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Debunking the short-termist thesis in financialization studies: Evidence from US non-financial corporations 1998 – 2018

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Debunking the short-termist thesis in financialization studies: Evidence from US non-financial corporations 1998 – 2018.

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Abstract

It's widely argued that shareholder value orientation (SVO) causes firms to adopt a financialized business model, in which short-run share prices are prioritized over the firm's long-run growth. Financialized business models entail a "downsizing and distributing" allocation regime – the channeling of resources to shareholder payouts over reinvestment – and other changes that undermine firm's ability to innovate, reduce costs and retain market share, harming its competitiveness. We test this theory by examining how increased shareholder power and realigned managerial preferences – two underlying 'mechanisms' of SVO – affect two sets of outcomes: allocation regime (fixed investment, R&D expenditure and payouts) and real performance (productivity, market share and profitability). We allow for the fact that institutional shareholders likely vary in their preferences for governance, meaning that broad objective of maximizing shareholder profit may conduce highly varying business strategies. Our findings suggest that short-termism is not an outcome common to shareholder primacy in general, but rather governance directed to certain *kinds* of shareholders – in particular low-turnover, non-passive institutional investors. Moreover it is much more likely to occur when those investors are empowered within the firm rather than reliant solely on managerial reincentivization. This suggests short-termism is a more contingent feature of NFC financialization than commonly supposed.

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1. INTRODUCTION

The rise of shareholder value orientation (SVO) – which we define as a governance framework in which shareholder interests are prioritized over other stakeholders – is seen as one of the defining institutional features of the era of financialization. Financialization scholars generally take a dim view of SVO. They argue that it has encouraged the adoption of short-termist business models that undermine firms' innovative and productive capacities (L. E. Davis, 2017, p. 280; Fasianos et al., 2018, p. 45; Hein & Treeck, 2010; Orhangazi, 2008, p. 864; Tori & Onaran, 2018, p. 1397; Van der Zwan, 2014, p. 108; Van Treeck, 2008, p. 383). In the managerialist governance regimes that SVO has supplanted, managers were unconstrained by shareholder oversight and free to concentrate on the firm's long term growth prospects. This meant that maximal resources were devoted to reinvestment and that managerial and workforce talent was safeguarded and cultivated. SVO shifts the orienting objective of firm from growth to shareholder returns, or share value. Now, instead of pursuing scale and scope, managers invest only where the return on capital can be maximized. Firms are winnowed down to their core specializations and workforces slashed. The free cash flow released as a result is funneled quickly back to shareholders. According to critics this results in chronic underinvestment in vital resources and a breakdown of the organizational synergies that sustain innovation (Lazonick, 2010; Lazonick & O'Sullivan, 2000). While return on equity and share prices might be lifted in the short-term, the firm's ability to manipulate its cost function, and hence to retain market share, is compromised.

This critique of SVO is something of a common-sense view within the financialization literature. But the evidence in favor of it remains weak. It's been illustrated by various case studies (Froud et al., 2006; Sakinç & Lazonick, 2019), but not by any clear generalizable evidence. What *has* been shown quantitatively, by a large body of post-Keynesian econometric work, is that SVO reduces investment

in fixed capital stock (Auvray & Rabinovich, 2019; L. E. Davis, 2017; Hecht, 2014; Onaran et al., 2011; Orhangazi, 2008; Stockhammer, 2004; Tori & Onaran, 2018). But only if one assumes that growth-at-all-costs in the only strategy compatible with long term competitiveness would this be evidence of short-termism. If instead managers have "empire-building" proclivities – a tendency to invest in inefficient projects that aggrandize their personal power and prestige – then more a more disciplined investment policy may actually redound to the firm's long-term benefit, as SVO proponents argue to be the case (Richardson, 2006).

Here we set out to provide firmer evidence for or against the claim that SVO has transformed business models in short-termist directions. We examine how it impacts two sets of outcomes. Firstly, 'allocation regime' which refers to schema governing the way revenues are divided, specifically the extent to which they are either retained by the firm and reinvested in plant and R&D or distributed to shareholders. We are interested specifically in whether SVO is associated with a 'downsizing and distributing' regime in which in capital and R&D expenditure are reduced in favor of payouts. Secondly, and more directly related to the short-termist thesis, we examine how SVO impacts various measures 'real' performance. Building on heterodox theories of the firm we offer a stylized account of the way that shareholder priorities alter the strategic and organizational architecture of the firm. This model suggests that the short-termist impulses brought about by SVO undermines its ability to develop and integrate *productivity* enhancing innovations. This in turn weakens its ability to produce lower cost, higher-quality goods which results in a loss of *market share*, which then dampens *profitability*. We test each of these outcomes in turn.

The major methodological hurdle faced by all research on this topic is that shareholder value orientation cannot be observed directly. Most of the empirical financialization literature therefore tries

to proxy for it using one of its assumed behavioral correlates. We take a different approach: instead of trying to bring SVO directly into the model, we focus on the underlying causes of the shift in governance priorities. Following the dominant thinking in the political economy literature we hypothesize that shareholder primacy comes about through two main factors: (1) the increased power of shareholders *over* the firm and (2) the closer alignment of managerial incentives and interests with those of shareholders, through things like stock-based compensation (Jung, 2015). We term the first a "coercive" route to shareholder primacy, and the second a "consensual" route, and employ a wide range of focal dependent variables related to each.

The main "coercive" variables we use are measures of ownership concentration by different categories of investor. This allows us to account for an important issue of complexity generally elided in the financialization literature – investor heterogeneity. Financialization theories tend to treat shareholders monolithically, regarding them as profit-centric and short-termist and counterposing their governance preferences to those growth-centric managers (Hein & Treeck, 2010; Stockhammer, 2004). But however relevant that distinction, it has tended to obscure the fact that profit- or shareholder value-maximization is still itself compatible with a potentially wide range of different strategies based on the time horizon over which that maximization occurs. Thus shareholders, who differ in their own time horizons, investment strategies or institutional constraints are likely to espouse very different business strategies. A competing hypothesis to the financialization one is that short-termism results not from shareholder pressure as such, but from pressure exerted by specifics kinds of (impatient) investors.

Our results suggest that this is the case. We do not observe any *consistent* association between consensual or coercive mechanisms of SVO and changes in either allocation regime or performance. Our consensual variables, for starters, appear to have little effect on either outcome, even when

interacted with ownership by impatient investor categories. This would support the view that reincentivization mechanisms are relatively ineffective at getting managers to fundamentally alter governance priorities (Knafo & Dutta, 2019; Westphal & Zajac, 1998). While increased shareholder power seems to more strongly affect firm governance, our results show that the way it does so depends considerably on the shareholders involved. Variables that measure overall ownership concentration, and concentration in broad categories of investor, like high turnover investors, display little consistent association with altered performance or behavior.

Stronger allocation effects only emerge with control by low-turnover institutional investors (i.e. those that have long holding periods). Ownership concentration in this category is associated with lower investment and higher payouts. However, when we decompose this grouping further, we observe that only in the case of hedge funds are these strategic shifts associated with weaker performance. Notably the Big Three index funds, which have vastly expanded their ownership share in recent decades, do not appear to encourage short-termism. The results thus suggest that investor heterogeneity matters considerably. Short-termism appears not to be an outgrowth of shareholder primacy as such, but is instead results from the influence of *specific kinds* of 'impatient' investors - as mainstream accounts of short-termism tend to argue (Marginson & McAulay, 2008).

These findings challenge what, following Knafo and Dutta (2019, p.4), we might call the 'dominant model' account of corporate governance in the financialization literature. This sees the modern history of governance as transitioning between clearly distinct epochs. The shareholder revolution brought down the curtains on the managerialist epoch, enshrining SVO as the new dominant model. SVO is seen as universally adhered to and as having well-defined, predictable effects on the strategy and allocative behavior of public firms. Our results suggest instead that there's no single, uniform 'logic'

of business strategy that comports with the drive to maximize share values. As Froud et al. (2017) argue, the business models that SVO produces are "variegated" – as a result firstly of the fact than shareholders themselves are variegated.

The article is organized as follows: Section 2 provides background on heterodox theories of shareholder value orientation and outlines our main hypotheses. Sections 3 and 4 discuss data and methodology respectively. Our results are presented in Section 5. Their implications are discussed in Section 6 and Section 7 concludes.

2. BACKGROUND AND LITERATURE

a. Contested views on governance and firm strategy

Critiques of the shareholder-oriented firm tend to be rooted in sympathy for what is taken to be its foil – the mangerialist firm. Mangerialism is generally regarded as having had its zenith in the post-War period. It's defining feature was the relative insulation of managers from shareholder pressures. Following the tradition stemming from Berle and Mean's (1991) early investigation of dispersed ownership firms, heterodox scholars ascribe interests to managers distinctive from that of owners. Manager's social position is rooted in the firm as an enduring institution. They have a vested interest in guaranteeing its stable reproduction. In heterodox theories, therefore, it is *power*, rather than profit, that the managerialist firm seeks to maximize (Lavoie, 2014, p. 128). Power enables the firm to cope with the uncertainties of the market by imposing its will on suppliers, customers, stakeholders and political actors (Dunn, 2010, p. 202). Managers' personal prestige and authority, moreover, is rooted in this social power.

The power of a firm is direct function of the assets under its command and the size of its workforce. So is its ability to weather the competitive struggle. Heterodox theories emphasize the fact that profits provide a major direct source of investment funds as well as determining the firm's access to credit (Dallery, 2009). Larger firms therefore have greater resources to deploy to expansion and innovation – and greater capacity to draw in managerial talent, upon which the development of new products and strategies is reliant (Eichner, 1976, p. 23; Penrose, 1959, p. 29). Hence in practice, the pursuit of power equates to a pursuit of *growth* (Lavoie 2014, p.131). Eichner (2008, p.24) shows that under certain basic assumptions, various commonplace growth targets such as retained earnings, sales, asset and market share growth are functionally and practically equivalent in conditions of oligopoly. Only under more onerous assumptions is growth maximization equivalent to short-term profit maximization or the maximization of the firm's net present value. Most post-Keynesian theories explicitly posit growth-profit tradeoffs at higher rates of expansion, arising in particular from the difficulties of procuring and integrating new managers ("Penrose effects") (Lavoie 2016, p.142). Growth maximization is therefore an objective pursued in defiance of owners.

Drawing on the work of Alfred Chandler, Lazonick (2010) constructs a 'theory of the innovative enterprise' which provides a stylized model of the strategy applied by the growth-oriented firm. In contrast to the "optimizing" firms of neoclassical economics, the innovative enterprise does not take its cost structure as given. The essence of its growth strategy consists, instead, of the constant application of new technologies and processes in order to produce higher quality goods at lower unit cost and thus retain and expand market share. Lazonick identifies three "social conditions" on which this model of value creation is predicated. First, an appropriate arrangement of incentives and

capacities ensuring that decision makers allocate resources to innovative investment strategies. Second, a requisite level of 'organizational integration' allowing for the skills of large groups of employees, occupying different operational niches, to be directed at key strategic objectives. Third, supplementation of internal revenues with sufficient "patient capital" allowing firms to commit resources long enough for the cumulative gains of innovation to be realized. The allocative regime of this type of firm follows a logic of "retain and reinvest". The firm cultivates a stable, loyal human resource base while funneling earnings back into the innovation process.

Managerialism came undone amidst the wider crisis that engulfed the Keynesian order from the mid 1970s onwards. US firms faced intense pressure from rapidly advancing Japanese and German competitors while seeing profits squeezed by a stagflating economy, and by inefficiencies resulting from over-expansion – which threw into question prevailing doctrines of corporate strategy. This was the context in which Agency theory – which was to become the ideological bedrock of the shareholder revolution – launched a frontal assault on the precepts of managerialism.

Downplaying its existence as an institution-in-itself, Agency theory reduces the firm to a "nexus of contracts" between freely consenting individuals (Jensen & Meckling, 1976). Shareholder primacy is justified in the first instance by the terms of their contractual claim: they are 'ultimate owners' and thus legally entitled to full authority over the firm (Friedman, 1970). But shareholders are also "residual claimaints" – they have rights to the net cash flow of the firm but not to any guaranteed income. Hence, unlike managers, they have a strict interest in cost reduction. Agency theory therefore offers a *social* justification for shareholder primacy. Firms that abide by it will employ resources effectively and maximize efficiency – which promotes firm survival. The problem of governance is to define a

contractual system which directs the decision process towards the interests of residual claimants. Managers must be incentivized towards prioritizing share value and disciplined towards doing so through stronger monitoring and enforcement mechanisms.

Agency theory ascended rapidly in business and economics schools throughout the 1980s and was vigorously embraced by shareholder activists and financial analysts (Dobbin & Zorn, 2005). It gained from its own success, diffusing more rapidly as its principles became established norms with the organizational field of business (Soener, 2015). But the shareholder revolution was not won on the battlefield of ideas alone. What really drove the transformation of corporate institutions in the 1980s was a rapid tilting in the political terrain of governance in favor shareholders -- an outgrowth of legislative changes, financial innovations and evolving ownership structures. These changing power dynamics first registered in the growth of the leveraged buyout movement, which deployed junk bonds and the growing financial arsenals of institutional investors to launch hostile takeovers of a heretofore unforeseen scale (G. F. Davis, 2013, p. 287).

Legislative changes at a state level and the widespread adoption of poison pills stemmed the tide of takeovers by the early 1990s. The frontline of the shareholder revolution then shifted from the capital market to the AGM as institutional investors, particularly pension funds, leveraged their growing ownership stakes to push for shareholder friendly reforms through proxy voting campaigns (Gillan & Starks, 2007). The number and diversity of active shareholders grew quickly after that, as did the tactics involved, which came to include less overtly hostile methods of influence such as direct dialoguing and engagement with management (Useem, 1996). Indeed by the 1990s, the conflict lines had already grown considerably blurred: many executives had themselves become fulsome proponents of the

shareholder revolution. This in part reflected the success of the first wave of SVO reforms in reshaping interests and incentives structures. But some accounts ascribe managers a more proactive role, arguing that they moved quickly to get ahead of reform process and direct it towards their own ends (Dobbin & Jung, 2010). Knafo and Dutta (2019) go as far as to argue that the whole shareholder revolution has its real origins in financial and managerial innovations pioneered by conglomerate executives in an earlier period.

b. SVO, financialized business models and short-termism

The shareholder revolution is seen as having revolutionized corporate governance and strategy. Where Chandlerians saw growth maximization as the central pillar of the 'innovative enterprise', Agency theory regarded it as a symptom of "empire-building" by unpoliced managers, who were focused on aggrandizing their own private power rather enhancing firm value. In place of sales and market-share growth, SVO proposes a different set of inter-related targets based on the maximization of profit, share value and the return on equity. This requires the firm to concentrate prudently on its most value-efficient functions, rather than pursuing scale at all costs. The shareholder view opposes excessive diversification and calls for firms to focus solely on "core competencies". It demands the imposition of higher hurdle rates on new undertakings, while insisting that free cash flow be immediately "disgorged" to shareholders in order to boost equity values and prevent funds being channeled into managerial vanity projects. Research links the spread of shareholder value principles to mass layoffs and attacks on employment security as firms have sought to lower costs and "cut the fat" from workforces (Jung, 2015).

"Downsize and distribute" rather than "retain and re-invest" thus becomes the guiding maxim of governance under SVO (Lazonick & O'Sullivan, 2000). On this point, there is overlap between shareholder value proponents and their Chandlerian critics. Both see management as having a baseline preference for higher growth. Greater shareholder influence should thus lead to lower investment and higher profit distribution, all else equal. For Agency theory this is a salutary outcome. Lower investment reflects an embrace of capital discipline and a more judicious use of resources for high net present value projects. This should lead to improved efficiency and higher value creation which will ultimately – through either local or system-wide effects – benefit all stakeholders.

The very different appraisal of SVO common in the financialization literature can be clarified by returning to Lazonick's (2010) theory of the innovative enterprise. SVO is seen as directly undermining each of the social conditions that upheld the productivity generating firms of the post-War era. Intensified demands for buybacks and higher dividends constitute a form of value extraction that deprive the firm of the "patient capital" it needs for long-term financial commitment. The problem is propounded managers' alignment with this distribution-led allocation regime, which prevents the firm from retaining and deploying sufficient resources for unlocking the slow-yielding, cumulative gains of innovation. Finally, layoffs and the flexibilization of the workforce weakens organizational integration and limits the incentive for employees to engage in long-term processes of collective learning and skill specialization. Critics have termed this business model a "financialized" one because it measures success by financial metrics – at the behest of financial institutions (Froud et al., 2017; Lazonick et al., 2017; Montalban & Sakinç, 2013).

The critical literature sees SVO as inducing a form of short-termism in governance (L. E. Davis, 2017, p. 280; Fasianos et al., 2018, p. 45; Hein & Treeck, 2010; Orhangazi, 2008, p. 864; Tori & Onaran, 2018, p. 1397; Van der Zwan, 2014, p. 108; Van Treeck, 2008, p. 383). We can define short-termism as a strategic orientation in which short-run rewards are pursued at the expense longer term results. Short-termism sometimes results from myopia: the fact that planners operate with abridged time horizons, which prevents them grasping the full consequences of their choices. But this isn't always the case: decision makers may sometimes be fully cognizant of the long-term implications of their strategies but be prevented from, or incentivized against, changing course. Financialized business models are said to be short-termist firstly because of the harmful long-run outcomes they incur: they undercut the firm's innovative capacities and thus weaken its ability to reduce unit costs and produce higher quality goods. This in turn results in a loss of market share, which dampens profitability and diminishes the resources available for successive rounds of innovation and expansion. In the worst-case scenario, the firm becomes trapped in a downwards feedback between lower market share and weaker profitability, compromising its survival. These outcomes are the consequences of actions taken to achieve short-term objectives – releasing free cash flow and increasing share prices – and hence are seen as short-termist in nature. Note, importantly, that this judgement is rendered from the perspective of the firm itself and of its general interest. It's owners and stakeholders have distinctive, private interests that may or may not be accommodated by short-term profit-oriented strategies.

While this interpretation of SVO and its effects is widespread in the financialization literature, the evidence in favor of it is far from conclusive. It's been illustrated by various case studies, which have showed self-harming cutbacks in investment and workforces in the wake of shareholder takeovers (Froud et al., 2006; Sakinç & Lazonick, 2019) . More representative evidence is harder to come by. Financialization scholars have relied heavily on quantitative work, mostly emanating from post-

Keynesian economists, which has linked SVO to investment slowdowns (Auvray & Rabinovich, 2019; L. E. Davis, 2017; Hecht, 2014; Onaran et al., 2011; Orhangazi, 2008; Stockhammer, 2004; Tori & Onaran, 2018). But the findings from this research do not allow any real adjudication between Agency and financialization theories, which both predict that SVO should lead to slower investment.

This paper makes an empirical contribution to the critical literature on SVO by examining how increased shareholder power and altered managerial incentives have transformed corporate strategies. Specifically, we test the effect of shareholder-oriented governance dynamics on two sets of outcomes: allocation regime and performance. Allocation regime refers to the patterned decisions managers make about how to deploy funds under the firm's command, and in particular what proportion of revenue to retain for reinvestment and what proportion to distribute to owners. We look at three dependent variables that define a firm's allocation regime: fixed investment, R&D expenditure and payouts. Following financialization theory, we hypothesize that SVO is associated with "downsizing and distributing" allocation regimes, hence that:

> H1: Shareholder power and shareholder-aligning incentives lead to lower capital and R&D expenditure and higher profit distribution.

Note that Agency theory would generate similar predictions regarding fixed investment and payouts but different ones regarding R&D: it sees self-serving managers as unlikely to prioritize the uncertain gains from research investment in the absence of shareholder pressure (David, 2001).

While the link between slower investment and SVO has often been interpreted as evidence of short-termism, that conclusion is not warranted. It is perfectly possible that slower investment instead reflects a foregoing of low net present value (NPV) projects by more disciplined and effectively monitored managers – as Agency theorists would hope to be the case and, indeed, as they have tried to show empirically (Cella, 2019; Richardson, 2006). A better test of whether the business models that SVO encourages are short-termist in nature is to look at how it affects longer-run performance. Following the model above, we examine how SVO impacts three different, inter-related, measures of real performance: productivity, market share and profitability. The theory that financialized business models undermine the organizational ballasts of the innovative enterprise generates the hypothesis that:

> H2: Shareholder power and shareholder-aligning incentives lead to lower market share, productivity and profitability.

On this, Agency theory of course demurs. It predicts, contrastingly, that firms which resolve their agency problems by honoring the primacy of "residual claimants" will enjoy gains in competitiveness and longer-run profitability.

This paper thus connects to a much larger body of work on corporate short-termism, which exists largely outside of the disciplinary boundaries of financialization studies. Short-termism has been conceptualized in a range of different ways and linked to a wide array of causes – spawning a diffuse literature marked by the sharp ideological and theoretical divides of debates on corporate governance. Agency theory has left a prominent imprint on the field, inspiring a large body of empirical work that

– orthogonally to the financialization literature – sees unpoliced managers as the main culprits of short-termism (Asker et al., 2014; David, 2001). Other studies take a more familiar approach, linking short-termism to the influence of impatient investors or frothy capital markets. Findings are, perhaps predictably, inconsistent. Some studies find that investor pressures can lead to lower R&D expenditure (Brossard et al., 2013; Bushee, 1998) and distorted investment decisions (Gutiérrez & Philippon, 2018) while others find no such outcomes (Aghion et al., 2013; Bebchuk et al., 2015; Brav et al., 2018; Wahal & McConnell, 2000).

