Philipp Alexander Thompson
Freie Universität Berlin
School of Business and Economics
Management Department

Freie Universität Berlin

# The Financialization of Nonfinancial Corporations

## Drivers and Outcomes in Context

# Agenda

- Introduction
- Key findings of the individual studies
- Zoom on: Study 2 - *A Cross-National Comparison of the Employment Outcomes of Financialization*
- The project‘s overall contributions and implications

Topic, Relevance, Theory

# INTRODUCTION

# Financialization as a multifaceted phenomenon

Broad definition by Epstein (2005): *"the increasing role of financial motives, financial markets, financial actors and financial institutions in the operation of the domestic and international economies"*.

Academic literature tackling this phenomenon at multiple levels (van der Zwan 2014):

- Financialization as a regime of accumulation
- **Financialization of organizations, particularly nonfinancial firms**
- Financialization of everyday life

Financialization of nonfinancial firms as a crucial nexus, where macro-institutional factors shape firm behavior, which in turn affects both macro-economic outcomes and micro-level effects on people's lives

# The Financialization of nonfinancial firms (NFC)

Within the nonfinancial corporation we see two important manifestations:

Financialization of investment

- NFCs invest more strongly in financial assets, rather than real assets, because they a) offer financial profit opportunities, and b) are more flexible, unspecific and tradeable, thus less committed than real investments

Financialization of valuation

- NFCs increasingly use financial logics of measurement and incentivization to assess essentially non-financial domains, such as pro-social efforts by managers and employees (Chiapello 2015)

# Open questions

While the scale and impact of financialization is broadly documented, some theoretical and empirical blind spots remain, especially:

*Does financialization enable or constrain nonfinancial firms?*

*Do institutions matter to financialization, and if yes, how?*

*Who benefits and who suffers under financialization?*

# Theory

Individual studies transdisciplinary and theoretically ecclectic

Broader theoretical orientation: Comparative institutional theory

- Varieties of Capitalism (Hall & Soskice 2001)
- Comparative industrial relations (e.g. Frege & Kelly 2013)

⇒ Financialization research is under-contextualized (Faust 2018)

⇒ Common assumption (Engelen & Konings 2010): coordinated market institutions and institutionally-supported labor voice will limit the extent and consequences of financialization

⇒ **But**: Institutions shape firm-level financialization in unexpected and nontrivial ways

Key findings of the

# INDIVIDUAL STUDIES

# Individual Studies

Study 1: *Drivers of the Financialization of Nonfinancial Firms in Different Varieties of Capitalism*

- Presented at Society for the Advancement of Socio-Economic (**SASE**) Annual Conference 2018, American Sociological Assocation (**ASA**) Annual Meeting 2019

Study 2: *A Cross-National Comparison of the Employment Outcomes of Financialization*

- Presented at **SASE** 2021, **ASA** 2021

Study 3: *Are CEO Incentives for Corporate Social Responsibility Really Effective?*

- Presented at European Group for Organization Studies (**EGOS**) 2020, **AOM** 2021

# Study 1: *Drivers of the Financialization of Nonfinancial Firms in Different Varieties of Capitalism*

Topic: What drives firm level financialization in different varieties of capitalism?

Literature: firm-level *financialization of investment* literature, Varieties of Capitalism, Political economy, Contingency theory

Argument: Institutional characteristics of liberal market economies (LME) and coordinated market economies (CME) moderate the relationship between financialization and its drivers (part. shareholder value orientation & risk)

Methods: firm-level data for ~5,800 corporations from major LMEs (USA, UK) and CMEs (Germany, Japan) over the period of 2000 – 2017 (44,777 obs.); fixed-effects linear panel regressions (+ random effects and GMM as robustness checks)

Contributions:

- Institutional environment of LMEs and CMEs substantially shapes relative salience of drivers
- Risk as a driver relatively more salient in CMEs, shareholder value orientation relatively more salient in LMEs

# Study 2: *A Cross-National Comparison of the Employment Outcomes of Financialization*

Topic: How do institutional differences in the domain of industrial relations shape the employment outcomes of firm-level financialization?

Literature: firm-level *financialization of investment* literature, comparative industrial relations, Varieties of Capitalism, Neoclassical economics

Argument: Institutionally-backed employee voice has the potential to both mitigate and exacerbate the negative employment effects of financialization, depending on the type of voice

Methods: firm-level data for ~5,000 corporations from 35 OECD countries over the period of 1990 – 2019; multi-level (mixed) effects linear and logit panel regressions

Contributions:

- firm-external labor voice (collective bargaining) appears to exacerbate the negative employment effects of financialization, but firm-internal labor voice (works councils) appears to mitigate them

# Study 3: *Are CEO Incentives for Corporate Social Responsibility Really Effective?*

Topic: Do CSR incentives for CEOs, as a financialized corporate governance tool, improve or hinder corporate responsibility?

Literature: *financialization of valuation* literature, agency theory, behavioral motivation theories (crowding-out), institutional theory (decoupling)

Argument: Monetary incentives for CEOs to advance CSR introduce a financialized, instrumental logic, and thus drive symbolic, rather than substantial CSR activities

Methods: firm-level data for ~1,300 US (S&P 1500) corporations over the period of 2002 – 2015; fixed-effects linear and probit panel regressions, IV and GMM regressions as robustness checks

Contributions:

- Monetary CSR incentives for CEOs, while driving up formal CSR adoption, nurture policy-practice decoupling, leading to ineffective CSR efforts

Zoom on: Study 2

# *A CROSS-NATIONAL COMPARISON OF THE EMPLOYMENT OUTCOMES OF FINANCIALIZATION*

# Motivation

Previous research has established broad negative employment effects from financialization (Lin 2016, Tomaskovic-Devey et al. 2015, Alvarez 2013), e.g. …

- Income inequality
- Reduced wage share
- Job loss
- Hiring stagnation

# Puzzle

…but we don‘t know how (institutional) context matters!

