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ESG 2.0: MEASURING AND MANAGING INVESTOR RISKS BEYOND THE ENTERPRISE-LEVEL

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About this Working Paper:

ESG 2.0: Measuring and Managing Investor Risks Beyond the Enterprise-Level is a working discussion paper for the Predistribution Initiative's Asset Owner & Allocator Capacity Building & Research Project. We are grateful for the feedback from the project's Advisory Board, including the following individuals: Akasha Absher, Agnes Dasewicz, Robert Eccles, Yusuf George, Emilie Goodall, Denise Hearn, Lionel Johnson, Chris Jurgens, Scott Kalb, Mirtha Kastrapeli, Marjorie Kelly, Corey Klemmer, Jon Lukomnik, James McIntire, Andrew Parry, Taylor Sekhon, Rendel Solomon, and Robin Varghese. Individual members of the Advisory Board are generally supportive of the research, conclusions and recommendations of this project. However, that does not imply that each Advisory Board member agrees with each finding or recommendation.

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About the Predistribution Initiative (PDI):

The Predistribution Initiative is a multistakeholder project designed to co-create improved investment structures and practices that:

- share more wealth and governance control with workers and communities;
- have stronger investment team incentives for ESG integration; and,
- that ultimately address systemic risks, including inequality and climate change.

We pursue this mission through workshops, research, publications, stakeholder engagement and field building.

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Introduction

Do environmental, social, and governance (ESG) and impact investing practices in their current forms provide investors with sufficient tools to play a meaningful role in "Building Back Better" following the COVID-19 crisis?[1] Many of our existing ESG and impact investing frameworks focus on issues at the portfolio company level, but they do not take into account potential negative impacts from capital structures and investors' influence in shaping them.[2] In this paper, the Predistribution Initiative (PDI) explores how the growth of institutional investors (asset owners and allocators) and certain asset allocation strategies can be in conflict with ESG objectives. The conflict materializes in various interconnected ways, particularly from institutional investors' role in increasing global debt levels and fund manager and corporate consolidation, which in turn can create barriers for diverse fund managers and entrepreneurs, jeopardize quality jobs, erode the quality and affordability of goods and services, increase asset class correlations, reduce diversification opportunities, and ultimately fuel economic inequality and market instability. For long-term, diversified institutional investors, or "Universal Owners" of the market, these dynamics eventually translate into lower financial returns.[3] For workers and communities, these dynamics translate into greater precarity and inequality.

This paper encourages such investors to consider how their activities may contribute to these issues and how they can improve their own practices to better manage systemic and systematic risks. We review the issues and then propose several preliminary paths toward solutions that we intend to workshop and fine-tune with investors and other stakeholders throughout 2021. Potential solutions focus on diversifying asset allocation to more regenerative investment structures and asset classes, building an

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[1] The United Nations [Principles for Responsible Investment (PRI)] refers to ESG in the context of responsible investing: "Responsible investment (RI) is an approach to investing that aims to incorporate environmental, social and governance (ESG) factors into investment decisions, to better manage risk and generate sustainable, long-term returns." Throughout this paper, when we refer to "ESG investing" or "ESG integration," we typically use it synonymously with "responsible investment." When referring to "impact investing," we use the [Global Impact Investing Network (GIIN)] definition: "Investments made into companies, organizations, and funds with the intention to generate social and environmental impact alongside a financial return." Both ESG and impact investing have grown significantly over the past decade. While they traditionally had different meanings, with ESG investing focused more on risk management, and impact investing focused more on making a positive impact, their application in practice is beginning to converge. For the purposes of this paper, we focus on ESG investing with the acknowledgement that our statements are often also applicable to impact investing.

[2] For additional context, see: Rothenberg and Feldman, "A Resolution for Investors: you must engage on new forms of stakeholder capitalism"; Rothenberg and Feldman, "Leverage, compensation and taxation"; Chappe and Rothenberg, "A More Thoughtful Private Equity Model"; The Predistribution Initiative and Impact Management Project, "HBR IdeaLab Discussion."

[3] First coined by Robert Monks and Nell Minow (See: Monks and Minow, *Corporate Governance*, 132), "universal ownership" suggests that certain institutional investors have reached such size and scale that they own every industry, asset class, and geography in their portfolios, essentially thereby owning the market, which is a reflection of the economy. As such, the health of the overall market and economy matters more than the idiosyncratic risk and opportunity of each individual investment. If an individual investment results in negative externalities to the economy, and therefore the market, even if that produces a near-term return for that individual investment, it may not be in the interest of the investor's portfolios. For additional information, see: Hawley and Williams, "The Emergence of Universal Owners"; Hawley and Williams, *Universal Ownership*; PRI Blogs, "Modernising Modern Portfolio Theory."

enabling environment through adjustments to team incentive structures, performance reviews, benchmarking and valuation methodologies, and field-building.

ESG investors, including those who identify as Universal Owners, often seek to manage risk and opportunity through corporate governance interventions, such as proxy voting, shareholder proposals, and engagement. However, certain investment structures can also have negative impacts relating to ESG goals and management of systematic risk. Furthermore, they can undermine the positive impacts sought by corporate governance reforms. It is therefore critical for institutional investors to consider risks stemming from asset allocation and portfolio construction and align the practices of their ESG and investment professional teams.[4]

Over the past decades, institutional investors have migrated up the risk-return spectrum to asset classes with higher yields. Investor allocations to private equity (PE), venture capital (VC), private debt (PD), high yield bonds (HYBs), leveraged loans (LLs), and collateralized loan obligations (CLOs), for instance, have been growing steadily in response to a number of trends. ***While such shifts in asset allocation may suit near-term goals, such as meeting actuarial targets, this institutional allocation to higher risk asset classes has also meant increased global debt burdens, corporate and fund manager consolidation, and risk across capital structures, resulting in fragility for companies, the real economy, and the stability of financial markets. The resulting risks are therefore shared not only by investors, but also governments, workers, and communities alike.***

To optimize leverage ratios, companies may prioritize debt servicing or distributions to investors at the expense of worker payrolls and benefits. Infrastructure and social infrastructure investments — such as power, water, roads, hospitals, nursing homes, housing, and cybersecurity — might be structured in such a way that provides access to end-users at unaffordable prices, or of poor quality, in order to meet investor return expectations and therefore attract capital. Weak capital structures increase the risk of restructurings or bankruptcies that are detrimental for stakeholders, such as workers. Stakeholders have increasingly raised concerns about high leverage, coined "financial engineering," particularly in the PE asset class, for such reasons.[5] Yet studies produced over the past decades, inspired by PE, praise the discipline of debt, and due to a number of additional factors, high leverage ratios are no longer confined to the PE asset class and are prolific across public equity markets, as well.[6]

In practice, the *negative impacts* of weak capital structures are typically being addressed piecemeal through company-by-company interventions that focus on corporate operations, like a game of whack-a-mole; *but key roots of the problem — the investment structures themselves — are left unaddressed*. For instance, asset owners and allocators may engage with a PE firm to ensure workers are

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[4] By "investment professionals," we mean analysts, portfolio managers, and other professionals who are responsible for conducting financial analysis and managing financial performance. ESG teams are often separate from teams of investment professionals, smaller, siloed in their organizations, and sometimes incentivized differently than investment teams. We explore these dynamics further in later sections of this paper.

[5] Academics, organizations, think tanks, and others have become increasingly vocal with concerns, including the US grassroots civil society organizations, the Center for Popular Democracy; non-profit advocacy groups such as the Private Equity Stakeholder Project and Americans for Financial Reform; academics such as Eileen Applebaum and Rosemary Blatt, Ludovic Phalippou, and even American Republican think tanks such as American Compass. There is now bi-partisan concern in the US about the impacts of PE and calls for more transparency, accountability, and responsibility by industry actors. Detailed sources are referred to throughout the remainder of this working paper.

[6] Examples of additional factors contributing to this trend include low interest rates, the tax deductibility of interest expense, and the limited liability corporate structure.

compensated fairly in a portfolio company (including in the instance of a bankruptcy), or that the quality and affordability of rental homes are improved.[7] While these efforts are noble in intention and impactful for each situation, they are not addressing a more systemic issue related to the ongoing practice of high-leverage in investments. ESG and corporate governance teams may be engaging their counterparts at companies and asset managers about treating workers and communities fairly, but at the same time, investment analysts and consultants urge their counterparts — executives and investment teams of asset managers — to increase returns, often through leverage. Thus, the ESG and investment teams of an institutional investor may have competing objectives.

The unintended negative consequences of highly levered investments have been underexplored when it comes to ESG and impact investing frameworks and practice. Matters relating to investment structures, capital structures, leverage ratios, earnings calculations, valuation methodologies, benchmarking approaches, and resulting asset allocation and portfolio construction are not typically within the realm of ESG-related responsibilities.

Yet, too much leverage is dangerous for all stakeholders. Debt-laden capital structures can encourage companies to cut costs such as worker payrolls and benefits, or the quality of goods and services, to service the debt — resulting in systemic inequality that can destabilize markets — while putting the companies in precarious situations. High debt can also put companies at risk of bankruptcy if there is a slight drop in revenues, rise in interest rates, or other unexpected business disruption. Yes, leverage accentuates both positive and negative results to a business, but negative results have a limit – bankruptcy – that is existential. As such, while leverage looks like a neutral, bilateral accelerant, it actually reduces financial resiliency at the very times when it might be most needed. High leverage ratios, and the pressure they have put on companies and workers, were a key reason why our economy was so fragile even before COVID-19. In a section of its October 2019 Global Financial Stability Report titled, "High corporate leverage can exacerbate the next economic downturn," The International Monetary Fund (IMF) noted that:

> *"…the outlook for firms has weakened despite very low interest costs. Debt has risen and is increasingly used for financial risk-taking—to fund corporate payouts to investors, as well as mergers and acquisitions (M&A), especially in the United States. In addition, global credit is increasingly flowing to riskier borrowers… Banks and nonbank financial institutions with significant exposures to small and medium-sized enterprises (SMEs), syndicated leveraged loans, direct credit, and high-yield corporate bonds may be particularly susceptible to losses in such an adverse scenario and could amplify the shock by curtailing credit to the economy."*[8]

High leverage is not just a concern in terms of risks to individual workers and communities of portfolio companies, but it poses systematic market risks, as well. In its May 2020 Financial Stability Report, the United States (US) Federal Reserve (the "Fed") noted that at the end of 2019, "Business debt levels were high relative to either business assets or GDP, with the riskiest firms accounting for most of the increase in debt in recent years… Against this backdrop, the COVID-19 outbreak poses severe risks to businesses of all sizes and millions of households."[9]

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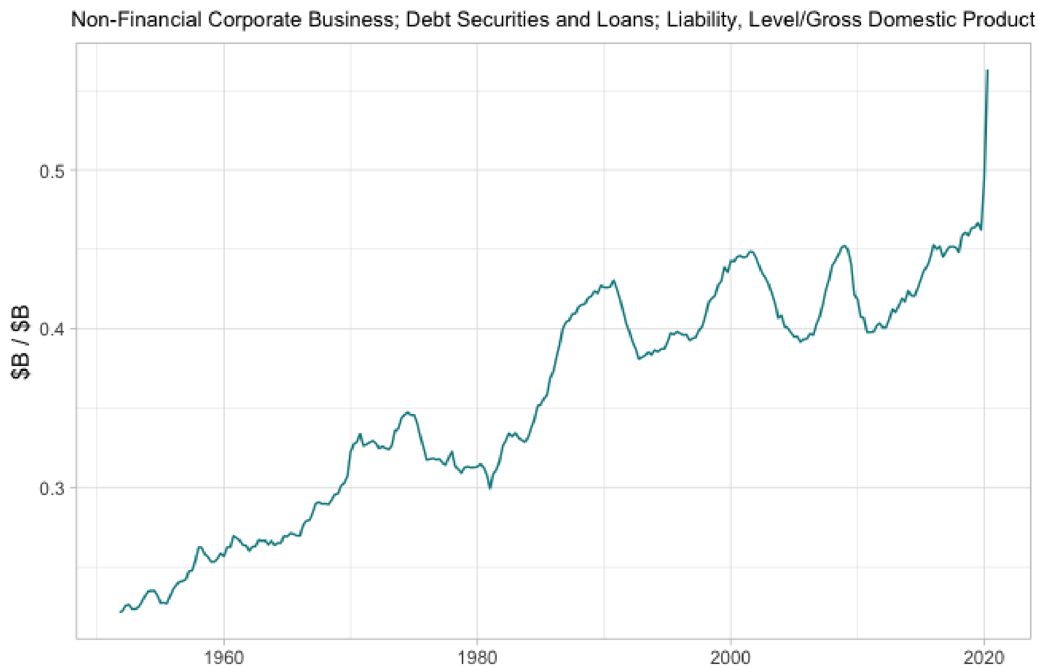
[7] An example of this form of engagement can be seen with the Toys R Us severance fund: Lewis, "Toys R Us."

[8] Sources and additional reading: IMF, *Global Financial Stability Report;* "Should the World Worry About America's Corporate-Debt Mountain?"; Martin-Buck, *Leveraged Lending and Corporate Borrowing*.

[9] Federal Reserve, *Financial Stability Report*, Chapter 2.

Figure 1: Non-financial Corporate Debt as a Percent of GDP Exceeds Prior Peak and Doubled Since the Global Financial Crisis



Source: FRED Economic Data (Federal Reserve Bank of St. Louis)

Eventually, unchecked increases in corporate debt result in increased systematic market risk that boomerangs back to investors and their portfolios. These risks are magnified by systemic inequality, which, as we explain throughout this paper, is partially fueled by current asset allocation practices. Systemic inequality has been shown to result in economic decline through, for instance, dynamics related to secular stagnation.[10] These issues are both a matter of risk management and value preservation for an investor's portfolio, as well as managing risks that impact other stakeholders such as workers, communities, and the environment. However, neither Modern Portfolio Theory (MPT) nor ESG or impact investing frameworks currently include a focus on potential negative impacts stemming from investment structures.[11] Perversely, as major central banks globally respond to the current crisis with

[10] Sources and additional reading: Bivens, *Inequality is slowing U.S. economic growth*; Clements et al., "Chapter 2. The IMF and Income Distribution"; Paul, "Historical Patterns of Inequality and Productivity around Financial Crisis"; Mian, Straub, and Sufi, "The Saving Glut of the Rich." Additionally, through various publications, Ray Dalio and the US Federal Reserve have expressed concerns about inequality resulting in systematic risks to the market and systemic risks to the economy.

[11] Arguments that MPT does not support portfolio construction in a manner that adequately accounts for companies' contributions to systematic risks have been put forth by a number of thought leaders, including Jon Lukomnik, James P. Hawley, and Jeffrey Gordon. For instance, see Jon Lukomnik and James P. Hawley's forthcoming book, *Moving Beyond Modern Portfolio Theory: Investing that Matters* and Gordan, "Systematic Stewardship." We build on this important body of work to suggest that similarly, MPT does not account for the negative systematic impacts stemming from investment structures and practices at the asset owner, allocator, and manager levels. Like those focused on corporate systematic risks, we believe that corporate governance reforms are part of the solution. However, we also argue that investment teams and consultants themselves need to reconsider asset allocation in terms of the negative financial impacts from investment structures and products.

rock bottom interest rates and new rounds of quantitative easing (QE), investors and companies are further incentivized to increase their exposure to high-risk debt and inflated asset valuations – a situation that leaves society and markets vulnerable to a rise in interest rates or other unplanned challenges.

Given that corporate debt burdens and leverage ratios are historically high, covenants are light, and defaults and bankruptcies are being held at bay by government support (e.g. through fiscal and monetary policy) – which is also funded by debt, though at the sovereign level – the time could never be more critical to reflect on the evolution of ESG and recognize that to date, we have been focusing primarily on one variable in a two-variable equation. Improvements in *both* corporate operations, *as well as* investment structures and products are needed to Build Back Better. Allowing investment structures to create negative externalities can systematically undermine ESG efforts at the portfolio company level.

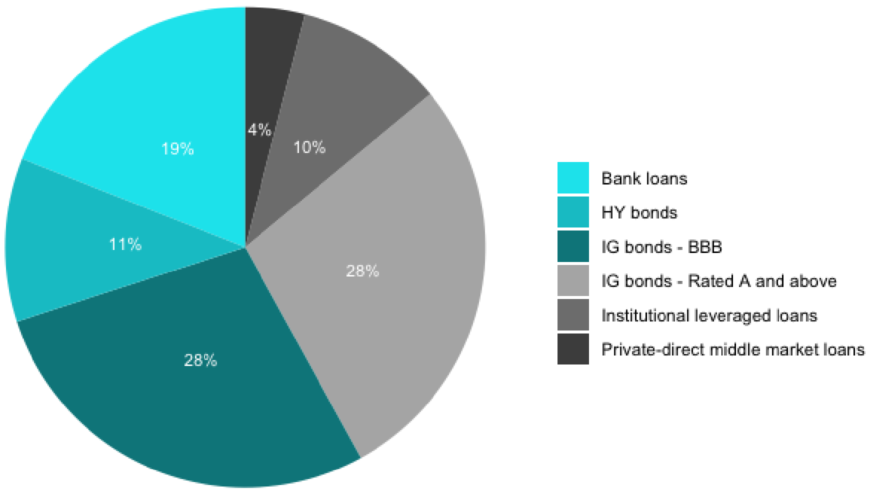
This point is crucial given how corporate funding dynamics have changed since the Global Financial Crisis (GFC), when banks came under heavy regulation that caused them to restrict lending to smaller clients. Capital markets, or the Non-bank Financial Intermediary ("NBFI" or "Shadow Banking") sector, has stepped in to fill this void. The Financial Stability Board (FSB) notes that, "The NBFI sector – comprising mainly pension funds, insurance corporations and other financial intermediaries (OFIs) – has grown faster than the banking sector over the past decade... The financial assets of the NBFI sector amounted to $200.2 trillion in 2019, accounting for nearly half of the global financial system in 2019, up from 42% in 2008."[12] Given the evolving composition of the global lending base, those with some of the most significant exposure to weak credit quality and who are fueling this trend are institutional investors. As the "Universal Ownership" concept suggests, they also have some of the greatest potential for change.[13]

This requires an examination of valuation and benchmarking methodologies, performance reviews and investment structures, and the official interpretation of financial materiality, as we explore at the end of this paper. Separately, while it may be argued that MPT accounts for the idiosyncratic risks of high leverage, arguments such as the Modigliani-Miller Theorem suggest the market value of a company is accurately calculated as the present value of its future earnings and its underlying assets, independent of its capital structure.

[12] Financial Stability Board, Global Monitoring Report on Non-Bank Financial Intermediation 2020, December 16, 2020.

