



A Public Option for Asset Management in the United States

Lenore Palladino

April 2022

About the Author

Lenore Palladino is Assistant Professor of economics and public policy at the University of Massachusetts Amherst. She is a fellow at the Roosevelt Institute and a research associate at the Political Economy Research Institute. She holds a PhD from the New School University in economics and a JD from Fordham Law School. She is also a contributing editor at the *Boston Review* and a fellow at the Rutgers Institute for Employee Ownership. Most recently, Lenore was Senior Economist and Policy Counsel at the Roosevelt Institute, and a lecturer in economics at Smith College.

Lenore's research centers on corporate power, stakeholder corporations, shareholder primacy, and the relationship between corporate governance and the labor market. She has also written on financial transaction taxes, employee ownership, and the rise of fintech. She has published in *Politics & Society*, the *International Review of Applied Economics*, the *Yale Journal of Regulation*, and *Fordham Journal of Corporate and Financial Law*, as well as the *Financial Times* and *State Tax Notes*. Lenore frequently works with policymakers, media, and advocates on corporate and financial policy, and has testified on the impacts of stock buybacks before the House Financial Services committee.

Acknowledgments

The author thanks Chirag Lala, Kristina Karlsson, Rhiana Gunn-Wright, Todd Tucker, and Saule Omarova for their comments and insight. Roosevelt staff Sonya Gurwitt and Matt Hughes, and Beryl Frishtick, also contributed to this project.

ABOUT THE ROOSEVELT INSTITUTE

The Roosevelt Institute is a think tank, a student network, and the nonprofit partner to the Franklin D. Roosevelt Presidential Library and Museum that, together, are learning from the past and working to redefine the future of the American economy. Focusing on corporate and public power, labor and wages, and the economics of race and gender inequality, the Roosevelt Institute unifies experts, invests in young leaders, and advances progressive policies that bring the legacy of Franklin and Eleanor into the 21st century.

ABSTRACT

Asset managers—financial institutions like BlackRock, State Street, and Vanguard—manage trillions of dollars of US household financial assets. The role of asset managers is to purchase and hold legal title to securities on behalf of economic beneficiaries, engaging in corporate governance with the goal of increasing the financial value of the portfolio, rather than the long-term multifaceted interests of such households. These private asset managers profit by increasing the financial value of assets under management. The sector's consolidation, orientation toward shareholder value maximization, and extraction of value from households entrusting them with their financial assets gives them a startling amount of control in the US economy. I propose establishing a public asset manager, which would act as a public option for pooled funds primarily holding widely diversified portfolios of stocks and bonds. This working paper explores the evolution of the asset management industry and explains how establishing a public asset manager would be one solution—though not a silver bullet—to shift the financial system toward serving the interests of the people and social systems on which it depends.

INTRODUCTION

"The fetters which bind the people are forged from the people's own gold." —Louis Brandeis (1914)

Private asset managers are the most powerful holders of corporate securities in the United States, acting as gatekeepers between US non-wealthy households and nonfinancial companies whose stock and bonds are traded publicly (Braun, 2021). To provide an institutional intervention that reduces the harms of "asset management capitalism," I propose establishing a public asset manager: a public financial institution that can manage financial assets on behalf of economic beneficiaries, serving the public interest. This working paper explores the evolution of the asset management industry and explains how establishing a public asset manager would be one solution to shift the financial system toward serving the interests of the people and social systems on which it depends (Alexander, 2018).

Asset managers take on the responsibility of managing funds, such as pension and mutual funds, into which individuals and families place money that they are not spending on consumption—whether on their own or through an employer. The asset management industry helps to relieve individual investors of the responsibility of deciding what financial assets to purchase based on their risk-return profile. Asset managers hold legal title to the purchased stocks and bonds, though they are not the “economic beneficiary”—the economic actors who are ultimately supposed to receive the economic gain in exchange for entrusting their assets to the funds, and who empower the asset manager to make decisions and pay them a fee. In other words, the gains—and losses—from the increase in the economic value of stocks flow to the beneficial investor (the employee or household) while asset managers are compensated in fees based on the size of the pool of assets that they manage, which incentivizes them to try to capture market share and increase the amount of money under management as much as possible (Birdthistle, 2016). The recent proliferation of “retail investing” using apps like Robinhood has drawn attention to individual investing, but most non-liquid, non-accredited investor¹ household financial assets are still channeled through multiple institutions—a pension or mutual fund, which delegates decision-making to an asset manager and which then may invest in its own funds, holds equity that is traded on the stock exchanges or holds bonds and other financial instruments.

The harms inherent in the asset manager sector, and the motivation for a public asset manager, come from the structure of the sector, and the way their responsibilities to both households and corporations have been defined and practiced. Asset managers choose how to direct the financial assets in their care and engage in corporate governance with the companies where they direct assets *on behalf of* the economic beneficiaries whose assets they are managing. These funds are meant to

¹ “Accredited investors” are wealthy and/or financially knowledgeable individuals whose income and/or net worth places them under different securities regulations. For more details, see <https://www.sec.gov/news/press-release/2020-191>.

serve the interests of those who part with income or savings to purchase financial assets.² However, “interests” has been incorrectly defined in both popular understanding and in law as simply financial interests, rather than the broader interest that households have in a healthy planet and sustainable economy (Palladino and Alexander, 2021). For example, asset managers continue to support the fossil fuel industry, despite asset managers claiming that they support a net-zero carbon economy (Cuvelier, 2021; Majority Action, 2021).

In terms of the corporations whose securities are held by asset managers, the purchase of corporate stocks and bonds has been traditionally viewed as resources that would be available to companies to pursue innovation in the goods and services economy. However, corporate stocks and bonds of publicly traded corporations are mainly traded among asset holders today, meaning that funds do not actually flow back to companies. In the financial markets of the 21st century, shareholders are often no longer “investors” but rather traders (Lazonick, 2017). Understanding the new configuration of the financial sector is critical to widening the aperture on the asset manager industry and understanding the potential benefits or harms of a public option for asset management.

The asset management industry has grown rapidly over the last several decades in the United States and around the world, and asset management leaders like Larry Fink of BlackRock are key voices in economic policymaking. The drivers of the growth of assets under management (AUM) and the asset management industry (AMI) globally are manifold: There has been an increase in the pool of savers, who have grown older and richer; wealth-to-income ratio has continued to grow, meaning that there is more wealth to be managed; and as life expectancy has grown and public and employer-provided pensions have shrunk, private reliance on investment to provide for economic security in retirement has grown (Epstein, 2019). The vast holdings of asset managers give them a great deal of power in corporate governance, whether they exercise it or not (Bebchuk and Hirst, 2019; Braun, 2021). Yet asset owners—individuals and households saving for retirement with their employer or on their own—

² Wealthy households often invest directly either by buying specific corporate stocks on the national stock exchanges, or by investing through wealth managers in private funds that are only available to wealthy households.

generally have no choice in whether or not their assets are managed by a private asset manager, nor do they have a voice in the corporate governance decisions that asset managers make. Establishing a public option for asset management is therefore critical to reorient financial assets toward the long-term interests of households.

This working paper illustrates the potential of a public asset manager for US households and nonfinancial corporations. Building on a previous Roosevelt Institute issue brief, [“The Potential Benefits of a Public Asset Manager”](#) (Palladino and Lala, 2021), this working paper adds important historical context to the political economy of asset managers in the 20th and 21st centuries and further develops key policy questions for implementing a public asset manager. It examines both the current framework that guides how household financial assets are directed, and the benefits that a public asset manager—as *one* option for asset management, though not to the exclusion of existing private asset managers—would provide to households in the United States. First, I will briefly review the relationship between financial institutions and nonfinancial corporations in the 20th century, focusing on the rise of the institutional shareholders post-World War II that moved households away from direct holdings of corporate equity. Second, I will discuss in more detail the rise of the asset manager industry in the 21st century, focusing on the market structure and its relationship to business corporations and household capital. Next, I discuss the proposal for a public asset manager and present two primary benefits: one, as an entity with the ability to redirect household investments in a manner that is aligned with their overall economic interest in a healthy planet and equitable economy; and two, as a public option that changes the incentives for private asset managers and reduces their ability to extract household wealth for themselves. Finally, I offer a brief conclusion and issues for further research.