A-priori assumption: Coordinated market institutions and strong labor voice limit the extent and effects of financialization among nonfinancial firms (Engelen & Konings 2010, Lin 2016)

Research question:

*“Does institutionally-supported collective employee voice represent a barrier limiting the detrimental consequences of firm financialization for workers?”*

# Theoretical considerations

Institutionally-backed labor voice can…

Empower workers to veto against employment reductions (Emmenegger 2014)

⇒ **Empowerment effect**

Drive substition of (nonfinancial) employment due to disincentives of labor voice (Laroche & Wechtler 2011)

⇒ **Substitution effect**

# Theoretical considerations

Net effect depends on type of labor voice…

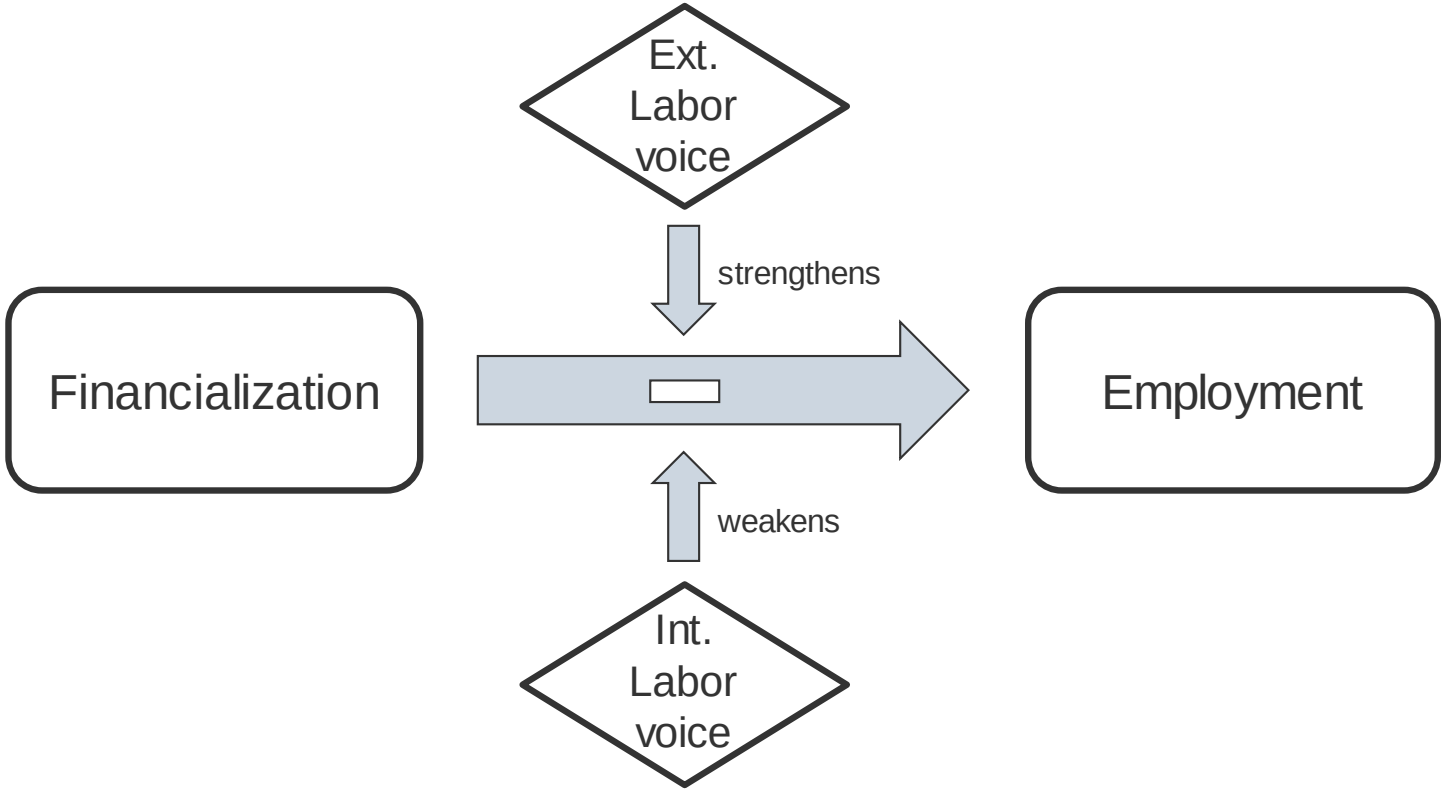
External, control-type labor voice: collective bargaining

- Conflictive character and distance to the firm exacerbates (dis)-incentives, while granting little empowerment against the fragmented challenge of financialization
- Substitution effect salient

Internal, participation-type labor voice: works councils

- Cooperative character and proximity to the firm minimizes (dis-)incentives, while granting greater empowerment to intervene against financialization-driven employment reductions
- Empowerment effect salient

# Empirical approach



# Empirical approach

Sample: Corporations listed on the primary stock indices of each of the 35 OECD countries

Data for ~5,000 corporations over the period of 1990 – 2019

- Data on financial investments, employment, other company characteristics taken from WorldScope
- Institutional/industrial relations data from the ICTWSS and OECD.stat databases

Method: Modelling moderating effect of industrial relations institutions through interactions within multi-level regression models

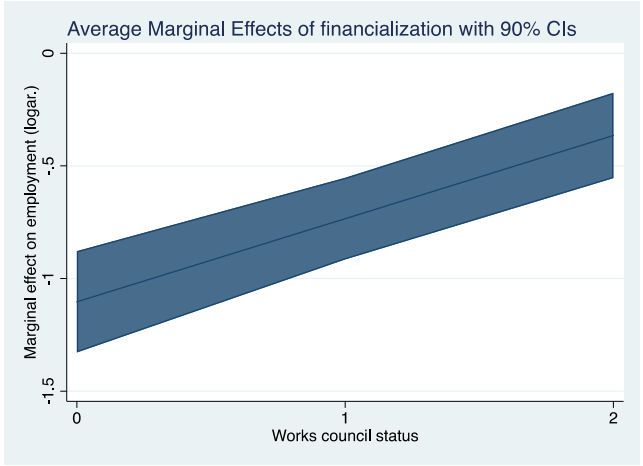
- Accounts for the nested structure of multilevel data: individual observations (level 1), nested within firms (level 2), nested within countries (level 3)
- Allow modelling interaction effects between higher-level (institutions) and lower-level (financialization) variables (cf. e.g. Brady et al. 2020, Sauerwald et al. 2016).
- Models include random intercepts at both the company and country levels, and random slopes for financialization.

