

A Mathematical Proof of the Value of Virtue (Lins et al. 2017)

How is virtue connected to the business world?

Trust is often understood as:

"the expectation that another person (or institution) will perform actions that are beneficial, or at least not detrimental, to us regardless of our capacity to monitor those actions... so that we will consider cooperating with him [the institution]." ¹

Trust is derived from **social capital**, which can be defined as:

"a propensity of people in a society to cooperate to produce socially efficient outcomes." ²

Social capital can be decomposed into:

1. Personal relationships
2. Social network support
3. **Civic engagement** - the activities through which agents contribute positively to the community and social life (e.g., volunteering, political participation, donations, etc).
4. **Trust and cooperative norms** - comprising factors (social norms, including reciprocity, and shared values) that shape the way that agents behave towards each other and as members of society.

Therefore, in capital markets, trust derived from greater social capital allows for more stock market participation.

According to Guiso et al. (2008) ³, from a shareholder perspective:

"The decision to invest in stocks requires not only an assessment of the risk-return trade-off given the existing data, but also an act of faith (trust) that the data in our possession are reliable and that the overall system is fair."

Quantitative analysis method

Identification strategy and natural experiment

In their 2017 paper, Lins, Servaes, and Tamayo use firms' **corporate social responsibility (CSR) activities as a measure of their social capital**. The authors posit that firms with high social capital (measured by corporate social responsibility, or CSR) are more resilient during crises due to increased stakeholder and investor trust ⁴. This is based on the idea that higher social capital leads to greater trust from stakeholders and investors, which is particularly valuable during periods of economic uncertainty.

From a shareholder perspective, if high social capital firms are perceived as more trustworthy, investors may place a valuation premium on these firms when overall trust in companies is low, as in the 2008-2009 financial crisis.

From a stakeholder perspective, the reciprocity concept often discussed in studies of social capital (i.e., the idea that "I will be good to you because I believe you will be good to me at some point in the future") suggests that stakeholders (e.g., employees, customers, suppliers, and the community at large) are more likely to help high social capital firms weather a negative shock, given that such firms displayed greater attention to, and cooperation with, stakeholders in the past.

Therefore, they utilise the 2008 crisis as a natural experiment to examine the relationship between corporate social responsibility (CSR) and firm performance, while controlling for various factors to isolate the effect of CSR. They also compare their findings to the Enron and WorldCom crises.

This crisis-based natural experiment is important because it is difficult to establish a causal relationship between social capital and firm performance. Under normal circumstances, it is perfectly possible that firms can generate high social capital from high performance. For example, investors may admire high-performing firms, and suppliers and customers may also assign greater credit to these firms, resulting in high social capital. However, this only indicates a positive correlation between social capital and firm performance, whereas a causal relationship is ambiguous. In the natural experiment conducted by this paper, the exogenous financial shock disrupts the equilibrium, while levels of CSR remain fixed, at least in the short term. This allows researchers to directly observe how investors adjust their valuations of firms with varying attitudes toward corporate social responsibility (CSR). Thus, this paper also makes a contribution to the literature investigating whether CSR is value-enhancing for shareholders.

Hypothesis

If a firm's social capital helps build stakeholder trust and cooperation, it should pay off more when being trustworthy is more valuable, such as during an unexpectedly low-trust period.

Data

- **CSR Data:** MSCI ESG Stats Database (formerly KLD), providing yearly CSR ratings. A composite CSR score is created, excluding certain industries and governance aspects.
- **Financial Data:** Stock returns from CRSP (Centre for Research in Security Prices), accounting data from Compustat. Financial firms and micro-cap stocks are excluded.
- **Regional Trust Data:** 2006 General Social Survey (GSS) data on regional trust levels.
- **Time Period:** August 2008 to March 2009 (main analysis), with extensions to the Enron/WorldCom crisis and a longer period (2007-2013).

Model & result

$$\begin{aligned} \text{Returns} = & \alpha + \beta_1 \text{CSR} + \beta_2 \text{Ln}(\text{Market Cap}) + \beta_3 \text{Long-Term Debt} \\ & + \beta_4 \text{Short-Term Debt} + \beta_5 \text{Cash Holdings} + \beta_6 \text{Profitability} \\ & + \beta_7 \text{Book-to-Market} + \beta_8 \text{Negative B/M} + \beta_9 \text{Momentum} \\ & + \beta_{10} \text{Idiosyncratic Risk} + \text{Other Corporate Governance Variables} \end{aligned}$$

The authors report the results of their regression analyses, showing a strong positive relationship between CSR ratings and stock returns during the 2008 financial crisis. This relationship is robust across various regression specifications and control variables.

Key findings: High-CSR firms significantly outperformed low-CSR firms during the financial crisis.