Before making the case for a public asset manager, it is important to note that this proposal will not solve problems of underfunded pension liabilities, nor will it provide a mechanism for a transition to guaranteed retirement paid for through fiscal policy. Importantly, determining the substantive strategy for real economy investment is not contemplated as in the purview of the public asset manager—that is the role of government. Whether and how these two mechanisms should be linked

is a major area for future research. This proposal should also be distinguished from other proposals that seek to establish mechanisms for increasing financing for proposals like the Green New Deal. The underlying question of this working paper is: How can currently existing household financial assets flow through the financial system in a way that meets the actual interests of those households who have sacrificed current consumption, in which they do not lose massive amounts of funds to fees and do not have their funds used for financial gain at the expense of a livable society and planet? This relatively modest proposal for a public asset manager fits into the larger framework of public options in finance in the United States.

THE GROWTH OF MONEY MANAGERS AND INSTITUTIONAL SHAREHOLDERS

To motivate the proposal for a public asset manager, it is important to understand the evolution of financial institutions and their relationship to both households and nonfinancial corporations over time. Today, just three large asset managers dominate the sector—Blackrock, Vanguard, and State Street—a result of the rising volume of retirement savings, passive investing strategies, and modern shareholder primacy. Yet the power of “money trusts” dates back to the beginning of US industrialization and the Great Merger Movement of the 1890s, and in fact was a central concern of social reformers in the Progressive Era and New Deal (Brandeis, 1914; Bratton, 2007; Kotz, 1980; Steele, 2020). In this section, I briefly examine the interplay of bankers and other types of financial institutions with both households looking to have financial assets managed, and with nonfinancial companies whose equity was being bought and sold throughout the late 19th and 20th century. The continuities and changes in the 21st century will be the subject of the next section.

Financial control of industrial enterprises emerged and became an important phenomenon in the period spanning 1865–1914. Investment trusts financed the major industrial developments, including mills, railroads, and steel during the Great Merger Movement, which was centered around

the period from 1898—1903 (Kotz, 1980; Lamoreaux, 1985; Novak, 2019). Large banks holding investment trusts exercised control with their ability to issue equity, which most large and growing corporations needed to finance the growth of their industrial enterprises (Kotz, 1980). The concentrated “money trusts,” led by the House of Morgan, exercised actual control over industrial enterprises through interlocking directorates, including the mergers and acquisitions that concentrated industrial enterprises and were a central focus of economic reformers (Steele, 2020). Rudolf Hilferding recognized as early as 1910 that financial institutions dominated the new economy, and noted their anti-competitive tendencies (Kotz, 1980).

During the Progressive Era, reformers took aim at the “social control of business” (Sklar, 1988). Louis Brandeis, who published *Other People's Money* in 1914, documented the three largest banks and their leaders that led the money trust exercising control over large corporations and preventing competition among them (Brandeis, 1914; Davis, 2008). As described by Graham Steele, the Congressional Pujo Committee of 1912:

[D]ocumented a network of “money trusts,” a small cadre of financial companies that controlled vast amounts of financial wealth in the form of shares and directorships in companies from railroads to utilities to industrial firms. At the center of the web of trusts was J.P. Morgan & Co. The “dominating power” of Pierpont Morgan, the bank’s namesake, was “so universally recognized in the financial world that even the leaders humbly bow to it.” The Committee concluded that the implications of the anticompetitive issues raised by concentrated ownership and control were “fraught with too great peril to our institutions to be tolerated.” (Steele, 2020, p. 4)

Finance capitalism changed rapidly in the United States around the time of World War I, in part due to the efforts of the Progressive Era reformers (Sklar, 1988; Sweezy, 1941). The Clayton Act limited shared directors among competitors while companies acquired the ability to finance production and innovation out of retained earnings (Chandler, 1990). Shareholding became dispersed and managers took over. This transition led to the “dispersion of control” in the 1920s, described by Berle and Means in *The Modern Corporation* (Berle and Means, 1932). Although early 20th-century corporate governance debates focused on the then-contested distinction between corporate ownership and control, as

shareholders no longer played a meaningful role in business decisions, mid-century US corporations had entrenched managers as the key decision-makers, accountable to the development of the business itself and multiple corporate constituencies (O'Sullivan, 2000). Shareholders in the mid-century expected to earn steady dividends by holding corporate equity but did not generally seek to exercise authority vis-à-vis management (Shin, 2018). This led economists like Paul Sweezy to conclude in 1941 that the power of the investment banker had declined and possibly disappeared as retained earnings grew in importance as the main source of finance for industrial corporations (Sweezy, 1941). Sweezy claimed that "the investment banker ruled up until the crash, but then he suffered a 'dramatic eclipse, [and that] such power as he still retains is largely rooted in a past that is gone forever'" (Sweezy, 1941, p. 380). The key drivers that Sweezy points to were the separation of commercial and investment banking in 1934 and institutions like the Reconstruction Finance Corporation that were set up during the New Deal to perform the financial functions that formerly required private financial institutions. After World War II, corporate managerialism was firmly in place (Chandler, 1990; Drucker, 1946).

By the 1960s, the rise of institutional shareholders—pensions and mutual funds—shifted the dynamics which have resulted in asset manager capitalism by further increasing shareholder power once again (van der Zwan, 2017; Jacoby, 2021). Early workplace pensions were put in place as part of the move toward welfare capitalism, such as at Kodak in 1929 (Jacoby, 1998). However, pension plans accelerated post-World War II, and the growth of pension funds was a result of union collective bargaining, culminating in the 1949 Supreme Court case *Inland v. NLRB* (Baum and Stiles, 1965). Corporate pensions were beneficial to the employer because they were a form of compensation on which the employer did not have to pay employee taxes, but corporate pensions were required to hold "safe" assets—i.e., not corporate stock. In the 1960s, commercial bank trust departments went from managing personal trusts, in which the economic beneficiary retained voting control, to employee benefit (pension) trusts, in which voting control passed to the bank, which held legal title but was not the economic beneficiary of the security (Baum and Stiles, 1965). As pension assets grew, institutional shareholders began to seek power in corporate governance (Jacoby, 2021). By 1968, the Patman Report noted (in an echo of the Pujo Committee), "the major banking institutions in this country are

emerging as the single most important force in the economy.” Similarly, the SEC Institutional Investor Study Report claimed that “large institutions, particularly banks, have the potential economic power to exert significant influence over many companies whose securities comprise their portfolios, particularly large companies . . . [yet they] tend to be reluctant to exercise their power, particularly in an open and public way” (Kotz, 1980).

The turning point that brought us to our modern-day idea of money-manager capitalism in the United States can perhaps be pinned to the signing of the Employee Retirement Income Security Act (ERISA)³ in 1974, and, more broadly, to the trend of pension funds being invested in corporate equity (van der Zwan, 2017). ERISA, intended to support workers, imposed regulatory burdens that reduced employers’ interests in maintaining and managing defined benefit plans, precipitating the shift to individually held defined contribution retirement accounts, which retained tax benefits to incentive retirement savings. However, as pensions moved from defined benefit to defined contribution, risk was shifted from employer to employee (Gelter, 2013). This supply-side shift tied the interests of workers directly to the financial markets, as workers became “forced capitalists,” and workers’ retirement savings started the shift from pension funds to mutual funds (Strine, 2018).

In the 1970s and 1980s, the rise of modern portfolio theory created changes in the understanding of prudence to adjusting risk across the entire portfolio (Lukomnik and Hawley, 2021). Whereas “prudent man” standards had previously required pensions to invest mainly in fixed-income assets (primarily government securities) in order not to engage in speculation or undue risk, a shift in the 1970s under the influence of modern portfolio theory made the “prudent man” standard inherently procedural, and cleared the way for mass participation of pension funds in the equity markets and shifting retirement security toward reliance on the fluctuations in the global financial markets (van der Zwan, 2017). For the pension funds that remained, principally in the public sector, the retirement security of pensioners also became increasingly tied to financial markets. Public pensions shifted into equities only in the 1980s after amendments were made to state pension law, causing the sudden

³ For more information, see the Department of Labor, ERISA: <https://www.dol.gov/general/topic/retirement/erisa>.

entrance of public pension funds like CalPERS into shareholder activism (Gelter, 2012). The rising reliance of households on financial assets led to the increase in asset managers, whose purported role in choosing investments also shifted as index funds and diversification became more and more common. This transition will be explored in the next section.

