



Regulating Stock Buybacks: The \$6.3 Trillion Question

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ABSTRACT

The purposes of this paper are: 1) to present common-sense reforms that are available to Congress and the Securities and Exchange Commission (SEC) for curbing the extractive practice of stock buybacks, including a straightforward ban on buybacks, bright-line limits on buybacks, and rescission of SEC Rule 10b-18; 2) to document the scale and adverse impacts that stock buybacks had on innovation in the 2010s; and 3) to outline the effects that new regulations on stock buybacks might have on encouraging a reorientation of American corporations toward innovation. Curbing stock buybacks is also necessary to tame market manipulation and reduce the potential for personal gain from the use of corporate funds by senior corporate executives and hedge fund managers.

INTRODUCTION

Stock buybacks—a term denoting a corporation’s repurchases of its own shares on the open market—manipulate stock prices and enrich senior corporate executives and hedge fund managers, along with the wealthiest US households, while preventing profits from being retained and invested in innovation (Lazonick 2014; Lazonick and Shin 2020). Stock buybacks have become a predominant use of aggregate corporate funds: Total spending by all publicly traded companies on stock buybacks between 2010–2019 totaled \$6.3 trillion, according to their 10-K and 10-Q public filings.¹ Shareholder payments—stock buybacks plus dividends—have on average totaled 100 percent of nonfinancial corporations’ corporate profits over the last decade. Corporate stock is largely owned by wealthy households; the top 10 percent of US households by wealth own 85 percent of corporate equity (Wolff 2021). To allow this level of buyback activity is a clear policy choice: The Securities and Exchange Commission (SEC) has encouraged stock-price manipulation through SEC Rule 10b-18, which essentially lets companies conduct buybacks in any amount, despite purported limits, as it does not enforce its rules nor does it collect real-time data on stock buyback activity.

¹ Since 2004, SEC disclosure regulations have required corporations to report the repurchasing of their shares on their Form 10-Q quarterly reports by stating the number of shares repurchased and the average purchase price per share. Companies are not required to disaggregate shares purchased on the open market that are (nominally) regulated by Rule 10b-18 and in other repurchase transactions.

This working paper presents new data on the use of stock buybacks by US corporations in the decade that led up to the COVID-19 pandemic and describes policy solutions needed to rein in the practice of open-market stock buybacks so that US corporations can be reoriented toward innovation and the creation of sustainable prosperity. Limiting stock buybacks is not a silver bullet that will automatically rebalance power within corporations and ensure that workers' contributions are valued, but it is essential; buybacks currently enable companies to manipulate their stock price, incentivizing senior executives and board members to enrich themselves. Rewriting the rules governing the practice of open-market share repurchases is a necessary step toward building back the US economy.

Stock buybacks are subject to SEC Rule 10b-18, first promulgated by the Securities and Exchange Commission in November 1982. Rule 10b-18 limits stock buybacks under certain volume, broker, and timing conditions, though the amount that a large company can spend on buybacks on a daily basis under the rule is often in the 100s of millions of dollars. Conforming to these conditions allows a company entry to a "safe harbor" that shields the company from charges of stock-price manipulation, even though the SEC itself has admitted that it does not monitor whether corporate buyback activity remains within this safe harbor (Dayen 2015). It is well past time to end the practice of allowing corporations to manipulate stock prices for the sake of enriching some of the wealthiest households at the expense of workers and taxpayers, as well as at the expense of an innovative economy (Lazonick and Shin 2020).

The impacts of the COVID-19 pandemic have increased the urgency of understanding the ill-advised public policies that allowed publicly listed US companies to spend \$6.3 trillion in aggregate on open-market share repurchases in the 2010s. The negative consequences of some of these practices were highlighted when prioritization of maximizing shareholder value in some sectors led to delays and lack of innovation in the production of medical supplies that turned out to be necessary in a pandemic (Lazonick and Hopkins 2020). Furthermore, many of America's largest corporations fought employee demands for hazard pay and personal protection equipment during the pandemic,

claiming these essential protections would be too costly while ignoring the billions they had spent on buybacks in previous years, and in some cases continued to spend during the pandemic.

Because a few thousand publicly traded corporations employ a large percentage of the total US business workforce, large corporations set the tone for the country's economy. Although the dollar amounts spent on stock buybacks by themselves are staggering, it is important to look at stock buyback activity as a ratio of net income in order to better interpret that activity and its impact on firm innovation. It is also important to consider the range of stock buyback transactions across different industrial sectors and firm sizes. Spending on stock buybacks occurred during the past decade both in sectors where underinvestment in actual productive resources led to underpreparedness in critical medical supplies as the pandemic surged, and in sectors such as retail and food services where the unexpected decline in economic activity due to public health measures led to layoffs of millions of the US's most vulnerable workers. This working paper presents data on stock buyback spending in these sectors to illustrate the real harms caused by stock buybacks to the US economy and its workforce, particularly in this time of economic and social crisis.

POLICY REFORMS FOR LIMITING STOCK BUYBACKS AND PROMOTING INNOVATION

Overview of the History of Policies Regarding Stock Buybacks

The history of regulatory policy regarding stock buybacks can instruct what reforms should be adopted going forward. Prior to the adoption of Rule 10b-18 in 1982, companies could be held liable for market manipulation under Section 9(a)(2) and 10(b) of the Securities Exchange Act of 1934² when executing open-market share repurchases. Not all companies engaging in repurchases were doing so

² Under the Securities and Exchange Act of 1934, which governs secondary trading in the financial markets, companies are subject to anti-fraud and anti-manipulation rules in their trading activity. Capital is a stock, not a flow, and secondary trading relates to financial flows, not investment in an asset (i.e., a stock).

for purposes of stock-price manipulation, however; some bought back stock to fulfill their obligations under stock-based employee compensation plans (Lazonick and Jacobson 2021). The Williams Act of 1968, which enabled the SEC to adopt regulations governing share repurchases, stated that it is unlawful for issuers to repurchase their own securities if the purchase “is in contravention of such rules and regulations as the Commission . . . may adopt (A) to define acts and practices which are fraudulent, deceptive, or manipulative, and (B) to prescribe means reasonably designed to prevent such acts and practices.”³

Prior to Ronald Reagan’s inauguration as president, the SEC spent over a decade debating which kinds of rules and regulations to adopt to enable a certain volume of stock buybacks without the presumption of liability for manipulation, at the outset proposing far more restrictions than it ultimately adopted under Reagan. Proposed Rule 13e-2, which was never adopted, would have made open-market stock buybacks subject to less permissive limits (as compared to those established by the eventual Rule 10b-18), and would have required disclosure by corporate insiders who might be considering buying or selling securities for their personal account at the same time that the company was engaging in share repurchases on the open market.⁴ In 1980, the commissioners clearly stated that their intent behind the proposed rule was to “prevent the issuer from leading or dominating the market through its repurchase program. In fashioning those limitations, the Commission has balanced the need to curb the opportunity to engage in manipulative conduct against the need to avoid excessively burdensome restrictions.”⁵

By the close of 1982, in what was termed a “regulatory about-face” by SEC staff, the Reagan SEC had replaced proposed Rule 13e-2 with the new Rule 10b-18, which provided corporate repurchasers a safe harbor from liability for manipulation under certain conditions. Crucially, however, it did not automatically regard buybacks executed outside the safe harbor as prohibited (Feller and Chamberlin

³ Williams Act, Pub. L. No. 90-439, 82 Stat. 455 (1968).

⁴ The initial proposal to limit buybacks to 15 percent of average daily trading volume was based on a single article produced in 1963, based on share repurchases conducted by large companies in that year for the purposes of employee compensation, not stock-price manipulation (Guthart 1965; Jacobson and Lazonick 2021).

⁵ Purchases of Certain Equity Securities by the Issuer and Others, 45 Fed. Reg. at 70891.

1984; Hudson 1982). This particular regulatory shift was part of the larger transition of the SEC from a financial regulatory agency that sought to limit stock-price manipulation without being overly intrusive to a financial promotion agency that authorized stock issuers to engage in large-scale stock-price manipulation without fear of liability, based on a misunderstanding of the role of secondary-market trading in capital formation (Lazonick and Shin 2020). More broadly, there was a shift to the view that trading on the secondary markets was the key to corporate investment and innovation, even though secondary-market trading does not actually send any new funds to corporate coffers, while buyback spending undertaken to push up share prices takes money out of profits and thus reduces retained earnings. This has led to the explosion in corporate funds spent on stock buybacks over the past four decades, which has enriched corporate insiders and share sellers, who represent disproportionately wealthy households.

