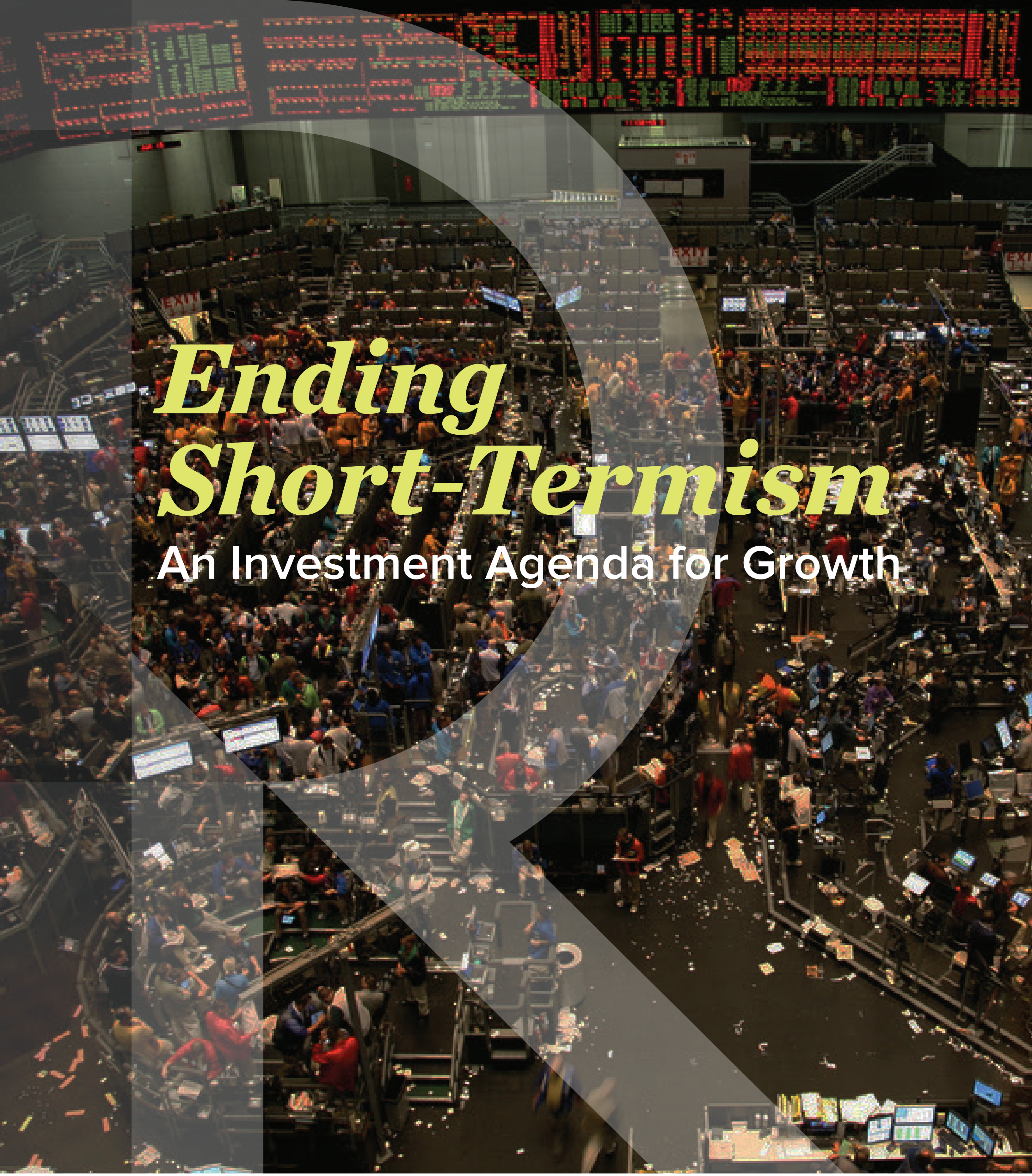

Ending Short-Termism

An Investment Agenda for Growth

Report by
**Mike Konczal, J.W. Mason,
and Amanda Page-Hoongrajok**
November 6, 2015

REWRITING THE RULES

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ABOUT THIS REPORT

This report is released by the Financialization Project as part of the Roosevelt Institute's comprehensive *Rewriting the Rules* agenda, which seeks to level the playing field and grow the American economy. The Financialization Project, led by Roosevelt Institute Fellow Mike Konczal, studies how the economy has been transformed by the growth of the financial sector beyond its core savings function, finance's increased power over the real economy, the increased influence of wealth, and the reduction of all of society to the realm of finance. In addition to clarifying the concept of financialization, it aims to develop a research and policy agenda to halt these trends and restore an economy that works for everyone.

Mike Konczal is a Fellow with the Roosevelt Institute, where he works on financial reform, unemployment, inequality, and a progressive vision of the economy. His blog, Rortybomb, was named one of the 25 Best Financial Blogs by *Time* magazine. His writing has appeared in the *Boston Review*, *The American Prospect*, the *Washington Monthly*, *The Nation*, Slate, and *Dissent*, and he's appeared on *PBS NewsHour*, MSNBC's *Rachel Maddow Show*, CNN, Marketplace, and more.

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Executive Summary

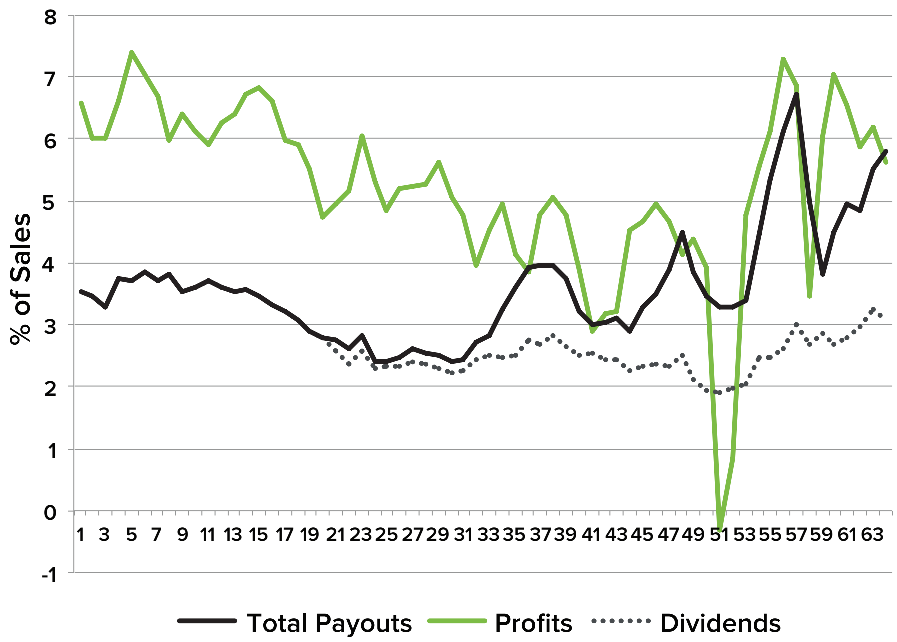
Five years after the official end of the recession, economic activity in the U.S. remains below potential. One important reason is the slow growth in business investment, which remains weak, especially compared to previous recoveries. To an increasing number of observers, the weakness in investment appears related to the rise in what observers are calling "quarterly capitalism" or "short-termism"—the focus on short time horizons by both corporate managers and financial markets.[1]

What has been lacking from this conversation is an all-encompassing agenda for reform, though there are several reform proposals out there.[2] Ours goes beyond simply tackling short-termism by itself. Instead, we focus on rebalancing power overall, limiting bad actors but also empowering good ones. This trend can only be combated by emboldening countervailing power in the marketplace while also emphasizing a new role for government.