[13] Sources and additional reading: IMF, *Global Financial Stability Report*; "Banks Lose out to Capital Markets When it Comes to Credit Provision"; Light, "A Decade After the Financial Crisis"; Levine, "Public Markets Don't Matter Like They Used To"; Gray, "Credit Downgrades Present 'Serious Challenges' for Pension Schemes"; Wigglesworth, "Coronavirus"; FSB, *Global Monitoring Report on Non-Bank Financial Intermediation.*

Figure 2: Composition of Corporate Credit as of 2018 (%)



Source: IMF Financial Stability Report, October 2019

This framing and discussion paper is the first in a series that explores the consolidation of capital amongst institutional investors and the resulting capital flows; increasing corporate debt burdens; the mix of investment products in a portfolio; and the pressures that weak capital structures linked to these investment products put on companies when it comes to matters that impact stakeholders, such as:

- cutting costs, which could be related to quality jobs, the quality of goods and services (e.g. elderly care), community engagement (e.g. in a project with significant land take), or even environmental issues (e.g. biodiversity preservation);
- increasing pricing, which could be for rental homes, essential healthcare services, or infrastructure (e.g. water);
- restructuring in extreme cases of bankruptcy or to avoid defaults, with significant job losses; and
- asset manager and corporate consolidation, leading to monopsony dynamics which reduce labor's bargaining power, a stifling of SMEs and smaller fund managers, reduced innovation and productivity, increased economic inequality, and political capture.[14]

[14] Examples of stakeholder concerns about these issues include the below. As follow-on work to this paper, PDI is conducting further empirical analysis to understand the relationships between the institutionalization of capital, asset allocation, macroeconomic trends, and these issues. Examples of concerns include: Commissioner Chopra, Letter to Congress; Zhu, Hua, and Polsky, "Private Equity Acquisitions of Physician Medical Groups Across Specialties"; Commissioner Chopra, Statement Regarding Private Equity Roll-ups; Warmbrodt, "Biden's Wall Street Backers"; Center for Popular Democracy, *Pirate Equity,* AFRER*, The Deadly Combination of Private Equity and Nursing Homes During a Pandemic;* Perlberg, "How Private Equity Is Ruining American Health Care"; Semuels, "When Wall Street Is Your Landlord"; AFR, "Fact Sheet: Private Equity Vultures Eye Real Estate During Coronavirus Crisis"; Stoller, "How to Get Rich Sabotaging Nuclear Weapons Facilities"; Ahmed, Smyth, and Wiggins, "Private Equity's New Bet on Sport"; Nicolaou and Fontanella-Khan, "The Fight for the Future of America's Local Newspapers"; Hodgson, "Pandemic Deepens Woes of UK's Private Equity-Backed Nursing Homes"; Butler and Rushe, "UN Accuses Blackstone Group of Contributing to Global Housing Crisis"; Hagood, "Private Equity May Be Repeating Mistakes with Physician Practice Management Companies"; Willmer, "Private Equity Loses Its Shield as U.S. Cracks Down on Fraud"; Gupta, et al, "Does Private Equity Investment in Healthcare Benefit Patients? Evidence from Nursing Homes"; Indap, "Private Equity's High Nursing Home Death Rates"; Scott, "Private Equity Ownership is Killing People at Nursing Homes."

We outline how current asset allocation practices result in a negative feedback loop that ultimately hurts institutional investors' returns in the long-run. This working paper explores these questions and is an invitation for diverse stakeholders, including, but not limited to, investors, intermediaries, civil society, labor advocates, academics, policy makers and regulators, among others, to consider alternative paths with less risk. Importantly, this paper is not intended to offer prescriptive solutions, but rather to present preliminary ideas and initiate a public discussion about unexplored ESG risks, which can therefore result in a forum for healthy debate and co-creation.[15]

How Did We Get Here?

For the past two decades, institutional asset owners have significantly shifted their overall asset allocation strategy. Private markets – including PE, PD, VC, infrastructure, and real estate - as well as LLs, CLOs, and HYBs, have become much larger percentages of overall portfolios. There are a number of reasons for these changes, including, but not limited to, ongoing declines in interest rates by major global central banks, dynamics related to funding ratios of institutional investors such as pension funds, growing interest in the illiquidity premium of private markets, benchmarking practices, investor dissatisfaction with public markets, and increased opportunity for NBFIs to provide financing following banking regulations resulting from the GFC.[16] Private capital assets under management (AUM) in 2019 was approximately US$6.5 trillion, an increase of over US$4 trillion over the past ten years.[17]

Private Equity

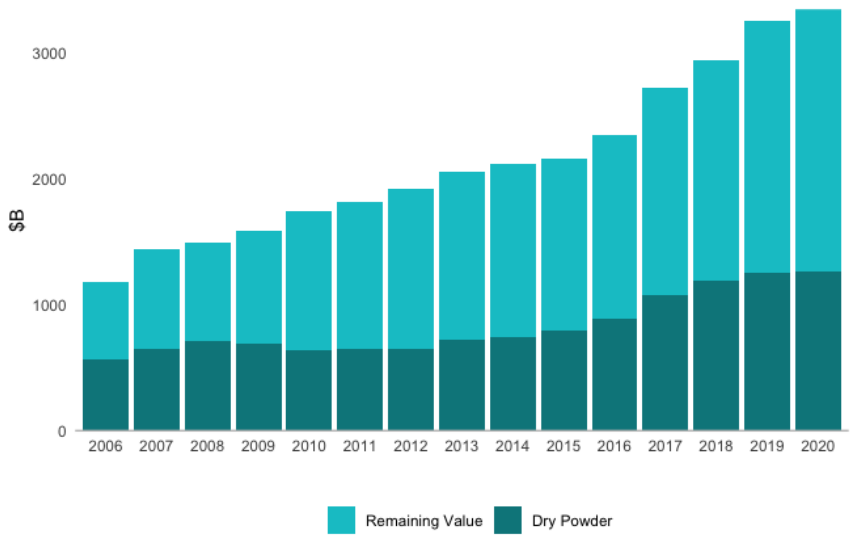
McKinsey's 2019 report on PE notes that the net asset value of the asset class grew twice as fast as global public equities since 2002, and that the number of PE-backed firms at the time of reporting was approximately double that of public equities.

[15] Note: Throughout this paper, we aim to highlight where outstanding assumptions exist to investigate further. These issues are set aside for empirical analysis as part of PDI's parallel studies, for publication in the future. We conclude this paper with preliminary suggestions for investors to consider as to how they can align the goals of their investing and ESG teams. PDI intends to workshop these proposals with investors to fine-tune them throughout 2021. Results of these workshops and engagements are expected to be published at the end of 2021 or early 2022.

[16] For additional context on some of these trends, see, for instance: Preqin, *Global Private Equity & Venture Capital Report;* Mauboussin and Callahan, "Public to Private Equity in the United States: A Long-Term Look"; Marks, Memo to Oaktree Clients.
Notes on dissatisfaction with public markets: In recent years, it has been observed that companies increasingly tend to prefer to stay private, often in response to high regulatory burdens of being public, as well as to avoid the complications of managing stock price volatility. Additionally, many retiring business owners find PE to be an attractive exit option. Some therefore argue that increased opportunity for funding in private markets by institutional investors and their asset managers is also what is enabling companies to stay private.
Separately, it is worth noting that while public market activity has increased in 2020 and 2021, much of this has been through Special Purpose Acquisition Vehicles (SPACs), which have features similar to PE in terms of structure, and many of the firms involved are from the PE and VC industries.

[17] McKinsey, *Private Markets Come of Age: McKinsey Global Private Markets Review.*

Figure 3: Private Equity AUM, 2006-2020



Source: PitchBook. Note that AUM for 2020 is only through June 30.

Investor demand is now so high for PE that many are concerned that the asset class is becoming crowded with capital. Asset managers (known as General Partners, or GPs, in private asset classes) face increased competition for deals, resulting in higher acquisition multiples and therefore eroding returns. The industry publication and data service provider, Preqin, notes:

> *…the influx of investable capital and intensifying competition have helped to drive up asset prices. Just over half (51%) of fund managers and over two-thirds of investors (69%) feel that private equity portfolio company prices are higher compared with 12 months ago. And 44% of fund managers experienced more competition for private equity transactions… 86% of LPs told us that they intend to allocate as much or more capital to the asset class in 2020 as they did in 2019.*[18]

In addition, there is a trend of institutional asset owners and allocators (known as Limited Partners, or LPs) consolidating their investments with some of the largest GPs. This trend is only magnified by the current COVID-19 crisis. In 2019, the 20 largest funds captured approximately 45 percent of all committed capital versus 29 percent five years ago. In the first half of 2020, while only 19.5 percent of the funds raised were US$1 billion or larger, they represented 73.9 percent of dollars committed, and that period outraised 2019 by US$6 billion with 214 fewer funds. Overall, 80.7 percent of the funds closed in 2020 increased their size from their predecessors — growing 43.4 percent on a median basis.[19]

While approximately 10 percent of US PE funds raised in 2020 were by first-time fund managers, recent data suggests the largest GPs (colloquially referred to as "mega fund managers" in the industry) will continue to dominate. According to Coller Capital, "The private equity industry is likely to become more concentrated – with three-quarters of LPs expecting the largest General Partners to attract a higher

[18] Preqin, *Global Private Equity & Venture Capital Report*; Rolandi, "Investors to Increase Private Markets Allocation"; Jacobius, "Larger Share of Commitments Going to Megamanagers during Pandemic."
Note: Various data services firms group different types of PE into AUM estimates. For instance, some estimates include VC and real assets, while others do not. As such, estimates may vary.
[19] Preqin, *Global Private Equity & Venture Capital Report*; Geifer, et al., *Private Fund Strategies Report – Q2 2020.*

proportion of total private equity commitments in the next five years."[20] These trends are occurring across private asset classes.[21]

There are strong reasons to believe that the trend in consolidated capital flows stems from the institutionalization of capital. Markets have evolved from being dominated by individual investors to having a large presence of institutional investors. Institutional investors now hold over 40 percent of global market capitalization of listed companies, and the number is higher in some markets. In the US, it is 72 percent.[22]

Institutional investors have sizable portfolios and must invest billions if not trillions of dollars. With such large chunks of capital to put to work, they often find it challenging to invest in smaller fund managers, smaller companies, and niche investment strategies due to a number of factors, such as transaction costs. Even when small deals perform well, which data suggests that they often do, they are hard to justify because they do not meaningfully move the needle in terms of overall portfolio returns.[23] Furthermore, when it comes to funds, institutional investors set concentration limits to manage risk, restricting investments from being over a threshold percentage of that entire fund's capital base.[24] From an efficiency point of view, institutional investors see benefits from investing large amounts, and that can most easily be done with larger entities. The results of these dynamics for US PE Leveraged Buyout (LBO or "Buyout" funds, which comprise the largest segment of PE markets) are illustrated in Figure 4.

A well-documented negative impact of consolidated capital flows to larger fund managers is that smaller, emerging, and innovative fund managers can be starved of capital. This is of particular concern regarding Black, Indigenous, and People of Color (BIPOC), as well as women. To be sure, there are other factors inhibiting capital flows to these emerging managers. They include implicit bias, the requirement of GPs to invest some of their own capital alongside LPs (which is often difficult for individuals from historically economically disadvantaged populations), limited track record, concerns by LP investment professionals and consultants relating to career risk and opportunity (in terms of allocating capital to new names versus trusted "blue chip" or brand names), among other factors. These practices inhibit diversification across talent, geography, access to deal flow, deal sizes, and deal structures which may be more regenerative, resilient, and undervalued.[25]

[20] Coller Capital, *Global Private Equity Barometer*; Fernyhough, Springer, and Akers, *US PE Breakdown – 2020 Annual;* PitchBook, *Private Fund Strategies Report – Q2 2020.*
[21] Cox and Carmean, *Global Private Debt Report – 2020 Annual.*
[22] OECD, *Owners of the World's Listed Companies*; PwC, *Asset and Wealth Management Revolution.* The US market is particularly relevant in this paper, as it is the largest capital market globally.
[23] For data on emerging and diverse fund managers see: Preqin, *Making the Case for First Time Funds*; Women in Venture Capital, *The Untapped Potential of Women-Led Funds*; Fairview Capital*, Market Review of Woman and Minority-Owned Private Equity and Venture Capital Firms*; NAIC, *Examining The Returns*; PitchBook, *Q1 2021 Benchmarks Webinar Deck.*
[24] This restriction incentivizes institutional investors to invest in larger funds so as to stay below those thresholds.
[25]For examples and additional reading, see for instance, Baird, *The Innovation Blind Spot*.

Figure 4: Average US PE Buyout Fund Size, 2010-2020

Source: PitchBook. Note: US PE Buyouts were selected for illustrative purposes since the US and Buyout markets are the dominant forms of global PE.

Fund Manager Compensation, Inequality, and Power

PE investors are some of the best paid investors in the market, with compensation of mega-fund-managers often exceeding banking executives. Professor Ludovic Phalippou at the University of Oxford Said Business School writes, "If all vintage years are included (from 2006) to 2015, Carry collected is $370 billion… the number of PE multibillionaires rose from 3 in 2005 to 22 in 2020."[26] Bloomberg Businessweek notes that, "There are more private equity managers who make at least $100 million annually than investment bankers, top financial executives, and professional athletes combined..."[27]

ESG and impact investing strategies at the portfolio company level may include paying living wages to workers, sharing equity ownership of portfolio companies with workers (or local community members in the case of real assets), narrowing executive-to-average-worker compensation ratios, or investing in products and services for the underserved. However, as long of the rate of wealth of the fund manager grows at an exponentially faster rate than for workers in or beneficiaries of portfolio companies, the wealth gap will continue to grow.

As such, even when PE funds are integrating ESG into their portfolio company operations, the largest of these funds, through their own compensation structures, are systemically growing economic inequality. Regarding the United Nations (UN) Sustainable Development Goals (SDGs), it is hard to imagine how investors can meaningfully contribute to SDG 10 (Reduced Inequalities) through such an inconsistent approach. Furthermore, when so much wealth pools to so few individuals, those few individuals are well-positioned to invest in assets such as real estate and equities, bidding up the prices to a point where they become unaffordable for the less advantaged. These dynamics contribute to massive inequality, secular stagnation, reduced economic growth, and social instability.

[26] Phalippou, "An Inconvenient Fact: Private Equity Returns & The Billionaire Factory."
[27] "Everything Is Private Equity Now."

It is important to highlight that the fee structure in most private asset classes also results in a misalignment of incentives between LPs and GPs. When the PE industry was in its earlier stages and fund sizes were smaller, the two percent management fee on committed or invested capital was designed to pay for operating expenses of the fund and basic salaries, while the twenty percent carried interest – or profits from the portfolio companies — was intended to reward managers for good performance. But the growth of mega fund managers has resulted in situations whereby large managers are paid handsomely for asset gathering through the management fee alone, weakening the incentive for managers to make strong returns.[28]

Moreover, large funds are often oversubscribed, so the bargaining power of their LPs decreases. While some may suggest LPs could act in concert, they are sometimes prevented from doing so due to concerns about being accused of collusion.[29] This can limit their ability to successfully negotiate fund terms, and in some cases, ESG integration. As noted by a LP in a recent Private Equity International article:

"'While it's been easier for us to ask for better terms on the debt and real assets side because those markets are more nascent, private equity is incredibly tough… You're actually lucky to just keep the terms you have in your previous fund. Most of the good GPs have worsened their terms instead of made them better, and it's kind of take it or leave it…'" The article then notes, "Despite the disruption, LPs are still supportive of private equity and allocations remain high, which bodes well for GPs' fee advantage."[30]

This GP influence is not limited to their LPs. As GPs amass their own wealth, they are well-positioned to influence policy making through lobbying and political spend. Contributions can be made directly, by key individuals at senior levels of the firm, or through industry bodies. Such activity sometimes runs counter to GP's stated ESG goals. For instance, some GPs have lobbied for surprise medical billing that would favor the profits of their portfolio companies over the affordability of healthcare services to lower and middle-class people.[31] Others have lobbied for limited disclosure.[32] Overall, this influence inhibits progress on issues such as responsible tax standards, increased transparency and disclosure requirements, and regulation that would support smoother functioning of markets.[33] It has been highlighted that ironically, though Milton Friedman

[28] We acknowledge this disincentive is tempered by the fact that most established fund managers recognize another incentive to generate strong financial performance, which is the need to raise a follow-on fund.
[29] Through our discussions with institutional investors, we have found that this is particularly a concern in the US market.
[30] Mendoza, "LP Fees: Investors Strike Back?"
[31] Lewis, "Top PE Lobbying Group Pauses Its Political Donations after Capitol Riot"; Center for Responsive Politics website; Lewis, "PE Digs in as Battle to End Surprise Medical Bills Rages on"; Cumming, "Private Equity Smashes Its Campaign-Spending Record with 2020 Races"; Center for Responsive Politics, "Private Equity & Investment Firms"; Park, "Latest update"; McLeod, "Here's How Private Equity Firms Targeted Republican Sen. John Cornyn With Dark Money To Preserve Surprise Medical Billing."
[32] Cortese, "The Surprising Climate Carveouts in the U.S. Spending Package."
[33] In regard to tax: While ESG initiatives such as the Principles for Responsible Investment, the B Team, and others, have recently published guidelines for responsible investors on responsible tax practices at the portfolio company level, this could also be applied to the asset management level. There has been significant debate about the appropriate tax treatment of carried interest. Currently, in a number of jurisdictions, carried interest is taxed as a capital gain, which is a lower rate than income. However, many argue that fund managers are not investing a significant amount of their own capital in their funds to justify their carried interest as a capital gain. Rather, most of the capital invested in these funds is from LPs, and the carried interest might therefore be considered as a performance fee to be taxed at the higher rate of ordinary income. Given the focus of this report is investment structuring versus tax policy, our coverage of this topic is limited, but we wish to acknowledge that it is a prominent topic of debate when considering the erosion of the public tax base.

advocated for the pursuit of profits as a corporation's sole purpose, that was only if confined within, "the rules of the game." However, political spending and lobbying create opportunities for companies and investors to influence the rules of the game, thereby creating a "destabilising feedback loop."[34]

While we have not yet conducted a fund-by-fund analysis of mega fund managers to evaluate their portfolios, high-level data comparing the average growth in fund sizes to the growth in average deal size suggests that larger funds tend to focus on larger deal sizes, thereby potentially contributing to corporate consolidation, rising valuations, and therefore asset class correlations. There are only so many larger companies to invest in, which suggests increased competition between the largest fund managers in the markets for the same deals, bidding up valuations. This is particularly the case in the Buyout segment of PE, which by far accounts for the largest percentage of deals. Figure 5 illustrates the average deal size and deal count from 2005 to 2020 in the global LBO market.

Negative impacts of this trend in addition to pressure on returns include corporate consolidation, starving smaller companies of capital, and decreased competition across the corporate sector. Higher levels of PE investments, combined with higher aggregate market capitalization (a six-fold increase for the average market valuation of U.S. listed firms in real terms over the past two decades), and the increase in M&A activity together could explain as much as around 60 percent of the U.S. listing gap (fewer but larger U.S. public firms), resulting in higher levels of corporate concentration in public markets and less opportunity for diversification, with a host of additional negative consequences as described in the next text box.[35]

There is strong evidence of negative impacts in the VC markets, as well.[36] The tendency for investors to allocate capital to the largest managers and deals, and to pursue "unicorns" has contributed to a dearth of capital and sometimes destructive competition for smaller businesses which have strong potential for steady returns in the middle of the risk-return spectrum, as opposed to "hockey stick" style returns. Many of these businesses are owned, run, and/or founded by people from BIPOC communities and women.[37] The combination of consolidated capital flows going to older, more traditional investment structures may be inhibiting portfolio diversification, portfolio resiliency, and efforts toward Diversity, Equity, and Inclusion (DEI).

In regard to investment structuring and practices, which is the focus of this report, many PE firms and other asset managers domicile their funds in tax havens. Such havens offer magnified returns for the fund managers themselves, as well as certain non-tax-exempt clients. However, many investors, such as US public pension funds, are tax-exempt, so this benefit does not accrue to them. Given well-functioning markets arguably depend on a stable legal and regulatory environment (as reflected in sovereign spreads, for instance), the erosion of the tax base is concerning from a systematic risk perspective.

[34] Austin, "Milton Friedman's hazardous feedback loop."

[35] Lattanzio, Megginson, and Sanati, "Listing Gaps, Merger Waves, and the New American Model of Equity Finance." M&A activity alone explains 35.3 percent of the U.S. listing gap, and PE investments alone 20.3 percent.

[36] McGrath, "COVID-19 Couldn't Stop Venture Capital Deal-Making in North America."

[37] Duhigg, "How Venture Capitalists Are Deforming Capitalism"; Ben-Ami, "Don't Go Chasing Unicorns"; Zebras Unite website; Kauffman, "Capital Access Lab."