Under Rule 10b-18, corporations are able to transact stock buybacks subject to very expansive limits on volume, while no disclosure is required that might discourage companies from straying beyond the bounds of the safe harbor, nor does doing so trigger a presumption that manipulation is taking place. Indeed, for the sake of quickly increasing earnings per share (EPS), companies often circumvent the safe harbor limit by doing “accelerated share repurchases” (see, e.g., Kurt 2018) with no apparent pushback from the SEC. Companies can repeatedly conduct daily transactions of open-market repurchases at high dollar volumes yet still stay within the safe harbor—although, since the actual data on daily transactions are not disclosed, there is no way for the SEC to monitor even this aspect of compliance. In a 2020 paper, William Lazonick calculated the average daily trading volume limits of some of the nation’s largest companies under Rule 10b-18 based on their overall trading activity (Lazonick 2020). From these calculations, it is clear that the rule’s stipulations do not in fact serve to curb large transactions that affect the market price of a company’s stock.

Table 1. The Leading Corporate Looters

Within the Rule 10b-18 safe harbor, Apple can repurchase \$5.7 billion trading day after trading day. Firms are not required to report dates of buyback activity and cannot violate Rule 10b-18 (because it is a safe harbor), and the SEC has never charged a firm with using buybacks to manipulate its stock price since Rule 10b-18 was adopted in 1982.

Company	Buybacks 2010-2019 (in billions)	Buybacks/ Net Income (%)	Dividends/ Net Income (%)	Buybacks Fiscal Year 2020 (to Sept. 16) (in billions)	ADTV Limit Oct. 21, 2019 (in millions)	ADTV Limit July 13, 2020 (in millions)	ADTV Limit Sept 16, 2020 (in millions)
Apple	320	76	21	55.2 to Q3	1587	3420	5710
Oracle	119	127	24	4.2 to Q1	183	255	227
Microsoft	113	54	44	0.0 to Q0	754	1723	1842
JP Morgan Chase	97	41	30	6.5 to Q2	342	567	398
Wells Fargo	93	46	34	4.1 to Q2	295	298	238
Exxon Mobil	92	35	45	0.3 to Q2	166	245	238
IBM	89	72	37	0.2 to Q2	125	155	124
Cisco Systems	86	106	44	2.7 to Q4	226	296	242
Pfizer	77	60	55	0.0 to Q2	146	284	220
Bank of America	73	58	28	6.6 to Q2	400	429	368

Summary of Policy Reform Proposals

It is clear that the SEC was mistaken in adopting Rule 10b-18 40 years ago. It is long past time to curb stock buyback activity and end companies' manipulation of the market in their own stock, and more broadly to help reorient US corporations away from value extraction and toward innovation and sustainable prosperity. The most effective policy reform would be for Congress to prohibit open-market share repurchases under the Securities and Exchange Act (the "Exchange Act") Sec. 9(a)(2), which would end the manipulative practice of open-market stock buybacks. The Exchange Act governs trading of equities in the secondary markets and regulates fraud and manipulative activity. Congress can choose to limit open-market share repurchases altogether, or to place bright-line limits on buyback activity.

If Congress refuses to act, the Securities and Exchange Commission has authorization under current law to issue rules regulating stock buybacks whereby bright-line limits can be placed on buyback transactions; the ability of corporate insiders to benefit from buyback transactions can be limited;

and, at the absolute minimum, real-time disclosure requirements can be put in place such that the public is aware of stock buyback activity. What is clear: Rule 10b-18, the stock buyback safe harbor, has not held back the high volume of buybacks, nor was it ever intended to do so. It should be repealed and replaced by regulations that will limit buybacks and encourage the redirection of US corporations toward innovation. Limiting stock buybacks will not be a silver bullet, but it is a necessary (though insufficient) reform that would move US corporations away from pure shareholder-value maximization and in the direction of innovation and sustainable prosperity.

Congressional Legislative Reforms

The 117th Congress has a range of options for reforming the practice of stock buybacks. Congress can ban open-market repurchases of an issuing company's own stock while leaving options available for private repurchase transactions,⁶ which are not currently regulated under Rule 10b-18. The Securities and Exchange Commission should then be given the authority to issue regulations to enact the policy, which was first proposed by Senator Tammy Baldwin (D-WI) in the "Reward Work Act."⁷ This prohibition would recognize that open-market share repurchases allow a company to manipulate the market price of its stock and would ban them on those grounds. This is the most straightforward proposal for reducing market manipulation and creating conditions for innovation in the United States.

If Congress were unable to agree on an outright ban, another approach would be to put in place bright-line limits on buyback activity to weaken the harmful incentives stemming from this activity, without any safe harbor provision. This would be justified under the same argument—that open-market stock buybacks are a tool for stock market manipulation—and would be in line with the regulations in place in many advanced financial markets (Kim, Schremper, and Varaiya 2004). A

⁶ Private repurchase transactions and "tender offers" are direct offers to shareholders made publicly by companies to repurchase their shares at a particular price, and do not involve the same potential for market manipulation because they are disclosed in advance and do not take place in the open market. Also see footnote 3, above.

⁷ The legislative text of the Reward Work Act can be seen here: <https://www.congress.gov/bill/116th-congress/senate-bill/915/text>, including Section 2(b), "Prohibitions—Notwithstanding any other provision of law, no issuer may purchase an equity security of the issuer on a national securities exchange."

bright-line limit should not simply adopt the current limits contained in Rule 10b-18; the choice of 25 percent of the average daily trading volume was based on no evidence that this ratio forestalls manipulation (Lazonick and Jacobson 2021). Further study should be required to define an exact set of bright-line limits, but it is clear that given the speed and volume of trading in the 21st century, the limits need to be set far below 25 percent of average daily trading volume and that other minimum conditions for compliance must also be established.

Several recent proposals have aimed to limit buybacks by tying a company's authorization to conduct stock buybacks to substantive corporate transactions. For example, buybacks would not be permitted if the company had underfunded pension obligations; had recently engaged in layoffs; or had wage dispersion below a certain threshold, or executive compensation above a certain limit or ratio relative to median worker pay. These proposals, though useful from a narrative perspective in tying together the issues of stock buybacks and economic inequality as experienced by workers, would nonetheless provide opportunity for corporate executives to manipulate reported worker earnings in order to justify buybacks. Such proposals might thus create more openings for buybacks than intended and should be avoided.

If Congress continues to permit any level of open-market share repurchases, it must remove the incentives for corporate insiders to benefit personally from stock buyback transactions by limiting their ability to sell their personal shareholdings in conjunction with buybacks that they authorize. Congress should also require disclosure on a real-time basis if buybacks are not impermissible outright (Palladino 2020; Fried 2000). Much of the incentive problem derives from the fact that the vast majority of senior corporate executives are paid at least partly—and often predominantly—in financial instruments whose values are tied to the price of their company's stock. These executives are in a position to gain significantly when a stock price rise spurred by buybacks coincides with their exercise of stock options or the vesting of their stock awards (Hopkins and Lazonick 2016). Structuring executive compensation in this manner presents a clear threat to management's focus on corporate innovation and should be disallowed.

Securities and Exchange Commission Options for Reform

As stated earlier, section 2(e)(1) of the Williams Act Amendment to the Exchange Act of 1968 explicitly states that it is unlawful for companies to engage in an open-market share repurchase if that purchase “is in contravention of such rules and regulations as the Commission . . . may adopt (A) to define acts and practices which are fraudulent, deceptive, or manipulative, and (B) to prescribe means reasonably designed to prevent such acts and practices.” Thus, even without congressional action, the commission can take affirmative steps to reduce the ability of companies to manipulate the market price of their own stock, require a comprehensive disclosure regime, and end the ability of corporate insiders to benefit from stock buyback execution concurrent with their personal share-selling.

To begin, the SEC must repeal Rule 10b-18 and issue new rulemaking that puts companies on notice that they may be found liable for open-market share repurchases that constitute potential market manipulation. Then, the SEC should place bright-line limits on stock buybacks rather than offering repurchasers a safe harbor bounded by the current limits on volume, timing, and purchaser. As with the congressional policy approach, the SEC must undertake an empirical analysis to determine the correct bright-line limits for repurchase volumes rather than rely on the 25 percent of average daily trading volume (ADTV) or even the 15 percent of ADTV proposed over 40 years ago. The commission must also focus on the personal incentives that stock buyback activity creates for executives.