The focus on the short term shows up most dramatically in the increase in funds paid out by corporations to shareholders. Before the 1970s, American corporations consistently paid out around 50 percent of their profits to shareholders, retaining the rest for investment. But over the past 30 years, shareholder payouts have averaged 90 percent of reported profits. In several years, including 2014, total payouts have actually been greater than total profits. Almost all the increase is due to buybacks—corporations' purchases of their own shares—which were practically nonexistent before the 1980s but

now account for nearly half of corporations' payouts to shareholders (see Figure 1).

Figure 1: Profits, Investment and Payouts, Publicly Traded Corporations



Source: Compustat database; Roosevelt Institute analysis Cashflow is profits plus depreciation.

This increase in shareholder payouts is closely linked to the transformation of American corporate governance from the 1980s, a transformation often described as the "shareholder revolution." Through most of the 20th century, American corporations were governed under a system best described as "managerialism," in which executives typically rose through the ranks at a single company and had as their primary objective the survival and growth of the corporation itself. Under this system, management saw itself as balancing the interests of a number of "stakeholders"—employees, customers, suppliers, regulators, creditors, other firms in the industry, and so on. Shareholders were just one constituency among others. But over the past generation, there has been a revival of the idea that shareholders are the only ones with a legitimate stake in the corporation, and that creating value for shareholders is the sole legitimate objective for management. This change in the self-conception of management has gone hand in hand with developments in law, ideology, and the structure of financial markets that have increased the power of shareholders to enforce their demands on managers. Higher payouts are one of the central demands of these empowered shareholders.[3]

The first part of this agenda will directly counter several of the specific trends known to increase short-termism. It will include ideas that are broadly applicable across industries, such as policies to address skyrocketing CEO pay, as well as more targeted solutions.

A policy agenda to address corporate short-termism requires a comprehensive approach focused on building countervailing power, which is addressed in the second part of our proposal. The forces that push firms toward short-termism will persist and find new ways to exert power, but the reforms outlined in this paper embrace wide-scale, long-term changes, such as granting workers power on boards, designed to attract long-term stakeholders. The agenda also includes practical, simple policy changes for regulators.

The third part of our agenda contains solutions that point to a new role for the state. Taxes and full employment are two obvious and necessary ways of checking short-termism, and if companies are less interested in investment, government needs to fill in that gap, whether by providing high-speed cable or funding basic research.

COMBAT SHORT-TERMISM DIRECTLY

1. Direct Limits on Buybacks

Buybacks have become one of the main drivers of cash leaving firms, with corporations spending roughly 100 percent of their profits to buy back stocks. Buybacks also offer CEOs a way of manipulating statistics and are prone to abuse. The SEC should revoke or limit its 1982 10b-18 Rule and require more extensive reporting of buybacks.

2. Reform CEO Pay and Earnings Reports

The movement to tie CEO pay to performance has been a major driver of short-termism. Congress can address this issue by updating section 162(m) to remove the incentive for using stock options and other "incentive-based" pay as compensation. The SEC should retract its proposal to require companies to report on executive pay and performance using total shareholder return as the metric for performance.

3. Private Equity Reform

Short-termism isn't limited to public companies. To ensure private equity's impact is more beneficial than harmful, Congress should limit leverage in private equity and forbid new debt for dividend recapitalizations. It should also limit moral hazard by requiring matching partner equity and demand more transparency and public disclosure of fees.

4. Limit Cash Release for Firms with Unfunded Pension Liabilities

Short-termism can have harmful effects that directly conflict with other legal obligations. For example, buybacks and dividends can have harmful effects for companies with unfunded pension liabilities. To combat this problem, Congress should empower the Pension Benefit Guaranty Corporation to limit dividends and buybacks for firms with these unfunded liabilities.

STRENGTHEN COUNTERVAILING FORCES

5. Implement a Proxy Access Rule

In order to reorient firms toward long-term value, long-term shareholders should have greater participation in board nominations. Toward this end, the SEC should mandate a proxy access rule, reduce the rule's ownership requirement, and lengthen the holding time requirement specifically to target long-term institutional investors.

6. Allow Alternative Share Approaches

Firms need the ability to innovate new approaches to shares. Loyalty shares would link more votes to longer-held shares. Dual-class shares empower long-term management by granting them more votes per share. Listing requirements on stock exchanges should be changed to allow more innovative experimentation with these and other approaches.

7. Affirm Board Power

The relevant governing bodies, particularly the SEC, should reaffirm the business judgment rule, which empowers boards with the benefit of the doubt concerning their decisions. They should also clarify the fact that shareholders are not owners or residual claimants. Additionally, management and regulators should continue to allow the practice of board staggering. Reaffirming these principles would help set the standard for the proper relationship between the many key stakeholders in a firm.

8. Establish Worker Representation

"Co-determination," or involving workers in company decision-making, has the potential to greatly increase the productivity and representation of the labor force by adding necessary long-term stakeholders. Congress should investigate adopting the German model, with the long-term goal of mandating employee representation on company boards to supplement more traditional forms of labor organizing.

A NEW ROLE FOR THE STATE

9. Use Taxes and the Rules of the Economy to Benefit Long-Term Growth

Government policy, which sets the rules of the economy, is a huge determinant of how fast the economy grows and who benefits from it. By pursuing full employment and equalizing the taxation of capital, the government can empower workers and check short-termism.

10. Expand Government Investment

If corporations will no longer invest for their own benefit and the benefit of society in general, then the federal government must step in—as it did during the New Deal—to ensure that Americans have access to quality transportation, basic research, high-speed Internet, green technology, etc., to ensure the country's long-term sustainability. There are myriad potential public infrastructure projects like these that, in addition to creating jobs and boosting demand in the short run, would prove a boon to long-term growth, innovation, entrepreneurship, and general well-being.

Part One: Combat Short-Termism

The first part of this agenda will directly counter several of the specific trends known to increase short-termism. It will include ideas that are broadly applicable across industries, such as policies to address skyrocketing CEO pay, as well as more targeted solutions.

1.DIRECT LIMITS ON BUYBACKS

Buybacks have become one of the main drivers of cash leaving firms, with corporations spending roughly 100 percent of their profits to buy back stocks. Buybacks also offer CEOs a way of manipulating statistics and are prone to abuse. The SEC should revoke or limit its 1982 10b-18 Rule and require more extensive reporting of buybacks.

Share repurchases are one of the most cited causes of short-termism in the media today, largely due to their recent explosion in size and scale. Publicly listed companies in the S&P 500 used 54 percent of their earnings, $2.4 trillion, to repurchase stocks between 2003 and 2012.[4] Combined with dividends, payouts to shareholders surpassed 100 percent of earnings, as they did right before the 2008 crash.[5]

Yet buybacks were not always of this magnitude. Until the 1980s, their extensive use wasn't even part of corporate practices. In 1982, the Securities and Exchange Commission (SEC) adopted 10b-18, a regulation commonly known as the "safe harbor rule." This rule protects companies that engage in buybacks against charges of insider trading as long as buybacks were less than 25 percent of the stock's average daily trading volume over the previous four weeks.[6] This rule changed the entire nature of corporate investment around buybacks, and there's no doubt it paved the way for the gigantic share repurchases of today.