In common with this paper, a number of mainstream studies seek to detect short-termism by looking at the effects of governance dynamics on performance (Bebchuk et al., 2015; Flammer & Bansal, 2017). However, they conceive performance in financial terms as return on equity, on assets or simply share value. These are sensible variables to focus on if believes financial markets to be generally efficient, in which case they would, in effect, "price in" the various aspects of "real" performance on which we concentrate. In the real world, however, where the future is clouded in fundamental uncertainty, financial markets are unavoidably skewed by misinformation and bias, including bias related to the presuppositions that investors hold about governance. Improved equity performance as a result of a firm having adopted shareholder norms may thus reflect nothing more than a prophecy self-fulfilled by investors who espouse those same norms. Financial market *in*efficiency is also what provides scope for managers to engage in successful, potentially long-term manipulation of share prices – manipulation which may be more commonplace in shareholder beholden firms, thus constituting an additional source of bias (Hein, 2008; Onaran et al., 2011).

Financialization theory's approach to the problem of short-termism can be distinguished from most of the rest of this literature in two ways. Firstly, in that short-termism is seen as an outgrowth of shareholder value orientation as a well-defined framework of governance. Most mainstream accounts, in contrast, don't find fault with the objective of maximizing share value as such; and insofar as they blame shareholders, they confine their accusations to specific *kinds* of investors – like hedge funds or high turnover institutions. Secondly, short-termism is seen as wired into the *business model* that SVO promotes. We can think of the business model as an organizational and strategic architecture, adopted by the firm, for creating and realizing value subject to various constraints including 'financial viability' and 'stakeholder credibility' (Froud et al., 2017). Short-termism is thus a *systemic* feature of the decision process in the firm, bearing on all high-level allocative and operational choices. This stands in contrast to accounts which see short-termism primarily in terms of *manipulation* to meet short-term earnings and other financial targets. Even in its less innocuous forms, which may impact investment and expenditure (rather than simply accounting practices), short-termism of this kind is likely to be shallower and more episodic in form and to affect a narrower range of strategic decisions.

The empirical design of this paper is rooted in this distinctive understanding of short-termism and the heterodox theories of the firm underpinning it – and is robust to heterodox critiques of the (strong) efficient market hypothesis. Consistent with the fact that we hypothesize SVO to be an outgrowth of shareholder primacy *in general* we test an extremely wide array of independent variables related to shareholder power and shareholder aligning managerial incentives – described in the next section. In examining their impact on allocation regime we contribute to post-Keynesian empirical work on the distributional outcomes of financialization, broadening the set of variables under study to include R&D and payouts. By examining these outcomes jointly alongside measures of 'real' performance, we

seek to establish firmer, representative evidence of the claim that SVO has wrought fundamental changes on the business models and strategies of NFCs.

c. Shareholder value orientation: concepts, measures and mechanisms

Debates around "shareholder value orientation" often get muddied in conceptual confusion because of the multiple definitions with which that term has become laden. In the financialization literature its used to refer to both to a governance 'orientation' as well as to the strategies thought follow from this. An SVO firm, in other words, is seen to be one that prioritizes shareholders *and* that does so in a certain manner, by focusing on short-term profits, "downsizing and distributing" etc. The trouble with this definition is that it forecloses on the questions we to pose in this paper - is SVO associated with certain firm strategies? does SVO cause short-termism? – since it is now defined in terms of those outcomes. It will also pose a problem if it turns out that there are certain types of investors that do not favor short-termist governance strategies – as we suspect might be the case. If so, we are likely to encounter some firms which are singularly dedicated to maximizing the returns of their owners, but don't 'downsize and distribute' etc. According to the expansive definition, such firms are not 'shareholder value oriented' - a conclusion which jars with the ordinary language meaning of that phrase. We therefore stick with a narrow definition of SVO. We define it as governance framework in which shareholder objectives take precedence over those of other stakeholders. SVO should be seen as a continuous variable, with firms that give greater weight to shareholders considered "more SVO" than those that don't.

The central difficulty that we encounter in empirical work is that SVO is an orientation or a disposition holding amongst the decision makers of the firm, and thus not directly observable. The most common

response to this within the financialization literature has been to proxy for it using measures of the behavior with which it is assumed to be associated - chiefly buybacks. This approach is plagued by a particularly worrying endogeneity concern, especially when used in investment models. Buybacks are an instrument for returning "excess" funds to shareholders. They will tend to be higher in firms where managers are subject to greater discipline. But they will also increase simply when the firm faces fewer viable investment options (of sufficient profitability) and thus finds itself with additional "excess funds" (DeAngelo et al., 2006). In other words, buybacks are negatively correlated with growth opportunities, which are unlikely to be perfectly controlled for in any model. More to the point, the proxying method of capturing SVO is closed to us since we cannot assume it to be linked to any definite behavioral outcomes as this is precisely what we are testing.

Our main independent variables seek to capture the changing dynamics of power and interests that have driven the increasing sway of shareholder priorities over the firm (Jung, 2015). These can be divided into two kinds. The first are measures of the power of investors relative to other stakeholders. We term these "coercive" variables, since they are associated with a route to SVO in which shareholders achieve primacy by wielding power *over* the firm. The main coercive variables we examine are measures of ownership concentration by different types of investor. The potency of the main instruments of shareholder influence are directly proportional to the size of an investor's stock. The exercise of voice within a firm typically relies directly or indirectly on voting power, which grows directly with the size of an investor's holdings. Large blockholders, moreover, can level more efficacious exit threats against managers, since the potential costs underlying such threats increase with the size of the stock to be exited from. Alongside ownership we also examine variables that measure the extent to which the bylaws and board structure of the firm facilitate shareholder influence.

Our second kind of SVO variable aims to capture the incentive structure of management. The principal-agent problem which lies at the core of the Agency theory resides precisely in the diverging interests that shareholders and managers are thought to have. Aligning these interests by changing the incentive structure management is one of the key institutional objectives that the shareholder revolution has sought to achieve. The main instrument it devised for this is been stock-based remuneration. Another key reform has been the shortening of CEO tenures, part of a broader reconfiguring of career and education structures. We term variables related to these changes "consensual", since they are associated with a route to SVO in which managers actively accede to shareholder primacy due to the way their own incentives are configured.

Examining the effects of changing ownership and incentive structures is intrinsically interesting given ongoing debates about the underlying causes of shifting governance frameworks, touched on briefly in the previous section. The arguably dominant view is that SVO has come about through some combination of an increase in the power of shareholders, a realignment in the interests of managers and a diffusion of new norms and conceptions of control. Our main independent variables should account fully for the first two of these mechanisms, and partially for the third insofar as norm diffusion has been partly driven by shareholder power and shareholder-friendly governance reforms.

A different view argues that the relative increase in shareholder power has been overstated, at least since successful managerial resistance to the hostile takeover movement (Knafo & Dutta, 2019). Researchers in this camp therefore see firms in the SVO era as still largely manager-controlled, but they divide on the implications of this due to disagreements about the extent to which managerial

outlooks have been transformed. One group sees some managers as having become, in effect, true believers in shareholder ideology. While no longer actually beholden to them, they thus run the firm in the way that owners would desire. If this is the case, incentive variables should still be associated with SVO effects, but power variables less so (Aglietta & Rebérioux, 2005; Boyer, 2005; Lazonick & O'Sullivan, 2000). The other group argues that managerial alignment with shareholder governance principles has been, in effect, opportunistic and surface level. Managers have adopted shareholderist practices when it suits their own interests to do so, and when it helps them to appease investors through "symbolic management" (Westphal & Zajac, 1998) – but in substance they've continued to govern according their own distinctive preferences (Galbraith, 2004). Here we should expect that both power and incentive variables have either no effect on allocation and performance or inconsistent effects, if financialized business models are "variegated" (Froud et al. 2017).

Examining mechanisms of SVO, rather than proxying for it, thus has the benefit of allowing us to peer into the hood of shifting governance outlooks and gain some leverage over their causal underpinnings. But the main upside of this approach is that it allows us to account for a major element of complexity that has generally been assumed away or elided in heterodox empirical work: shareholder heterogeneity. The inattention paid to this issue may reflect the pervasiveness in heterodox political economy of a "simplifying assumption" which treats market-based financial systems - where SVO has taken root - as composed uniformly of 'impatient capital' (and thus a straightforward inverse of bank-based systems) (Deeg & Hardie, 2016). This assumption is mirrored in Post-Keynesian theories which have tended to rely on a binary distinction drawn between profit-maximizing shareholders - the agents of short-termism - and growth-maximizing managers (those who haven't defected to SVO) (Dallery & Van Treeck, 2011; Hein & Van Treeck, 2010; Lavoie, 2014; Stockhammer, 2004). This distinction is valid at one level – shareholders have an *ultimate* interest solely

in generating returns, whereas managers stand to gain from growth and other non-pecuniary objectives. Insofar as firms do confront a growth-profit tradeoff, as most Post-Keynesian models assume, we are therefore likely to find shareholders generally distributed more towards the higher profitability region of the choice set than managers.

However, two things must be noted. First, in reality, unlike in most formalizations, there is never any categorial choice between which kind of outcome to optimize over since the two are intertwined - today's growth (investment) is generally a major determinant of tomorrow's profitability (Dallery, 2009; Rabinovich, 2021). Thus among equally profit-centric shareholders, we are likely to find a range of opinions on the appropriate resolution to growth-profit tradeoffs based on their own term horizons. Secondly, it's not the case that that any deviation from growth maximization is a path towards short-termism as some accounts seem to imply. Indeed, the best long-term strategy almost certainly involves exercising some discretion with regard to investment projects of uncertain yield. Thus many of shareholder-preferred strategies, which might be more profit than growth oriented relative to managers' ideal, will not be short-termist.

Since most of our focal independent variables are measures of ownership concentration, we can allow for differential effects by different types of investors. Among institutional investors, preference variation will largely be a function of differing business models, asset structures, governance frameworks, regulatory environments and organizational interdependencies(Jackson & Petraki, 2011). Short-termist preferences are equivalent to what is commonly labeled "impatience". Based on Deeg and Hardie (2016) we can define impatient investors as those that are geared towards capturing short-term benefits from the firm and are prepared to exit it when conditions become adverse to that

objective. An alternative to the hypothesis that shareholder influence leads to short-termism (H2), is that short-termism results only from the influence of these *specific types* of investors.

The degree of investor patience is the first place a function holding term. Momentum traders and other high-turnover investors are necessarily impatient since they never intend to retain shares long enough to realize the benefits of long-term strategies. But a long(er) holding period is no guarantee that the investor will concern itself with long-run performance if exit at some stage remains an option. Many impatient investors, such as certain hedge funds, remain with firms for fairly lengthy periods but use their influence to pressure managers into making strategic decisions oriented towards boosting short-run returns (Deeg & Hardie, 2016; Jackson & Petraki, 2011).

Investors vary not simply in their preferences but in their modes, capacities and proclivities for enforcing those preferences on managers. High turnover, short-period investors will rely primarily on threats of *exit* to effectuate pressure, as will longer term investors who choose not to bear the costs of active 'stewardship'. Other investors utilize *voice* in the form of private and public engagements with management, the exercise of voting rights and the construction of investor coalitions and other forms of activism (Coffee, 1991; Deeg & Hardie, 2016). Using voice, however, is costly and bears uncertain rewards and hence is beset by free rider problems. Among patient investors, we should therefore expect to see considerable unevenness in the willingness of different investors to engage, and the success with which they do so. Likewise the relative efficaciousness of exit and voice is likely to vary over time and in different circumstances. Strongly buoyant stock markets in the run up to and in the wake of the 2008 crash, for example, may have lessened the disciplinary force of exit threats.

Our empirical strategy comports with mainstream research that has examined the effects of ownership and compensation structures on NFC governance, and specifically managerial term horizons. Much like the broader literature on short-termism, the results of this work are fairly inconsistent. Some studies find support for the Agency theory hypothesis that ownership concentration in institutional investors improves performance (Chen et al., 2007; Elyasiani & Jia, 2010), but many others find no such effects (Demsetz & Villalonga, 2001; Gillan & Starks, 2007; Schultz et al., 2010). Bushee (1998) and Brossard et al. (2013) find that investors with high portfolio turnover reduce R&D expenditure, while David (2001) and Wahal and McConnell (2000) find that institutional ownership has the opposite effect. Much recent research has concentrated on the effects of passive index funds, particularly the so-called Big Three firms – Blackrock, Vanguard and State Street - which have amassed control over an increasingly significant share of the market over the last decade (Fichtner et al., 2017). In recent years, the Big Three have actively cultivated an image of themselves as proponents of long-termism and socially responsible investing and have beefed up their stewardship divisions. But some scholars argue this is mostly a PR strategy at this stage, and that the low margin model of the industry will continue to deter active involvement in governance (Bebchuk & Hirst, 2019). Evidence on their stewardship behavior and its effects remains mixed. Proxy voting data suggests that the Big Three tend overwhelmingly to vote with management (Fichtner & Heemskerk, 2020). Yet both Appel et al. (2016) and Harford et al. (Harford et al., 2018) find that ownership by passive and long-term investors respectively leads to SVO-like governance reforms.

Most research on executive compensation effects has tended to focus on somewhat narrower outcomes, particularly accounting irregularities. Numerous studies show that stock- and options-based compensation induces managers to engage in earnings management - manipulating results to meet contract targets or timing them with maturity dates (see Edman et al.(2017, p. 486) for a review).

Edmans et al. (2017) show that the firms reduce R&D and capital expenditure during financial quarters in which large quantities of equity are scheduled to vest - which is also when CEOs tend to sell shares. Flammer and Bansal (2017) show that long-term incentives can boost performance and R&D spending. Jung (2016) finds that stock-based compensation increases the scale of workforce downsizing events.

We should note certain limits to the method employed here. We test the effects of ownership and incentives on various outcomes - not SVO directly, so any conclusions we draw about the causal status of the latter rests on further assumptions. In particular we have to assume that "coercive" and "consensual" variables are strong causes of SVO and that there aren't other unblocked pathways through which these variables affect our outcomes of interest. While this seems a fair assumption, it seems likely that there are other causes of SVO which our variables will not capture - for example the adoption of shareholder norms through processes of 'institutional isomorphism' (Soener 2015), or environmental pressures like the heightened threat of hostile takeover, on which post-Keynesian accounts tend to place a lot of emphasis. We should note however, that hostile takeovers have been exceedingly rare since the widespread adoption of poison pills in the early 1990s, however important they may have been in paving the way for the shareholder revolution (G. F. Davis, 2009; Useem, 1996, p. 64). Our method is limited by not accounting for these alternative mechanisms, but there is no reason to assume this limitation should bias results.

3. DATA

We use firm-level data from Compustat and include all active and inactive, publicly listed NFCs incorporated in the USA, excluding financial firms identified by the primary SIC codes from 6000 to 6799 and firms without sectoral information. Firms with no information or nil values of total assets (Compustat item *AT*), net property plant and equipment (Compustat item *PPENT*), and sales (Compustat item *REVT*) are removed. We restrict our sample to firms that have at least three consecutive years, a common practice in micro-econometric literature (Bond et al., 2003) and, in order to account for outliers, observations are winsorized by 0.5% at the upper and lower bound.[1]

Figure 1 plots the median values of our main behavioral and performance related outcome variables. In the former category are capital accumulation (*CAPX*) and R&D expenditure (*XRD*) weighted by property, plant and equipment assets (*PPENT*) and total assets (*AT*) respectively; as well as net payouts (*NETPAYOUTS*) normalized by total assets. Net payouts are calculated as stock buybacks plus dividends minus stock issuance (Compustat items *PRSTKC*, *DV* and *SSTK* respectively). Whereas capital accumulation follows a cyclical but decreasing path, R&D has a broadly irregular pattern. Net payouts increase in a secular fashion for the period.

Our first performance-based variable is labor productivity (*LPROD*) calculated as the ratio between real sales and employment (Compustat item *EMP*). The second is market share (*MKSHARE)* calculated as the ratio between firm's revenue and gross output by industry from the Bureau of Economic Analysis (BEA). To obtain real sales we divide revenue by chain-type price indexes for gross output by industry from the BEA. Finally, profitability is calculated at total 'operating income

[1] Values of each variable are set either at the 0.5 or 99.5 percentile value when they are respectively lower or higher than these thresholds.

before depreciation' (Compustat item *OIBDP*) weighted by total assets (AT). The median values of these variables present divergent trends.

[Figure 1]

Table 1 presents a full list of behavioral performance, control and SVO-related variables with descriptive statistics. As detailed above, we divide the latter into two categories, "coercive" and "consensual". The former gauge shareholder power over the firm and are comprised firstly of various measures of ownership concentration drawn from Thomson Eikon. We follow Brossard et al (2013) in developing investor categories and types. First, we calculate two broad measures of concentration: the proportion of total outstanding stocks held by the biggest investor (*TOP1*) and by the top 5 investors (*TOP5*). Second, we calculate the ownership shares of two broad categories of investor, 'institutional' (*INSTIT*) and 'strategic' (*STRATEGIC*). Strategic' entities in Thomson Eikon are those that "don't invest for 'investment management' purposes, but rather invest for strategic stakes in companies". They include holding companies, individual investors, corporations, government agencies and other insider investors. Institutional investors are defined in Thomson Eikon as 'investment managers'; they are "buy-side institutions that have discretionary power over assets under management (AUM) and make buy/sell decisions". This includes banks and trusts, endowment funds, finance companies, foundations, hedge funds, insurance companies, investment advisors, investment advisor/hedge funds, pension funds, private equity, sovereign wealth funds and venture capital.

[Table 1]

Third, we classify investors according to their portfolio turnover. We define a "high turnover" investor as any shareholder whose portfolio turnover is characterized as "moderate" or "high" in Thomson Eikon. Moderate turnover is defined as an average holding period of between 1 year and 2 years, whereas high turnover is less than 1 year. *HIGHT* and *LOWT* are the ownership shares of the top 10 "high-turnover" and "low-turnover" investors respectively. Since most research associates SVO specifically with institutional investors, we focus particular attention on this category and various of its subcomponents, distinguishing firstly between high and low turnover institutional investors (*INSTIT_LOWT* and *INSTIT_HIGHT*). As a final level of classification within the former category we divide investors by type, separating out the Big Three (*INSTIT_LOWT_BIG3*) from hedge funds (*INSTIT_LOWT_HEDGE*) and other low turnover institutional investors (*INSTIT_LOWT_OTHER*).[2]

Two remaining coercive variables measure the extent to which the governance structures of the firm enable shareholder influence over it. From the Institute of Shareholder Studies' (ISS) Directors database we calculate the percentage of the firm's directors who have a financial background (*%FIN_DIRECTORS*). It is perhaps more common to use the percentage of outsiders to capture shareholder power on the board, but we regard our measure as more efficient because outsider-ship as such is not itself a guarantee that directors will be shareholder aligned. Given that SVO is born of financial ideologies and interests, a financial background is a better proxy for the latter criterion. From the ISS Governance database we construct the *E-INDEX* – widely used in corporate governance and management research – which is based on six provisions that have been shown to be most relevant

[2] Black Rock, State Street and Vanguard are actually 'families' of funds with different affiliates. While the vast majority of these are institutional patient investors, a few cross into other categories. The mean value of the total ownership by the Big Three in our sample is 7.78%, while its institutional and patient component is 7.54%.

for determining the extent of managerial 'entrenchment' – such as whether the firm has a poison pill or golden parachutes for executives (Bebchuk et al., 2009).

We look at two main types of consensual variable. Firstly, using data from ExecuComp, we define incentive-based remuneration as total stock reward, plus the total value of options awarded, divided by total compensation and calculate this for all executives (*IBR_MANAGERS*) and for the CEO (*IBR_CEO*). Due to changes in SEC regulations which led to a switch in the way stock awards are calculated and reported (from Black-Scholes to fair value), pre- and post-2006 data for this variable are not strictly comparable, so specifications in which it appears are limited to the later period.

Secondly, from the ISS Governance database, we calculate *CEOTENURE* as the full tenure that the current CEO *ends up* spending at the firm. In other words, if the same individual is the CEO of a firm from 2004 to 2010, *CEOTENURE* is coded as 6 for each of those years. We use full (projected) rather than contemporaneous tenure since what we are interested in is a particular governance *orientation*. Tenure is relevant because it impacts the outlook but also the power of the CEO within the firm. CEOs with long expected tenures are more likely to favor projects and investments that serve the long-term survival and growth of the firm, whereas those likely to be short-lived in their positions will prefer quick rewarding projects (Palley, 1997). Longer serving CEOs are also more likely to be entrenched, to have stronger stakeholder relationships and hence to be more capable of withstanding pressure from owners. CEOTENURE along with the E-index are sign inverted such that are variables have the same direction of association with SVO.

Figure 2 shows the evolution of the median value of coerced and consensual variables. A marked increase ownership concentration among the top 5 investors is observed for the period, whereas the

evolution of the first investor share has been more erratic. While ownership by strategic investors has declined overall, institutional ownership has followed the opposite path. The increase within this category has been led by low-turnover investors. The data also reflect the sharp increase in Big Three ownership specifically.

Figure 2 also includes the evolution of *IBR_MANAGERS*, *IBR_CEO* and *CEOTENURE*. The former two show an increasing trend indicating a higher proportion of incentive-based remuneration over the last years. *CEOTENURE*, on the other hand, displays two different periods: an increase in the average tenure, from 6.5 to 8 years approximately up to the GFC declining to 6 years afterwards.

[Figure 2]

While all these databases (Compustat, Thomson Eikon, ExecuComp, Institute for Shareholder Studies' Directors, ISS) contain the CUSIP identifier, the merging process was not straightforward due to the fact that CUSIPs are changed for various reasons, such as mergers. Although Wharton Research Data Services, which houses all of these datasets, does make an attempt to update CUSIPs to the latest usage, this still leaves a large number of inconsistencies, with the same firms identified by different CUSIPs across datasets. Agreement is far higher among Compustat, ExecuComp and Thompson Eikon than between these and the ISS databases. In order correct for this we leveraged an additional identifier common to all databases - TICKER. Before joining datasets, we find instances in which the join results in multiple firms with the same TICKERs for the same year. The CUSIPs for these firms were then altered (using a master key based on Compustat identifier) prior to the join in order to merge them – *except* when doing so would result in duplicated CUSIPs. Observations in which identifiers were altered in this way were then manually checked, along with observations in which firm

names from different datasets failed a 'fuzzy match'. A more cursory manual scan of the full dataset was then performed by visually comparing firm names. This method revealed only a small handful (~22) of spurious mergers, which were manually corrected.