The authors also investigate whether the positive relation above is unique to periods of low trust or is common to most periods, perhaps due to some unobservable (omitted) risk factor that is correlated with CSR. To address this question, the authors construct a panel of monthly returns for all the firms in the sample starting in 2007, prior to the onset of the crisis, and ending in 2013, several years into the economic recovery.

$$\begin{aligned} \text{Returns} = & \alpha + \beta_1 \text{CSR}_{2006} * \text{Crisis} + \beta_2 \text{CSR}_{2006} * \text{Post-Crisis} \\ & + \beta_3 \text{Ln}(\text{Market Cap}) + \beta_4 \text{Long-Term Debt} \\ & + \beta_5 \text{Short-Term Debt} + \beta_6 \text{Cash Holdings} + \beta_7 \text{Profitability} \\ & + \beta_8 \text{Book-to-Market} + \beta_9 \text{Negative B/M} + \beta_{10} \text{Momentum} \\ & + \beta_{11} \text{Idiosyncratic Risk} + \text{Other Corporate Governance Variables} \end{aligned}$$

Crisis is a dummy variable taking the value of 1 in the period August 2008 to March 2009, and 0 otherwise. *Post-Crisis* is a dummy variable set to 1 in the period April 2009 to December 2013. The result shows that high-CSR firms exhibit superior performance during the crisis period; after the crisis, the relation between CSR and returns becomes insignificant. *These results indicate that the excess returns earned by high-CSR firms are limited to the crisis period, consistent with our suggestion that social capital created through CSR pays off when trust in the economy declines unexpectedly.*

Further tests show that:

- The positive relationship is also observed during the Enron/WorldCom crisis.
- High-CSR firms exhibited higher profitability, growth, and sales per employee during the crisis.

A Case Against Mainstream Shareholder-Centric Corporate Governance

Bratton and Wachter (2010) launch a full attack on the mainstream shareholder-centric corporate governance approach ⁵.

1. Critique of Shareholder Primacy and "Managing to the Market":

- The 2008 crisis demonstrated the failure of a system focused solely on maximising short-term shareholder value. This led to "managing to the market," where firms prioritised short-term gains over long-term stability and risk management. Increased shareholder power, the authors argue, did not prevent this and might have exacerbated it.

2. Information Asymmetry and Market Failures:

- The article highlights the unrealistic assumption of negligible information asymmetry in the shareholder empowerment model. Managers often possess more information than shareholders, which can lead to poor decision-making and excessive risk-taking. Market prices, therefore, don't always accurately reflect long-term value.

3. The Dynamic Responsiveness of the Existing Legal Model:

- The authors argue that, although imperfect, the existing corporate governance system has demonstrated a capacity to adapt and respond to shareholder concerns and agency costs over time. Further shareholder empowerment is unnecessary and could introduce new costs.

4. Executive Compensation and Risk-Taking:

- The authors link executive compensation structures to excessive risk-taking. Incentives focused on short-term stock price increases encouraged managers to take on excessive risk, even if it jeopardised long-term sustainability.

5. The Role of Regulation and Oversight:

- The authors implicitly advocate for stronger regulatory oversight to prevent excessive risk-taking and ensure responsible lending practices. This is crucial to address market failures and information asymmetries.

Tip

[Student activity]

Formal assessment 2: policy paper

2500 words

Students will assume the role of a speech-writer for the Department for Business and Trade (DBT) of the UK government and prepare a background policy paper for a forthcoming international forum, which sets out the main reasons for the world financial crisis of 2007-2008 and a consensus of lessons learnt, with scope for new thinking as well.

To complete this assessment, you may use the following points as guidance:

- Study the origin of the crisis and the governance discussion by consulting the papers provided for this part of the course.
- In particular, papers in the folder named “On Mechanism” address specific governance mechanisms proposed by researchers; papers in the folder named “On Stakeholder Theory” focus on the debate between shareholder primacy and stakeholder-oriented thinking.
- The Confucianism paper, although not directly related to the financial crisis, may inspire new thinking about adjusting the direction of modern corporate governance. It is also helpful to review materials in Part 1.4 - Confucian Governance.
- Make sure you refer to the theories and any relevant materials you have learnt during the earlier part of this course.

1. Sapienza, P., & Zingales, L. (2012). A trust crisis. *International review of finance*, 12(2), 123-131. [↗](#)

2. La Porta, R., Lopez-de-Silanes, F., & Shleifer, A. (1997). Trust in large organizations. *The American Economic Review*, 87(2), 333-338. [↗](#)

3. Guiso, L., Sapienza, P., & Zingales, L. (2008). Trusting the stock market. *the Journal of Finance*, 63(6), 2557-2600. [↗](#)

4. Lins, K. V., Servaes, H., & Tamayo, A. (2017). Social capital, trust, and firm performance: The value of corporate social responsibility during the financial crisis. *the Journal of Finance*, 72(4), 1785-1824. [↗](#)

5. Bratton, W. W., & Wachter, M. L. (2010). The case against shareholder empowerment. *University of Pennsylvania Law Review*, 653-728. [↗](#)