Negative Impacts of Corporate Concentration[38]

Increasing corporate concentration may be responsible for higher mark-ups and pricing power relative to consumers. It is estimated that since the 1980s average mark-ups have increased for publicly traded firms in the US, from 18 percent to 67 percent above cost.[39] In his book *The Great Reversal,* Philippon asserts that increasing concentration in the US is responsible for an excessive increase in prices by at least 8 percent over the past seventeen years, based on research that is primarily focused on a comparison between the US and Europe.[40] According to Philippon, markups are systematically related over time and across countries and industries to changes in concentration.[41] Common ownership (the degree to which companies are owned by the same investors) may also result in the exercise of price setting power.[42]

This is not to say that consolidation has always pushed prices up. Some consolidated industries, such as retail, have become more efficient and have clearly passed on cost savings to their consumers (e.g. Amazon and Walmart's advanced supply chain management system, though often at the expense of quality jobs and supplier relationships), as Philippon acknowledges in his book.[43] Yet on average, US consumers have been facing increases in prices and mark-ups on account of corporate consolidation, more so than in other advanced economies, such as in Europe. This in turn has had an adverse impact on consumption. In another study, Gutiérrez, Jones, and Philippon estimate that in aggregate the decline in competition has depressed consumption by about 5 to 10 per cent between 2003 and 2015.[44]

While corporate concentration has traditionally been viewed as a consumer welfare issue, its negative consequences are now being recognized as a broader threat to the economy. Corporate concentration may also be bad for investment and productivity growth. Investment has fallen to low levels relative to measures of profitability and valuation, with capital stock estimated at about 10% lower than it should be. Data suggests this is primarily driven by the increase in corporate concentration, with the investment gap as high as 20 percent in concentrated industries.[45] Moreover, research has highlighted how concentrated industries can inhibit the growth of SMEs and innovative new start-ups due to incumbents' ability to stifle competition through a variety of tactics.[46]

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[38] For additional and regularly updated information on negative impacts from corporate consolidation, see the American Economic Liberties Project website and Tepper and Hearn, *The Myth of Capitalism*.

[39] De Loecker, Eeckhout, and Unger, "The Rise of Market Power and the Macroeconomic Implications."

[40] According to Philippon, *The Great Reversal*, prices in the US have increased 15 percent more than prices in Europe, but wages have increased by only about 7 percent more than in Europe. He finds that half of the relative price increase in the US comes from increasing markups.

[41] Philippon's examples of industries that have seen price increases as a result of corporate concentration include high-speed internet and airlines. He finds that because price increases have been gradual and because it is difficult to compare prices across countries, even for similar goods and services, the differences between the US and Europe in this regard have not attracted as much attention as they deserve.

[42] See Azar, Raina, and Schmalz, "Ultimate Ownership and Bank Competition" for an analysis of common ownership and fees in the banking industry; and for an analysis of how common ownership may be correlated with ticket price increases in the airline industry.

[43] Philippon, *The Great Reversal*.

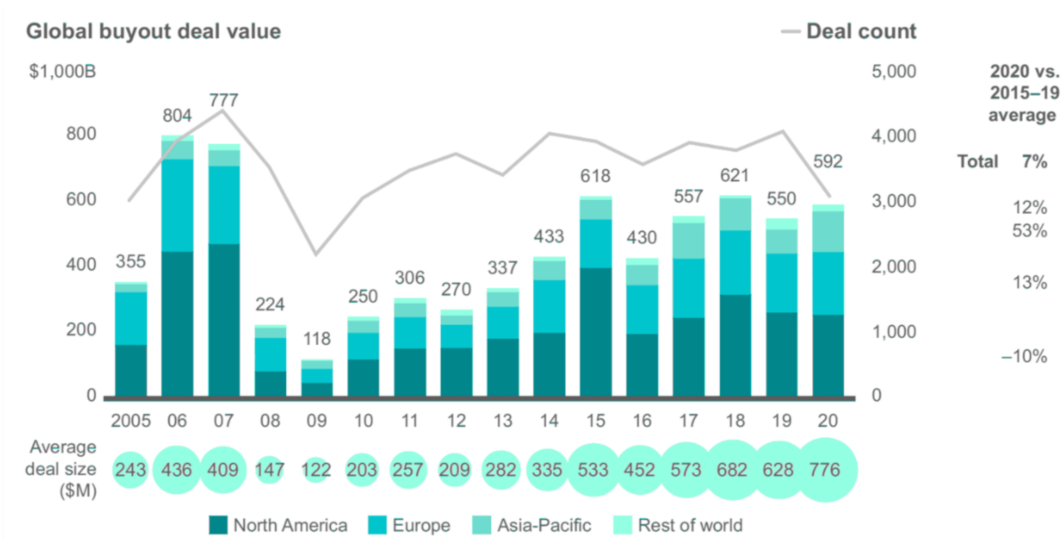
[44] They rely on a model that simulates the evolution of the U.S. economy since 1990.

[45] Gutiérrez and Philippon, "Investment-Less Growth" estimated the statistical relationship between corporate valuations (Tobin's Q) and investment during the period 1990-2001, and found that investment started to decline after 2001, with a cumulative shortfall of more than 10 percent of capital by 2015. While this research is primarily focused on public companies, there is no reason to think that similar dynamics would not be associated with higher corporate concentration levels in private markets.

[46] Tepper and Hearn, *The Myth of Capitalism*.

As a related point, corporate concentration may also be a key factor contributing to the increase in income inequality in both public and private markets. For developed economies, the data shows a positive association between aggregate wage inequality and growth of the largest firms, with wage differentials associated with different jobs and skill requirements increasing with firm size.[47] Pay differences *between* firms may be accounting for as much as two-thirds of the increase in earnings inequality from 1981 to 2013.[48] The rise in corporate concentration also appears to be a driver of the fall in the "labor share" (the share of labor income in total income), with industries with larger increases in market concentration experiencing larger declines.[49] Based on a dataset that captures 80 percent of total private sector employment, Autor and his co-authors find that the labor share is going down as sales reallocate into "superstar firms" – those firms with above-average markups and below-average labor shares, while average firms have not seen their labor share decrease.[50] Corporate concentration may also be contributing to the issue of monopsony power in labor markets, thereby depressing growth in worker compensation, in addition to a deterioration of the quality and affordability of goods and services.[51]

Figure 5: Global LBO Average Deal Value and Deal Count, 2005-2020

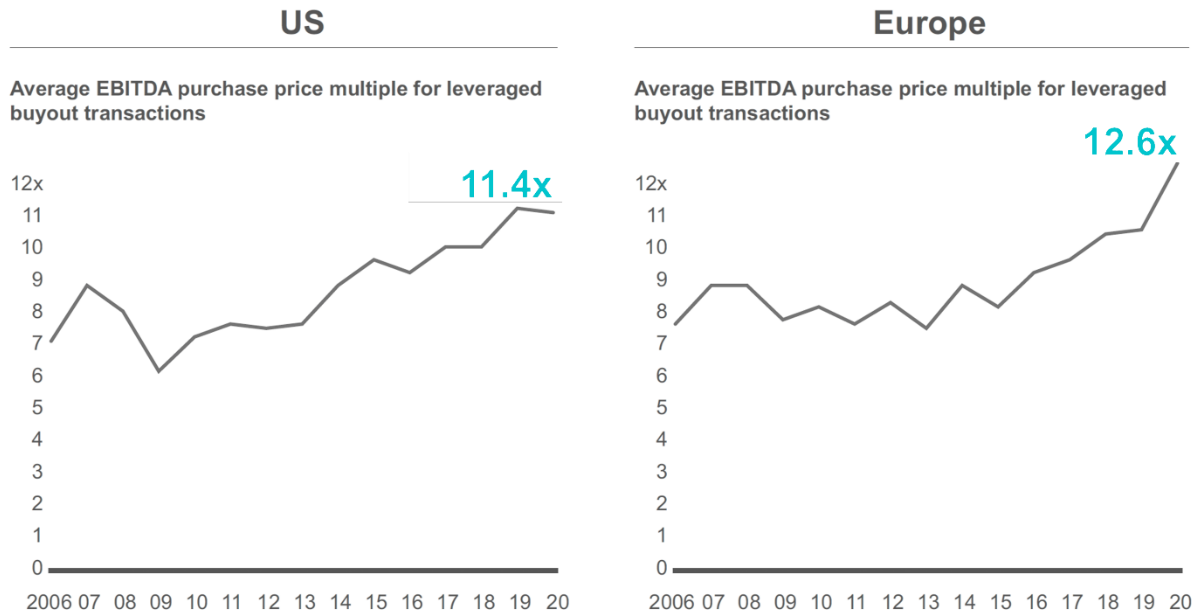


Sources: Dealogic, Bain & Company, Global Private Equity Report 2021. Notes: Includes add-ons; excludes loan-to-own transactions and acquisitions of bankrupt assets; based on announcement date; includes announced deals that are completed or pending, with data subject to change; geography based on target's location; average deal size calculated using deals with disclosed value only.

[47] See Mueller, Ouimet, and Simintzi, "Wage Inequality and Firm Growth." Critical wages in medium and low-skill job categories are invariant to firm size. This suggests that though wages do increase with firm size on average, this result is exclusively driven by the upper tail of the distribution.
[48] Song et al., "Firming Up Inequality."
[49] Autor et al., "Concentrating on the Fall of the Labor Share"; Barkai, "Declining Labor and Capital Shares"; Autor et al., "The Fall of the Labor Share and the Rise of Superstar Firms." Starting in the 1980s there has been an unprecedented and well-documented fall in the share of labor income in total income, from a relatively constant average of 62% to a low of 56%.
[50] At the individual firm level, the labor share can be computed as the ratio of wages to firm value-added (contribution to GDP), or, alternatively, to sales. Autor et al., "The Fall of the Labor Share and the Rise of Superstar Firms" find that the fall in the labor share is driven largely by the reallocation of sales into superstar firms rather than a fall in the unweighted mean labor share across all firms.
[51] Azar, Marinescu, and Steinbaum in "Labor Market Concentration"; Benmelech, Bergman, and Kim, "Strong Employers and Weak Employees." Azar, Marinescu, and Steinbaum show that going from the 25th percentile to the 75th percentile in labor market concentration is associated with a 17% decline in posted wages.

With so much capital – in large chunks – chasing deals, combined with the tailwinds of low interest rates, it is not surprising that valuations are rising. The average US EBITDA buyout multiple in 2020 was 11.4x, with more than 80 percent of deals leveraged at above 6x EBITDA. Around 70 percent of US buyouts priced above 11x EBITDA. As seen in Figure 6, valuations have been on a gradual rise, with peaks not seen since the past financial crises of 2000 and 2007. These trends are evident in both public and private equities.[52]

Figure 6: Average EBITDA Purchase Price Multiple for Leveraged Buyout Transactions



Source: S&P LCD, Bain & Company.

The Institutionalization of Capital and the Universal Owner – A Double Edged Sword?

The consolidation of capital among institutional investors is a double-edged sword. On the one hand, institutions offer individual investors professional money management with multi-disciplinary staff and robust internal infrastructure capable of constructing well-diversified portfolios. Size and scale can also allow large allocators to influence corporate governance of portfolio companies, as well as negotiate more attractive terms with fund managers. It is arguable that fees overall are reduced through these dynamics, and strong ESG practices can be better advocated for. On the other hand, since large institutions need to put significant amounts of capital to work, they often allocate to the largest managers and companies, thereby resulting in consolidation of power, profit, influence, and opportunity among a shrinking pool of asset managers and companies.[53] In order for large institutional investors to act as responsible Universal Owners and effectively manage systematic risk, it will be critical for them to evaluate their asset allocation practices

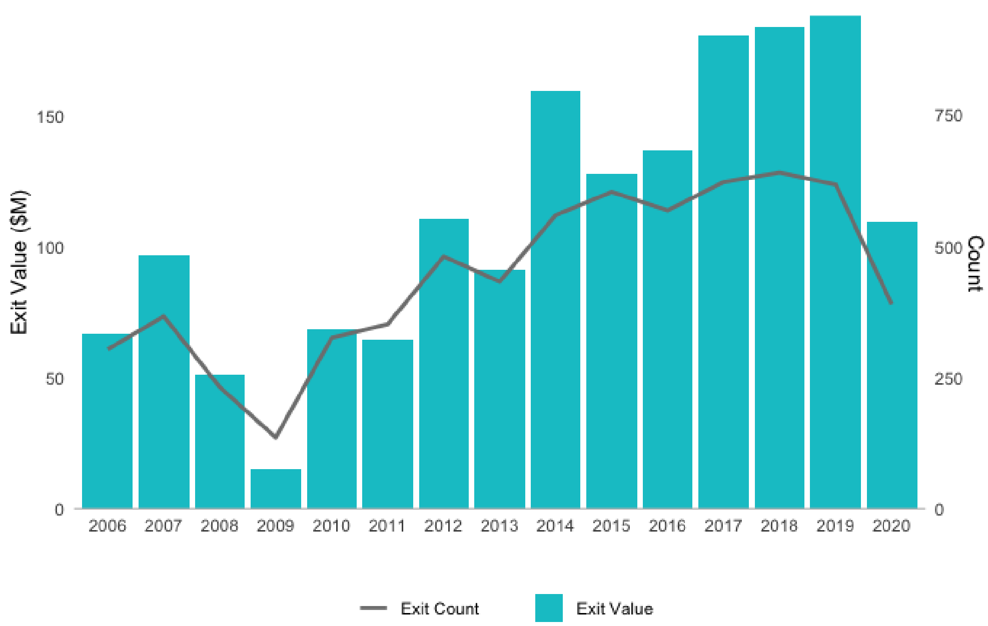
[52] Bain & Company, *Global Private Equity Report 2021.* Notes 1) EV stands for Enterprise Value. 2) EBITDA stands for Earnings before Interest, Tax, Depreciation, and Amortization. 3) As described later in this paper, leverage ratios may actually be higher than documented due to accounting manipulations. Steele, "The New Money Trust"; Mauboussin and Callahan, "Public to Private Equity in the United States: A Long-Term Look."
[53] Coller Capital, *Global Private Equity Barometer*.

for unintended negative consequences that not only impact the real economy, but also markets and their long-term portfolios.

For a number of reasons, including the promise of stronger returns, GPs have increasingly turned to Secondary Buyouts – or selling a portfolio company to another PE investor, as a path to liquidity. Figure 7 shows the exit values of such sponsor-to-sponsor activities. While this can mean earlier exits than the market would otherwise allow, as well as the potential for an acquiring GP to add specialist expertise to the company, it can also mean reduced diversification and higher valuations for LPs, particularly those who find themselves on both sides of a transaction.[54] Management of conflicts of interest is also an additional complication to be considered.

Another route for exits that became popular in 2020 are Special Purpose Acquisition Companies (SPACs). Figure 8 shows the US SPAC IPO activities. While the impacts of SPACs are still being understood, and we are evaluating them in more detail as data emerges, there are early indications of misalignment of interests and other issues through this exit route. Of particular concern is the twenty percent promote that is typically awarded to SPAC sponsors, reduced disclosure requirements, and short hold times.[55]

Figure 7: US PE Sponsor-to-Sponsor Exit Activity

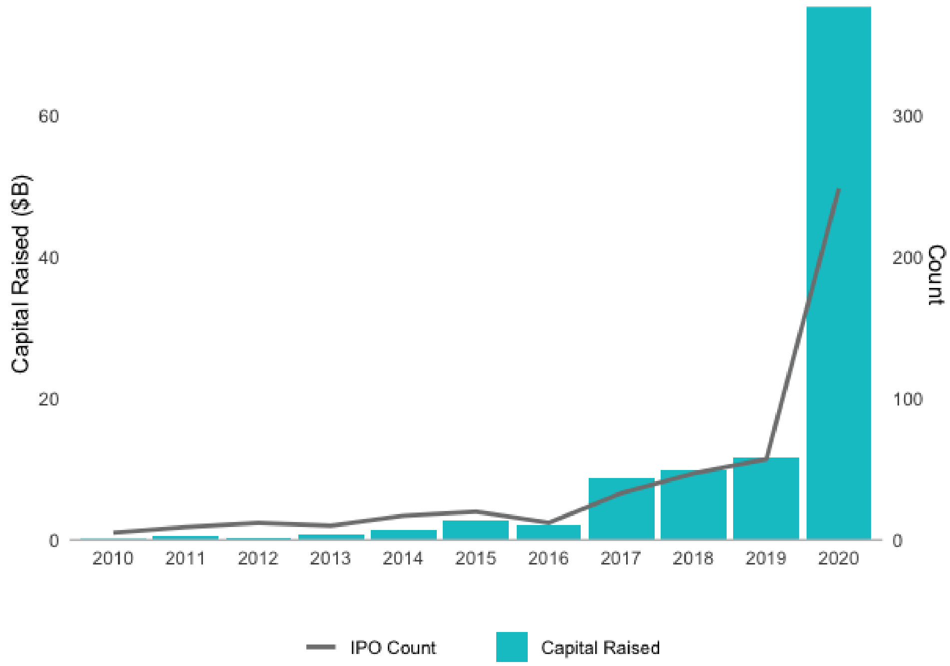


Source: PitchBook.

[54] Wilder, "How Secondary Buyouts Became Ubiquitous"; Wiggins, "How Selling to Yourself Became Private Equity's Go-to Deal."

[55] Gara and Haverstock, "How SPACs Became Wall Street's Money Tree"; Celarier, "Egregious Founder Shares. Free Money for Hedge Funds. A Cluster***k of Competing Interests. Welcome to the Great 2020 SPAC Boom"; Lewis, "Private Equity Plays a Starring Role in 2020's SPAC Boom"; Klausner, Ohlrogge, and Ruan, "A Sober Look at SPACs"; Bain & Company, *Global Private Equity Report 2021.*

Figure 8: US SPAC IPO Activity



Source: PitchBook.

Rising Asset Prices and Inequality

COVID-19 has raised awareness about the difference in performance between the stock market and the real economy. While inflated asset prices erode potential returns for corporate or new stock acquisitions, they also disproportionately benefit those who are already wealthy and privileged. Eighty-four percent of all stocks owned by Americans belong to the wealthiest 10 percent of households. Forty-five percent of Americans don't own any stock at all. From a worldwide perspective, it is important to keep in mind that these numbers are even lower across populations in the Global South. This data takes into account stakes in pension plans, 401(k)'s, IRAs, trust funds, mutual funds, and college savings accounts.[56] These dynamics have particularly negative impacts on Black households, given their lower ownership of equities. In the US, over 60 percent of white families own stocks (directly or through a retirement account), versus approximately 30 percent of Black and Hispanic families.[57]

The granting of equity incentives and high compensation to executives of large companies and fund managers while keeping worker compensation relatively low compounds these impacts. Such arrangements result in significant gains for CEOs and fund managers versus workers in portfolio companies, particularly when combined with stock buybacks and/or dividend distributions.[58] Such gains are also often out of reach for BIPOC communities and women given CEOs and fund managers are typically white males. Moreover, strong bodies of evidence suggest that performance often is not commensurate with high pay, and other

[56] Cohen, "We All Have a Stake in the Stock Market, Right?"; Wolff, "Household Wealth Trends in the United States, 1962 to 2016"; Gallup, "Stock Market Poll."
[57] Clement, "The Wealth Gap and the Race between Stocks and Homes"; Detrixhe and Kopf, "The US Stock Market's Wealth Generator Has Failed Black Americans."
[58] Scheltens, "How Did American CEOs Get so Rich?"; Lazonick, Erdem Saking, and Hopkins, "Why Stock Buybacks Are Dangerous for the Economy"; Mason, "Disgorge the Cash: The Disconnect Between Corporate Borrowing and Investment."

studies illustrate that paying and treating workers better contributes to both improved company and market performance.[59] Overall, a small class of corporate and fund manager executives capture disproportionate gains relative to asset owners, workers, and other stakeholders who may be taking risk and/or creating value in the "capital markets value chain."[60] Meanwhile, investors may be leaving money on the table from not adequately incentivizing others who participate in the value creation process of companies.