Corporate insiders could be prohibited from trading their personal holdings during a quarter in which buybacks have been executed, or at minimum required to disclose in real time when they are doing so. Most other advanced financial markets—including those of the United Kingdom, Japan, France, Hong Kong, Canada, and the Netherlands—explicitly restrict trading by insiders during periods of stock buyback activity (Kim, Schremper, and Varaiya 2004).

Finally, even if substantial reforms take more time, under Rule 10b-18 regulators should at minimum immediately require disclosure of stock buyback activity on a daily basis to ensure that companies are complying with the limited requirements that constitute the safe harbor. To be clear, the ability of companies to spend 25 percent of ADTV is still manipulative, but disclosure is a bare minimum and should have been required all along (Lazonick 2015). Without such disclosure, the “safe harbor” idea is

meaningless, as the SEC does not even collect the data necessary to determining whether companies are staying within the safe harbor's limits (an admission made by President Obama's SEC Chair, Mary Jo White) (Dayen 2015).

THE IMPACTS OF RESTRICTING STOCK BUYBACKS

Stock buybacks create multiple types of harms. When executives prioritize using corporate funds for stock buybacks, they reduce funds available for innovation from retained earnings. Stock buybacks also manipulate the market price of corporate securities and incentivize corporate insiders to personally benefit from selling their own shareholdings after share prices increase as a result of stock buybacks. Regulation that limits some or all open-market repurchase activity can ensure that corporations are not able to manipulate the market price of their stock, and can put the onus on executives to engage in innovation rather than in financial manipulation.

Innovation and Sustainable Prosperity: The Theory of the Innovative Enterprise

The ideology of shareholder primacy follows the flawed neoclassical model of the firm by essentially ignoring how corporations innovate over time (for a detailed analysis of the flaws in the neoclassical theory of the firm, see Lazonick and Shin 2020; Lazonick 2020). The “theory of the innovative enterprise” provides a more accurate and useful framework for analyzing what allows firms to produce higher-quality products at lower unit costs over time, leading to increased profits (Lazonick 2019a; O’Sullivan 2000). These enhanced profits can be shared among contributors to these value-creating processes and invested in new rounds of innovation. The theory posits that because innovation is cumulative, collective, and uncertain, it requires managers to be strategic, employees to be integrated into organizational learning processes, and management to have access to financial resources that can sustain the innovation process over an uncertain timeline. The structure of corporate governance in large US companies today and the focus on value extraction at the expense of value creation are harmful to innovation, and stock buybacks play a leading role in diverting

executives from a strategic focus on innovation, undermining organizational learning processes, and reducing financial resources available for the uncertain innovative process of generating higher-quality, lower-cost products.

Impacts on Market Manipulation

Stock buybacks are clearly intended to increase the market price for share sellers and, at least temporarily, to increase the price of outstanding equity. There is a strong argument that this market manipulation is in violation of Section 9(a)(2) of the Exchange Act, though the legal definition of market manipulation is complex and lacking in “precision, cogency, and consistency of application” (Fox, Glosten, and Rauterberg 2018). In the 1970s, as the Securities and Exchange Commission discussed regulatory options that would have permitted companies to conduct some buybacks without fear of liability for market manipulation, it initially laid out bright-line conditions that were explicitly meant to keep the volume and timing of stock buybacks from manipulating market prices (though the SEC’s initial proposals would likely not have had that actual effect). Most other advanced financial markets have regulations in place to partially limit the manipulative effects of stock buybacks. However, due to the structure of Rule 10b-18 as a safe harbor—and the SEC’s lack of monitoring of actual buyback activity—companies can safely manipulate the market price of their stock. Research has shown a sharp increase in the probability of share repurchases being conducted by corporations that, but for the reduction in outstanding shares that results from buybacks, might have just missed a quarterly EPS forecast (Almeida, Fos, and Kronlund 2016).

Incentives for Corporate Insiders and Personal Gain

A specific harm of stock buybacks is that they create an opportunity for corporate insiders, who are aware of stock buyback transactions before they must be disclosed to the public in aggregate, to take advantage of higher stock prices caused by stock buybacks and sell their personal shares (Palladino 2020; Lazonick 2019b). Figure 1 details the average total pay and percentage shares of pay components for the 500 highest-paid US executives. The shift to stock-based pay rewards senior executives for “making decisions that foment speculation and manipulate stock prices,” in part through the use of

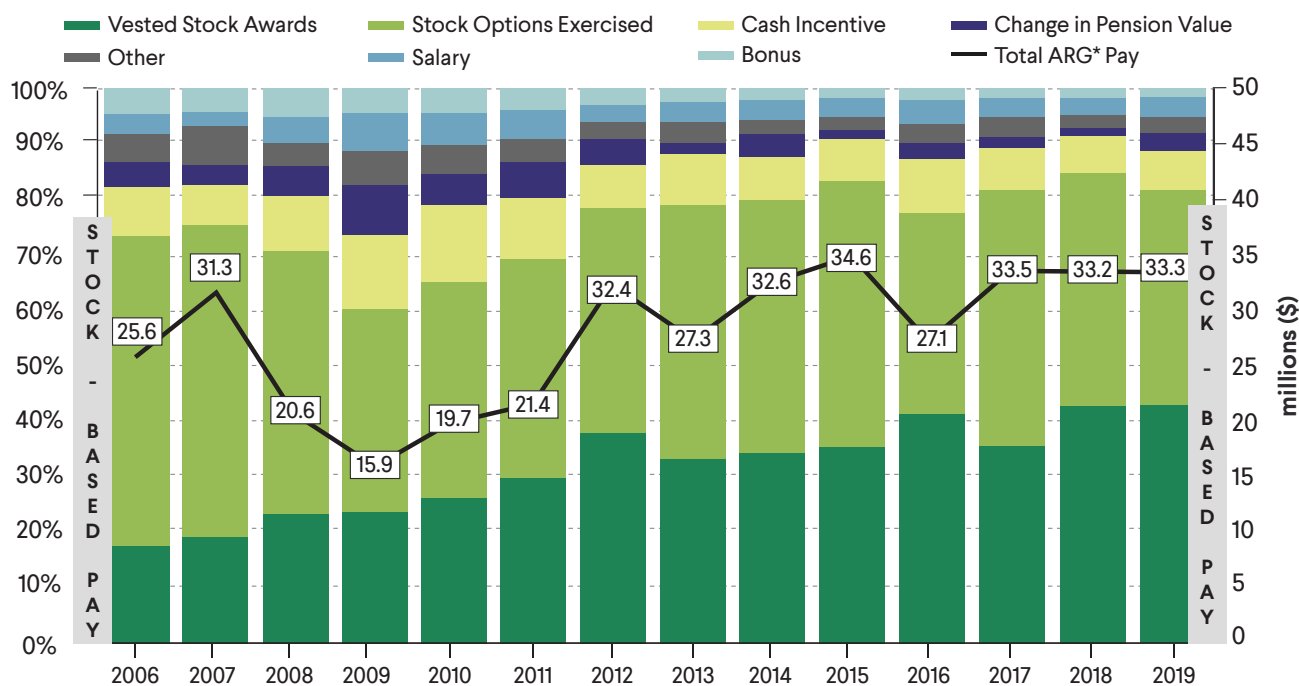
stock buybacks (Lazonick 2019a). Though “insider trading” is generally illegal, and insiders face strict requirements to report their personal transactions of corporate stock, there are currently no restrictions on insiders using information about current stock buyback transactions in their personal dealings. Lazonick (2019a) summarizes the problem:

Stock-based pay gives top executives powerful personal incentives to boost, from quarter to quarter, the stock prices of the companies that employ them. In stock buybacks, these executives have found a potent, and SEC-approved, instrument for stock-market manipulation from which they can personally benefit, even if the stock-price boosts are only temporary. (Lazonick 2019a, p. 63)

In recent research, Palladino (2020) found evidence that net insider personal sales of over \$100,000 are nearly twice as common in quarters when meaningful stock buyback transactions take place than they are in other quarters, and that a 10 percent change in insider share selling is associated with a 0.5 percent change in stock buyback transactions (Palladino 2020). At the dollar volume at which stock buybacks were taking place before the COVID-19 pandemic, using mean values from the sample, this meant that a \$4.2 million increase in stock buybacks was associated with a \$900,000 increase in insider share selling per quarter. Previous research by former SEC Commissioner Robert Jackson Jr. found a similar link between stock buyback announcements—which also tend to increase share prices, even before actual repurchases take place—and corporate insider share selling (Jackson 2018). Lack of regulation over corporate insiders profiting personally from decisions they themselves make to devote corporate funds to manipulating stock prices is a problem that policymakers can solve easily.