21ST CENTURY ASSET MANAGERS

In this section, I describe the rise of the asset manager sector as it exists in the 2020s. To understand its structure, it is useful to briefly describe its economic base: the financial asset holdings of US households today.

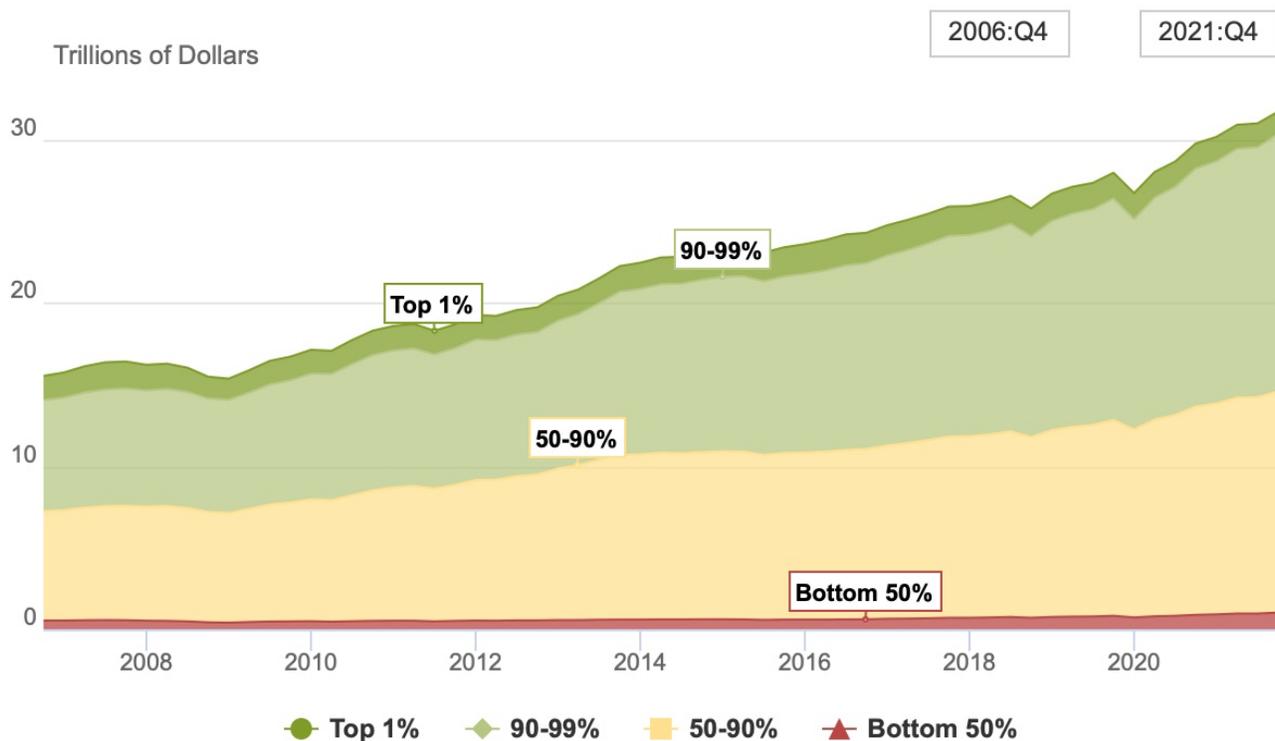
US Household Financial Assets in the 2020s

Asset managers only function by accessing “other people’s money,” in the words of Louis Brandeis (1914). Their profits depend on the growth of the underlying financial assets that are entrusted to them. Not so long ago, many non-wealthy households did hold stock or purchase the bonds of a specific corporation, whether through their employer or simply due to their own preferences. Most non-wealthy US households save for retirement and other financial lifecycle goals by purchasing financial assets in pooled funds either through their employer or directly through an aggregator like a mutual fund. In doing so, they do not have a great deal of choice—either their employer makes the choice for them, or they choose from a relatively small number of financial institutions (Birdthistle, 2016).

Today, the main financial asset of non-wealthy households is a retirement account. While there has been an overall growth of retirement assets in the last ten years, Individual Retirement Accounts (IRAs) and Defined-Contribution retirement plans have seen significant increases, while Defined-Benefit pensions have declined, especially outside the public sector. In 2007, IRAs and DC plans made up over 50 percent of the total value of retirement assets; by 2019, that number had risen to 60

percent. The implications of this distribution of assets are that while most financial wealth is concentrated among wealthy, white households, a far larger set of households are impacted by the decisions made within the financial system. For the majority of households, the economic benefits they earn from their financial assets are based on allocation decisions made by asset managers and decisions that impact market value that are either macroeconomic or specific to a given sector or company.

Pension entitlements by wealth percentile group



Source: Survey of Consumer Finances and Financial Accounts of the United States

(Chart can be found at:

<https://www.federalreserve.gov/releases/z1/dataviz/dfa/distribute/chart/#quarter:129;series:Pension%20entitlements;demo%20graphic:networth;population:1,3,5,7;units:levels>)

The notion that middle-class households save for retirement by holding corporate stock justifies the dominant corporate governance ideology of “shareholder primacy,” which claims that the purpose of corporate production is to increase the wealth of shareholders, who face the most risk by “investing” in the company through their purchase of stock (Lazonick, 2017). As households have shifted from owning stock directly to placing their savings in pooled funds that are managed by asset manager

companies, non-wealthy households no longer have a sense of actual ownership of specific corporate stocks—nor do they engage in corporate governance in any meaningful sense.

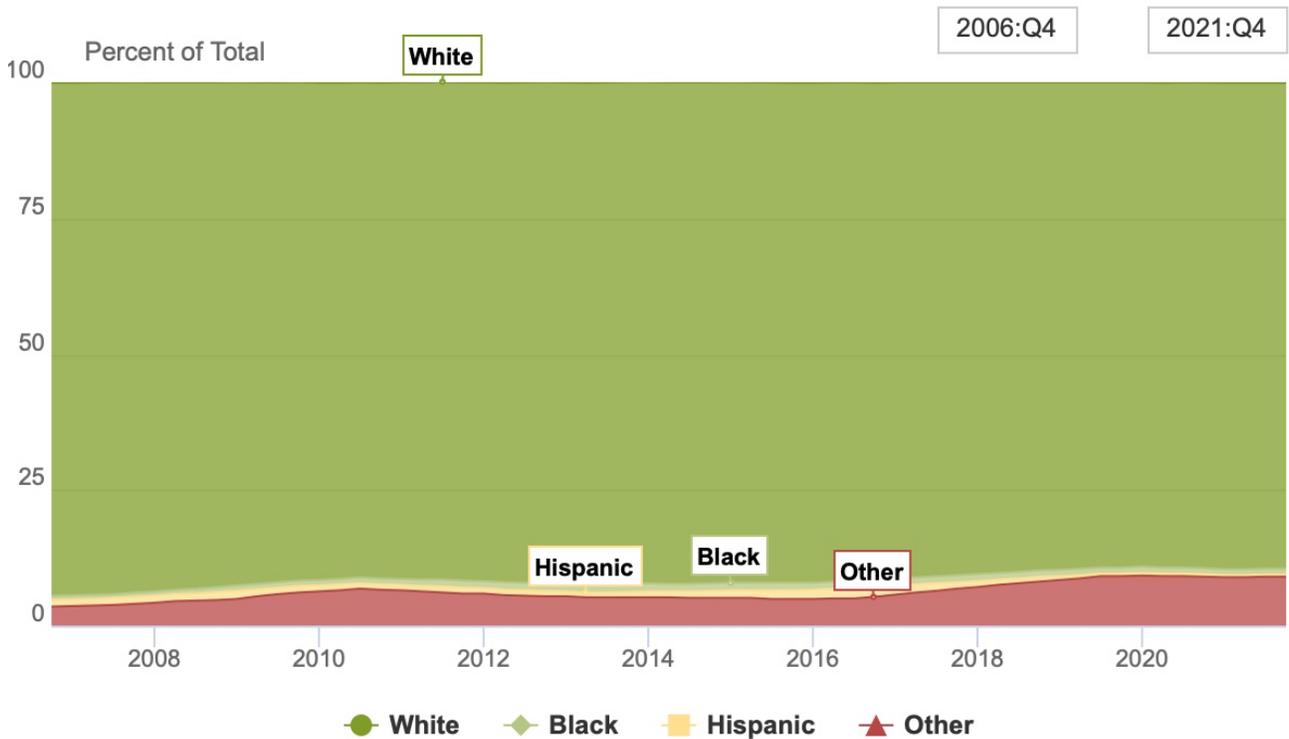
Moreover, shareholder primacy is a flawed conception of the corporation that is used to justify manager and corporate board decisions like increasing share prices by squeezing labor costs or using pollutants in production processes, or choosing to spend corporate profits on stock buybacks, which enrich share sellers at the expense of shareholders. The practices of shareholder primacy perpetuate wealth and income inequality and the racial wealth gap: The wealthiest 10 percent of US households own 85 percent of corporate stock in terms of its dollar value. These wealthy, almost entirely white households are the main beneficiaries of corporate shareholder primacy (Palladino and Alexander, 2021). While the focus here is on asset management, it is necessary to be clear-eyed about the need to reconceive the corporation as an innovative enterprise and understand the role of household shareholders in the economic decisions of such enterprises (Lazonick, 2019).