It is not only prices of equities, but also housing and other assets that skyrocket and become unobtainable for those with lower incomes or net worth. This becomes even more problematic when PE investors begin to invest in assets such as housing. PE and other large investors comprised more than 11 percent of US home purchasers in 2018, the highest on record and approximately twice the pre-2008 housing crash. As put in a Wall Street Journal article, this "poses a challenge for millennials and other first-time buyers who are increasingly looking to buy starter homes and are forced to compete with deep-pocketed cash buyers."[61] It is arguable that low interest rates primarily benefit those who already have some level of wealth. Despite the current low interest rate environment, Bloomberg notes that US homebuyers face "the worst affordability squeeze in 12 years."[62]

Gains from the wealthy are often reinvested in markets, thereby pushing up asset prices even further, consolidating wealth, and increasing barriers to entry and the costs of living for the less-well off. At a macro level, this consolidation of wealth contributes to secular stagnation, given the wealthy do not spend as much as lower and middle classes proportionate to their net worth. [63] Moreover, much recent investment is often in consumer-oriented industries with little job creation and contribution to economic growth. Risks of an equity bubble also increase.

High asset valuations and corresponding deterioration in financial performance from new acquisitions might be addressed through layering on additional leverage to deals to magnify returns. In the LBO segment of PE, leverage has grown particularly high (see Figure 9). Bain and Company notes that,

> *"...debt multiples shot up in 2020, with almost 80% of deals leveraged at more than 6 times EBITDA—traditionally the level at which federal regulators start to raise eyebrows. These*

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[59] Rasmussen and Li, "The MBA Myth and the Cult of the CEO"; Edgecliffe-Johnson, "A Crisis Is an Ideal Time to Raise Pay;" Mirchandani, "What I Wish I Had Learned About Investing At Harvard Business School"; Tufford, "CEO Pay from Start to Finish."

[60] See Predistribution Initiative, "FAQ" for a description of the "capital markets value chain."

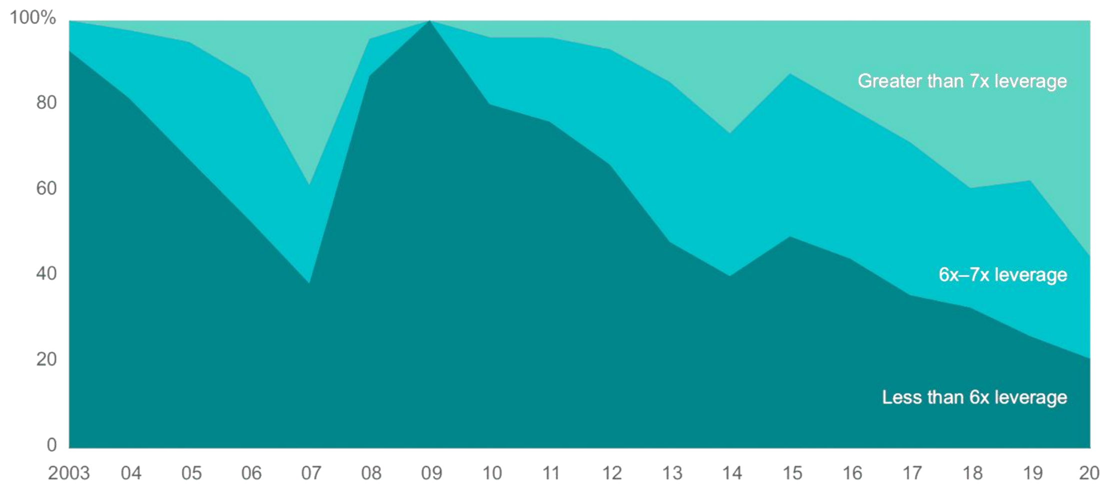
[61] Kusisto, "Investors Are Buying More of the U.S. Housing Market Than Ever Before"; Foroohar, "Why Big Investors Are Buying up American Trailer Parks"; OHCHR, *States and Real Estate Private Equity Firms Questioned for Compliance with Human Rights.* It is also worth noting that inflation, at least in the US, may not be adequately captured by traditional measures such as the Consumer Price Index (CPI) and the Personal Consumption Expenditures price index (PCE). Inflation may actually be much higher depending on how rising expenses associated with big cost items such as housing, healthcare and education are reported.

[62] Gopal, "U.S. Homebuyers Face Worst Affordability Squeeze in 12 Years."

[63] Overall, increase in inequality has resulted in excessive savings by the very rich, which has exerted a drag on demand. EPI estimates that in recent years rising inequality has slowed growth in aggregate demand by 2 to 4 percentage points of GDP annually. See Bivens, "Inequality is slowing U.S. economic growth: Faster wage growth for low- and middle-wage workers is the solution". Much of the savings of the rich households has not been accompanied by a rise in net domestic investment – almost two-thirds of the rise in financial asset accumulation of the top 1% of the wealth distribution since the 1980s has been a rise in the accumulation of claims on U.S. government and household debt (Mian, Straub, and Sufi, "The Saving Glut of the Rich"). Larry Summers' "secular stagnation" hypothesis posits that excess savings relative to levels of investment tend to drive interest rates down while also leading to demand shortfalls and low growth (Summers, "The Age of Secular Stagnation").

> *dynamics have been at play for several years, as limited partners continue to pile money into the industry faster than GPs can put it to work. Unspent private capital overall, including that committed to venture, growth and infrastructure funds, has grown in stair-step fashion since 2013 to almost $3 trillion, with around a third of it attributed to buyout funds and SPACs."*[64]

Figure 9: Share of US Leveraged Buyout Market, by Leverage Level



Source: Refinitiv LPC, Bain and Company.

High leverage ratios may not seem problematic when markets are stable and debt is cheap to service. However, they leave capital structures extremely weak and vulnerable to downturns. In 2020, the industry publication and data service provider, PitchBook, noted:

> *"…a sweeping wave of downgrades also plagued PE portfolios during the quarter (2Q 2020). Lenders have been willing to underwrite deals with few to no covenants and have accepted aggressive add-backs for years. This has led to portfolio companies being less able to survive during times of distress, as we are in now. The number of companies with ratings of B3 negative and lower has more than doubled in 2020 and now sits firmly above any point during the global financial crisis. Moreover, of the 412 companies with credit ratings of B3 negative and lower, 273—or around two-thirds—were PE-backed as of May 7,2020."*[65]

Moodys reported that 54 companies defaulted in the second quarter of 2020, nearly three times the number in the year's first quarter, and that PE was present in 58 percent of defaults among non-energy companies. The ratings agency noted that, "the dollar volume of defaulted debt swelled by nine times between April and June, thereby approaching the roughly $100 billion of defaulted debt, close to what we saw in the 2008-2009 credit crisis."[66] Yet, global central bank intervention stopped put a floor on downside risk for investors, keeping markets not only liquid, but thriving. QE, low interest rates, and a new program enabling the Fed to purchase corporate bonds has particularly benefited credit markets,

[64] Bain & Company, *Global Private Equity Report 2021.*
[65] Fernyhough and Akers, *US PE Breakdown – Q2 2020.*
[66] Chursin, Padgett, and Joshi, "US speculative-grade default rate surges in Q2 2020 as coronavirus fallout takes toll."

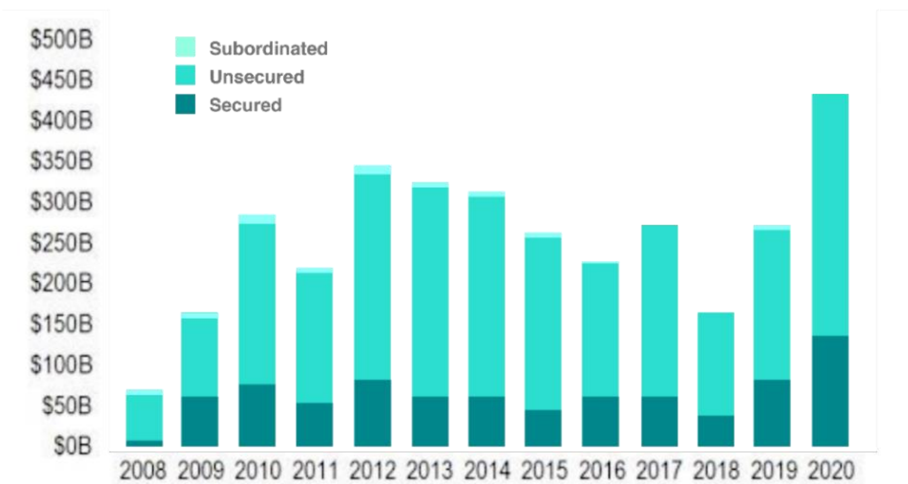
and therefore highly leveraged companies and strategies.[67] Furthermore, continued low interest rates both fuel LP interest in PE and incentivize more leverage. As such, these trends are poised to continue.

High Yield Bonds, Private Debt, Leveraged Loans, and CLOs

The sources of debt to facilitate leveraged transactions have expanded as well, and now include HYBs, PD, LLs, and CLOs, with uses of funds in addition to portfolio company acquisitions that include dividends (more often referred to as "dividend recapitalizations" in private markets and simply "dividends" in public markets), buybacks (in public markets), capital expenditures, refinancing, and general corporate purposes.

As a familiar asset class since the 1980s, HYBs - known colloquially as "junk bonds" - have been a popular choice of asset allocation in this low interest rate environment. Following interventions by central banks in response to the COVID-19 crisis, total HYB bond issuance soared, beating the prior peak in 2012, as per Figure 10.[68] Rating outlooks remained at risk (see Figure 11), while credit spreads recovered from their initial spike (see Figure 12).

Figure 10: US High Yield Bond Issuance



Source: S&P Global Market Intelligence LCD. Note: Data through Dec. 18, 2020.

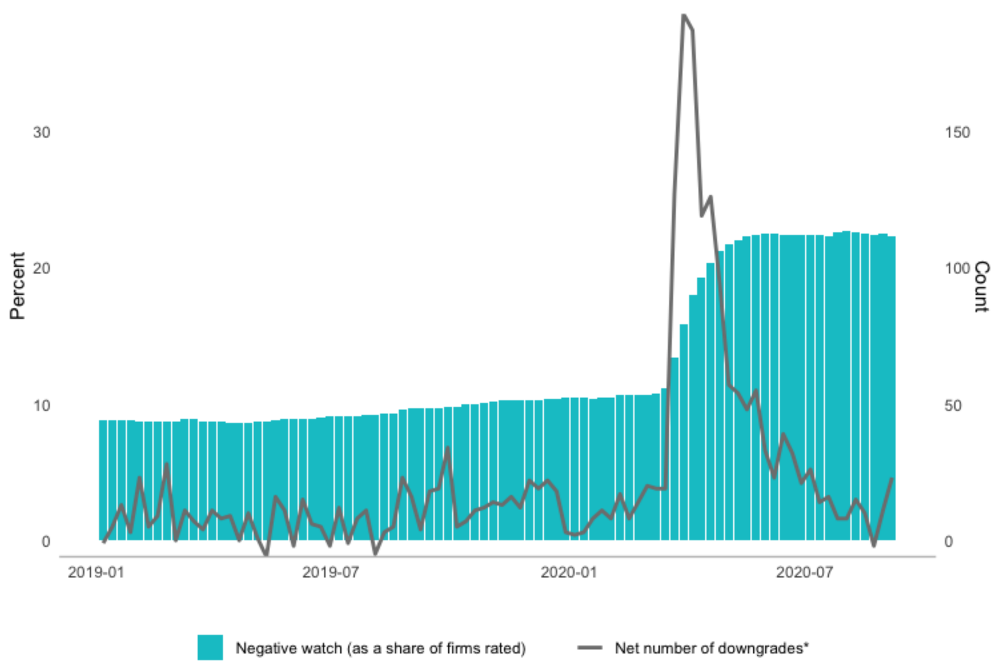
[67] It is worth noting that that these Fed purchases came without any conditions, such as maintaining payrolls or limiting future leverage. While such conditions may have been too complicated to implement for certain investment products, it may have been possible to design some level of intervention without incentivizing moral hazard.

[68] Rennison, "US Corporate Bond Issuance Hits $1.919tn in 2020, Beating Full-Year Record"; Lewis, "US High-Yield Bond Issuance Smashes August Record as Market Rolls On"; Atkins, "US High Yield Bonds Q4 Review."

Estimates vary, but data suggests that a significant number of borrowers have unsustainable capital structures or pose near-term default risks.[69] The Bank of International Settlements (BIS) reported in its September 2020 Quarterly Review that,

> *"In credit markets, spreads narrowed to long-term historical levels, despite evidence of deteriorating credit quality. Heavy issuance across the rating spectrum, especially in investment grade, though to a considerable extent precautionary in nature, added to the heavily indebted capital structure of many firms… credit markets seem to expect that corporate bankruptcy rates will continue to be low, even though this would be at odds with historical experience. Concretely, if historical relationships continued to hold, the 2020 GDP growth forecasts – ranging between –4.5 and –11% – would be consistent with bankruptcies increasing by 20–40% in 2020. Yet, on the back of public support measures, most economies have witnessed a lower number of bankruptcies since the beginning of the year than over the equivalent period in the previous five years… As net leverage ratios continued to climb to all-time peaks, corporates' capital structure became increasingly reliant on debt and low interest rates…"*[70]

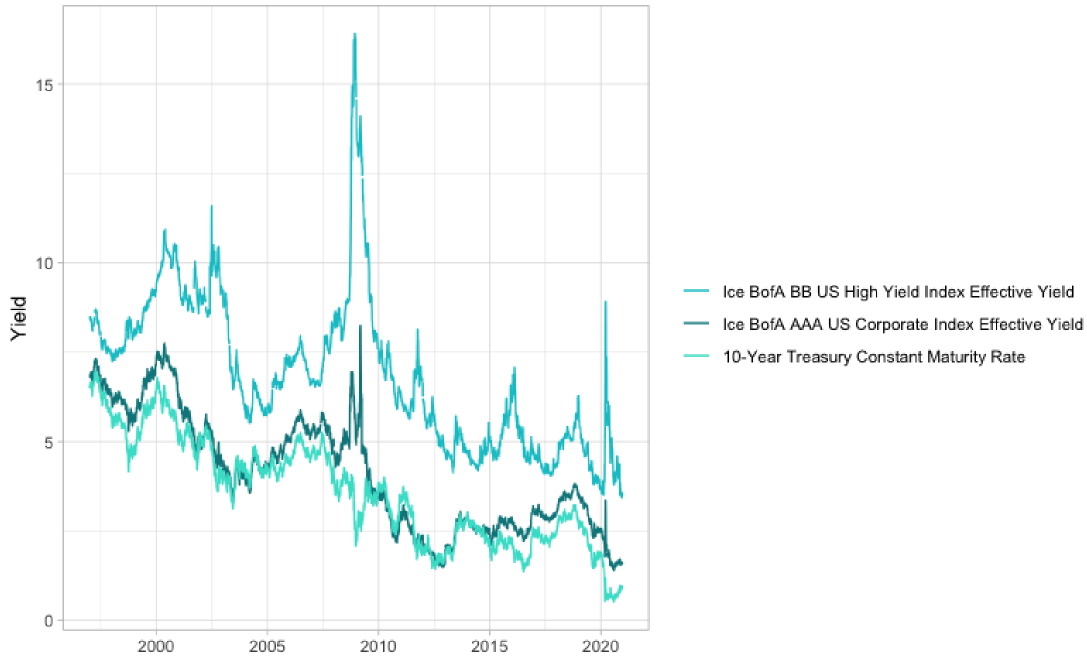
Figure 11: Ratings Outlook Remains at Risk



Source: BIS Quarterly Review, September 2020. Note: Net downgrades count the number of downgrade actions taken minus the number of upgrade actions, which may include the same entity being downgraded more than once.

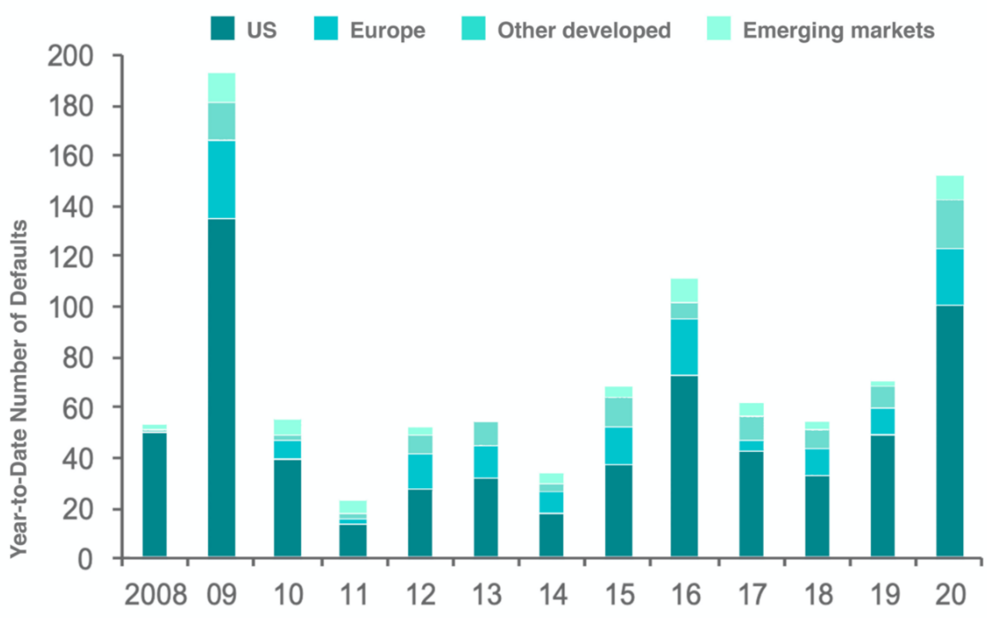
[69] Data below, and for additional reading, see: Guthrie, Whiffin, and Yuk, "Why Rescue Finance Will Slow Recovery in Businesses."
[70] BIS, *Markets Rise despite Subdued Economic Recovery.*

Figure 12: US Credit Spreads, 1997-2020



Sources: Ice Data Indices, LLC and FRED, retrieved from FRED (Federal Reserve Bank of St. Louis)

Figure 13: Solvency Risks in the Corporate Sector: Global Speculative-grade Corporate Defaults



Source: IMF. Note: 2020 data was reported as year-to-date at the time of publication. The IMF notes that, "defaults have risen across risky markets, with the largest increase among high-yield bond issuers, followed by leveraged loans and middle market loans."

Because the underlying credit profile of the borrowers is riskier and most of the debt is unsecured, returns are higher than traditional fixed income securities (e.g. US Treasuries or investment grade ("IG") corporate debt), suiting institutional investors' search for yield in an increasingly low interest rate environment. Yet, as with equities, this yield begins to decline as investor demand increases and capital floods the asset class.[71]

Figure 14: Growth of BBB as a Percent of IG, 2002-2020

Source: WRDS Bond Returns.

Loans can be made in a number of forms and are not limited to public debt issuances in bond markets. For instance, banks and private creditors can make loans directly to companies. As previously mentioned, while banks were traditionally a source of corporate loans, increased regulation in response to the GFC crisis limited their ability to lend to smaller clients and those with less robust credit profiles.