4. METHODOLOGY

It is perhaps useful to illustrate the story we told in Section 2 above with a basic causal map. On the left of Figure 3 we depict the mechanisms - causal forces – which are thought to bring about SVO, one based on shareholder power and the other on managerial incentives. SVO then influences the business model of the firm which determines performance. Shareholder preferences appear in this framework as a variable that mediates the translation of SVO into practice. That is to say, once a firm decides to prioritize the wishes of its shareholders, how it actually behaves depends on what those wishes are.

[Figure 3]

Allocation regime forms a core part of the business model. Our allocation variables – capital expenditure, R&D and net payouts - therefore lie on the causal path linking SVO to performance. But they don't exhaust the pathways between the two – a business model consists of many other elements ("Other" in Figure 3). Human resource policy is a crucial one. The theoretical model developed above contends that financialized business models involve downsizing and cost-reducing approach to the workforce which undermines the firm's ability to cultivate and deploy specialized skills. Managerial priorities are another: if decision makers are focused on stock prices movements they may miss opportunities to improve firm performance. We are interested in the *total effect* of SVO on

performance, so we estimate the association between mechanism and performance variables directly, rather than through a path analysis. The strongest confirmation of financialization theory would be if it's behavioral (H1) and performance (H2) predictions are jointly demonstrated. We use ownership by different kinds of investors to capture variation in preferences, one unfortunate consequence of which is that we are empirically unable to parse the different roles played by enforcement capacities and shareholder preferences in the above graph.

We estimate the following baseline models for our allocative variables:

$$\left(\frac{CAPX}{PPENT}\right)_{i,t} = \alpha_0 + \alpha_1 GROWTH_{i,t-1} + \alpha_2\left(\frac{FININC}{AT}\right)_{i,t-1} + \alpha_3\left(\frac{NETPAYOUTS}{AT}\right)_{i,t-1} + \alpha_4 SIZE_{i,t-1} + \alpha_5\left(\frac{CASH}{AT}\right)_{i,t-1} + \alpha_6\left(\frac{LIABILITIES}{AT}\right)_{i,t-1} + \alpha_7\left(\frac{PROFIT}{AT}\right)_{i,t-1} + \alpha_8 AGE_{i,t-1} + + \varphi_{jt} + \theta_t + \varepsilon_{it} + \omega_i \quad (1)$$

$$\left(\frac{XRD}{AT}\right)_{i,t} = \beta_0 + \beta_1 GROWTH_{i,t-1} + \beta_2\left(\frac{FININC}{AT}\right)_{i,t-1} + \beta_3\left(\frac{NETPAYOUTS}{AT}\right)_{i,t-1} + \beta_4 SIZE_{i,t-1} + \beta_5\left(\frac{CASH}{AT}\right)_{i,t-1} + \beta_6\left(\frac{LIABILITIES}{AT}\right)_{i,t-1} + \beta_7\left(\frac{NEWPROFIT}{AT}\right)_{i,t-1} + \beta_8 AGE_{i,t-1} + \varphi_{jt} + \theta_t + \varepsilon_{it} + \omega_i \quad (2)$$

$$\left(\frac{NETPAYOUTS}{AT}\right)_{i,t} = \gamma_0 + \gamma_1 GROWTH_{i,t-1} + \gamma_2\left(\frac{CAPX}{PPENT}\right)_{i,t-1} + \gamma_3\left(\frac{XRD}{AT}\right)_{i,t-1} + \gamma_4 SIZE_{i,t-1} + \gamma_5\left(\frac{CASH}{AT}\right)_{i,t-1} + \gamma_6\left(\frac{LIABILITIES}{AT}\right)_{i,t-1} + \gamma_7\left(\frac{PROFIT}{AT}\right)_{i,t-1} + \gamma_8 AGE_{i,t-1} + \varphi_{jt} + \theta_t + \varepsilon_{it} + \omega_i \quad (3)$$

Where $\alpha_0 \dots \alpha_8$, $\beta_0 \dots \beta_8$, $\gamma_0 \dots \gamma_8$ are parameters, the *i, j* and *t* subscripts denotes firm, industry and time period. φ_{jt} is a coefficient that controls industry specific trends. θ_t are coefficients of a set of

time dummies, while ε_{it} represents nonobservable shocks and ω_i unobservable individual-specific effects.

Following the financialization literature (Auvray & Rabinovich, 2019; L. E. Davis, 2017; Orhangazi, 2008; Tori & Onaran, 2018), we include a set of common variables that control for growth opportunities, potential crowding-out by financial investments, size, cash resource, leverage, cash resources, profitability and age. *GROWTH* is increase in sales computed as the difference between the logarithms of sales (Compustat item *REVT*) in two consecutive periods – $ln(REVT_{i,t}) - ln(REVT_{i,t-1})$. *FININC* is 'interest and related income' (Compustat item *IDIT*). *SIZE* is the logarithm of total assets (Compustat item *AT*). *CASH* is 'cash and short-term investments' (Compustat item *CHE*). *LIABILITIES* is 'total liabilities' (Compustat item *LT*). *PROFIT* is 'operating income before depreciation' (Compustat item *OIBDP*) and for *NEWPROFIT, XRD* (which is expensed) is added back to *PROFIT*. *AGE* is calculated as the current year minus the first year in which the firm appeared in Compustat.

After the baseline models presented in equations (1), (2) and (3) are calculated, we add the SVO mechanism variables presented in the previous section. We then repeat the same exercise and estimate the effect of SVO on performance measures in order to assess whether or not short-termism is verified. Noting that decisions taken under the aegis of SVO can take some time to materialize in performance metrics we compute a 3 rather than a 1-year lag of the focal SVO variables.

We base our estimations for performance measures on models investigating determinants of total factor productivity that combine real and financial characteristics of the firm (Giovanis & Ozdamar, 2015; Harris & Li, 2008; Schiffbauer & Ospina, 2010).[3] Our baseline models are:

$$MKSHARE_{i,t} = \alpha_0 + \alpha_1 AGE_{i,t-1} + \alpha_2 SIZE_{i,t-1} + \alpha_3 \left(\frac{ST.LIAB}{AT}\right)_{i,t-1} + \alpha_4 \left(\frac{LT.LIAB}{AT}\right)_{i,t-1} + \alpha_5 \left(\frac{CASH}{AT}\right)_{i,t-1} + \varphi_{jt} + \theta_t + \varepsilon_{it} + \omega_i \quad (4)$$

$$\left(\frac{PROFIT}{AT}\right)_{i,t} = \alpha_0 + \alpha_1 AGE_{i,t-1} + \alpha_2 SIZE_{i,t-1} + \alpha_3 \left(\frac{ST.LIAB}{AT}\right)_{i,t-1} + \alpha_4 \left(\frac{LT.LIAB}{AT}\right)_{i,t-1} + \alpha_5 \left(\frac{CASH}{AT}\right)_{i,t-1} + \varphi_{jt} + \theta_t + \varepsilon_{it} + \omega_i \quad (5)$$

$$LPROD_{i,t} = \beta_0 + \beta_1 AGE_{i,t-1} + \beta_2 SIZE_{i,t-1} + \beta_3 \left(\frac{ST.LIAB}{AT}\right)_{i,t-1} + \beta_4 \left(\frac{LT.LIAB}{AT}\right)_{i,t-1} + \beta_5 \left(\frac{CASH}{AT}\right)_{i,t-1} + \beta_6 lnCOGS_{i,t-1} + \beta_7 lnPPENT_{i,t-1} + \varphi_{jt} + \theta_t + \varepsilon_{it} + \omega_i \quad (6)$$

Where *ST.LIAB* and *LT.LIAB* are short-term liabilities and long-term liabilities (Compustat items *DLC* and *DLTT* respectively). The labor productivity model also includes the logarithm of net property, plant and equipment (*PPENT*) and intermediate inputs approximated by cost of goods sold (Compustat item *COGS*). This is intended to control for changes in labor productivity that have to do with other factor usage, rather than simply efficiency. As with behavioral variables, we add the SVO mechanism variables to equations (4), (5) and (6).

[3] We are aware of the theoretical and empirical problems regarding total factor productivity (Felipe & McCombie, 2020). For that reason, we focus instead on labor productivity. We include one exercise of TFP, nevertheless, as part of the robustness analysis.

Equations (1) … (6) are estimated using a within-effects model with firm-level and year fixed effects. Endogeneity arising due to unobservable individual heterogeneity is a well-known problem associated with microeconomic data, rendering ordinary least squares (OLS) estimates inconsistent as they require explanatory variables to be uncorrelated with the error term. Profiting from the panel structure of our data, the within-effects model allows us to control for time-constant unobservable firm characteristics which may be related to our dependent variables. We also control for elements that vary over time but affect firms in the same way such as macroeconomic shocks as well as industry specific factors.

5. RESULTS

Table 2 presents our results for the baseline estimations of allocative variables. They largely track the results of previous studies (Auvray & Rabinovich, 2019; L. E. Davis, 2017; Orhangazi, 2008). Growth in sales, liquid assets and profitability all display a positive association with capital accumulation, statistically significant at the 1% level. Net financial payouts, size and leverage display the opposite association, at the same statistical significance. Results for R&D expenditures overall appear less sensitive to the business cycle as Figure 1 suggested. Net payouts maintain their negative sign but several variables behave differently to the way they do in CAPX equations: growth in sales flips to a negative effect, financial income has a positive effect while liabilities also flip to a positive - but statistically insignificant - sign. Profitability ceases to be statistically significant (although note that this is measured differently to the CAPX equation).

Larger, more profitable firms and those which have more liquid assets tend to have higher net payouts. Conversely, firms increasing their sales, those with higher liabilities and those which spend more on

R&D and capital accumulation tend to distribute earnings at lower rates, results which are statistically significant at the 1% level. In terms of performance measures, larger firms tend to have a higher labor productivity and market share, in both cases statistically significant at the 1% level. Size, on the other hand, has no effect of profitability. Cash and short-term investments have statistically significant negative effects on labor productivity and profitability.

In Tables 3 – 8 we re-estimate these baseline models, this time including SVO mechanism variables. We present the results in tables showing only the coefficients and standard errors of our focal variables, each with two panels, the first on 'coercive' SVO and the second on 'consensual' SVO. Among the former we find only isolated instances in which SVO variables display statistically significant effects on investment. In fact it is only with ownership by institutional investors that we observe a negative effect on investment, statistically significant effect at the 1% level (Table 3). When we distinguish between high and low turnover institutional shareholders, we observe that this effect is led by the latter. It retains its significance for all three sub-categories of low turnover institutions (Big Three, hedge funds and other), although the statistical significance is weakest in the case of the Big Three (at only 10%). Variables that capture shareholder bias in governance - *%FIN_DIRECTORS* and *E-INDEX* - have a negative but not statistically significant association with investment. We find mixed evidence on consensual SVO variables in investment equations, incentive-based compensation for the management and CEO has the expected negative sign while the (sign inverted) length of CEO tenure (*CEOTENURE*) appear to have a *positive* effects on investment, statistically significant in all cases.

For R&D (Table 4), statistically significant effects are even more infrequent. We find a small negative effect, significant at the 5% level for high turnover investors generally, and for high turnover

institutions (with slightly diminished significance). Unlike what we found with investment, ownership by low turnover institutional investors does not appear to reduce R&D expenditure, indeed a positive and statistically significant coefficient is found on *INSTIT_LOWT_BIG3*. Variables measuring shareholder friendly governance as well as all consensual variables have (perverse) positive coefficients although never with statistical significance.

Finally, for coercive variables, results for payout equations (Table 5) conform with our findings on capital expenditure. It is only in the case of low turnover institutional investors that we observe robustly significant effects – in this case positive, implying that the influence of these investors tends to increase payouts. No other coercive variables and none of our consensual variables demonstrate any statistically significant association with altered payout behavior. While incentive-based remuneration variables have a positive sign, they are statistically insignificant. We thus do find *some* evidence that SVO can lead to the behavioral changes that both financialization and Agency theory predict – slower investment and faster distribution – but these outcomes only emerge in the presence of low turnover investors. In order to determine whether they reflect short-termism we examine whether the same SVO variables are associated with worsening performance.

For market share, our first performance variable, we find statistically significant negative effects associated with ownership by institutional investors and all subclasses thereof, with the notable exception of Big Three (Table 6). These effects are strongest and most significant in the case of hedge funds, *INSTIT_LOWT_HEDGE*. We find the same effect with overall concentration among the top 5 investors (*TOP5*) and with concentration in high and low turnover investors generally (*HIGHT* and *LOWT*). No other coercive variables and none of our consensual variables demonstrate effects with statistical significance.

SVO mechanisms appear to have far more limited effect on profitability (Table 7). Among coercive variables we observe negative and statistically significant effects only with Big Three and hedge fund ownership. Consensual variables again have no statistically significant effects. A similar story emerges with labor productivity (Table 8), however this time only hedge funds are associated with statistically significant negative effects. It's thus only in the case of hedge funds that we observe consistent negative effects across performance variables performance. SVO mechanisms in general do not appear, from this angle, to be causing short-termism.

We evaluate the robustness of these results and deepen the analysis in several ways. First, we separately examine the period before and after the Great Financial Crisis – which marked various changes in financial and ownership institutions and potentially norms of governance. We do this for those variables with sufficient coverage in both periods: ownership and CEO tenure. Incentive-based remuneration, the E-Index and financial board members are limited mostly to the latter period and therefore are not included in this analysis. Results in each period are similar to those for the whole period (online appendix, Tables A1-A14). In the second period, statistical significance overall decreases but *INSTIT_LOWT* and its subdivisions remains the most impactful focal variable, especially for performance, with hedge funds driving negative results in all cases.

Second, we compute two similar but alternative performance measures (online appendix, Tables A15-A16). We calculate market share using only Compustat instead of BEA data and we calculate total factor instead of labour productivity. For the former, results are similar to our initial estimates, with ownership by institutional investors, both with high and low turnover and all subcategories thereof, demonstrating statistically significant negative effects. However, with Compustat derived market

share, incentive-based remuneration variables also present negative and statistically significant results. Concentration among the top 5, *TOP5*, shareholders loses its statistically significant. For TFP, we again find negative and statistically significant results for hedge funds and this time also with other non-Big Three low turnover institutional investors.

Third, we re-estimate equations (1)-(6) including sampling weights given by firms' sales (online appendix, Tables A17-A23), such that we account for macroeconomic importance in our results. Results for the baseline models track the original non-weighted sample although with an improved R2. For behavioral variables we see a lower statistical significance but with similar signs except capital expenditures where we see unexpected positive effects from *INSTIT_LOWT, INSTIT_HIGHT* and CEO incentive-based remuneration. In the case of performance-based variables negative and statistically significant results are maintained in most cases for *INSTIT_LOWT_HEDGE*. Differently from our original results, *%FIN_DIRECTORS* improves its statistical significance with positive effects on R&D and net payouts, and negative effects on profitability.

Fourth, we study the interaction among some of our coercive and consensual variables. We investigate whether higher incentive-based remunerations or shorter CEO tenure manifests clearer governance effects in the context of specific ownership structures (online appendix, Tables A24-A29). The sample is restricted to the post-crisis period following the availability of the incentive-based remuneration data. The more impactful results appear when the latter variables interact with Big Three ownership as in the case of CAPX (negative) and productivity (positive). In contrast with the Big Three, hedge funds present a statistically significant interaction for capital expenditures only, while negative effects on profitability and productivity appear to be related purely to ownership and are not impacted by managerial variables.

[Tables 3 – 9]

6. DISCUSSION

These results challenge financialization theory, and do not provide general support for H1 or H2. Broad measures of shareholder concentration, variables related to shareholder friendly governance structures as well as all those related to managerial re-incentivization appear to have very little effect on either the allocative behavior or performance of NFCs. Where we do start to see clearer effects are with variables measuring the influence of specific *kinds* of investor. Higher ownership by both low and high turnover institutional investors is associated with the behavioral outcomes that both financialization and Agency theory expect – a tendency to invest less and to pay out more. However, while this appears to consistently harm future market share, it does not otherwise lead to noticeably worse performance – except in the case of hedge funds. Here is the one instance where the financialization hypothesis is fully validated – hedge fund control leads to "downsizing and distributing" along with worse performance outcomes across the board. Big Three ownership on the other hand has limited negative effects on performance and in fact is associated with increased R&D expenditure, a possible indicator of long-termism.

These results suggest that investor heterogeneity matters considerably. They support accounts of short-termism more common the mainstream literature, which see it not as an effect of shareholder primacy as such, but rather of the influence of specific *kinds* of shareholder – specifically, in this case, hedge funds. But why do hedge funds stand out from the crowd in their governance effects? Regrettably, because we do not *separately* capture shareholder preferences and enforcement capacities,

we cannot tell the full story here. The fact that outcomes were different with the Big Three may suggest that the latter are simply not interested in, or capable of, active stewardship, as some maintain (Bebchuk & Hirst, 2019). Or they may suggest that index funds are in fact genuinely supportive of a long-term orientation among the firms in which they invest. The latter interpretation is supported by the positive R&D effect found for Big Three ownership. These passive institutions also seem to be more capable of aligning managers' incentives, as suggested by the statistical significance on interaction terms in capital expenditure and productivity models.

However, we can be fairly confident that hedge funds are not the only "impatient" investors around. High turnover investors, almost by definition, will share an overriding concern with short-run performance (Deeg & Hardie, 2016). Thus the fact that high turnover capital in general showed few performance effects, while hedge funds did, is very likely explained by disparities in enforcement capacity or more simply – power. This is an interesting result which supports claims that the disciplinary effect of a liquid stock market has been weakening, and that shareholders increasingly rely on the exercise of *voice* to effectuate pressure (Useem, 1996). That would mean that it is more the 'mailed fist' of direct and interpersonal shareholder power rather than the 'invisible hand' of capital markets that today drives the financialization of corporate governance.

We find that consensual variables have broadly *no* effect on behavior or performance (where *some* coercive ones do). This could on the one hand be a function of the finding just described. If shareholders are heterogenous, then institutional reforms which encourage managers to embrace shareholder primacy *as such* will not have consistent effects across firms, since each firm will be responding to a different mix of investor interests. However, the fact that consensual variables remain non-impactful even when interacted with shareholding by investor types which have been seen to be

associated with short-termism suggests something stronger. It suggests that re-incentivization mechanisms do not generally succeed in getting managers to alter governance priorities in any systematic way. This would support a literature cited earlier, which argues that the prescriptions of Agency theory may alter what Jung (2015) calls the "decision context" for managers but they don't entirely refashion it. Managers may instead engage in "symbolic management" to appease investors and market analysts, while in substance holding on to their own autonomy and distinct interests (Benton & Cobb, 2019; Knafo & Dutta, 2019; Westphal & Khanna, 2003; Westphal & Zajac, 1998).

It's worth highlighting finally, that while our findings do confirm that SVO can have substantive effects on firm behavior, like lowering investment rates, the actual magnitude of these effects is quite muted. For example, our results imply that a one standard deviation increase in the (demeaned) value of *BIG3PAT*, *TOTINVPAT*,*hedge* and *TOTINVPAT*,*other*, 5.49% and 6.45% and 7.43% respectively, would generate a decrease in capital accumulation of around 0.3%. This is only around 2% of the (demeaned) standard deviation of that variable. Similarly, a one standard deviation increase in *BIG3PAT* and *TOTINVPAT,other* is associated with an increase in net payouts of around 2-4% of a standard deviation. These are meaningful magnitudes, but they suggest that SVO may not be able to fully bear the explanatory weight it has been accorded in some recent accounts of financialized capitalism. If these numbers are accurate, they suggest that SVO's contribution to secular stagnation, for example, can only have been vanishingly slight.

7. CONCLUSION

According to its critics, SVO causes a financialization of the business model which induces decision makers to focus on the short-term shareholder gains over the firm's long-term health and

competitiveness. While some case studies have shown that SVO can have this effect, we lack clear evidence about the generality with which it does so. This paper raises doubts about that generality. We show that factors which increase the power of shareholders and the sensitivity of managers to shareholder concerns – the main underlying mechanisms of SVO – do not *consistently* alter either the allocative behavior of the firm or its long-term competitive performance. We do find that shareholder power can lead to a 'downsizing and distributing' allocation regime coupled with a decline in productivity, market share and profitability – but this occurs only in the presence of specific kinds of shareholders, chiefly hedge funds. Short-termism therefore appears not to be a function of shareholder primacy but of investor impatience – which is a more particular phenomenon.

This finding has important implications for how we understand changing paradigms of corporate governance under financialization. Much of the field has become wedded to a 'dominant model' account that portrays the history of governance in terms of the rise and fall of successive hegemonic frameworks (Knafo & Dutta, 2019, p. 4). These frameworks have a clear underlying logic that encourages uniformity in the business model and strategic behavior of firms. As the dominant model under financialization, SVO is seen as having become effectively universalized and thus as having reconfigured firm strategy across the board. This account seems to rest of two assumptions. Firstly, that shareholder interests have achieved unmitigated dominance over the firm and asserted their priorities as its own. This could reflect either that they have prevailed completely in the class struggle with management and/or that class distinctions themselves have been dissolved by the transmutation of managers into owners. Secondly, that shareholders have identical preferences, at least over a fairly wide domain of major issues pertaining to strategic governance.

