

GEG Working Paper 120  
September 2016

---

# The Tangibility of the Intangibles: What Drives Banks' Sustainability Disclosure in the Emerging Economies?

---

**Adam Ng**



# The Tangibility of the Intangibles: What Drives Banks' Sustainability Disclosure in the Emerging Economies?

Adam Ng<sup>1</sup>

## Abstract

This article sheds light onto the tangibility of the intangibles, arguing that environment, social and governance sustainability (“ESG”), typically considered as intangibles, can be explained by tangible factors such as banks’ fundamentals, country ESG performance, macroeconomic factors and institutional quality. Based on panel estimation of 251 banks from 45 emerging countries over the period 2005-2014, we find that size, liquidity, years of establishment and market power positively influence banks’ disclosure of ESG policies and practices. Non-profitable banks disclose ESG, probably to build reputation and to attract more customers. At the macro level, country ESG scores are positively correlated with environment and social disclosure, but do not have a significant effect on any governance indicators. While banks in countries with higher economic freedom tend to focus on and value the importance of ESG, this is not the case with banks in countries with more economic growth and financial openness. We also find that a financial crisis can reduce the probability of banks’ disclosure. In the overall analysis, our models can explain the disclosure of environmental and social indicators better than governance indicators.

*Keywords: Sustainability, ESG Disclosure, Banks, Emerging Markets, Institutional Quality*

*The Global Economic Governance Programme is directed by Emily Jones and has been made possible through the generous support of Old Members of University College. Its research projects have been principally funded by the Ford Foundation (New York), the International Development Research Centre (Ottawa), and the MacArthur Foundation (Chicago).*

---

<sup>1</sup> Research Associate, Global Economic Governance Programme, University of Oxford  
Coauthors: Dr. Ginanjar Dewandaru (General Council for Islamic Banks and Financial Institutions (CIBAFI), Bahrain), Ruslan Nagayev (International Centre for Education in Islamic Finance (INCEIF), Malaysia), Janoearto Alamsyah (Bloomberg, Malaysia) and Abdullah (INCEIF and Coventry University, UK). An earlier version of this paper was presented at the “The Future of Islamic Banking and Economics in Search of New Normal”, a conference hosted by the Central Bank of the Republic of Turkey (4-5 April 2016, Istanbul), and was used as a reference for the Responsible Finance Summit hosted by the Central Bank of Malaysia (30-31 March 2016, Kuala Lumpur).

---

## Table of Contents

<b>1. Introduction</b>	<b>3</b>
<b>2. Conceptual framework</b>	<b>8</b>
<b>3. Hypotheses, data and methodology</b>	<b>10</b>
<b>4. Findings and discussion</b>	<b>15</b>
<b>Baseline analysis</b>	<b>15</b>
<b>Further analyses</b>	<b>16</b>
<b>5. Conclusion and implications</b>	<b>20</b>
<b>References</b>	<b>22</b>
<b>Appendix</b>	<b>27</b>

# 1. Introduction

Since the Industrial Revolution, the financial sector has been an important enabler of human progress and economic growth. Today, climate change and resource scarcity pose major environmental threats. Improving business ethics, governance, community welfare and employee well-being are becoming the concern of many.<sup>2</sup> The banking sector, as an important financial intermediary and capital raising agent, has a significant role to play in catalyzing the global transition to sustainable development and shared prosperity. As banks work to restore their credibility following the global financial crisis and contribute to financial stability, timely and strategic integration of sustainability into their businesses remains a crucial agenda for change. Sustainability can be practised *from the inside* (banks' internal operation) *to the outside* (banks' financing and investment portfolio, client and community relationships). Yet, can the financial sector do good while doing well? Does a bank that improves its financial performance increase, decrease, or leave unchanged its environmental, social and governance ("ESG") disclosure?<sup>3</sup> Is the banking sector up to the challenge of being the steward of long-term capital, preserving and enhancing different types of capital in the value creation process?

This article seeks to address these issues *from the inside* by examining the influence of banks' characteristics (e.g. capital adequacy, asset quality, managerial efficiency, earnings, liquidity (CAMEL) and size) on the disclosure of ESG policies and practices in emerging economies over the recent years, controlling for country ESG score, macroeconomic factors and institutional quality.<sup>4</sup> At a time where the global economy is facing 'secular stagnation' due to a decline in investments and an ageing population, the emerging economies are among the fastest growing markets that could potentially offer viable solutions to global economic growth and sustainable development in the 21<sup>st</sup> century. Over the next three decades, global economic power will continue to shift from developed economies in North America, Western Europe and Japan to existing and

---

<sup>2</sup> By 2050, up to 1 billion people could be displaced by climate change and more than 40% of the global population will be living in areas of severe water stress (United Nations). Economic losses from natural disasters have now reached US\$300 billion annually while \$1 trillion of additional investment in new green infrastructure is required annually to 2030 (World Economic Forum 2013). 2.8 billion people live on less than US\$ 2 a day and nearly 1 billion people are illiterate and 1 billion do not have safe water (United Nations). These sustainability megafactors impact on business in several ways (price increases and volatility, new regulations, physical and weather change, changes in consumer preferences, resource constraint on production, etc.) (KPMG International 2011).

<sup>3</sup> ESG is a term and concept first proposed in June 2004 by the UN Global Compact's "Who Cares Wins" initiative to focus mainstream investors and analysts on the materiality and interplay between environmental, social and governance issues.

<sup>4</sup> In an article entitled "Integrating Sustainability into Capital Markets: Bloomberg LP and ESG's Quantitative Legitimacy" Park and Ravenel (2013) remarked that "if it can one day find a place within the basic language of finance, ESG's presence could influence how finance is done from the inside by exposing a wide range of investment endeavors to address ESG concerns" (p. 67).

newly emerging economies. The economies of Mexico and Indonesia are projected to be larger than those of the UK and France by 2030 (in PPP terms) while Turkey's may become larger than Italy's. Malaysia has great potential for long-term sustainable growth while Nigeria could be the fast growing large economy by 2050 (PwC 2015). Rapid development in China, India, Indonesia, Malaysia, Thailand and Vietnam will result in Asia's share of the new middle class to more than double from its present 30%. Asia will be home to 64% of the global middle class and make up more than 40% of global middle class consumption by 2030 (Rohde 2012).

Yet, sustainable development is not guaranteed for emerging markets, as evidenced by recent problems in China, Russia and Brazil. Relative to developed markets, emerging markets still lag behind in the disclosure of ESG in business and financing decisions. While faith-based sensitivities in the marketplace might align behavior of banks towards sustainability, the presence of best-in-class sustainability banks in the emerging markets is hardly felt. Most of the best-in-class sustainability banks such as Australia & New Zealand Group (Australia), Banco Santander SA (Spain), Barclays Plc (UK), BNP Paribas SA (France), Credit Suisse Group (Switzerland), DNB ASA (Norway), Standard Chartered Plc (UK) and Westpac Bank (Australia) are headquartered in developed markets.<sup>5</sup> Emerging market companies are less aware of and less prepared to manage ESG risks or optimize ESG opportunities (Dijk et al., 2012). A WWF report in 2015 finds an alarming gap between regional ASEAN banks and the ESG standards adopted by their international counterparts. For instance, only four out of 18 banks disclosed the use of ESG as a tool in their credit processes and only one out of four had a forest sector policy. There is also shortfall in regulations on responsible lending guidelines and corporate sustainability disclosure requirements between ASEAN and Brazil, China, South Africa and Hong Kong (WWF 2015). Some of these markets may be more exposed to ESG risks due to the lack of robust regulations and enforcement; lower levels of external scrutiny (for example from civil society/NGOs/media); and lower awareness and capacity within banks, and from their clients, concerning ESG issues (WWF 2014). There is a risk that minority shareholder interests are not sufficiently represented in countries dominated by family-owned and state-owned governance models. The gap in public disclosure of corporate corruption in emerging markets leaves investors uninformed of, and exposed to, the risks of bribery (Dijk et al., 2012). These issues pose reputational and material risks to investors and key stakeholders.

At the same time, there are more ESG-related business opportunities (such as energy efficiency or environmental protection project financing and microfinancing) given the greater need for social and environmental investment activity in these markets

---

<sup>5</sup> The Dow Jones Sustainability Index comprises the best-in-class companies that are concentrated in the developed countries.

(WWF 2014).<sup>6</sup> The “Vision 2050: The New Agenda for Business” report notes that many of the opportunities that make businesses grow and prosper (to do more with less, to create value, to prosper, and to advance the human condition) will be in the emerging markets. An insightful meta-analysis of more than 2,000 empirical studies by Friede et al. (2015) reveals a considerably higher share of positive outcomes of relations between environmental and social performance on the one hand and corporate financial performance on the other hand in emerging markets (65.4%) than in developed markets (38.0%). More sustainability opportunities are present particularly in North America, emerging markets, and in non-equity asset classes. With regard to banking regulation, authorities in Brazil, Bangladesh, China, Colombia, Indonesia, Kenya, Mongolia, Nigeria, Peru and Vietnam have issued sustainable banking guidelines for banks. Indonesia launched a Sustainable Finance Roadmap in December 2014 and is expected to announce additional regulations in 2016. This stands in contrast with most members of the Basel Committee (comprising the most advanced developed countries) which do not have a policy to coordinate environmental and banking regulation. Lessons on sustainable banking have been shared among emerging markets through a global knowledge-sharing network launched in 2012, the Sustainable Banking Network.<sup>7</sup> Opportunities, therefore, exist within the current Basel framework for the incorporation of these emerging market regulatory practices into global best practices (University of Cambridge Institute for Sustainability Leadership 2014).

While extensive research has already been undertaken to examine the relationship between corporate social and environmental responsibility (“CSR”) and financial performance (Wang et al., 2015; Griffin and Mahon 1997), extant studies offer limited and often conflicting evidence, particularly in the banking industry (Simpson and Kohers 2002; Wu and Shen 2013; Jo et al., 2014; Cornett et al., 2014). Little attention has thus far been placed on seeking to understand why banks act in socially responsible ways (McWilliams et al., 2006). The goal of identifying motivations for disclosure of ESG policies and practices is gaining considerable traction among researchers. One of the many plausible motivations is the desire to legitimise an organisation’s (Deegan 2002).<sup>8</sup>

---

<sup>6</sup> As at July 2015, 80 financial institutions in 34 countries have adopted the Equator Principles, representing over 70% of international project finance debt in emerging markets (United Nations Global Compact and KPMG International 2015). Corporate social responsibility policies of the financial institutions that adopted the Equator Principles are ranked higher than those of financial institutions that did not adopt (Scholtens and Dam 2007).

<sup>7</sup> The Network consists of regulators and banking associations from 16 countries: Bangladesh, Brazil, China, Colombia, Indonesia, Kenya, Lao PDR, Mongolia, Morocco, Nepal, Nigeria, Pakistan, Peru, the Philippines, Thailand, and Vietnam.

<sup>8</sup> In the 2010 UN Global Compact-Accenture CEO study, 93% of the 766 participants CEOs globally considered sustainability as an “important” or “very important” factor for their organizations’ future success (Lacy et al. 2010). Several drivers of ESG disclosure have been identified as relevant to both global and domestic banks (WWF, 2015): “(i) A failure to address systemic ESG challenges will affect economic growth and returns in the longer-term, so financing must play a role in addressing ESG issues;

A recent study on the impact of corporate governance on the quality of CSR disclosure in US listed banks by Jizi et al. (2013) reveals that more independent boards of directors and larger boards are the internal governance mechanisms that enhance both shareholders' and other stakeholders' interests. In the case of Spanish listed firms, Reverte (2009) finds that legitimacy theory, as reflected by those variables related to public or social visibility, is the most relevant theory for explaining CSR disclosure practices. Media exposure, followed by size and industry, is the most significant variable in explaining firms' variation in CSR ratings. In China, the disclosure of corporate social responsibility is positively associated with firm size, media exposure, share ownership concentration and institutional shareholding. Companies in high-profile environmentally sensitive sectors disclose more information than those in low-profile environmentally sensitive sectors (Wang et al., 2013) (see also Nollet et al., (2016) who examine the S&P500 firms from 2007-2011 and Cornett et al. (2014) who investigate commercial banks in the US).

In this article, we hypothesize that bank characteristics (CAMEL and non-CAMEL variables) could be an internal organic factor that influence banks' ESG disclosure (Mallin et al., 2014; Chih et al., 2010). At the macro level, disclosure could also be influenced by the respective country ESG standards, macroeconomic indicators and institutional quality. We examine specific sustainability dimensions because "no single E, S, and G category demonstrates a meaningful superior positive relation to corporate financial performance" (Friede et al., 2015, p. 226). This approach is particularly relevant because measuring corporate social responsibility, a field that is closely related to ESG, is challenging given its multidimensional nature (Waddock and Graves 1997; Wu and Shen 2013).

While most studies have assessed the ESG aspects of companies in the developed markets, this article focuses on the banking sector in emerging economies, an area that is still underresearched. Based on the analyses of 251 banks from 45 emerging countries over the period 2005-2014, we find that bank size is positively related to banks' overall ESG disclosure scores. On average, larger banks disclose 11 out of 12 environmental, 11 out of 13 social, and 7 out of 11 governance policies and practices. Banks with lower liquidity risks are also more likely to disclose ESG policies and practices. However, banks' profitability, when significant, appear to have a mostly negative relationship with environmental and social disclosure. Other bank characteristics (capitalization, management quality, asset quality and business model) have mixed effects on ESG disclosure. At the macro level, country ESG scores are mostly positively correlated with environmental and social indicators disclosure, but do

---

(ii) Regulatory standards on ESG are tightening in many markets affecting banks and their clients, creating opportunities for banks that are proactive; (iii) ESG can enhance credit risk and reputation risk management."

not have a significant effect on any governance indicators. While banks in countries with higher economic freedom tend to focus on and value the importance of ESG, this is not the case with banks in countries with more economic growth and financial openness. We also find that a financial crisis can reduce the probability of banks' disclosure. In the overall analysis, our models can explain the disclosure of environmental and social indicators more than governance indicators.

The remainder of this article is structured as follows. Section 2 outlines the conceptual framework while Section 3 describes the data and empirical methodology. Section 4 presents the empirical results of the effects of banks' financial, macroeconomic conditions and institutional quality on ESG. Section 5 provides concluding remarks and implications for further research and application.



## 2. Conceptual framework

Various theories explain why firms, particularly banks, are interested in ESG disclosure. Firms are moving the direction of business from maximising shareholder's wealth to maximising stakeholder's value. Although shareholders share financial wealth (Friedman 1962), stakeholders including employees, customers, the local communities are the ultimate risk owner who cares about the social impacts of business operation (Freeman and Liedtka 1992). Stakeholder theory indicates that banks disclose their ESG activities by not only considering their financial capital, but also human capital, natural capital and social and relationship capital to maximise their wellbeing (IIR 2016). Banks are particularly more interested in serving the social needs to build a strong local base for future sustainable business. This is because strong local presence, through environmental and social activity, will reduce the likelihood of bank failure (Kaufer 2014). Further, signalling theory suggests that firms are more likely to disclose ESG activities in order to signal their social and environmental performance to stakeholders (Lys, Naughton, and Wang 2015). As customers, employees and local communities are more concerned about wider impact on society and environment, ESG disclosure works as a signal of acknowledgement of their concern by the firm. It is also an effective way to signal to its stakeholders about its expected future financial performance (Healy and Palepu 2001). Banks also use ESG disclosure to signal the society that its internal operation and financing decision will not have an adverse impact on environment and society. This helps to increase investors' confidence and strengthens the local presence which, in turn, can reduce the impact of financial crisis on the local community according to Cornett, Erhemjams, and Tehranian (2016).

Stewardship theory can also explain why banks are willing to disclose its ESG related activities. Stewardship is defined as "the extent to which an individual (management) willingly subjugates his or her personal interests to act in protection of others' (stakeholders) long-term welfare" (Hernandez 2012). This provides social benefits and fulfils the collective interest over a longer period. Stewardship theory is particularly related to the bank's ESG related activities as the management invests in environmental and social activities to serve the shared value and interest of stakeholders despite incurring financial cost to shareholders. Banks employ its resources to improve environmental quality and to create a sustainable society, which in turn, can reinforce a strong social base in the society. Some researchers see motives of ESG disclosure from a socio-political view. Banks face social pressure to secure their legitimacy by fulfilling the "social contract" which are directly or indirectly demanded by stakeholders at large (Guthrie and Parker 1989; Tilling 2004). Failure to comply with this demand may affect the bank's legitimacy and its future financial performance. Banking products and services should meet consumer's personal preference, and at the same time, fulfil social preferences to preserve the environment and society. This point is also

related to institutional theory - organizations are embedded within broader social structures that exert influence on corporations' decision-making (Jackson and Apostolakou 2010; Campbell 2007).<sup>9</sup> Hence, firms in an environment of sound institutional quality are likely to make better corporate decisions that align with broader social interest.

Banks with larger asset size are more active in ESG disclosure. Environmental and social activities incur costs to the banks, and larger banks have relatively more resources to engage in and report these activities to stakeholders (Wang, Song, and Yao 2013; Lys, Naughton, and Wang 2015; Orlitzky 2001; Wu and Shen 2013). Economies of scale play an important role in ESG engagement and reporting as it generally reduces the cost proportionately with respect to the size of banks. It indicates that larger banks typically incur lower cost for ESG related activities while smaller banks bear higher cost (IFC 2006). This enables larger banks to be engaged in ESG activities. More liquid banks are likely to be engaged in ESG activities. Investment into ESG activities are considered as long-term investment, with no immediate profit or payback in the short term (WEF 2011; UKSIF 2007).<sup>10</sup> Banks with higher amount of liquid or semi-liquid asset have enough resources to invest in long-term sustainability. Moreover, lower liquidity risk decreases the risk premium and borrowing cost of banks, thus reduces the probability of financial distress (Elliott 2014). This allows safer banks, with lower liquidity risks, an opportunity to focus on long term sustainability by investing more on environmental and social policy and practices. It is probable that less profitable banks disclose ESG related activities more to increase its social presence for greater acceptability by the society which may, in turn, increase its profitability.

---

<sup>9</sup> Based on a conceptualization of nation-level institutions as “national business systems” (NBS) (Whitley, 1999), Ioannou and Serafeim (2012) constructed an annual composite corporate social performance (CSP) index for firms from 42 countries spanning seven years, and found that political system, followed by labour and education system, and the cultural system are the most important NBS categories of institutions that affect CSP. The financial system, measured by country debt over assets and SRI index, has relatively less significant impact.