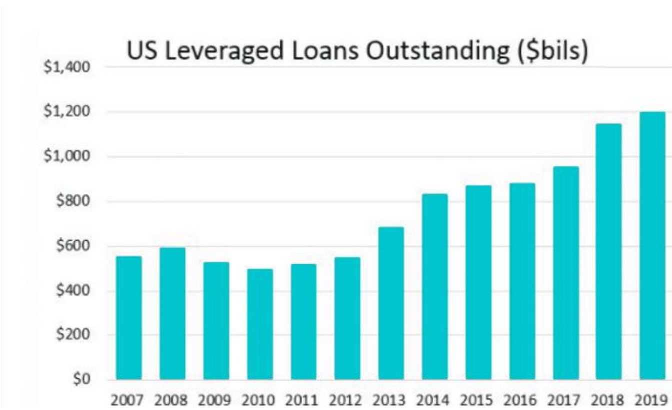
Recognizing corporate demand, limited supply of such debt, risk premiums that can be charged to smaller companies or companies with weaker balance sheets, as well as institutional investor appetite for yield, asset managers and other NBFIs have developed specialized investment vehicles to provide "private credit" or "private debt" (PD). Significant portions of this credit come from PE firms themselves,

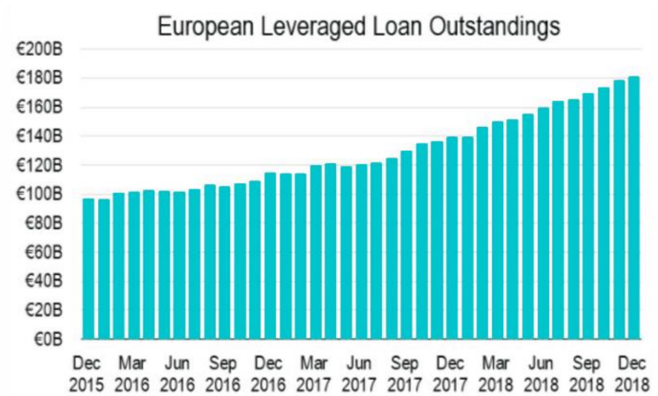
[71] Lewis, "US High-Yield Bond Issuance Smashes August Record as Market Rolls On"; Mackenzie and Platt, "Asset Managers in $300bn Drive to Build Private Lending Funds."
Note: Many argue that the quality of IG debt has also deteriorated over the years given significant issuance at the lower rungs of what is considered IG. Going into the pandemic, approximately 50 percent IG corporate debt was rated BBB, just above junk status. At the end of 2019, concerns rose that investors had strong interest in both junk and lower-rated IG bonds despite poor underlying fundamentals, or earnings that did not seem to justify such interest. When it became clear that COVID-19 could significantly impact corporate earnings in 2020, many companies rated BBB were downgraded by ratings agencies to junk status. Such companies are known as "fallen angels." However, global policy interventions (notably in the US the Fed's decision to extend its purchase of corporate bonds – including ETFs – to bonds issued by fallen angels) pushed borrowing costs down, put a floor on credit downgrades, and propped up the market. For further reading, see: "Navigating Through the Fog of Crisis"*;* Zwick and Bernhardt, "Is Coronavirus About to Cause the Next Global Financial Crisis?" and Samson, "Moody's Warns on Frothy US Junk Bond Market."

many of whom have established PD funds.[72] A relatively new asset class, PD grew from under US$100 billion in AUM in 2004 to over US$800 billion as of mid-2019.[73]

Some of this debt – both from banks and asset managers - comes in the form of leveraged loans (LLs) – or loans to companies which already have significant debt levels, and therefore have lower credit quality. LLs are present in the PE asset class as a form of portfolio company debt and/or as loans made by PD funds to other funds' portfolio companies. US and European LL markets have risen rapidly over the last few years as illustrated in the figures below, with the US market doubling since 2007 from approximately $554 billion to $1.2 trillion.[74] LLs can be securitized into CLOs. The CLO markets in the US and Europe have also skyrocketed over the past decade.[75]

Figure 15: Leveraged Loans





Source: LCD, an offering of S&P Global Market Intelligence; S&P LSTA Leveraged Loan Index

While HYB, LL, CLO, and private debt financings may be facilitated by traditional banks and asset managers, the ultimate lenders and buyers of these products are often institutional investors, such as pension funds, insurance companies, sovereign wealth funds (SWFs), and endowments. Given their yield potential, many credit underwriters are willing to forego standard protections such as covenants and limits to leverage ratios. A July 2019 study by a leading law firm in the private credit industry found that "covenant loose" deals comprised 59% of transactions, versus 26% in 2018.[76] Estimates of covenant-lite loans in the global LL market are nearly 90%.[77]

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[72] Vandevelde, "How the Biggest Private Equity Firms Became the New Banks"; Le, et al., *US PE Lending League Tables – Q2 2020.*

[73] Preqin, *Global Private Debt Report – 2020*; Private Debt Investor, "Deep Dive"; Preqin, *Future of Alternatives 2025*.

[74] Sources and additional reading: Aramonte, "Private Credit"; Martin-Buck, *Leveraged Lending and Corporate Borrowing*; Wirz and Timiraos, "The Next Coronavirus Financial Crisis"; Mauboussin and Callahan, "Public to Private Equity in the United States: A Long-Term Look"; Private Debt Investor, "Deep Dive."

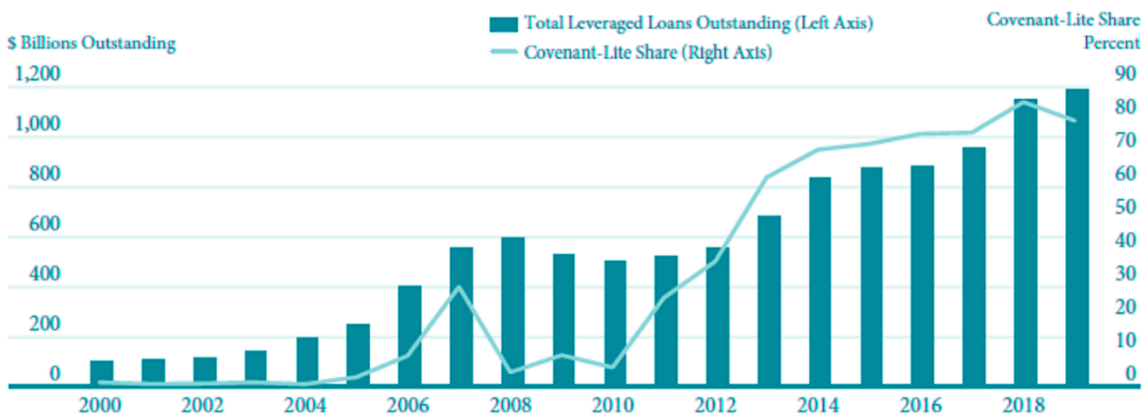
[75] The loans can be packaged into a pool of loans and then divided up into tranches with different estimated risk/return profiles. Some investors may want to purchase the highest risk/return CLOs of an issuance, while others may prefer exposure to safer tranches. Sources and additional reading: S&P Global, "Leveraged Loan Primer"; S&P Global, "CLO Primer"; Aramonte and Avalos, "Structured Finance Then and Now."

[76] Proskauer, "Proskauer Releases 1H 2019 Private Credit Market Highlights."

[77] Light, "A Decade After the Financial Crisis"; S&P Global, "Riskier Leveraged Loan Issuers Load up on Cov-Lite Deals"; Edwards, "The Risk 'Leveraged Loan' Market Just Sunk to a Whole New Low."

Figure 16 illustrates the growth of LLs since 2000, the share that are cov-lite, and deteriorating credit quality. Estimates suggest that higher defaults are expected. In 2019, the Fed noted that lending to companies with especially high debt loads exceeded peaks in 2007 and 2014.[78] In 2018, the European Central Bank (ECB) found that over half of new LLs made by large Eurozone banks exceeded their "high leverage" threshold of six times EBITDA, which has caused concern about weakness in financial system stability.[79] A recent study by Standard & Poor's (S&P) Leveraged Commentary & Data of 67 companies exiting bankruptcy between 2014 and 2020 illustrates that the average recovery was just 65 cents on the dollar versus investors in senior loans with normal covenants recovering 99 cents at the median.[80]

Figure 16: Outstanding US Leveraged Loans Almost Double Their Pre-Crisis Level, and Covenant-lite Share is Near an All-time High



Sources: FDIC Quarterly, S&P LCD. Notes: Outstanding loan data cover loans included in the S&P/Loan Syndications and Trading Association Leveraged Loan Index and thus underestimate the full market. Covenant-lite share is of institutional leveraged loan issuance. Data are through July 2019.

Moreover, a key metric of profitability – EBITDA – has been increasingly manipulated by companies in order to present reasonable leverage ratios to investors and secure more favorable credit ratings (see Figure 17). This practice is often referred to as an "EBITDA add-back" or "adjusted EBITDA" and can make a corporate borrower seem safer than it is. Over 40 percent of buyout deals have adjustments to EBITDA, and data shows that companies that provide projections of adjusted EBITDA frequently miss those projections.[81]

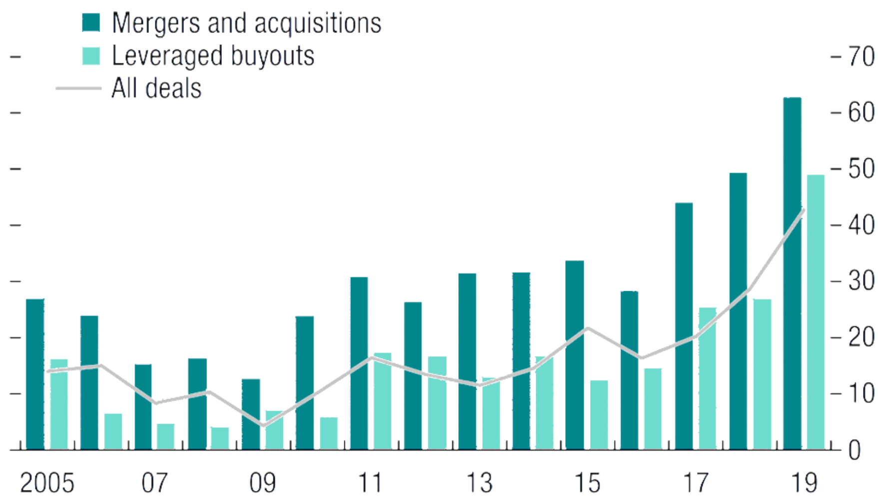
[78] "Everything Is Private Equity Now."

[79] Kakouris, "2021 Leveraged Loan Survey"; Kraemer, Palmer, and Mccabe, "Default, Transition, and Recovery."; Morris, Smith, and Arnold, "ECB Threatens Banks with Capital 'Add-Ons' over Leveraged Loan Risks."

[80] "Leveraged Loans."

[81] Honeyman and Zhang, "When The Cycle Turns."

Figure 17: US Leveraged Loans Deals with EBITDA Add-Backs (Percent of New Issuance)

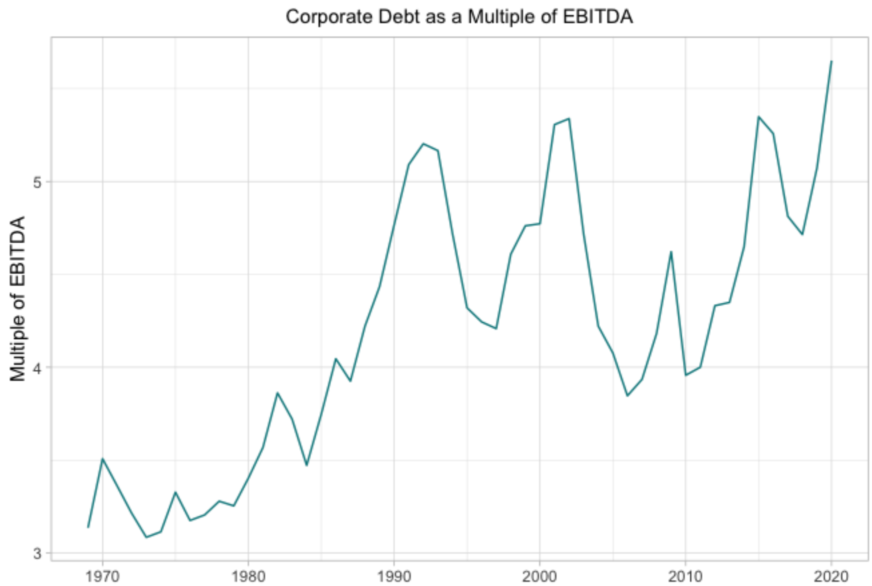


Source: IMF.

This high-risk debt is not limited to private companies. A recent Forbes article highlights how, "some of the biggest firms in the United States… have binged on low interest debt. Most of them borrowed more than they needed, often returning it to shareholders in the form of buybacks and dividends. They also went on acquisition sprees." The publication's analysis of 455 companies in the S&P 500 (excluding banks and cash rich tech giants like Apple, Amazon, Google and Microsoft) showed on average, businesses nearly tripled their net debt over the last 10 years, adding approximately $2.5 trillion in leverage to their balance sheets. "For every dollar of revenue growth over the past decade, the companies added almost a dollar of debt..."[82] Figure 18 shows the rising trend of corporate debt as a multiple of EBITDA.

[82] Gara and Vardi, "Inside the $2.5 Trillion Debt Binge That Has Taken S&P 500 Titans Including Boeing and AT&T From Blue Chips to Near Junk."

Figure 18: Corporate Debt as a Multiple of EBITDA, 1970-2020



Source: Compustat. Note: Nonfinancial companies only. Debt does not include cash and short-term investments.

From the corporate perspective, historically cheap credit due to low interest rates is attractive, particularly when combined with the current tax deductibility of interest expense, studies suggesting that highly leveraged capital structures do not negatively impact stock prices, and arguments that debt adds discipline to corporate management.[83] Yet debt and common uses of funds can increase risk for other stakeholders. M&A has been shown to contribute to corporate consolidation which can stifle SMEs, innovation, suppliers, the quality and affordability of goods and services, labor's bargaining power, and diversification for institutional investors.[84] There is significant literature that explores negative impacts of share buybacks in public companies, given the links with high executive compensation and that cash paid to executives and shareholders can deter from reinvestment in the company, the quality of goods and services, and the workforce.[85] In PE-backed companies, high leverage from acquisitions and dividend recapitalizations can push companies to cut costs related to quality jobs and jeopardize the quality and affordability of goods and services.[86]

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[83] Modigliani and Miller, "The Cost of Capital, Corporation Finance and the Theory of Investment"; Jensen, "Agency Costs of Free Cash Flow, Corporate Finance, and Takeovers."

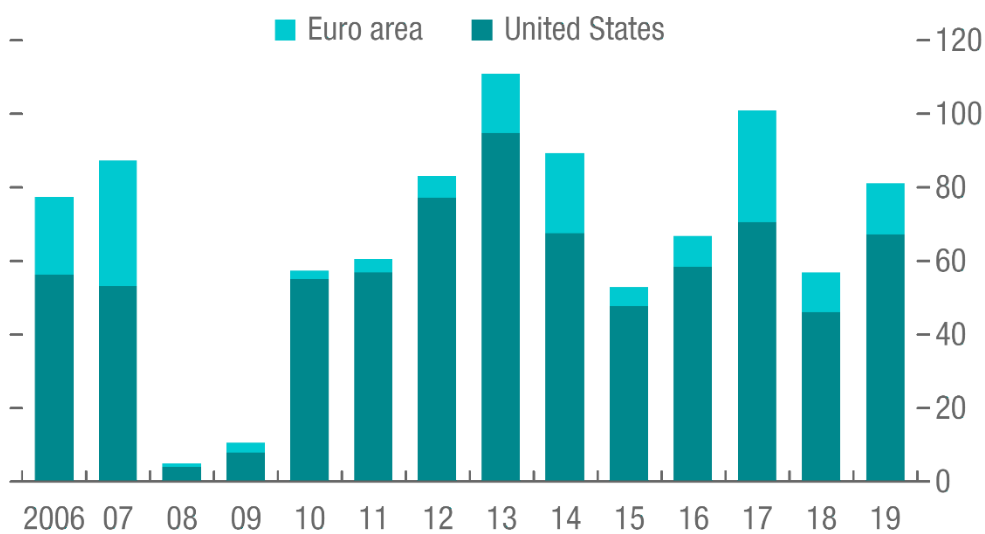
[84] Gara and Vardi, "Inside the $2.5 Trillion Debt Binge That Has Taken S&P 500 Titans Including Boeing and AT&T From Blue Chips to Near Junk"; Tepper and Hearn, *The Myth of Capitalism*; Martin-Buck, *Leveraged Lending and Corporate Borrowing*; Ronalds-Hannon, Doherty, and Scigliuzzo, "Wave of U.S. Bankruptcies Builds Toward Worst Run in Many Years"; IMF, *Global Financial Stability Report*; Sharma, "This Is How the Coronavirus Will Destroy the Economy"; Rothenberg, Hearn, and Chappe, "Deconsolidating Capital Flows: Pros, Cons, and Approaches"; American Economic Liberties Project website.

[85] Lazonick, Erdem Sakinç, and Hopkins, "Why Stock Buybacks Are Dangerous for the Economy"; Lowrey, "Are Stock Buybacks Starving the Economy?"; Mason, "Disgorge the Cash: The Disconnect Between Corporate Borrowing and Investment."

[86] McGavin and Robertson, "Private Equity Firms Quietly Return to Debt-Funded Payouts"; Lewis, "PE Firms Keep Deploying Dividend Recaps despite the Risks." Appelbaum and Blatt, *Private Equity at Work*.

As of September 2020, nearly 25 percent of US LL proceeds in that year had been used to fund PE dividends, with signs of the practice continuing in 2021.[87] As per Figure 19, the IMF finds that in particular, firms with speculative-grade credit quality have used more debt for such purposes. Figure 20 also illustrates M&A activity funded by debt. In 2020, add-ons accounted for 72.5 percent of all US Buyouts, beating the previous record in 2019, as well as 61.4 percent of European Buyout activity in 2020, a record rate.[88]

Figure 19: High-Yield Bonds and Leveraged Loans Used for Dividends and Share Buyback Recapitalizations (US$Bn)

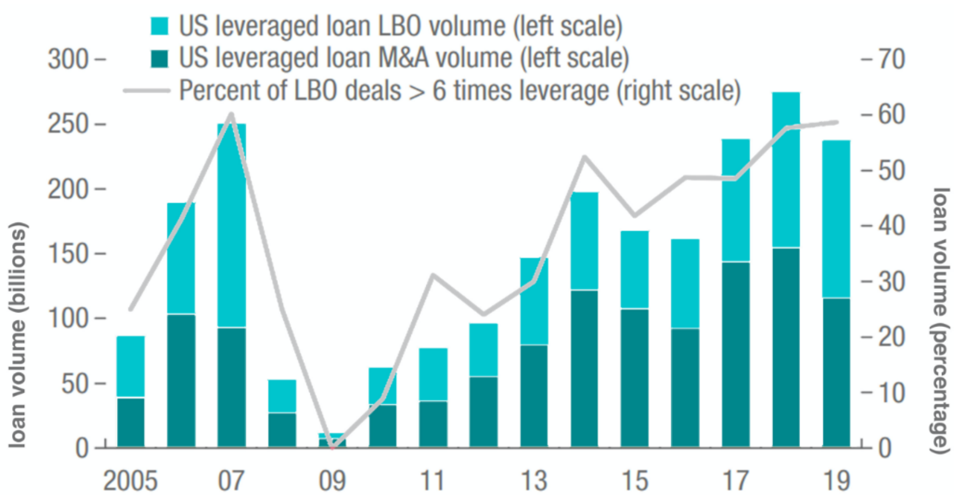


Source: IMF.

[87] "Private Equity: Quick Recap."