# Findings – internal labor voice

| | (1) | (2) | (3) | (4) |
|---|---|---|---|---|
| Sales | 1.09e-08*** (1.85e-10) | 1.06e-08*** (1.80e-10) | 1.04e-08*** (1.80e-10) | 1.04e-08*** (1.80e-10) |
| ROA | -0.00466*** (0.000264) | -0.00286*** (0.000261) | -0.00286*** (0.000261) | -0.00287*** (0.000261) |
| Foreign sales ratio | 0.00929*** (0.00227) | 0.0104*** (0.00223) | 0.00939*** (0.00223) | 0.00989*** (0.00223) |
| Financialization | | -0.889*** (0.115) | -0.896*** (0.109) | -1.410*** (0.153) |
| Works councils | | | 0.141*** (0.0124) | 0.0241 (0.0231) |
| Financialization * Works councils | | | | 0.383*** (0.0635) |
| Constant | 8.047*** (0.104) | 8.319*** (0.124) | 8.128*** (0.125) | 8.287*** (0.127) |
| Observations | 53675 | 53675 | 53675 | 53675 |
| Δ AIC (compared to model 1) | | -2529 | -2655 | -2687 |

Standard errors in parentheses
* p<0.10 ** p<0.05 *** p<0.01

Figure 1: Average marginal effect of financialization on workforce size at different levels of works council status; 90% confidence interval indicated by colored area



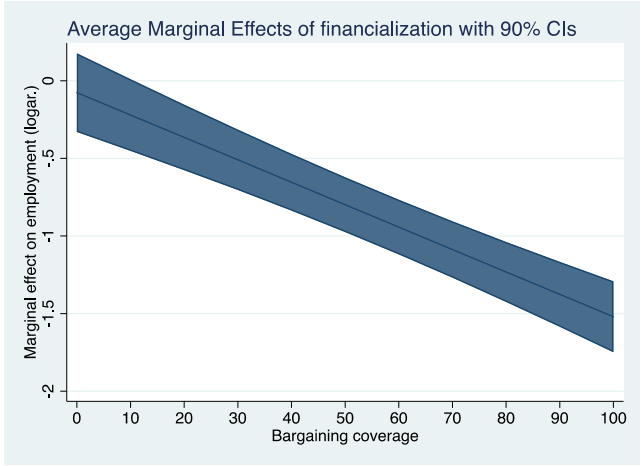

| | | Average marg. effect | P-value | 95% confidence interval | |
|---|---|---|---|---|---|
| Works Council Status (0=low, 2=high) | 0 | -1.1031 | 0.000 | -1.3710 | -0.8351 |
| | 1 | -.7340 | 0.000 | -0.9501 | -0.5179 |
| | 2 | -.3649 | 0.002 | -0.5909 | -0.1390 |

# Findings – external labor voice

| | (5) | (6) | (7) | (8) | (9) |
|---|---|---|---|---|---|
| Sales | 1.01e-08*** | 9.88e-09*** | 9.54e-09*** | 9.58e-09*** | 9.50e-09*** |
| | (1.89e-10) | (1.85e-10) | (1.86e-10) | (1.86e-10) | (1.86e-10) |
| ROA | -0.00484*** | -0.00312*** | -0.00297*** | -0.00296*** | -0.00291*** |
| | (0.000279) | (0.000278) | (0.000277) | (0.000277) | (0.000278) |
| Foreign sales ratio | 0.115*** | 0.122*** | 0.115*** | 0.117*** | 0.117*** |
| | (0.00823) | (0.00807) | (0.00805) | (0.00805) | (0.00808) |
| Financialization | | -0.816*** | -0.788*** | 0.0229 | -0.478*** |
| | | (0.0928) | (0.0910) | (0.163) | (0.172) |
| Bargaining coverage | | | -0.00621*** | -0.00147* | -0.000959 |
| | | | (0.000408) | (0.000798) | (0.000782) |
| Financialization * Bargaining coverage | | | | -0.0145*** | -0.0144*** |
| | | | | (0.00211) | (0.00201) |
| Works councils | | | | | -0.0324 |
| | | | | | (0.0226) |
| Financialization * Works councils | | | | | 0.369*** |
| | | | | | (0.0619) |
| Constant | 8.094*** | 8.334*** | 8.653*** | 8.397*** | 8.387*** |
| | (0.107) | (0.120) | (0.124) | (0.128) | (0.134) |
| Observations | 40112 | 40112 | 40112 | 40112 | 39609 |
| Δ AIC (compared to model 1) | | -1624.07 | -1851.75 | -1892.84 | -2706.06 |

Standard errors in parentheses
* p<0.10 ** p<0.05 *** p<0.01

Figure 2: Average marginal effect of financialization on workforce size at different levels of bargaining coverage; 90% confidence interval indicated by blue area




| | | Average marg. effect | P-value | 95% confidence interval | |
|---|---|---|---|---|---|
| Bargaining coverage in % | 0 | -.0762 | 0.621 | -.3783 | .2259 |
| | 20 | -.3651 | 0.004 | -.6163 | -.1139 |
| | 40 | -.6540 | 0.000 | -.8715 | -0.4364 |
| | 60 | -.9428 | 0.000 | -1.1524 | -0.7332 |
| | 80 | -1.2317 | 0.000 | -1.4618 | -1.0016 |
| | 100 | -1.5206 | 0.000 | -1.7932 | -1.2479 |

# Contributions

First to offer statistical evidence that the negative employment effects of financialization occur not only in the US

Theorizes and empirically shows that “institutions matter” to the outcomes of financialization in non-trivial ways.

- Contrary to prior belief (cf. Engelen & Konings 2010, Lin 2016), strong collective bargaining institutions actually are associated with worse employment reductions.
- Firm-internal worker participation in decision making on the other does protect employment in the context of financialization

=> Advances financialization scholarship, as well as (comparative) industrial relations scholarship

The project‘s

# OVERALL CONTRIBUTIONS AND IMPLICATIONS

# Overall contributions

1. Illustrates financialization's capacity to both enable and constrain
   - Enables firms to effectively manage volatile business environments and demands for consistent shareholder value creation (studies 1 & 2), but constrains their ability to respond to demands of other stakeholders besides shareholders (study 3)

2. Shows that „institutions matter" for the drivers and outcomes of financialization
   - Institutions affect the salience of the drivers (study 1), and the severity of the outcomes of financialization (study 2)

3. Points out unequal distributional effects of financialization
   - Beneficiaries: Investors & managers; Sufferers: Employees, societal stakeholders

# Implications

For management/organizational scholarship:

Researchers should consider the expanded impact of finance on areas like employment and HR policy, corporate strategy, innovation, etc.