There are several reasons to be concerned about the prevalence of buybacks in today's economy. The amount spent on buybacks means that there are fewer

Share repurchases are one of the most cited causes of short-termism in the media today, largely due to their recent explosion in size and scale. Publicly listed companies in the S&P 500 used 54 percent of their earnings, $2.4 trillion, to repurchase stocks between 2003 and 2012.[4] Combined with dividends, payouts to shareholders surpassed 100 percent of earnings, as they did right before the 2008 crash.[5]

resources left over for capital expenditure and the retention, attraction, and training of employees.[7] Pre-1980s corporate finance demonstrated a strong link between cash inflows and investment. During the '80s, a change occurred, weakening this link. Now profits and borrowing are highly correlated not with investment but with buybacks.[8] Researchers have found a general negative correlation between share repurchases and investment expenditure.[9] This is consistent with other research that finds private firms are much more likely to invest than similarly situated public firms, and that "firms that repurchase shares subsequently reduce employment and investment in capital, and hold less financial slack."[10]

Direct limits on buybacks could take a number of different forms. Rule 10b-18 could be revoked, eliminating the safe harbor rule. Alternatively, the daily trading volume limit could be lowered, permitting fewer buybacks. The SEC should begin enforcing and keeping track of buybacks on a regular schedule to allow for enforcement of this rule.

These measures alone won't be enough to combat short-termism: As buybacks recede, dividends will expand. Dividends are generally not prone to fluctuations, but corporations could issue special dividends with more variation. This is why a broader agenda is necessary. However, there are benefits to replacing buybacks with dividends; most notably, it would provide less incentive for CEOs to manipulate their pay packages, as will be discussed in the next section. It would also help prevent tax arbitrage. Companies have a mechanism to return money to shareholders, and that mechanism is the dividend.

2. REFORM CEO PAY AND EARNINGS REPORTS

The movement to tie CEO pay to performance has been a major driver of short-termism. Congress can address this issue by updating section 162(m) to remove the incentive for using stock options and other "incentive-based" pay as compensation. The SEC should retract its proposal to require companies to report on executive pay and performance using total shareholder return as the metric for performance.

The growth of CEO equity-based compensation is largely responsible for incentivizing managers to engage in short-termism. In an attempt to align executive interest with their own, shareholders demanded that a greater percentage of CEO compensation be based on performance. This was motivated by the belief that CEOs who received stock options would make decisions to benefit themselves and thus benefit shareholders. Performance pay has been one of the major drivers of the rise of CEO pay, which has more than quintupled for large public companies since the early 1980s.[11]

In 1993, Congress adjusted Section 162(m) of the tax code to allow deductibility of executive compensation up to $1 million. However, the rule states that compensation is tax-deductible without limit if it is performance-based. Part of the rationale for this was to protect infant industries that only had stock options to pay for executive talent.[12] However, this aligned companies as a whole to coordinate around a flawed and controversial approach to CEO pay. Executives now have an interest in short-term gains even at the expense of long-term investment, and this interest aligns executives with short-term shareholders.

To discourage performance-based pay, Congress should update section 162(m) to cap deductibility of compensation at $1 million regardless of the form of the income. This should be extended beyond public companies to all companies that file quarterly reports with the SEC. And it should go beyond executives to apply to all employees earning more than $1 million.[13]

The SEC is attempting to address the CEO pay issue by requiring companies to increase financial disclosure. Under the proposed rule, companies would report the compensation of their top executive, including pension and equity awards; average compensation paid to their executive officers; annual total shareholder return (TSR) for their own firm; and annual total shareholder return for peer companies.[14] Unfortunately, the new rule will exacerbate, not reduce, the incentive to increase short-term gains. This is because the logic of increased disclosure is to present information to shareholders that allows them to examine the relationship between CEO compensation and company performance as measured by shareholder returns.

Instead of rejecting the idea of paying for performance, the SEC has embraced it. This rule was meant to contain CEO pay but will result in increased short-termist urges, much like the 1993 executive compensation tax reform. The issue with the rule is not with increased transparency, but with the choice of what metrics companies should use. Several critics have noted the use of total shareholder returns, which measures stock appreciation and dividends, as the metric for performance deliberately encourages a focus on short-term stock price movements as opposed to the longer-term success of the corporation. Furthermore, it is a poor metric for company performance.

The movement to tie CEO pay to performance has been a major driver of short-termism. Congress can address this issue by updating section 162(m) to remove the incentive for using stock options and other "incentive-based" pay as compensation. The SEC should retract its proposal to require companies to report on executive pay and performance using total shareholder return as the metric for performance.

The choice of TSR as a measure of company performance demonstrates how embedded shareholder primacy has become in American business, at the expense of all other stakeholders in a firm. Los Angeles Times columnist Michael Hiltzik expresses this idea succinctly: "A bigger problem with the SEC rule is that it examines the CEO's pay only in the context of the shareholders' welfare. This reflects the notion that the corporation exists only to benefit its shareholders—that creation of 'shareholder value' is the be-all and end-all of management."[15] To the extent that executives financially manipulate stock prices and increase dividends, companies have less money for long-term investments and less liquidity available in the event of an emergency.[16] These effects can benefit shareholders yet harm other company stakeholders.

Even strong supporters of shareholder rights acknowledge CEOs are often rewarded for stock price movements that they had no hand in creating.

Even if TSR were a reasonable measure of company performance, it would be an incorrect metric for analyzing executive performance. Not only can executives engage in financial manipulation (versus real operative improvements) to inflate stock prices, stock prices can rise and fall without any executive action. The Investor Responsibility Research Center lists the many variables that can impact stock prices as "fund flows, central bank policies, macroeconomics, geo-political risks and regulatory changes."[17] Hiltzik notes also that TSR is sensitive to capital structures, so that executives could be rewarded for taking on more debt.

Even strong supporters of shareholder rights acknowledge CEOs are often rewarded for stock price movements that they had no hand in creating.[18] Eleanor Bloxham of the Value Alliance and Corporate Governance Alliance suggests that companies should reward executives for actions that contribute to the companies' long-term value. Others, like legal professor Lynn Stout, believe the entire notion of "pay for performance" crowds out prosocial behavior and encourages selfishness.[19] Stout draws on behavioral science to argue that, instead of pay-for-performance incentives, companies should adopt non-material and relatively modest compensation packages to foster prosocial behavior.

3. PRIVATE EQUITY REFORM

Short-termism isn't limited to public companies. To ensure private equity's impact is more beneficial than harmful, Congress should limit leverage in private equity and forbid new debt for dividend recapitalizations. It should also limit moral hazard by requiring matching partner equity and demand more transparency and public disclosure of fees.

Private equity (PE) represents the most extreme case of shareholder power because the shareholders are, in effect, the managers. With an estimated 7.5 million people employed by private equity since 2000, this lightly regulated yet growing industry is an important area to address in the policy reaction to short-termism.