<sup>10</sup> Reducing of environmental costs takes at least 1 or 2 years to enhance firm performance.

### 3. Hypotheses, data and methodology

Our annual data spans from 2005 to 2014, covering 251 banks headquartered in 45 emerging countries. Data on ESG disclosure, practices and policies are adopted from Bloomberg as it provides the widest possible coverage of all ESG datasets in the countries that we are interested in for our purposes (Ioannou and Serafeim 2014). The use of this dataset is important since alternative measures of sustainability performance should also be considered as most research in this field heavily relies on the Kinder, Lydenberg and Domini (KLD) dataset (Margolis et al., 2009). The focus on data from the recent years takes into account the fact that sustainability agenda has become more important in global policy and commercial practices, and that ESG data is gradually becoming more widely collected (Halbritter and Dorfleitner 2015).<sup>11</sup> Cited as a measure of ESG's mainstream relevance by the Global Reporting Initiative's "Year in Review 2010-2011",<sup>12</sup> Bloomberg provides ESG data disclosed by more than 11,000 companies in 65 countries, constituting probably the largest coverage of ESG data in emerging markets. In contrast to other data providers, Bloomberg ESG data is not estimated or derived from mathematical models. Rather, the data is sourced from company filings, including CSR or sustainability reports, annual reports, company websites, press releases and a proprietary Bloomberg survey that requests data directly from companies. The overall average ESG disclosure score in the sample is rather low, i.e. 16.58 out of 100, with banks in Brazil, Hungary, South Africa and Sri Lanka leading by a far margin compared to other countries. From these four countries, two are part of the G20 (namely Brazil and South Africa).

While the ESG disclosure scores have been used in a number of recent studies (Nollet et al., 2016; Ioannou and Serafeim 2014), it is important to understand the effect of bank financial, macroeconomic and institutional factors on ESG disclosure at a more granular level. Hence, we use individual ESG indicators that are mostly available across emerging markets as our main dependent variables of interest. There are 12 environmental indicators (12 are binary dummies), 11 governance indicators (6 are binary dummies; 5 are score), 13 social indicators (12 are binary dummies; 1 is score). The ESG indicators and definitions are provided in Table A of the Appendix.

Bank fundamentals are commonly proxied by CAMEL-rating variables comprising capital adequacy (capitalization), asset quality, management quality (inefficiency), earnings (return on assets), and liquidity as well as non-CAMEL-type variables, namely size and business model. Capital adequacy determines how well banks can address shocks to their balance sheet, and it is proxied by equity to total asset ratio. Higher equity to total asset ratio indicates better capitalization. Asset quality measures the

---

<sup>11</sup> Bloomberg collected ESG data in 2008. Consolidation of players also happened between 2007 and 2009 (KLD, Innovest, ISS by RiskMetrics (later acquired by MSCI), Thomson Asset 4). Bloomberg ESG has more than 200 banks from emerging markets while Thomson Asset4 has only 56 banks from these markets.

<sup>12</sup> "Investors are looking at sustainability data in bigger numbers than ever before: sustainability performance information is now available on some 350,000 Bloomberg terminals worldwide. A field that was once the preserve of sustainability and CSR professionals, and socially responsible investors, is becoming a focus of more traditional investment firms." GRI, "Year in Review 2010-2011" at pg. 16.

exposure to specific risk trends in non-performing loans as well as the health and profitability of bank borrowers, particularly in the corporate sector. Low asset quality impacts profitability and capital negatively through additional provisions for bad debts. We use reserve for loan loss to total loan as an indicator of asset quality, where lower asset quality means higher reserve for loan loss to total loan. Managerial quality is proxied by efficiency ratio, i.e. the cost to income ratio. A higher ratio indicates inefficient bank management. The continued viability of a bank depends on its ability to yield sufficient return on its assets and capital. Good levels of earnings enable a bank to expand and remain competitive. We use return on assets as a measure of earnings. Liquidity encompasses funding sources and maturity mismatches. We use deposit to total asset ratio where the size of deposits (short-term liabilities) over total assets provides an estimate of liquidity risk related to deposit withdrawal. Bank size (total assets) is included as larger banks are more diversified to various sectors and less exposed to liquidity shocks. The business model is measured by total loan to total asset ratio to reflect the degree of intermediation and non-intermediation businesses of the bank (Sahut and Mili 2011; Bassett et al., 2015; Wang et al., 2012; Curry et al., 2008).

Overall country ESG score has significant impact on banks' ESG disclosure (Stellner, Klein, and Zwergel 2015; Cheung, Tan, and Wang 2016). Investors are also using county level ESG tools in their investment decision. This motivates banks to disclose their ESG activities especially where the country has higher ESG rating (Dijk, Griek, and Jansen 2012 p: 26; UNPRI 2016). The ESG country strategic risk score ("country ESG score") is computed by Bloomberg based on several indicators: emissions, energy, electricity, water, biodiversity, discrimination, employment, health, human rights, human welfare, defense, economic freedom, political risk, government effectiveness, corruption and innovation (proxies are presented in Table A of the appendix). The overall average score is 42.30. Countries that exceed the average score are Argentina, Brazil, Chile, China, Colombia, Croatia, Czech Republic, Hungary, Mexico, Peru, Poland, Romania, Russia, Slovakia, South Africa, Thailand and Malaysia. This leads us to our 1<sup>st</sup> equation:

$$ESG_{it} = \alpha + \beta_1 Size_{it} + \beta_2 Capitalization_{it} + \beta_3 Liquidity_{it} + \beta_4 Inefficiency_{it} + \beta_5 Asset\ Quality_{it} + \beta_6 Business\ Model_{it} + \beta_7 Return\ on\ Assets_{it} + \beta_8 Country\ ESG\ score_{it} + \varepsilon_{it} \quad (1)$$

where  $i$  refers to the bank in year  $t$  and  $ESG$  captures disclosure of ESG policies and practices. The parameter of interest is  $\beta$ , the coefficients on the bank characteristics and country ESG score.

A country's macroeconomic environment may affect transparency levels, making it difficult to relate to the financial performance of banks (Sahut and Mili 2011). Rising GDP typically signals a healthy economy and affects bank soundness, although this might be at the expense of the environment following the environmental Kuznets curve literature. Rising inflation might be beneficial to banks because their assets are re-priced faster than their liabilities and their relative value of non-performing loans are reduced. The Chinn-Ito index captures both the extensiveness and intensity of capital

controls, and considers four types of restrictions: presence of multiple exchange rates, restrictions on current and capital account transactions, and the requirement to surrender export proceeds. A higher score indicates less regulation and more capital account openness. Macroeconomic data (GDP growth and inflation) is adopted from the World Development Indicators and de jure measure of financial openness is adopted from the Chinn-Ito index (Chinn and Ito 2006; Chinn and Ito 2008).

Institutional quality is proxied by the Heritage Foundation's Index of Economic Freedom. Economic freedom is measured based on ten quantitative and qualitative factors, categorized into four broad pillars: rule of law (property rights, freedom from corruption); limited government (fiscal freedom, government spending); regulatory efficiency (business freedom, labor freedom, monetary freedom); and open markets (trade freedom, investment freedom, financial freedom). This leads us to the following equation.

$$ESG_{it} = \alpha + \beta_1 Size_{it} + \beta_2 Capitalization_{it} + \beta_3 Liquidity_{it} + \beta_4 Inefficiency_{it} + \beta_5 Asset\ Quality_{it} + \beta_6 Business\ Model_{it} + \beta_7 Return\ on\ Assets_{it} + \beta_8 Macroeconomic_{it} + \beta_9 Institutional\ Quality_{it} + \varepsilon_{it} \quad (2)$$

Financial crises generally have a significant impact on the banking sector (Alves and Francisco 2015; Zeitun, Temimi, and Mimouni 2016; Spencer 2016; Sagh-Zedek and Tarazi 2014). Therefore, banks may act differently, in terms of ESG disclosure, during financial crisis. Banks with lower liquid asset may reduce environmental and social activities to focus more on financial stability. Similarly, smaller sized banks may find it more costly to continue ESG activities. Moreover, GDP growth, inflation and institutional quality may not have similar impact on bank's ESG disclosure during this period. Therefore, a binary dummy variable has been added in the following equation to assess the impact of financial crisis on bank's ESG disclosure.

$$ESG_{it} = \alpha + \beta_1 Size_{it} + \beta_2 Capitalization_{it} + \beta_3 Liquidity_{it} + \beta_4 Inefficiency_{it} + \beta_5 Asset\ Quality_{it} + \beta_6 Business\ Model_{it} + \beta_7 Return\ on\ Assets_{it} + \beta_8 Macroeconomic_{it} + \beta_9 Institutional\ Quality_{it} + \beta_{10} Financial\ crisis_{it} + \varepsilon_{it} \quad (3)$$

UNPRI (2013) conducted case studies on 21 large companies to analyse potential factors for ESG disclosure of firms. They found firms with higher market share tend to be more interested in disclosing ESG activities. Cottrill (1990) investigated whether firm's market share or higher concentration has any impact on ESG disclosure. By using Fortune magazine's annual survey of corporate reputation, firm's market share was found significantly positively associated with corporate social responsibility. This result is consistent with Pava and Krausz (1996)'s findings. Therefore, market power may have a significant role along with

bank specific and macroeconomic variables in influencing the disclosure of ESG activities. Market power of the banking sector is measured by the Lerner index from the Global Financial Development database. The index has become the standard measure of monopoly power and one of the most extensively used indices in the discipline of economics (Elzinga and Mills 2011). The Lerner index is defined as the difference between output prices and marginal costs (relative to prices). Prices are calculated as total bank revenue over assets, whereas marginal costs are obtained from an estimated translog cost function with respect to output. Higher values of the Lerner index connotes less bank competition.

Bank age also have significant impact on bank's ESG disclosure (Cornett, Erhemjamts, and Tehranian 2016). Using 3000 publicly traded companies from the MSCI ESG STATS database over 2003–2013, they found that larger banks are more proactive to disclose ESG scores. The largest banks in the dataset (which were accused of being careless about society) conducted environmental and social activities more than other banks. This result is robust in different specifications, including alternative definitions of CSR engagement and financial performance, and size thresholds. Therefore, this variable is included in the following equation to determine its impact in our analysis. The final model is stipulated below:

$$ESG_{it} = \alpha + \beta_1 Size_{it} + \beta_2 Capitalization_{it} + \beta_3 Liquidity_{it} + \beta_4 Inefficiency_{it} + \beta_5 Asset\ Quality_{it} + \beta_6 Business\ Model_{it} + \beta_7 Return\ on\ Assets_{it} + \beta_8 Macroeconomic_{it} + \beta_9 Bank\ Age + \beta_{10} Market\ Power + \varepsilon_{it} \quad (4)$$

We employ the random-effects panel logit model which is widely adopted in cases where the dependent variable is in the form of a binary dummy (Qin and Luo 2014). Various studies found this model useful to capture random unobserved behaviour of an individual-specific effect, which is statistically independent and uncorrelated with its repressors. The random-effects model allows for a larger set of covariates, including time-invariant ones and discrete choices, that enables economic consideration of the relationship between variables in the sample (Boudry et al., 2013; Henry 2011; Rahaman 2011; Card and Hyslop 2009; Aivazian et al., 2005; Jostarndt and Sautner 2008; Focarelli and Pozzolo 2001).

$$prob(ESG_{it} = 1) = \frac{e^{\beta' X_{it}}}{1 + e^{\beta' X_{it}}} \quad (3)$$

$$\log \left[ \frac{prob(ESG_{it} = 1)}{1 - prob(ESG_{it} = 1)} \right] = \beta' X_{it} \quad (4)$$

where  $ESG_{it}$  is the ESG dummy for bank  $i$  at time  $t$ , taking the value of 1 if there is disclosure of ESG policies or practices and taking 0 if no disclosure.  $\beta$  is the coefficient vector and  $X_{it}$  is the vector of explanatory variables. The coefficients  $\beta$  measure the expected changes in the following log odds of ESG disclosure, when there is a one-unit change in a certain variable with all the others held constant. For non-binary dependent variables, we choose random or fixed effects panel models based on the Hausman test (Greene 2011). Descriptive statistics are presented in Table B of the Appendix.

## 4. Findings and discussion

### Baseline analysis

In Table C, we find that bank size has a significantly positive influence on the overall banks' ESG disclosure scores. On average, larger banks disclose 11 out of 12 environmental, 11 out of 13 social, and 7 out of 11 governance policies and practices. This is reinforced by the positive nexus between capitalization and ESG disclosure, although it is significant only for 11 indicators. This is plausible as larger banks have the capacity and scale to mobilize resources for ESG. For example, these banks may have dedicated sustainability unit or committee to oversee the setting and implementation of ESG policies and practices. They are also more likely to be exposed to a diversity of business sectors with various environmental and social risks. Larger banks are also subject to closer scrutiny by the public, which increases the likelihood of such banks acting in more socially and environmentally responsible ways (Dierkes and Coppock 1978; Fombrun and Shanley 1990; Trotman and Bradley 1981).

However, banks' profitability, when significant, appear to have mostly negative relationship with environmental and social disclosure. While this is counter-intuitive, since banks that are less profitable have fewer resources to spare for socially responsible activities (Waddock and Graves 1997), it is possible that non-profitable banks in our sample are more likely to disclose ESG in order to build their reputation and to attract more customers. These banks may have incentives to manage earnings in the presence of weaker shareholder rights and lower transparency in accounting disclosure (Shen and Chih 2005). Environmental and social policy and practices may also be considered as costs to banks, particularly for banks that do not have established practices and when banks conduct ESG activities for altruistic or "greenwashing" purposes (Baron 2001). Banks with lower liquidity risks are more likely to disclose ESG policies and practices, while other bank characteristics (management quality, asset quality and business model) have mixed effects on ESG disclosure. Our finding is consistent with Chih et al. (2010) who found that larger financial firms are more CSR-minded, and financial performance (ROA) and CSR are not related. It is also consistent with Scholtens and Dam (2007), who found that adopters of the Equator Principles<sup>13</sup> are typically larger banks, and adoption improves the reputation and risk profile of the adopters, although adoption comes at a certain cost (see also Wu and Shen, 2013). At the macro level, country ESG scores are mostly significantly positive for environmental and social indicators disclosure. However, the country ESG scores do not have a significant effect on any bank governance indicators.

---

<sup>13</sup> The Equator Principles are a risk management framework for financial institutions to manage environment and social risk in project financing.



**Table C:** Number of significant independent variables (country ESG score), corresponding to Table 1-4

	Environment (total: 12 indicators)	Social (total: 13 indicators)	Governance (total: 11 indicators)
Bank size	11 (+)	11 (+)	7 (+)
Capitalization	2 (+)	8 (+)	1 (+)
Liquidity risk	7 (-)	2 (+); 5 (-)	1 (+)
Inefficiency	1 (+); 1 (-)	1 (+); 1 (-)	2 (+); 1 (-)
Asset quality risk	1 (-)	0	1 (+); 4 (-)
Business model	2 (+)	1 (+)	3 (+); 1 (-)
Return on assets	8 (-)	1 (+); 7 (-)	1 (-)
ESG country score	10 (+)	9 (+); 1 (-)	0
Number of significant variables	43	47	22
Proportion of significant variables	28.67%	28.92%	16.00%

### Further analyses

We continue with further analyses by incorporating (i) macroeconomic and institutional quality variables (Table D); (ii) impact of the 2008 subprime crisis (Table E); and (iii) influence of a bank's establishment and market power within the banking sector (Table F). The effects of bank fundamentals are broadly similar with the baseline analysis in Table C. Economic growth has negative effects on banks' environmental and social disclosure, similar to Wu and Shen (2013)'s finding that banks in countries with slow GDP growth engage in more CSR activities. In theory, banks are less likely to act in socially and environmentally responsible ways in an "unhealthy economic environment where the possibility for near-term profitability is limited" (Campbell 2007). However, the conflicting evidence found in our analysis is likely due to the procyclicality of banks' business in response to the economy where banks are incentivized to increase financing and investment to any sector that is growing positively during an economic boom, irrespective of the sector's environmental and social risks. This reactionary business cycle may, in turn, influence banks' internal environmental and social policies and practices.

There is an inverse link between a country's financial openness and ESG disclosure as identified in our result. In theory, capital account liberalization should facilitate more efficient global allocation of capital, and increase growth, employment opportunities and living standards in developing countries. Policymakers have strong incentives to adopt sound economic policies, as a perceived weakness in its policy environment could be penalized by domestic and foreign investors. Liberalization also allows for the transfer of foreign technological and managerial know-how, in addition to promoting competition and financial development (Kose and Prasad 2012). This should prompt banks to increase ESG disclosure in order to benefit from financial liberalization and remain

competitively relevant. However, our findings may correspond to some evidence of a significant procyclical element to global capital market access for emerging market countries. Foreign capital inflows could be misallocated in an environment of weakly regulated banking systems and insufficient financial regulation and supervision. While we do not allude to the presence of such evidence in our sample countries, it is possible that the negative effects of capital account liberalization might divert resources and focus of the banking sector away from ESG practices.

Economic freedom is significantly positive in the promotion of ESG disclosure, conforming to the institutional theory in which banks' practices of sustainability are driven by the broader social structures in the country. The ideals of economic freedom are significantly associated with healthier societies, cleaner environments, higher per capita wealth, human development, democracy and poverty alleviation. Globally, economic freedom increases countries' capacity for innovation and, by extension, their capability to enhance their environmental performance (for example, through greener technologies) (Miller and Kim 2015). Innovative corporations in such an environment can fill gaps in social need in sustainable and profitable ways. Countries with higher economic freedom tend to have sound political environment. This allows banks to focus on meeting social and collective demands regarding environment and society in order to secure sustainable businesses in the longer term.

Our result is consistent with Ioannou and Serafeim (2012)'s main finding that the political system<sup>14</sup> is the most important of the "national business systems" categories of institutions that affect corporate social performance (CSP) indexes for firms from 42 countries. Our finding is also consistent with Chih et al. (2010), who found that financial firms in countries with stronger levels of legal enforcement tend to engage more in corporate social responsibility activities.