Neither of these assumptions has much real-world validity. The shareholder revolution shifted the balance of power within the firm towards shareholders but did not make them masters over it. Managers have held on to a considerable share of power by resisting (Benton & Cobb, 2019; Westphal & Khanna, 2003) and deflecting (Westphal & Khanna, 2003) shareholder attacks. That resistance is the surest sign that, whatever the degree of rapprochement between the two, class distinctions have not been extinguished and intra-elite conflict still defines corporate governance. Even where shareholders have prevailed unambiguously, the outcomes of this are harder to predict than 'dominant model' theory suggests because shareholders have complex, heterogenous interests. As Deeg and Hardie (2016) argue, the distinctions between them are often qualitative and not simply ones of degree. Certain investors seem perfectly capable of providing 'patient capital' – a phenomenon that is not endemic to bank-based financial systems as commonly assumed. Our findings confirm this, suggesting that short-termist pressures are not in any way uniform across investor classes. Apkarian (2018) complicates the picture further, showing how debt investors concerned with minimizing "downside risk" (rather than maximizing "upside potential") are likely to resist the governance strategies that financialization theory associates with SVO.

Neither does the macro-level picture accord well with the expectations that 'dominant model' theory appears to furnish. SVO has diffused extremely unevenly at an international level, gaining far greater purchase in liberal economies like the US and UK than elsewhere. If it is as strongly inimical to innovation and competitiveness as some critics charge, we would expect this to have had a devastating impact on the relative performance of these economies. This is a familiar worry – the 1980s, when the US appeared to be rapidly losing its technological edge to Japan Inc., was when consternation about short-termism and the lack of 'patience' in US capital markets first became widespread (Porter, 1992). But the situation soon reversed, without there being any fundamental alteration in the putative

institutional sources of short-termism. Japan slipped into a prolonged stagnation from which its yet to fully recover, while the US corporate system regained its shine in the course of the 'roaring 90s'. Today its pressurized from competition by China and other East Asian economies, but it remains globally dominant, particularly in high technology sectors (Starrs, 2013). A full 38 percent of so-called 'superstar' firms – top-tier firms which have increasingly diverged from the pack in terms of productivity and profitability - are based in the US and Canada according to a recent McKinsey report (Manyika et al., 2018).

A look at the strategies these firms have pursued commonly reveals a business model that is, unsurprisingly, starkly different from the one financialization theorists would expect to find. Amazon is an important case in point. The company's massive success derives from an orientation that can only be described as archetypally managerialist. As Khan (2016) describes, its defining feature has been a willingness to forgo profit, for an extraordinary length of time, in the name of a relentless pursuit of growth and scale. The company filed losses for all most half of the quarters it was operating from its founding through 2013. At the same time, it was funneling resources at an extraordinary scale into the expansion of its operations - building up its physical capacities, diversifying into new lines of business like logistics and payment services, and using aggressive tactics to capture market share, like the Prime Membership program, which generated losses of between $1 and $2 billion for its first several years of existence. This was part of deliberate long-termist, growth-oriented strategy clearly articulated by Amazon executives from its earliest days. "Just as striking as Amazon's lack of interest in generating profit," Khan writes (2016, p. 748), "has been investor's willingness to back the company." Amazon's long-termist strategy has only been made possible by the evident patience of its shareholder and lenders, who've continued supplying it with ample external funds even as the firm racked up losses quarter after quarter.

At the very least, all of this suggests that the truth is considerably more complicated than the dominant model account allows for. That account goes wrong by extrapolating general tendencies into categorical outcomes. In doing so it obscures the considerable heterogeneity that continues to characterize the field of corporate governance. Firms continue to vary in their political arrangements. Power is apportioned differently between stakeholder categories - managers, shareholders, creditors and labor representatives. Each of those broad categories is internally varied – comprised of different sub-groups with potentially distinctive preferences and capacities. Making matters even more complicated is the fact that, as Froud et al. (2017) show, the same political arrangements are likely to manifest is very different strategies based on the sector-specific characteristics of a firm's industry and the constraints and opportunities available to it – producing financialized business models that are highly "variegated". Rather than continuing to rely on a single ideal typical concept of financialized governance, future research ought to develop a more granular taxonomy of these different models, and begin to closely track their prevalence. Only in this way can we reach firmer conclusions about the contribution of changing governance frameworks, as a relatively autonomous causal factor, to macro-dynamics of financialized capitalism like secular stagnation and rising inequality.

REFERENCES

Aghion, P., Van Reenen, J., & Zingales, L. (2013). Innovation and institutional ownership. *American Economic Review*, *103*(1), 277–304.

Aglietta, M., & Rebérioux, A. (2005). *Corporate governance adrift: A critique of shareholder value*. Edward Elgar.

Apkarian, J. (2018). Opposition to shareholder value: Bond rating agencies and conflicting logics in corporate finance. *Socio-Economic Review*, *16*(1), 85–112. https://doi.org/10.1093/ser/mwx041

Appel, I. R., Gormley, T. A., & Keim, D. B. (2016). Passive investors, not passive owners. *Journal of Financial Economics*, *121*(1), 111–141. https://doi.org/10.1016/j.jfineco.2016.03.003

Asker, J., Farre-Mensa, J., & Ljungqvist, A. (2014). Corporate investment and stock market listing: A puzzle? *The Review of Financial Studies*, *28*(2), 342–390.

Auvray, T., & Rabinovich, J. (2019). The financialisation-offshoring nexus and the capital accumulation of US nonfinancial firms. *Cambridge Journal of Economics*, *43*(5), 1183–1218. https://doi.org/10.1093/cje/bey058

Bebchuk, L. A., Brav, A., & Jiang, W. (2015). *The long-term effects of hedge fund activism*. National Bureau of Economic Research.

Bebchuk, L. A., Cohen, A., & Ferrell, A. (2009). What matters in corporate governance? *The Review of Financial Studies*, *22*(2), 783–827. https://doi.org/10.1093/rfs/hhn099

Bebchuk, L. A., & Hirst, S. (2019). *Index funds and the future of corporate governance: Theory, evidence, and policy*. National Bureau of Economic Research.

Benton, R. A., & Cobb, J. A. (2019). Eyes on the Horizon? Fragmented Elites and the Short-Term Focus of the American Corporation. *American Journal of Sociology*, *124*(6), 1631–1684. https://doi.org/10.1086/702916

Berle, A., & Means, G. (1991). *The Modern Corporation and Private Property*. Transaction Publishers.

Bond, S., Elston, J. A., Mairesse, J., & Mulkay, B. (2003). Financial factors and investment in Belgium, France, Germany, and the United Kingdom: A comparison using company panel data. *Review of Economics and Statistics*, *85*(1), 153–165. https://doi.org/10.1162/003465303762687776

Boyer, R. (2005). From Shareholder Value to CEO Power: The Paradox of the 1990s. *Competition & Change*, *9*(1), 7–47. https://doi.org/10.1179/102452905X38623

Brav, A., Jiang, W., Ma, S., & Tian, X. (2018). How does hedge fund activism reshape corporate innovation? *Journal of Financial Economics*, *130*(2), 237–264. https://doi.org/10.1016/j.jfineco.2018.06.012

Brossard, O., Lavigne, S., & Sakinç, M. E. (2013). Ownership structures and R&D in Europe: The good institutional investors, the bad and ugly impatient shareholders. *Industrial and Corporate Change*, *22*(4), 1031–1068.

Bushee, B. J. (1998). The influence of institutional investors on myopic R&D investment behavior. *Accounting Review*, 305–333.

Cella, C. (2019). Institutional investors and corporate investment. *Finance Research Letters*. https://doi.org/10.1016/j.frl.2019.04.026

Chen, X., Harford, J., & Li, K. (2007). Monitoring: Which institutions matter? *Journal of Financial Economics*, *86*(2), 279–305. https://doi.org/10.1016/j.jfineco.2006.09.005

Coffee, J. C. (1991). Liquidity versus control: The institutional investor as corporate monitor. *Columbia Law Review*, *91*(6), 1277–1368.

Dallery, T. (2009). Post-Keynesian Theories of the Firm under Financialization. *Review of Radical Political Economics*, *41*(4), 492–515. https://doi.org/10.1177/0486613409341371

Dallery, T., & Van Treeck, T. (2011). Conflicting claims and equilibrium adjustment processes in a stock-flow consistent macroeconomic model. *Review of Political Economy*, *23*(2), 189–211. https://doi.org/10.1080/09538259.2011.561557

David, P. (2001). The Influence of Activism by Institutional Investors on R&D. *Academy of Management Journal*, 14.

Davis, G. F. (2009). *Managed by the Market: How Finance Reshaped America*. Oxford University Press.

Davis, G. F. (2013). After the Corporation. *Politics & Society*, *41*(2), 283–308. https://doi.org/10.1177/0032329213483110

Davis, L. E. (2017). Financialization and the non-financial corporation: An investigation of firm-level investment behavior in the United States. *Metroeconomica*, *69*(1), 270–307. https://doi.org/10.1111/meca.12179

DeAngelo, H., DeAngelo, L., & Stulz, R. M. (2006). Dividend policy and the earned/contributed capital mix: A test of the life-cycle theory. *Journal of Financial Economics*, *81*(2), 227–254. https://doi.org/10.1016/j.jfineco.2005.07.005

Deeg, R., & Hardie, I. (2016). 'What is patient capital and who supplies it?' *Socio-Economic Review*, *14*(4), 627–645. https://doi.org/10.1093/ser/mww025

Demsetz, H., & Villalonga, B. (2001). Ownership structure and corporate performance. *Journal of Corporate Finance*, *7*(3), 209–233.

Dobbin, F., & Jung, J. (2010). The misapplication of Mr. Michael Jensen: How agency theory brought down the economy and why it might again. In M. Lounsbury & P. M. Hirsch (Eds.), *Markets on Trial: The Economic Sociology of the U.S. Financial Crisis: Part B: Vol. 30 Part B* (pp. 29–64). Emerald Group Publishing Limited. https://doi.org/10.1108/S0733-558X(2010)000030B006

Dobbin, F., & Zorn, D. (2005). Corporate Malfeasance and the Myth of Shareholder Value. In *Political Power and Social Theory* (Vol. 17, pp. 179–198). Emerald (MCB UP). https://doi.org/10.1016/S0198-8719(04)17006-3

Dunn, S. P. (2010). *The economics of John Kenneth Galbraith: Introduction, persuasion, and rehabilitation*. Cambridge University Press.

Edmans, A., Fang, V. W., & Lewellen, K. A. (2017). Equity Vesting and Investment. *The Review of Financial Studies*, *30*(7), 2229–2271. https://doi.org/10.1093/rfs/hhx018

Edmans, A., Gabaix, X., & Jenter, D. (2017). Executive Compensation: A Survey of Theory and Evidence. In B. E. Hermalin & M. S. Weisbach (Eds.), *The Handbook of the Economics of Corporate Governance* (Vol. 1, pp. 383–539). North-Holland. https://doi.org/10.1016/bs.hecg.2017.11.010

Eichner, A. (1976). *The megacorp and oligopoly*. Cambridge University Press.

Elyasiani, E., & Jia, J. (2010). Distribution of institutional ownership and corporate firm performance. *Journal of Banking & Finance*, *34*(3), 606–620. https://doi.org/10.1016/j.jbankfin.2009.08.018

Fasianos, A., Guevara, D., & Pierros, C. (2018). Have we been here before? Phases of financialization within the twentieth century in the US. *Review of Keynesian Economics*, *6*(1), 34–61. https://doi.org/10.4337/roke.2018.01.03

Felipe, J., & McCombie, J. (2020). The illusions of calculating total factor productivity and testing growth models: From Cobb-Douglas to Solow and Romer. *Journal of Post Keynesian Economics*, *43*(3), 470–513.

Fernandez, R., Adriaans, I., Klinge, T. J., & Hendrikse, R. (2020). *Engineering digital monopolies. The financialisation of Big Tech*. SOMO.

Fichtner, J., & Heemskerk, E. M. (2020). The New Permanent Universal Owners: Index funds, patient capital, and the distinction between feeble and forceful stewardship. *Economy and Society*, *49*(4), 493–515. https://doi.org/10.1080/03085147.2020.1781417

Fichtner, J., Heemskerk, E. M., & Garcia-Bernardo, J. (2017). Hidden power of the Big Three? Passive index funds, re-concentration of corporate ownership, and new financial risk†. *Business and Politics*, *19*(2), 298–326. https://doi.org/10.1017/bap.2017.6

Flammer, C., & Bansal, P. (2017). Does a long-term orientation create value? Evidence from a regression discontinuity. *Strategic Management Journal*, *38*(9), 1827–1847. https://doi.org/10.1002/smj.2629

Friedman, M. (1970, September 13). A Friedman doctrine: The social responsibility of business is to increase its profits. *The New York Times Magazine*, 32–33.

Froud, J., Johal, S., Leaver, A., & Williams, K. (2006). *Financialization and strategy: Narrative and numbers*. Routledge.

Froud, J., Johal, S., Leaver, A., & Williams, K. (2017). Financialized Business Models and the Corporation. In G. Baars & A. Spicer (Eds.), *The Corporation* (pp. 291–302). Cambridge University Press. https://doi.org/10.1017/9781139681025.018

Galbraith, J. K. (2004). *The Economics of Innocent Fraud: Truth for Our Time* (51352nd edition). Houghton Mifflin Harcourt.

Gillan, S. L., & Starks, L. T. (2007). The Evolution of Shareholder Activism in the United States*. *Journal of Applied Corporate Finance*, *19*(1), 55–73. https://doi.org/10.1111/j.1745-6622.2007.00125.x

Giovanis, E., & Ozdamar, O. (2015). Determinants of total factor productivity: Evidence from US Compustat firms and Triadic Patent Families. *International Journal of Economics and Business Research*, *10*(3), 258–272.

Gutiérrez, G., & Philippon, T. (2018). Ownership, Concentration, and Investment. *AEA Papers and Proceedings*, *108*, 432–437.

Harford, J., Kecskés, A., & Mansi, S. (2018). Do long-term investors improve corporate decision making? *Journal of Corporate Finance*, *50*, 424–452. https://doi.org/10.1016/j.jcorpfin.2017.09.022

Harris, R., & Li, Q. C. (2008). Evaluating the contribution of exporting to UK productivity growth: Some microeconomic evidence. *World Economy*, *31*(2), 212–235.

Hecht, J. (2014). Is net stock issuance relevant to capital formation? Comparing heterodox models of firm-level capital expenditures across the advanced and largest developing economies. *Cambridge Journal of Economics*, *38*(5), 1171–1206. https://doi.org/10.1093/cje/bet070

Hein, E. (2008). *Financialisation in a comparative static, stock-flow consistent Post-Kaleckian distribution and growth model*. IMK Working Paper 21/2008.

Hein, E., & Treeck, T. V. (2010). Financialisation and Rising Shareholder Power in Kaleckian/Post-Kaleckian Models of Distribution and Growth. *Review of Political Economy*, *22*(2), 205–233. https://doi.org/10.1080/09538251003665628

Hein, E., & Van Treeck, T. (2010). Financialisation and rising shareholder power in Kaleckian/Post-Kaleckian models of distribution and growth. *Review of Political Economy*, *22*(2), 205–233. https://doi.org/10.1080/09538251003665628

Jackson, G., & Petraki, A. (2011). *Understanding short-termism: The role of corporate governance*.

Jensen, M. C., & Meckling, W. H. (1976). Theory of the firm: Managerial behavior, agency costs and ownership structure. *Journal of Financial Economics*, *3*(4), 305–360.

Jung, J. (2015). Shareholder Value and Workforce Downsizing, 1981–2006. *Social Forces*, *93*(4), 1335–1368. https://doi.org/10.1093/sf/sou108

Khan, L. M. (2016). Amazon's antitrust paradox. *The Yale Law Journal*, *126*, 710–805.

Klinge, T. J., Fernandez, R., & Aalbers, M. B. (2020). The Financialization of Big Pharma. *Revista Internacional de Sociología*, *78*(4), 174.

Knafo, S., & Dutta, S. J. (2019). The myth of the shareholder revolution and the financialization of the firm. *Review of International Political Economy*, *0*(0), 1–24. https://doi.org/10.1080/09692290.2019.1649293

Lavoie, M. (2014). *Post-Keynesian Economics: New Foundations*. Edward Elgar Publishing.

Lazonick, W. (2010). Innovative business models and varieties of capitalism: Financialization of the US corporation. *Business History Review*, *84*(04), 675–702.

Lazonick, W., Hopkins, M., Jacobson, K., Sakinç, M. E., & Tulum, Ö. (2017). US pharma's financialized business model. *Institute for New Economic Thinking Working Paper Series*, *60*.

Lazonick, W., Mazzucato, M., & Tulum, Ö. (2013). Apple's changing business model: What should the world's richest company do with all those profits? *Accounting Forum*, *37*, 249–267.

Lazonick, W., & O'Sullivan, M. (2000). Maximizing shareholder value: A new ideology for corporate governance. *Economy and Society*, *29*(1), 13–35.

Lazonick, W., & Tulum, Ö. (2011). US biopharmaceutical finance and the sustainability of the biotech business model. *Research Policy*, *40*(9), 1170–1187.

Manyika, J., Ramaswamy, S., Bughin, J., Woetzel, J., Birshan, M., & Nagpal, Z. (2018). *The superstar firms, sectors, and cities leading the global economy* [Discussion Paper]. McKinsey Global Institute. https://www.mckinsey.com/featured-insights/innovation-and-growth/superstars-the-dynamics-of-firms-sectors-and-cities-leading-the-global-economy

Marginson, D., & McAulay, L. (2008). Exploring the debate on short-termism: A theoretical and empirical analysis. *Strategic Management Journal*, *29*(3), 273–292.

Montalban, M., & Sakinç, M. E. (2013). Financialization and productive models in the pharmaceutical industry. *Industrial and Corporate Change*, *22*(4), 981–1030. https://doi.org/10.1093/icc/dtt023

Onaran, Ö., Stockhammer, E., & Grafl, L. (2011). Financialisation, income distribution and aggregate demand in the USA. *Cambridge Journal of Economics*, *35*(4), 637–661. https://doi.org/10.1093/cje/beq045

Orhangazi, Ö. (2008). Financialisation and capital accumulation in the non-financial corporate sector: A theoretical and empirical investigation on the US economy: 1973–2003. *Cambridge Journal of Economics*, *32*(6), 863–886. https://doi.org/10.1093/cje/ben009

Palley, T. I. (1997). Managerial turnover and the theory of short-termism. *Journal of Economic Behavior & Organization*, *32*(4), 547–557.

Penrose, E. T. (1959). *The Theory of the Growth of the Firm*. Basil Blackwell.

Porter, M. E. (1992). Capital disadvantage: America's failing capital investment system. *Harvard Business Review*, *70*(5), 65–82. Scopus.

Rabinovich, J. (2021). Financialisation and the 'supply-side' face of the investment-profit puzzle. *Journal of Post Keynesian Economics*, *44*(3), 434–462. https://doi.org/10.1080/01603477.2020.1734463

Richardson, S. (2006). Over-investment of free cash flow. *Review of Accounting Studies*, *11*(2–3), 159–189. https://doi.org/10.1007/s11142-006-9012-1

Sakinç, M. E., & Lazonick, W. (2019, May 31). *Make Passengers Safer? Boeing Just Made Shareholders Richer*. The American Prospect. https://prospect.org/api/content/58e5a085-d6aa-5698-b03d-bf95c67ae0cc/

Schiffbauer, M., & Ospina, S. (2010). *Competition and firm productivity: Evidence from firm-level data*. International Monetary Fund.

Schultz, E. L., Tan, D. T., & Walsh, K. D. (2010). Endogeneity and the corporate governance—Performance relation. *Australian Journal of Management*, *35*(2), 145–163. https://doi.org/10.1177/0312896210370079

Soener, M. (2015). Why do firms financialize? Meso-level evidence from the US apparel and footwear industry, 1991–2005. *Socio-Economic Review*, mwv006.

Starrs, S. (2013). American Economic Power Hasn't Declined—It Globalized! Summoning the Data and Taking Globalization Seriously. *International Studies Quarterly*, *57*(4), 817–830.

Stockhammer, E. (2004). Financialisation and the slowdown of accumulation. *Cambridge Journal of Economics*, *28*(5), 719–741. https://doi.org/10.1093/cje/beh032

Tori, D., & Onaran, Ö. (2018). The effects of financialization on investment: Evidence from firm-level data for the UK. *Cambridge Journal of Economics*, *42*(5), 1393–1416. https://doi.org/10.1093/cje/bex085

Useem, M. (1996). *Investor capitalism: How money managers are changing the face of corporate America*. Basic Books.

Van der Zwan, N. (2014). Making sense of financialization. *Socio-Economic Review*, *12*(1), 99–129. https://doi.org/10.1093/ser/mwt020

Van Treeck, T. (2008). Reconsidering the investment-profit nexus in financed-led economies: An ARDL-based approach. *Metroeconomica*, *59*(3), 371–404. https://doi.org/10.1111/j.1467-999X.2008.00312.x

Wahal, S., & McConnell, J. J. (2000). Do institutional investors exacerbate managerial myopia? *Journal of Corporate Finance*, *6*(3), 307–329.

Westphal, J. D., & Khanna, P. (2003). Keeping directors in line: Social distancing as a control mechanism in the corporate elite. *Administrative Science Quarterly*, *48*(3), 361–398.