PE is simply equity capital that is not traded on public exchanges. PE funds are just one type of the PE asset class, related but separate from venture capital. Like the leveraged buyouts of the past, PE funds borrow money to take public companies private with the stated intention of conducting value-increasing changes and selling the company at a higher price three to five years later. The rationale behind PE firms and funds is that they target distressed companies and manage them back to health, but research shows this is not the case; PE firms overwhelmingly target healthy companies.[20]

Distressed or healthy, PE firms have the potential to improve the companies in which they invest. This is most evident in the lower middle market, roughly defined as having an enterprise value of $25–300 million.[21] PE is able to offer capital, management, and financial expertise and access to new markets to growing but credit-constrained companies. However, PE can also harm stakeholders through-cost cutting that results in lower investment and wages. PE can also increase a company's long-term liabilities by selling assets and taking out new loans to finance dividend recapitalizations, which are special dividends paid out to investors.

To ensure that PE's impact is more beneficial than harmful, Congress should limit leverage in PE and forbid new debt for dividend recapitalizations. It should also limit moral hazard by requiring matching partner equity and demand more transparency and public disclosure of fees, building on reforms in Dodd-Frank. These proposals would regulate PE with the aim of decreasing the harmful maneuvers PE firms use to enrich themselves while supporting the beneficial impact of PE, in particular when it focuses on helping smaller companies to grow.

Reducing the amount of leverage in PE will increase financial stability. Stronger balance sheets can reduce incentives to cut costs and improve a firm's ability to absorb shocks, leading to fewer loan defaults and bankruptcies. Congress can reduce the amount of debt accumulated by portfolio companies. One important means of doing this is to place a direct limit on the amount of leverage PE firms can use to acquire a company. A good benchmark for how much leverage should be allowed would be the amount of leverage utilized by the middle market PE firms—a debt-to-equity ratio closer to 50:50.[22]

Tax reform is a crucial element of addressing these issues. Currently, taking on more debt is rewarded through discounted tax bills. The more debt a business has to service, the less tax it incurs. Estimates find that large debt can increase a company's value by 10–20 percent because of the interest deductibility it receives.[23] Interest should not be deductible, which should be part of a larger tax reform agenda. Another way to directly limit debt is to forbid any new debt for a dividend recapitalization. If long-term investors are indeed long-term, they should not need a short-term exit.[24]

PE suffers from a major moral hazard because the general partner has a monopoly on management decisions but holds the least amount of risk. Congress can address this moral hazard and force investors to have more to lose if a portfolio company fails, especially if risky management decisions were made. It could demand that PE firms put more skin in the game by matching limited partner equity in the fund. It could eliminate the carried interest loophole, which currently allows carried interest on an investment to be taxed as capital gains, not as ordinary income. Congress could also mandate that if a company goes into bankruptcy due to sale of assets or dividend recapitalizations, the investors must be liable for severance pay for workers and are not eligible to pass off pension liabilities to the Pension Benefit Guaranty Corporation.

Congress can also demand more transparency and disclosure. Although this is a broad and somewhat broken-record mandate, transparency and accountability in the PE sector is necessary. Disclosure standards in this industry are considerably low, leaving no data for researchers who seek to examine PE's impact or performance. Improved disclosure would not only increase awareness about the PE industry but also increase the data availability for academics who want to conduct studies in these areas.

The Dodd-Frank Act took initial steps to regulate the industry by mandating that general partners register with the SEC. Using this new regulatory power, the SEC began to examine PE firms and recently declared that it found transparency issues with half of the firms investigated.[25] With increased transparency, more violations could be uncovered, which would in turn deter other violations. Efforts to roll back the minimal disclosures added in Dodd-Frank must be resisted.

A variety of studies demonstrate that reduced debt is good for portfolio companies and their stakeholders and that less leverage is good for employees. A new study by MIT economists finds highly leveraged companies were responsible for most if not all of the job losses during the financial crisis.[26] Between 1970 and 2002, PE companies were twice as likely to go bankrupt.[27] Standard and Poor's states that dividend recapitalizations can reduce credit-worthiness and increase the chance of defaults.[28]

Currently, PE is held accountable for little, and the result has been an increase in dividend recaps and continued layoffs from downsizing.[29] PE firms have more incentive to break explicit and implicit contracts with stakeholders than public firms do. A mixture of carrots and sticks will encourage PE firms to take other stakeholders into consideration when leading their portfolio companies.

4. LIMIT CASH RELEASE FOR FIRMS WITH UNFUNDED PENSION LIABILITIES

Short-termism can have harmful effects that directly conflict with other legal obligations. For example, buybacks and dividends can have harmful effects for companies with unfunded pension liabilities. To combat this problem, Congress should empower the Pension Benefit Guaranty Corporation to limit dividends and buybacks for firms with these unfunded liabilities.

Combating short-termism will require creative solutions, especially when there are public stakeholders directly at risk from increased payouts. Congress can empower qualified institutions to provide a direct limit on payouts in situations that have a direct negative public consequence, such as when they come at the expense of other legal obligations. The Pension Benefit Guaranty Corporation (PBGC) is an example of such an institution.

The PBGC is a federal institution created by the

Employee Retirement Income Security Act (ERISA) in 1974. It was designed to insure defined benefit retirement plans in private sector pensions. Defined benefit plan participants usually receive a fixed benefit for life regardless of how the pension fund performs. Like other insurance companies, the PBGC charges premiums to companies in exchange for the risk of taking on their pension liabilities in the future. Covered plans may be single-employer plans, in which one employer provides benefits, or multi-employer plans, in which many employers provide benefits. Currently, all multiemployer plans and most single-employer plans pay a flat premium. Additional charges, called variable premiums, are charged if a single-employer plan is underfunded.

Under the Pension Protection Act of 2006, pension plans should target 100 percent funding. If a plan becomes underfunded, its current assets are less than its current and estimated future liabilities. To pay benefits to participants of failed plans, the PBGC uses money it collects from premiums, capital gains from investments, and recoveries from companies formerly covered.

Some defined-benefit pension plans may be underfunded because of circumstances beyond the sponsoring company's control—for example, poor results in the financial markets in which the plan's assets are invested, or a fall in the company's operating income due to a cyclical downturn. Other companies may temporarily underfund their plans in order to finance investment spending urgently needed for the company's long-term success. In general, there is no public interest in further penalizing these companies; the decline in employer-sponsored pensions is a major factor undermining retirement security for working Americans, and those companies that still participate in them should be encouraged to continue doing so.

In many cases, however, a company that is able fully meet its pension obligations will instead, under shareholder pressure, allow its defined-benefit pension plans to become underfunded in order to finance increased dividends and buybacks. In effect, employees provide their labor in return for an agreed compensation, which is then not paid to them but claimed by shareholders instead. This is a clear example of a short-term focus undermining long-term success, since the underfunding creates financial risks for the company and, by undermining the credibility of its commitments to its workers, weakens its ability to gain their loyalty in return. If the ultimate result of this underfunding is that promised pensions are not paid, the payouts will, in a real sense, have been stolen from the employees. Sufficient underfunding may even threaten the solvency of the PBGC itself. So on both moral and public policy grounds, there is a clear case for restricting shareholder payouts by companies with unfunded pension liabilities.

For example, the Dutch grocery company Ahold (which owns the American chains Stop & Shop and Giant as well as the online retailer Peapod) reported a shortfall of nearly $800 million in its American pension funds in 2014—$250 billion for its own plan for salaried employees, and $540 billion for its share of the funding deficits of the multiemployer pension funds in which it participates for its union employees. These funding shortfalls are growing: The plans were underfunded by "only" $650 million in 2013. At the same time, Ahold has been sharply increasing its shareholder payouts. During the decade of the 2000s, Ahold paid out an average of $270 million per year, about equally divided between dividends and repurchases. But over the past five years, shareholder payouts have averaged $1.4 billion annually, including $500 million in dividends and nearly $1 billion in share repurchases per year.