**Table D:** Number of significant independent variables (further analyses with macroeconomic and institutional quality), corresponding to Table 5-8

	Environment (total: 12 indicators)	Social (total: 13 indicators)	Governance (total: 11 indicators)
Bank size	11 (+)	10 (+)	5 (+)
Capitalization	3 (+)	3 (+)	1 (+)
Liquidity risk	7 (-)	4 (-)	1 (+)
Inefficiency	1 (+); 1 (-)	1 (-)	2 (+); 1 (-)
Asset quality risk	1 (-)	0	4 (+); 3 (-)
Business model	0	1 (+); 2 (-)	2 (+)
Return on assets	5 (-)	5 (-)	1 (+)
Inflation	0	1 (+)	1 (+)
Economic growth	3 (-)	6 (-)	1 (+); 1 (-)

<sup>14</sup> Political system is proxied by competition and regulation, anti-self-dealing, absence of corruption, and left ideology.

Financial openness	9 (-)	13 (-)	9 (-)
Economic freedom	11 (+)	10 (+); 1 (-)	5 (+)
Number of significant variables	52	57	37
Proportion of significant variables	47.67%	48.23%	37.00%

To assess whether our results are robust or not in times of crisis, we include the 2008 financial crisis year dummy in the analysis. We find that the banks tend to disclose less of ESG policies and practices during the crisis, consistent with an analysis by Karaibrahimoglu (2010), who found that the decrease in CSR projects among the Fortune 500 companies was due to the financial downturn in 2007-2008 (see Table E).

**Table E:** Number of significant independent variables (further analyses with crisis dummy variable), corresponding to Table 9-12

	Environment (total: 12 indicators)	Social (total: 13 indicators)	Governance (total: 11 indicators)
Bank size	11 (+)	11 (+)	4 (+)
Capitalization	2 (+)	5 (+)	1 (+)
Liquidity risk	6 (-)	1 (+); 4 (-)	1 (+)
Inefficiency	0	1 (-)	2 (+); 1 (-)
Asset quality risk	0	0	2 (+); 2 (-)
Business model	0	1 (+); 3 (-)	3 (+)
Return on assets	5 (-)	5 (-)	1 (+); 2 (-)
Inflation	0	1 (+)	1 (-)
Economic growth	7 (-)	9 (-)	6 (-)
Financial openness	6 (-)	1 (+); 9 (-)	8 (-)
Economic freedom	7 (+); 2 (-)	8 (+)	4 (+)
Dummy crisis 2008	3 (-)	5 (-)	1 (+); 6 (-)
Number of significant variables	49	64	45
Proportion of significant variables	34.03%	41.03%	34.09%

As competition in the banking sector is desirable for efficiency and maximization of social welfare, we include a direct measure of bank pricing behavior or market power based on the new empirical industrial organization literature to examine the extent to

which competition can drive ESG disclosure.<sup>15</sup> The binary dummy for last financial crisis (2008) was not included in the 4<sup>th</sup> equation as we are interested to see the standalone effect of bank age and market power on ESG disclosure over the entire sample period, while controlling other commonly used variables.

From Table F, we find that less bank competition promotes more ESG disclosure, which corresponds to that fact that larger banks have better disclosure levels as demonstrated in the foregoing tables. This is possible because banks operating in a higher market power environment are able to set prices and hence improve their efficiency and lower the cost associated with ESG disclosure (Ariss 2010; Fungáčová et al., 2013). These banks are also likely to promote transparency about banks' ESG activities for their own benefits. We also find that older, more established banks have higher levels of disclosure, indicating that these banks are more active in addressing sustainability issues. Overall, the models explain the disclosure of environmental and social indicators better than the disclosure of governance indicators. This is sensible as governance aspects are typically entrenched in the banking sector by virtue of banking regulatory requirements rather than bank fundamentals. Details of the estimation result are provided in Table 1-16 of the Appendix.

**Table F:** Number of significant independent variables (further analyses with bank age and Lerner index), corresponding to Table 12-16

	Environment (total: 12 indicators)	Social (total: 13 indicators)	Governance (total: 11 indicators)
Bank size	10 (+)	11 (+)	6 (+)
Capitalization	3 (+)	8 (+)	1 (+)
Liquidity risk	5(-)	1 (+); 3 (-)	1 (+)
Inefficiency	1 (-)	2 (-)	1 (-)
Asset quality risk	1 (+)	1 (-)	3 (+); 1 (-)
Business model	1 (-)	0	3 (+)
Return on assets	2 (-)	5 (-)	1 (-)
Economic growth	2 (-)	0	1 (+); 1 (-)
Financial openness	1 (+); 1 (-)	1 (+)	5 (-)
Bank age	9 (+)	11 (+)	4 (+); 1 (-)
Lerner index	7 (+)	7 (+); 1 (-)	2 (+)
Number of significant variables	43	51	31
Proportion of significant variables	32.57%	35.66%	25.62%

<sup>15</sup> We exclude inflation in the analysis as it has minimal significance power as demonstrated in Table D and E. We also exclude economic freedom so that we can assess banks' market power and years of establishment without being influenced by the country's institutional quality.

## 5. Conclusion and implications

The internal and external communication of sustainability information contributes to an organization's supply of key resources from various stakeholders (Hahn and Kühnen, 2013). This contribution can be organically internalized and applied if the intangibility of ESG is driven by tangible factors. We find that (i) larger size, lower liquidity risk, longer years of establishment and higher market power positively influence banks' disclosure of ESG policies and practices; (ii) non-profitable banks have higher levels of ESG disclosures, probably to build their reputation and to attract more customers; (iii) banks require sound country-level institutional and ESG quality in order to thrive in embracing sustainability; and (iv) financial crises reduce the probability of banks' disclosures.

These findings have several policy and commercial implications. First, policymakers and regulators can use a differentiated incentive structure to help smaller banks to adopt more ESG disclosures, rather than giving the same incentives across the board. For example, some stock exchange authorities adopt a phased approach in requiring the disclosure of sustainability statement in the annual reporting according to the size of the corporations (e.g. Bursa Malaysia). Second, given the effect of market power, banks, particularly the smaller ones, should reassess the cost and benefit of using ESG as a strategic or competitiveness initiative in developing new or enhanced financial products, deeper client relationship, and leadership in certain ESG themes. Third, policymakers and regulators should strive to provide an enabling institutional environment conducive to sustainability practices in the banking industry. The banking sector can be a significant contributor to economies when it is allowed to operate in a reliable political and economic environment, supported by fair rules of the game and profit-making prospects (Kapstein and Kim 2010). To minimize the unintended consequences of unhelpful regulation and to provide a more informed basis for policymaking, banks can adopt a proactive and collaborative approach with governments and regulators.

Fourth, investors and market analysts can now have better understanding of the motives of ESG disclosure by banks, and accord premium or discount to the bank's ESG and financial valuations. As a result, banks would be encouraged to move from altruism or greenwashing to strategic motive by integrating ESG into their business strategy, goals and financial performance. Finally, since data availability is relatively limited in emerging markets, direct engagement with smaller banks can be helpful in addressing information gaps. Forming strategic alliances with domestic institutional investors, the use of local language, the understanding of cultural sensitivities, and the awareness of local business environment and ESG exposures are key ingredients in making such engagement productive. Further, responsible investors (banks) should reach out actively to investee (financed) companies to overcome data gaps and

investment (financing) expectation gap (Dijk et al., 2012).<sup>16</sup> These push-pull factors would encourage improvement in both disclosure quantity and quality in emerging markets.

In terms of implications for future study, more research that combines bank-specific information with analyses of ESG risks at country and industry levels could furnish investors with meaningful insights. Our study can be extended to the following areas: (i) examination of the private and social costs of the 2008 subprime crisis on ESG disclosure; (ii) assessment of the threshold effect of bank size and capitalization on the bank fundamentals-ESG link; (iii) comparison of bank fundamentals-ESG relation between developed and emerging markets as well as banking and non-banking firms; (iv) inclusion of other non-bank determinants of ESG disclosure such as stakeholder power, strategic posture, legitimacy (public and social visibility), media exposure, goodwill; and (v) applying primary data research to assess banks' ESG appetite, practices and challenges in the emerging markets.

We wish to conclude by quoting the co-chairs of the World Business Council for Sustainable Development (WBCSD)'s "Vision 2050: The New Agenda for Business" who remarked: "...business-as-usual cannot get us to sustainability or secure economic and social prosperity; these can be achieved only through radical change, starting now. To play its role, business will still need to do what business does best: innovate, adapt, collaborate and execute. These activities will change along with the partnerships that we form with other businesses, governments, academia and non-governmental organizations in order to get it right for all." We believe there are tangible prospects for banks in the emerging markets to embrace sustainability from the *inside out*.

---

<sup>16</sup> In this regard, Bloomberg is actively engaged in "bringing ideas to market in tangible, decision-useful ways" and providing an "instructive point of reference for others looking to enter the fray" (Park and Ravenel 2013).

## References

- Aivazian, Varouj A., Ying Ge, and Jiaping Qiu. 2005. "Corporate Governance and Manager Turnover: An Unusual Social Experiment." *Journal of Banking and Finance* 29 (6): 1459–81. doi:10.1016/j.jbankfin.2004.05.038.
- Alves, Paulo, and Paulo Francisco. 2015. "The Impact of Institutional Environment on the Capital Structure of Firms during Recent Financial Crises." *Quarterly Review of Economics and Finance* 57. Board of Trustees of the University of Illinois: 129–46. doi:10.1016/j.qref.2014.12.001.
- Ariss, Rima Turk. 2010. "On the Implications of Market Power in Banking: Evidence from Developing Countries." *Journal of Banking and Finance* 34 (4): 765–75.
- Baron, David P. 2001. "Private Politics, Corporate Social Responsibility, and Integrated Strategy." *Journal of Economics & Management Strategy* 10 (1): 7–45. doi:10.1162/105864001300122548.
- Bassett, William F., Seung Jung Lee, and Thomas Popeck Spiller. 2015. "Estimating Changes in Supervisory Standards and Their Economic Effects." *Journal of Banking & Finance* 60: 21–43.
- Boudry, Walter I., Jarl G. Kallberg, and Crocker H. Liu. 2013. "Investment Opportunities and Share Repurchases." *Journal of Corporate Finance* 23. Elsevier B.V.: 23–38. doi:10.1016/j.jcorpfin.2013.07.006.
- Campbell, John L. 2007. "Why Would Corporations Behave in Socially Responsible Ways? An Institutional Theory of Corporate Social Responsibility." *Academy of Management Review* 32 (3): 946–67.
- Card, David, and Dean R. Hyslop. 2009. "The Dynamic Effects of an Earnings Subsidy for Long-Term Welfare Recipients: Evidence from the Self Sufficiency Project Applicant Experiment." *Journal of Econometrics* 153 (1). Elsevier B.V.: 1–20. doi:10.1016/j.jeconom.2009.03.013.
- Cheung, Yan Leung, Weiqiang Tan, and Wenming Wang. 2016. "National Stakeholder Orientation, Corporate Social Responsibility, and Bank Loan Cost." *Journal of Business Ethics*. Springer Netherlands, 1–20. doi:10.1007/s10551-016-3140-8.
- Chih, Hsiang-Lin, Hsiang-Hsuan Chih, and Tzu-Yin Chen. 2010. "On the Determinants of Corporate Social Responsibility: International Evidence on the Financial Industry." *Journal of Business Ethics* 93 (1): 115–35. doi:10.1007/s10551-009-0186-x.
- Chinn, Menzie D., and Hiro Ito. 2006. "What Matters for Financial Development? Capital Controls, Institutions, and Interactions." *Journal of Development Economics* 81: 163–92.
- . 2008. "A New Measure of Financial Openness." *Journal of Comparative Policy Analysis: Research and Practice* 10 (3): 309–22.
- Cornett, Marcia M., Otgontsetseg Erhemjamts, and Hassan Tehranian. 2014. "Corporate Social Responsibility and Its Impact on Financial Performance: Investigation of U.S. Commercial Banks," 1–53. <https://www2.bc.edu/~tehranih/CSR-Performance Relationship for Banks Jan 2014.pdf>.
- Cornett, Marcia Millon, Otgontsetseg Erhemjamts, and Hassan Tehranian. 2016. "Greed or Good Deeds: An Examination of the Relation between Corporate Social Responsibility and the Financial Performance of U.S. Commercial Banks around the Financial Crisis." *Journal of Banking & Finance* 70. Elsevier B.V.: 137–59. doi:10.1016/j.jbankfin.2016.04.024.
- Cottrill, Melville T. 1990. "Corporate Social Responsibility and the Marketplace." *Journal of Business Ethics* 9 (9): 723–29. doi:10.1007/BF00386355.
- Curry, Timothy J., Gary S. Fissel, and Carlos D. Ramirez. 2008. "The Impact of Bank Supervision on Loan Growth." *North American Journal of Economics and Finance* 19 (2):

113–34.

- Deegan, Craig. 2002. "Introduction: The Legitimising Effect of Social and Environmental Disclosures – a Theoretical Foundation." *Accounting, Auditing & Accountability Journal* 15 (3): 282–311.
- Dierkes, M., and R. Coppock. 1978. "Europe Tries the Corporate Social Report." *Business and Society Review* 25: 21–24.
- Dijk, Andrea van, Lotte Griek, and Chloe Jansen. 2012. "Bridging the Gaps: Effectively Addressing ESG Risks in Emerging Markets." Sustainalytics.
- Elliott, D. 2014. "Bank Liquidity Requirements: An Introduction and Overview." UK. [https://www.brookings.edu/wp-content/uploads/2016/06/23\\_bank\\_liquidity\\_requirements\\_intro\\_overview\\_elliott.pdf](https://www.brookings.edu/wp-content/uploads/2016/06/23_bank_liquidity_requirements_intro_overview_elliott.pdf).
- Elzinga, Kenneth G., and David E. Mills. 2011. "The Lerner Index of Monopoly Power: Origins and Uses." *American Economic Review* 101 (3): 558–64.
- Focarelli, Dario, and Alberto Franco Pozzolo. 2001. "The Patterns of Cross-Border Bank Mergers and Shareholdings in OECD Countries." *Journal of Banking and Finance* 25 (12): 2305–37. doi:10.1016/S0378-4266(01)00192-3.
- Fombrun, Charles, and Mark Shanley. 1990. "What's in a Name? Reputation Building and Corporate Strategy." *Academy of Management Journal* 33 (2): 233–58.
- Freeman, Edward, and Jeanne Liedtka. 1992. "Corporate Social Responsibility: A Critical Approach." *Business Horizons* 34 (4): 92–98. <http://www.sciencedirect.com/science/journal/00076813/34/4>.
- Friede, Gunnar, Timo Busch, and Alexander Bassen. 2015. "ESG and Financial Performance: Aggregated Evidence from More than 2000 Empirical Studies." *Journal of Sustainable Finance & Investment* 5 (4): 210–33. doi:10.1080/20430795.2015.1118917.
- Friedman, Milton. 1962. *Capitalism and Freedom*. 14th ed. Chicago: The University of Chicago Press. <http://www.press.uchicago.edu/ucp/books/book/chicago/C/bo18146821.html>.
- Fungáčová, Zuzana, Pierre Pessarossi, and Laurent Weill. 2013. "Is Bank Competition Detrimental to Efficiency? Evidence from China." *China Economic Review* 27: 121–34.
- Greene, William H. 2011. *Econometric Analysis*. Prentice Hall.
- Griffin, Jennifer J., and John F. Mahon. 1997. "The Corporate Social Performance and Corporate Financial Performance Debate: Twenty-Five Years of Incomparable Research." *Business & Society* 36: 5–31.
- Guthrie, James, and Lee D. Parker. 1989. "Corporate Social Reporting: A Rebuttal of Legitimacy Theory." *Accounting and Business Research* 19 (76): 343–52. doi:10.1080/00014788.1989.9728863.
- Hahn, Rüdiger, and Michael Kühnen. 2013. "Determinants of Sustainability Reporting: A Review of Results, Trends, Theory, and Opportunities in an Expanding Field of Research." *Journal of Cleaner Production* 59: 5–21.
- Halbritter, Gerhard, and Gregor Dorfleitner. 2015. "The Wages of Social Responsibility — Where Are They? A Critical Review of ESG Investing." *Review of Financial Economics* 26: 25–35.
- Healy, Paul M., and Krishna G. Palepu. 2001. "Information Asymmetry, Corporate Disclosure, and the Capital Markets: A Review of the Empirical Disclosure Literature." *Journal of Accounting and Economics* 31 (1–3): 405–40. doi:10.1016/S0165-4101(01)00018-0.
- Henry, Darren. 2011. "Ownership Structure and Tax-Friendly Dividends." *Journal of Banking and Finance* 35 (10). Elsevier B.V.: 2747–60. doi:10.1016/j.jbankfin.2011.03.003.
- Hernandez, Morela. 2012. "Toward an Understanding of the Psychology of Stewardship." *Academy of Management Review* 37 (2): 172–93. doi:10.5465/amr.2010.0363.
- IFC. 2006. "Adding Sustainability Variables to Asian Sectoral Analysis." USA. [http://www.ifc.org/wps/wcm/connect/fc94da0048855bd78a4cda6a6515bb18/ASrIA\\_Taking\\_Stock\\_Banking.pdf?MOD=AJPERES&CACHEID=fc94da0048855bd78a4cda6a6515bb18](http://www.ifc.org/wps/wcm/connect/fc94da0048855bd78a4cda6a6515bb18/ASrIA_Taking_Stock_Banking.pdf?MOD=AJPERES&CACHEID=fc94da0048855bd78a4cda6a6515bb18).