For financialization scholarship:

Researchers should systematically consider the institutional embeddedness of the phenomenon

For (comparative) institutional scholarship:

Researchers should further investigate the role of financialization as a form of escape from and erosion of core institutions

Freie Universität Berlin

Additional materials

# BACKUP

# STUDY 1: DRIVERS

# Study 1: Hypotheses

*Hypothesis 1: An increase in the business risk within nonfinancial companies' respective industry environment leads to an increase in investments in their financial assets.*

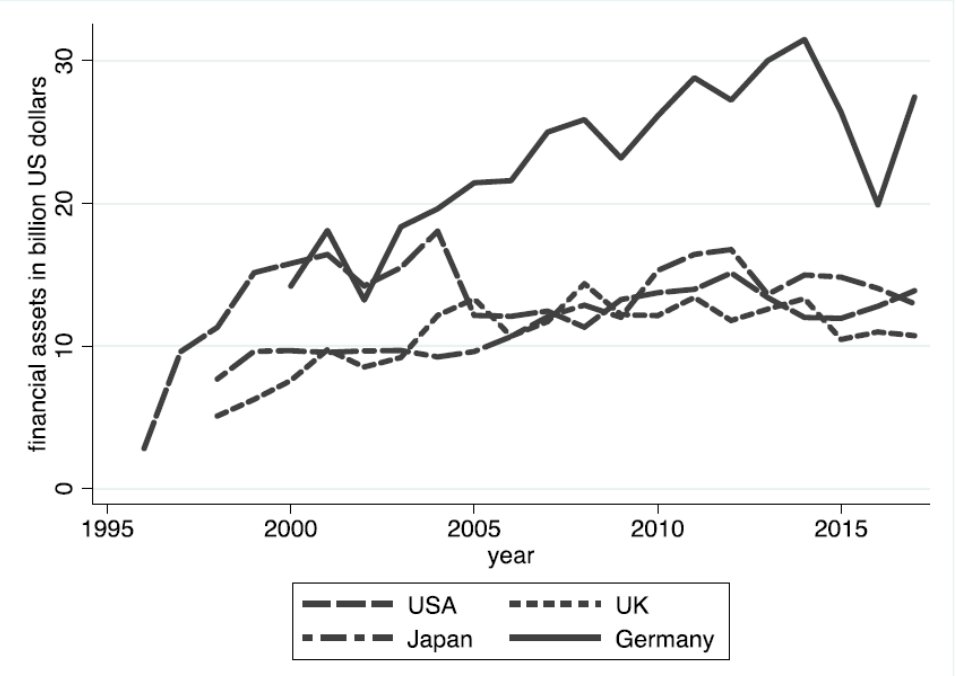
*Hypothesis 2: The positive effect of the economic risk in firms' industry environment on investments in financial assets will be stronger in CMEs (Germany and Japan), compared to LMEs (US and UK).*

*Hypothesis 3: An increase in nonfinancial companies' shareholder value orientation leads to an increase in investments in financial assets.*

*Hypothesis 4: When considering the average level of shareholder value orientation in each type of economy, shareholder value orientation in LMEs accounts for a larger amount of nonfinancial companies' investments in financial assets, compared to CMEs.*

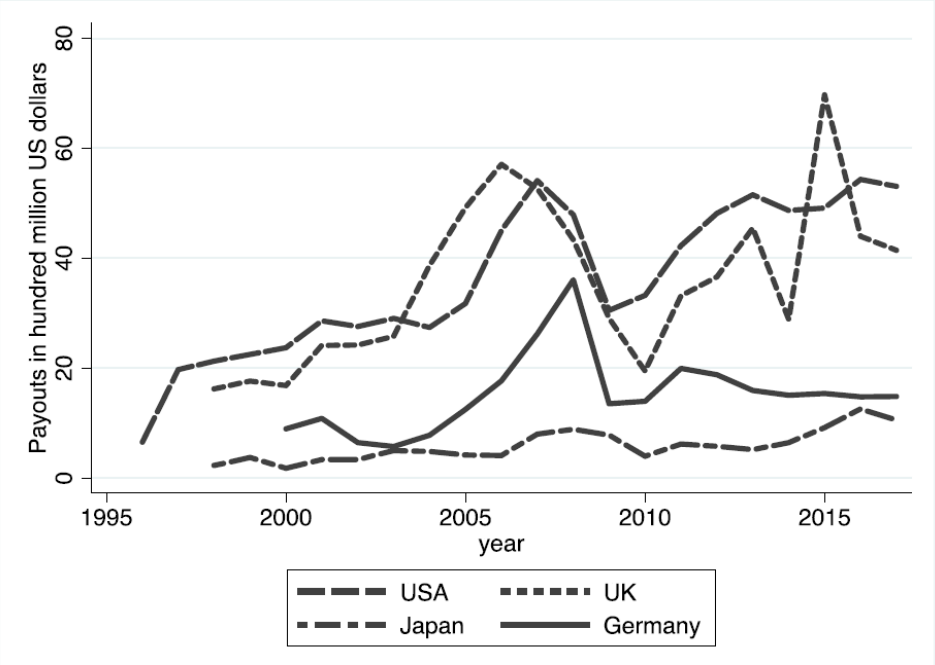
# Trends in financial investments

**Figure 1: Average financial assets of nonfinancial corporations in the US, UK, Germany and Japan, weighted by company size (market capitalization)**



# Trends in payouts to shareholders

**Figure 2: Average corporate payouts (dividends and share buybacks) of nonfinancial corporations in the US, UK, Germany and Japan, weighted by company size (market capitalization)**