Today, American households' financial assets are the bedrock of financial markets. As of the fourth quarter of 2020, there was \$30 trillion invested in the United States in employer-held retirement accounts and \$33.5 trillion in other corporate equity and mutual funds.⁴ Though corporate equity holdings are highly unequal by household wealth and race, these financial assets still represent the savings for the future of millions of American families. Employer-held funds are highly stratified by the wealth of the household and by race and ethnicity. As of the fourth quarter of 2020, the bottom 50 percent of US households by wealth held just 3 percent of pension entitlements and just 0.6 percent of other corporate equity and mutual funds. Pension entitlements are concentrated at the top, with the top 10 percent of households by wealth holding 54 percent of pension entitlements, and 88 percent of other corporate equity. Stratification is even starker by race due to intergenerational transmission of wealth, labor market discrimination, and many other factors rooted in structural racism: White households hold 80 percent of pension entitlements and 90 percent of corporate equity, while Black

⁴ Distributional Financial Accounts, Federal Reserve 2021.

households own just 1 percent of corporate equity and 8 percent of pension entitlements, and Hispanic households own 0.4 percent of corporate equities and 3.1 percent of pension entitlements.⁵

Corporate equities and mutual fund shares by race



(Chart can be found at:

<https://www.federalreserve.gov/releases/z1/dataviz/dfa/distribute/chart/#quarter:129;series:Corporate%20equities%20and%20mutual%20fund%20shares;demographic:race;population:all;units:shares;range:2006.4,2021.4>)

Financial asset ownership is even more concentrated than other major asset classes. The top 10 percent of US households by wealth own 88 percent of non-pension corporate equity and 50 percent of pension entitlements. When viewed by income percentile, the bottom 40 percent of US households by income hold just 5 percent of pension entitlements and the bottom 80 percent hold just 13 percent of non-pension corporate equity and mutual funds. White households hold 90 percent of corporate equities and mutual funds, Black households hold 1 percent, and Hispanic households hold 0.4

⁵ The Federal Reserve’s Distributional Financial Accounts do not report wealth for additional racial and ethnic groups, except as a generic “Other” category, which includes mixed-race households. For more background, see [“The Contribution of Shareholder Primacy to the Racial Wealth Gap,”](#) Palladino 2020.

percent (while the rest is held by an “other” category). White households hold 80 percent of pension entitlements, while Black households hold 8 percent and Hispanic households hold 3 percent (Board of Governors of the Federal Reserve 2021a).

The share of households with retirement accounts is broader: 35 percent of Black households have a retirement account, as do 25 percent of Hispanic households (Board of Governors of the Federal Reserve 2021b). By contrast, 57 percent of white households have retirement accounts (Board of Governors of the Federal Reserve 2021). Over half of households in the middle of the income distribution (between 40 and 60 percent) have a retirement account (Board of Governors of the Federal Reserve 2021b). However, actual dollar holdings are very different at the median for Black, Latinx, and white households.

Structure and Practices of the Asset Manager Industry

"Average investors would like diversity but cannot afford to assemble it by themselves, so they pay for the convenience and management that accompanies small slices of diverse investment pools, such as mutual funds and now ETFs." (Birdthistle, 2012, p. 180)

Much of these funds flow through the asset management sector, often intermediated through several layers of pension funds, mutual funds, asset managers, and other financial intermediaries. This complexity enables economic beneficiaries to hold diversified portfolios without much effort, but also enables corporate governance on their behalf but without their input. The remove that households have from their own funds also enables asset managers and other financial intermediaries to extract fees. Although these facets of the asset management industry are interrelated, I will review them in turn to provide clarity about the benefits of a public asset manager.

One additional critical component that has enabled asset managers to grow their assets under management has been the increased orientation toward index funds and function of asset managers

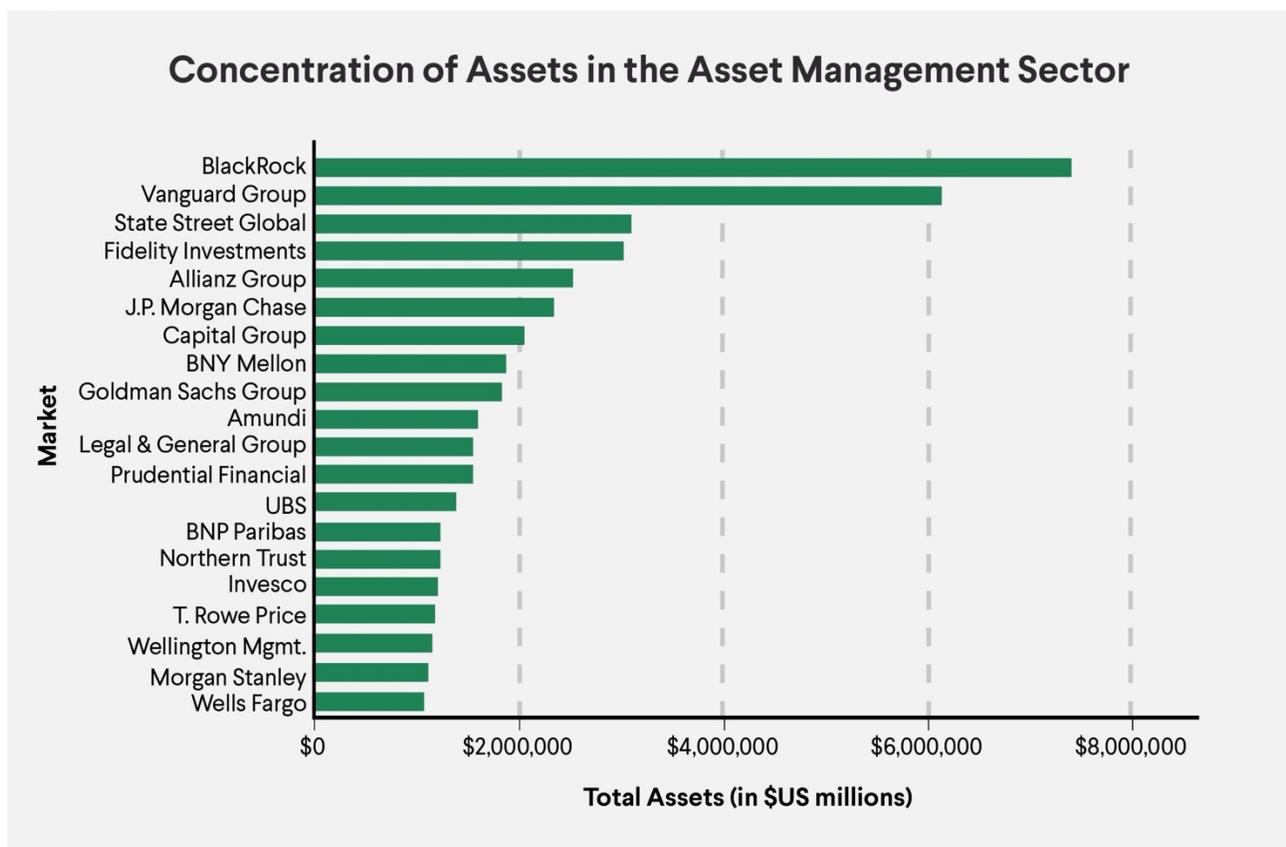
as “universal owners,” meaning their portfolios are comprised of all publicly traded corporate securities, or with minimal exclusions (Quigley, 2020). Index funds are touted to be safe for economic beneficiaries, as they cannot be gamed by “active” managers. They comprise a rising proportion of funds: In 2019, equity index funds surpassed active funds (Fichtner and Heemskerk, 2020). However, though some funds do use an index that represents the rise and fall in value of the entire stock market, or some well-defined subset of the stock market, many “index” funds use their own bespoke index (Robertson, 2019). The rise of index funds has increased assets under management and thus the potential power of asset managers in corporate governance, but in an ironic fashion, as the more that funds are tied to an index, the less of a purported value-add that the asset manager can bring to economic beneficiaries by actively allocating their funds.