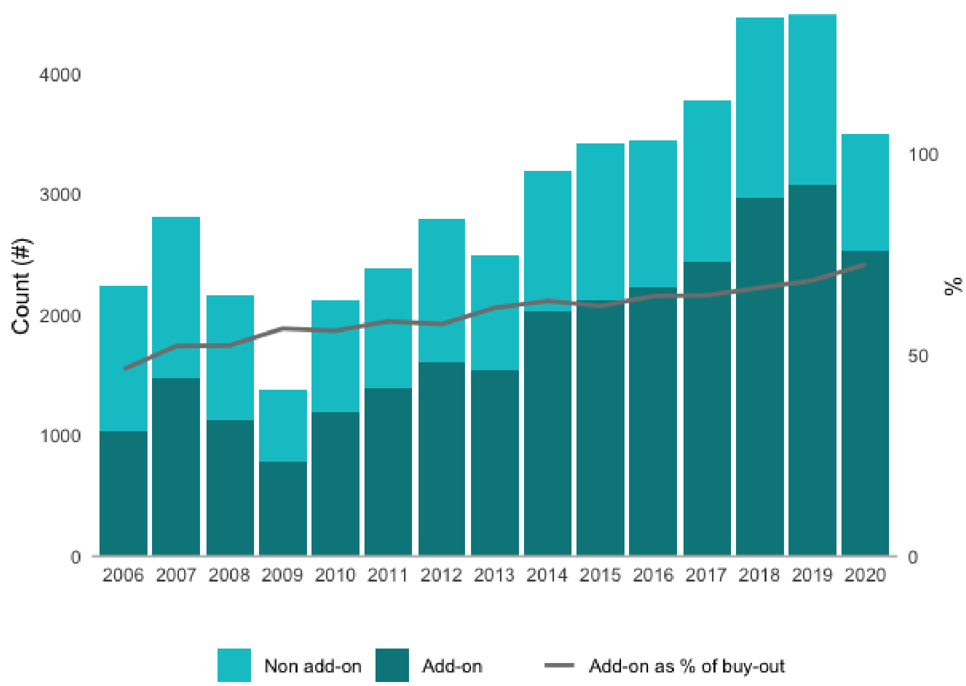
[88] Sources: Fernyhough, Springer, and Akers, *US PE Breakdown – 2020 Annual;* Mondesir and York, *European PE Breakdown – 2020 Annual. Note*: We recognize that not all M&A activity has negative impacts, and some of it is healthy for the economy. We also recognize that there are certain situations in both public and private markets when distributions to investors funded by debt can be appropriate. Our intent with highlighting negative impacts is to encourage investors to evaluate the uses of proceeds of debt issuances and loans on a case-by-case basis in a manner that contextualizes the health of the company's capital structure and corporate consolidation relative to systemic and systematic risk.

Figure 20: US Leveraged Loan M&A and LBO Volume



Source: IMF.

Figure 21: US PE Add-On Activity



Source: PitchBook.

In terms of buybacks, there are emerging arguments that they are actually used by companies as a tool to reach targeted leverage ratios. As such, to take a more holistic view and get to the root of the problem, it may be constructive for investors to place more emphasis on leverage ratios, rather than buybacks and dividends, when considering related ESG risks.

In their 2020 paper, Financing Payouts, for instance, Joan Farre-Mensa, Roni Michaely, and Martin Schmalz argue that debt-funded payouts help companies manage ideal leverage targets while not depleting cash, take advantage of opportunities to arbitrage relative valuations of debt versus equity, maximize tax management, address agency considerations, and that, "…capital-structure changes are not a buy-product but a key objective of payout policy… Debt financed payouts are not without costs, however, as they appear to increase firms' financial fragility, at least in the case of firms without an investment-grade credit rating."[89]

A recent study appearing in the BIS Quarterly Review makes a similar argument and considers reasons for lack of investor concern:

> *"Companies can pursue excessively high leverage for a number of reasons. For one, opaqueness could blur the link between leverage and the likelihood and cost of financial distress. In this instance, more information may lead shareholders to target lower leverage. Alternatively, the focus on short-term results could lead managers and shareholders to largely disregard longer-term costs of distress, especially if these are borne by creditors, employees or the public sector. In this case, high leverage is part of a strategically chosen capital structure."*[90]

Although creditors, employees, and public sector mentioned are external stakeholders bearing the costs of the externalities, their absorption of such risk arguably contributes to market risk, which boomerangs back to institutional investors' portfolios. Wide defaults across credit markets can lead to liquidity or solvency crises, causing markets across asset classes to seize up. In such situations, public sector spending aimed at putting a floor on losses can contribute to persistent low interest rates, currency devaluation, and inflation. Massive unemployment stemming from corporate restructurings exacerbates the problem, reduces consumer spending power, and stifles economic growth. None of these are good for markets and therefore the portfolios of large, long-term, diversified investors, or Universal Owners.

However attractive near-term payouts in the form of dividends and buybacks may be, in the long term, high leverage across large segments of the market could be particularly damaging for Universal Owners. As the financial historian and economist, Peter L. Bernstein, writes in his book, Capital Ideas, "In diversified portfolios, the riskiness of any single asset is submerged by the behavior of the portfolio as a whole. This insight leads Sharpe to the same conclusion that Treynor and Markowitz had reached: *The only thing investors should worry about is how much any asset contributes to the risk of the portfolio as a whole*."[91] As such, it is arguable that a methodology should be developed for considering the "inside out" systematic risks of any particular investment, whether it be selection of a security, or strategic asset allocation.[92]

It is important to note that not all PE, PD, LL, CLO, and HYB products are so risky, and they do serve a constructive purpose. There are often many forms of these debt instruments, some of which have a high risk-return profile, and some which have much lower returns, but are considered safer. For instance,

[89] Farre-Mensa, Michaely, and Schmalz, "Financing Payouts."
[90] BIS, *Quarterly Review – September 2020.*
[91] Bernstein, *Capital Ideas,* 188.
[92] The concept of "inside out" risks refer to externalities caused by certain market actors, which actually become risks to essential systems in the real and / or market economy. Recommended reading for more context includes: Baue and Thurm, "Sustainable Finance Blueprint: Systemic Transformation to a Regenerative & Distributive Economy."

certain types of debt can be backed by collateral ("asset backed" or "secured" debt), while others are not ("unsecured debt"). Some debt can be backed by a guarantor. Other forms have flexible payment schedules relative to the financial health of the business. Debt can be an excellent source of capital for a growing business that does not want to sacrifice ownership and control to external equity investors. There have even been transactions in which debt is used to finance worker and community ownership.[93]

There are numerous types of private capital, as well as various strategies of PE funds themselves. Certain PE strategies, such as growth, can have particularly positive impacts for society and stakeholders by creating jobs, fostering innovation, supporting SMEs in supply chains, while also generating strong returns for investors. However, many of these are more "niche opportunities" in nature and difficult for large institutional investors to access, given the huge capital flows that they need to put to work. As such, this will be a topic we revisit in the proposed solutions to workshop section of this paper.

How Much Risk is Sustainable? Are We Doubling Down, or Building Back Better?

Financial vulnerabilities are on the rise, and the Covid-19 pandemic has only accelerated and exposed pre-existing fragilities. Investor fears were reflected in high market volatility and liquidity concerns in the Spring of 2020. Since then, a global stimulus policy response in the range of US$12 trillion was deployed, easing financial conditions, preserving access to capital markets and bank funding, and preventing a liquidity crisis of the type we saw in 2007/2008. Ironically, many of the largest central banks around the world have had little choice but to double down on low interest rates and QE – thereby incentivizing even more leverage throughout the economy and markets. Fiscal stimulus, while critical to support growth if spent productively, nonetheless also contributes to growing sovereign debt burdens. Yet without coordinated government and investor efforts, central bank interventions will result in a self-reinforcing cycle of higher equity valuations, ever increasing corporate and government debt, and a widening gap between the real economy and financial markets.

Doubling Down with Debt and QE

The Fed began its practice of reliably and continually cutting interest rates to accommodate shocks and price volatility with the tenure of Alan Greenspan as Chairman. This started in response to the 1987 stock market crash (and subsequent crises such as the collapse of Long Term Capital Management and the 1997 Asian Financial Crisis), which saw the US Federal Funds rate decline from just under 10 percent in 1989 to around 1.5 percent in 2004. It continued with the 2007 to 2008 GFC, which saw its reduction to effectively zero, and the beginning of QE through large scale asset purchases of long-term government bonds and mortgage-backed securities.

In response to the Covid-19 pandemic, the Fed has had to intervene with further large-scale purchases to support the economy, committing in March 2020 to buying a wide range of debt securities (commercial paper, municipal debt, corporate debt, and securitized products) through a series of

[93] Social Capital Partners, "Taylor Guitars' Transitions to 100% Employee Ownership with Support from the Healthcare of Ontario Pension Plan (HOOPP) and Social Capital Partners (SCP)"; The First Nations Major Project Coalition website.

emergency special facilities with Treasury backing.[94] This included high-yield bond exchange traded funds (ETFs) and bonds of fallen angels. As previously described, this intervention effectively preserved liquidity in financial markets by reigning in the yields (putting a "floor" under asset prices) and promoting a market rally despite high unemployment and high earnings uncertainty. The Fed balance sheet expanded from US$870 billion in August 2007 to US$4.5 trillion in early 2015, and has now increased to over US$7 trillion, which stands at about 35 percent of US GDP.[95]

Central banks have engaged in comparable monetary policy globally, with a nearly US$7.5 trillion balance sheet expansion as of September 2020 in G10 countries.[96] Central banks in emerging economies also deployed similar asset purchases, with a focus on local currency government bonds. The programs were significantly smaller than those launched in advanced economies and varied in size from less than 1 percent to 6 percent of GDP.[97]

While many would argue – and we would agree – that central banks have taken necessary action given the circumstances, such policies have had unintended negative consequences of encouraging leverage and risk-taking on the part of government as well as investors and companies. First, total US public debt has reached levels unseen since World War II, as high as 127 percent as the end of the third quarter in 2020.[98] Focusing on that portion of the debt held by the public, in a September 2020 report the US Congressional Budget Office noted that as a result of growing deficits "federal debt held by the public is projected to rise sharply, to 98 percent of GDP in 2020, compared with 79 percent at the end of 2019 and 35 percent in 2007, before the start of the previous recession. It would exceed 100 percent in 2021 and increase to 107 percent in 2023, the highest in the nation's history. The previous peak occurred in 1946 following the large deficits incurred during World War II. By 2030, debt would equal 109 percent of GDP."[99] Even with low interest rates, the interest on the public debt is set to grow faster than any other spending category.

Public debt levels globally are also at a record high (Figure 22). The IMF estimates that public debt across developed economies will rise above 130 percent of GDP this year.[100] As of November 2020, the Institute of International Finance (IIF) estimated that global debt-to-GDP would have reached 365 percent in 2020, significantly higher than at the start of the 2008 GFC.[101] Fitch has calculated that in the aftermath of the pandemic, global sovereign debt soared by US$10 trillion to US$77.8 trillion, or 94 percent of world GDP.[102] Yet while developed economies have seen an environment of declining interest rates, with average interest rates falling from 4% to 2% over the past decade, on average rates have actually increased in emerging markets during that same period from 4.3 percent to 5.1 percent, putting those governments at a disadvantage when it comes to interest-service burdens. In the same report, Fitch forecasts that despite emerging economies having debt burdens that amount to only a third of that across developed economies, by 2022 they are on track to pay just as much as those economies in interest alone, about US$860 billion. This high debt service diverts funds from other needed investments in domestic resources and social infrastructure.

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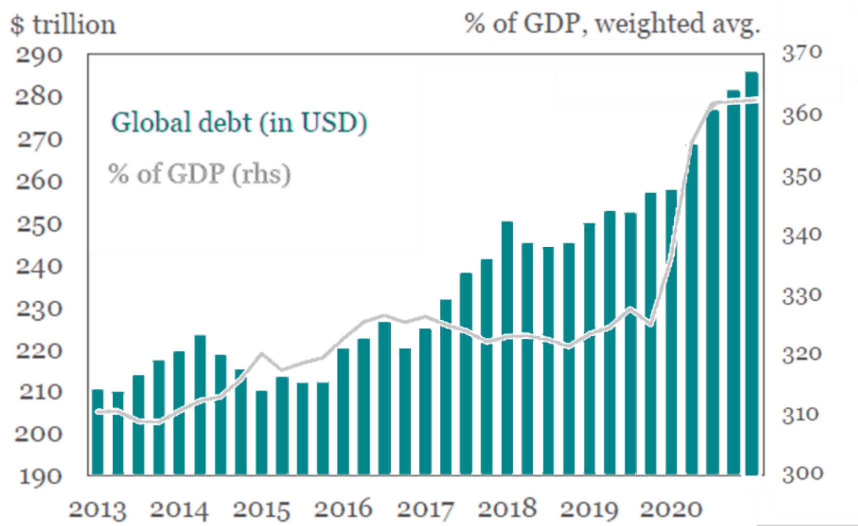
[94] Federal Reserve, "Federal Reserve Announces Extensive New Measures to Support the Economy."
[95] Federal Reserve, *Quarterly Report on Federal Reserve Balance Sheet Developments.*
[96] IMF, *Global Financial Stabilty Report.*
[97] Ha and Kindberg-Hanlon, "Asset Purchases in Emerging Markets."
[98] Federal Reserve Bank of St. Louis, *Federal Debt: Total Public Debt as Percent of Gross Domestic Product.*
[99] Blom, et al., *An Update to the Budget Outlook: 2020 to 2030.*
[100] IMF, *Fiscal Monitor - April 2020.*
[101] IIF, "Global Debt Monitor"; Tiftik, Mahmood, and Gibbs, *Global Debt Monitor Attack of the Debt Tsunami.*
[102] "Record Rise in Government Debt Will Hit Emerging Markets Harder, Fitch Says."

Figure 22: Global Debt Hit Record Highs in 2020



Sources: IIF, BIS, IMF, National sources.

Risks to Emerging Markets

While this working paper focuses on corporate debt, it is worth noting that similar trends are evident in the bond markets of sovereigns, particularly developing countries. Investors have gravitated toward high yielding risky debt of developing countries, who are now struggling to repay. Developing countries may be vulnerable to the demands and influence of international private sector investors who may not be willing to accept a loss of capital in a downturn.[103]

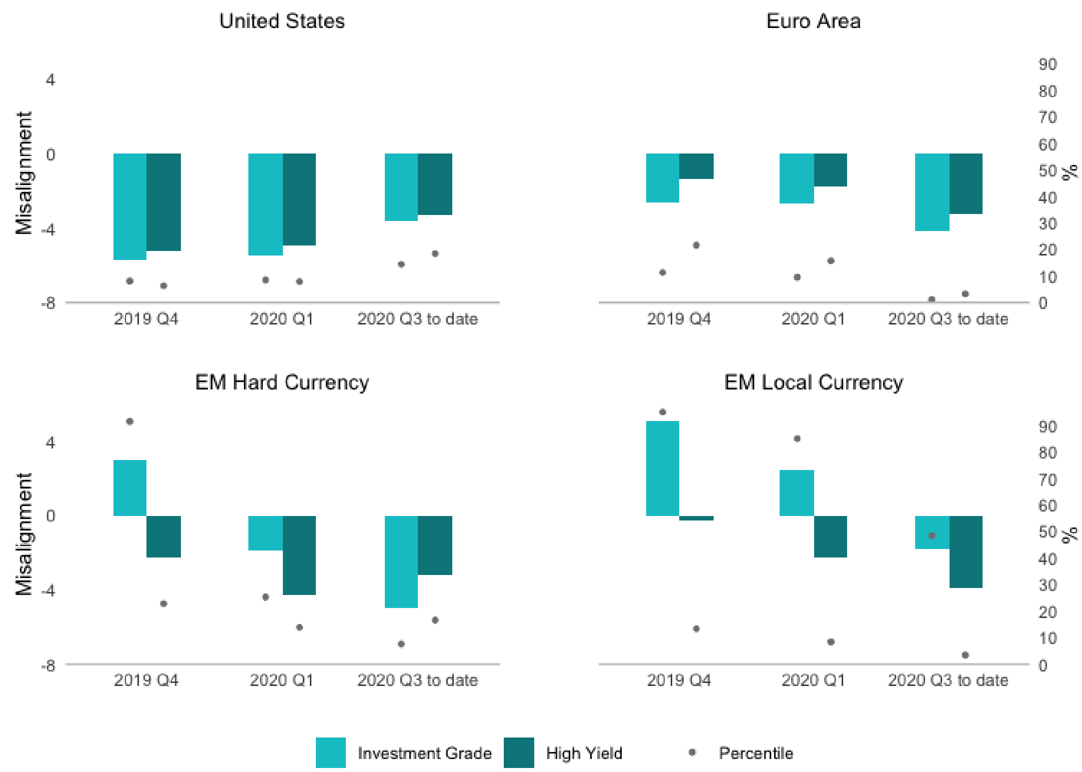
As noted in a 2020 Financial Times article, the head of the World Bank, David Malpass, "…warned that without restructuring debts owed to commercial creditors, additional lending would be diverted from domestic social programmes to foreign interest payments."

"There is a direct connection between debt service, which takes money away from countries, and the urgent need for resources to address health, education and investment in human capital," Mr Malpass said. [104]

While low borrowing costs have supported companies in adding cash to their balance sheets and refinancing, they have also incentivized companies to take on more debt at a time when the non-financial corporate sector was already highly leveraged. The Fed and ECB backstop have also resulted in a misalignment between credit risk and yields. As per Figure 23, the IMF reports a compression in credit spreads below values estimated to be consistent with economic fundamentals. This has enabled companies to flood the market with newly issued debt priced well below its true risk level. For instance, US companies borrowed a record US$2.5 trillion in the bond market in 2020, a borrowing binge' which has driven leverage to an all-time peak for investment grade companies.[105]

[103] Stiglitz and Rashid, "How to Prevent the Looming Sovereign-Debt Crisis."
[104] Wheatley and Jack, "World Bank Piles Pressure on Private Creditors for EM Debt Relief."
[105] Rennison, "Fed Backstop Masks Rising Risks in America's Corporate Debt Market."

Figure 23: Bond Spread Misalignments



Source: IMF, 2020. Note: Misalignment is a deviation from fair value per unit of risk. Percentile is based on 1995-2020. Most bond spreads appear to be too compressed relative to fundamentals across both advanced and emerging markets.

On average, companies' ability to pay for this increased leverage has actually declined. This is reflected in credit ratings downgrades; according to S&P Global Ratings, as early as June 2020 the number of corporate issuers in the 'CCC' rating category in the US had nearly doubled since the beginning of the pandemic in February, as well as in the increase in the number of so-called zombie companies whose interest coverage ratio has been less than one for at least three consecutive years.[106] Research by the BIS suggests that the 10-plus percentage point decline in nominal interest rates since the mid-1980s may account for as much as 17 percent of the rise in the prevalence of zombies in advanced economies.[107] Firms stay in the zombie state for longer than they used to, rather than recovering or going through bankruptcy. While temporary support to such firms from monetary policy may be helpful in reducing the blow in the immediate aftermath of a crisis, longer-term, this can be problematic because zombie companies tend to have lower productivity than other firms, invest less, and are vulnerable to even the slightest future shocks.[108]

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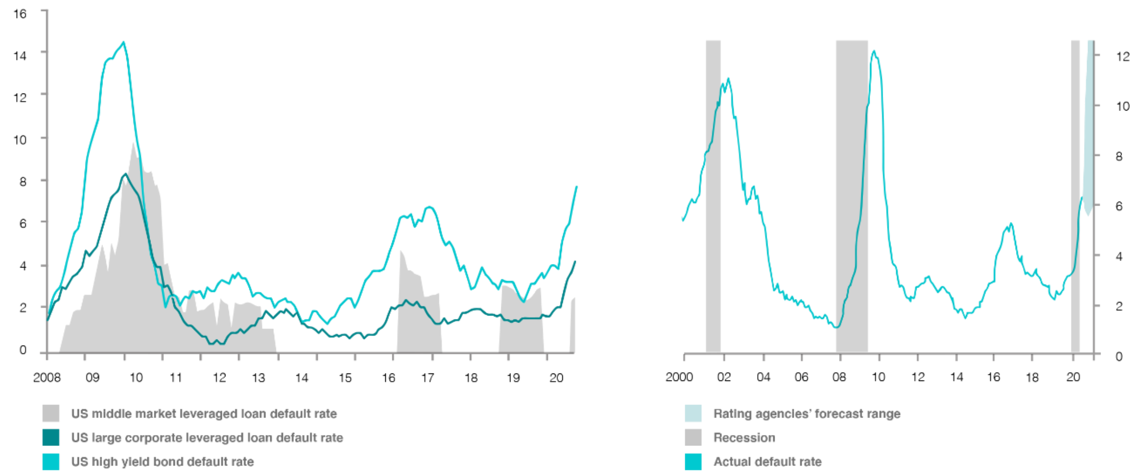
[106] Serino, et al., "Credit Trends." Note: The interest-coverage ratio is calculated by dividing earnings before interest and taxes (EBIT) by the interest expense for a given company over a given period of time. Additionally, the firm must be at least 10 years old. See the broad definition in Adalet McGowan, Andrews, and Millot, "The Walking Dead? Zombie Firms and Productivity Performance in OECD Countries.".
[107] Banerjee and Hofmann "The Rise of Zombie Firms: Causes and Consequences." Note: The so-called zombie share is the number of zombies as a percentage of the total population of non-financial companies.
[108] Id.