# Study 1: Model variables

**Table 1: Variables for the regression analysis**

| Variable | Measure | Unit |
|---|---|---|
| **Dependent variable** | | |
| Financial assets (ln) | Ln(Cash & short-term investments + receivables) | Ln($US) |
| **Independent variables** | | |
| RISK | Industry (within country) average of standard deviation in the cashflow / total assets ratio | % |
| PAYOUTS | Cash dividend paid + share buybacks | 100,000,000 $US |
| **Controls** | | - |
| Employees (logar.) | Ln(number of employees) | - |
| Operating margin | Operating income / net total sales | % |
| Foreign sales ratio | Foreign sales / net total sales | % |
| Market to book ratio | (Market capitalization / (total assets – total liabilities)) / 1000<br>Note: re-scaling necessary to reduce number of decimals and make coefficients readable | - |
| Inflation | Yearly inflation rate of country, from Worldbank data | % |
| Profit gap | (Non-operating interest income – interest expenses) / total assets | - |
| Crisis | = 1 if year = {2007, 2008, 2009}, 0 otherwise | - |

# Study 1: Correlations

**Table 2: correlations, means and standard deviations for regression variables**

| | | | | Correlations | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Variable | Mean | Std. | (1) | (2) | (3) | (4) | (5) | (6) | (7) | (8) | (9) |
| (1) | Financial assets (ln) | 12.28 | 1.90 | 1.00 | | | | | | | | |
| (2) | Employees (logar.) | 7.680 | 1.940 | 0.84 | 1.00 | | | | | | | |
| (3) | Operating Margin | -0.445 | 18.718 | 0.05 | 0.06 | 1.00 | | | | | | |
| (4) | Foreign sales ratio | 27.46 | 29.30 | 0.15 | 0.16 | -0.01 | 1.00 | | | | | |
| (5) | Market to book ratio | 0.002 | 0.031 | -0.01 | -0.01 | -0.02 | 0.01 | 1.00 | | | | |
| (6) | Inflation | 1.201 | 1.348 | -0.13 | -0.01 | -0.02 | 0.17 | 0.02 | 1.00 | | | |
| (7) | Profit gap | -0.007 | 0.032 | 0.02 | -0.05 | -0.02 | -0.01 | 0.00 | -0.10 | 1.00 | | |
| (8) | PAYOUTS | 1.725 | 9.108 | 0.34 | 0.32 | 0.01 | 0.11 | 0.02 | 0.09 | -0.01 | 1.00 | |
| (9) | RISK | 0.106 | 0.499 | -0.10 | -0.08 | -0.02 | 0.08 | 0.02 | 0.10 | -0.01 | 0.00 | 1.00 |

# Study 1: Regression Results

**Table 3: fixed-effects linear regressions with robust standard errors; ln(financial assets) is the dependent variable in all models.**

| VARIABLES (all lagged) | (1) USA | (2) UK | (3) Germany | (4) Japan | (5) Pooled |
|---|---|---|---|---|---|
| Employees (logar.) | 0.566*** | 0.464*** | 0.609*** | 0.521*** | 0.521*** |
| | (0.047) | (0.035) | (0.086) | (0.024) | (0.021) |
| Operating margin | 0.000 | -0.000 | 0.000* | 0.003 | -0.000 |
| | (0.002) | (0.000) | (0.000) | (0.057) | (0.000) |
| Foreign sales ratio | 0.007*** | 0.002*** | 0.001 | 0.004*** | 0.003*** |
| | (0.001) | (0.001) | (0.001) | (0.000) | (0.000) |
| Market-to-book ratio | 0.068 | -0.179* | 11.202** | -2.347*** | -0.038 |
| | (0.059) | (0.101) | (5.560) | (0.866) | (0.076) |
| Inflation | -0.057*** | 0.045*** | -0.034** | -0.025*** | -0.021*** |
| | (0.004) | (0.009) | (0.013) | (0.002) | (0.002) |
| Profit gap | 7.645*** | 3.082*** | -0.121 | 18.835*** | 1.113 |
| | (0.965) | (1.041) | (0.328) | (1.994) | (1.174) |
| RISK | -0.002 | 0.025*** | 0.205*** | 0.254** | -0.001 |
| | (0.022) | (0.008) | (0.051) | (0.112) | (0.023) |
| * UK | | | | | 0.031 |
| | | | | | (0.024) |
| * GERMANY | | | | | 0.215*** |
| | | | | | (0.054) |
| * JAPAN | | | | | 0.291** |
| | | | | | (0.122) |
| PAYOUTS | 0.004*** | 0.005*** | 0.007*** | 0.004** | 0.005*** |
| | (0.001) | (0.002) | (0.002) | (0.002) | (0.001) |
| * UK | | | | | -0.000 |
| | | | | | (0.002) |
| * GERMANY | | | | | 0.001 |
| | | | | | (0.003) |
| * JAPAN | | | | | 0.000 |
| | | | | | (0.002) |
| Constant | 8.190*** | 7.683*** | 7.318*** | 8.616*** | 8.228*** |
| | (0.414) | (0.233) | (0.646) | (0.181) | (0.161) |
| Observations | 10,266 | 10,393 | 3,328 | 20,790 | 44,777 |
| Number of companies | 1,206 | 1,502 | 500 | 2,568 | 5,776 |
| R2 (within) | 0.285 | 0.188 | 0.224 | 0.279 | 0.218 |
| R2 (between) | 0.556 | 0.699 | 0.763 | 0.716 | 0.701 |
| R2 (overall) | 0.583 | 0.728 | 0.803 | 0.698 | 0.700 |

Robust standard errors in parentheses
*** p<0.01, ** p<0.05, * p<0.1

# Study 1: Estimated Contributions

**Figure 3: Estimated contributions of shareholder value orientation (operationalized as PAYOUTS) to the financial investments of the average nonfinancial firm in each country**