Asset Manager Sector Concentration

The asset management industry is extremely concentrated, which means that households and pooled funds do not have options and cannot avoid the fees charged by asset managers to manage their money. There are three major asset managers, which have come to be known as “The Giant Three”: State Street Global Advisors (SSGA), Vanguard, and BlackRock (Bebchuk and Hirst, 2019). As the percentage of corporate equity held by asset managers has grown, SSGA, Vanguard, and BlackRock have also increased the percentage of ownership held between the three of them. In 1998, the three combined held only 5 percent of the total ownership of corporate equity, but by 2017, the three held 20.5 percent—demonstrating just how concentrated the ownership of corporate equity is within these three asset managers alone (Bebchuk and Hirst, 2019).⁶

⁶ To further add to the picture of the growth of the asset manager industry, it is important to note where most of these holdings are located geographically. Most asset manager holdings are concentrated within North America, and this has remained the same over the past decade. In 2007, North America had the greatest portion of holdings, at \$24 trillion. As of 2018, North America continues to hold the most, with \$35.2 trillion. North America has also seen the largest increase in asset manager holdings in the past decade, though other regions have seen an increase as well. Between 2007 and 2018, Europe went from \$13.7 to \$20.5 trillion, Japan and Australia together from \$4.3 to \$6 trillion, Asia from \$2.3 to \$7.2 trillion, and the Middle East and Africa from \$0.9 to \$1.3 trillion.

This increased concentration of ownership has increased the ability of asset managers and their index providers to alter what counts as an acceptable, safe, or otherwise promising investment (Petry, Fichtner, and Heemskerk, 2019). The federal government recognizes the outsized power that these companies have, but rather than regulate them, it has hired them: In 2009 and 2020, in the midst of financial crises, the Federal Reserve outsourced management of corporate bond buying programs to BlackRock (Steele, 2020). The industry is divided between bank and non-bank independent managers, with banks becoming less dominant in the 21st century (while insurance companies retain a steady market share). The independent asset managers are also asset owners in the large publicly traded banks, so there is cross ownership of the banks themselves. The reality of the sector means that new entrants have no prospect of competing with today's dominant asset managers—their economies of scale and entrenched role as an intermediary make private-sector competition difficult. This is one of the main purposes of introducing a public option for asset management: It is the most viable approach to increasing competition in the asset manager sector today.



Source: Boston Consulting Group, <https://www.bcg.com/publications/2020/global-asset-management-protect-adapt-innovate>.

Fees: The Revenue Stream of Asset Managers

Because of rising asset manager concentration, the large asset managers can charge exorbitant fees, causing an economic loss to the economic beneficiaries of securities that is not necessarily visible to them (Birdthistle, 2016). Such opacity of fees is in part a result of asset manager concentration and in part a result of the skills they purport to sell. Introducing price competition would be one benefit of a public asset manager. Greenwood and Scharfstein note that: "The direct cost of professional management at 1.3% is high. The present value of this fee paid over 30 years amounts to approximately one-third of the assets initially invested—a large price to pay a manager who does not outperform passive benchmarks" (Greenwood and Scharfstein, 2012, p. 13). Birdthistle (2016) discusses in detail fees charged by asset managers, along with brokers: The broker and adviser charge fees both for the buying and selling of securities, even though they are often part of the same larger financial institution. The fee is a percentage of assets under management. Even though many funds hold the same underlying basket of portfolio securities, they are charged different fees because of the audience that they are marketed to.

Since fees are in dollars, based on expense ratio times assets under management, fees automatically rise as business rises (though not all fees are actually included in the "expense ratio" figure) (Birdthistle, 2016). However, actual effort involved is not linear because there are economies of scale. Birdthistle (2016) also outlines different mechanisms that enable asset managers to inflate revenues, including when asset managers artificially inflate assets under management by delaying returning assets that they are required to return; inflating the value of non-publicly traded assets; and collaborating with hedge funds to time trades (Birdthistle 2016, p. 93).

Asset Managers and Corporate Governance & Finance

Asset managers participate directly in corporate governance *on behalf of* their economic beneficiaries, voting as shareholders as fiduciaries for the actual households who hold the financial assets that are used to purchase corporate equity. Asset management stewardship teams therefore have significant power to decide how to vote on critical issues, with few meaningful avenues available for their beneficiaries to voice objections if a decision is taken against their collective wishes (Alexander, 2018; Condon, 2020). This tension has come to the fore recently with discussions about how asset managers are engaging in corporate governance regarding climate change policy. According to a 2019 analysis, the “Big Three” coal, oil, and gas reserve holdings grew by 34.8 percent from 2016 to 2019; asset managers could have used this increase in fossil fuel holdings as a chance to take aggressive action to curb climate change on behalf of household beneficiaries, such as by accelerating the deactivation of coal-powered generation, limiting further pipeline development, or pushing the industry to consider transitioning away from selling fossil fuels for energy consumption. Yet a recent report by Majority Action found that BlackRock and Vanguard voted against nearly all shareholder resolutions calling on fossil fuel and other companies to take aggressive action on climate (Majority Action, 2020). Though BlackRock has taken some climate-related actions to improve public relations, like joining the coalition Climate Action 100+, it has not followed through with substantial efforts to truly address climate change, voting against the coalition’s own proposals to take on climate change risk. Though how asset managers vote on corporate decisions that impact the climate are a central issue, the broader concern is how asset manager fiduciary duties are understood—in other words, what are their real responsibilities to their beneficiaries. Reforming the fiduciary duty of asset managers will be one of the key proposals put forward as part of the establishment of a public asset manager in the next section.

Asset managers have yet another set of problematic incentives due to the conflict of interest inherent in the industry’s structure. They are, on one hand, supposed to engage in corporate governance with corporations whose equity they hold on behalf of economic beneficiaries; at the same time, they seek

to manage the employee retirement assets of those same corporations (Davis and Kim, 2007; Taub, 2009). Whether this conflict of interest has translated into a more pro-management orientation by asset managers who hold the financial assets of the nonfinancial company has been the subject of empirical research. Cohen and Schmidt (2009) examine the conflicts of interest inherent in the fact that mutual fund families act as trustees for the retirement plans of nonfinancial corporations (NFC), thus exercising discretion over their portfolios while being assured inflows of funds from regular retirement savings. The research finds that these mutual fund families do overweight the equities of the companies for whom they act as trustees in all of their plans, and are more reluctant to sell those equities, regardless of performance. Trustees direct NFC's assets into their own mutual funds, and since these companies, these are guaranteed inflows regardless of performance. Mutual funds can be "captive purchasers" of new security issuances underwritten either by their own financial conglomerate, or coming from a NFC whose plans they manage. Other studies, including those by Davis & Kim (2007) and Taub (2009), examine corporate governance engagement and its relationship to mutual fund advisers' holdings. Taub shows that mutual fund advisers can be pro-management for their own interests, such as increasing inflows of corporate 401(k) plans. Policy reform has attempted to address the issue through proxy voting rules, i.e. requiring that mutual funds' investment advisers disclose how they vote their proxies. Davis and Kim (2007) compare the corporate governance approaches of public pension funds to corporate funds that are managed by mutual funds and possess these conflicting ties, pointing out that public pension funds have been more aggressive in pushing for corporate governance reform. Creating a public option for asset management would give pooled funds an option for asset management, meaning that they could avoid these types of conflicts of interest.