Clearly, Ahold has the financial resources to fully fund its pensions. But given the uncertain future of retail, it is entirely possible that at some point in the future this will no longer be the case, and if Ahold's plans remain unfunded, the company will be unable to meet its obligations to retired employees. If that happens, today's shareholder payouts will have been financed by defrauding workers. Increasing shareholder payouts while pension obligations remain unmet is a form of looting and should be prevented by regulation or law.[30]

Unfortunately, the PBGC no longer publishes data on unfunded pension liabilities, so we cannot say exactly how many pension funds are being depleted by shareholder payouts, but the problem is certainly widespread. In 2009, a survey of multiemployer pensions plans found that nearly a third (32 percent) of them had assets less than 65 percent of the present value of their obligations—the level considered "critical" underfunding by the PBGC.[31] An unknown, but presumably substantial, fraction of the corporations participating in these plans will have also participated in the great increase in shareholder payouts in recent years. As a first step toward assessing the scale of the problem, the SEC should require companies to report their unfunded pension liabilities in a consistent way.

The PBGC should use its existing resources to directly limit share repurchases. The PBGC is vested with limited power through ERISA: It can place a lien on business assets if the business has $1 million in unpaid contributions, and also has the power to investigate companies through its early warning program. The PBGC should demand that companies limit buybacks and dividends unless their pension liabilities are 100 percent funded, as required by the Pension Protection Act of 2006. The PBGC can further discourage buybacks by corporations with unfunded pension liabilities by charging a higher variable rate to single-employee plans and a higher fixed rate to multiemployer plans. Furthermore, companies with unfunded pension liabilities that conduct repurchases should not be granted "hardship waivers" that allow struggling companies to forgo late payment penalties.[32] Lastly, financial assistance should not be granted to multiemployer plans for companies that are currently engaged in buybacks.

Congress should legislate any necessary updates to ERISA to allow the PBGC to enforce these new requirements. The PBGC might require an updated law in order to place a lien on a company for the reason of buybacks instead of unpaid pension contributions. Additionally, congressional approval is necessary to charge multiemployer plans engaged in buybacks a higher rate.

The PBGC is particularly well suited to carry out this proposed mandate. First, the PBGC itself is mandated and empowered to protect defined benefit private pensions. Its mission statement says it "protects the retirement incomes of more than 41 million American workers."[33] Second, the institution has structures in place to obtain information from businesses. The PBGC actively monitors plans through its early warning program. Technical Update 00-3 lists a sampling of transactions that concern the PBGC, including "payment of extraordinary dividends."[34] The PBGC is not a passive observer; it has engaged in multiple negotiations to protect plan participants and demonstrated its ability to collect relevant information and enforce the current rules in place.[35] Since the PBGC already collects and monitors this type of information, adding a new rule concerning buybacks would not place any extraordinary burden on the institution.

A common claim of buyback advocates is that the money spent on repurchases has no better use; in the case of unfunded pension liabilities, it does. Redirecting share buybacks and dividends to unfunded pension liabilities would comply with the law, which, as mentioned, says company plans must target 100 percent funding. As an added potential benefit, the increased contributions would reduce the chance that the PBGC would incur those liabilities in the future, decreasing future deficits. The PBGC debt has grown due to the many plans it saved during the financial crisis and fallout.[36]

The proposal to empower the PBGC with stronger enforcement rights is supported by the literature. The growing PBGC deficit may be a sign that without tougher enforcement, the gap between assets and liabilities will only worsen. Economists Xuanjuan Chen, Tong Yu, and Ting Zhang find that high-bankruptcy risk company pension plans are more likely to engage in risky behaviors and underfund pension plans. Furthermore, the authors state, "the existing pension laws and regulations have failed to provide sufficient incentives for sponsors to make larger pension contributions and fully fund their pension plans."[37] Attempting to use indirect strategies, such as shaming, to increase funding ratios, has not worked. Researchers Norman Godwin and Kimberly Key find that being listed on the PBGC's "Top 50 underfunded pension

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plans" actually increases a business's stock value because investors believe the company will be able to transfer its pension liabilities to the PBGC.[38] Several studies critique the PBGC's flat-rate premium policy, with some calling for a risk-based premium.[39] Placing liens, raising premiums, and restricting financial assistance may be necessary to force companies to redirect buyback payouts to pension liabilities.

Part Two: Empower Countervailing Forces

Reversing the short-termist trend will require a holistic, multi-dimensional approach. The previous section described policies designed to limit short-term behavior directly. But direct limits will not be sufficient for the problem at hand. This section will propose policies to strengthen managers and shareholders who value the long-term health of their businesses. Only through these countervailing forces can short-termism be kept in check.

The forces that push firms toward short-termism will persist and find new ways to exert power. The reforms outlined here embrace wide-scale, long-term changes designed to attract long-term stakeholders, such as granting workers power on boards. They also include practical, simple policy changes for regulators.

5. IMPLEMENT A PROXY ACCESS RULE

Toward this end, the SEC should mandate a proxy access rule that requires lower ownership and longer holding time requirements. These stipulations will specifically target long-term institutional investors.

Shareholders who own shares for short periods of time are incentivized to advocate for short-term gains. Other investors, like pension funds, hold shares for a longer period of time. These investors are incentivized to value the long-term growth and performance of a company. Thus, long-term shareholders have a reason to resist decisions made to produce immediate returns at the expense of future returns. Several institutions recognize the benefits of empowering long-term investors and support their desire for greater participation in board nominations. Research suggests that enabling long-term shareholders to advocate for their long-term interest has benefits for companies and society.

One way to empower long-term shareholders is to increase their influence over boards. Corporate boards are responsible for supervising executives and making important company decisions. Board members are usually nominated by an independent committee and placed on a company ballot for shareholder vote. Shareholders who wish to run their own nominees for election must use their own resources to send out a separate ballot, which is usually very costly.

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Seeing this cost as a barrier to shareholder participation, investors have lobbied for a widespread process called proxy access, which allows shareholders to place their candidates on the company's ballot. Currently, individual companies can pass resolutions for proxy access; however, it is not guaranteed by any regulation. The Dodd-Frank Act affirmed that the SEC has the authority to develop a proxy access rule, an in 2010, the SEC passed Rule 14a-11, which stated that if a shareholder held at least 3 percent of a company's shares for at least three years, that shareholder could nominate either 25 percent of a board or one member, whichever is greater.[40] This rule was struck down by the D.C. Circuit Court of Appeals, largely due to lobbyists claiming that the economic impact of the rule was not fully considered.

The SEC should appeal this ruling. Vested with authority from Dodd-Frank, the SEC is within its jurisdiction to mandate a proxy access rule. Additionally, the SEC should reduce the rule's ownership requirement and lengthen the holding time requirement to target long-term institutional investors specifically. Proxy access has a range of supporters including the Council of Institutional Investors and proxy advisory firms like Institutional Shareholder Services, Inc. These institutions have helped pass dozens of proxy access resolutions at the individual company level. They should assist the SEC in appealing the D.C. Circuit Court's decision.