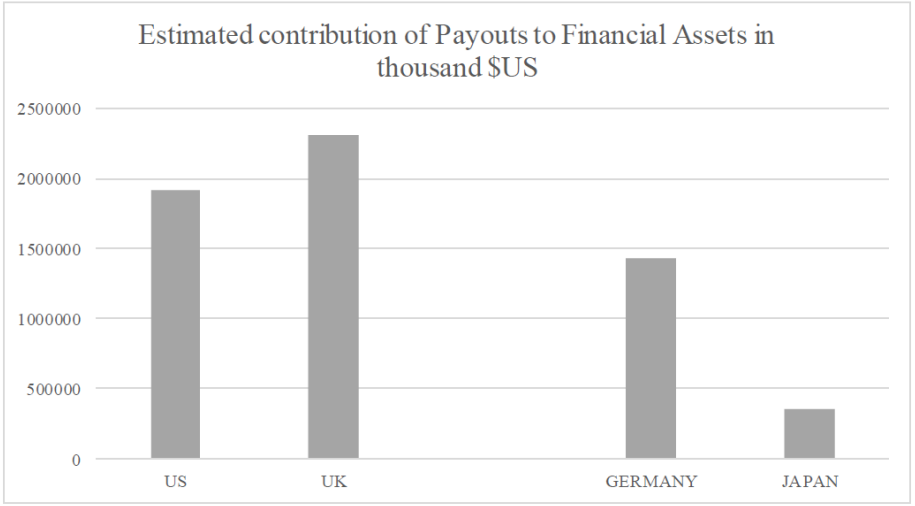
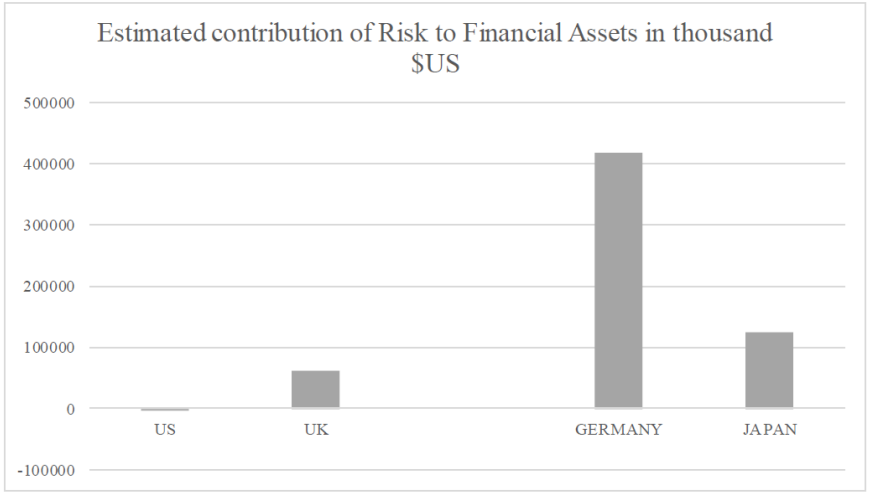
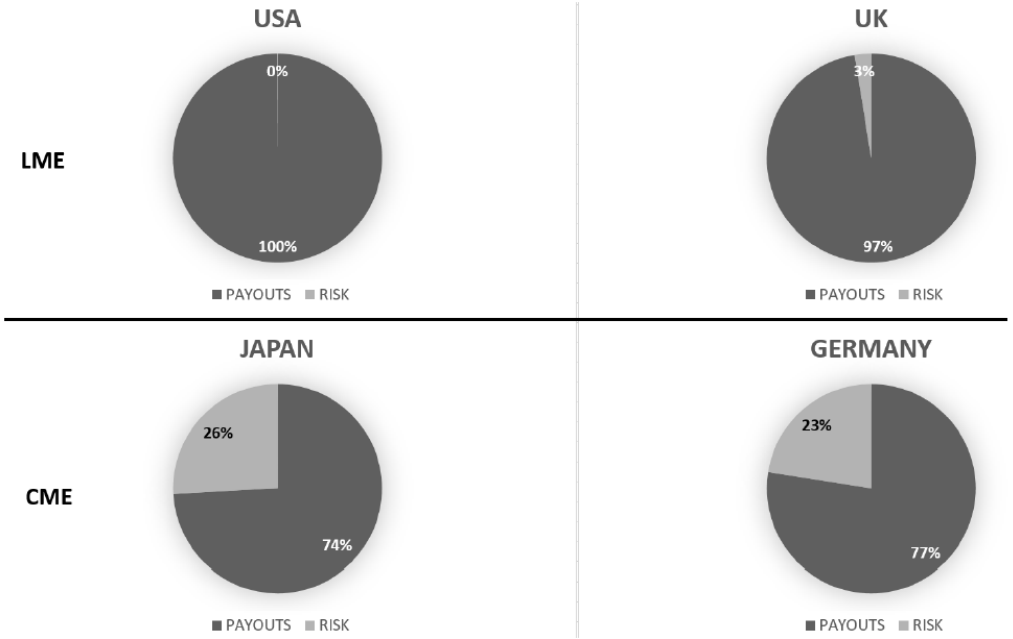



**Figure 4: Estimated contributions of risk (operationalized as RISK) to the financial investments of the average nonfinancial firm in each country**



# Study 1: Relative contributions

**Figure 5: Proportion of financial investment net of controls explained by RISK and PAYOUTS in each country, estimates based on pooled model (5)**



# STUDY 2: OUTCOMES

# Study 2: Hypotheses

*Hypothesis 1: Financialization is associated with a reduction of employment in nonfinancial corporations.*

*Hypothesis 2: Employee voice in the form of company-internal representation is associated with less negative employment effects from financialization.*

*Hypothesis 3: Employee voice in the form of collective bargaining is associated with more negative employment effects from financialization.*

# Study 2: Model Variables

**Table 1: Model variables – technical definitions and sources**

| Variable | Definitions, Notes |
|---|---|
| **Dependent Variable** | |
| Workforce size (ln) | Logarithmized number of employees, Source: Thomson Reuters WorldScope |
| **Financialization** | |
| Financialization | Financial assets / total assets;<br>Financial assets contains cash and short-term investments, net receivables, and other current assets;<br>firm-level |
| **Internal participation-type voice** | |
| Status of Works Councils | 2= existence and rights of works council or structure for (union and non-union-based) employee repre-sentation within firms or establish-ments confronting management are mandated by law or established through basic general agreement between unions and employers;<br>1= works councils (etc.) are voluntary, i.e. even where they are mandated by law, there are no legal sanctions for non-observance<br>0= works council or similar (union or non-union) based institutions of employee representation confronting management do not exist or are exceptional.<br>national level<br>Source: ICTWSS |
| Works Council Rights | 3 =economic and social rights, including codetermination on some issues (e.g., mergers, take-overs, restructuring, etc.)<br>2 =economic and social rights, consultation (advice, with possibility of judicial redress)<br>1 =information and consultation rights (without judicial redress)<br>0 =works council or similar (union or non-union) based institutions of employee representation confronting management do not exist or are exceptional.<br>Source: ICTWSS |
| **External control-type voice** | |
| Bargaining Coverage | Employees covered by valid collective (wage) bargaining agreements as a proportion of all wage and salary earners in employment with the right to bargaining, expressed as percentage, adjusted for the possibility that some sectors or occupations are excluded from the right to bargain<br>Source: ICTWSS |
| Union density | % of employees who are union members; from OECD;<br>national level |
| | |
| **Control variables** | |
| Sales | Total Sales, Source: Thomson Reuters WorldScope |
| Return on Assets (ROA) | = net income / total assets, Source: Thomson Reuters WorldScope |
| Foreign Sales Ratio | = sales abroad / total sales, Source: Thomson Reuters WorldScope |