Figure 1. Value-Extracting Insiders: Average Total Pay and Percentage Shares of Pay Components, 500 Highest-Paid US Executives, 2006–2019

High executive pay comes from realized gains from exercising stock options and vesting of stock awards.



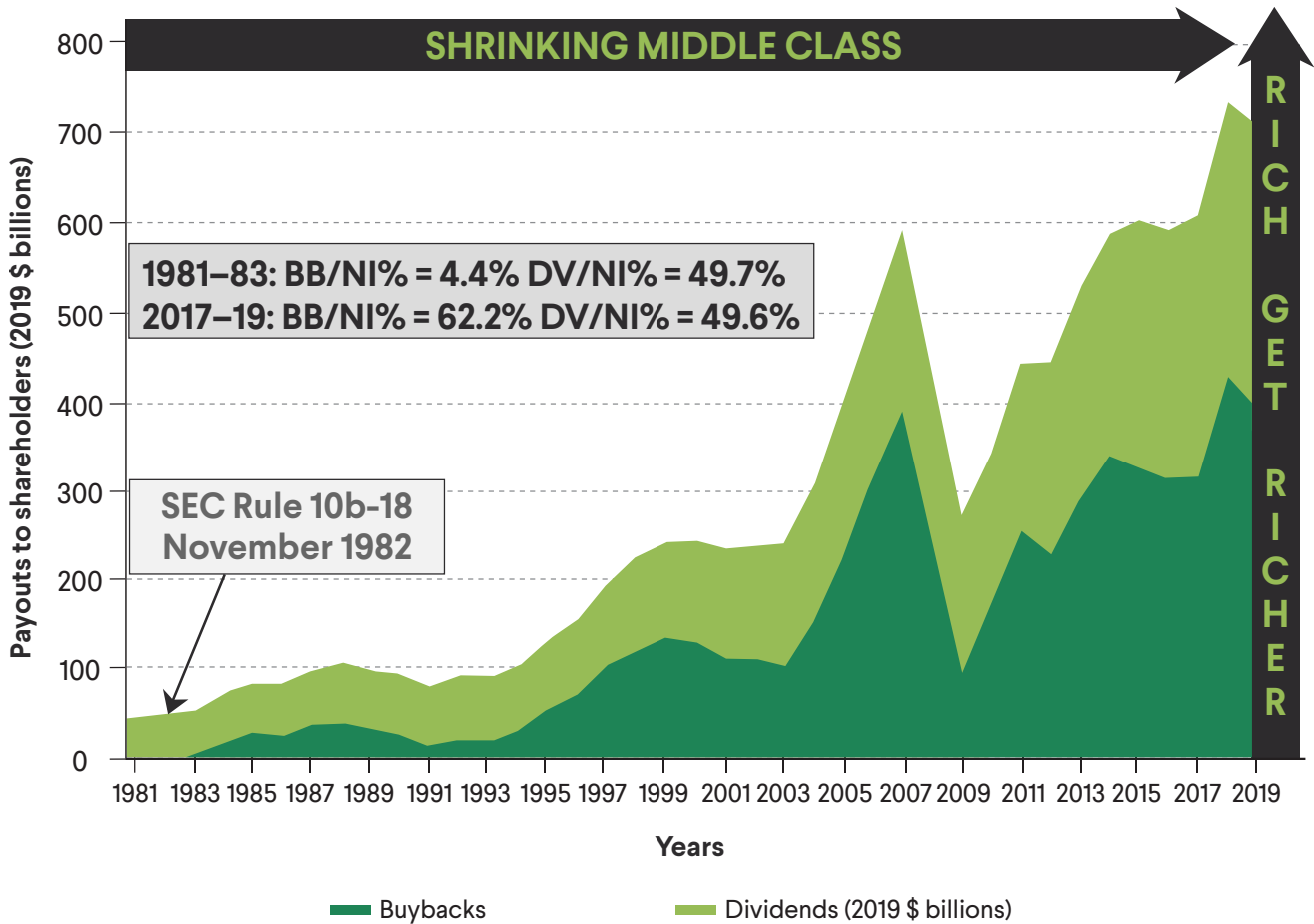
Source: Analysis by Matt Hopkins of the Academic-Industry Research Network, using the S&P Execucomp Database.
 *Note: Actual realized gains.

STOCK BUYBACKS IN THE 2010S: \$6.3 TRILLION SPENT TO RAISE SHARE PRICES

Stock buybacks have been widespread and rising steadily since the mid-1980s, surpassing dividends as a form of distribution to shareholders in 1997. Buybacks are more volatile than dividends and have been executed in addition to dividends rather than instead of them. In moderation, dividends are legitimate because they provide a yield to shareholders, whereas buybacks reward share sellers. Buybacks tend to happen when stock prices are high and rising, and when companies are competing to show strong stock price performance. Figure 2 shows the rise of buybacks and dividends for companies that were publicly traded for the period from 1981 to 2019.

Figure 2. Rising Buybacks and Dividends for Publicly Traded Companies Consistently in the S&P 500, 1981-2019

In the Name of “Maximizing Shareholder Value”



Note: Data includes 216 companies that were consistently in the S&P 500 Index that were publicly traded from 1981 through 2019.

It is important to summarize the economic activity of the 2010s to understand the implications of public policies that allowed US publicly listed companies to spend \$6.3 trillion in aggregate on open-market share repurchases. To put this figure in context, total US GDP for the decade was approximately \$172 trillion, so spending on open-market share repurchases alone was equivalent to 4 percent of US spending on goods and services.

Although the dollar amounts by themselves are staggering, looking at stock buyback activity as a ratio of corporate net income emphasizes the deleterious impact of buybacks on retained earnings, which form the financial foundation for rewarding employees for the contributions to corporate profits and investing in the next generation of innovative products (Lazonick 2014). Later on, we examine specific sectors that have become critical in the pandemic—both sectors where underinvestment in actual productive resources led to under-preparedness as the pandemic surged, and sectors where the unexpected decline in economic activity led to layoffs of millions of America’s most vulnerable workers. As the pandemic raged and the US economy crashed, senior leaders of large companies continued to focus on maximizing shareholder value and their own profits, even while laying off hundreds of thousands of employees (MacMillan, Whoriskey, and O’Connell 2020). In the years preceding the pandemic, airline companies spent roughly \$50 billion on stock buybacks—but negotiated a public bailout in 2020. Walmart distributed \$10 billion to shareholders during the pandemic while laying off over 1,000 employees. Under a people-oriented governance regime, these companies’ top executives would have come together to use their resources to combat the pandemic. Instead, they have shown that their main concern was to boost their stock price.

Aggregate Buyback Activity

Between 2010 and 2019, total spending on open-market stock buybacks by all publicly traded companies was \$6.3 trillion, according to their 10-K and 10-Q public filings as reported by S&P Compustat. As can be seen in Figure 3, aggregate spending grew steadily through the decade after the Great Recession, peaking in the fourth quarter of 2018 at \$270.6 billion. Average spending across all corporations engaged in buybacks also rose at the end of the decade, reaching over \$80 million *on average* in the fourth quarter of 2018 and nearly \$90 million on average in the first quarter of 2020, immediately preceding the pandemic. The median value for average spending by all companies for all quarters was \$62 million. Plotting the rise of the S&P 500 Index alongside rising stock buybacks is instructive, as it demonstrates that the stock market and buyback activity have risen in tandem. Table 7 in the Appendix lists aggregate and average spending on open-market stock buybacks by quarter.

Buyback spending is concentrated among the largest corporations; Figure 4 shows average spending on buybacks by firm revenue quartile for the decade, and Table 2 shows the largest individual spenders on stock buybacks, both in dollar volume and as a percentage of net income. The majority of buybacks are conducted by a relatively small group of companies. Of the 466 companies that were consistently in the S&P 500 from 2010–2019, the 50 largest repurchasers conducted 51 percent of all buybacks. Market dominance, stemming from both innovation and market power, can lead to enormous profits, to which predatory value extractors can lay claim. In contrast, smaller and less profitable firms do not attract the same pressures, nor do they have the same funds available to engage in mass buyback activity (though there are exceptions).