THE BENEFITS OF ESTABLISHING A PUBLIC OPTION FOR ASSET MANAGEMENT

"The . . . analysis reveals some of the problems that arise when we change the nature of the participants in the economic system, without changing the rules of the game" (Baum and Stiles, 1965, p. xi).

Creating a public option for asset management has the potential to incentivize private asset managers to improve their products and services while also reducing the fees charged to non-wealthy households and retirees. To be clear, this proposal assumes that households will still save funds for their individual accounts through their employer retirement funds or an individual private fund, such as a mutual fund. The public asset manager would not provide retail financial asset manager services to individual households. However, a public option for pension funds, 401K funds, and IRAs would reduce the ability of private asset managers to extract value from households and ensure that asset management serves the interests of households who are handing over control of their financial assets, as a key accompanying reform is to modify the understanding of the fiduciary duty of asset managers, both public and private.

History of Public Options in Finance in the United States

The idea of a public option financial institution that helps shape financial markets is not new—such institutions have a deep history in the United States. One example is the establishment of public options in housing finance. Levitin and Wachter define the "public option" in housing finance as "having the government compete in the marketplace for the provision of goods and services" (Levitin and Wachter, 2013, p. 1115). Due to the size of the government as a market actor, its "unparalleled ability to assume risk," and its role as regulator (when it chooses to engage) it can largely set the terms for a market. This has been the case for housing finance in the 20th century in the United States, though the government largely does not provide mortgages directly to households (notable exceptions are Federal Housing Authority (FHA) and Veterans Affairs (VA) loans). Still, by participating

in the market, the government created the "American mortgage"—a new product that changed the offerings of private sector financial institutions. Its ultimate objective is not short-term shareholder wealth maximization or even profit maximization, but it is able to view its product as in service of the public good.

Other examples of public financial institutions currently under consideration by policymakers include public banks and postal banking. Baradaran (2018) discusses how a large and concentrated banking sector has become dominant, making banking extractive for the poor (Baradaran, 2018). To solve this problem, she proposes a public option for banking in the form of postal banking. She discusses Brandeis's observation that control of "other people's money" is what creates so much power for banks, and his policy proposal to make banking a public utility. "The post office inspector general's White Paper suggests that the post office can collect debts using a Treasury Department program only available to federal agencies that allows the garnishment of tax refunds. By using a low-cost and effective collection mechanism unavailable to any other lender, the post office can significantly alter the market forces in small lending" (Baradaran, 2018, loc. 4342).

Credit ratings agencies are a financial institution that was seen as central to the 2008 financial crisis, one that shares many of the same characteristics of the asset manager sector: It is extremely concentrated, opaque, and has conflicts of interest built into its business practices. Diomande, Heintz, and Pollin proposed a public credit ratings agency based on the failures of the three private credit ratings agencies—Moody's, Standard & Poors, and Fitch—which played a role in the financial crisis of 2007–2009. One might think that if a credit ratings agency manager is failing to do its job, it would be pushed out of the market. But because the market is so concentrated, this does not happen.

Competition cannot be created through antitrust alone. Rather than provide objective evidence of the quality of financial products, based on an assessment of risk, the agencies consistently rated financial products highly to gain market share in the credit ratings industry. The high ratings on mortgage securities that were based on poor fundamentals gave institutional shareholders permission to purchase them at high volumes. Companies seeking ratings also want higher ratings for their financial products—thus they also have an incentive to choose a credit ratings agency that

will give them higher ratings. A public option is, instead, one of the best ways to spur actual competition that cannot be avoided in the same way that even regulations can be circumvented. If there is a public credit ratings agency, market participants could compare the assessments coming from public versus private credit ratings agencies and investigate why there are divergences.

Structural Options and Benefits of a Public Asset Manager

Building on the public option financial institutions described above, I will now outline the key concepts for a public asset manager. A public asset manager would hold legal title to household financial assets in private funds as a fiduciary, just as private asset managers do, meaning that the public institution would have control over deciding what corporate stocks or other financial instruments to purchase with the funds that it holds. An essential component of establishing a public asset manager is to adapt the rules regarding how fiduciaries must act in the best interests of economic beneficiaries, which will be covered below. For funds that choose to be “universal owners,” meaning they invest in index funds that broadly track the market, a public asset manager would provide a low-cost way to access the index and ensure that the economic benefits of holding financial assets flow directly to the economic beneficiaries.

There are several important benefits to creating a public option for asset management. A public option for asset management would be able to act in the public interest in its corporate governance engagement with companies and other investment vehicles in which it invests. A public asset manager can view its “stewardship” responsibilities as a shareholder of corporations as a means to encourage broad-based prosperity and innovation, rather than engaging in short-term extractive practices. A public asset manager would be able to charge lower fees than private asset managers due its public mission and economies of scale. The public option would therefore increase competition in the asset management sector and provide a baseline set of asset management services accessible to all, such that private asset managers would have to improve their quality of services in order to continue to attract a customer base.

A public asset manager would fundamentally change the options available to large pools of household financial assets. The business model of asset managers claims, in essence, that through their management, funds will grow more quickly through smart investing, making households better off. They argue that their investment services are worth the fees that households pay indirectly. However, not only do households face the general negative consequences of private equity's impact on job losses and hindering steps to mitigate climate harm, but there is also increasing evidence that such funds lose out financially as well. In other words, funds would be better off simply investing in an index fund that tracks publicly traded stock than investing through private actors. A public asset manager could create specialized indexes to leave out the most pernicious activity—including fossil fuel investment—while reducing fees and other participation costs currently heaped on households. The public assets created by a government decarbonization program, including those by a green bank or National Investment Authority, could be held in trust for the public by the public asset manager, further boosting the investment authority's ability to continue decarbonization investment (Omarova, 2020). The returns from these stakes would ensure public, long-term returns without the extractive excesses of current private equity.

New Fiduciary Duties for Asset Managers

Establishing a public asset manager requires reframing the fiduciary duties both for the new asset manager and for private entities to ensure a level playing field and enable the public asset manager to engage in corporate governance in service of the public interest. Today, fund “fiduciaries” have a duty to protect the interests of their beneficiaries, which has been interpreted as requiring them to focus all their effort to encourage higher asset prices, even if, for example, they are investing workers' retirement funds in a company that is trying to outsource the jobs of those very same workers (Alexander, 2018; Webber, 2018). This narrow focus on financial interests means that the negative consequences of corporate behavior, continuing carbon dioxide emissions, and failing to prepare for

an eventual transition of workers out of fossil fuel industries are not the focus of asset fund managers—only share prices continuing to rise (Condon, 2020).

If we recognize that households investing through the financial intermediation chain live on the same planet that companies are putting at risk through their contributions to climate change, we see clearly that household interests are best served when their investments are directed in ways that advance decarbonization and reduce economic inequality. A public option would allow households and fund managers to channel their funds toward investments that serve their actual interests as human beings and members of society (as long as institutional reform is paired with reforms to the fiduciary duties of private and public asset managers alike). Thus, key policy reform necessary for the success of a public option would be a clarification of what true asset manager fiduciary duty means—in other words, how do the decision-makers understand their responsibilities to the households who entrust them with their financial assets? Thus far, fiduciary duty has been understood too narrowly, as simply the duty to increase asset values in the short-term as much as possible, rather than taking into account the reality that some assets go up in value by creating costs that the rest of society must bear. This is clearly the case with climate change, as the costs of pollution and resource extraction have been externalized from energy companies and businesses generally and shouldered by the broader society. Public policy must require trustees to see their duty as being responsible to the actual interests of households, which means investing and engaging in corporate governance so as to mitigate societal harms like climate change and economic inequality—because the households whose capital is being invested ultimately bear the costs of such harms.