- IIR. 2016. "Applying the Integrated Reporting Concepts of Outcomes and Social and Relationship Capital in the Banking Industry." <http://integratedreporting.org/wp-content/uploads/2016/03/SR-Capital-and-Outcomes-IR-Banking-Network.pdf>.
- Ioannou, Ioannis, and George Serafeim. 2012. "What Drives Corporate Social Performance? The Role of Nation-Level Institutions." *Journal of International Business Studies* 43 (9): 834–64.
- . 2014. "The Consequences of Mandatory Corporate Sustainability Reporting: Evidence from Four Countries." Harvard Business School Working Paper.
- Jackson, Gregory, and Androniki Apostolakou. 2010. "Corporate Social Responsibility in Western Europe: An Institutional Mirror or Substitute?" *Journal of Business Ethics* 94 (3): 371–94.
- Jizi, Mohammad Issam, Aly Salama, Robert Dixon, and Rebecca Stratling. 2013. "Corporate Governance and Corporate Social Responsibility Disclosure: Evidence from the US Banking Sector." *Journal of Business Ethics*, 1–15. doi:10.1007/s10551-013-1929-2.
- Jo, Hoje, Hakkon Kim, and Kwangwoo Park. 2014. "Corporate Environmental Responsibility and Firm Performance in the Financial Services Sector." *Journal of Business Ethics* 131 (2): 257–84. doi:10.1007/s10551-014-2276-7.
- Jostarndt, Philipp, and Zacharias Sautner. 2008. "Financial Distress, Corporate Control, and Management Turnover." *Journal of Banking & Finance* 32 (10): 2188–2204. doi:10.1016/j.jbankfin.2007.12.040.
- Kapstein, Ethan B., and René Kim. 2010. "The Social and Economic Impact of Standard Chartered in Indonesia."
- Karaibrahimoglu, Yasemin Zengin. 2010. "Corporate Social Responsibility in Times of Financial Crisis." *African Journal of Business Management* 4 (4): 382–89.
- Kaufer, Katrin. 2014. "Social Responsibility as a Core Business Model in Banking: A Case Study in the Financial Sector." *Journal of Sustainable Finance & Investment* 4 (1): 76–89. doi:10.1080/20430795.2014.887350.
- Kose, M. Ayhan, and Eswar S. Prasad. 2012. "Capital Accounts: Liberalize or Not?" *Finance and Development*.
- KPMG International. 2011. "Expect the Unexpected: Building Business Value in a Changing World."
- Lacy, Peter, Tim Cooper, Rob Hayward, and Lisa Neuberger. 2010. "A New Era of Sustainability: UN Global Compact-Accenture CEO Study 2010."
- Lys, Thomas, James P. Naughton, and Clare Wang. 2015. "Signaling through Corporate Accountability Reporting." *Journal of Accounting and Economics* 60 (1): 56–72. doi:10.1016/j.jacceco.2015.03.001.
- Mallin, Christine, Hisham Farag, and Kean Ow-Yong. 2014. "Corporate Social Responsibility and Financial Performance in Islamic Banks." *Journal of Economic Behavior and Organization* 103 (March 2013). Elsevier B.V.: S21–38. doi:10.1016/j.jebo.2014.03.001.
- Margolis, Joshua D., Hillary Anger Elfenbein, and James P. Walsh. 2009. "Does It Pay to Be Good...And Does It Matter? A Meta-Analysis of the Relationship between Corporate Social and Financial Performance."
- McWilliams, Abigail, Donald S. Siegel, and Patrick M. Wright. 2006. "Corporate Social Responsibility: Strategic Implications." *Journal of Management Studies* 43 (1): 1–18.
- Miller, Terry, and Anthony B. Kim. 2015. "Economic Freedom: The Proven Path to Prosperity." *The Heritage Foundation*.
- Nollet, Joscha, George Filis, and Evangelos Mitrokostas. 2016. "Corporate Social Responsibility and Financial Performance: A Non-Linear and Disaggregated Approach." *Economic Modelling* 52. Elsevier B.V.: 400–407. doi:10.1016/j.econmod.2015.09.019.
- Orlitzky, Marc. 2001. "Does Firm Size Confound the Relationship between Corporate Social Performance and Firm Financial Performance?" *Journal of Business Ethics* 33 (2): 167–80.

doi:10.1023/A:1017516826427.

- Park, Andrew, and Curtis Ravenel. 2013. "Integrating Sustainability Into Capital Markets: Bloomberg LP And ESG's Quantitative Legitimacy." *Journal of Applied Corporate Finance* 25 (3): 62–67.
- Pava, Moses L., and Joshua Krausz. 1996. "The Association between Corporate Social Responsibility and Financial Performance: The Paradox of Social Cost." *Journal of Business Ethics* 15 (3): 321–57. doi:10.1007/BF00382958.
- PwC. 2015. "The World in 2050: Will the Shift in Global Economic Power Continue?"
- Qin, Xiao, and Chengying Luo. 2014. "Capital Account Openness and Early Warning System for Banking Crises in G20 Countries." *Economic Modelling* 39: 190–94.
- Rahaman, Mohammad M. 2011. "Access to Financing and Firm Growth." *Journal of Banking and Finance* 35 (3). Elsevier B.V.: 709–23. doi:10.1016/j.jbankfin.2010.09.005.
- Reverte, Cormelo. 2009. "Determinants of Corporate Social Responsibility Disclosure Ratings by Spanish Listed Firms." *Journal of Business Ethics* 88 (2): 351–66. doi:10.1007/s10551-008-9968-9.
- Rohde, David. 2012. "The Swelling Middle." *Reuters*.
- Saghi-Zedek, Nadia, and Amine Tarazi. 2014. "Excess Control Rights, Financial Crisis and Bank Profitability and Risk." *Journal of Banking and Finance* 55. Elsevier B.V.: 361–79. doi:10.1016/j.jbankfin.2014.10.011.
- Sahut, Jean-Michel, and Mehdi Mili. 2011. "Banking Distress in MENA Countries and the Role of Mergers as a Strategic Policy to Resolve Distress." *Economic Modelling* 28 (1–2): 138–46.
- Scholten, Bert, and Lammertjan Dam. 2007. "Banking on the Equator. Are Banks That Adopted the Equator Principles Different from Non-Adopters?" *World Development* 35 (8): 1307–28. doi:10.1016/j.worlddev.2006.10.013.
- Shen, Chung-Hua, and Hsiang-Lin Chih. 2005. "Investor Protection, Prospect Theory, and Earnings Management: An International Comparison of the Banking Industry." *Journal of Banking & Finance* 29 (10): 2675–97.
- Simpson, W. Gary, and Theodor Kohers. 2002. "The Link between Corporate Social and Financial Performance: Evidence from the Banking Industry." *Journal of Business Ethics* 35 (2): 97–109. doi:10.1023/A:1013082525900.
- Spencer, Peter. 2016. "US Bank Credit Spreads during the Financial Crisis." *Journal of Banking & Finance* 71. Elsevier B.V.: 168–82. doi:10.1016/j.jbankfin.2016.04.015.
- Stellner, Christoph, Christian Klein, and Bernhard Zwergel. 2015. "Corporate Social Responsibility and Eurozone Corporate Bonds: The Moderating Role of Country Sustainability." *Journal of Banking & Finance* 59. Elsevier B.V.: 538–49. doi:10.1016/j.jbankfin.2015.04.032.
- Tilling, Matthew V. 2004. "Refinements to Legitimacy Theory in Social and Environmental Accounting Not One Theory but Two ( at Least )." *Commerce Research Paper Series*. Vol. 6. <http://www.flinders.edu.au/sabs/business-files/research/papers/2004/04-6.pdf>.
- Trotman, Ken T., and Graham W. Bradley. 1981. "Associations between Social Responsibility Disclosure and Characteristics of Companies." *Accounting, Organizations and Society* 6 (4): 355–62.
- UKSIF. 2007. "Long-Term Investing." London. <http://uksif.org/wp-content/uploads/2012/12/LYDENBERG-S.-2007.-Long-term-investing-a-proposal-for-how-to-define-and-implement-long-tem-investing.pdf>.
- United Nations. n.d. "Hunger."
- . n.d. "Water Scarcity."
- United Nations Global Compact and KPMG International. 2015. "SDG Industry Matrix."
- University of Cambridge Institute for Sustainability Leadership. 2014. "Stability and Sustainability in Banking Reform: Are Environmental Risks Missing in Basel III?"

Cambridge and Geneva.

- UNPRI. 2013. "Integrated Analysis - How Investors Are Addressing Environmental, Social and Governance Factors in Fundamental Equity Valuation."
- . 2016. "PRI Reporting Framework." *ESG Incorporation in Actively Managed Fixed Income*. <https://reporting.unpri.org/surveys/PRI-Reporting-Framework-2016/982bed68-801c-47b9-8fa6-9d6732051233/2548e56da8f543a383b48979ce205aaa/html/2/?lang=&a=1>.
- Waddock, Sandra A., and Samuel B. Graves. 1997. "The Corporate Social Performance-Financial Performance Link." *Strategic Management Journal* 18 (4): 303–19.
- Wang, Jianling, Lin Song, and Shujie Yao. 2013. "The Determinants of Corporate Social Responsibility Disclosure: Evidence From China." *Journal of Applied Business Research* 29 (6): 1833–48.
- Wang, Qian, Junsheng Dou, and Shenghua Jia. 2015. "A Meta-Analytic Review of Corporate Social Responsibility and Corporate Financial Performance: The Moderating Effect of Contextual Factors." *Business & Society*, 1–39.
- Wang, Wei Kang, Wen Min Lu, and Yi Ling Lin. 2012. "Does Corporate Governance Play an Important Role in BHC Performance? Evidence from the U.S." *Economic Modelling* 29 (3): 751–60.
- WEF. 2011. "The Future of Long-Term Investing." USA.  
[http://www3.weforum.org/docs/WEF\\_FutureLongTermInvesting\\_Report\\_2011.pdf](http://www3.weforum.org/docs/WEF_FutureLongTermInvesting_Report_2011.pdf).
- Whitley, R. 1999. *Divergent Capitalisms: The Social Structuring and Change of Business Systems*. Oxford: Oxford University Press.
- World Economic Forum. 2013. "Creating a Sustainable Energy Future through Trade."
- Wu, Meng-Wen, and Chung-Hua Shen. 2013. "Corporate Social Responsibility in the Banking Industry: Motives and Financial Performance." *Journal of Banking & Finance* 37 (9). Elsevier B.V.: 3529–47. doi:10.1016/j.jbankfin.2013.04.023.
- WWF. 2014. "Environmental, Social and Governance Integration for Banks: A Guide to Starting Implementation."
- . 2015. "Sustainable Finance in Singapore, Indonesia, and Malaysia: A Review of Financiers' ESG Practices Disclosure Standards and Regulations."  
<http://wwf.panda.org/?246811/Sustainable-finance-in-Singapore-Malaysia-and-Indonesia-A-review-of-financiersESG-practice>.
- Zeitun, Rami, Akram Temimi, and Karim Mimouni. 2016. "Do Financial Crises Alter the Dynamics of Corporate Capital Structure? Evidence from GCC Countries." *The Quarterly Review of Economics and Finance*. Board of Trustees of the University of Illinois. doi:10.1016/j.qref.2016.05.004.

## Appendix

**Table A:** ESG indicators and definition

<i>Governance indicators</i>	<i>Definition</i>
<b>Board meetings</b> (BDMYear)	Total number of corporate board meetings held in the past year.
<b>Board size</b> (BDSize)	Number of Directors on the company's board, as reported by the company. Full time Directors only. Deputy members of the Board will not be counted.
<b>Independent director</b> (IndDirP)	Independent directors as a percentage of total board membership.
<b>Female executive</b> (FemExeP)	Number of female executives, as a percentage of total executives, as of the fiscal year end wherever available, otherwise as of the date of the latest filing. Executives are as defined by the company, or those individuals that form the company executive committee/board or management committee/board or equivalent.
<b>Women on board</b> (WomBDP)	Percentage of Women on the Board of Directors, as reported by the company.
<b>CEO duality</b> (CEODual)	Indicates whether the company's Chief Executive Officer is also Chairman of the Board, as reported by the company.
<b>CEO from the same company</b> (CEOWithn)	Indicates whether the chief executive officer (CEO) or person with equivalent role, as of the fiscal year end wherever available, otherwise as at date of latest filing, has been appointed from within the company (is not external to the business).
<b>Female CEO</b> (FemaCEO)	Indicates whether the company Chief Executive Officer (CEO) or equivalent is female, as of the fiscal year end wherever available, otherwise as of the date of the latest filing. Where the company has a two-tier board, this field refers to the chairperson of the management board.
<b>Female Chairperson or equivalent</b> (FemaChai)	Indicates whether the company chairperson or equivalent is female, as of the date of the last filing. Where the company has a two-tier board, this field refers to the chairperson of the supervisory board.
<b>Former CEO or its equivalent on board</b> (FormCEO)	Indicates whether a former company chief executive officer (CEO) or person with equivalent role has been a director on the board at the fiscal year end. Where the company has a two-tier board, this field

refers to the supervisory board.

**Independent chairperson** (IndeChai) Indicates whether the company chairperson was independent as of the fiscal year end wherever available, otherwise as at date of latest filing. Independence is defined according to the company's own criteria. Where the company has a two-tier board, this field refers to the chairperson of the supervisory board.

---

*Environment indicators*

---

**Biodiversity policy** (BioPol) Indicates whether the company has implemented any initiatives to ensure the protection of biodiversity. This might include trees and vegetation as well as wildlife and endangered species.

**Climate change opportunities** (ClimCh) Indicates whether the Management Discussion and Analysis (MD&A) and its equivalent section of company's annual report discuss business opportunities related to climate change.

**Climate change policy** (ClimPol) Indicates whether the company has outlined its intention to help reduce global emissions of the Greenhouse Gases that cause climate change through its ongoing operations and/or the use of its products and services. Examples might include efforts to reduce Greenhouse Gas (GHG) emissions, efforts to improve energy efficiency, efforts to derive energy from cleaner fuel sources, investment in product development to reduce emissions generated or energy consumed in the use of the company's products etc.

**Climate change products** (ClimProd) Indicates whether the company has developed and/or launched products during the current period only which address future impacts of climate change and/or which mitigate customers' contributions to climate change by reduced Greenhouse Gases emissions. The products may or may not be new to the market.

**Climate risks** (ClimRisk) Indicates whether the Management Discussion and Analysis (MD&A) or its equivalent risk section of company's annual report discusses business risks related to climate change.

**Emissions reduction policy** (EmisRed) Indicates whether the company has implemented any initiatives to reduce its environmental emissions to air.

**Energy efficiency policy** (EnerPol) Indicates whether the company has implemented any initiatives to make its use of energy more efficient.

**Environment quality** Indicates whether the company has introduced any kind of

<b>management policy</b> (EnvQual)	environmental quality management and/or environmental management system to help reduce the environmental footprint of its operations.
<b>Environment policy in supply chain</b> (EnvSupp)	Indicates whether the company has implemented any initiatives to reduce the environmental footprint of its supply chain. Environmental footprint reductions could be achieved by reducing waste, by reducing resource use, by reducing environmental emissions, by insisting on the introduction of environmental management systems etc. in the supply chain.
<b>Green building policy</b> (GreBuil)	Indicates whether the company has taken any steps towards using environmental technologies and/or environmental principles in the design and construction of its buildings.
<b>Waste reduction policy</b> (WastRed)	Indicates whether the company has implemented any initiatives to reduce the waste generated during the course of its operations.
<b>Water policy</b> (WatePol)	Indicates whether the organization has undertaken any initiatives to reduce the quantity of water used or to improve the efficiency of its processes, and whether the company is considering the potential water stress to its areas of operation.

---

*Social indicators*

<b>Anti-bribery ethics policy</b> (BribPol)	Indicates whether the company has policies in place to prevent bribery of its employees, executives, and directors by others, and/or the prevention of involvement in any corrupt business practices limiting open competition by deception, including but not limited to: cartels, collusion, fraud, embezzlement, nepotism, price fixing, and preferred patronage.
<b>Employee protection/whistle blower policy</b> (EmpProt)	Indicates whether the company has systems and policies in place for the reporting of internal ethical compliance complaints without retaliation or retribution, including but not limited to access to confidential third-party ethics hotlines or systems for confidential written complaints.
<b>Employee CSR training policy</b> (EmpTrai)	Discloses whether the company conducts training courses for employees on Corporate Social Responsibility (CSR).
<b>Equal opportunity policy</b> (EqOpPol)	Indicates whether the company has made a proactive commitment to ensure non-discrimination against any type of demographic group. This could be in the form of an equal opportunities policy, as described by the company.

<b>Business ethics policy</b> (EthiPol)	Indicates whether the company has established ethical guidelines and/or a compliance policy for its non-management/executive employees in the conduct of company business.
<b>Fair remuneration policy</b> (FairRen)	Indicates whether the company has its policy within its human resource policy or other statements which shows company's commitment to compensate its employees based on their work performance.
<b>Health and safety policy</b> (HealPol)	Indicates whether the company has recognized its health and safety risks and responsibilities and is making any effort to improve the management of employee health and/or employee safety.
<b>Human rights policy</b> (HumRPol)	Indicates whether the company has implemented any initiatives to ensure the protection of the rights of all people it works with.
<b>Policy to reduce the social risk in supply chain management</b> (SocSupp)	Indicates whether the company has implemented any initiatives to reduce the social risks in its supply chain. Social risks might include poor working conditions, the use of child or forced labor, lack of a living, fair or minimum wage etc.
<b>Supplier's guidelines, considered ESG, is publicly disclosed</b> (SusSupG)	Indicates whether a supplier's guidelines, that encompass all Environmental, Social and Governance (ESG) areas, are publicly disclosed.
<b>Training policy</b> (TraiPol)	Indicates whether the company has implemented any initiatives to train new and existing employees on career development, education or skills. Training initiatives should apply to all employee levels, not just to those employees at management level.
<b>Signatory of United Nations Global Compact</b> (UnGlob)	Indicates whether the company is a signatory of the United Nations Global Compact (UNGC).
<b>Personnel expenses per employee</b> (PExEmpl)	Personnel expenses divided by the number of employees.

---

*Country ESG score*

---

<b>Environment</b>	Carbon Intensity, CO2 per capita from fossil fuel use, Energy imports (% of energy use), Coal Consumption, Electricity Consumption, % Nuclear Power, % Renewable (non-hydro), Freshwater Withdrawals, Forest area (% of land area).
<b>Social</b>	% seats held by women in national parliament, Ages 15-24 employment to population ratio, Vulnerable employment (% of total emp.), Share women employed (% of total emp.), Life Expectancy at Birth, Infant mortality rate (per 1,000 births), Prevalence of HIV (% of population ages 15-49), Prevalence of undernourishment (% of pop.), Net Migration, Ratio of female to male primary enrollment (%), Public Spending on Education, Literacy Rate, Poverty ratio (% pop. at national poverty line), GINI Income Inequality, Net ODA Received (current US\$), Military expenditure (% of GDP), The Human Development Index data.
<b>Governance</b>	Property Rights Freedom, Labor Freedom, Investment Freedom, Business Freedom, Regulatory Quality, Ease of Doing Business Rank, EIU Political Risk, Government Effectiveness, Rule of Law, Control of Corruption, R&D expenditure (% GDP), Internet Users (per 100 people), Number of IPOs, Patent Applications.