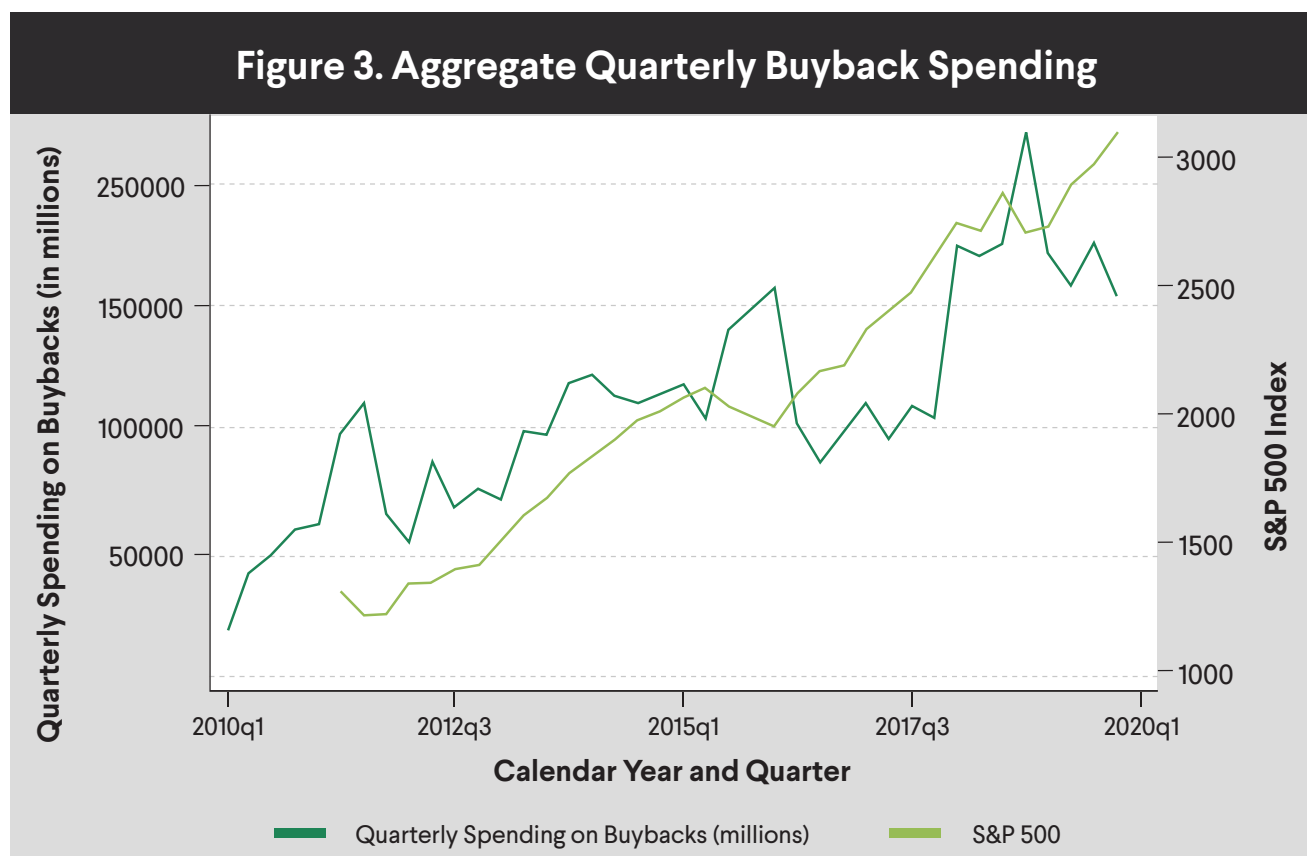
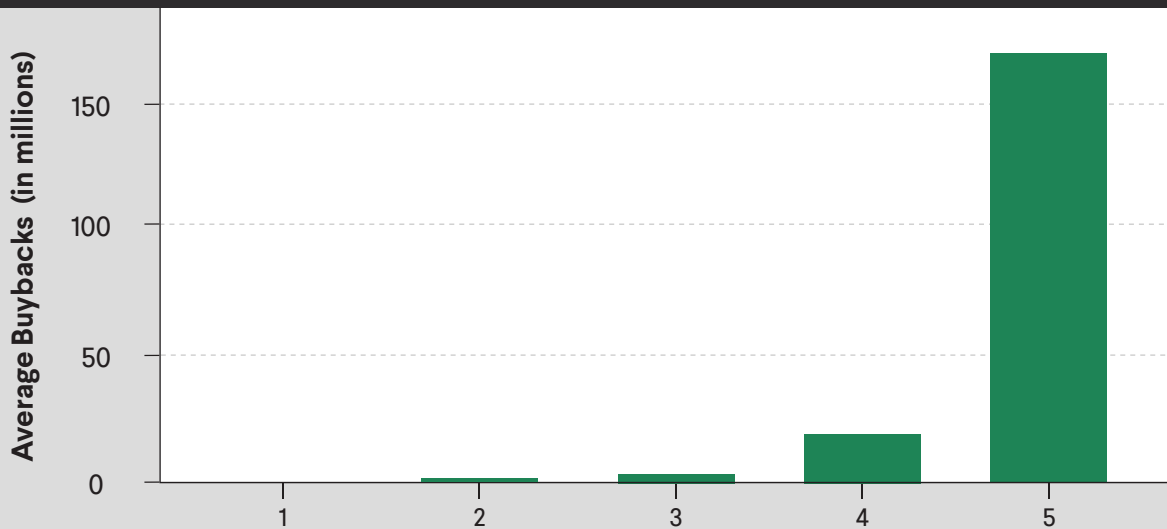


Figure 4. Average Quarterly Buyback Spending



Figure 5. Average Buybacks by Firm Revenue Category

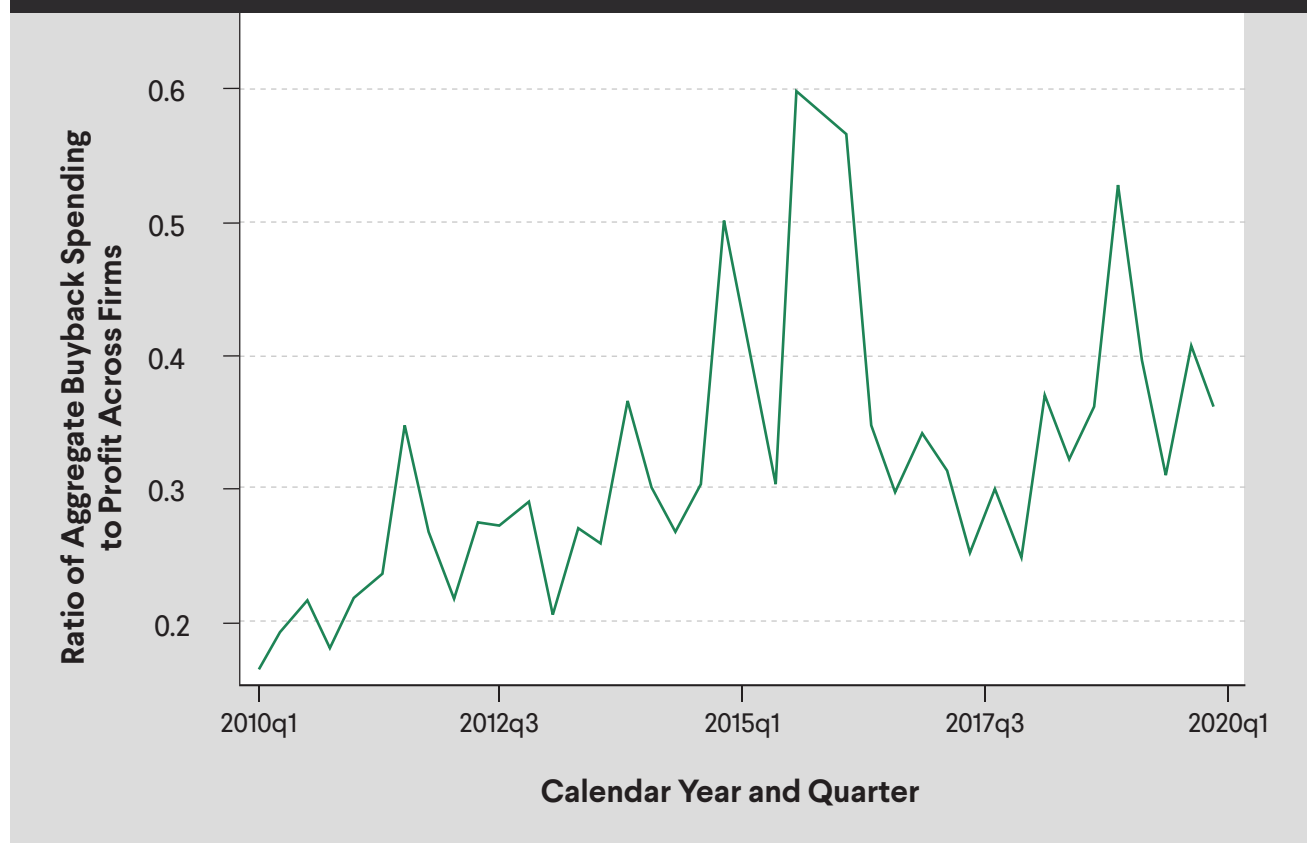


Note: Average buybacks by firm revenue quintile, 2010–2019.