# Study 2: Correlations

**Table 2: Descriptive statistics and correlations for full sample**

| | Variable | Mean | SD | correlations | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | | (1) | (2) | (3) | (4) | (5) | (6) | (7) |
| (1) | Workforce size (ln) | 8.8912 | 1.5345 | 1 | | | | | | |
| (2) | Financiali-zation | 0.3192 | 0.1689 | -0.1462 | 1 | | | | | |
| (3) | Sales | 7748831 | 2.10e+07 | 0.4899 | -0.0722 | 1 | | | | |
| (4) | ROA | 6.0164 | 8.7619 | 0.0022 | 0.1171 | -0.0048 | 1 | | | |
| (5) | Foreign Sales Ratio | 0.4291 | 0.9095 | 0.0576 | 0.1665 | 0.0332 | -0.0229 | 1 | | |
| (6) | Works C. Status | 1.2260 | 0.8853 | -0.2321 | 0.1661 | -0.0867 | -0.0679 | 0.2314 | 1 | |
| (7) | Bargaining Cov. | 42.9614 | 30.5265 | -0.2652 | 0.1236 | -0.1292 | -0.0644 | 0.2196 | 0.7026 | 1 |

# STUDY 3: INCENTIVES

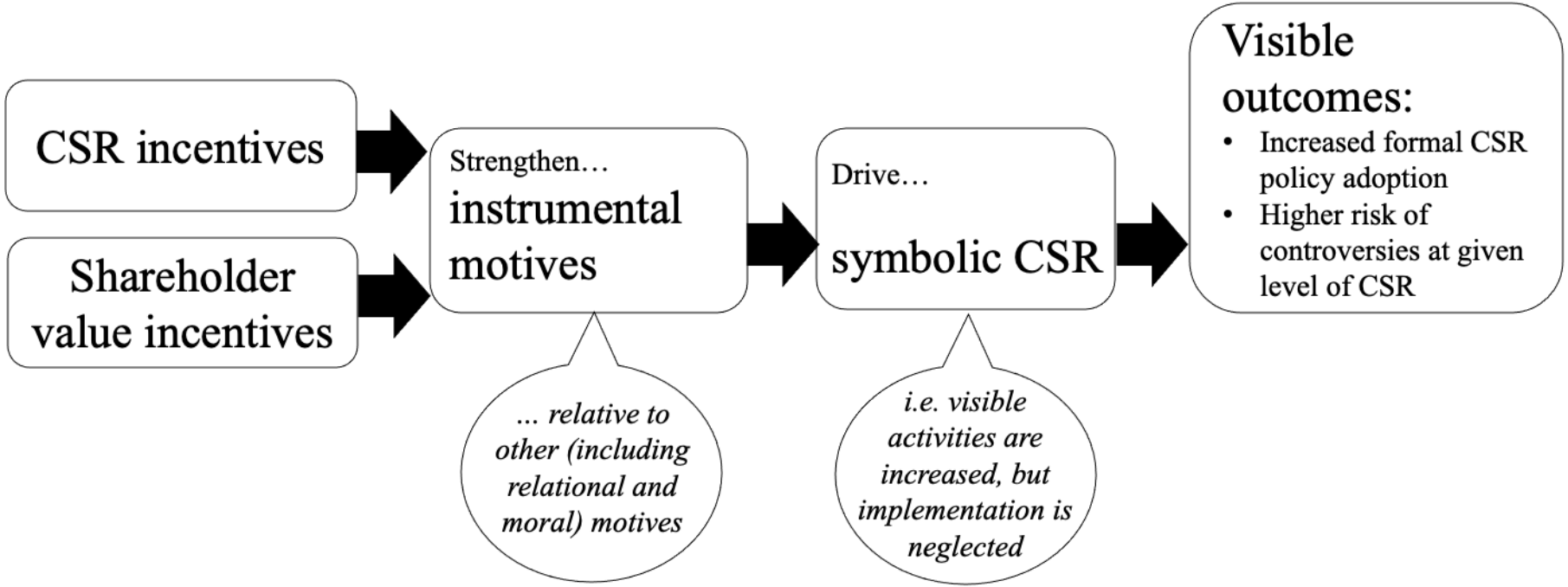
# Study 3: Hypotheses

Hypothesis 1: *CEO incentives for CSR will increase formal CSR policy adoption*

Hypothesis 2: *Among firms with a high level of formal CSR policy adoption, those granting CSR incentives to their CEOs will be more likely be involved in corporate irresponsibility scandals.*

Hypothesis 3: *CEO incentives for shareholder value creation will increase formal CSR policy adoption.*

# Study 3: Conceptual Model



# Study 3: Variables

Freie Universität Berlin

**Table 1: Variable descriptions**

| Variable | Description |
|---|---|
| **Dependent variables** | |
| CSR Policy Adoption Score | Continuous measure, score based on number of policies adopted in each area relative to total number of covered policies, see formula (1) |
| Occurrence of Scandal | Binary measure, "Is the company under the spotlight of the media because of a controversy linked to issues of product responsibility, human rights, workforce or diversity?"[13]<br>No = 0<br>Yes = 1 |
| **Independent variables** | |
| CSR incentives | Binary measure, "Is the senior executive's (CEO) compensation linked to CSR/H&S/Sustainability targets?"<br>No = 0<br>Yes = 1 |
| Shareholder incentives | Binary measure, "Is the CEO's compensation linked to total shareholder return?"<br>No = 0<br>Yes = 1 |
| **Controls** | |
| Operating margin | = operating income / total sales |
| Return on assets | = (Net Income – Bottom Line + ((Interest Expense on Debt-Interest Capitalized) * (1-Tax Rate))) / Average of Last Year's and Current Year's Total Assets * 100<br>(unit: Percent; taken from Worldscope) |
| ln employees | = ln(number of employees) |
| Tobin's Q | = (market capitalization + total liabilities) / (common shareholders equity + total liabilities) |