Westphal, J. D., & Zajac, E. J. (1998). The Symbolic Management of Stockholders: Corporate Governance Reforms and Shareholder Reactions. *Administrative Science Quarterly*, *43*(1), 127–153. https://doi.org/10.2307/2393593

FIGURES

Figure 1. Focal and performance variables

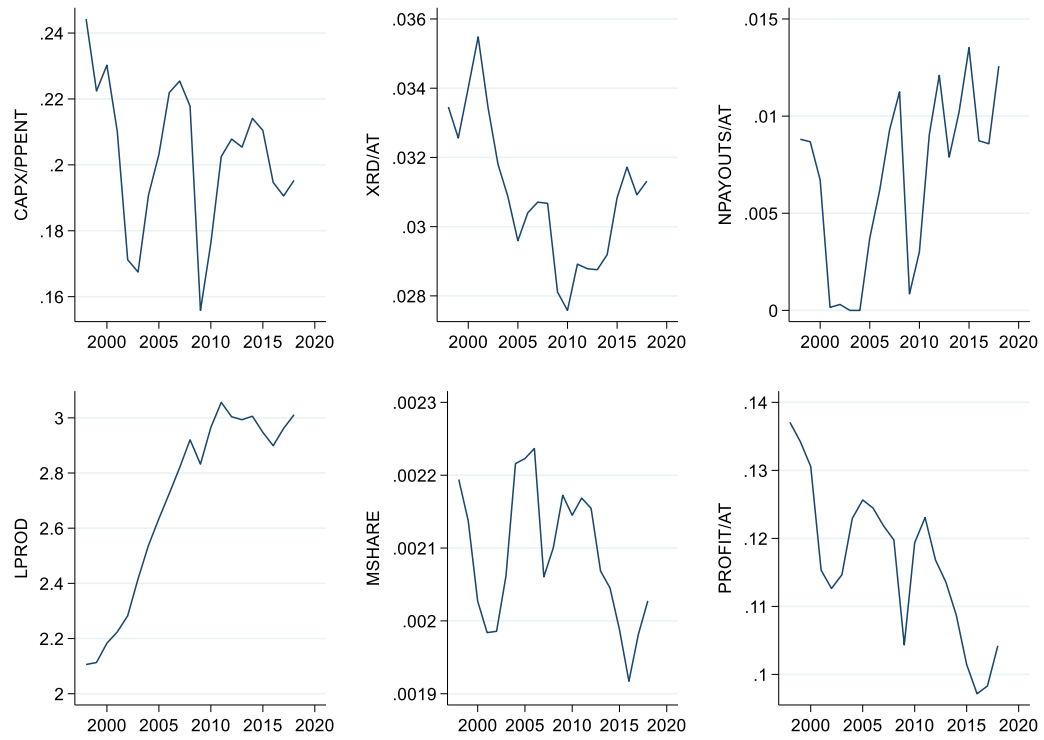


Figure 2. Coercive and consensual SVO variables

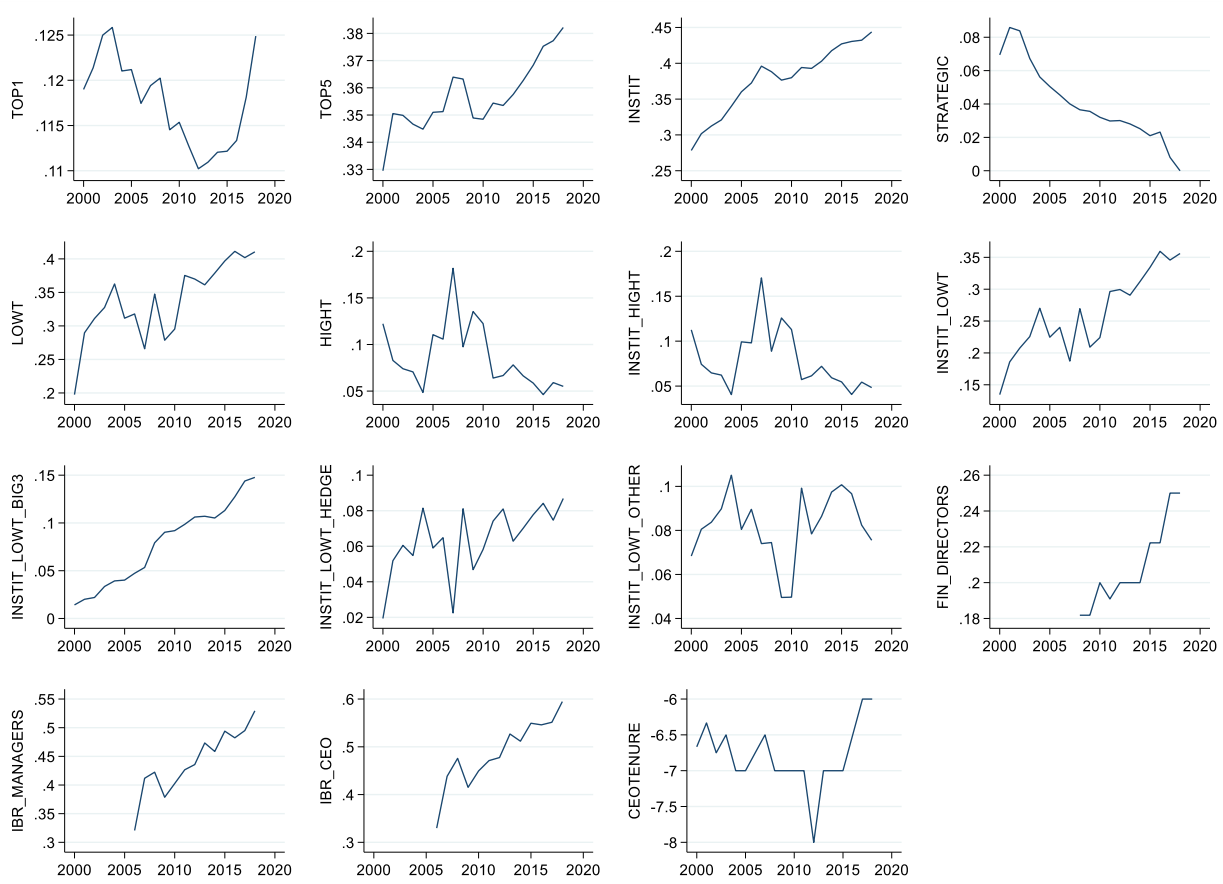
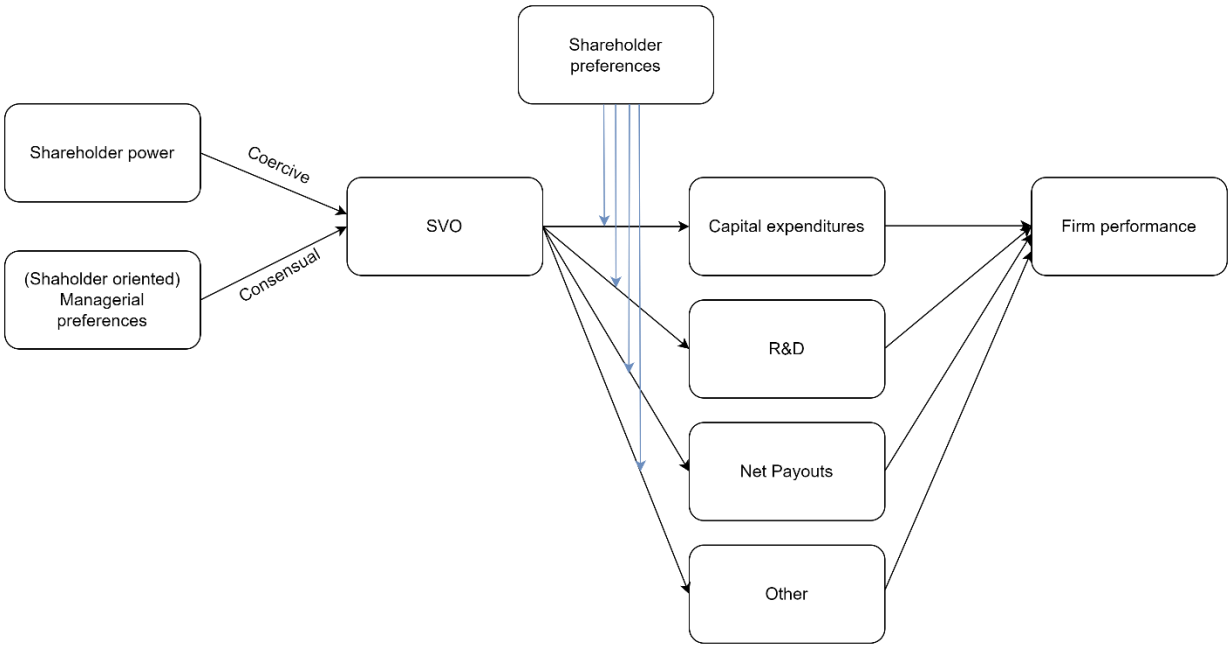


Figure 3. Causal map



TABLES

Table 1. Descriptive statistics.

Description	Variables	Obs.	Mean	Median	Min.	Max.	Std. Dev.
Behavioral							
Capital expenditures	(CAPX/PPENT)	44659	0.253	0.202	0.013	0.988	0.183
R&d	(XRD/AT)	28093	0.079	0.031	0.000	0.931	0.131
Net payouts	(NETPAYOUTS/AT)	44659	-0.012	0.004	-1.040	0.410	0.167
Performance							
Profit rate	(PROFIT/AT)	44659	0.085	0.116	-1.236	0.495	0.204
Labor productivity	LPROD	43676	4.697	2.705	0.080	60.215	7.060
Maket share	MSHARE	44466	0.013	0.002	0.000	0.320	0.037
Control							
Growth in sales	(GROWTH)	42837	0.087	0.070	-1.150	1.705	0.296
Financial income	(FININC/AT)	44659	0.002	0.000	0.000	0.038	0.005
Size in assets	(SIZE)	44659	6.748	6.746	1.541	11.720	1.998
Cash and short-term investment	(CASH/AT)	44659	0.186	0.102	0.000	0.930	0.211
Leverage	(LIABILITIES/AT)	44659	0.521	0.512	0.052	1.787	0.270
Short-term leverage	(ST.LIAB/AT)	44654	0.031	0.006	0.000	0.419	0.062
Long-term leverage	(LT.LIAB/AT)	44613	0.198	0.162	0.000	1.120	0.204
Cost of goods sold	lnCOGS	44659	5.996	6.124	-0.227	11.233	2.154
Property, plant and equipment	lnPPENT	44659	4.938	5.061	-2.254	10.632	2.550
Age	AGE	44659	23.025	18	1	67	17.196
Coercive							
Ownership							
Concentration							
Largest shareholder	TOP1	32044	0.153	0.115	0.006	0.779	0.124
Top 5 shareholders	TOP5	32044	0.378	0.352	0.009	0.918	0.163
Type							
Total Strategic	STRATEGIC	32044	0.119	0.027	0.000	0.839	0.181
Total Institutional	INSTIT	32044	0.371	0.380	0.000	0.859	0.175
High turnover	INSTIT_HIGHT	32044	0.100	0.074	0.000	0.620	0.100
Low turnover	INSTIT_LOWT	32044	0.267	0.261	0.000	0.740	0.157
Big Three	INSTIT_LOWT_BIG3	32044	0.078	0.069	0.000	0.273	0.068
Hedge	INSTIT_LOWT_OTHER	32044	0.085	0.064	0.000	0.450	0.083
Other	INSTIT_LOWT_HEDGE	32044	0.103	0.081	0.000	0.554	0.098
Turnover							
High turnover	HIGHT	32044	0.110	0.081	0.000	0.625	0.108
Low turnover	LOWT	32044	0.347	0.338	0.000	0.888	0.173
Governance							
E-Index	%FIN_DIRECTORS	11938	0.236	0.200	0	0.625	0.131
Financial Board Members	E-INDEX	19144	-3.515	-4	-6	0.000	1.322
Consensual							
Incentive-based remuneration							
All executives	IBR_MANAGERS	19487	0.415	0.443	0	0.903	0.227
CEO	IBR_CEO	19286	0.439	0.490	0	0.956	0.268
CEO Tenure	CEOTENURE	21853	-9.224	-7	-44	-0.500	8.097

Table 2. Fixed-effects regression estimation of equation (1), (2), (3), (4), (5) and (6). Nonfinancial firms. The table presents the coefficient and standard errors (in parenthesis) of the estimations by fixed effects regression. Time fixed effects and trend-industry fixed effects are included but not reported. Period covered: 1998-2018. P-values are reported for all tests. * indicates significance at 10%, ** significance at 5% and *** significance at 1%.

	(CAPX/PPENT)t	(XRD/AT)t	(NETPAYOUTS/AT)t	LPRODt	MSHAREt	(PROFIT/AT)t
(GROWTH)t-1	0.044***	-0.011***	-0.015**			
	(0.004)	(0.003)	(0.006)			
(FININC/AT)t-1	0.244	0.714***				
	(0.292)	(0.236)				
(NETPAYOUTS/AT)t-1	-0.099***	-0.019*				
	(0.010)	(0.011)				
(SIZE)t-1	-0.020***	-0.017***	0.032***	0.557***	0.006***	0.002
	(0.002)	(0.002)	(0.003)	(0.155)	(0.001)	(0.003)
(CASH/AT)t-1	0.134***	0.024***	0.111***	-1.104***	-0.001	-0.081***
	(0.012)	(0.008)	(0.012)	(0.329)	(0.002)	(0.015)
(LIABILITIES/AT)t-1	-0.024***	0.011	-0.070***			
	(0.007)	(0.007)	(0.010)			
(PROFIT/AT)t-1	0.167***		0.191***			
	(0.013)		(0.022)			
(AGE)t-1	-0.004	0.001	0.004	-0.484	0.003***	-0.000
	(0.003)	(0.002)	(0.004)	(0.790)	(0.001)	(0.018)
(NEWPROFIT/AT)t-1		0.017				
		(0.014)				
(CAPX/PPENT)t-1			-0.022**			
			(0.010)			
(XRD/AT)t-1			-0.218***			
			(0.048)			
(ST.LIAB/AT)t-1				0.171	0.004***	-0.055*
				(0.530)	(0.001)	(0.029)
(LT.LIAB/AT)t-1				0.271	-0.002**	-0.013
				(0.304)	(0.001)	(0.010)
lnCOGSt-1				0.825***		
				(0.160)		
lnPPENTt-1				-0.912***		
				(0.140)		
Observations	40,476	25,183	21,810	41,684	42,610	42,796
R2	0.116	0.049	0.166	0.051	0.102	0.019

Table 3. Fixed-effects regression estimation of equation (1). The table presents the coefficient and standard errors (in parenthesis) of the estimations by fixed effects regression. Control variables, time fixed effects and trend-industry fixed effects are included but not reported. Period covered: 1998-2018, except for %FIN_DIRECTORS, E-INDEX (2008-2018); IBR_MANAGERS, IBR_CEO (2007-2018). P-values are reported for all tests. * indicates significance at 10%, ** significance at 5% and *** significance at 1%.

Panel A. Coercive SVO variables

	(CAPX/PPENT)t	(CAPX/PPENT)t	(CAPX/PPENT)t	(CAPX/PPENT)t	(CAPX/PPENT)t	(CAPX/PPENT)t	(CAPX/PPENT)t	(CAPX/PPENT)t
TOP1t-1	-0.014							
	(0.012)							
TOP5t-1		-0.013						
		(0.009)						
INSTITt-1			-0.033***					
			(0.010)					
STRATEGICt-1			0.002		0.003	0.002		
			(0.010)		(0.010)	(0.011)		
HIGHTt-1				0.000				
				(0.011)				
LOWTt-1				-0.004				
				(0.009)				
INSTIT_LOWTt-1					-0.038***			
					(0.011)			
INSTIT_HIGHTt-1					-0.012	-0.012		
					(0.013)	(0.013)		
INSTIT_LOWT_BIG3t-1						-0.069*		
						(0.035)		
INSTIT_LOWT_HEDGEt-1						-0.034**		
						(0.015)		
INSTIT_LOWT_OTHERt-1						-0.036***		
						(0.013)		
%FIN_DIRECTORSt-1							-0.006	
							(0.014)	
E-INDEXt-1								0.000
								(0.002)
Observations	29,466	29,466	29,466	29,466	29,466	29,466	10,123	11,877
R2	0.108	0.109	0.109	0.108	0.109	0.109	0.077	0.095

Panel B. Consensual SVO variables

	(CAPX/PPENT)t	(CAPX/PPENT)t	(CAPX/PPENT)t
IBR_MANAGERSt-1	-0.016***		
	(0.006)		
IBR_CEOt-1		-0.011**	
		(0.005)	
CEOTENUREt-1			0.001***
			(0.000)
Observations	16,819	16,819	17,384
R-squared	0.094	0.094	0.122

Table 4. Fixed-effects regression estimation of equation (2). The table presents the coefficient and standard errors (in parenthesis) of the estimations by fixed effects regression. Control variables, time fixed effects and trend-industry fixed effects are included but not reported. Period covered: 1998-2018, except for %FIN_DIRECTORS, E-INDEX (2008-2018); IBR_MANAGERS, IBR_CEO (2007-2018). P-values are reported for all tests. * indicates significance at 10%, ** significance at 5% and *** significance at 1%.

Panel A. Coercive SVO variables

	(XRD/AT)t	(XRD/AT)t	(XRD/AT)t	(XRD/AT)t	(XRD/AT)t	(XRD/AT)t	(XRD/AT)t	(XRD/AT)t
TOP1t-1	-0.017							
	(0.012)							
TOP5t-1		-0.001						
		(0.008)						
INSTITt-1			-0.003					
			(0.009)					
STRATEGICt-1			0.001		0.001	0.004		
			(0.010)		(0.010)	(0.010)		
HIGHTt-1				-0.022**				
				(0.010)				
LOWTt-1				0.000				
				(0.006)				
INSTIT_LOWTt-1					0.008			
					(0.008)			
INSTIT_HIGHTt-1					-0.024*	-0.021*		
					(0.012)	(0.012)		
INSTIT_LOWT_BIG3t-1						0.067**		
						(0.028)		
INSTIT_LOWT_HEDGEt-1						0.004		
						(0.010)		
INSTIT_LOWT_OTHERt-1						0.004		
						(0.009)		
%FIN_DIRECTORSt-1							0.001	
							(0.004)	
E-INDEXt-1								0.000
								(0.000)
Observations	18,352	18,352	18,352	18,352	18,352	18,352	6,355	7,473
R2	0.051	0.051	0.051	0.052	0.052	0.053	0.043	0.050

Panel B. Consensual SVO variables

	(XRD/AT)t	(XRD/AT)t	(XRD/AT)t
IBR_MANAGERSt-1	0.001		
	(0.003)		
IBR_CEOt-1		0.001	
		(0.002)	
CEOTENUREt-1			0.000
			(0.000)
Observations	10,600	10,600	10,770
R-squared	0.060	0.060	0.058

Table 5. Fixed-effects regression estimation of equation (3). The table presents the coefficient and standard errors (in parenthesis) of the estimations by fixed effects regression. Control variables, time fixed effects and trend-industry fixed effects are included but not reported. Period covered: 1998-2018, except for %FIN_DIRECTORS, E-INDEX (2008-2018); IBR_MANAGERS, IBR_CEO (2007-2018). P-values are reported for all tests. * indicates significance at 10%, ** significance at 5% and *** significance at 1%.

Panel A. Coercive SVO variables

	(NETPAYOUTS/ AT)t	(NETPAYOUTS/ AT)t	(NETPAYOUTS/ AT)t	(NETPAYOUTS/ AT)t	(NETPAYOUTS/ AT)t	(NETPAYOUTS/ AT)t	(NETPAYOUTS/ AT)t	(NETPAYOUTS/ AT)t
TOP1t-1	0.008							
	(0.016)							
TOP5t-1		0.016						
		(0.011)						
INSTITt-1			0.032***					
			(0.012)					
STRATEGICt-1			-0.003		-0.003	-0.001		
			(0.013)		(0.013)	(0.014)		
HIGHTt-1				-0.017				
				(0.014)				
LOWTt-1				0.010				
				(0.009)				
INSTIT_LOWTt-1					0.044***			
					(0.012)			
INSTIT_HIGHTt-1					0.007	0.007		
					(0.016)	(0.016)		
INSTIT_LOWT_BIG3t-1						0.090**		
						(0.037)		
INSTIT_LOWT_HEDGEt-1						0.047***		
						(0.016)		
INSTIT_LOWT_OTHERt-1						0.035***		
						(0.013)		
%FIN_DIRECTORSt-1							0.013	
							(0.012)	
E-INDEXt-1								-0.002
								(0.002)
Observations	15,904	15,904	15,904	15,904	15,904	15,904	5,792	6,813
R2	0.176	0.176	0.177	0.176	0.177	0.177	0.156	0.160

Panel B. Consensual SVO variables

	(NETPAYOUTS/ AT)t	(NETPAYOUTS/ AT)t	(NETPAYOUTS/ AT)t
IBR_MANAGERSt-1	0.005		
	(0.006)		
IBR_CEOt-1		0.005	
		(0.005)	
CEOTENUREt-1			0.000
			(0.000)
Observations	9,590	9,590	9,601
R-squared	0.152	0.152	0.166

Table 6. Fixed-effects regression estimation of equation (4). The table presents the coefficient and standard errors (in parenthesis) of the estimations by fixed effects regression. Control variables, time fixed effects and trend-industry fixed effects are included but not reported. Period covered: 2000-2018, except for %FIN_DIRECTORS, E-INDEX (2010-2018); IBR_MANAGERS, IBR_CEO (2009-2018). P-values are reported for all tests. * indicates significance at 10%, ** significance at 5% and *** significance at 1%.