---



**Table B:** Descriptive statistics

Variable	Observation	Min	Max	Mean	Standard Deviation	Skewness	Kurtosis
Bank Size	2403	4.050	20.629	12.580	2.694	0.412	3.286
Capitalization	2402	-0.310	0.957	0.109	0.060	5.038	60.966
Liquidity	2383	0.000	90.306	69.635	12.716	-1.349	5.309
Efficiency	2391	-17.812	676.061	50.804	20.533	12.816	368.349
Asset Quality	2142	0.000	42.450	4.305	4.003	3.099	17.699
Business Model	2316	12.074	6358.499	61.489	131.535	47.403	2269.883
Return on Asset	2392	-13.339	40.573	1.710	1.690	5.985	137.755
Inflation	2236	-25.130	103.820	7.053	9.046	4.838	55.058
Economic Growth	2237	-14.800	26.170	5.433	3.690	0.075	7.441
Financial Openness	1993	0.000	100.000	48.776	31.974	0.444	1.759
Economic Freedom	2237	36.140	78.960	59.954	6.778	0.444	3.041
Country ESG	1993	25.498	56.929	42.290	5.926	0.177	2.555
BioPol	2403	0	1	0.030	0.171	5.514	31.406
ClimCh	2403	0	1	0.006	0.076	12.986	169.649
ClimPol	2403	0	1	0.088	0.283	2.913	9.485
ClimProd	2403	0	1	0.004	0.061	16.248	265.004
ClimRisk	2403	0	1	0.006	0.076	12.986	169.649
EmisRed	2403	0	1	0.117	0.321	2.384	6.684
EnerPol	2403	0	1	0.163	0.370	1.823	4.325
EnvQual	2403	0	1	0.045	0.207	4.393	20.297
EnvSupp	2403	0	1	0.068	0.252	3.437	12.815
GreBuil	2403	0	1	0.040	0.195	4.726	23.336
WastRed	2403	0	1	0.077	0.267	3.163	11.003
WatePol	2403	0	1	0.058	0.234	3.772	15.226
BDMYear	1053	0.693	5.050	2.283	0.562	0.893	4.887
BDSIZE	1309	1.386	3.091	2.341	0.310	-0.274	3.172
CEODual	2403	0	1	0.080	0.272	3.088	10.538
CEOWithn	2403	0	1	0.175	0.380	1.713	3.933
FemaCEO	2403	0	1	0.025	0.157	6.035	37.419
FemaChai	2403	0	1	0.015	0.123	7.872	62.962
FormCEO	2403	0	1	0.050	0.217	4.153	18.245
IndeChai	2403	0	1	0.100	0.300	2.669	8.123
IndDirP	1016	0	1	0.454	0.206	0.323	2.804
FemExeP	1145	0.000	1.000	0.096	0.134	1.883	7.941
WomBDP	1303	0.000	0.750	0.086	0.100	1.547	7.231
BribPol	2403	0	1	0.114	0.317	2.435	6.930

EmpProt	2403	0	1	0.107	0.310	2.537	7.434
EmpTrai	2403	0	1	0.022	0.146	6.575	44.234
EqOpPol	2403	0	1	0.133	0.340	2.159	5.663
EthiPol	2403	0	1	0.149	0.356	1.976	4.906
FairRen	2403	0	1	0.005	0.071	14.045	198.255
HealPol	2403	0	1	0.153	0.360	1.926	4.711
HumRPol	2403	0	1	0.117	0.321	2.384	6.684
PEXEmpl	1605	8.627	23.681	13.271	2.268	1.286	4.574
SocSupp	2403	0	1	0.048	0.214	4.215	18.766
SusSupG	2403	0	1	0.029	0.167	5.644	32.856
TraiPol	2403	0	1	0.216	0.411	1.383	2.914
UnGlob	2403	0	1	0.047	0.211	4.302	19.504

---

**Table 1:** Environmental factors in binary form (country ESG score)

	(1) BioPol	(2) ClimCh	(3) ClimPol	(4) ClimProd	(5) ClimRisk	(6) EmisRed	(7) EnerPol	(8) EnvQual	(9) EnvSupp	(10) GreBuil	(11) WastRed	(12) WatePol
Bank Size	0.420+ (0.16)	1.476* (0.60)	1.946+ (0.18)	-0.086 (0.25)	1.140* (0.50)	1.631+ (0.18)	3.528+ (0.16)	0.935+ (0.24)	2.079+ (0.21)	1.530+ (0.29)	0.874+ (0.19)	0.446+ (0.16)
Capitalization	3.439 (8.31)	60.269 (43.34)	12.451 (8.57)	12.017 (9.81)	10.679 (19.76)	7.029 (6.46)	10.532 (6.98)	11.294 (7.94)	20.813* (9.26)	3.920 (11.15)	11.639- (6.54)	8.212 (6.24)
Liquidity	-0.017 (0.02)	-0.123 (0.09)	-0.066* (0.03)	0.000 (0.04)	-0.083 (0.07)	-0.074+ (0.02)	-0.024 (0.03)	-0.126+ (0.03)	-0.071* (0.03)	-0.085* (0.04)	-0.078+ (0.02)	-0.095+ (0.02)
Inefficiency	-0.019 (0.02)	0.097- (0.05)	-0.010 (0.02)	-0.058 (0.04)	0.048 (0.05)	-0.009 (0.02)	0.004 (0.02)	-0.009 (0.02)	-0.016 (0.02)	-0.007 (0.03)	-0.006 (0.02)	-0.038* (0.02)
Asset Quality	-0.093 (0.10)	-0.110 (0.43)	-0.193 (0.13)	-0.156 (0.20)	-0.045 (0.32)	0.008 (0.07)	0.027 (0.08)	-0.120 (0.12)	0.031 (0.11)	0.122 (0.12)	-0.043 (0.08)	-0.203* (0.10)
Business Model	0.000 (0.03)	0.025 (0.09)	0.032 (0.03)	-0.028 (0.04)	0.001 (0.08)	0.022 (0.02)	0.017 (0.03)	0.052- (0.03)	0.011 (0.03)	0.070 (0.04)	0.050* (0.02)	0.008 (0.02)
Return on Assets	-0.480- (0.29)	-0.105 (1.79)	-0.565- (0.31)	-0.610 (0.51)	0.514 (0.76)	-0.524* (0.21)	-0.384- (0.21)	-0.612* (0.29)	-0.920+ (0.34)	-0.264 (0.32)	-0.510* (0.20)	-0.838+ (0.23)
ESG Country Score	0.076 (0.06)	0.390* (0.19)	0.274+ (0.07)	0.081 (0.09)	0.758+ (0.20)	0.236+ (0.05)	0.214+ (0.06)	0.207+ (0.07)	0.199+ (0.07)	0.173* (0.08)	0.213+ (0.05)	0.144+ (0.05)
Constant	-13.997+ (4.56)	- 73.983+ (16.61)	-44.221+ (4.48)	-4.131 (7.04)	-67.613+ (16.42)	-35.498+ (4.76)	- 66.657+ (4.17)	-24.416+ (6.51)	-43.479+ (5.28)	- 40.725+ (7.47)	-25.931+ (5.04)	-9.164* (4.01)
Insig2u Constant	2.790+ (0.22)	5.085+ (0.25)	4.048+ (0.19)	-10.514 (308.98)	3.983+ (0.34)	3.781+ (0.21)	5.057+ (0.16)	2.993+ (0.33)	4.086+ (0.19)	4.232+ (0.25)	3.193+ (0.26)	2.339+ (0.33)
Observations	1737	1737	1737	1737	1737	1737	1737	1737	1737	1737	1737	1737
Model	re	re	re	re	re	re	re	re	re	re	re	re

Standard errors in parentheses

-  $p < 0.1$ , \*  $p < 0.05$ , +  $p < 0.01$

**Table 2:** Social factors in binary form (country ESG score)

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
	BribPol	EmpProt	EmpTrai	EqOpPol	EthiPol	FairRen	HealPol	HumRPol	SocSupp	SusSupG	TraiPol	UnGlob
Bank Size	8.322+ (0.50)	5.016+ (0.37)	0.373 (0.26)	1.617+ (0.18)	3.772+ (0.32)	0.416 (0.53)	1.592+ (0.22)	1.038+ (0.21)	0.630+ (0.15)	0.579- (0.34)	2.820+ (0.17)	1.825+ (0.31)
Capitalization	20.795* (10.58)	22.085* (8.72)	5.604 (9.80)	9.092- (5.52)	12.899- (7.23)	-10.328 (28.50)	7.878 (5.48)	-0.485 (6.29)	13.507- (6.93)	14.629- (7.76)	16.161+ (6.16)	4.392 (12.40)
Liquidity	0.094* (0.04)	0.050 (0.03)	-0.111+ (0.04)	-0.017 (0.02)	-0.015 (0.02)	-0.060 (0.07)	-0.021 (0.02)	-0.036- (0.02)	-0.075+ (0.02)	-0.113+ (0.03)	-0.002 (0.02)	-0.146+ (0.04)
Inefficiency	-0.012 (0.03)	-0.018 (0.03)	-0.041 (0.03)	-0.021 (0.02)	0.020 (0.02)	-0.019 (0.07)	-0.015 (0.02)	-0.033* (0.02)	-0.020 (0.02)	-0.007 (0.02)	-0.013 (0.02)	0.025 (0.03)
Asset Quality	0.168 (0.14)	-0.035 (0.11)	-0.246 (0.16)	-0.025 (0.07)	0.045 (0.07)	-0.063 (0.30)	-0.046 (0.07)	-0.104 (0.08)	-0.125 (0.09)	-0.105 (0.11)	-0.015 (0.08)	-0.107 (0.18)
Business Model	-0.007 (0.04)	0.004 (0.03)	0.023 (0.04)	-0.012 (0.02)	0.031 (0.03)	-0.067 (0.09)	-0.004 (0.02)	-0.023 (0.02)	0.026 (0.02)	0.014 (0.03)	0.008 (0.02)	0.103* (0.04)
Return on Assets	-0.100 (0.32)	-0.163 (0.27)	-0.958* (0.40)	-0.506+ (0.19)	-0.221 (0.24)	-0.823 (0.88)	-0.410* (0.19)	-0.373- (0.19)	-0.767+ (0.25)	-0.733* (0.30)	-0.341- (0.20)	-0.388 (0.37)
ESG Country Score	0.130 (0.10)	0.043 (0.07)	0.188* (0.08)	0.249+ (0.05)	0.242+ (0.07)	0.397- (0.21)	0.235+ (0.05)	0.160+ (0.04)	0.101- (0.05)	0.105 (0.06)	0.296+ (0.05)	0.232+ (0.08)
Constant	- 155.641+ (9.17)	-94.086+ (7.15)	-13.275* (6.74)	-37.045+ (4.47)	- 78.427+ (6.31)	-27.728- (16.27)	-35.493+ (4.83)	-19.683+ (4.55)	-15.784+ (4.09)	-12.976- (7.11)	- 58.879+ (3.89)	-45.853+ (7.62)
Insig2u												
Constant	6.837+ (0.20)	5.923+ (0.18)	2.970+ (0.35)	3.799+ (0.21)	5.414+ (0.19)	3.507+ (0.51)	3.798+ (0.24)	2.796+ (0.31)	2.908+ (0.22)	2.282* (0.92)	4.768+ (0.17)	4.144+ (0.26)
Observations	1737	1737	1737	1737	1737	1737	1737	1737	1737	1737	1737	1737
Model	re	re	re	re	re	re	re	re	re	re	re	re

Standard errors in parentheses  
-  $p < 0.1$ , \*  $p < 0.05$ , +  $p < 0.01$

**Table 3:** Governance factors in binary form (country ESG score)

	(1)	(2)	(3)	(4)	(5)	(6)
	CEODual	CEOWithn	FemaCEO	FemaChai	FormCEO	IndeChai
Bank Size	0.586+	2.916+	0.215	0.134	0.727+	0.554+
	(0.15)	(0.30)	(0.14)	(0.18)	(0.16)	(0.15)
Capitalization	-4.070	6.453	0.610	6.723	-2.416	40.608+
	(9.54)	(5.38)	(6.31)	(10.73)	(6.91)	(6.31)
Liquidity	0.038	0.021	0.020	0.000	-0.031	0.091+
	(0.03)	(0.02)	(0.02)	(0.04)	(0.02)	(0.02)
Inefficiency	-0.069+	0.003	0.017	-0.002	-0.023	0.012
	(0.02)	(0.02)	(0.01)	(0.03)	(0.02)	(0.02)
Asset Quality	-0.072	0.060	0.148+	-0.435*	0.090-	-0.137*
	(0.08)	(0.05)	(0.05)	(0.19)	(0.05)	(0.06)
Business Model	0.029	0.087+	0.052*	0.034	0.029	0.101+
	(0.02)	(0.02)	(0.03)	(0.04)	(0.02)	(0.02)
Return on Assets	-0.549*	0.220	0.045	-0.181	-0.272	-0.096
	(0.26)	(0.13)	(0.14)	(0.46)	(0.20)	(0.18)
ESG Country Score	0.072	0.056	0.025	0.010	-0.007	0.043
	(0.06)	(0.05)	(0.06)	(0.08)	(0.05)	(0.05)
Constant	-18.436+	-56.880+	-17.555+	-12.108-	-15.129+	-32.406+
	(4.77)	(5.58)	(4.51)	(6.29)	(3.93)	(4.34)
Insig2u	3.358+	4.753+	2.524+	2.758+	2.980+	3.252+
Constant	3.358+	4.753+	2.524+	2.758+	2.980+	3.252+
	(0.20)	(0.22)	(0.24)	(0.24)	(0.22)	(0.21)
Observations	1737	1737	1737	1737	1737	1737
Model	re	re	re	re	re	re

Standard errors in parentheses

-  $p < 0.1$ , \*  $p < 0.05$ , +  $p < 0.01$

**Table 4:** ESG Scores (country ESG score)

	(1)	(2)	(3)	(4)	(5)	(6)
	BDMYear	BDSIZE	IndDirP	FemExeP	WomBDP	PEmPl
Bank Size	0.000 (0.03)	0.000 (0.01)	0.027– (0.02)	0.005– 0.00	0.025+ (0.01)	0.607+ (0.03)
Capitalization	-0.304 (0.45)	-0.137 (0.18)	0.132 (0.18)	-0.148 (0.13)	-0.033 (0.14)	2.451+ (0.59)
Liquidity	0.001 0.00	0.001 0.00	0.000 0.00	0.000 0.00	0.000 0.00	0.005– 0.00
Inefficiency	0.002 0.00	-0.001 0.00	0.002* 0.00	0.000 0.00	0.001* 0.00	0.004* 0.00
Asset Quality	0.008 (0.01)	-0.005* 0.00	0.004 0.00	0.000 0.00	-0.002– 0.00	0.007 0.00
Business Model	0.000 0.00	-0.002– 0.00	0.001 0.00	0.001 0.00	0.001 0.00	0.002 0.00
Return on Assets	-0.009 (0.01)	-0.005 0.00	0.010 (0.01)	0.000 0.00	0.000 0.00	0.031– (0.02)
ESG Country Score	-0.005 0.00	0.000 0.00	-0.002 0.00	0.000 0.00	0.000 0.00	-0.015* (0.01)
Constant	2.308+ (0.62)	2.419+ (0.17)	0.036 (0.26)	0.030 (0.09)	-0.310– (0.16)	4.981+ (0.58)
Observations	707	914	725	764	907	1170
Model	fe	re	fe	re	fe	re