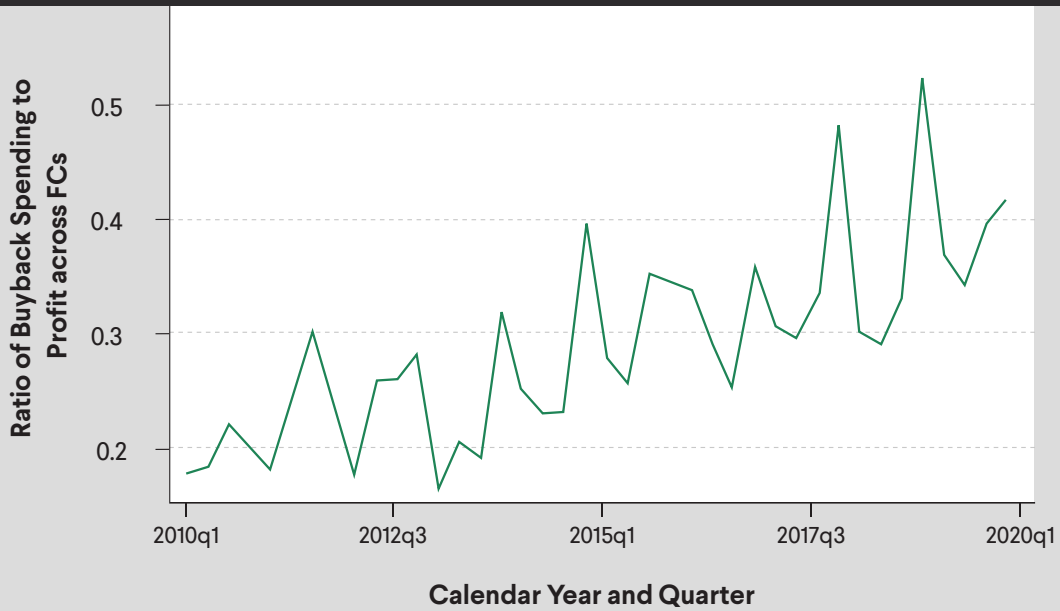
Spending on Stock Buybacks as a Ratio of Net Income

It is useful to go beyond total dollar amounts and understand the percentage of corporate net income that companies are spending on stock buybacks, as the portion of net income kept as retained earnings has been central to corporate innovation. Figure 6 shows the ratio of buyback spending to net income (profit/loss) for all firms. Spending by corporations on stock buybacks as a percentage of net income remained high for the entire decade, with some fluctuation mainly due to dips in profit. The ratio was especially pronounced for nonfinancial corporations. Aggregate spending on buybacks reached a high of 60 percent of net income in 2015, even including companies that did not conduct stock buybacks in a given quarter. Nonfinancial companies spent a high of over 80 percent of net income on stock buybacks in 2015 and fluctuated between 40 and 60 percent for much of the decade. This is a significant sum of funds that could have been retained but has instead been spent on stock buybacks.

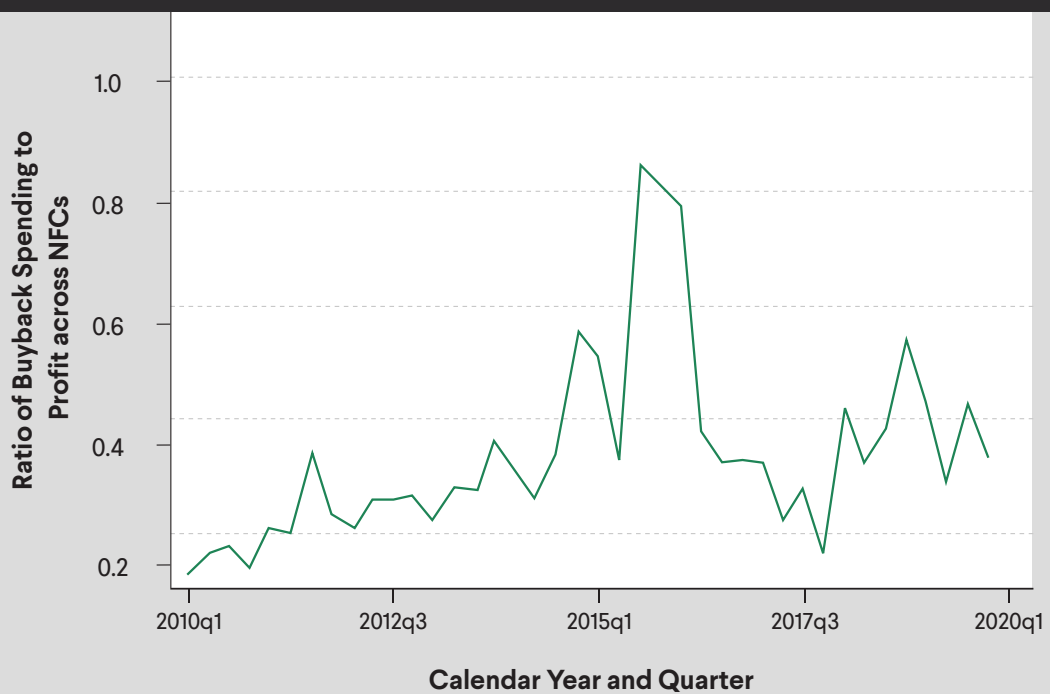
Figure 6. Ratio of Buyback Spending to Net Income



**Figure 7. Ratio of Buyback Spending to Net Income
(across Financial Corporations)**



**Figure 8. Ratio of Buyback Spending to Net Income
(across Non-financial Corporations)**



Industry and Sectoral Buyback Activity

It is critical to disaggregate spending on buybacks by sector, as buybacks cause different kinds of damage to the innovation process depending on the technological, market, and competitive characteristics of an industry. Spending on stock buybacks varies by industry and by company; however, no sector, even the Educational Services and the Arts, Entertainment, and Recreation sectors, fell below \$1 billion in total repurchases over the decade. Table 2 presents data on aggregate spending on buybacks by industry, organized by two-digit North American Industry Classification System (NAICS) codes. Total buyback activity ranged widely over industries, with the Manufacturing, Information, and Finance and Insurance sectors all spending more than \$1 trillion over the decade, while at the lowest end the Arts, Entertainment, and Recreation sector spent “just” \$7.5 billion, the Educational Services sector spent \$9.75 billion, and all other industries stayed below \$500 billion.

Table 2. Aggregate Buybacks per Two-Digit Industry (2010–2019)

NAICS Code	Sector	Aggregate Buybacks (in billions)
11	Agriculture, Forestry, Fishing and Hunting	14.77
21	Mining, Quarrying, and Oil and Gas Extraction	149.68
22	Utilities	27.01
23	Construction	26.29
31	Manufacturing	276.26
32	Manufacturing	1,006.04
33	Manufacturing	1,273.44
42	Wholesale Trade	83.74
44	Retail Trade	357.59
45	Retail Trade	159.06
48	Transportation and Warehousing	164.84
49	Transportation and Warehousing	31.98
51	Information	1,017.72
52	Finance and Insurance	1,261.43
53	Real Estate and Rental and Leasing	68.53
54	Professional, Scientific, and Technical Services	122.13
56	Administrative and Support and Waste Management and Remediation Services	51.84
61	Educational Services	9.75
62	Health Care and Social Assistance	46.58
71	Arts, Entertainment, and Recreation	7.55
72	Accommodation and Food Services	159.09
81	Other Services (except Public Administration)	8.55
99		80.89

Source: Author's calculation using SEC 10-K and 10-Q filings.