Figure 24:
Left Chart: Percent US Speculative-grade Corporate Default Rates by Market
Right Chart: Trailing 12 Month Percent US Speculative-grade Default Rate: Actual and Forecasts by Credit Rating Agencies



Sources: IMF, Fitch, Haver Analytics, Moody's, S&P Global Ratings, S&P Leveraged Commentary and Data; and IMF staff calculations. Note: In the right chart, the range in the projection period corresponds to the forecasts by Fitch, Moody's, and S&P.

For the time being, the answer to weak capital structures seems to be more leverage, which avoids losses.[109] Yet this may be merely postponing and magnifying larger problems down the road, rather than truly resolving corporate financial distress. The ability to rely on increased leverage, ultimately constrained by firm assets, may not be continually available. The potential for downgrades can quickly translate into liquidity crises and forced selling, increasing risk of losses across markets. Furthermore, the complex structuring of many highly leveraged deals can complicate orderly bankruptcy proceedings and, in many cases leave investors and creditors fighting for their expected residual value, jeopardizing positions in capital structures.[110] If liquidation processes are costly and lenders are incentivized to avoid losses, this may further increase the magnitude of impacts of zombie firms at the macro level. The economic costs of a corporate debt overhang will rise with inefficient debt restructurings and high liquidation costs, making it more likely that "corporate zombies creep along," as suggested by recent research from the Federal Reserve Bank of New York.[111] The IMF writes,

> *"Easing financial conditions—when investors lower their pricing of credit risk—provide a boost to economic activity in the short term. However, the easing comes with a cost. Further along in the medium term, a heightened risk of a sharp downturn arises, starting at 7-8 quarters out. This tradeoff becomes more accentuated during credit booms. That is, the near-term boost is greater, while the medium-term downside risks are also larger."*[112]

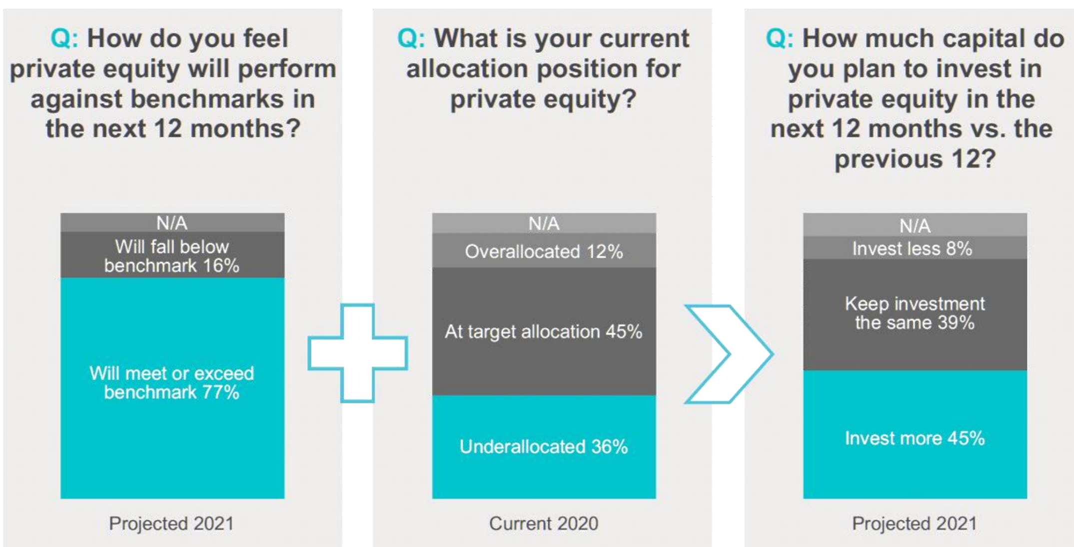
As highlighted earlier in this paper, loose monetary policy has also potentially inflated equity valuations in the stock market. The BIS has found that a decomposition of the S&P 500 performance into the contributions of three factors—earnings (current and projected), the risk-free rate, and the equity risk

[109] Podkul, "'Fallen Angels' Fall Short of Expectations."
[110] Indap, "Monstrous Capital Structures Are a Menace to Corporate America."; Hill and Reyes, "Bond Defaults Deliver 99% Losses in New Era of U.S. Bankruptcies."
[111] Jordà et al. "Zombies at Large? Corporate Debt Overhang and the Macroeconomy."
[112] Barajas and Natalucci, "Confronting the Hazards of Rising Leverage."

premium—shows that following the pandemic, rate cuts and a compression of the equity risk premium more than compensated the deterioration in corporate earnings outlook in terms of the impact on equity valuations. In November 2020, Société Générale analysts found that without QE, the Nasdaq-100 and the S&P 500 should be closer to 50% of their value.[113] They also noted that movements in equities are increasingly driven by changes in bond yields rather than the other way around, a shift in "causality" attributable to QE. In this market environment, it also becomes difficult for distressed and value investors to find opportunities.

As central banks around the world doubled down on low interest rates and QE, investors responded by increasing portfolio allocation to higher risk and yielding asset classes. Data suggests that institutional investors expect to expand their private assets portfolios moving forward, particularly to buyout strategies and managers with established track records.[114] Amid challenges posed by the pandemic, PE fundraising remained strong, and as per Figure 25, LPs expressed interest in increasing their allocations to the asset class.

Figure 25: Bain & Company Survey of LPs



Source: Bain & Company Global Private Equity Report 2021.

An orderly rise in interest rates would seemingly help institutional investors meet their required rates of return and de-risk markets. Yet the economy may have become so leveraged that in fact the barriers to raising interest rates have become very high – what economists describe as a "debt-trap." For the multitudes of borrowers with significant debt burdens, even small rate increases result in excessive debt servicing costs. The "Taper Tantrum" of 2013, in which markets panicked in response to the Fed's plans to wind down QE, provides some hints of the instability that could come. The question then becomes, how long can the current paradigm of low interest rates and rising debt levels last? Is it sustainable, and will macro impacts such as significant currency fluctuations and inflation ever catch up with us?

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[113] The Nasdaq-100 should be closer to 5,000 (than 11,000), while the S&P 500 should be closer to 1,800 (than 3,300). See Watts, "Without QE, the S&P 500 Would Be Trading Closer to 1,800 than 3,300, Says Société Générale."
[114] Bain & Company, *Global Private Equity Report 2021;* Eaton Partners, *LP Pulse Survey Results*.

New Forms of Systematic Risk and Macroeconomic Instability

With both equities and debt securities responding to the same primary driver — liquidity created through QE — market valuations are increasingly driven by the same macroeconomic factors (including credit spreads and the strength of the dollar). As a result, asset classes are more correlated than they have ever been. In June 2020, JP Morgan warned that market correlations were at a 20-year high.[115] Moreover, it is highly likely that the consolidation of capital flows to few investment opportunities has contributed to both corporate consolidation and a rise in asset class correlation. With a limited universe of investment opportunities at scale and different assets classes increasingly exposed to the same risk factors, the task of creating truly diversified portfolios becomes more challenging. And while defaults and bankruptcies have been held at bay by fiscal and monetary policy globally, this has come at the cost of potential macroeconomic instability longer-term, thereby contributing to a build-up of financial stability risks that are not necessarily properly factored in by traditional portfolio allocation models (whether as systemic or systematic risk).

Troubling macroeconomic and socioeconomic impacts include low aggregate investment and income inequality. As described earlier, aggregate investment is low, a trend which seems to be driven by the increase in corporate concentration. At first glance, the context of low interest rates and high corporate profits makes the collapse in investment particularly puzzling, as these factors should be favorable to investment. Yet high leverage and QE may in fact be worsening the problem. First, high leverage no longer translates into corporate investment – since the 1980s, less than 10 cents of each borrowed dollar is invested, as compared with 40 cents in the 1960s and 1970s.[116] Second, theoretical models show that when interest rates are sufficiently low, market leaders may be incentivized to invest more aggressively relative to other firms, resulting in more concentrated markets, overall reduced investment (to the extent only a very small subset of firms are actually investing), and lower aggregate productivity growth.[117] Another possible explanation focuses on the rising role of intangible assets in the economy, with average firms in highly concentrated industries not well positioned to manage and exploit intangible assets, and again only a very small subset of firms actually driving investment without making up for the overall shortfall.[118]

The decline in investment in turn means that the economy is increasingly reliant on consumption (as reflected by the increase in consumer spending as a share of GDP).[119] Note that this may be the case even if consumption is itself depressed by high levels of corporate concentration through market pricing power, as described earlier, since at issue here are the relative weights of consumption and investment as drivers of total aggregate demand. There are both theoretical and empirical reasons to believe that a consumer-dominated economy makes it more difficult to sustain long term economic growth.[120] Additionally, this is particularly concerning when consumer spending is financed by credit, which can make aggregate demand more volatile because highly-indebted households are more sensitive to

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[115] Lee, "JPMorgan Sounds Warning on Market Correlations at 20-Year Highs."

[116] Mason "Disgorge the Cash: The Disconnect Between Corporate Borrowing and Investment."

[117] See Liu, Mian and Sufi "Low Interest Rates, Market Power, and Productivity Growth." This trend is comparable to dynamics in the housing markets, in which those who already hold wealth benefit the most from low interest rates and the opportunity to borrow.

[118] Haskel and Westlake, *Capitalism without Capital: The Rise of the Intangible Economy*.

[119] Federal Reserve Bank of St. Louis*, Shares of Gross Domestic Product: Personal Consumption Expenditures*.

[120] Emmons, "Don't Expect Consumer Spending To Be the Engine of Economic Growth It Once Was."

income fluctuations.[121] Ironically, this reliance on credit, in turn, has been found to be largely funded by the substantial increase in savings accumulated by wealthy households as result of decades of growing inequality (a "saving glut of the rich"), with 30% of the rise in net household debt (owed by the bottom 90%) financed by the top 1% from 1982 to 2007.[122]

In the US, for instance, households had turned to credit to fund their standard of living in the face of stagnant wages, and were already increasingly reporting to be experiencing financial insecurity even prior to Covid-19.[123] In 2018, the Fed itself had determined that the majority of American adults would not be able to cover a hypothetical unexpected expense of $400.[124] When Covid-19 hit, a large proportion of the workforce was not in a position to withstand any financial disruption. Many workers faced pressure to continue working even when sick, thereby worsening the pandemic.[125]These dynamics have also led to waves of consumer or household defaults and postponed payments on debt and rent, thereby impacting the economy and potentially markets, some of which may yet to be seen given moratoria on defaults and evictions.

In summary, the combination of QE and low interest rates with corporate consolidation and high inequality may well be creating challenges to long-term economic growth, as well as introducing potential drivers of instability for aggregate demand. These trends had already made the global economy vulnerable *prior to* COVID-19. Combined with vulnerabilities exposed by the pandemic such as rising corporate and sovereign debt, and inflated stock market valuations, underlying macro-financial vulnerabilities and systemic and systematic risk are to be expected.

For the time being the Fed has been able to rely on massive expansions of its balance sheet without facing immediate negative consequences (such as currency devaluation). Arguably this is made possible in the US because of the world reserve status of the US dollar, and an environment of structurally low inflation and interest rates. In recent meetings the Fed reaffirmed its forecast that inflation will remain below 2% until 2023. Yet many are concerned that central banks will eventually run out of fire power, and that uncontrolled increases in inflation may eventually precipitate a solvency crisis. Unlike 2008, when QE had little effect on the actual amount of currency in circulation (increases in the monetary base flowed into holdings of excess bank reserves without resulting in additional loans and deposits),[126] the measure of broad-based money supply in the US, M2, jumped by 24 per cent between March and

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[121] Baker, "Debt and the Consumption Response to Household Income Shocks," February 20, 2015. finds that because of the large build-up of household debt, the drop in consumption during the 2007-2009 recession was approximately 20% greater than what would have been seen with household balance sheet positions that were in place in 1983.

[122] Mian, Straub, and Sufi, "The Saving Glut of the Rich." That is to say, there has been a large rise in savings by the top 1% of the income or wealth distribution as a result of the rise in inequality over the past four decades. These savings have been mostly deployed to finance US household consumption as well as US government debt. As a result, rich households have accumulated financial assets that are direct claims on US government and household debt.

[123] In a recent survey of 7,000 households conducted by The Pew Charitable Trusts, 57% of surveyed households reported that they were unprepared for a financial emergency.

[124] Mian, Straub, and Sufi, "The Saving Glut of the Rich."

[125] Pound, "These Charts Show How CARES Act Savings Are Running out for Unemployed Americans."

[126] Ben Bernanke admitted as much in the aftermath of the 2008 financial crisis, see Bernanke, "What the Fed Did and Why." Another way to think about it is that central banks were merely making up for money that was not being created by bank lending.

November 2020, the largest surge in 150 years. This has led to speculations that a burst of inflation could be triggered in the near future.[127]

Even if it doesn't, the U.S. economy (like most economies) will eventually need to grow significantly to absorb its high debt burden. Referring back to Figure 22, achieving economic growth that would outpace debt is a notable challenge. Furthermore, as organizations such as r3.0 and others are increasingly highlighting, a need for massive and rapid growth to repay debts could put pressure on and come at a cost to natural and human capital. There is mounting global concern about the potential for *sustainable* economic growth in light of limited natural resources, biodiversity loss, and climate change, systemic shocks which further jeopardize investors' long-term returns.[134] On the other hand, there is also reason to believe that there are certain industries that could contribute to sustainable economic growth. Examples include conversion of distressed commercial real estate into sustainable affordable housing, as well as sustainable infrastructure, agribusiness, and conservation.

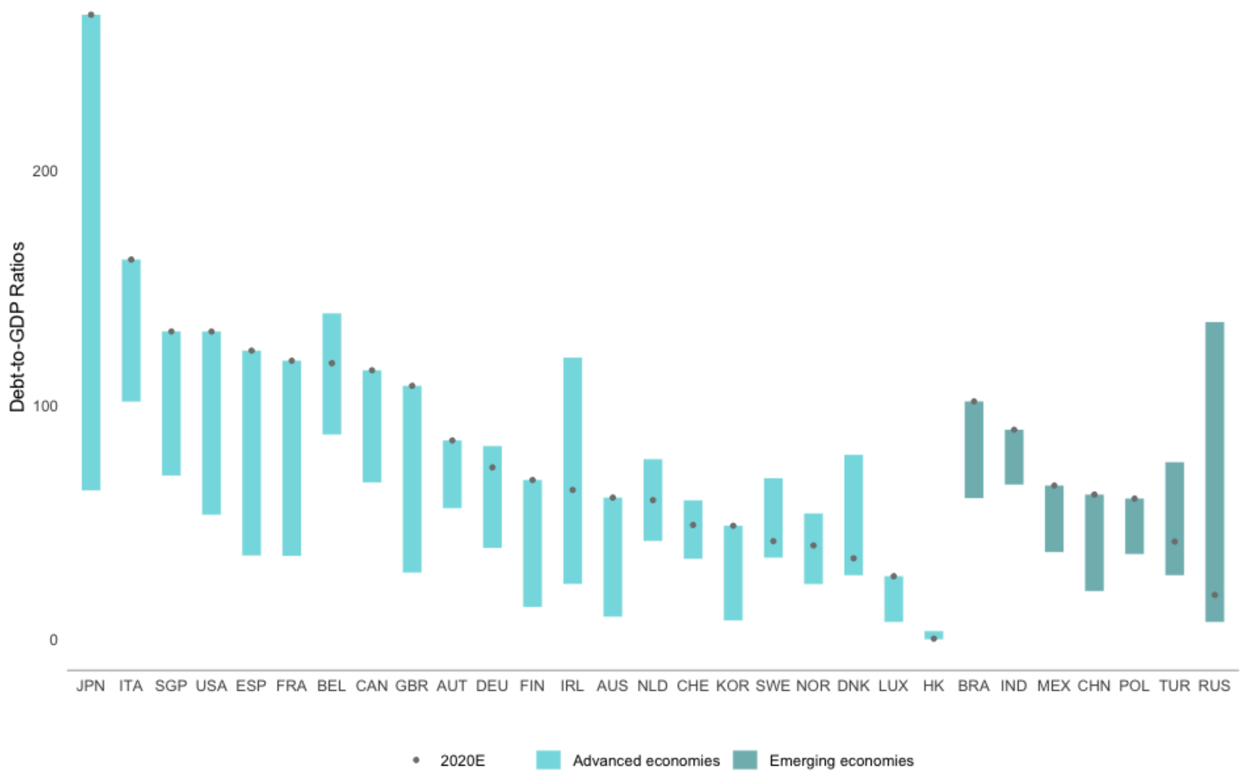
Ultimately economic growth could create a dilemma for the Fed as a matter of policy, having to decide whether to tolerate inflation or raise interest rates (via the Fed Fund) when neither option seems particularly attractive. Inflation is a bit of a double-edged sword. Though high inflation could alleviate some debt repayment burdens, it could also ultimately precipitate a solvency crisis by spiking corporate yields, since inflation expectations are a key ingredient in determining nominal yields. Traditional policies to control inflation such as raising interest rates would increase the cost of servicing high levels of existing government and corporate debt. Either way, eventually the repayment of large corporate and sovereign debt burdens would end up being highly disruptive to overall market conditions.

Further, while the US dollar has had a tendency to go up in times of uncertainty, appreciating in value whenever there is a flight to the relative safety of US assets, the endurance of its status as a global reserve currency is not guaranteed. According to Schwartz, "American Hegemony: Intellectual Property Rights, Dollar Centrality, and Infrastructural Power," two related mechanisms are at work to explain the centrality of the US dollar in the global monetary system in spite of persistent current account deficits. First is its use as the dominant world currency for credit and invoicing, particularly for trade in emerging market economies, which has created a self-reinforcing dynamic of trade partners accumulating and recycling US dollars; and second is the disproportionate share of global profits captured by US firms through enhanced productivity and near monopoly power in global supply chains, often guaranteed by intellectual property rights protected in international trade agreements.

It is difficult to opine on the extent to which this current model for reserve currency status will be jeopardized in the aftermath of the pandemic and as such, there is not consensus as to specific timing and factors that may trigger a dollar crisis. However, if the US is forced to devalue its currency, that has massive effects and downward pressure on other international currencies which can hamper other nations.

[127] See Siegel, "Higher Inflation Is Coming and It Will Hit Bondholders"; "A Surge in Inflation Looks Unlikely."
[134] r3.0, "Blueprint 6: Sustainable Finance."

Figure 26: Sovereign Debt-to GDP Ratios: Sovereign Debt has Reached Historically High Levels in Most Jurisdictions with Systemically Important Financial Sectors



Sources: IMF, BIS, Haver Analytics, IIF. Note: Bars equal the range over the past 30 years, while dots equal the percentile rank of the latest value at the time of publication.