The movement to increase long-term shareholder power, both broadly and specifically in the context of proxy access, is supported by academic research. For example, long-term shareholders theoretically have an incentive to monitor the decisions of management, and in particular to challenge managerial decisions that forgo future gains for immediate returns. To investigate this hypothesis, one study examined seasoned equity announcements.[41] The results indicate that short-term shareholder presence decreases returns after a seasoned equity announcement and shorter institutional investment horizons are related to poorer post-issue performance. These findings lend support to the claim that long-term shareholders are more likely to act as monitors and hold managers accountable.[42] Another article inspected shareholder proposals that were authored by pension funds. The authors conclude that pension funds are more successful at monitoring management than previously acknowledged.43

Researchers have also analyzed the potential impacts of the 2010 SEC ruling. A Harvard Business School study found that the claims made by the lobbyist Business Roundtable failed to stand up to empirical testing. The firms that would have been affected by the SEC's ruling—those with a high concentration of shareholders holding shares for three years or more—lost value.[44]

6. ALLOW ALTERNATIVE SHARE APPROACHES

Firms need the ability to innovate new approaches to shares. Loyalty shares would link more votes to longer-held shares. Dual-class shares empower long-term management by granting them more votes per share. Listing requirements on stock exchanges should be changed to allow more innovative experimentation with these and other approaches.

There are typically numerous shareholders of a publicly traded company, each with different values and agendas. Short-term investors seeking immediate returns from companies are not the same as long-term shareholders seeking stable returns in the future, or managers who can have an incentive to plan for the long-term. Research shows that efforts to expand alternative, innovative ways of structuring shares can help orient a firm toward long-term value. Though this does not require legislative effort, it does show that market-based alternatives are capable of changing the dynamics we have described. Small efforts from regulators and institutions can bolster this.

Linking more votes to longer-held shares is one way to incorporate time horizons into voting rights Both business leaders and scholars have proposed rewarding long-term shareholders with a financial innovation called loyalty shares.[45] This is based on the idea that long-term shareholders' voting power should reflect their extended stake in the companies in which they invest. Investors with extended time horizons depend not just on immediate gains but also on the future success of a company, forcing them to value decisions that consider the long run.

Currently, there are no state laws that prohibit companies from granting a certain class of shares more voting power.[46] For example, a board of directors could approve any shares held for five years to have five times the voting power. In Europe, the one share, one vote standard is more the exception than the norm. France's Florange Act stipulates that unless shareholders successfully vote against it, any shares held for two years will receive twice the voting rights.[47] In the U.S., some companies issue dual-class shares where one class of shares use the standard one vote, one share model and another class of shares carry as much as 10 votes per share. However, exchange listing standards only allow private companies with dual-class shares to maintain them if they go public.[48]

The stock exchanges should adjust their listing requirements to allow shares with time-phased voting.[49] Then, under the Model Business Corporation Act, boards could approve the different classes of shares on a company-by-company basis.[50] These decisions would most likely be protected under the business judgment rule, which we will discuss further in the next section. To implement a more direct, less flexible model of loyalty shares, Congress could pass legislation modeled on the aforementioned Florange Act. These policy proposals are necessary to empower long-term shareholders.

Giving long-held shares more votes is a way to reconcile the view of shareholders as monitors of management with the view of shareholders as a source of short-termism. In almost all EU countries where multi-voting shares are available, they are used.[51] In addition to France, Italy recently relaxed its legal restrictions on time-based voting shares.[52]

Another potential innovation is the increased use of dual-class shares. Similar to loyalty shares, a dual-class share system empowers long-term management by granting them more votes per share. Research suggests expanding access to dual shares would decrease short-term shareholders' ability to influence company decisions and could improve company performance.

Both Google and Berkshire Hathaway issue dual-class shares and have incredible track records in terms of returns. Their founders also explicitly acknowledge short-termism as a real problem and state that they will sacrifice short-term results if doing so is in the best interest of shareholders in the long run.[53] The president of Grocery retailer Market Basket has maintained a generous profit sharing program for employees and in the event of his ousting, employees walked out in protest. The story of Market Basket demonstrates managers with the managerialist era perspective still exist and make decisions that benefit all stakeholders, not just those seeking short-term gains.[54]

There is already a structure in place designed to give managers increased voting power. A dual-class share system usually involves two or more classes of stock, each with different votes attached to it. Google, for example, has Class A stock, which is offered to the public and has one vote per share, Class B stock, which is not publicly traded and has 10 votes per share, and Class C stock, which has no voting rights and is also available to the public.

The exchange listing requirements prohibit dual shares except for companies that had existing dual-class structure before their IPO. Pre-IPO, founders, family owners, and top executives are usually the ones who have access to the higher voting class of stock. Thus Google founders and executives are able to maintain control over the company with a relatively small amount of equity. The percentage of listed shares that are dual-class grew from 8 percent in 2009 to 12 percent in 2012.[55]

Listing standards have not always prohibited dual-class shares. Dual-class recapitalizations have been banned and unbanned several times since being introduced. In the past, dual-class shares were used as a method of resisting short-term shareholders, particularly in blocking hostile takeover attempts. The relative increased voting power of the manager's class of shares prevented bidders from acquiring a controlling stake in the company. Thus leveraging dual-class shares to resist short-sighted shareholders has historical precedent.

One study examining the impact of dual-class shares analyzed 178 firms during a time period when firms in the U.S. could switch from one vote, one share to a dual-class share system. It found evidence that dual-class share structures were value-increasing.[56] Another study explored how time-phased voting, attaching more rights to longer-held shares, adds value to a company. This theory is supported by empirical evidence that shows that firms with time-phased voting significantly outperformed the market.[57]

7. AFFIRM BOARD POWER

The relevant governing bodies, particularly the SEC, should reaffirm the business judgment rule, which empowers boards with the benefit of doubt concerning their decisions. They should also clarify that shareholders are not owners or residual claimants. Additionally, management and regulators should continue to allow the practice of board staggering. Reaffirming these principles would help set the standard for the proper relationship between the many key stakeholders in a firm.

Though the problem of short-termism is complex, simple solutions should not be overlooked. One easily available solution is for regulators to reaffirm basic elements of corporate governance publicly. The first is the business judgment rule, which empowers board decisions. The second is that shareholders are not owners of a firm. The third is staggered boards, which protect board members from being replaced at once. These actions can have subtle affects on many different stakeholders in the firm. The SEC in particular guides and oversees the nature of firms, but other regulators should follow suit in affirming these standards.

The first step is reaffirming the business judgment rule, which protects directors from personal civil liability for the decisions they make on behalf of a corporation.[58] Some may hesitate to give managers more power and protection, but there are two reasons to consider this approach. First, this action should be carried out in tandem with the other policy proposals in the agenda. The most effective way to address short-termism is holistically, seeking to end short-termist trends but also empower good management. Second, the business judgment rule is powerful but not invincible. If management fails to demonstrate to a judge that it utilized all available information in its decision-making, it will be overruled in shareholders' favor.[59]

The second step is for agencies and law associations to state publicly that shareholders are not the owners or residual claimants of the firm. The claim that they are is often repeated but incorrect.[60] Corporations are a nexus of contracts and obligations, and shareholders are just one of many agents who have claims on a firm. Shareholders own stock but do not have traditional ownership rights to a firm because they cannot "freely access the company's place of business, exclude others, or decide what happens on a day-to-day basis." [61] Law Professor Stephen Bainbridge uses the case of W. Clay Jackson Enterprises, Inc. v. Greyhound Leasing and Financial Corp to illustrate the fact shareholders are not owners. In this case, it was stated, "even a sole shareholder has no independent right which is violated by trespass upon or conversion of the corporation's property."[62] In other words, shareholders do not have the right of use or possession of corporate property.