Table 3. The Largest Corporate Spenders on Stock Buybacks in the 2010s

Rank	Company	Buybacks 2010–2019 (\$ billions)	BB/NI (%)	DV/NI (%)	(BB+DV)/ NI (%)
1	Apple	320	76	21	97
2	Oracle	119	127	24	151
3	Microsoft	113	54	44	98
4	JP Morgan Chase	97	41	30	70
5	Wells Fargo	93	46	34	81
6	Exxon Mobil	92	35	45	80
7	IBM	89	72	37	108
8	Cisco Systems	86	106	44	150
9	Pfizer	77	60	55	116
10	Bank of America	73	58	28	86
11	Walmart	70	50	41	91
12	Intel Corp	68	52	36	88
13	Home Depot	64	93	45	137
14	Citigroup	63	56	17	73
15	Johnson & Johnson	62	49	62	110
16	Goldman Sachs	56	77	23	100
17	Qualcomm	55	133	59	192
18	Proctor & Gamble	55	52	64	117
19	Alphabet	52	31	0	31
20	Amgen	52	93	37	130
21	General Electric	50	135	179	313
22	AIG	49	110	15	126
23	Disney	48	61	24	85
24	VISA	47	77	19	96
25	Merck	46	81	91	172

Source: Author's calculation using SEC 10-K and 10-Q filings.

Sectors that are not commonly thought of as financialized are also spending significant funds on stock buybacks. The following section presents data on specific health care and education sectors to illustrate what high spending on stock buybacks has meant in the context of the pandemic. As Table 4 shows, buybacks in the Ambulatory Health Care Services sector (NAICS 621) peaked at nearly \$4.9 billion for the year 2019. Buybacks in Nursing Care and Residential Care Facilities, a sector in which the majority of funding comes from Medicare and Medicaid, peaked at nearly \$70.8 million for 2011. Buybacks by Hospitals peaked at \$3 billion for 2016. They fluctuated after this year but were still \$1.4 billion for 2019—the eve, as it turned out, of the COVID-19 crisis. Even the NAICS three-digit sectoral category 611 of Educational Service Firms has consistently engaged in stock buybacks. The sector's spending peaked in late 2014, when companies spent nearly \$80 million collectively on stock buybacks. The highest corporate spenders for each sector are presented in Table 8 in the Appendix.

Table 4. Aggregate Buybacks per Year by Select NAICS (3)

Ambulatory Health Care Services

NAICS (3)	Year	Aggregate Buybacks (millions)
621	2010	\$2,077.16
621	2011	\$2,868.33
621	2012	\$1,351.39
621	2013	\$3,264.44
621	2014	\$1,700.36
621	2015	\$1,542.37
621	2016	\$2,019.02
621	2017	\$4,783.89
621	2018	\$3,590.44
621	2019	\$4,958.73
621	Total	\$28,156.13

Hospitals

NAICS (3)	Year	Aggregate Buybacks (millions)
622	2010	\$327.09
622	2011	\$2,346.70
622	2012	\$297.27
622	2013	\$1,358.74
622	2014	\$2,188.89
622	2015	\$2,834.18
622	2016	\$3,082.33
622	2017	\$2,220.70
622	2018	\$1,593.71
622	2019	\$1,138.02
622	Total	\$17,387.63

Nursing and Residential Care Facilities

NAICS (3)	Year	Aggregate Buybacks (millions)
623	2010	\$3.80
623	2011	\$70.83
623	2012	\$3.01
623	2013	\$8.95
623	2014	\$12.46
623	2015	\$21.56
623	2016	\$50.63
623	2017	\$25.67
623	2018	\$15.52
623	2019	\$37.60
623	Total	\$250.03

Social Care

NAICS (3)	Year	Aggregate Buybacks (millions)
624	2010	-
624	2011	-
624	2012	-
624	2013	-
624	2014	\$221.57
624	2015	\$128.09
624	2016	\$112.80
624	2017	\$162.16
624	2018	\$129.84
624	2019	\$34.78
624	Total	\$789.24

Educational Services

NAICS (3)	Year	Aggregate Buybacks (millions)
611	2010	\$2,076.96
611	2011	\$2,191.96
611	2012	\$1,364.07
611	2013	\$432.17
611	2014	\$1,537.42
611	2016	\$335.96
611	2017	\$443.97
611	2019	\$654.19

Stock Buybacks and the Pandemic

In the midst of the COVID-19 pandemic, it is more important than ever to examine the effect of devoting funds to stock buybacks on specific sectors and companies that are critical to surviving a public health crisis. For example, the focus on maximizing shareholder value had specific harmful effects on product markets that became critical in 2020: ventilator and personal protective equipment (PPE) production. Lazonick and Hopkins (2020) document in detail the history of the development, production, and delivery of ventilators to the Strategic National Stockpile, showing that “the weakness of the [government-business collaborations engaged in production] appeared when these innovative manufacturers fell under the control of business corporations committed to the ideology of ‘maximizing shareholder value’” (Lazonick and Hopkins 2020, 1). In each of the two government contracts meant to produce ventilators for the national stockpile, the innovative ventilator companies (Newport Medical and Respironics) that retained profits and reinvested in productive capabilities were acquired by larger financialized companies (Covidien and Philips). This focus undermined the development and delivery of ventilators while prioritizing value extraction, in particular through the use of stock buybacks.⁸

A major feature of the pandemic has been employment loss, especially for low-income workers. While stock buyback activity certainly did not trigger the decline in economic activity that led to layoffs, it is useful to imagine how retained corporate funds could have been utilized. Certain sectors, such as the Information and Communication Technology sector (ICT), were major spenders on stock buybacks (negatively affecting their ability to innovate) but did not conduct layoffs once the pandemic hit, while other sectors, such as airlines and hotel companies, spent massively on buybacks pre-pandemic and also conducted major layoffs.

As a final method to illustrate the scale of spending on stock buybacks, we compare spending on stock buybacks during the 2010s with the estimated savings from employee layoffs during the COVID-

⁸ Lazonick and Hopkins (2020) detail the complete history of the shift in prioritization from innovation toward shareholder value maximization in the companies responsible for producing ventilators for the US national stockpile.

19 pandemic. This is a rough, back-of-the-envelope calculation, not meant to present an exact measure of the cost savings of job loss, but it can still illustrate the magnitude of spending on stock buybacks. We calculate employment losses from December 2019 to November 2020, and multiply the jobs lost by the average annual wage for production and nonsupervisory workers as reported by the Bureau of Labor Statistics in 2019 to find an estimate of the total wages lost to workers in these key sectors (in Table 5). Table 6 presents a comparison of total buybacks by each sector from 2010–2019 and the sector’s estimated lost wages due to the pandemic. We find that for Ambulatory Health Care Services and Hospitals, spending on buybacks was 446 percent of estimated lost wages, while for Hospitals it was 396 percent. In other words, health care corporations spent multiples more on buybacks in the previous decade than workers lost in the pandemic recession. For nursing homes and social care, spending on buybacks was far less, due to the much more decentralized business structure of those sectors.

Table 5. Layoffs and Earnings Loss in Key Sectors for Production and Nonsupervisory Employees

NAICS Code	Sector	Employment Loss Dec. 2019–Nov. 2020 (thousands)	Total Earnings Loss (thousands)
621	Ambulatory Health Care Services	143.3	\$6,314,411
622	Hospitals	70.5	\$4,392,821
623	Nursing and Residential Care Facilities	254.8	\$7,492,648
624	Social Care	283.2	\$6,645,140
	Total	751.8	\$24,845,022

Source: Bureau of Labor Statistics (Employment Data) & Current Employment Survey (Earnings Loss)

Table 6. Comparison of Earnings Loss in 2020 and Aggregate Buybacks (2010–2019)

NAICS Code	Sector	Earnings Loss	Buybacks	
621	Ambulatory Health Care Services	\$6,314,411,324	\$28,156,134,000	446%
622	Hospitals	\$4,392,821,160	\$17,387,627,800	396%
623	Nursing and Residential Care Facilities	\$7,492,648,800	\$250,026,619	3%
624	Social Care	\$6,645,140,736	\$789,238,260	12%

CONCLUSION

The nation's recovery from the COVID-19 pandemic must not simply be a return to the value-extracting economy of the last four decades. Before the pandemic hit, the corporate governance ideology of shareholder primacy contributed to the country's widening income and wealth inequality by disproportionately directing corporate funds to white, wealthy households who own 85 percent of corporate stock, while workers experienced four decades of wage stagnation (Federal Reserve Distributional Financial Accounts 2021). In the next decade, policymakers can choose to redirect the nation's corporate resources toward innovation and sustainable prosperity by restricting the extractive practice of stock buybacks. Though policy design is critical, it is clear that there is a range of options available to both Congress and, failing congressional action, to the Securities and Exchange Commission. New leadership in the federal government should prioritize reining in stock buybacks, as there is no sign that companies are going to abandon them on their own in 2021.