**Table 5:** Environmental factors in binary form (further analyses with macroeconomic and institutional quality)

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
	BioPol	ClimCh	ClimPol	ClimProd	ClimRisk	EmisRed	EnerPol	EnvQual	EnvSupp	GreBuil	WastRed	WatePol
Bank Size	0.363 <sup>▣</sup> (0.17)	1.341 <sup>▣</sup> (0.66)	1.645 <sup>+</sup> (0.24)	-0.061 (0.26)	1.277 <sup>+</sup> (0.49)	1.787 <sup>+</sup> (0.18)	3.087 <sup>+</sup> (0.35)	1.264 <sup>+</sup> (0.27)	2.383 <sup>+</sup> (0.26)	0.976 <sup>+</sup> (0.27)	1.177 <sup>+</sup> (0.17)	0.459 <sup>+</sup> (0.16)
Capitalization	5.771 (8.54)	40.064 <sup>-</sup> (24.23)	14.690 <sup>-</sup> (8.06)	12.665 (9.83)	4.931 (19.68)	6.909 (6.63)	5.279 (7.06)	12.239 (10.38)	26.737 <sup>▣</sup> (11.89)	-1.598 (11.82)	9.377 (7.01)	8.429 (6.34)
Liquidity	-0.019 (0.02)	-0.126 (0.10)	-0.042 <sup>-</sup> (0.03)	-0.009 (0.04)	-0.082 (0.07)	-0.068 <sup>+</sup> (0.02)	-0.025 (0.03)	-0.139 <sup>+</sup> (0.03)	-0.071 <sup>-</sup> (0.04)	-0.062 <sup>▣</sup> (0.03)	-0.076 <sup>+</sup> (0.02)	-0.097 <sup>+</sup> (0.02)
Inefficiency	-0.019 (0.02)	0.096 <sup>-</sup> (0.05)	-0.021 (0.02)	-0.066 (0.05)	0.050 (0.06)	-0.005 (0.02)	0.002 (0.02)	-0.009 (0.03)	-0.026 (0.03)	-0.013 (0.03)	0.001 (0.02)	-0.039 <sup>▣</sup> (0.02)
Asset Quality	-0.060 (0.09)	-0.078 (0.33)	-0.155 (0.12)	-0.110 (0.19)	-0.083 (0.24)	0.003 (0.08)	0.051 (0.08)	-0.038 (0.14)	0.067 (0.13)	0.106 (0.11)	0.010 (0.08)	-0.154 <sup>-</sup> (0.09)
Business Model	-0.008 (0.03)	0.063 (0.10)	-0.003 (0.03)	-0.047 (0.04)	0.003 (0.07)	-0.002 (0.02)	-0.013 (0.03)	0.046 (0.04)	-0.011 (0.04)	0.014 (0.04)	0.038 (0.02)	-0.006 (0.02)
Return on Assets	-0.369 (0.29)	0.609 (1.03)	-0.415 (0.30)	-0.605 (0.51)	1.253 (0.81)	-0.506 <sup>▣</sup> (0.23)	-0.394 <sup>-</sup> (0.22)	-0.515 (0.35)	-0.863 <sup>▣</sup> (0.37)	-0.159 (0.34)	-0.440 <sup>▣</sup> (0.22)	-0.796 <sup>+</sup> (0.24)
Inflation	-0.013 (0.04)	-0.071 (0.14)	0.018 (0.02)	-0.013 (0.07)	-0.062 (0.11)	0.014 (0.02)	0.009 (0.02)	0.028 (0.03)	0.030 (0.02)	-0.036 (0.04)	-0.004 (0.02)	-0.021 (0.02)
Economic Growth	-0.042 (0.07)	-0.442 <sup>-</sup> (0.27)	-0.082 (0.06)	0.048 (0.13)	-0.558 <sup>+</sup> (0.21)	-0.104 <sup>▣</sup> (0.05)	-0.054 (0.05)	-0.012 (0.07)	-0.098 (0.07)	-0.114 (0.07)	-0.037 (0.05)	0.009 (0.05)
Financial Openness	-0.034 <sup>▣</sup> (0.02)	0.019 (0.05)	-0.054 <sup>+</sup> (0.02)	-0.032 (0.02)	0.060 (0.04)	-0.029 <sup>▣</sup> (0.01)	-0.049 <sup>+</sup> (0.02)	-0.055 <sup>▣</sup> (0.02)	-0.114 <sup>+</sup> (0.02)	-0.045 <sup>▣</sup> (0.02)	-0.023 <sup>-</sup> (0.01)	-0.026 <sup>▣</sup> (0.01)
Economic Freedom	0.044 (0.07)	-0.821 <sup>+</sup> (0.29)	0.177 <sup>+</sup> (0.07)	0.202 <sup>-</sup> (0.12)	-0.700 <sup>+</sup> (0.22)	0.231 <sup>+</sup> (0.06)	0.382 <sup>+</sup> (0.07)	0.250 <sup>+</sup> (0.09)	0.276 <sup>▣</sup> (0.12)	0.243 <sup>+</sup> (0.08)	0.285 <sup>+</sup> (0.05)	0.133 <sup>▣</sup> (0.05)
Constant	-10.723 <sup>▣</sup> (5.26)	-2.210 (22.85)	36.945 <sup>+</sup> (6.29)	-10.295 (8.49)	0.930 (14.88)	-39.834 <sup>+</sup> (5.25)	-69.793 <sup>+</sup> (7.92)	-33.760 <sup>+</sup> (7.80)	-51.290 <sup>+</sup> (8.75)	-31.544 <sup>+</sup> (7.12)	-38.035 <sup>+</sup> (4.99)	-9.186 <sup>▣</sup> (4.46)
Insig2u Constant	2.787 <sup>+</sup> (0.23)	4.801 <sup>+</sup> (0.29)	4.212 <sup>+</sup> (0.21)	-9.939 (315.60)	4.539 <sup>+</sup> (0.27)	4.094 <sup>+</sup> (0.19)	4.958 <sup>+</sup> (0.25)	3.536 <sup>+</sup> (0.31)	4.522 <sup>+</sup> (0.21)	3.593 <sup>+</sup> (0.27)	3.719 <sup>+</sup> (0.19)	2.414 <sup>+</sup> (0.31)
Observations	1737	1737	1737	1737	1737	1737	1737	1737	1737	1737	1737	1737
Model	re	re	re	re	re	re	re	re	re	re	re	re

Standard errors in parentheses

<sup>-</sup>  $p < 0.1$ , <sup>▣</sup>  $p < 0.05$ , <sup>+</sup>  $p < 0.01$

**Table 6:** Social factors in binary form (further analyses with macroeconomic and institutional quality)

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
	BribPol	EmpProt	EmpTrai	EqOpPol	EthiPol	FairRen	HealPol	HumRPol	SocSupp	SusSupG	TraiPol	UnGlob
Bank Size	3.082 <sup>+</sup>	1.766 <sup>+</sup>	0.341	1.545 <sup>+</sup>	2.071 <sup>+</sup>	0.310	1.648 <sup>+</sup>	1.397 <sup>+</sup>	0.555	0.649 <sup>+</sup>	3.309 <sup>+</sup>	1.711 <sup>+</sup>
	(0.17)	(0.21)	(0.22)	(0.20)	(0.30)	(0.49)	(0.21)	(0.20)	(0.57)	(0.25)	(0.19)	(0.27)
Capitalization	8.541	9.186	7.666	3.809	5.937	-	4.600	1.848	16.844	19.184 <sup>▣</sup>	14.427 <sup>▣</sup>	3.830
	(6.75)	(6.34)	(9.97)	(5.68)	(6.11)	(37.81)	(5.68)	(7.25)	(10.35)	(8.59)	(6.37)	(11.38)
Liquidity	0.033	0.019	-0.115 <sup>+</sup>	-0.013	-0.019	-0.091	-0.019	-	-0.069 <sup>▣</sup>	-0.110 <sup>+</sup>	0.003	-0.132 <sup>+</sup>
	(0.02)	(0.02)	(0.03)	(0.02)	(0.02)	(0.07)	(0.02)	0.017	(0.03)	(0.03)	(0.02)	(0.04)
Inefficiency	-0.012	-0.017	-0.051	-0.026	0.019	-0.008	-0.016	-0.033 <sup>-</sup>	-0.027	-0.023	-0.010	0.015
	(0.02)	(0.02)	(0.03)	(0.02)	(0.02)	(0.06)	(0.02)	(0.02)	(0.02)	(0.02)	(0.02)	(0.03)
Asset Quality	0.021	-0.103	-0.220	-0.013	0.071	-0.197	-0.032	-	-0.127	-0.067	-0.039	-0.086
	(0.10)	(0.09)	(0.16)	(0.08)	(0.07)	(0.33)	(0.07)	0.061	(0.11)	(0.12)	(0.08)	(0.16)
Business Model	-0.040	-0.015	0.023	-0.039 <sup>-</sup>	0.013	-0.070	-0.022	-0.043 <sup>-</sup>	-0.012	-0.044	-0.017	0.068
	(0.03)	(0.02)	(0.04)	(0.02)	(0.02)	(0.10)	(0.02)	(0.02)	(0.03)	(0.04)	(0.02)	(0.04)
Return on Assets	-0.191	-0.288	-0.870 <sup>▣</sup>	-0.473 <sup>▣</sup>	-0.178	-1.075	-0.366 <sup>-</sup>	-	-0.792 <sup>▣</sup>	-0.905 <sup>+</sup>	-0.329	-0.398
	(0.23)	(0.24)	(0.40)	(0.20)	(0.20)	(0.79)	(0.20)	0.238	(0.32)	(0.33)	(0.22)	(0.38)
Inflation	0.003	-0.006	-0.022	0.029 <sup>-</sup>	0.009	0.039	0.003	0.017	0.014	0.033	0.012	0.012
	(0.02)	(0.02)	(0.07)	(0.02)	(0.02)	(0.11)	(0.02)	(0.02)	(0.02)	(0.02)	(0.02)	(0.03)
Economic Growth	-0.052	-0.039	-0.076	-0.090 <sup>▣</sup>	-0.160 <sup>+</sup>	-	-0.127 <sup>+</sup>	-0.125 <sup>▣</sup>	-0.073	-0.040	-0.086 <sup>▣</sup>	-0.038
	(0.05)	(0.05)	(0.08)	(0.05)	(0.05)	0.362 <sup>▣</sup>	(0.05)	(0.05)	(0.06)	(0.08)	(0.04)	(0.08)
Financial Openness	-0.062 <sup>+</sup>	-0.061 <sup>+</sup>	-0.041 <sup>-</sup>	-0.057 <sup>+</sup>	-0.076 <sup>+</sup>	0.134 <sup>+</sup>	-0.043 <sup>+</sup>	-0.070 <sup>+</sup>	-0.069 <sup>-</sup>	-0.077 <sup>+</sup>	-0.025 <sup>-</sup>	-0.047 <sup>▣</sup>



	(0.02)	(0.01)	(0.02)	(0.01)	(0.02)	(0.05)	(0.01)	(0.02)	(0.04)	(0.02)	(0.01)	(0.02)
Economic Freedom	0.304 <sup>+</sup>	0.493 <sup>+</sup>	-0.004	0.323 <sup>+</sup>	0.472 <sup>+</sup>	-0.492 <sup>⊠</sup>	0.283 <sup>+</sup>	0.230 <sup>+</sup>	0.288 <sup>⊠</sup>	0.385 <sup>+</sup>	0.385 <sup>+</sup>	0.272 <sup>+</sup>
	(0.07)	(0.06)	(0.09)	(0.06)	(0.07)	(0.22)	(0.06)	(0.06)	(0.13)	(0.10)	(0.06)	(0.10)
Constant	-68.083 <sup>+</sup>	-60.124 <sup>+</sup>	-3.438	40.268 <sup>+</sup>	62.987 <sup>+</sup>	16.070	39.943 <sup>+</sup>	30.602 <sup>+</sup>	-22.652	-27.272 <sup>+</sup>	-73.085 <sup>+</sup>	-46.178 <sup>+</sup>
	(5.66)	(5.92)	(6.84)	(5.49)	(7.86)	(18.83)	(5.67)	(5.56)	(16.61)	(7.14)	(5.52)	(7.65)
Insig2u Constant	4.879 <sup>+</sup>	4.256 <sup>+</sup>	3.459 <sup>+</sup>	3.942 <sup>+</sup>	4.551 <sup>+</sup>	4.103 <sup>+</sup>	4.017 <sup>+</sup>	3.627 <sup>+</sup>	2.971 <sup>+</sup>	2.885 <sup>+</sup>	5.021 <sup>+</sup>	4.100 <sup>+</sup>
	(0.16)	(0.19)	(0.20)	(0.21)	(0.24)	(0.33)	(0.21)	(0.23)	(0.99)	(0.33)	(0.16)	(0.25)
Observations	1737	1737	1737	1737	1737	1737	1737	1737	1737	1737	1737	1737
Model	re	re	re	re	re	re	re	re	re	re	re	re

Standard errors in parentheses

<sup>-</sup>  $p < 0.1$ , <sup>⊠</sup>  $p < 0.05$ , <sup>+</sup>  $p < 0.01$

**Table 7:** Governance factors in binary form (further analyses with macroeconomic and institutional quality)

	(1)	(2)	(3)	(4)	(5)	(6)
	CEODual	CEOWithn	FemaCEO	FemaChai	FormCEO	IndeChai
Bank Size	0.462 <sup>+</sup>	2.621 <sup>+</sup>	0.113	0.059	0.950 <sup>+</sup>	0.727 <sup>+</sup>
	(0.16)	(0.21)	(0.18)	(0.25)	(0.18)	(0.18)
Capitalization	-7.124	5.638	1.957	13.314	0.620	41.601 <sup>+</sup>
	(11.21)	(5.42)	(6.39)	(12.30)	(7.68)	(6.80)
Liquidity	0.030	0.021	0.020	-0.006	-0.028	0.098 <sup>+</sup>
	(0.03)	(0.02)	(0.03)	(0.05)	(0.03)	(0.03)
Inefficiency	-0.067 <sup>+</sup>	-0.007	0.010	-0.009	-0.006	0.016
	(0.02)	(0.02)	(0.02)	(0.04)	(0.02)	(0.02)
Asset Quality	-0.045	0.100 <sup>□</sup>	0.176 <sup>+</sup>	-0.435 <sup>-</sup>	0.122 <sup>□</sup>	-0.112 <sup>-</sup>
	(0.08)	(0.05)	(0.06)	(0.23)	(0.06)	(0.06)
Business Model	0.032	0.051 <sup>+</sup>	0.019	0.016	0.013	0.082 <sup>+</sup>
	(0.03)	(0.02)	(0.03)	(0.04)	(0.03)	(0.02)
Return on Assets	-0.466	0.156	0.037	-0.233	-0.249	-0.056
	(0.28)	(0.16)	(0.18)	(0.47)	(0.24)	(0.19)
Inflation	0.027	0.001	-0.007	-0.072	-0.047	-0.001
	(0.03)	(0.01)	(0.03)	(0.08)	(0.03)	(0.01)
Economic Growth	-0.066	0.068 <sup>-</sup>	0.096	-0.050	0.034	0.029
	(0.06)	(0.04)	(0.08)	(0.11)	(0.06)	(0.05)
Financial Openness	-0.062 <sup>+</sup>	-0.088 <sup>+</sup>	-0.062 <sup>+</sup>	-0.080 <sup>+</sup>	-0.061 <sup>+</sup>	-0.027 <sup>□</sup>
	(0.02)	(0.01)	(0.02)	(0.03)	(0.02)	(0.01)
Economic Freedom	0.097	0.511 <sup>+</sup>	0.237 <sup>+</sup>	0.166	0.277 <sup>+</sup>	0.284 <sup>+</sup>
	(0.07)	(0.06)	(0.08)	(0.10)	(0.07)	(0.06)
Constant	-17.442 <sup>+</sup>	-74.908 <sup>+</sup>	-25.342 <sup>+</sup>	-16.070 <sup>-</sup>	-35.486 <sup>+</sup>	-49.987 <sup>+</sup>
	(5.41)	(5.52)	(5.97)	(8.76)	(5.44)	(6.32)
Insig2u	3.603 <sup>+</sup>	4.689 <sup>+</sup>	2.522 <sup>+</sup>	2.911 <sup>+</sup>	3.666 <sup>+</sup>	3.671 <sup>+</sup>
Constant	(0.19)	(0.18)	(0.28)	(0.27)	(0.18)	(0.21)
Observations	1737	1737	1737	1737	1737	1737
Model	re	re	re	re	re	re

Standard errors in parentheses

<sup>-</sup>  $p < 0.1$ , <sup>□</sup>  $p < 0.05$ , <sup>+</sup>  $p < 0.01$

**Table 8:** ESG Scores (further analyses with macroeconomic and institutional quality)

	(1)	(2)	(3)	(4)	(5)	(6)
	BDMYear	BDSIZE	IndDirP	FemExeP	WomBDP	PEXEmpl
Bank Size	0.015 (0.03)	-0.013 (0.02)	0.024 (0.02)	0.011 (0.01)	0.021 <sup>Ⓜ</sup> (0.01)	0.434 <sup>+</sup> (0.03)
Capitalization	-0.252 (0.45)	-0.027 (0.21)	0.076 (0.18)	-0.262 (0.19)	-0.060 (0.14)	1.156 <sup>-</sup> (0.61)
Liquidity	0.001 0.00	0.001 0.00	0.000 0.00	0.000 0.00	0.000 0.00	0.001 0.00
Inefficiency	0.002 0.00	-0.001 0.00	0.002 <sup>Ⓜ</sup> 0.00	0.000 0.00	0.001 <sup>Ⓜ</sup> 0.00	0.002 0.00
Asset Quality	0.010 <sup>-</sup> (0.01)	-0.004 0.00	0.003 0.00	-0.002 0.00	-0.002 <sup>-</sup> 0.00	0.006 0.00
Business Model	0.000 0.00	-0.001 0.00	0.000 0.00	0.000 0.00	0.001 0.00	0.004 <sup>-</sup> 0.00
Return on Assets	-0.008 (0.01)	-0.003 0.00	0.014 <sup>Ⓜ</sup> (0.01)	-0.001 0.00	0.000 0.00	0.008 (0.01)
Inflation	-0.001 0.00	0.000 0.00	0.001 <sup>-</sup> 0.00	0.000 0.00	0.000 0.00	0.000 0.00
Economic Growth	0.005 <sup>-</sup> 0.00	0.001 0.00	-0.005 <sup>+</sup> 0.00	0.000 0.00	-0.001 0.00	0.006 0.00
Financial Openness	0.001 0.00	-0.001 <sup>-</sup> 0.00	-0.001 0.00	-0.001 <sup>-</sup> 0.00	-0.001 <sup>-</sup> 0.00	-0.006 <sup>Ⓜ</sup> 0.00
Economic Freedom	0.003 (0.01)	0.000 0.00	0.000 (0.01)	0.004 <sup>Ⓜ</sup> 0.00	0.000 0.00	0.000 (0.01)
Constant	1.661 <sup>Ⓜ</sup> (0.65)	2.592 <sup>+</sup> (0.29)	0.050 (0.41)	-0.205 (0.25)	-0.221 (0.14)	7.328 <sup>+</sup> (0.65)
Observations	707	914	725	764	907	1170
Model	fe	fe	fe	fe	fe	fe