Panel A. Coercive SVO variables

	MSHAREt	MSHAREt	MSHAREt	MSHAREt	MSHAREt	MSHAREt	MSHAREt	MSHAREt
TOP1t-3	-0.002							
	(0.002)							
TOP5t-3		-0.002***						
		(0.001)						
INSTITt-3			-0.006***					
			(0.002)					
STRATEGICt-3			-0.002		-0.002*	-0.001		
			(0.001)		(0.001)	(0.001)		
HIGHTt-3				-0.004***				
				(0.001)				
LOWTt-3				-0.004***				
				(0.001)				
INSTIT_LOWTt-3					-0.005***			
					(0.002)			
INSTIT_HIGHTt-3					-0.006***	-0.006***		
					(0.001)	(0.002)		
INSTIT_LOWT_BIG3t-3						0.002		
						(0.006)		
INSTIT_LOWT_HEDGEt-3						-0.010***		
						(0.003)		
INSTIT_LOWT_OTHERt-3						-0.003*		
						(0.002)		
%FIN_DIRECTORSt-3							0.001	
							(0.002)	
E-INDEXt-3								-0.000
								(0.000)
Observations	25,826	25,826	25,826	25,826	25,826	25,826	7,299	8,906
R2	0.112	0.113	0.114	0.114	0.114	0.114	0.126	0.131

Panel B. Consensual SVO variables

	MSHAREt	MSHAREt	MSHAREt
IBR_MANAGERSt-3	-0.000		
	(0.001)		
IBR_CEOt-3		-0.000	
		(0.001)	
CEOTENUREt-3			0.000
			(0.000)
Observations	13,442	13,442	13,540
R-squared	0.110	0.110	0.167

Table 7. Fixed-effects regression estimation of equation (5). The table presents the coefficient and standard errors (in parenthesis) of the estimations by fixed effects regression. Control variables, time fixed effects and trend-industry fixed effects are included but not reported. Period covered: 2000-2018, except for %FIN_DIRECTORS, E-INDEX (2010-2018); IBR_MANAGERS, IBR_CEO (2009-2018). P-values are reported for all tests. * indicates significance at 10%, ** significance at 5% and *** significance at 1%.

Panel A. Coercive SVO variables

	(PROFIT/AT)t	(PROFIT/AT)t	(PROFIT/AT)t	(PROFIT/AT)t	(PROFIT/AT)t	(PROFIT/AT)t	(PROFIT/AT)t	(PROFIT/AT)t
TOP1t-3	0.029**							
	(0.013)							
TOP5t-3		0.010						
		(0.009)						
INSTITt-3			0.002					
			(0.012)					
STRATEGICt-3			0.011		0.010	0.006		
			(0.012)		(0.012)	(0.012)		
HIGHTt-3				0.023*				
				(0.012)				
LOWTt-3				-0.000				
				(0.008)				
INSTIT_LOWTt-3					-0.010			
					(0.012)			
INSTIT_HIGHTt-3					0.023	0.017		
					(0.015)	(0.015)		
INSTIT_LOWT_BIG3t-3						-0.117***		
						(0.042)		
INSTIT_LOWT_HEDGEt-3						-0.037**		
						(0.016)		
INSTIT_LOWT_OTHERt-3						0.013		
						(0.014)		
%FIN_DIRECTORSt-3							0.003	
							(0.011)	
E-INDEXt-3								0.000
								(0.001)
Observations	26,450	26,450	26,450	26,450	26,450	26,450	7,367	8,993
R2	0.021	0.021	0.021	0.021	0.021	0.022	0.038	0.046

Panel B. Consensual SVO variables

	(PROFIT/AT)t	(PROFIT/AT)t	(PROFIT/AT)t
IBR_MANAGERSt-3	-0.004		
	(0.005)		
IBR_CEOt-3		-0.003	
		(0.004)	
CEOTENUREt-3			-0.000
			(0.000)
Observations	13,508	13,508	13,728
R-squared	0.033	0.033	0.052

Table 8. Fixed-effects regression estimation of equation (6). The table presents the coefficient and standard errors (in parenthesis) of the estimations by fixed effects regression. Control variables, time fixed effects and trend-industry fixed effects are included but not reported. Period covered: 2000-2018, except for %FIN_DIRECTORS, E-INDEX (2010-2018); IBR_MANAGERS, IBR_CEO (2009-2018). P-values are reported for all tests. * indicates significance at 10%, ** significance at 5% and *** significance at 1%.

Panel A. Coercive SVO variables

	LPRODt	LPRODt	LPRODt	LPRODt	LPRODt	LPRODt	LPRODt	LPRODt
TOP1t-3	0.535							
	(0.450)							
TOP5t-3		0.317						
		(0.302)						
INSTITt-3			-0.539					
			(0.363)					
STRATEGICt-3			0.455		0.484	0.510		
			(0.337)		(0.333)	(0.328)		
HIGHTt-3				-0.238				
				(0.312)				
LOWTt-3				-0.171				
				(0.231)				
INSTIT_LOWTt-3					-0.372			
					(0.369)			
INSTIT_HIGHTt-3					-0.402	-0.401		
					(0.412)	(0.409)		
INSTIT_LOWT_BIG3t-3						0.270		
						(1.416)		
INSTIT_LOWT_HEDGEt-3						-1.423***		
						(0.521)		
INSTIT_LOWT_OTHERt-3						0.346		
						(0.438)		
%FIN_DIRECTORSt-3							0.382	
							(0.483)	
E-INDEXt-3								-0.011
								(0.066)
Observations	25,826	25,826	25,826	25,826	25,826	25,826	7,299	8,906
R2	0.057	0.057	0.058	0.057	0.058	0.058	0.150	0.132

Panel B. Consensual SVO variables

	LPRODt	LPRODt	LPRODt
IBR_MANAGERSt-3	0.245		
	(0.170)		
IBR_CEOt-3		0.168	
		(0.133)	
CEOTENUREt-3			0.011*
			(0.006)
Observations	13,252	13,252	13,540
R-squared	0.116	0.115	0.053

Table 9. Summary of results

		Behaviour			Performance		
	Variable Name	Investment	R&D	Payout	M-Share	Profit	L-Prod
Coercive							
Ownership							
Concentration							
Largest shareholder	TOP1	Neg	Neg	Pos	Neg	Pos **	Pos
Top 5 shareholders	TOP5	Neg	Neg	Pos	Neg ***	Pos	Pos
Type							
Total Strategic	STRATEGIC	Pos	Pos	Neg	Neg	Pos	Pos
Total Institutional	INSTIT	Neg ***	Neg	Pos ***	Neg ***	Pos	Neg
High turnover	INSTIT_HIGHT	Neg	Neg *	Pos	Neg ***	Pos	Neg
Low turnover	INSTIT_LOWT	Neg ***	Pos	Pos ***	Neg ***	Neg	Neg
Big Three	INSTIT_LOWT_BIG3	Neg *	Pos **	Pos **	Neg	Neg ***	Pos
Hedge	INSTIT_LOWT_HEDGE	Neg **	Pos	Pos ***	Neg ***	Neg **	Neg ***
Other	INSTIT_LOWT_OTHER	Neg ***	Pos	Pos ***	Neg *	Pos	Pos
Turnover							
High turnover	HIGHT	Pos	Neg **	Neg	Neg ***	Pos*	Neg
Low turnover	LOWT	Neg	Pos	Pos	Neg ***	Neg	Neg *
Governance							
E-Index	E-INDEX	Pos	Pos	Pos	Pos	Pos	Pos
Financial Board Members	%FIN_DIRECTORS	Neg	Pos	Neg	Neg	Pos	Neg
Consensual							
Incentive-based remuneration							
All executives	IBR_MANAGERS	Neg ***	Pos	Pos	Neg	Neg	Pos
CEO	IBR_CEO	Neg **	Pos	Pos	Neg	Neg	Pos
CEO Tenure	CEOTENURE	Pos ***	Pos	Pos	Pos	Neg	Pos*

APPENDIX

Table A1. Fixed-effects regression estimation of equation (1), (2), (3), (4), (5) and (6). Nonfinancial firms. The table presents the coefficient and standard errors (in parenthesis) of the estimations by fixed effects regression. Time fixed effects and trend-industry fixed effects are included but not reported. Period covered: 1998-2007. P-values are reported for all tests. * indicates significance at 10%, ** significance at 5% and *** significance at 1%.

	(CAPX/PPENT)t	(XRD/AT)t	(NETPAYOUTS/AT)t	LPRODt	MSHAREt	(PROFIT/AT)t
(GROWTH)t-1	0.044***	-0.010**	-0.017**			
	(0.006)	(0.004)	(0.007)			
(FININC/AT)t-1	-0.719*	0.588**				
	(0.388)	(0.258)				
(NETPAYOUTS/AT)t-1	-0.088***	-0.016				
	(0.017)	(0.015)				
(SIZE)t-1	-0.018***	-0.009***	0.049***	0.252	0.005***	-0.017***
	(0.004)	(0.003)	(0.005)	(0.172)	(0.001)	(0.004)
(CASH/AT)t-1	0.179***	-0.005	0.113***	-0.160	-0.001	-0.021
	(0.017)	(0.011)	(0.018)	(0.302)	(0.001)	(0.017)
(LIABILITIES/AT)t-1	-0.035**	-0.009	-0.080***			
	(0.014)	(0.010)	(0.014)			
(PROFIT/AT)t-1	0.204***		0.142***			
	(0.018)		(0.030)			
(AGE)t-1	-0.003	0.003	0.018***	-0.812	0.002**	-0.003
	(0.003)	(0.002)	(0.005)	(0.871)	(0.001)	(0.018)
(NEWPROFIT/AT)t-1		-0.004				
		(0.022)				
(CAPX/PPENT)t-1			-0.031**			
			(0.013)			
(XRD/AT)t-1			-0.287***			
			(0.090)			
(ST.LIAB/AT)t-1				0.138	0.000	0.029
				(0.472)	(0.002)	(0.032)
(LT.LIAB/AT)t-1				-0.054	-0.001	0.001
				(0.283)	(0.001)	(0.015)
lnCOGSt-1				0.939***		
				(0.206)		
lnPPENTt-1				-0.518***		
				(0.168)		
Observations	17,667	10,740	8,995	18,574	18,970	19,055
R2	0.147	0.026	0.174	0.048	0.070	0.025

Table A2. Fixed-effects regression estimation of equation (1). The table presents the coefficient and standard errors (in parenthesis) of the estimations by fixed effects regression. Control variables, time fixed effects and trend-industry fixed effects are included but not reported. Period covered: 1998-2007. P-values are reported for all tests. * indicates significance at 10%, ** significance at 5% and *** significance at 1%.

	(CAPX/PPENT)t	(CAPX/PPENT)t	(CAPX/PPENT)t	(CAPX/PPENT)t	(CAPX/PPENT)t	(CAPX/PPENT)t	(CAPX/PPENT)t
TOP1t-1	-0.038*						
	(0.020)						
TOP5t-1		-0.033***					
		(0.013)					
INSTITt-1			-0.055***				
			(0.017)				
STRATEGICt-1			-0.016		-0.016	-0.016	
			(0.014)		(0.015)	(0.015)	
HIGHTt-1				0.007			
				(0.017)			
LOWTt-1				-0.020			
				(0.013)			
INSTIT_LOWTt-1					-0.070***		
					(0.017)		
INSTIT_HIGHTt-1					-0.016	-0.017	
					(0.021)	(0.021)	
INSTIT_LOWT_BIG3t-1						-0.073	
						(0.057)	
INSTIT_LOWT_HEDGEt-1						-0.090***	
						(0.027)	
INSTIT_LOWT_OTHERt-1						-0.059***	
						(0.020)	
CEOTENUREt-1							0.000
							(0.000)
Observations	10,874	10,874	10,874	10,874	10,874	10,874	7,899
R2	0.134	0.134	0.135	0.134	0.135	0.136	0.137

Table A3. Fixed-effects regression estimation of equation (2). The table presents the coefficient and standard errors (in parenthesis) of the estimations by fixed effects regression. Control variables, time fixed effects and trend-industry fixed effects are included but not reported. Period covered: 1998-2007. P-values are reported for all tests. * indicates significance at 10%, ** significance at 5% and *** significance at 1%.

	(XRD/AT)t	(XRD/AT)t	(XRD/AT)t	(XRD/AT)t	(XRD/AT)t	(XRD/AT)t	(XRD/AT)t
TOP1t-1	-0.003						
	(0.016)						
TOP5t-1		0.006					
		(0.011)					
INSTITt-1			-0.008				
			(0.015)				
STRATEGICt-1			0.012		0.012	0.014	
			(0.012)		(0.012)	(0.012)	
HIGHTt-1				-0.023			
				(0.014)			
LOWTt-1				0.003			
				(0.010)			
INSTIT_LOWTt-1					0.001		
					(0.014)		
INSTIT_HIGHTt-1					-0.028	-0.025	
					(0.020)	(0.019)	
INSTIT_LOWT_BIG3t-1						0.052*	
						(0.029)	
INSTIT_LOWT_HEDGEt-1						0.011	
						(0.016)	
INSTIT_LOWT_OTHERt-1						-0.008	
						(0.018)	
CEOTENUREt-1							0.000
							(0.000)
Observations	6,517	6,517	6,517	6,517	6,517	6,517	4,835
R2	0.034	0.035	0.035	0.036	0.036	0.037	0.030

Table A4. Fixed-effects regression estimation of equation (3). The table presents the coefficient and standard errors (in parenthesis) of the estimations by fixed effects regression. Control variables, time fixed effects and trend-industry fixed effects are included but not reported. Period covered: 1998-2007. P-values are reported for all tests. * indicates significance at 10%, ** significance at 5% and *** significance at 1%.

	(NETPAYOUTS/AT)t	(NETPAYOUTS/AT)t	(NETPAYOUTS/AT)t	(NETPAYOUTS/AT)t	(NETPAYOUTS/AT)t	(NETPAYOUTS/AT)t	(NETPAYOUTS/AT)t
TOP1t-1	-0.011						
	(0.028)						
TOP5t-1		0.015					
		(0.018)					
INSTITt-1			0.039*				
			(0.023)				
STRATEGICt-1			-0.008		-0.006	-0.002	
			(0.023)		(0.023)	(0.023)	
HIGHTt-1				-0.003			
				(0.023)			
LOWTt-1				-0.002			
				(0.017)			
INSTIT_LOWTt-1					0.055**		
					(0.022)		
INSTIT_HIGHTt-1					0.023	0.028	
					(0.030)	(0.031)	
INSTIT_LOWT_BIG3t-1						0.246***	
						(0.063)	
INSTIT_LOWT_HEDGEt-1						0.056*	
						(0.030)	
INSTIT_LOWT_OTHERt-1						0.032	
						(0.024)	
CEOTENUREt-1							0.000
							(0.000)
Observations	5,432	5,432	5,432	5,432	5,432	5,432	4,171
R2	0.198	0.198	0.199	0.198	0.200	0.202	0.181

Table A5. Fixed-effects regression estimation of equation (4). The table presents the coefficient and standard errors (in parenthesis) of the estimations by fixed effects regression. Control variables, time fixed effects and trend-industry fixed effects are included but not reported. Period covered: 2000-2007. P-values are reported for all tests. * indicates significance at 10%, ** significance at 5% and *** significance at 1%.

	MSHAREt	MSHAREt	MSHAREt	MSHAREt	MSHAREt	MSHAREt	MSHAREt
TOP1t-3	-0.003**						
	(0.001)						
TOP5t-3		-0.002***					
		(0.001)					
INSTITt-3			-0.002*				
			(0.001)				
STRATEGICt-3			-0.002***		-0.002***	-0.002***	
			(0.001)		(0.001)	(0.001)	
HIGHTt-3				-0.002			
				(0.001)			
LOWTt-3				-0.002***			
				(0.001)			
INSTIT_LOWTt-3					-0.002		
					(0.001)		
INSTIT_HIGHTt-3					-0.002**	-0.002*	
					(0.001)	(0.001)	
INSTIT_LOWT_BIG3t-3						0.010	
						(0.006)	
INSTIT_LOWT_HEDGEt-3						-0.003	
						(0.002)	
INSTIT_LOWT_OTHERt-3						-0.002	
						(0.001)	
CEOTENUREt-3							0.000
							(0.000)
Observations	8,876	8,876	8,876	8,876	8,876	8,876	5,349
R2	0.068	0.068	0.069	0.068	0.069	0.070	0.103

Table A6. Fixed-effects regression estimation of equation (5). The table presents the coefficient and standard errors (in parenthesis) of the estimations by fixed effects regression. Control variables, time fixed effects and trend-industry fixed effects are included but not reported. Period covered: 2000-2007. P-values are reported for all tests. * indicates significance at 10%, ** significance at 5% and *** significance at 1%.

	(PROFIT/AT)t-1	(PROFIT/AT)t-1	(PROFIT/AT)t-1	(PROFIT/AT)t-1	(PROFIT/AT)t-1	(PROFIT/AT)t-1	(PROFIT/AT)t-1
TOP1t-3	0.044**						
	(0.018)						
TOP5t-3		0.030**					
		(0.013)					
INSTITt-3			0.002				
			(0.019)				
STRATEGICt-3			0.041***		0.040***	0.034***	
			(0.012)		(0.012)	(0.012)	
HIGHTt-3				0.030			
				(0.019)			
LOWTt-3				0.018			
				(0.012)			
INSTIT_LOWTt-3					-0.009		
					(0.019)		
INSTIT_HIGHTt-3					0.017	0.007	
					(0.025)	(0.024)	
INSTIT_LOWT_BIG3t-3						-0.207***	
						(0.046)	
INSTIT_LOWT_HEDGEt-3						-0.042*	
						(0.025)	
INSTIT_LOWT_OTHERt-3						0.027	
						(0.022)	
CEOTENUREt-3							-0.000*
							(0.000)
Observations	8,903	8,903	8,903	8,903	8,903	8,903	5,364
R2	0.023	0.023	0.025	0.022	0.025	0.028	0.055

Table A7. Fixed-effects regression estimation of equation (6). The table presents the coefficient and standard errors (in parenthesis) of the estimations by fixed effects regression. Control variables, time fixed effects and trend-industry fixed effects are included but not reported. Period covered: 2000-2007. P-values are reported for all tests. * indicates significance at 10%, ** significance at 5% and *** significance at 1%.

	LPRODt	LPRODt	LPRODt	LPRODt	LPRODt	LPRODt	LPRODt
TOP1t-3	0.504						
	(0.508)						
TOP5t-3		0.432					
		(0.403)					
INSTITt-3			-0.592				
			(0.491)				
STRATEGICt-3			0.393		0.434	0.379	
			(0.336)		(0.336)	(0.335)	
HIGHTt-3				-0.677*			
				(0.387)			
LOWTt-3				-0.116			
				(0.286)			
INSTIT_LOWTt-3					-0.194		
					(0.501)		
INSTIT_HIGHTt-3					-0.962*	-1.066**	
					(0.535)	(0.513)	
INSTIT_LOWT_BIG3t-3						-2.100	
						(1.695)	
INSTIT_LOWT_HEDGEt-3						-0.674	
						(0.633)	
INSTIT_LOWT_OTHERt-3						0.277	
						(0.771)	
CEOTENUREt-3							-0.002
							(0.007)
Observations	8,691	8,691	8,691	8,691	8,691	8,691	5,261
R2	0.040	0.040	0.041	0.040	0.041	0.042	0.085

Table A8. Fixed-effects regression estimation of equation (1), (2), (3), (4), (5) and (6). Nonfinancial firms. The table presents the coefficient and standard errors (in parenthesis) of the estimations by fixed effects regression. Time fixed effects and trend-industry fixed effects are included but not reported. Period covered: 2008-2018. P-values are reported for all tests. * indicates significance at 10%, ** significance at 5% and *** significance at 1%.

	(CAPX/PPENT)t	(XRD/AT)t	(NETPAYOUTS/AT)t	LPRODt	MSHAREt	(PROFIT/AT)t
(GROWTH)t-1	0.034***	-0.007*	-0.002			
	(0.005)	(0.004)	(0.008)			
(FININC/AT)t-1	0.493	0.834**				
	(0.477)	(0.414)				
(NETPAYOUTS/AT)t-1	-0.070***	0.001				
	(0.014)	(0.012)				
(SIZE)t-1	-0.020***	-0.013***	0.041***	0.804***	0.004***	-0.005
	(0.004)	(0.004)	(0.005)	(0.224)	(0.000)	(0.005)
(CASH/AT)t-1	0.121***	0.048***	0.153***	-1.894***	-0.002*	-0.101***
	(0.017)	(0.013)	(0.020)	(0.497)	(0.001)	(0.022)
(LIABILITIES/AT)t-1	-0.014	0.011	-0.091***			
	(0.011)	(0.009)	(0.017)			
(PROFIT/AT)t-1	0.142***		0.137***			
	(0.018)		(0.032)			
(AGE)t-1	0.002	0.001	-0.001	-0.734	0.003***	-0.028
	(0.002)	(0.001)	(0.004)	(1.223)	(0.001)	(0.028)
(NEWPROFIT/AT)t-1		0.009				
		(0.018)				
(CAPX/PPENT)t-1			-0.001			
			(0.014)			
(XRD/AT)t-1			-0.260***			
			(0.050)			
(ST.LIAB/AT)t-1				0.650	0.002**	-0.042
				(0.906)	(0.001)	(0.035)
(LT.LIAB/AT)t-1				0.617*	-0.001	0.001
				(0.353)	(0.001)	(0.017)
lnCOGSt-1				0.639***		
				(0.168)		
lnPPENTt-1				-1.116***		
				(0.220)		
Observations	22,809	14,443	12,815	23,110	23,640	23,741
R2	0.077	0.033	0.161	0.098	0.089	0.017

Table A9. Fixed-effects regression estimation of equation (1). The table presents the coefficient and standard errors (in parenthesis) of the estimations by fixed effects regression. Control variables, time fixed effects and trend-industry fixed effects are included but not reported. Period covered: 2008-2018. P-values are reported for all tests. * indicates significance at 10%, ** significance at 5% and *** significance at 1%.