APPENDIX I

Table 7. Aggregate Spending on Open-Market Stock Buybacks by Quarter

Calendar Quarter	Buyback Spending (in millions)
2010q1	\$67,965.13
2010q2	\$91,553.22
2010q3	\$98,315.40
2010q4	\$108,050.10
2011q1	\$110,796.50
2011q2	\$147,644.40
2011q3	\$160,333.50
2011q4	\$114,729.10
2012q1	\$103,418.20
2012q2	\$136,312.30
2012q3	\$117,853.20
2012q4	\$125,361.70
2013q1	\$120,486.50
2013q2	\$149,014.10
2013q3	\$147,271.80
2013q4	\$168,548.60
2014q1	\$171,800.60
2014q2	\$163,393.50
2014q3	\$160,578.20
2014q4	\$164,471.40
2015q1	\$168,288.10
2015q2	\$154,067.10
2015q3	\$190,014.00
2015q4	\$201,876.30
2016q1	\$207,186.80
2016q2	\$152,072.90
2016q3	\$135,910.60
2016q4	\$148,237.50
2017q1	\$160,187.00
2017q2	\$145,372.90
2017q3	\$159,159.70
2018q1	\$224,730.00
2018q2	\$220,313.90
2018q3	\$225,570.00
2018q4	\$270,629.00
2019q1	\$221,511.20
2019q2	\$208,011.40
2019q3	\$225,490.00
2019q4	\$203,595.30
2020q1	\$245,281.30
2020q2	\$88,674.98
2020q3	\$83,988.61

Table 8. Top Corporate Spenders by NAICS (3)

Ambulatory Health Care Services

NAICS	Sector	Aggregate Buybacks (2019) in Millions
621	Davita Inc.	\$2,402.53
621	Humana Inc.	\$870.04
621	Fresenius Medical Care AG&Co.	\$581.39
621	Laboratory CP of Amer Holdings	\$464.41
621	Quest Diagnostics Inc.	\$365.68
621	Mednax Inc.	\$145.30
621	Chemed Corp.	\$92.63
621	Amedisys Inc.	\$9.40
621	LHC Group Inc.	\$9.29
621	Apollo Medical Holding Inc.	\$7.31

Hospitals

NAICS	Sector	Aggregate Buybacks (2019) in Millions
622	HCA Healthcare Inc.	\$1,030.96
622	Encompass Health Corp.	\$62.54
622	Select Medical Holdings Corp	\$38.52
622	Community Health Systems Inc.	\$3.60
622	Acadia Healthcare Co. Inc.	\$2.27
622	Quorum Health Corp.	\$0.13
622	Amedisys Inc.	\$9.40
622	LHC Group Inc.	\$9.29
622	Apollo Medical Holding Inc.	\$7.31

Education Services

NAICS	Sector	Aggregate Buybacks (2019) in Millions
611	Laureate Education Inc.	\$270.87
611	Adtalem Global Education Inc.	\$242.41
611	Grand Canyon Education Inc.	\$43.93
611	American Public Education	\$40.50
611	Bright Scholar Edu - Adr	\$39.12
611	Perdoceo Education Corp.	\$6.63
611	Sunlands Tech Group - Adr	\$4.54
611	Graham Holdings Co.	\$1.86
611	Rise Edn Cyn Ltd - ADS	\$1.58
611	Laix Inc. - ADR	\$1.53

Nursing and Residential Care Facilities

NAICS	Sector	Aggregate Buybacks (2019) in Millions
623	Brookdale Senior Living Inc.	\$23.02
623	Ensign Group Inc.	\$13.71
623	National Healthcare Corp.	\$0.84
623	Five Star Senior Living Inc.	\$0.03

Social Care

NAICS	Sector	Aggregate Buybacks (2019) in Millions
624	Bright Horizons Family Solutions	\$34.78

APPENDIX II

Table 9. Current Legislative Proposals to Limit Stock Buybacks

Name & Year	Sponsors & Co-sponsors	Description
Reward Work Act (2019)	Author: Sen. Tammy Baldwin (D-WI) Cosponsors: Sen. Kirsten Gillibrand (D-NY), Sen. Bernie Sanders (I-VT), Sen. Elizabeth Warren (D-MA) Also introduced in the House by: Rep. Jesús G. "Chuy" García (D-IL) and Rep. Ro Khanna (D-CA)	Repeals SEC Rule 10b-18 to end stock buybacks by removing immunity from manipulation charges. Institutes a rule that no issuer may register securities on a national exchange unless one-third of the firm's directors are chosen by employees through a one-employee, one-vote process.
Schumer & Sanders NYT Op-Ed (2020)	Authors: Sen. Chuck Schumer (D-NY) & Sen. Bernie Sanders (I-VT)	They plan to introduce a bill that would ban stock repurchases unless a firm meets the following conditions: <ul style="list-style-type: none"> • providing a \$15 minimum wage; • providing seven days of paid sick leave; and • offering decent pensions and reliable health benefits.
Corporate Accountability and Democracy Plan	Author: Sen. Bernie Sanders (I-VT)	Obligates firms with over \$100 million in revenue and with a \$100 million balance sheet total to: <ul style="list-style-type: none"> • build up to 20 percent stock ownership by employees; • require 45 percent of the Board of Directors to be chosen by employees; and • obtain a Federal Charter that requires boards to consider the interests of all stakeholders. <p>Repeals SEC rule 10b-18 to end stock buybacks.</p> <p>Establishes a \$500 million Employee Ownership Bank that will assist workers with loans, guarantees, and technical assistance to purchase their own businesses via Employee Stock Ownership Plans (ESOPs) or Eligible Worker-Owned Cooperatives.</p> <p>Requires firms that displace labor for automation or outsourcing to share gains with workers via conveyed shares.</p> <p>Guarantees a Right of First Refusal via the Employee Ownership Bank.</p> <p>Creates Worker Ownership Centers to assist retiring small business owners in selling their firms to their employees.</p> <p>Requires a significant proportion of corporate boards to be composed of people from historically underrepresented groups.</p> <p>Has a Shareholder Democracy Component that:</p> <ul style="list-style-type: none"> • States that every employee should have a right to vote in the firm and have a voice in setting their wages; • Bans actions by asset managers without explicit instructions from those whose money they manage; and • Says that savers should be able to elect representatives who set voting policy in corporations, multi-employer pensions, single-employer pensions, and 401K funds. <p>Organizes sectoral pensions.</p>

Table 9. Current Legislative Proposals to Limit Stock Buybacks (continued)

Name & Year	Sponsors & Co-sponsors	Description
<p>Stock Buyback Reform and Worker Dividend Act of 2019 (S. 2391)</p>	<p>Author: Sen. Sherrod Brown (D-OH)</p>	<p>Requires public companies to pay workers \$1 for every \$1 million they spend on dividends, special dividends, or stock buybacks.</p> <p>Lowers the permissible level of stock buybacks and imposes new reporting requirements.</p> <p>Converts the safe harbor rule to a mandatory prohibition on excessive buybacks.</p> <p>States that if employers fail to meet worker dividend requirements, there will be a five-year moratorium on new buybacks and a private right of action for employees.</p>
<p>Worker Dividend Act of 2019 (S. 2514)</p>	<p>Authors: Sen. Cory Booker (D-NJ), Sen. Bob Casey (D-PA), and former Sen. Joe Kennedy (D-MA) (House version)</p>	<p>Applies to all publicly traded companies with at least \$250 million in earnings in a given year. A total obligation to employees would be calculated as the lesser of the total in profits above \$250 million or 50 percent of the firm's buybacks.</p>

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