Standard errors in parentheses

<sup>-</sup>  $p < 0.1$ , <sup>Ⓜ</sup>  $p < 0.05$ , <sup>+</sup>  $p < 0.01$

**Table 9:** Environmental factors in binary form (further analyses with dummy crisis)

	(1) BioPol	(2) ClimCh	(3) ClimPol	(4) ClimProd	(5) ClimRisk	(6) EmisRed	(7) EnerPol	(8) EnvQual	(9) EnvSupp	(10) GreBuil	(11) WastRed	(12) WatePol
Bank Size	0.312 _	1.516 <sup>+</sup>	1.702 <sup>+</sup>	-0.077	1.235 <sup>□</sup>	1.692 <sup>+</sup>	3.157 <sup>+</sup>	0.859 <sup>+</sup>	2.416 <sup>+</sup>	0.857 <sup>+</sup>	0.946 <sup>+</sup>	0.449 <sup>+</sup>
	(0.17)	(0.56)	(0.20)	(0.27)	(0.54)	(0.18)	(0.18)	(0.23)	(0.29)	(0.28)	(0.18)	(0.16)
Capitalization	3.979	40.095	14.661 _	13.141	3.765	6.582	6.028	9.870	26.163 <sup>□</sup>	-4.286	7.530	8.429
	(8.83)	(26.95)	(8.04)	(9.77)	(20.15)	(6.57)	(7.29)	(8.41)	(12.69)	(11.75)	(7.12)	(6.51)
Liquidity	-0.017	-0.111	-0.042 <sup>-</sup>	-0.014	-0.088	-0.069 <sup>+</sup>	-0.028	-0.122 <sup>+</sup>	-0.066 <sup>-</sup>	-0.064 <sup>□</sup>	-0.081 <sup>+</sup>	-0.099 <sup>+</sup>
	(0.02)	(0.10)	(0.02)	(0.05)	(0.08)	(0.02)	(0.03)	(0.03)	(0.04)	(0.03)	(0.02)	(0.02)
Inefficiency	-0.018	0.093	-0.022	-0.069	0.063	-0.007	0.001	-0.019	-0.026	-0.028	-0.005	-0.043 <sup>□</sup>
	(0.02)	(0.07)	(0.02)	(0.05)	(0.06)	(0.02)	(0.02)	(0.02)	(0.03)	(0.03)	(0.02)	(0.02)
Asset Quality	-0.074	-0.200	-0.159	-0.126	-0.091	-0.006	0.008	-0.102	0.037	0.063	-0.032	-0.175 <sup>-</sup>
	(0.09)	(0.48)	(0.12)	(0.19)	(0.26)	(0.08)	(0.09)	(0.12)	(0.14)	(0.12)	(0.08)	(0.10)
Business Model	-0.013	0.054	-0.002	-0.043	0.027	-0.002	-0.015	0.016	-0.008	-0.001	0.030	-0.009
	(0.03)	(0.10)	(0.03)	(0.04)	(0.08)	(0.02)	(0.03)	(0.03)	(0.04)	(0.04)	(0.02)	(0.02)
Return on Assets	-0.395	0.784	-0.444	-0.640	1.521	-0.515 <sup>□</sup>	-0.432 <sup>-</sup>	-0.526 <sup>-</sup>	-0.888 <sup>□</sup>	-0.287	-0.491 <sup>□</sup>	-0.836 <sup>+</sup>
	(0.28)	(1.07)	(0.28)	(0.53)	(0.93)	(0.23)	(0.24)	(0.30)	(0.39)	(0.34)	(0.22)	(0.24)
Inflation	-0.020	-0.082	0.018	-0.056	-0.083	0.014	0.010	0.028	0.030	-0.049	-0.006	-0.025
	(0.04)	(0.15)	(0.02)	(0.11)	(0.11)	(0.02)	(0.02)	(0.02)	(0.02)	(0.04)	(0.02)	(0.03)
Economic Growth	-0.119	-0.361	-0.117 <sup>-</sup>	0.018	-0.416 <sup>-</sup>	-0.114 <sup>□</sup>	-0.093 <sup>-</sup>	-0.060	-0.156 <sup>-</sup>	-0.225 <sup>+</sup>	-0.105 <sup>-</sup>	-0.060
	(0.08)	(0.28)	(0.07)	(0.15)	(0.23)	(0.05)	(0.06)	(0.08)	(0.08)	(0.09)	(0.06)	(0.06)
Financial Openness	-0.026	0.021	-0.051 <sup>+</sup>	-0.026	0.037	-0.028 <sup>□</sup>	-0.040 <sup>+</sup>	-0.046 <sup>□</sup>	-0.111 <sup>+</sup>	-0.037 <sup>□</sup>	-0.016	-0.021
	(0.02)	(0.07)	(0.02)	(0.02)	(0.04)	(0.01)	(0.01)	(0.02)	(0.03)	(0.02)	(0.01)	(0.01)
Economic Freedom	0.016	- 0.725 <sup>□</sup>	0.164 <sup>□</sup>	0.165	-0.652 <sup>□</sup>	0.221 <sup>+</sup>	0.367 <sup>+</sup>	0.205 <sup>+</sup>	0.282 <sup>-</sup>	0.204 <sup>□</sup>	0.231 <sup>+</sup>	0.110 <sup>□</sup>
	(0.07)	(0.28)	(0.07)	(0.12)	(0.27)	(0.06)	(0.07)	(0.07)	(0.14)	(0.08)	(0.06)	(0.05)
D2008	- 1.315 <sup>□</sup>	0.527	-0.508	0.000	1.870	-0.157	-0.562	-0.560	-0.793	-1.524 <sup>□</sup>	-1.028 <sup>□</sup>	-1.157 <sup>+</sup>
	(0.56)	(1.58)	(0.40)	(.)	(1.22)	(0.35)	(0.35)	(0.53)	(0.51)	(0.63)	(0.40)	(0.42)
Constant	-7.384	- 10.826	-37.036 <sup>+</sup>	-7.054	-2.667	-37.211 <sup>+</sup>	-68.545 <sup>+</sup>	-21.719 <sup>+</sup>	-52.399 <sup>+</sup>	-24.134 <sup>+</sup>	-28.385 <sup>+</sup>	-6.638
	(5.37)	(21.75)	(5.88)	(8.97)	(16.63)	(5.32)	(5.99)	(6.12)	(10.67)	(7.30)	(5.34)	(4.44)

Insig2u Constant	2.705 <sup>+</sup>	4.816 <sup>+</sup>	4.285 <sup>+</sup>	-9.458	4.472 <sup>+</sup>	4.002 <sup>+</sup>	4.915 <sup>+</sup>	2.923 <sup>+</sup>	4.581 <sup>+</sup>	3.444 <sup>+</sup>	3.322 <sup>+</sup>	2.425 <sup>+</sup>
	(0.24)	(0.28)	(0.18)	(332.05)	(0.31)	(0.19)	(0.16)	(0.30)	(0.22)	(0.30)	(0.23)	(0.30)
Observations	1737	1737	1737	1349	1737	1737	1737	1737	1737	1737	1737	1737
Model	re	re	re	re	re	re	re	re	re	re	re	re

Standard errors in parentheses

<sup>-</sup>  $p < 0.1$ , <sup>□</sup>  $p < 0.05$ , <sup>+</sup>  $p < 0.01$

**Table 10:** Governance factors in binary form (further analyses with dummy crisis)

	(1)	(2)	(3)	(4)	(5)	(6)
	CEODual	CEOWithn	FemaCEO	FemaChai	FormCEO	IndeChai
Bank Size	0.501 <sup>+</sup> (0.16)	1.364 <sup>+</sup> (0.31)	0.074 (0.18)	0.003 (0.23)	0.674 <sup>+</sup> (0.17)	0.565 <sup>+</sup> (0.16)
Capitalization	-6.219 (11.20)	2.576 (4.89)	1.239 (6.85)	8.730 (14.48)	1.754 (7.82)	45.817 <sup>+</sup> (7.33)
Liquidity	0.027 (0.03)	0.009 (0.02)	0.028 (0.03)	0.008 (0.05)	-0.041 (0.03)	0.092 <sup>+</sup> (0.03)
Inefficiency	-0.068 <sup>+</sup> (0.02)	-0.012 (0.02)	0.008 (0.02)	0.006 (0.04)	-0.021 (0.02)	0.001 (0.02)
Asset Quality	-0.028 (0.08)	0.057 (0.05)	0.159 <sup>▯</sup> (0.07)	-0.420 <sup>▯</sup> (0.21)	0.077 (0.06)	-0.199 <sup>+</sup> (0.07)
Business Model	0.036 (0.03)	0.050 <sup>+</sup> (0.02)	0.024 (0.03)	-0.002 (0.04)	0.004 (0.03)	0.087 <sup>+</sup> (0.02)
Return on Assets	-0.455 (0.28)	0.080 (0.14)	-0.015 (0.20)	-0.185 (0.50)	-0.422 <sup>-</sup> (0.25)	-0.395 <sup>-</sup> (0.22)
Inflation	0.025 (0.03)	0.000 (0.01)	-0.002 (0.03)	-0.122 (0.13)	-0.081 <sup>-</sup> (0.05)	-0.029 (0.02)
Economic Growth	-0.036 (0.07)	-0.083 <sup>-</sup> (0.04)	-0.016 (0.10)	-0.280 <sup>-</sup> (0.16)	-0.188 <sup>▯</sup> (0.08)	-0.116 <sup>▯</sup> (0.06)
Financial Openness	-0.067 <sup>+</sup> (0.02)	-0.064 <sup>+</sup> (0.01)	-0.060 <sup>+</sup> (0.02)	-0.058 <sup>▯</sup> (0.03)	-0.051 <sup>+</sup> (0.02)	-0.014 (0.01)
Economic Freedom	0.106 (0.07)	0.353 <sup>+</sup> (0.07)	0.222 <sup>+</sup> (0.08)	0.089 (0.11)	0.209 <sup>+</sup> (0.07)	0.199 <sup>+</sup> (0.06)

D2008	0.489 (0.45)	-2.673* (0.39)	-2.023* (0.78)	0.000 (.)	-3.819* (0.81)	-4.648* (0.77)
Constant	-19.231* (5.52)	-44.079* (7.86)	-24.336* (5.74)	-9.306 (9.39)	-22.347* (5.34)	- 40.537* (5.85)
Insig2u Constant	3.734* (0.18)	3.696* (0.28)	2.748* (0.23)	2.643* (0.32)	3.306* (0.21)	3.636* (0.20)
Observations	1737	1737	1737	1349	1737	1737
Model	re	re	re	re	re	re

Standard errors in parentheses  
 $\bar{p} < 0.1$ ,  $\square p < 0.05$ ,  $+ p < 0.01$

**Table 11:** Social factors in binary form (further analyses with dummy crisis)

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
	BribPol	EmpProt	EmpTrai	EqOpPol	EthiPol	FairRen	HealPol	HumRPol	SocSupp	SusSupG	TraiPol	UnGlob
Bank Size	5.170 <sup>*</sup> (0.27)	1.331 <sup>*</sup> (0.21)	0.289 (0.22)	1.511 <sup>*</sup> (0.19)	2.084 <sup>*</sup> (0.28)	0.348 (0.53)	1.927 <sup>*</sup> (0.21)	1.368 <sup>*</sup> (0.19)	0.524 <sup>+</sup> (0.19)	0.673 <sup>-</sup> (0.35)	3.321 <sup>+</sup> (0.19)	1.677 <sup>+</sup> (0.28)
Capitalization	16.824 <sup>-</sup> (9.06)	7.624 (6.06)	8.189 (9.50)	3.739 (5.62)	5.975 (6.14)	-31.716 (35.26)	5.280 (5.93)	1.674 (7.28)	16.538 <sup>▯</sup> (7.73)	20.371 <sup>▯</sup> (10.10)	14.720 <sup>▯</sup> (6.33)	5.751 (11.58)
Liquidity	0.080 <sup>+</sup> (0.03)	0.005 (0.02)	-0.107 <sup>+</sup> (0.03)	-0.014 (0.02)	-0.020 (0.02)	-0.124 (0.08)	-0.015 (0.02)	-0.018 (0.02)	-0.071 <sup>+</sup> (0.03)	-0.116 <sup>+</sup> (0.04)	0.004 (0.02)	-0.135 <sup>+</sup> (0.04)
Inefficiency	-0.006 (0.03)	-0.023 (0.02)	-0.043 (0.03)	-0.026 (0.02)	0.019 (0.02)	-0.019 (0.06)	-0.015 (0.02)	-0.034 <sup>-</sup> (0.02)	-0.025 (0.02)	-0.024 (0.02)	-0.010 (0.02)	0.004 (0.03)
Asset Quality	-0.076 (0.13)	-0.143 (0.09)	-0.203 (0.15)	-0.015 (0.07)	0.066 (0.07)	-0.171 (0.35)	-0.022 (0.07)	-0.071 (0.08)	-0.154 (0.10)	-0.102 (0.13)	-0.031 (0.08)	-0.135 (0.18)
Business Model	-0.057 <sup>-</sup> (0.03)	-0.011 (0.02)	0.003 (0.03)	-0.038 <sup>-</sup> (0.02)	0.014 (0.02)	-0.082 (0.10)	-0.022 (0.02)	-0.043 <sup>-</sup> (0.02)	-0.011 (0.03)	-0.052 (0.04)	-0.017 (0.02)	0.057 (0.05)
Return on Assets	-0.228 (0.29)	-0.340 (0.23)	-0.820 <sup>▯</sup> (0.37)	-0.473 <sup>▯</sup> (0.20)	-0.184 (0.20)	-1.248 (0.89)	-0.360 <sup>-</sup> (0.21)	-0.253 (0.22)	-0.788 <sup>+</sup> (0.28)	-0.917 <sup>▯</sup> (0.36)	-0.320 (0.22)	-0.522 (0.39)
Inflation	0.011 (0.02)	-0.010 (0.02)	-0.012 (0.07)	0.029 <sup>-</sup> (0.02)	0.009 (0.02)	0.031 (0.11)	0.004 (0.02)	0.017 (0.02)	0.012 (0.02)	0.033 (0.02)	0.012 (0.02)	0.012 (0.03)
Economic Growth	-0.141 <sup>▯</sup> (0.07)	-0.126 <sup>▯</sup> (0.06)	-0.175 <sup>-</sup> (0.10)	-0.096 <sup>-</sup> (0.05)	-0.174 <sup>+</sup> (0.06)	-0.274 (0.20)	-0.124 <sup>▯</sup> (0.05)	-0.150 <sup>▯</sup> (0.06)	-0.159 <sup>▯</sup> (0.07)	-0.239 <sup>▯</sup> (0.11)	-0.072 (0.05)	-0.139 (0.10)
Financial Openness	-0.054 <sup>▯</sup> (0.02)	-0.050 <sup>+</sup> (0.01)	-0.030 (0.02)	-0.057 <sup>+</sup> (0.01)	-0.074 <sup>+</sup> (0.02)	0.119 <sup>▯</sup> (0.06)	-0.042 <sup>+</sup> (0.01)	-0.069 <sup>+</sup> (0.02)	-0.060 <sup>+</sup> (0.02)	-0.066 <sup>▯</sup> (0.03)	-0.026 <sup>▯</sup> (0.01)	-0.037 (0.02)
Economic Freedom	0.305 <sup>+</sup> (0.10)	0.392 <sup>+</sup> (0.07)	-0.034 (0.09)	0.319 <sup>+</sup> (0.06)	0.469 <sup>+</sup> (0.07)	-0.420 (0.28)	0.298 <sup>+</sup> (0.06)	0.220 <sup>+</sup> (0.06)	0.245 <sup>+</sup> (0.07)	0.336 <sup>+</sup> (0.13)	0.391 <sup>+</sup> (0.06)	0.223 <sup>▯</sup> (0.10)
D2008	-1.198 <sup>+</sup> (0.46)	-1.239 <sup>+</sup> (0.41)	-1.276 <sup>-</sup> (0.72)	-0.091 (0.34)	-0.182 (0.38)	1.602 (1.14)	0.031 (0.32)	-0.323 (0.36)	-1.357 <sup>▯</sup> (0.53)	-2.738 <sup>+</sup> (0.93)	0.203 (0.32)	-1.213 <sup>-</sup> (0.67)
Constant	-106.712 <sup>+</sup> (8.97)	-44.892 <sup>+</sup> (6.66)	0.788 (6.71)	-39.156 <sup>+</sup> (5.38)	-63.044 <sup>+</sup> (7.73)	14.231 (20.76)	-46.230 <sup>+</sup> (5.75)	-29.374 <sup>+</sup> (5.47)	-19.086 <sup>+</sup> (5.75)	-22.494 <sup>▯</sup> (11.22)	-73.767 <sup>+</sup> (5.63)	-40.689 <sup>+</sup> (8.03)
Insig2u Constant	5.944 <sup>+</sup> (0.15)	3.836 <sup>+</sup> (0.23)	3.108 <sup>+</sup> (0.22)	3.880 <sup>+</sup> (0.21)	4.567 <sup>+</sup> (0.23)	4.017 <sup>+</sup> (0.43)	4.296 <sup>+</sup> (0.20)	3.612 <sup>+</sup> (0.22)	2.903 <sup>+</sup> (0.28)	2.729 <sup>+</sup> (0.69)	5.021 <sup>+</sup> (0.16)	4.049 <sup>+</sup> (0.27)
Observations	1737	1737	1737	1737	1737	1737	1737	1737	1737	1737	1737	1737
Model	re	re	re	re	re	re	re	re	re	re	re	re

Standard errors in parentheses

- p < 0.1, \* p < 0.05, + p < 0.01



**Table 12:** ESG Scores (further analyses with dummy crisis)

	(1)	(2)	(3)	(4)	(5)	(6)
	BDMYear	BDSIZE	IndDirP	FemExeP	WomBDP	PEmpl
Bank Size	-0.023 (0.04)	0.007 (0.02)	0.022 (0.02)	0.011 (0.01)	0.005 0.00	0.427 <sup>+</sup> (0.03)
Capitalization	-0.430 (0.43)	0.055 (0.21)	0.068 (0.18)	-0.261 (0.19)	- 0.101	1.106 <sup>-</sup> (0.60)
Liquidity	0.000 0.00	0.001 0.00	0.000 0.00	0.000 0.00	0.000 0.00	0.001 0.00
Inefficiency	0.002	-0.001	0.002 <sup>▯</sup>	0.000	0.001	0.002
Asset Quality	0.00 0.010 <sup>-</sup>	0.00 -0.004	0.00 0.003	0.00 -0.002	0.00 -	0.00 0.006
Business Model	0.001 (0.01)	-0.001 0.00	0.000 0.00	0.000 0.00	0.001 0.00	0.004 <sup>▯</sup> 0.00
Return on Assets	-0.008 (0.01)	-0.003 0.00	0.014 <sup>▯</sup> (0.01)	-0.001 0.00	0.000 0.00	0.008 (0.01)
Inflation	-0.001 0.00	0.000 0.00	0.001 0.00	0.000 0.00	0.000 0.00	0.000 0.00
Economic Growth	0.002 0.00	0.002 0.00	-0.005 <sup>+</sup> 0.00	0.000 0.00	-0.001 <sup>▯</sup> 0.00	0.004 0.00
Financial Openness	0.002 0.00	-0.001 <sup>▯</sup> 0.00	-0.001 0.00	-0.001 <sup>-</sup> 0.00	-0.000 <sup>▯</sup> 0.00	-0.005 <sup>▯</sup> 0.00
Economic Freedom	0.005 (0.01)	0.000 0.00	0.000 (0.01)	0.004 <sup>▯</sup> 0.00	0.000 0.00	0.000 (0.01)
D2008	-0.058 <sup>▯</sup> (0.03)	0.031 <sup>▯</sup> (0.01)	-0.005 (0.01)	0.000 (0.01)	-0.014 <sup>▯</sup> (0.01)	-0.035 (0.03)
Constant	2.101 <sup>+</sup> (0.67)	2.351 <sup>+</sup> (0.29)	0.077 (0.37)	-0.207 (0.26)	0.021 (0.07)	7.439 <sup>+</sup> (0.64)
Observations	707	914	725	764	907	1170
Model	fe	fe	fe	fe	re	fe