I propose a set of policy reforms to the fiduciary duties of asset managers so that portfolio decisions are made with the genuine long-term interests of US households in mind, rather than solely concerned with a company-by-company approach. I propose two specific areas for federal policy reform: 1) a substantive redefinition of asset manager fiduciary duty so that managers must consider the impacts of their portfolio on their beneficiaries' *common* interests, including on the welfare of communities and the environment; and 2) a substantive bright-line such that portfolios must be carbon neutral by 2050 at the latest, in compliance with the Paris Agreement. Policymakers should

revise the Investment Advisers Act of 1940 and ERISA such that all asset managers are “responsible for the impact they have on the shared social and natural systems needed for a just, equitable, inclusive, and prosperous economic system” (Kassoy et al., 2020). The fiduciary duties of care, loyalty, and impartiality should remain the same, as fiduciaries are still in the privileged position of managing money for others. What is important is that the “best interests” of beneficiaries must be interpreted today according to what is truly in the best interests of households as humans and members of a society, something that cannot be boiled down to maximizing financial return.

The core problem with the current approach is that “diversification” is not a way to avoid *systemic* risk (Quigley, 2021). Diversification requires fiduciaries not to concentrate their holdings in one particular asset or company, so that if it fails to produce a return, the whole portfolio is not as affected as it would be if the portfolio were concentrated in one particular asset. However, as the financial crisis of 2007 showed, diversification is not a sufficient strategy to protect investors when systemic risks affected all assets at the same time. Climate change and the harms of growing economic inequality and wage stagnation are two kinds of systemic risk that cannot be diversified away. The Department of Labor’s Investment Rule, issued in late 2020, clarified that ESG considerations are appropriate for fiduciaries when they serve the financial benefits of the plan. This means, for example, “trustees can refuse to invest in companies that pollute if they believe that polluting companies ultimately make less money . . . [and] discourage[] portfolio companies from engaging in behaviour that harms society and the environment, and consequently the value of shareholders’ diversified portfolios” (Alexander, 2018).

Consideration of the systemic risks to portfolios’ financial value from harms created in the real economy does not effectively take into account the harm flowing directly to beneficiaries. Following the previous example, under the current rules, fiduciaries cannot choose to not invest in a polluting company “because they want their beneficiaries to live in a cleaner world” (Alexander, 2018). For this reason, I propose further clarifying that serving the interests of economic beneficiaries requires considering the risks *externalized* by companies, whether to households’ diversified portfolios, or directly to the households themselves.

I now turn to the proposal for new fiduciary duties for asset managers for the 21st century.⁷ The reform has two goals: (1) to make fiduciaries *responsible* for the consideration of the total impacts of their decisions on the households on whose behalf they are investing, rather just giving them *permission* to do so without a mandate; and (2) to mandate substantive adherence to portfolio carbon neutrality for all asset managers. The first goal would make sure that all investor fiduciaries must actively consider the potential benefits and harms of their total portfolio on the households for whom they invest, which concretely means considering not just financial returns, but the long-term harms to the climate and the negative impacts of economic inequality on economic growth. The second goal more specifically mandates that the investment fiduciary's overall portfolio be climate neutral. Disclosure is a critical first step, but it leaves investors free to continue to invest in companies that are harming the ecosystem on which we all depend, as long as they tell us where they put the money. Disclosure is not sufficient to ensure that investment managers act responsibly toward the US households who are entrusting fiduciaries with their money. Asset managers would continue to be responsible for evaluating the traditional range of factors that affect stock prices of individual companies, as well as ESG and systemic factors that have the potential to impact the entire portfolio. The reforms presented here are not meant to negate these duties, but rather to expand the aperture so that asset managers are required to consider the downside as well as the upside—i.e., costs that have previously been externalized by individual companies and thus internalized by underlying beneficiaries.

To meet this first goal, a new fiduciary duty should require all investment managers to be “responsible for the impact they have on the shared social and natural systems needed for a just, equitable, inclusive, and prosperous economic system” (Kasoy et al, 2020). This re-focuses fiduciaries on the interests that beneficiaries—US households—have in a sustainable and durable social system,

⁷ It is worth noting that while the Investment Company Act regulates investment companies, and ERISA and Taft-Hartley control private pension fund fiduciary requirements, public pension funds at the state level are controlled by state law (as discussed above regarding the IL Sustainable Investment Act). Though federal reform is crucial to see widespread change in investment manager behavior, state policymakers can adopt these proposals to reform fiduciary duties for investment managers inside their states.

rather than measuring their interests simply as financial return. It also recognizes that financial returns themselves will be negatively affected by economic inequality and climate change and puts the responsibility on fiduciaries to proactively take steps to mitigate the harmful impacts on plan assets, which is arguably already contained in the 2020 Investment Rules. Though such a standard immediately raises questions about how to enforce the duty, creating a baseline standard is the only way to ensure that bad actors do not use a disclosure framework to simply disclose—but not stop—harmful behavior that generates high rewards in the short term. This framework functions essentially as permission for fiduciaries to make corporate governance and portfolio decisions with consideration of the full impact of company decisions on beneficiaries, meaning that they cannot be sued for deviating from a narrow focus on rapid share price increases.⁸

Mandatory Duties

One legislative approach is to reform the Investment Company Act of 1940 directly (15 U.S.C. 80a) and add language after paragraph (54) of Section 2 and after subsection (c) of Section 36. The language of the Act focuses on the common interests of beneficiaries and the new duty of fiduciaries to look out for their common good. These common interests are defined as:

[I]nterests held generally in common by beneficiaries and the person and communities served by such beneficiaries, including interests in (A) securities market performance, (B) the effect of economic, social and environmental systems on beneficiaries and the persons and communities served by such beneficiaries and (C) the effect of such systems on the welfare of communities of which such beneficiaries and the persons and communities served by such beneficiaries are a part.

⁸ A specific proposal to counteract labor cost-cutting has been made by David Webber: Webber (2014, 2169) proposes a “member-first” conception of fiduciary duty in which the fiduciary would be “required to assess the potential impact on participant jobs.” Once a particular investment is flagged, the fiduciary would have to assess the jobs impact themselves, or have the investee conduct an analysis (2170).

A Climate Guardrail

Requiring “consideration” of the full range of beneficiary impacts still leaves the onus on beneficiaries (institutional investors) to bring claims that their interests have not been respected, which, in practice, is very difficult for many beneficiaries, who are far along the financial intermediation chain from asset managers. That is why an additional proposal for policy reform is substantive compliance with carbon neutrality by 2050, as outlined in the Paris Agreement, along with standardized metrics to measure the carbon footprint of a given portfolio. This “climate guardrail” standard should include a specific set of actions to be developed through a consultation process, but may include features such as: engaging in stewardship and corporate governance to ensure that all portfolio companies support (and, at minimum, do not make efforts to oppose) regulatory action to mitigate climate change, stewardship that engages portfolio companies whose business model is tied to climate change and urges a wholesale business model transition, and overall monitoring of all companies’ plans to move toward climate neutrality.

CONCLUSION

A public asset manager is not an easy financial institution to design. It is important to consider how a public financial institution would be governed and what rules would determine the responsibility of its decision-makers. While some of the governance structures should rightfully be determined through the democratic political process, including through lawmaking and the regulatory process requiring notice and comment, it will be important at the outset to guard against private capture of a public asset manager agency. The institutional design issues at stake in establishing new public options in finance merit future research.

Another set of important issues for future research is how to specifically enable corporate governance engagement that serves the public interest, and what kind of disclosure regulations would such engagement require. Currently, the three large private asset managers have, over time,

been required to disclose increasing information about their voting behavior, though much corporate engagement occurs privately. Since households do not track the corporate governance engagement of their asset managers, what kind of summary reporting should be required of a public asset manager?

Finally, a related question of metrics is the fundamental one of how to measure and report the benefits and harms that corporations are creating, and how those affect economic beneficiaries of their securities. Krahé (2021) makes the case that without systemic clarity on what is sustainable for the economy and the society on which it depends, individual-level “sustainability” metrics mean little. In the United States, clear economy-wide standards are fraught with legal challenges and debates, in an era when there is no time to lose to stop the worst effects of climate change. Ultimately, many of the limits that must be urgently put on corporations should not come through corporate governance engagement, but through direct regulation from the appropriate government agencies and Congressional legislation. Still, how to organize the engagement of a public asset manager so that it serves the redefined fiduciary duties is an important question.