A number of lawyers believe the law states clearly that shareholders are not owners. Loizos Heracleous and Luh Luh Lan conducted a review of the legal theory and precedent literature spanning a hundred years and conclude, "It turns out that the law provides a surprisingly clear answer: Shareholders do not own the corporation, which is an autonomous legal person."[63] Virgile Chassagnon and Xavier Hollandts conduct their own review of the corporate ownership debate and conclude similarly that shareholders are not owners of a corporation. They state that a firm is an independent entity that cannot be owned by any group, including shareholders.[64]

The third step is for agencies and business leaders to reconsider the benefits of staggered boards. Staggered board elections prevent shareholders from ousting an entire board in any given year. As such, they are an effective defense against shareholder intervention and hostile takeovers.[65] However, they can be too effective at times, blocking out all shareholders including long-term shareholders who are attempting to change bad management. In an ideal world, staggering would protect boards that make decisions for the long-term health of a company and not for short-term gain. That said, board staggering may be more effective in combination with the other policies proposed. For example, board staggering would insulate management from all shareholder threats, but long-term shareholders would have room to punish bad management through increased voting power in their loyalty shares. Recent research looking at the time-series of firms with changes to their staggered board status finds an increase in value. The research concludes that "adopting a staggered board has a stronger positive association with firm value for firms where such longer-term commitment seems more relevant, i.e., firms with more R&D, more intangible assets, more innovative and larger and thus likely more complex firms."[66]

Emphasizing these elements of corporate governance publicly would have several positive effects. First, it would clarify corporate governance for the regulatory agencies themselves. These agencies are increasingly staffed with people trained in the idea that shareholders own the firm, a fallacious way of understanding the nature of a firm. Second, business leaders could no longer claim that they are engaging in short-termism to satisfy shareholder demands. Similarly, managers who have the long-term health of their company in mind would potentially feel more secure, in a legal sense, in standing against short-term shareholders. It could also help guide rule-writing. The recent disclosures rules from the SEC are an example of this.[67] These rules put significant focus on total shareholder return as the core guiding principle of how CEO pay should be determined, but there is no enforceable duty to maximize shareholder value, especially in the short run.

Though simple and straightforward, public commitments can bring about significant changes. Recent history shows that the norms and practices projected by administrative agencies have serious influence over all manner of legal norms.[68]

8. ESTABLISH WORKER REPRESENTATION

"Co-determination," or involving workers in company decision-making, has the potential to greatly increase the productivity and representation of the labor force by adding necessary long-term stakeholders. Congress should investigate adopting the German model, with the long-term goal of mandating employee representation on company boards to supplement more traditional forms of labor organizing.

In the U.S., labor unions have been the dominant form of worker representation. However, in most European nations, other vehicles for employee participation supplement labor unions. Germany, for example, has a long history of involving workers in company decision-making, a model they call Mitbestimmung or "co-determination." In this model, workers are represented at the establishment level through works councils and at the company level through board representation.[69]

German co-determination is rooted in collaboration and trust between employers and employees. It is also based on a solid legal foundation. The U.S. Congress can pass laws to give American workers a similar legal right to representation. It should take the German Works Constitution Act (1972) as a model and mandate works councils for companies with more than five employees. Work councils are worker-elected bodies that represent employee interests and communicate directly with the employer. The councils have a number of legal rights, including the right to information, inspection, supervision, and consultation. They may request employee compensation information, negotiate working time, address any violation of safety laws, and challenge employee dismissals.

Congress should investigate mandating employee representation on company boards. Employee board representatives could be elected directly by the workers or through potential works councils.[70] German corporations have a two-tiered corporate governance system in which the management board makes decisions for the company while the supervisory board supervises management and approves its actions. If a corporation employs more than 2,000 workers, it must allow its employees to elect half of its supervisory board.[71] Employee-elected board members can be employees, union members, or community leaders. European countries that operate under the U.S.-style one-tier board structure also legally provide employee board representation.[72]

Works councils and board-level employee representation in the U.S. are marginal to say the least. The absence of works councils is in part due to the National Labor Relations Act (NLRA) section 8(a)(2), which explicitly forbids company unions.[73] U.S. corporations have elected union leaders as labor representatives on their boards in the past, but such appointments are rare. Furthermore, because labor is usually allocated only one or two seats, their impact is limited.[74] Clearly, the U.S. does not operate under a model of co-determination. Therefore, to assess its impact, we should consult studies regarding U.S. worker participation and studies on European co-determination.

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The benefits of worker representation at the board-level are well documented in the literature. The Institute for the Study of Labor conducted an econometric study to examine the effects of German co-determination and, using data on corporations before and after they included worker representation on their boards, found positive productivity effects associated with co-determination.[75] Another study utilizing Swedish industry data finds that employee representation on corporate boards is associated with less turnover for both workers and CEOs.[76] Furthermore, Swedish survey data demonstrates that most managers who have experience with employee representation on boards think it is generally positive.[77] One benefit managers cite is improved communication between employees and management regarding decision-making. Another study using interview data from union representatives across 13 different European countries provides evidence for the claim that board representation improves workers' status.[78]

Opponents of worker representation may argue that workers don't want to participate or that any type of representation would harm the company. It is clear that both claims are false. In one of the most expansive worker surveys in the U.S., Rogers and Freeman find that nearly 90 percent of workers want representative bodies.[79] An econometric IZA study shows that board representation in Germany does not slow down innovation and competitiveness.[80] Another uses German panel data to investigate whether or not works councils adversely affect investment and finds that the creation of a works council has no negative effects on investment.[81] Finally, two separate econometric studies show that stockholders are not harmed by the introduction of worker representation, whether in the form of a works council or employee representation on the board.[82]

The evidence supports the claim that co-determination yields benefits for workers, managers, and the sustainability of corporations. By giving workers a legal right to representation, Congress could bring these benefits to American employees and companies.

Part Three: A New Role for Government

Several solutions to short-termism point to a role for the state. If the corporate sector is less willing to invest for long-term prosperity, then the government is more than capable of filling that role. Taxes and full employment are two obvious and necessary ways of checking short-termism in the economy, and if companies are less interested in investment, the government needs to fill in that gap, whether by providing high-speed cable or funding basic research.

9. USE TAXES AND THE RULES OF THE ECONOMY TO BENEFIT LONG-TERM GROWTH

Government policy, which sets the rules of the economy, is a major determinant of how fast the economy grows and who benefits from it. By pursuing full employment and equalizing the taxation of capital, the government can empower workers and check short-termism.

A number of more general economic reforms could restructure incentives and reallocate power and influence to combat short-term culture and some of its worst consequences: Higher taxes on capital gains and a tax on financial transactions could discourage short-term trading by making it less profitable for individuals and corporations; better labor protections would bolster the political strength of organized workers, enabling them to act as a countervailing force; and finally, expansionary monetary policy could tighten labor markets, ensuring that workers benefit more directly from economic growth and leaving corporate managers less room to extract rents.