	(CAPX/PPENT)t	(CAPX/PPENT)t	(CAPX/PPENT)t	(CAPX/PPENT)t	(CAPX/PPENT)t	(CAPX/PPENT)t	(CAPX/PPENT)t
TOP1t-1	-0.025						
	(0.020)						
TOP5t-1		-0.009					
		(0.015)					
INSTITt-1			-0.024				
			(0.015)				
STRATEGICt-1			0.009		0.010	0.009	
			(0.019)		(0.019)	(0.019)	
HIGHTt-1				-0.002			
				(0.016)			
LOWTt-1				0.003			
				(0.012)			
INSTIT_LOWTt-1					-0.028*		
					(0.015)		
INSTIT_HIGHTt-1					-0.012	-0.010	
					(0.018)	(0.018)	
INSTIT_LOWT_BIG3t-1						-0.042	
						(0.046)	
INSTIT_LOWT_HEDGEt-1						-0.022	
						(0.021)	
INSTIT_LOWT_OTHERt-1						-0.029*	
						(0.017)	
CEOTENUREt-1							0.000
							(0.000)
Observations	18,592	18,592	18,592	18,592	18,592	18,592	9,485
R2	0.077	0.077	0.077	0.077	0.077	0.077	0.094

Table A10. Fixed-effects regression estimation of equation (2). The table presents the coefficient and standard errors (in parenthesis) of the estimations by fixed effects regression. Control variables, time fixed effects and trend-industry fixed effects are included but not reported. Period covered: 2008-2018. * indicates significance at 10%, ** significance at 5% and *** significance at 1%.

	(XRD/AT)t	(XRD/AT)t	(XRD/AT)t	(XRD/AT)t	(XRD/AT)t	(XRD/AT)t	(XRD/AT)t
TOP1t-1	-0.012						
	(0.015)						
TOP5t-1		-0.003					
		(0.011)					
INSTITt-1			0.006				
			(0.012)				
STRATEGICt-1			-0.013		-0.013	-0.011	
			(0.016)		(0.016)	(0.016)	
HIGHTt-1				-0.007			
				(0.013)			
LOWTt-1				0.001			
				(0.008)			
INSTIT_LOWTt-1					0.013		
					(0.011)		
INSTIT_HIGHTt-1					-0.006	-0.005	
					(0.016)	(0.015)	
INSTIT_LOWT_BIG3t-1						0.067*	
						(0.038)	
INSTIT_LOWT_HEDGEt-1						0.003	
						(0.014)	
INSTIT_LOWT_OTHERt-1						0.014	
						(0.011)	
CEOTENUREt-1					-		-0.000
							(0.000)
Observations	11,835	11,835	11,835	11,835	11,835	11,835	5,935
R2	0.035	0.035	0.035	0.035	0.036	0.036	0.050

Table A11. Fixed-effects regression estimation of equation (3). The table presents the coefficient and standard errors (in parenthesis) of the estimations by fixed effects regression. Control variables, time fixed effects and trend-industry fixed effects are included but not reported. Period covered: 2008-2018. P-values are reported for all tests. * indicates significance at 10%, ** significance at 5% and *** significance at 1%.

	(NETPAYOUTS/ AT)t	(NETPAYOUTS/ AT)t	(NETPAYOUTS/ AT)t	(NETPAYOUTS/ AT)t	(NETPAYOUTS/ AT)t	(NETPAYOUTS/ AT)t	(NETPAYOUTS/ AT)t
TOP1t-1	0.032						
	(0.027)						
TOP5t-1		0.034*					
		(0.020)					
INSTITt-1			0.028				
			(0.019)				
STRATEGICt-1			0.033		0.031	0.033	
			(0.031)		(0.031)	(0.032)	
HIGHTt-1				-0.022			
				(0.019)			
LOWTt-1				0.020			
				(0.014)			
INSTIT_LOWTt-1					0.038**		
					(0.018)		
INSTIT_HIGHTt-1					-0.001	-0.002	
					(0.022)	(0.022)	
INSTIT_LOWT_BIG3t-1						0.056	
						(0.059)	
INSTIT_LOWT_HEDGEt-1						0.041*	
						(0.023)	
INSTIT_LOWT_OTHERt-1						0.033	
						(0.021)	
CEOTENUREt-1			-0.000				-0.000
			(0.000)				(0.000)
Observations	10,472	10,472	10,472	10,472	10,472	10,472	5,430
R2	0.160	0.161	0.161	0.161	0.161	0.161	0.165

Table A12. Fixed-effects regression estimation of equation (4). The table presents the coefficient and standard errors (in parenthesis) of the estimations by fixed effects regression. Control variables, time fixed effects and trend-industry fixed effects are included but not reported. Period covered: 2010-2018. P-values are reported for all tests. * indicates significance at 10%, ** significance at 5% and *** significance at 1%.

	MSHAREt	MSHAREt	MSHAREt	MSHAREt	MSHAREt	MSHAREt	MSHAREt
TOP1t-3	0.000						
	(0.001)						
TOP5t-3		-0.000					
		(0.001)					
INSTITt-3			-0.001				
			(0.001)				
STRATEGICt-3			-0.000		0.000	0.000	
			(0.001)		(0.001)	(0.001)	
HIGHTt-3				-0.001**			
				(0.001)			
LOWTt-3				-0.001			
				(0.001)			
INSTIT_LOWTt-3					-0.001		
					(0.001)		
INSTIT_HIGHTt-3					-0.002*	-0.002*	
					(0.001)	(0.001)	
INSTIT_LOWT_BIG3t-3						0.002	
						(0.005)	
INSTIT_LOWT_HEDGEt-3						-0.002*	
						(0.002)	
INSTIT_LOWT_OTHERt-3						0.000	
						(0.001)	
CEOTENUREt-3			-0.000				
			(0.000)				
E-INDEXt-3							-0.000
							(0.000)
Observations	17,482	17,482	17,482	17,482	17,482	17,482	8,316
R2	0.097	0.097	0.097	0.097	0.097	0.098	0.141

Table A13. Fixed-effects regression estimation of equation (5). The table presents the coefficient and standard errors (in parenthesis) of the estimations by fixed effects regression. Control variables, time fixed effects and trend-industry fixed effects are included but not reported. Period covered: 2010-2018. P-values are reported for all tests. * indicates significance at 10%, ** significance at 5% and *** significance at 1%.

	(PROFIT/AT)t	(PROFIT/AT)t	(PROFIT/AT)t	(PROFIT/AT)t	(PROFIT/AT)t	(PROFIT/AT)t	(PROFIT/AT)t
TOP1t-3	0.015						
	(0.018)						
TOP5t-3		0.001					
		(0.013)					
INSTITt-3			-0.015				
			(0.016)				
STRATEGICt-3			0.005		0.005	0.000	
			(0.019)		(0.019)	(0.019)	
HIGHTt-3				0.019			
				(0.014)			
LOWTt-3				-0.006			
				(0.011)			
INSTIT_LOWTt-3					-0.023		
					(0.016)		
INSTIT_HIGHTt-3					0.005	0.001	
					(0.018)	(0.018)	
INSTIT_LOWT_BIG3t-3						-0.124**	
						(0.052)	
INSTIT_LOWT_HEDGEt-3						-0.038*	
						(0.021)	
INSTIT_LOWT_OTHERt-3						-0.011	
						(0.019)	
CEOTENUREt-3							-0.000
							(0.000)
Observations	17,547	17,547	17,547	17,547	17,547	17,547	8,364
R2	0.020	0.020	0.020	0.021	0.021	0.022	0.051

Table A14. Fixed-effects regression estimation of equation (6). The table presents the coefficient and standard errors (in parenthesis) of the estimations by fixed effects regression. Control variables, time fixed effects and trend-industry fixed effects are included but not reported. Period covered: 2010-2018. P-values are reported for all tests. * indicates significance at 10%, ** significance at 5% and *** significance at 1%.

	LPRODt	LPRODt	LPRODt	LPRODt	LPRODt	LPRODt	LPRODt
TOP1t-3	0.301						
	(0.494)						
TOP5t-3		0.327					
		(0.307)					
INSTITt-3			-0.297				
			(0.393)				
STRATEGICt-3			0.649		0.715*	0.691	
			(0.444)		(0.433)	(0.432)	
HIGHTt-3				0.174			
				(0.306)			
LOWTt-3				0.098			
				(0.212)			
INSTIT_LOWTt-3					-0.017		
					(0.375)		
INSTIT_HIGHTt-3					-0.078	-0.124	
					(0.407)	(0.409)	
INSTIT_LOWT_BIG3t-3						-0.172	
						(1.471)	
INSTIT_LOWT_HEDGEt-3						-0.970**	
						(0.576)	
INSTIT_LOWT_OTHERt-3						0.642*	
						(0.371)	
CEOTENUREt-3							0.002
							(0.007)
Observations	17,135	17,135	17,135	17,135	17,135	17,135	7,299
R2	0.103	0.104	0.104	0.103	0.104	0.105	0.150

Table A15. Fixed-effects regression estimation of equation (4). The table presents the coefficient and standard errors (in parenthesis) of the estimations by fixed effects regression. Control variables, time fixed effects and trend-industry fixed effects are included but not reported. Period covered: 2000-2018, except for %FIN_DIRECTORS, E-INDEX (2010-2018); IBR_MANAGERS, IBR_CEO (2009-2018). P-values are reported for all tests. * indicates significance at 10%, ** significance at 5% and *** significance at 1%.

Panel A. Coercive SVO variables

	MSHAREt	MSHAREt	MSHAREt	MSHAREt	MSHAREt	MSHAREt	MSHAREt	MSHAREt
TOP1t-3	-0.003							
	(0.004)							
TOP5t-3		-0.002						
		(0.002)						
INSTITt-3			-0.011***					
			(0.003)					
STRATEGICt-3			0.002		0.002	0.002		
			(0.002)		(0.002)	(0.002)		
HIGHTt-3				-0.008***				
				(0.002)				
LOWTt-3				-0.004**				
				(0.002)				
INSTIT_LOWTt-3					-0.010***			
					(0.003)			
INSTIT_HIGHTt-3					-0.013***	-0.014***		
					(0.003)	(0.003)		
INSTIT_LOWT_BIG3t-3						-0.020*		
						(0.011)		
INSTIT_LOWT_HEDGEt-3						-0.012**		
						(0.005)		
INSTIT_LOWT_OTHERt-3						-0.007**		
						(0.003)		
%FIN_DIRECTORSt-3							0.003	
							(0.004)	
E-INDEXt-3								-0.001*
								(0.001)
Observations	26,358	26,358	26,358	26,358	26,358	26,358	7,324	8,942
R2	0.060	0.060	0.062	0.060	0.062	0.062	0.068	0.078

Panel B. Consensual SVO variables

	MSHAREt	MSHAREt	MSHAREt
IBR_MANAGERSt-3	-0.002*		
	(0.001)		
IBR_CEOt-3		-0.002*	
		(0.001)	
CEOTENUREt-3			-0.000
			(0.000)
Observations	13,442	13,442	13,665
R-squared	0.072	0.072	0.103

Table A16. Fixed-effects regression estimation of equation (6). The table presents the coefficient and standard errors (in parenthesis) of the estimations by fixed effects regression. Control variables, time fixed effects and trend-industry fixed effects are included but not reported. Period covered: 2000-2018, except for %FIN_DIRECTORS, E-INDEX (2010-2018); IBR_MANAGERS, IBR_CEO (2009-2018). P-values are reported for all tests. * indicates significance at 10%, ** significance at 5% and *** significance at 1%.

Panel A. Coercive SVO variables

	TFPt	TFPt	TFPt	TFPt	TFPt	TFPt	TFPt	TFPt
TOP1t-3	0.057							
	(0.044)							
TOP5t-3		0.023						
		(0.031)						
INSTITt-3			-0.043					
			(0.040)					
STRATEGICt-3			0.062*		0.059*	0.047		
			(0.036)		(0.036)	(0.036)		
HIGHTt-3				0.020				
				(0.039)				
LOWTt-3				-0.007				
				(0.028)				
INSTIT_LOWTt-3					-0.067*			
					(0.040)			
INSTIT_HIGHTt-3					-0.002	-0.013		
					(0.048)	(0.048)		
INSTIT_LOWT_BIG3t-3						-0.335**		
						(0.140)		
INSTIT_LOWT_HEDGEt-3						-0.114**		
						(0.055)		
INSTIT_LOWT_OTHERt-3						-0.007		
						(0.046)		
%FIN_DIRECTORSt-3							0.048	
							(0.049)	
E-INDEXt-3								0.005
								(0.006)
Observations	23,732	23,732	23,732	23,732	23,732	23,732	7,211	8,790
R2	0.142	0.142	0.142	0.142	0.142	0.143	0.088	0.108

Panel B. Consensual SVO variables

	TFPt	TFPt	TFPt
IBR_MANAGERSt-3	-0.012		
	(0.021)		
IBR_CEOt-3		-0.009	
		(0.016)	
CEOTENUREt-3			0.000
			(0.001)
Observations	12,985	12,985	13,349
R-squared	0.087	0.087	0.199

Table A17. Fixed-effects regression estimation of equation (1), (2), (3), (4), (5) and (6). Nonfinancial firms. The table presents the coefficient and standard errors (in parenthesis) of the estimations by fixed effects regression. Time fixed effects and trend-industry fixed effects are included but not reported. Sampling weight by total revenues. Period covered: 1998-2018. P-values are reported for all tests. * indicates significance at 10%, ** significance at 5% and *** significance at 1%.

	(CAPX/PPENT)t	(XRD/AT)t	(NETPAYOUTS/AT)t	LPRODt	MSHAREt	(PROFIT/AT)t
(GROWTH)t-1	0.055***	-0.007**	-0.025***			
	(0.010)	(0.003)	(0.007)			
(FININC/AT)t-1	-1.068	-0.210				
	(0.926)	(0.219)				
(NETPAYOUTS/AT)t-1	-0.085***	-0.005				
	(0.032)	(0.008)				
(SIZE)t-1	-0.013**	-0.005**	0.010**	0.580	0.026***	-0.009**
	(0.006)	(0.002)	(0.004)	(0.555)	(0.003)	(0.004)
(CASH/AT)t-1	0.070***	0.009	0.086***	-0.881	-0.033	-0.045
	(0.026)	(0.013)	(0.033)	(2.254)	(0.032)	(0.032)
(LIABILITIES/AT)t-1	-0.049***	0.000	-0.055***			
	(0.014)	(0.004)	(0.014)			
(PROFIT/AT)t-1	0.247***		0.325***			
	(0.038)		(0.031)			
(AGE)t-1	-0.001	0.002***	0.014***	-0.026	0.001	-0.029**
	(0.003)	(0.001)	(0.004)	(0.316)	(0.007)	(0.013)
(NEWPROFIT/AT)t-1		0.056***				
		(0.015)				
(CAPX/PPENT)t-1			-0.036			
			(0.023)			
(XRD/AT)t-1			-0.133*			
			(0.074)			
(ST.LIAB/AT)t-1				0.725	0.000	-0.003
				(1.383)	(0.017)	(0.024)
(LT.LIAB/AT)t-1				-0.162	-0.005	-0.010
				(0.859)	(0.006)	(0.014)
lnCOGSt-1				1.842**		
				(0.757)		
lnPPENTt-1				-1.186*		
				(0.702)		
Observations	40,476	25,183	21,810	41,684	42,610	42,796
R2	0.194	0.121	0.214	0.099	0.293	0.052

Table A18. Fixed-effects regression estimation of equation (1). The table presents the coefficient and standard errors (in parenthesis) of the estimations by fixed effects regression. Control variables, time fixed effects and trend-industry fixed effects are included but not reported. Sampling weight by total revenues. Period covered: 1998-2018, except for %FIN_DIRECTORS, E-INDEX (2008-2018); IBR_MANAGERS, IBR_CEO (2007-2018). P-values are reported for all tests. * indicates significance at 10%, ** significance at 5% and *** significance at 1%.

Panel A. Coercive SVO variables

	(CAPX/PPENT)t	(CAPX/PPENT)t	(CAPX/PPENT)t	(CAPX/PPENT)t	(CAPX/PPENT)t	(CAPX/PPENT)t	(CAPX/PPENT)t	(CAPX/PPENT)t
TOP1t-1	-0.007							
	(0.019)							
TOP5t-1		-0.026**						
		(0.012)						
INSTITt-1			-0.048***					
			(0.018)					
STRATEGICt-1			-0.006		-0.006	-0.006		
			(0.016)		(0.016)	(0.017)		
HIGHTt-1				-0.035*				
				(0.021)				
LOWTt-1				-0.028*				
				(0.014)				
INSTIT_LOWTt-1					-0.044**			
					(0.019)			
INSTIT_HIGHTt-1					-0.040	-0.039*		
					(0.024)	(0.024)		
INSTIT_LOWT_BIG3t-1						-0.044		
						(0.056)		
INSTIT_LOWT_HEDGEt-1						-0.029		
						(0.025)		
INSTIT_LOWT_OTHERt-1						-0.055**		
						(0.023)		
%FIN_DIRECTORSt-1							0.028	
							(0.019)	
E-INDEXt-1								-0.001
								(0.001)
Observations	29,466	29,466	29,466	29,466	29,466	29,466	10,123	11,877
R2	0.201	0.201	0.203	0.202	0.202	0.203	0.128	0.148

Panel B. Consensual SVO variables

	(CAPX/PPENT)t	(CAPX/PPENT)t	(CAPX/PPENT)t
IBR_MANAGERSt-1	-0.009		
	(0.007)		
IBR_CEOt-1		-0.008*	
		(0.005)	
CEOTENUREt-1			0.001**
			(0.000)
Observations	16,819	16,819	17,384
R-squared	0.148	0.148	0.200

Table A19. Fixed-effects regression estimation of equation (2). The table presents the coefficient and standard errors (in parenthesis) of the estimations by fixed effects regression. Control variables, time fixed effects and trend-industry fixed effects are included but not reported. Sampling weight by total revenues. Period covered: 1998-2018, except for %FIN_DIRECTORS, E-INDEX (2008-2018); IBR_MANAGERS, IBR_CEO (2007-2018). P-values are reported for all tests. * indicates significance at 10%, ** significance at 5% and *** significance at 1%.

Panel A. Coercive SVO variables

	(XRD/AT)t	(XRD/AT)t	(XRD/AT)t	(XRD/AT)t	(XRD/AT)t	(XRD/AT)t	(XRD/AT)t	(XRD/AT)t
TOP1t-1	-0.002							
	(0.005)							
TOP5t-1		0.003						
		(0.003)						
INSTITt-1			0.007					
			(0.005)					
STRATEGICt-1			0.003		0.003	0.004		
			(0.005)		(0.005)	(0.005)		
HIGHTt-1				0.002				
				(0.006)				
LOWTt-1				0.006				
				(0.013)				
INSTIT_LOWTt-1					0.008			
					(0.005)			
INSTIT_HIGHTt-1					0.003	0.004		
					(0.007)	(0.007)		
INSTIT_LOWT_BIG3t-1						0.011		
						(0.014)		
INSTIT_LOWT_HEDGEt-1						0.014		
						(0.016)		
INSTIT_LOWT_OTHERt-1						0.003		
						(0.005)		
%FIN_DIRECTORSt-1							0.009**	
							(0.004)	
E-INDEXt-1								-0.000
								(0.001)
Observations	18,352	18,352	18,352	18,352	18,352	18,352	6,355	7,473
R2	0.122	0.122	0.123	0.123	0.123	0.123	0.078	0.087

Panel B. Consensual SVO variables

	(XRD/AT)t	(XRD/AT)t	(XRD/AT)t
IBR_MANAGERSt-1	0.002		
	(0.002)		
IBR_CEOt-1		0.001	
		(0.001)	
CEOTENUREt-1			0.000
			(0.000)
Observations	10,600	10,600	10,770
R-squared	0.072	0.072	0.130

Table A20. Fixed-effects regression estimation of equation (3). The table presents the coefficient and standard errors (in parenthesis) of the estimations by fixed effects regression. Control variables, time fixed effects and trend-industry fixed effects are included but not reported. Sampling weight by total revenues. Period covered: 1998-2018, except for %FIN_DIRECTORS, E-INDEX (2008-2018); IBR_MANAGERS, IBR_CEO (2007-2018). P-values are reported for all tests. * indicates significance at 10%, ** significance at 5% and *** significance at 1%.

Panel A. Coercive SVO variables

	(NETPAYOUTS/AT)t	(NETPAYOUTS/AT)t	(NETPAYOUTS/AT)t	(NETPAYOUTS/AT)t	(NETPAYOUTS/AT)t	(NETPAYOUTS/AT)t	(NETPAYOUTS/AT)t	(NETPAYOUTS/AT)t
TOP1t-1	-0.025							
	(0.021)							
TOP5t-1		-0.007						
		(0.014)						
INSTITt-1			-0.016					
			(0.017)					
STRATEGICt-1			-0.001		-0.002	-0.002		
			(0.018)		(0.017)	(0.017)		
HIGHTt-1				-0.006				
				(0.021)				
LOWTt-1				-0.013				
				(0.013)				
INSTIT_LOWTt-1					-0.019			
					(0.017)			
INSTIT_HIGHTt-1					-0.016	-0.017		
					(0.024)	(0.024)		
INSTIT_LOWT_BIG3t-1						-0.014		
						(0.037)		
INSTIT_LOWT_HEDGEt-1						-0.029		
						(0.022)		
INSTIT_LOWT_OTHERt-1						-0.012		
						(0.020)		
%FIN_DIRECTORSt-1							0.036*	
							(0.020)	
E-INDEXt-1								-0.002
								(0.002)
Observations	15,904	15,904	15,904	15,904	15,904	15,904	5,792	6,813
R2	0.238	0.238	0.238	0.238	0.238	0.238	0.223	0.218

Panel B. Consensual SVO variables

	(NETPAYOUTS/AT)t	(NETPAYOUTS/AT)t	(NETPAYOUTS/AT)t
IBR_MANAGERSt-1	-0.004		
	(0.007)		
IBR_CEOt-1		-0.001	
		(0.004)	
CEOTENUREt-1			0.001***
			(0.000)
Observations	9,590	9,590	9,601
R-squared	0.209	0.208	0.241

Table A21. Fixed-effects regression estimation of equation (4). The table presents the coefficient and standard errors (in parenthesis) of the estimations by fixed effects regression. Control variables, time fixed effects and trend-industry fixed effects are included but not reported. Sampling weight by total revenues. Period covered: 2000-2018, except for %FIN_DIRECTORS, E-INDEX (2010-2018); IBR_MANAGERS, IBR_CEO (2009-2018). P-values are reported for all tests. * indicates significance at 10%, ** significance at 5% and *** significance at 1%.