This article provides an initial sketch of the purpose of a proposal for a public asset manager in the United States, a financial institution that would serve as a financial intermediary between economic beneficiaries and the operating companies whose securities are held in pooled funds. Due to the rapid increase in importance of the private-sector asset management sector, which is extremely concentrated and has the ability to extract fees from beneficiaries, a public asset manager could provide much-needed competition to the sector. Reforming the fiduciary duties of both private and public asset managers will ensure that the true interests of economic beneficiaries in a healthy economy and society are met. Though a public asset manager is only one small institutional piece of a much larger economic transformation, it is worthy of future debate and research to enable the financial system to serve its true purpose of human well-being and corporate innovation and productivity.

REFERENCES

- Alexander, F. (2018). Whose Portfolio Is It, Anyway. *Stetson Law Review*, **47**, 311-332.
- Baradaran, M. (2018). *How the Other Half Banks: Exclusion, Exploitation, and the Threat to Democracy*. Harvard University Press, Cambridge, MA.
- Baum, D.J. & Stiles, N.B. (1965). *The Silent Partners: Institutional Investors and Corporate Control*. Syracuse University Press, Syracuse, NY.
- Bebchuk, L. & Hirst, S. (2019). The Specter of the Giant Three. *Boston University Law Review*, **99**, 721-741.
- Berle, A. & Means, G. (1932). *The Modern Corporation and Private Property*. Routledge, New York.
- Birdthistle, W. (2016). *Empire of the Fund*. Oxford University Press, New York, NY.
- Brandeis, L. (1914). *Other People's Money*. Harper & Row, New York: NY.
- Bratton, W.W. & Wachter, M.L. (2007). Shareholder Primacy's Corporatist Origins: Adolf Berle and 'The Modern Corporation. *Journal of Corporate Law*, **34**, 99-152.
- Braun, B. (2021). Asset Manager Capitalism as a Corporate Governance Regime American Political Economy: Politics, Markets, and Power. (Eds, Hacker et al.) Cambridge University Press, New York, NY.
- Chandler, A. (1990). *Scale and Scope: The Dynamics of Industrial Capitalism*. The Belknap Press of Harvard University Press, Cambridge, Massachusetts.
- Cohen, L. & Schmidt, B. (2009). Attracting Flows by Attracting Big Clients. *The Journal of Finance*, **64**, 2125-2151.
- Condon, M. (2020). Externalities and the Common Owner. *Washington Law Review*, **95**, 1-81.
- Cuvelier, L. (2021). Slow Burn: The asset managers betting against the planet. Reclaim Finance.
- Davis, G.F. (2008). A new finance capitalism? Mutual funds and ownership re-concentration in the United States. *European Management Review*, **5**, 11-21.
- Davis, G.F. & Kim, E.H. (2007). Business ties and proxy voting by mutual funds. *Journal of Financial Economics*, **85**, 552-570.
- Diomande, M.A., Heintz, J. & Pollin, R. (2009). Why U.S. Financial Markets Need a Public Credit Rating Agency. *The Economists' Voice*, **6**, 1-4.
- Drucker, P. (1946) *Concept of the Corporation*. Routledge.
- Epstein, G. (2019). The asset management industry in the United States. United Nations ECLAC.
- Fichtner, J. & Heemskerk, E. (2020). The new permanent universal owners: Index funds, patient capital, and the distinction between feeble and forceful stewardship. *Economy and Society*, **49**, 493-515.
- Gelter, M. (2013). The Pension System and the Rise of Shareholder Primacy. *Seton Hall Law Review*, **43**, 909-970.

- Greenwood, R.M. & Scharfstein, D.S. (2013). The Growth of Modern Finance. *Journal of Economic Perspectives*, 27(2), 3-28.
- Hilferding, R. *Finance capital: a study of the latest phase of capitalist development*. Routledge & Kegan Paul, London.
- Hopkins, M. & Lazonick, W. (2016). *The Mismeasure of Mammon: Uses and Abuses of Executive Pay Data*. Institute for New Economic Thinking.
- Jacoby, S. (1998). *Modern Manors: Welfare Capitalism Since the New Deal*. Princeton University Press.
- Jacoby, S. (2021). *Labor in the Age of Finance*. Princeton University Press.
- Kassoy, A. et al. (2020). From Shareholder Primacy to Stakeholder Capitalism. B Lab. <https://www.wlrk.com/docs/From-Shareholder-Primacy-to-Stakeholder-Capitalism-TSC-and-B-Lab-White-Paper.pdf>
- Kotz, D. (1980). *Bank Control of Large Corporations in the United States*. University of California Press, Berkeley, CA.
- Krahé, M. (2021). From System-Level to Investment-Level Sustainability. Academie royale de Belgique.
- Lamoreaux, N. (1985). Quantitative and qualitative evidence on the great merger movement The Great Merger Movement in American Business, 1895–190. 87-117.
- Lazonick, W. (2017). *Innovative enterprise and sustainable prosperity*. Institute for New Economic Thinking.
- Lazonick, W. (2017). *Innovative Enterprise Solves the Agency Problem: The Theory of the Firm, Financial Flows, and Economic Performance*. Institute for New Economic Thinking.
- Lazonick, W. (2019). The value-extracting CEO: How executive stock-based pay undermines investment in productive capabilities. *Structural Change and Economic Dynamics*, 48, 53-68.
- Levitin, A.J. & Wachter, S.M. (2013). The Public Option in Housing Finance. *University of California, Davis Law Review*, 46, 1111-1172.
- Lukomnik, J. & Hawley, J.P. (2021). *Moving Beyond Modern Portfolio Theory*. Routledge.
- Majority Action. (2021). Climate in the Boardroom. <https://www.majorityaction.us/climate-in-the-boardroom-2021>
- Novak, W.J. (2019). Institutional Economics and the Progressive Movement for the Social Control of American Business. *Business History Review*, 93, 665-696.
- O’Sullivan, M. (2000). The innovative enterprise and corporate governance. *Cambridge Journal of Economics*, 24, 393-416.
- Omarova, S.T. (2020). Why We Need a National Investment Authority. *SSRN Electronic Journal*.
- Palladino, L. & Alexander, F. (2021). Responsible Asset Managers: New Fiduciary Rules for the Asset Manager Industry. Roosevelt Institute.

Petry, J., Fichtner, J. & Heemskerk, E. (2019). Steering capital: the growing private authority of index providers in the age of passive asset management. *Review of International Political Economy*, 1-25.

Quigley, E. (2020). Universal Ownership in Practice.

Robertson, A.Z. (2019). Passive in Name Only: Delegated Management and “Index” Investing. *Yale Journal of Regulation*, 36, 795-851.

Shin, J.-S. (2018). The Subversion of Shareholder Democracy and the Rise of Hedge-Fund Activism. 77, 1-56.

Sklar, M.J. (1988). *The Corporate Reconstruction of American Capitalism, 1890–1916*. Cambridge University Press, Cambridge, UK.

Steele, G. (2020). The New Money Trust. American Economic Liberties Project.

Strine, L.E. (2018). Fiduciary Blind Spot: The Failure of Institutional Investors to Prevent the Illegitimate Use of Working Americans’ Savings for Corporate Political Spending. *SSRN Electronic Journal*.

Sweezy, P.M. (1941). The Decline of the Investment Banker. *The Antioch Review*, 1, 63.

Taub, J. (2009). Able But Not Willing: The Failure of Mutual Fund Advisers to Advocate for Shareholders’ Rights. *Journal of Corporation Law*, 34, 102-151.

Tulum, Ö. & Lazonick, W. (2018). Financialized Corporations in a National Innovation System: The U.S. Pharmaceutical Industry. *International Journal of Political Economy*, 47, 281-316.

Webber, D. (2018). *The Rise of the Working-Class Shareholder: Labor’s Last Best Weapon*. Harvard University Press, Cambridge, MA.

Zwan, N.V.D. (2017). Financialisation and the Pension System: Lessons from the United States and the Netherlands. *Journal of Modern European History*, 15, 554-584.