By decreasing tax obligations on investment income, low capital gains tax rates and other tax breaks for investors encourage short-termism and act as tax breaks for the wealthy investor class. The preferential rate on long-term capital gains, for example, was worth $161 billion in 2013, according to the CBO.[83] More than 70 percent of the benefit of this low rate goes to the top 1 percent of households. While a tax incentive for long-term investors could be a good idea, current law defines a long-term investment as one held for only a year or longer. This is a historically low threshold that does nothing to increase the average holding period of an investment.[84]

Lawmakers could disincentivize quarterly capitalism while combating inequality by raising capital gains rates, closing investor loopholes, and instating a tax on financial transactions. Similarly, a small tax on every financial trade would cut the profit margins for high-frequency traders and other investors who make their money on a high volume of short-term trades.[85]

Recent research has found that the tax cuts for dividends in 2003, though very large in absolute and relative terms did nothing to boost investment.[86] However, the tax cuts did have a significant impact on dividend policy and buybacks, increasing both relative to earlier time periods. This suggests that capital tax policy is not a relevant or binding constraint on investment decisions, and that policies of the kind we are proposing can curb short-termism without negatively impacting investment decisions. In addition, all of these policies would carry the added benefit of generating revenue for useful public spending and would counteract the cultural belief in Wall Street as a generator of instant profits.

Labor policy is another area where reform could help to fight short-termism. Three decades of eroding labor protections and a hostile political climate have hurt wage growth, weakened labor unions, and tipped the political balance of power away from workers and toward capital.[87] Bolstering labor rights and organizing power would help boost wages and working conditions and would provide natural opposition to policies that protect short-term interests at the expense of sustainable growth and the welfare of America's workers. In order to exert such a countervailing force, however, workers must have the legal right and practical ability to organize effectively. This is not the case for millions of Americans employed as independent contractors in the gig economy, those working in the growing and unprotected care economy, and others who are legally prevented or obstructed from unionizing.

In addition to helping to raise wages and return more economic benefits to workers, lower barriers to unionization and expanded protection under the NLRA would boost labor's influence. Allowing for more flexibility in defining a bargaining unit so that more workers can bargain directly with the firms that control their working conditions is an important step, as is stricter and more expeditious punishments for NLRA violators. Other reforms, which could streamline the union election process or allow workers to take secondary action, could also improve the political strength of organized workers. The recent NLRB decision in Browning-Ferris is potentially positive news for millions of franchise employees, but it is also just one small piece of a broader pro-worker agenda that will restore a reasonable balance of power between workers, managers, and corporate interests.[88] Directly raising wages by increasing the minimum wage would also direct corporate resources toward workers.

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Full employment is another area in which reforms could be made to simultaneously benefit workers and combat short-termism. In particular, the Federal Reserve has focused its policies overwhelmingly on controlling inflation and has ignored its other legal mandate, the pursuit of full employment, in the process. Concerns over inflation and the possibility that unemployment could go too low have dominated Fed policy, leading to several recent business cycles in which interest rates were raised—and recovery stifled—before the benefits of economic growth had time to reach workers in the form of more jobs and high wages.[89] Furthermore, the trade-off of more unemployment for greater price control appears increasingly disadvantageous as economists come to a fuller understanding of the severity of the negative impacts of long-term unemployment.[90] The Federal Reserve must streamline alternative monetary policy actions, including directly setting long-term rates and announcing a higher inflation target.

Generally speaking, policies that are good for workers are good for the economy, and full employment monetary policy is no exception. In addition to directing more economic benefits to workers, tighter labor markets would decrease the latitude available to corporate managers seeking to extract rents for themselves and their shareholders by forcing those managers to compete in a more neutral market.

10. EXPAND GOVERNMENT INVESTMENT

If corporations will no longer invest for their own benefit and the benefit of society in general, then the federal government must step in as it did during the New Deal to ensure that Americans have access to quality transportation, basic research, high-speed Internet, green technology, etc., to ensure the country's long-term sustainability. There are myriad potential public infrastructure projects like these that, in addition to creating jobs and boosting demand in the short run, would prove a boon to long-term growth, innovation, entrepreneurship, and general well-being.

As corporations scale back investment in favor of payouts to shareholders, and the U.S. falls behind other nations in research and development spending, the government should step in with public funding to spur innovation and growth.[91] Contrary to arguments by some government spending critics, evidence and theory point to the enormous benefits and necessity of public investment in research and development. The satellite and the Internet, for example, which are both the result of public R&D investment, each gave birth to entirely new industries and avenues of further innovation whose social benefits are still being discovered today.[92] While few investments will pay the long-term dividends that these did, there are a wealth of projects that the federal government can pursue to address contemporary challenges like climate change, disease, and the need for improved connectivity.

Wireless connectivity is fast becoming an economic necessity and will soon be an absolute prerequisite to economic participation in the United States. Although private carriers historically have led the charge to improve service, so far U.S. corporations are largely abstaining from investment in the development of 5G mobile technology. Recently, the European Union, UK, and South Korean governments have all announced large public–private ventures in 5G research and development.[93] The U.S. government should follow suit, as public investments in the development of 5G mobile technology would help keep America competitive in an increasingly digital global economy and could help make investment in this area more enticing to private firms.

Medicine is another area in which private investment has declined and government spending could spur corporations to action and improve outcomes. U.S. spending on biotechnology, pharmaceuticals, medical devices, and health services is losing ground relative to both other countries and its own recent past.[94] Determining which specific projects warrant increased funding and which do not is beyond the scope of this paper, but scientists at the National Institute for Health are certainly not short of ideas about how the government could improve medical care as well as the lifespan and quality of life for millions of Americans and billions around the world. In addition to the human cost, illness and disease carry well-documented economic costs, so improvements in the medical field should be a high priority of any investment agenda.[95]

In 2009, President Obama's American Recovery and Reinvestment Act made the U.S. government the largest public funder of green technology in the world. Some decried this move as a public handout to private industry, and while there is some truth to that argument—eventually, private renewable energy enterprises must be left to sink or swim on their own—the majority of these technologies have not yet reached the stage of economic viability.[96] Given the economic threats of climate change and the long-term economic and environmental benefits of such investment, it is clear that a number of research areas could and should benefit from continued and expanded government support.[97] The Department of Energy's Advanced Technology Vehicles loan program, which supports the development and expansion of fuel-efficient vehicle manufacturing sites, has made enormous progress toward reducing U.S vehicle emissions. Other government-supported projects, like Tesla Motors' groundbreaking electric vehicles, have helped open and expand markets for high efficiency vehicles that otherwise might flounder.[98] Other areas of green tech, like research into algae-based biofuels, could create new, profitable business for the agriculture industry, replace wasteful corn subsidies, and spawn cleaner-burning energy sources.[99]

These are just three large, general areas in which public investment could help stimulate private R&D spending in order to boost growth and innovation. Other significant examples, like continued research into sub-atomic particles and gene splicing, seem poised to offer enormous human and economic benefits further down the line as related technologies and scientific understanding are applied to new, as-yet undiscovered fields.

Conclusion

As long as corporations conceived of simply as machines for increasing share value, they will be unable to fully utilize their collective productive capacities or develop those capacities into the future. The goal of this paper is to combat this growing trend.

It is important to emphasize that these policies represent a plurality of approaches. Rather than just tackling the obvious problems, we look to build countervailing power among long-term shareholders and other stakeholders. Instead of focusing on legislation exclusively, we have also considered how simple choices by regulators and exchanges can make large differences. All of these solutions together will be necessary to counteract short-termism—a trend that shows no sign of abating on its own in the wake of the Great Recession.

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