Standard errors in parentheses

<sup>-</sup>  $p < 0.1$ , <sup>▯</sup>  $p < 0.05$ , <sup>+</sup>  $p < 0.01$

**Table 13:** Environmental factors in binary form (further analyses with bank age and lerner index)

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
	BioPol	ClimCh	ClimPol	ClimProd	ClimRisk	EmisRed	EnerPol	EnvQual	EnvSupp	GreBuil	WastRed	WatePol
Bank Size	1.991 <sup>+</sup> (0.52)	3.497 <sup>+</sup> (1.03)	4.035 <sup>+</sup> (0.40)	0.219 (0.56)	0.904 (0.65)	4.325 <sup>+</sup> (0.51)	6.014 <sup>+</sup> (0.55)	1.655 <sup>+</sup> (0.35)	6.038 <sup>+</sup> (0.45)	2.711 <sup>+</sup> (0.53)	3.639 <sup>+</sup> (0.42)	1.382 <sup>+</sup> (0.32)
Capitalization	5.021 (15.05)	55.813 <sup>⊠</sup> (23.83)	19.527 <sup>-</sup> (11.77)	11.802 (13.79)	1.667 (14.52)	11.532 (10.23)	7.394 (10.91)	13.693 (9.45)	28.346 <sup>-</sup> (16.10)	0.399 (13.25)	4.037 (11.24)	9.436 (8.30)
Liquidity	-0.004 (0.04)	-0.273 <sup>⊠</sup> (0.13)	-0.034 (0.04)	-0.079 (0.06)	-0.060 (0.05)	-0.028 (0.03)	0.006 (0.04)	-0.148 <sup>+</sup> (0.03)	-0.022 (0.05)	-0.103 <sup>⊠</sup> (0.05)	-0.133 <sup>+</sup> (0.04)	-0.119 <sup>+</sup> (0.03)
Inefficiency	0.000 (0.04)	0.085 (0.08)	0.018 (0.03)	-0.043 (0.06)	0.044 (0.04)	0.015 (0.03)	0.007 (0.03)	-0.008 (0.03)	0.032 (0.06)	-0.002 (0.03)	-0.005 (0.03)	-0.044 <sup>-</sup> (0.02)
Asset Quality	-0.075 (0.15)	-0.415 (0.49)	-0.224 (0.16)	-0.021 (0.22)	-0.288 (0.25)	0.057 (0.10)	-0.010 (0.11)	-0.092 (0.13)	0.163 (0.17)	0.270 <sup>⊠</sup> (0.13)	0.083 (0.10)	-0.147 (0.11)
Business Model	0.013 (0.05)	-0.222 <sup>-</sup> (0.12)	-0.008 (0.04)	-0.026 (0.06)	-0.091 (0.07)	-0.056 (0.04)	-0.059 (0.04)	0.048 (0.04)	0.062 (0.05)	-0.044 (0.06)	0.059 (0.04)	0.004 (0.03)
Return on Assets	-0.607 (0.56)	0.818 (0.90)	-0.574 (0.48)	-0.654 (0.82)	0.731 (0.62)	-0.455 (0.31)	-0.598 <sup>⊠</sup> (0.27)	-0.388 (0.40)	-0.629 (0.62)	-0.402 (0.33)	-0.439 (0.33)	-0.891 <sup>+</sup> (0.30)
Economic Growth	0.007 (0.08)	-0.835 <sup>⊠</sup> (0.37)	0.042 (0.07)	0.094 (0.14)	-0.433 <sup>⊠</sup> (0.21)	-0.037 (0.06)	0.026 (0.06)	-0.037 (0.08)	0.068 (0.09)	-0.104 (0.09)	0.020 (0.06)	0.019 (0.06)
Financial Openness	-0.033 (0.03)	-0.058 (0.10)	-0.035 (0.02)	0.003 (0.02)	0.011 (0.03)	0.033 (0.02)	0.032 <sup>-</sup> (0.02)	0.005 (0.02)	-0.020 (0.03)	0.002 (0.03)	0.061 <sup>+</sup> (0.02)	-0.005 (0.02)
Age	0.074 <sup>-</sup> (0.04)	0.129 (0.11)	0.094 <sup>+</sup> (0.03)	0.074 <sup>⊠</sup> (0.03)	0.033 (0.04)	0.059 (0.04)	0.188 <sup>+</sup> (0.03)	0.090 <sup>+</sup> (0.02)	0.214 <sup>+</sup> (0.03)	0.129 <sup>+</sup> (0.04)	0.205 <sup>+</sup> (0.03)	0.079 <sup>+</sup> (0.02)
Lerner Index	6.599 (4.27)	4.563 (14.07)	11.166 <sup>+</sup> (3.62)	8.033 (6.05)	-1.643 (6.27)	6.253 <sup>⊠</sup> (3.13)	13.456 <sup>+</sup> (3.22)	2.821 (2.55)	10.005 <sup>⊠</sup> (4.79)	11.079 <sup>⊠</sup> (4.88)	9.925 <sup>+</sup> (3.23)	5.640 <sup>⊠</sup> (2.75)
Constant	- 42.320 <sup>+</sup> (10.21)	- 59.847 <sup>+</sup> (21.75)	-68.377 <sup>+</sup> (7.72)	-7.964 (11.62)	-14.930 (13.47)	-67.540 <sup>+</sup> (8.75)	-97.548 <sup>+</sup> (9.32)	-27.602 <sup>+</sup> (6.98)	- 116.414 <sup>+</sup> (9.23)	-48.481 <sup>+</sup> (8.90)	-66.992 <sup>+</sup> (7.70)	-19.388 <sup>+</sup> (6.20)
Insig2u Constant	4.265 <sup>+</sup> (0.29)	5.306 <sup>+</sup> (0.28)	4.658 <sup>+</sup> (0.22)	-12.281 (381.48)	2.605 <sup>⊠</sup> (1.10)	4.619 <sup>+</sup> (0.26)	5.478 <sup>+</sup> (0.21)	3.035 <sup>+</sup> (0.32)	5.650 <sup>+</sup> (0.21)	4.166 <sup>+</sup> (0.27)	4.585 <sup>+</sup> (0.24)	3.241 <sup>+</sup> (0.31)
Observations	1123	1123	1123	1123	1123	1123	1123	1123	1123	1123	1123	1123
Model	re	re	re	re	re	re	re	re	re	re	re	re

Standard errors in parentheses

<sup>-</sup>  $p < 0.1$ , <sup>⊠</sup>  $p < 0.05$ , <sup>+</sup>  $p < 0.01$

**Table 14:** Governance factors in binary form (further analyses with bank age and lerner index)

	(1)	(2)	(3)	(4)	(5)	(6)
	CEODual	CEOWithn	FemaCEO	FemaChai	FormCEO	IndeChai
Bank Size	0.557 <sup>□</sup> (0.26)	2.487 <sup>+</sup> (0.33)	0.655 <sup>□</sup> (0.32)	0.176 (0.42)	2.945 <sup>+</sup> (0.70)	1.665 <sup>+</sup> (0.43)
Capitalization	-4.389	-1.983	4.468	14.06	31.949	21.968 <sup>-</sup>
Liquidity	0.003 (0.03)	0.008 (0.02)	0.023 (0.03)	-0.016 (0.05)	-0.031 (0.06)	0.060 <sup>-</sup> (0.04)
Inefficiency	-0.067 <sup>□</sup> (0.03)	-0.034 (0.02)	0.015 (0.02)	-0.008 (0.05)	-0.074 (0.06)	0.007 (0.03)
Asset Quality	-0.073 (0.10)	0.153 <sup>+</sup> (0.06)	0.171 <sup>+</sup> (0.06)	-0.866 <sup>□</sup> (0.42)	0.187 (0.17)	0.198 <sup>□</sup> (0.09)
Business Model	0.056 (0.03)	0.062 <sup>□</sup> (0.02)	0.038 (0.03)	0.093 (0.06)	0.111 <sup>-</sup> (0.06)	0.109 <sup>+</sup> (0.04)
Return on Assets	-0.101 (0.39)	0.032 (0.15)	-0.018 (0.18)	-0.603 (0.59)	-1.488 <sup>□</sup> (0.62)	0.065 (0.27)
Economic Growth	-0.047 (0.08)	0.098 <sup>□</sup> (0.04)	0.023 (0.09)	-0.185 (0.14)	0.173 (0.11)	0.014 (0.07)
Financial Openness	-0.019 (0.02)	-0.011 (0.01)	-0.068 <sup>□</sup> (0.03)	-0.035 (0.03)	-0.059 <sup>-</sup> (0.03)	0.005 (0.02)
Age	0.065 <sup>+</sup> (0.02)	0.086 <sup>+</sup> (0.02)	-0.001 (0.02)	0.017 (0.03)	0.128 <sup>+</sup> (0.03)	0.079 <sup>+</sup> (0.03)
Lerner Index	1.108 (3.02)	4.708 <sup>□</sup> (2.03)	2.435 (2.83)	-1.351 (4.63)	3.764 (3.22)	15.326 <sup>+</sup> (4.20)
Constant	-16.241 <sup>+</sup>	-45.230 <sup>+</sup>	-19.964 <sup>+</sup>	-11.925	-65.086 <sup>+</sup>	-

	(6.19)	(6.00)	(7.09)	(10.42)	(11.86)	56.476 <sup>+</sup> (9.88)
Insig2u	3.029 <sup>+</sup>	4.122 <sup>+</sup>	2.390 <sup>+</sup>	2.839 <sup>+</sup>	4.965 <sup>+</sup>	4.661 <sup>+</sup>
Constant	(0.27)	(0.28)	(0.46)	(0.33)	(0.24)	(0.26)
Observations	1123	1123	1123	1123	1123	1123
Model	re	re	re	re	re	re

Standard errors in parentheses  
<sup>-</sup>  $p < 0.1$ , <sup>□</sup>  $p < 0.05$ , <sup>+</sup>  $p < 0.01$

**Table 15:** Social factors in binary form (further analyses with bank age and lerner index)

	(1) BribPol	(2) EmpProt	(3) EmpTrai	(4) EqOpPol	(5) EthiPol	(6) FairRen	(7) HealPol	(8) HumRPol	(9) SocSupp	(10) SusSupG	(11) TraiPol	(12) UnGlob
Bank Size	4.618* (0.38)	4.238* (0.42)	0.582 (0.39)	2.824* (0.31)	5.901* (0.49)	1.421 (0.98)	4.527* (0.34)	2.045* (0.35)	2.746* (0.42)	1.398* (0.46)	6.047* (0.41)	3.731* (0.52)
Capitalization	21.606 <sup>■</sup> (8.98)	19.719 <sup>■</sup> (8.87)	11.455 (11.10)	11.744 <sup>-</sup> (7.04)	21.842 <sup>■</sup> (10.90)	-47.353 (40.47)	16.281 <sup>■</sup> (7.85)	-0.186 (8.08)	25.373 <sup>■</sup> (12.51)	22.226 <sup>■</sup> (9.73)	21.855 <sup>■</sup> (9.35)	27.595 (17.60)
Liquidity	0.072 <sup>■</sup> (0.03)	0.041 (0.03)	-0.152* (0.04)	-0.012 (0.03)	0.018 (0.04)	-0.105 (0.07)	0.014 (0.03)	-0.014 (0.02)	-0.058 (0.04)	-0.150* (0.04)	0.031 (0.03)	-0.148* (0.05)
Inefficiency	-0.019 (0.03)	-0.020 (0.03)	-0.062 <sup>-</sup> (0.04)	-0.028 (0.02)	0.015 (0.03)	0.019 (0.06)	-0.017 (0.03)	-0.039 <sup>-</sup> (0.02)	-0.009 (0.03)	0.001 (0.02)	0.004 (0.02)	0.048 (0.05)
Asset Quality	-0.025 (0.11)	-0.041 (0.13)	-0.370 <sup>-</sup> (0.22)	-0.001 (0.09)	0.110 (0.11)	-0.084 (0.26)	-0.051 (0.10)	-0.104 (0.09)	-0.008 (0.15)	-0.046 (0.12)	-0.001 (0.09)	-0.105 (0.20)
Business Model	-0.029 (0.03)	0.003 (0.03)	-0.030 (0.05)	-0.006 (0.03)	0.008 (0.04)	-0.084 (0.09)	-0.046 (0.03)	-0.039 (0.03)	0.030 (0.04)	0.029 (0.04)	-0.032 (0.03)	0.051 (0.06)
Return on Assets	-0.339 (0.25)	-0.207 (0.29)	-1.267 <sup>■</sup> (0.51)	-0.577 <sup>■</sup> (0.23)	-0.256 (0.27)	-0.648 (0.73)	-0.421 <sup>-</sup> (0.25)	-0.419 <sup>-</sup> (0.23)	-0.599 (0.45)	-0.609 <sup>-</sup> (0.37)	-0.349 (0.26)	-0.155 (0.58)
Economic Growth	-0.006 (0.06)	-0.028 (0.06)	-0.110 (0.10)	-0.008 (0.05)	-0.095 (0.08)	-0.056 (0.18)	-0.077 (0.06)	-0.088 (0.05)	-0.019 (0.08)	-0.018 (0.08)	-0.060 (0.06)	-0.003 (0.11)
Financial Openness	0.000 (0.02)	0.026 (0.02)	-0.022 (0.03)	0.000 (0.02)	-0.009 (0.02)	0.102 (0.08)	0.025 (0.02)	-0.015 (0.01)	-0.026 (0.02)	-0.012 (0.02)	0.032 <sup>-</sup> (0.02)	0.010 (0.04)
Age	0.167* (0.03)	0.153* (0.02)	0.074* (0.03)	0.065* (0.02)	0.352* (0.03)	0.086 (0.07)	0.111 <sup>■</sup> (0.05)	0.026 (0.02)	0.162* (0.04)	0.103* (0.03)	0.130* (0.02)	0.203* (0.04)
Lerner Index	9.804* (2.95)	5.257 <sup>■</sup> (2.60)	-0.899 (3.94)	8.547* (2.66)	2.732 (2.77)	13.751 (10.09)	10.908* (3.01)	7.789* (2.47)	3.585 (2.70)	6.266 <sup>-</sup> (3.43)	7.004* (2.61)	2.502 (3.25)
Constant	-82.835* (6.71)	-79.548* (7.99)	-3.055 (7.90)	-48.080* (6.27)	- (113.064* (8.79)	-26.355 (22.72)	-73.825* (5.89)	-28.147* (6.46)	-53.924* (8.16)	-25.371* (9.40)	- (95.329* (6.78)	-72.033* (10.03)
Insig2u Constant	5.092* (0.18)	5.149* (0.21)	3.414* (0.28)	4.421* (0.23)	6.177* (0.20)	2.880 <sup>■</sup> (1.13)	5.050* (0.19)	3.355* (0.32)	4.383* (0.25)	2.812* (0.53)	5.445* (0.20)	4.547* (0.25)
Observations	1123	1123	1123	1123	1123	1123	1123	1123	1123	1123	1123	1123
Model	re	re	re	re	re	re	re	re	re	re	re	re

Standard errors in parentheses

<sup>-</sup> $p < 0.1$ , <sup>■</sup> $p < 0.05$ , \* $p < 0.01$

**Table 16:** Governance factors in binary form (further analyses with bank age and lerner index)

	(1)	(2)	(3)	(4)	(5)	(6)
	BDMYear	BDSIZE	IndDirP	FemExeP	WomBDP	PEmpl
Bank Size	-0.045 (0.06)	0.030 (0.05)	0.015 (0.03)	0.004 0.00	0.013 <sup>+</sup> 0.00	0.161 <sup>+</sup> (0.06)
Capitalization	-0.596 (0.53)	0.006 (0.30)	- (0.22)	-0.052 (0.15)	0.020 (0.08)	0.461 (0.62)
Liquidity	-0.001	0.000	- 0.001	-0.001	0.000	- 0.001
Inefficiency	0.00 0.001	0.00 -0.001	0.00 0.002 <sup>+</sup>	0.00 0.000	0.00 0.000	0.00 0.001
Asset Quality	0.00 0.006 (0.01)	0.00 -0.003 0.00	0.00 0.004 (0.01)	0.00 0.002 0.00	0.00 0.000 0.00	0.00 0.002 0.00
Business Model	-0.002 0.00	0.000 0.00	0.000 0.00	0.000 0.00	0.001 0.00	0.002 0.00
Return on Assets	-0.005 (0.01)	-0.003 (0.01)	0.026 <sup>+</sup> (0.01)	-0.004 0.00	0.000 0.00	0.003 (0.01)
Economic Growth	0.002	0.000	- 0.002	-0.002	-0.002 <sup>▣</sup>	0.007
Financial Openness	0.00 0.001	0.00 -0.001 <sup>▣</sup>	0.00 0.000	0.00 -0.001 <sup>+</sup>	0.00 -0.001 <sup>▣</sup>	(0.01) - 0.003
Age	0.00 0.011 (0.01)	0.00 -0.010 (0.01)	0.00 0.004 (0.01)	0.00 -0.001 0.00	0.00 -0.001 <sup>▣</sup> 0.00	0.00 0.048 <sup>+</sup> (0.01)
Lerner Index	-0.243 (0.25)	0.026 (0.11)	- 0.003 (0.11)	-0.014 (0.07)	-0.026 (0.04)	-0.242 <sup>-</sup> (0.13)
Constant	2.663 <sup>+</sup> (0.60)	2.428 <sup>+</sup> (0.42)	0.008 (0.28)	0.180 <sup>-</sup> (0.10)	-0.053 (0.07)	8.897 <sup>+</sup> (0.57)
Observations	458	588	476	481	585	742
Model	fe	fe	fe	re	re	fe

Standard errors in parentheses

<sup>-</sup>  $p < 0.1$ , <sup>▣</sup>  $p < 0.05$ , <sup>+</sup>  $p < 0.01$

The Global Economic Governance Programme was established in 2003 to foster research and debate into how global markets and institutions can better serve the needs of people in developing countries. The program is co-hosted by University College and the Blavatnik School of Government.

The three core objectives of the Programme are:

- ◇ to conduct and foster research into international organizations and markets as well as new public-private governance regimes
- ◇ to create and develop a network of scholars and policy-makers working on these issues
- ◇ to influence debate and policy in both the public and the private sector in developed and developing countries



[www.globaleconomicgovernance.org](http://www.globaleconomicgovernance.org)