Panel A. Coercive SVO variables

	MSHAREt	MSHAREt	MSHAREt	MSHAREt	MSHAREt	MSHAREt	MSHAREt	MSHAREt
TOP1t-3	-0.006							
	(0.011)							
TOP5t-3		-0.008						
		(0.006)						
INSTITt-3			-0.018**					
			(0.008)					
STRATEGICt-3			-0.003		-0.003	-0.006		
			(0.008)		(0.008)	(0.007)		
HIGHTt-3				0.008				
				(0.008)				
LOWTt-3				-0.008				
				(0.006)				
INSTIT_LOWTt-3					-0.022**			
					(0.009)			
INSTIT_HIGHTt-3					-0.001	-0.003		
					(0.009)	(0.009)		
INSTIT_LOWT_BIG3t-3						-0.059		
						(0.038)		
INSTIT_LOWT_HEDGEt-3						-0.030**		
						(0.015)		
INSTIT_LOWT_OTHERt-3						-0.014		
						(0.009)		
%FIN_DIRECTORSt-3							0.003	
							(0.009)	
E-INDEXt-3								-0.001
								(0.001)
Observations	26,358	26,358	26,358	26,358	26,358	26,358	7,324	8,942
R2	0.323	0.324	0.325	0.324	0.326	0.327	0.285	0.296

Panel B. Consensual SVO variables

	MSHAREt	MSHAREt	MSHAREt
IBR_MANAGERSt-3	-0.001		
	(0.005)		
IBR_CEOt-3		-0.007*	
		(0.004)	
CEOTENUREt-3			-0.000
			(0.000)
Observations	13,442	13,442	13,665
R-squared	0.262	0.265	0.365

Table A22. Fixed-effects regression estimation of equation (5). The table presents the coefficient and standard errors (in parenthesis) of the estimations by fixed effects regression. Control variables, time fixed effects and trend-industry fixed effects are included but not reported. Sampling weight by total revenues. Period covered: 2000-2018, except for %FIN_DIRECTORS, E-INDEX (2010-2018); IBR_MANAGERS, IBR_CEO (2009-2018). P-values are reported for all tests. * indicates significance at 10%, ** significance at 5% and *** significance at 1%.

Panel A. Coercive SVO variables

	(PROFIT/AT)t	(PROFIT/AT)t	(PROFIT/AT)t	(PROFIT/AT)t	(PROFIT/AT)t	(PROFIT/AT)t	(PROFIT/AT)t	(PROFIT/AT)t
TOP1t-3	-0.016							
	(0.017)							
TOP5t-3		-0.013						
		(0.011)						
INSTITt-3			-0.002					
			(0.012)					
STRATEGICt-3			-0.008		-0.008	-0.009		
			(0.013)		(0.013)	(0.014)		
HIGHTt-3				-0.002				
				(0.013)				
LOWTt-3				0.007				
				(0.010)				
INSTIT_LOWTt-3					0.002			
					(0.013)			
INSTIT_HIGHTt-3					-0.007	-0.009		
					(0.015)	(0.015)		
INSTIT_LOWT_BIG3t-3						0.013		
						(0.041)		
INSTIT_LOWT_HEDGEt-3						-0.040**		
						(0.017)		
INSTIT_LOWT_OTHERt-3						0.026		
						(0.017)		
%FIN_DIRECTORSt-3							-0.024*	
							(0.013)	
E-INDEXt-3								0.000
								(0.002)
Observations	26,450	26,450	26,450	26,450	26,450	26,450	7,367	8,993
R2	0.088	0.088	0.088	0.088	0.088	0.090	0.095	0.087

Panel B. Consensual SVO variables

	(PROFIT/AT)t	(PROFIT/AT)t	(PROFIT/AT)t
IBR_MANAGERSt-3	-0.004		
	(0.005)		
IBR_CEOt-3		-0.005	
		(0.004)	
CEOTENUREt-3			-0.000
			(0.000)
Observations	13,508	13,508	13,728
R-squared	0.085	0.086	0.106

Table A23. Fixed-effects regression estimation of equation (6). The table presents the coefficient and standard errors (in parenthesis) of the estimations by fixed effects regression. Control variables, time fixed effects and trend-industry fixed effects are included but not reported. Sampling weight by total revenues. Period covered: 2000-2018, except for %FIN_DIRECTORS, E-INDEX (2010-2018); IBR_MANAGERS, IBR_CEO (2009-2018). P-values are reported for all tests. * indicates significance at 10%, ** significance at 5% and *** significance at 1%.

Panel A. Coercive SVO variables

	LPRODt	LPRODt	LPRODt	LPRODt	LPRODt	LPRODt	LPRODt	LPRODt
TOP1t-3	-1.444							
	(1.341)							
TOP5t-3		-1.689						
		(1.167)						
INSTITt-3			-3.053*					
			(1.852)					
STRATEGICt-3			-0.412		-0.330	0.028		
			(0.593)		(0.588)	(0.589)		
HIGHTt-3				-3.523*				
				(2.009)				
LOWTt-3				-1.354				
				(1.109)				
INSTIT_LOWTt-3					-2.019			
					(1.681)			
INSTIT_HIGHTt-3					-4.679*	-4.515*		
					(2.602)	(2.456)		
INSTIT_LOWT_BIG3t-3						3.313		
						(4.263)		
INSTIT_LOWT_HEDGEt-3						-3.369		
						(2.870)		
INSTIT_LOWT_OTHERt-3						-1.655		
						(1.645)		
%FIN_DIRECTORSt-3							0.436	
							(0.968)	
E-INDEXt-3								-0.110
								(0.159)
Observations	25,826	25,826	25,826	25,826	25,826	25,826	7,299	8,906
R2	0.073	0.074	0.077	0.076	0.078	0.080	0.101	0.064

Panel B. Consensual SVO variables

	LPRODt	LPRODt	LPRODt
IBR_MANAGERSt-3	0.535		
	(0.342)		
IBR_CEOt-3		0.174	
		(0.245)	
CEOTENUREt-3			0.030
			(0.019)
Observations	13,252	13,252	13,540
R-squared	0.068	0.067	0.093

Table A24. Fixed-effects regression estimation of equation (1). The table presents the coefficient and standard errors (in parenthesis) of the estimations by fixed effects regression. Control variables, time fixed effects and trend-industry fixed effects are included but not reported. Period covered: 2007-2018. P-values are reported for all tests. * indicates significance at 10%, ** significance at 5% and *** significance at 1%.

	(CAPX/PPENT)t	(CAPX/PPENT)t	(CAPX/PPENT)t
IBR_MANAGERSt-1	0.031		
	(0.020)		
IBR_CEOt-1		0.018	
		(0.017)	
CEOTENUREt-1			0.001
			(0.001)
INSTIT_LOWT_BIG3t-1	0.029	-0.056	-0.124**
	(0.063)	(0.061)	(0.062)
INSTIT_LOWT_HEDGEt-1	-0.022	-0.003	-0.113***
	(0.039)	(0.035)	(0.030)
INSTIT_LOWT_OTHERt-1	-0.039	-0.045*	-0.040
	(0.029)	(0.027)	(0.028)
INSTIT_HIGHTt-1	0.005	0.010	-0.060*
	(0.029)	(0.028)	(0.033)
STRATEGICt-1	0.009	0.010	-0.004
	(0.015)	(0.015)	(0.021)
INSTIT_LOWT_BIG3t-1*	-0.335***		
IBR_MANAGERSt-1	(0.108)		
INSTIT_LOWT_HEDGEt-1*	-0.080		
IBR_MANAGERSt-1	(0.073)		
INSTIT_LOWT_OTHERt-1*	0.017		
IBR_MANAGERSt-1	(0.061)		
INSTIT_HIGHTt-1*IBR_MANAGERSt-1	-0.056		
IBR_MANAGERSt-1	(0.062)		
INSTIT_LOWT_BIG3t-1*IBR_CEOt-1		-0.108	
		(0.090)	
INSTIT_LOWT_HEDGEt-1*IBR_CEOt-1		-0.121**	
		(0.058)	
INSTIT_LOWT_OTHERt-1*IBR_CEOt-1		0.027	
		(0.050)	
INSTIT_HIGHTt-1*IBR_CEOt-1		-0.066	
		(0.051)	
INSTIT_LOWT_BIG3t-1*			-0.003
CEOTENUREt-1			(0.004)
INSTIT_LOWT_HEDGEt-1*			-0.006**
CEOTENUREt-1			(0.003)
INSTIT_LOWT_OTHERt-1*			0.001
CEOTENUREt-1			(0.002)
INSTIT_HIGHTt-1*			-0.001
CEOTENUREt-1			(0.003)
Observations	12,278	12,278	8,581
R2	0.105	0.105	0.096

Table A25. Fixed-effects regression estimation of equation (2). The table presents the coefficient and standard errors (in parenthesis) of the estimations by fixed effects regression. Control variables, time fixed effects and trend-industry fixed effects are included but not reported. Period covered: 2007-2018. P-values are reported for all tests. * indicates significance at 10%, ** significance at 5% and *** significance at 1%.

	(XRD/AT)t	(XRD/AT)t	(XRD/AT)t
IBR_MANAGERSt-1	0.014		
	(0.011)		
IBR_CEOt-1		0.007	
		(0.008)	
CEOTENUREt-1			0.000
			(0.000)
INSTIT_LOWT_BIG3t-1	0.079*	0.061	0.008
	(0.049)	(0.044)	(0.024)
INSTIT_LOWT_HEDGEt-1	-0.010	-0.005	0.013
	(0.019)	(0.019)	(0.010)
INSTIT_LOWT_OTHERt-1	0.005	0.003	0.027***
	(0.016)	(0.012)	(0.009)
INSTIT_HIGHTt-1	0.005	-0.003	0.022**
	(0.015)	(0.012)	(0.010)
STRATEGICt-1	0.012	0.012	0.020**
	(0.010)	(0.010)	(0.008)
INSTIT_LOWT_BIG3t-1*	-0.141		
IBR_MANAGERSt-1	(0.155)		
INSTIT_LOWT_HEDGEt-1*	0.030		
IBR_MANAGERSt-1	(0.027)		
INSTIT_LOWT_OTHERt-1*	-0.001		
IBR_MANAGERSt-1	(0.026)		
INSTIT_HIGHTt-1*IBR_MANAGERSt-1	-0.004		
IBR_MANAGERSt-1	(0.028)		
INSTIT_LOWT_BIG3t-1*IBR_CEOt-1		-0.090	
		(0.142)	
INSTIT_LOWT_HEDGEt-1*IBR_CEOt-1		0.018	
		(0.023)	
INSTIT_LOWT_OTHERt-1*IBR_CEOt-1		0.003	
		(0.016)	
INSTIT_HIGHTt-1*IBR_CEOt-1		0.019	
		(0.021)	
INSTIT_LOWT_BIG3t-1*			-0.002
CEOTENUREt-1			(0.001)
INSTIT_LOWT_HEDGEt-1*			-0.001
CEOTENUREt-1			(0.001)
INSTIT_LOWT_OTHERt-1*			0.001*
CEOTENUREt-1			(0.001)
INSTIT_HIGHTt-1*			-0.001
CEOTENUREt-1			(0.001)
Observations	7,767	7,767	5,342
R2	0.065	0.065	0.066

Table A26. Fixed-effects regression estimation of equation (3). The table presents the coefficient and standard errors (in parenthesis) of the estimations by fixed effects regression. Control variables, time fixed effects and trend-industry fixed effects are included but not reported. Period covered: 2007-2018. P-values are reported for all tests. * indicates significance at 10%, ** significance at 5% and *** significance at 1%.

	(NETPAYOUTS/AT)t	(NETPAYOUTS/AT)t	(NETPAYOUTS/AT)t
IBR_MANAGERSt-1	-0.008		
	(0.026)		
IBR_CEOt-1		0.004	
		(0.021)	
CEOTENUREt-1			0.001
			(0.001)
INSTIT_LOWT_BIG3t-1	-0.049	-0.005	-0.068
	(0.070)	(0.065)	(0.070)
INSTIT_LOWT_HEDGEt-1	0.010	0.004	-0.082***
	(0.029)	(0.028)	(0.031)
INSTIT_LOWT_OTHERt-1	0.010	0.022	-0.061**
	(0.035)	(0.033)	(0.029)
INSTIT_HIGHTt-1	-0.061*	-0.065**	-0.048
	(0.037)	(0.033)	(0.031)
STRATEGICt-1	0.004	0.004	-0.006
	(0.020)	(0.020)	(0.019)
INSTIT_LOWT_BIG3t-1*	0.138		
IBR_MANAGERSt-1	(0.127)		
INSTIT_LOWT_HEDGEt-1*	-0.046		
IBR_MANAGERSt-1	(0.062)		
INSTIT_LOWT_OTHERt-1*	-0.050		
IBR_MANAGERSt-1	(0.068)		
INSTIT_HIGHTt-1*IBR_MANAGERSt-1	0.077		
IBR_MANAGERSt-1	(0.080)		
INSTIT_LOWT_BIG3t-1*IBR_CEOt-1		0.027	
		(0.101)	
INSTIT_LOWT_HEDGEt-1*IBR_CEOt-1		-0.030	
		(0.051)	
INSTIT_LOWT_OTHERt-1*IBR_CEOt-1		-0.075	
		(0.058)	
INSTIT_HIGHTt-1*IBR_CEOt-1		0.083	
		(0.066)	
INSTIT_LOWT_BIG3t-1*			-0.001
CEOTENUREt-1			(0.004)
INSTIT_LOWT_HEDGEt-1*			-0.002
CEOTENUREt-1			(0.002)
INSTIT_LOWT_OTHERt-1*			-0.002
CEOTENUREt-1			(0.002)
INSTIT_HIGHTt-1*			-0.001
CEOTENUREt-1			(0.002)
Observations	7,045	7,045	4,884
R2	0.140	0.141	0.164

Table A27. Fixed-effects regression estimation of equation (4). The table presents the coefficient and standard errors (in parenthesis) of the estimations by fixed effects regression. Control variables, time fixed effects and trend-industry fixed effects are included but not reported. Period covered: 2009-2018. P-values are reported for all tests. * indicates significance at 10%, ** significance at 5% and *** significance at 1%.

	MSHAREt	MSHAREt	MSHAREt
IBR_MANAGERSt-3	0.001		
	(0.003)		
IBR_CEOt-3		0.000	
		(0.003)	
CEOTENUREt-3			-0.000*
			(0.000)
INSTIT_LOWT_BIG3t-3	0.002	0.009	0.022
	(0.008)	(0.010)	(0.014)
INSTIT_LOWT_HEDGEt-3	0.003	-0.001	0.002
	(0.003)	(0.003)	(0.006)
INSTIT_LOWT_OTHERt-3	0.002	0.002	0.009**
	(0.003)	(0.003)	(0.004)
INSTIT_HIGHTt-3	0.003	0.000	0.012**
	(0.003)	(0.003)	(0.006)
STRATEGICt-3	-0.001	-0.001	-0.003
	(0.002)	(0.002)	(0.004)
INSTIT_LOWT_BIG3t-3*	0.003		
IBR_MANAGERSt-3	(0.011)		
INSTIT_LOWT_HEDGEt-3*	-0.009		
IBR_MANAGERSt-3	(0.008)		
INSTIT_LOWT_OTHERt-3*	0.003		
IBR_MANAGERSt-3	(0.007)		
INSTIT_HIGHTt-3*IBR_MANAGERSt-3	-0.003		
IBR_MANAGERSt-3	(0.008)		
INSTIT_LOWT_BIG3t-3*IBR_CEOt-3		-0.014	
		(0.014)	
INSTIT_LOWT_HEDGEt-3*IBR_CEOt-3		0.001	
		(0.005)	
INSTIT_LOWT_OTHERt-3*IBR_CEOt-3		0.004	
		(0.005)	
INSTIT_HIGHTt-3*IBR_CEOt-3		0.004	
		(0.006)	
INSTIT_LOWT_BIG3t-3*			0.001
CEOTENUREt-3			(0.001)
INSTIT_LOWT_HEDGEt-3*			0.000
CEOTENUREt-3			(0.000)
INSTIT_LOWT_OTHERt-3*			0.000
CEOTENUREt-3			(0.000)
INSTIT_HIGHTt-3*			0.001*
CEOTENUREt-3			(0.000)
Observations	9,932	9,932	7,490
R2	0.116	0.116	0.157

Table A28. Fixed-effects regression estimation of equation (5). The table presents the coefficient and standard errors (in parenthesis) of the estimations by fixed effects regression. Control variables, time fixed effects and trend-industry fixed effects are included but not reported. Period covered: 2009-2018. P-values are reported for all tests. * indicates significance at 10%, ** significance at 5% and *** significance at 1%.

	(PROFIT/AT)t	(PROFIT/AT)t	(PROFIT/AT)t
IBR_MANAGERSt-3	-0.065		
	(0.040)		
IBR_CEOt-3		-0.045	
		(0.033)	
CEOTENUREt-3			-0.000
			(0.001)
INSTIT_LOWT_BIG3t-3	-0.163*	-0.140*	0.084
	(0.087)	(0.080)	(0.057)
INSTIT_LOWT_HEDGEt-3	-0.075*	-0.064*	-0.007
	(0.039)	(0.036)	(0.025)
INSTIT_LOWT_OTHERt-3	-0.111**	-0.087*	-0.016
	(0.052)	(0.045)	(0.022)
INSTIT_HIGHTt-3	-0.054	-0.043	-0.027
	(0.048)	(0.042)	(0.022)
STRATEGICt-3	-0.005	-0.006	0.007
	(0.018)	(0.018)	(0.016)
INSTIT_LOWT_BIG3t-3*	0.245		
IBR_MANAGERSt-3	(0.172)		
INSTIT_LOWT_HEDGEt-3*	0.093		
IBR_MANAGERSt-3	(0.079)		
INSTIT_LOWT_OTHERt-3*	0.191**		
IBR_MANAGERSt-3	(0.093)		
INSTIT_HIGHTt-3*IBR_MANAGERSt-3	0.094		
IBR_MANAGERSt-3	(0.096)		
INSTIT_LOWT_BIG3t-3*IBR_CEOt-3		0.180	
		(0.144)	
INSTIT_LOWT_HEDGEt-3*IBR_CEOt-3		0.058	
		(0.063)	
INSTIT_LOWT_OTHERt-3*IBR_CEOt-3		0.123*	
		(0.070)	
INSTIT_HIGHTt-3*IBR_CEOt-3		0.062	
		(0.078)	
INSTIT_LOWT_BIG3t-3*			0.000
CEOTENUREt-3			(0.003)
INSTIT_LOWT_HEDGEt-3*			0.002
CEOTENUREt-3			(0.002)
INSTIT_LOWT_OTHERt-3*			-0.001
CEOTENUREt-3			(0.002)
INSTIT_HIGHTt-3*			-0.001
CEOTENUREt-3			(0.002)
Observations	9,977	9,977	7,520
R2	0.039	0.038	0.053

Table A29. Fixed-effects regression estimation of equation (6). The table presents the coefficient and standard errors (in parenthesis) of the estimations by fixed effects regression. Control variables, time fixed effects and trend-industry fixed effects are included but not reported. Period covered: 2009-2018. P-values are reported for all tests. * indicates significance at 10%, ** significance at 5% and *** significance at 1%.

	LPRODt	LPRODt	LPRODt
IBR_MANAGERSt-3	-1.628***		
	(0.592)		
IBR_CEOt-3		-1.293**	
		(0.506)	
CEOTENUREt-3			-0.006
			(0.020)
INSTIT_LOWT_BIG3t-3	-6.320***	-5.070***	0.963
	(1.845)	(1.880)	(2.097)
INSTIT_LOWT_HEDGEt-3	-1.162	-1.355*	0.210
	(0.773)	(0.708)	(1.526)
INSTIT_LOWT_OTHERt-3	-0.861	-0.449	0.311
	(0.550)	(0.448)	(0.773)
INSTIT_HIGHTt-3	0.433	0.276	-0.029
	(0.751)	(0.636)	(0.951)
STRATEGICt-3	0.652	0.587	0.322
	(0.485)	(0.485)	(0.542)
INSTIT_LOWT_BIG3t-3*	12.925***		
IBR_MANAGERSt-3	(3.287)		
INSTIT_LOWT_HEDGEt-3*	2.799		
IBR_MANAGERSt-3	(2.377)		
INSTIT_LOWT_OTHERt-3*	4.313**		
IBR_MANAGERSt-3	(1.856)		
INSTIT_HIGHTt-3*IBR_MANAGERSt-3	-1.330		
IBR_MANAGERSt-3	(1.617)		
INSTIT_LOWT_BIG3t-3*IBR_CEOt-3		9.077***	
		(2.650)	
INSTIT_LOWT_HEDGEt-3*IBR_CEOt-3		3.077	
		(1.926)	
INSTIT_LOWT_OTHERt-3*IBR_CEOt-3		3.109**	
		(1.523)	
INSTIT_HIGHTt-3*IBR_CEOt-3		-0.762	
		(1.200)	
INSTIT_LOWT_BIG3t-3*			0.086
CEOTENUREt-3			(0.120)
INSTIT_LOWT_HEDGEt-3*			0.059
CEOTENUREt-3			(0.072)
INSTIT_LOWT_OTHERt-3*			-0.051
CEOTENUREt-3			(0.050)
INSTIT_HIGHTt-3*			0.006
CEOTENUREt-3			(0.049)
Observations	9,886	9,886	7,462
R2	0.142	0.141	0.138