# Study 3: Symbolic and Substantial CSR

**Figure 1: Matrix of the relationship between formal CSR adoption (high CSR vs. low CSR) and actual corporate conduct (responsible vs. irresponsible)**

| | | Actual corporate conduct | |
|---|---|---|---|
| | | Responsible | Irresponsible |
| Adoption of CSR policies | High | Substantial CSR | **Symbolic CSR** |
| | Low | Uninvolved | Irresponsible |

# Study 3: Correlations

| | Mean | SD | Policy adoption | Scandal | CSR incent. | Shareh.V. incent. | Operat. margin | Return on assets | ln employ. | Tobin's Q |
|---|---|---|---|---|---|---|---|---|---|---|
| Policy adoption | 0.3480 | 0.2039 | 1 | | | | | | | |
| Scandal | 0.2236 | 0.4167 | 0.3480 | 1 | | | | | | |
| CSR incentives | 0.2277 | 0.4194 | 0.3211 | 0.1551 | 1 | | | | | |
| Shareh.V. incentives | 0.5751 | 0.4944 | 0.3249 | 0.1390 | 0.1772 | 1 | | | | |
| Operating margin | 0.1564 | 0.1057 | 0.0015 | 0.0010 | 0.0260 | 0.0008 | 1 | | | |
| Return on assets | 7.7998 | 7.7698 | -0.0038 | 0.0173 | -0.0290 | -0.0322 | 0.4009 | 1 | | |
| ln employees | 9.4972 | 1.4331 | 0.2738 | 0.3442 | 0.0573 | 0.1096 | -0.3484 | -0.0187 | 1 | |
| Tobin's Q | 2.1441 | 1.3639 | -0.1034 | -0.0108 | -0.1217 | -0.1147 | 0.3269 | 0.5160 | -0.1374 | 1 |

# Study 3: Results CSR

**Table 3: Results of regression analyses with CSR policy adoption score as dependent variable, using fixed effects linear regression**

| VARIABLES | (1) CSR policy adoption | (2) CSR policy adoption |
|---|---|---|
| Operating margin | 0.010 | 0.010 |
| | (0.030) | (0.030) |
| Return on assets | 0.000 | 0.000 |
| | (0.000) | (0.000) |
| Employees (ln) | 0.019*** | 0.018*** |
| | (0.005) | (0.005) |
| Tobin's Q | 0.004** | 0.004** |
| | (0.002) | (0.002) |
| Shareholder value incentives | 0.017*** | 0.019*** |
| | (0.005) | (0.005) |
| CSR incentives | 0.014*** | 0.021*** |
| | (0.004) | (0.006) |
| CSR incentives * Shareholder value incentives | | -0.010 |
| | | (0.007) |
| Constant | -0.226*** | -0.224*** |
| | (0.050) | (0.050) |
| Year | controlled | controlled |
| Observations | 8,497 | 8,497 |
| $R^2$ | 0.804 | 0.805 |
| Number of companies | 1,296 | 1,296 |

Robust standard errors in parentheses
*** p<0.01, ** p<0.05, * p<0.1

# Study 3: Results CSiR

**Table 4: Subsample analysis for companies with high average level of CSR policy adoption (top 30% in sample), random effects probit regressions with occurrence of irresponsibility controversy in any issue area**

| VARIABLES | (3) CSiR Controversy | (4) CSiR Controversy |
|---|---|---|
| Operating margin | 1.373*** | 1.382*** |
| | (0.519) | (0.518) |
| Return on assets | -0.006 | -0.006 |
| | (0.006) | (0.006) |
| Employees (ln) | 0.623*** | 0.622*** |
| | (0.054) | (0.054) |
| Tobin's Q | 0.091** | 0.090** |
| | (0.039) | (0.039) |
| Shareholder value incentives | 0.203** | 0.233** |
| | (0.090) | (0.103) |
| CSR incentives | 0.260*** | 0.348** |
| | (0.086) | (0.163) |
| CSR incentives * Shareholder value incentives | | -0.114 |
| | | (0.181) |
| Constant | -8.352*** | -8.352*** |
| | (0.667) | (0.668) |
| Year | controlled | controlled |
| Observations | 2,842 | 2,842 |
| $\chi^2$ | 239.6 | 241.21 |
| Number of companies | 388 | 388 |

Robust standard errors in parentheses
*** p<0.01, ** p<0.05, * p<0.1

# Study 3: Results CSiR Disaggr.

**Table 5: Subsample analyses for companies with high average level of CSR policy adoption in each individual corporate responsibility issue area (top 30% companies in product responsibility, community responsibility, or workforce responsibility), random effects probit regressions with occurrence of irresponsibility controversy in each individual issue area as dependent variable**

| VARIABLES | (5) Product controversy | (6) Community controversy | (7) Workforce controversy |
|---|---|---|---|
| Operating margin | 2.632*** | 2.287*** | -1.152 |
| | (0.613) | (0.701) | (0.948) |
| Return on assets | -0.006 | -0.011 | 0.001 |
| | (0.006) | (0.009) | (0.010) |
| Employees (ln) | 0.639*** | 0.475*** | 0.719*** |
| | (0.055) | (0.045) | (0.063) |
| Tobin's Q | 0.043 | -0.007 | 0.048 |
| | (0.046) | (0.045) | (0.076) |
| Shareholder value incentives | 0.128 | 0.253* | 0.150 |
| | (0.122) | (0.131) | (0.176) |
| CSR incentives | 0.421** | 0.377** | 0.001 |
| | (0.198) | (0.191) | (0.257) |
| CSR incentives * Shareholder value incentives | -0.340 | -0.102 | 0.026 |
| | (0.213) | (0.216) | (0.272) |
| Constant | -9.784*** | -6.890*** | -10.496*** |
| | (0.744) | (0.664) | (0.998) |
| Year | controlled | controlled | controlled |
| Observations | 3,005 | 2,176 | 3,086 |
| $\chi^2$ | 211.89 | 194.43 | 235.63 |
| Number of companies | 388 | 388 | 388 |

Robust standard errors in parentheses

*** p<0.01, ** p<0.05, * p<0.1