Arguments have been made that interventions by the largest global central banks have been necessary, and indeed, there is no alternative (TINA). We would generally agree. Yet while QE and accommodating monetary policy clearly have short-term benefits, this is achieved at the cost of introducing increased macro-financial vulnerabilities. There are legitimate concerns around excessive risk-taking and the severity of a potential upcoming market correction, which creates a difficult dilemma for policymakers who need to do what it takes to assist with the economic recovery during the pandemic while also remaining in line with their mandates and safeguarding the financial system against unintended consequences of these policies.[128] Indeed, some economists (e.g. Tobias Adrian at the IMF) are suggesting that central banks should be reconsidering the traditional policy trade-off between inflation and output to take into account possible financial stability risks that may result from QE, and that they need a framework to quantify and incorporate such risk-return tradeoff considerations explicitly into their monetary-policy decisions.[129]

On the other hand, while central banks have a role to play in considering long-term risks, so too, do investors. IMF staff note:

[128] See for instance Adrian and Natalucci, "Financial Perils in Check for Now, Eyes Turn to Risk of Market Correction."
[129] See Adrian "'Low for Long' and Risk-Taking."

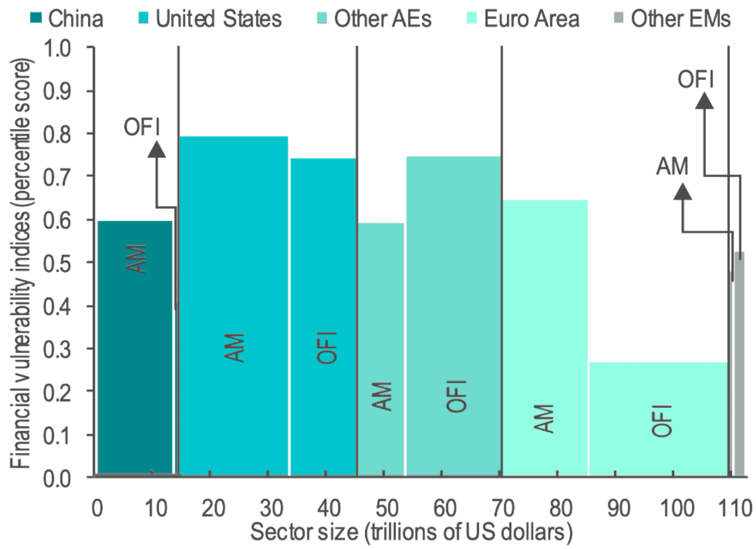
> *"While there is for now no alternative to continued monetary policy support, there are legitimate concerns around excessive risk-taking and market exuberance. This situation creates a difficult dilemma for policymakers. They need to keep financial conditions easy to provide a bridge to vaccines and to the economic recovery. But they also need to safeguard the financial system against unintended consequences of their policies, while remaining in line with their mandates.* ***With investors betting on persistent policy backstop, a sense of complacency appears to be permeating markets; coupled with apparent uniform investor views, this raises the risk of a market correction or "repricing." A sharp, sudden asset-price correction—for example, as a result of a persistent increase in interest rates—would cause a tightening of financial conditions. This could interact with existing financial vulnerabilities, creating knock-on effects on confidence and jeopardizing macro-financial stability.***
>
> *Financial stability risks have been in check so far, but action is needed to address vulnerabilities exposed by the pandemic. These include rising corporate debt, fragilities in the nonbank financial institutions sector, increasing sovereign debt, market access concerns for some developing economies, and declining profitability in some banking systems."*[130]

There is reason to question whether the current macroeconomic backdrop and market composition warrant the same tools and approaches we have used in the past. Is a barbell asset allocation strategy fit for purpose in a low interest rate environment, as well as a market in which capital flows are concentrated among institutional asset owners, allocators, and managers? How far can markets migrate up the risk curve before they become unsustainable – both from a financial and socioeconomic point of view? Our conclusion is that while investors may be generating short-term profits, traditional approaches to asset allocation and procyclical asset allocations are indeed contributing to systematic risk across markets. Longer-term, dynamics boomerang back to investors in the longer term in the form of asset bubbles, debt crises, lack of diversification, deterioration of the real economy, and financial system instability, while resulting in systemic risk for all stakeholders. Simply put, institutional-scale migration farther up the risk curve cumulatively results in *both more risk for the real economy, as well as investor portfolios*. Responding to a potential corporate debt crisis and equity bubble with more of the same types of investments is not sustainable – neither in terms of a market health or stakeholder health perspective.

Some may object that macroeconomic and market instability may only manifest long after current investment teams have been rewarded for near-term returns (not to mention, current policy makers are out of office). Yet this point only highlights an opportunity for improvement in designing incentive structures for investment teams and portfolio construction to truly align with investors' stated long-term goals. And as ESG investing grows in prominence, concerns about investing with moral hazard and the burden it shifts to workers, communities, and taxpayers — eventually impacting investor returns — should be front of mind.

[130] Adrian and Natalucci, "Financial Perils in Check for Now, Eyes Turn to Risk of Market Correction."

Figure 27: Vulnerabilities in the Nonbank Financial Sector



Source: IMF.

Why should responsible investors care, and what can they do?

Ultimately – in the long-run - the dependence of institutional investors on higher risk strategies and fewer managers may not serve their interests. High valuations in equity asset classes can lead to bubbles and lower returns, while high leverage can lead to deteriorating socioeconomic conditions, waves of defaults and bankruptcies, debt traps, and market instability in the form of credit and liquidity crises. The consolidation of capital among fewer large asset managers appears to also contribute to corporate consolidation and — among both asset managers and companies — reduced competition, innovation, and bargaining power of other stakeholders (including, in the long-run, ironically, asset owners and allocators in addition to workers and consumers). The need to maintain low interest rates and easy monetary policy contributes to asset class correlation, potentially contributes to currency fluctuations and inflation, and challenges institutional investors to meet their required rates of return. The opportunities for diversification and sustainable economic growth weaken. Yet, these strategies persist.

We expect some readers from the investment community may read this report and respond that potential risks of market instability are too distant to factor into portfolio construction decisions today. Particularly at a time when central banks around the world seem prepared to continue to step in to prevent liquidity and solvency crises, there does not seem to be a need to steer asset allocation away from higher risk asset classes. Moreover, depending on benchmarking and return target methodologies, it could be politically risky career-wise for a Chief Investment Officer (CIO) to reconsider asset allocation in ways this working paper considers.

Yet we would argue that:

1) It is very difficult to realize strong returns through traditional asset allocation. As capital floods high-risk asset classes, return potential will erode away (a classic situation in which past

performance no guarantee of future results, and investors may therefore need to reconsider their benchmarking practices);

2) Integrating long-term risk management into investment analysis and portfolio construction is the very essence of what it means to be a sustainable or responsible investor;
3) For large diversified institutional investors, the types of systematic risks discussed in this report are some of the most critical factors in determining their long-term returns; [131]
4) For investors who also include stewardship of environmental and social systems in their fiduciary duty mandates, these dynamics that occur beyond the enterprise-level are critical factors to measure and manage.

ESG is about identifying and managing risks - including those that stem from unintended negative consequences of public policy and that manifest over longer time horizons. And impact investing is about constructive solutions - how can we have *sustainable* environmental and social solutions that are based on capital structures that fuel systemic and systematic risks? Changes relating to performance evaluations, incentive structures, and valuation and benchmarking methodologies can help unlock solutions. Below, we outline eleven non-mutually exclusive paths and associated changes that investors can consider.

1) Reconsider Asset Allocation

One of the challenges of institutional investing is the growing burden of bureaucracy. It is often difficult for asset owners and allocators to invest in products with unusual investment structures. With so much capital to invest, institutional investors typically have teams of individuals who each specialize in a particular asset class, and each asset class has its own narrow range of targeted risk-adjusted returns, which are expected within certain time-frames and measured against specific benchmarks. Investing in standardized products, as opposed to structures with unusual features, increases efficiency and – from some perspectives – reduces risk. Particularly if an institutional investor does not have a special situations team, investment products with risk-return profiles that don't fit one of these "buckets" can fall through the cracks – that is, no investment team at an institutional investor has interest in the product because it doesn't fit within the narrow confines of any team's assigned risk-reward profile and asset class mandate.

However, it could also be argued that not investing in new, innovative products creates more risk. Particularly as the macroeconomic environment and understanding of risk evolves, investing in the same products may lead to bubbles, lack of diversification, crowded trades, and therefore asset class performance correlations. Additionally, new opportunities can be missed, which means investors may be leaving money on the table. In a low interest rate environment with consolidated capital flows, investors are struggling to meet their required rates of return with traditional approaches to portfolio construction.[132] A key question in this report is whether trying to fit the traditional approach into the new reality is like trying to fit a square peg in a round hole, resulting in systematic risk for everyone. Traditional fixed income returns are too low, so investors migrate up the risk curve to high-risk asset

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[131] In their book, *Moving beyond Modern Portfolio Theory,* Lukomnik and Hawley explain how the majority of institutional investors' returns are influenced by systematic factors versus idiosyncratic factors.

[132] This is increasingly widely recognized. For instance, see: Chen and Greifeld, "In New 60/40 Portfolio, Riskier Hedges Are Displacing U.S. Debt." As an additional note, our usage of the term, "traditional" includes asset allocation strategies with exposure to alternative investments like private asset classes.

classes to compensate for yield. Yet, eventually, that yield gets inflated away as more capital pours into the asset classes. As a recent Morgan Stanley note states regarding PE, "since 2000 the returns appear to be coming down and large capital raises, combined with historically high valuation levels, may portend more modest returns in the future. Further, the persistence of returns has declined in recent decades."[133] Eventually, too much capital migrating up the risk curve can become less promising in terms of potential return. *In crowded and consolidated asset classes in particular, the risk/return relationship is no longer what it used to be.*

Portfolio construction in the current environment may require more thoughtful and/or niche solutions and therefore deconsolidated capital flows and a less "bucketed" approach to strategic asset allocation. Ensuring the existence of a well-resourced special situations or emerging managers team with sufficient capital to invest can help.[134] Growth equity, quasi-equity (equity with fixed income-like features, as described below), and fixed income exposure to companies with reasonable leverage ratios and promising business models may be options, as well as asset-backed securities, trade finance, and other styles of investing.[135] However, PE buyout funds dominate asset allocation when it comes to private markets, and higher yielding debt strategies dominate when it comes to fixed income.

Additional solutions may lie in newer emerging asset classes with more balanced risk-return profiles. If investors are targeting seven percent returns from a blended portfolio across asset classes, it may not be necessary to rely on high-risk asset classes to compensate for lower returns in traditional fixed income – a strategy which reflects the traditional asset allocation practice and is known as the "barbell" approach. Rather, allocating less to traditional fixed income *and* less to high-risk asset classes, *but more* to emerging asset classes in the middle of the risk-return spectrum could potentially offer more stable paths to an investor's required rate of return.

An example of a previously unfamiliar asset class now comfortable for many investors is mezzanine debt for sustainable infrastructure. Asset managers began to see an opportunity to provide financing, for instance, to renewable energy projects around 2014 and 2015, when equity was expensive for project developers, and bank lending was limited due to regulations following the GFC. Mezzanine debt provided by private lenders filled this void, charging project developers a higher interest rate than traditional fixed income (the latter of which was not available to them in the terms or tenor preferred anyway), with the benefit of offering non-dilutive financing. Still popular today, much of this debt is considered relatively safe given the development stage of the projects and predictable fixed return from power purchase agreements once the projects were operational (which also provide early liquidity to investors).

When this opportunity became evident, asset managers enthusiastically began to launch funds to offer this private debt to developers, but were puzzled by the lack of interest from institutional investors. While some investor hesitation could reasonably be expected from any new asset class due to the lack of track record, part of the barrier was also the structure of the portfolio and therefore team design. Investors have "buckets" in their portfolios for fixed income with a corresponding rate of return, equities with a corresponding target rate of return, and alternatives like private equity with a corresponding targeted rate of return. Additionally, each team is typically resourced with its own

[133] Mauboussin and Callahan, "Public to Private Equity in the United States: A Long-Term Look."
[134] See for instance Office of the New York State Comptroller, "Emerging Manager Program."
[135] We do not refer to any of these strategies as a panacea, as each come with their own risks and requirements for responsible structuring.

specialists focused on the asset class. But in this design, there was no room for a bucket for mezzanine or private debt, which were fixed income products with a much higher projected return profile and higher risk.

Only after several years did this situation evolve. Insurance companies began to allocate capital to the strategy, followed by pension funds. It took time for this new type of investment to catch on, but it did. As such, there may be similar potential for other emerging asset classes in the middle of the risk-return spectrum, such as revenue-based financing (RBF or RBI) and equity redemptions.

RBF is when investors inject capital into a business in exchange for a fixed percentage of revenues until a set multiple of the original investment has been repaid. This form of investment can support growing businesses without them having to give up equity or pressuring them to grow too quickly, and unlike traditional debt, they have flexibility on the payment schedule. It is also attractive for investors, because their interests are aligned with the company, and they can produce a steady and reliable risk-adjusted return. While investors may express some concern about lack of control, protections can be negotiated into terms of the agreement.

RBF has been shown to be an attractive financing option for more mature growth businesses, but for earlier stage businesses, equity redemptions may be more appropriate. Equity redemptions are structured so that a company raises capital from an investor in exchange for equity, but the company buys back that equity with a pre-set percentage of profits over time until a targeted return is reached. These arrangements come with similar benefits to both the company and investor as RBF, and terms can be negotiated to support investor protections in this arrangement, as well. In each type of investment, the fund manager or investor can even find ways to support the business over time through capacity building and advisory services to reach the targeted returns.

Investors may also want to consider structures to facilitate employee ownership for appropriate companies and situations. In some models, an investor or asset manager can lend a company's employees capital to purchase shares of the company from the previous owners. Often times, the previous owners also provide financing for these transactions, which if subordinated can lower the risk for new investors. This model of employee ownership might be especially attractive for retiring business owners who have reached some level of success, who want to help their employees build wealth, and who value their company staying independent. In other models, employee ownership can be structured through, for instance, stock options or share purchase plans.

Some of these strategies are newer, but to date, data suggests they have generally had track records of high single-digit to low double-digit returns. They do not come without their own risks, but structured thoughtfully, and comprising a larger percentage of an institutional investor's asset allocation, these investment products can both support institutional investors in meeting their required rate of return (often around seven percent), while offering more regenerative financing solutions for the economy.

In his 2018 article, *Don't Go Chasing Unicorns*, impact investor, Aner Ben-Ami walks through RBF and equity redemptions in more detail and how at the portfolio level for an asset manager, a similar return is achievable as a typical VC portfolio. This is because the portfolio is less dependent on "home-runs," where most companies in the portfolio fail, but their losses are compensated by the performance of one or two stars. In an RBF / equity redemption portfolio, all companies are expected to grow moderately, and thus a stable return is expected.[136] In terms of structuring, recognizing that ESG integration can help manage risks, investors may also consider structures where the interest rate or return declines in correspondence with ESG-related operational improvements.[137]

Figure 28: Hypothetical VC versus "Zebra" Portfolio

Source: Don't go Chasing Unicorns, by Aner Ben-Ami. Notes: "Zebras" are a term coined for companies with more moderate growth potential than unicorns, but a relatively stable return outlook. In the diagram, on the left is a hypothetical VC portfolio, "…where 6 out of 10 companies fail, 2 do really well and 2 do ok. On the right is a hypothetical zebra portfolio, where only 2 out of 10 companies fail, 1 delivers a very strong 5x return and the remaining 7 are what VCs might consider 'singles' or 'doubles." See disclaimer in the original article for information about hypothetical data.

One of the reasons why these investment opportunities have the potential to support investors in meeting their required rate of return, particularly in a low interest rate environment, is that they reach segments of the market that are overlooked by large capital flows. As mentioned previously, as banks have become more restricted since the GFC, they are lending less to smaller companies. Capital markets have stepped in, but given the size of the capital flows, asset managers and institutional investors are missing opportunities to finance smaller businesses with steady and reliable growth potential. Even the VC market misses these opportunities, partly because the businesses are not "unicorn" potential, and partly because VC capital flows are targeting larger and larger deal sizes, as well.[138] These businesses could offer diversification for investors and more stable returns.

From an ESG and impact investing lens, many have highlighted how traditional investment structures and capital flows could be part of what is inhibiting the funding of diverse and emerging fund managers and corporate founders and executives.[139] The lack of progress in funding BIPOC and women-led funds and companies is well-documented.[140] The same can also be said for other types of businesses. PitchBook notes, "For all the talk of boosting VC investment in the heartland, the yearly share of total

[136] Ben-Ami, "Don't Go Chasing Unicorns."
[137] McGovern and Cherry, "Socially-Conscious Loans Attract Europe's Alternative Lenders."
[138] McGrath, "COVID-19 Couldn't Stop Venture Capital Deal-Making in North America."
[139] Brandel, et al., "Zebras Fix What Unicorns Break."
[140] For addition resources that support expanding funding flows to BIPOC fund managers, see websites for Due Diligence 2.0 Commitment and Racial Justice Investing.

capital deployed in the US has remained about 18%, excluding deals done in states with the biggest tech hubs."[141] Impact investor, Ross Baird, discusses these overlooked opportunities in his book, *The Innovation Blind Spot: Why We Back the Wrong Ideas, and What We Can Do About It*.

A number of foundations and impact investors are seeking to raise awareness and build these market opportunities with more regenerative investment structures into recognizable asset classes.[142] There are also growing efforts to expand investment opportunities that facilitate employee and community ownership, so that wealth is more evenly distributed among those who are not entrepreneurs or investors themselves.[143]

Some of these strategies, and most asset classes in general, could benefit from longer-time horizons and more patient investors. Large institutions are generally investing to cover liabilities thirty years in the future, and thus conceivably should have that patience. For companies, longer-time horizons give them more time to grow. To accommodate some of the structures mentioned above, as well as more regenerative forms of traditional PE, permanent capital vehicles (PCVs) and longer-dated funds can offer solutions.

PCVs – such as holding companies and evergreen funds – as well as longer-dated funds (e.g., a 20-year closed-end fund, versus a 10-year closed-end fund), can help address the short-termism that is prevalent in the PE asset class. PCVs and longer-dated funds alleviate pressure on portfolio companies to grow or return capital to investors too quickly. Portfolio companies can thus focus on reinvesting in the business until they are mature and stable. Certain aspects of these arrangements may also be more beneficial for LPs, since the GP team can stay focused on a particular fund for longer, without concern for having to raise a new fund to pursue more investments. In the latter situation, the investment team can become distracted from managing the current portfolio and also receive double fees for managing two funds. While LPs may have some concerns about liquidity, PCVs and longer-dated funds often pay dividends (from profit distributions and exits) and offer secondary exit opportunities to LPs after an initial lock-up period.

It is worth noting that a number of institutional investors have also built teams to manage investments directly into companies and projects so that they are not constrained by external managers and their fund structures at all. In both these cases and PCVs, while pressure on near-term returns may be somewhat alleviated, it is critical to also consider investment team incentive structures, performance evaluation practices, valuation methodologies, and benchmarking practices to thoroughly integrate long-termism into the business. We discuss this further in the next section of this paper.

Investors would be well suited to develop more flexible asset allocation models to accommodate new strategies that do not fit into traditional buckets, particularly in the current market environment. It is

[141] Davis, "VC Deals and Trumpism."
[142] Price "Impact Investors Turn to Revenue-Based Financing to Bridge Capital Gaps for Founders of Color"; Price, "Q&A with Founders First's Kim Folsom: Helping Diverse Founders Grow Businesses With Revenue Based Financing"; Kauffman, "Capital Access Lab."
Note: In "Axios Pro Rata," authors Kia Kokalitcheva and Dan Primack review some of the challenges that Indie.vc faced when raising institutional capital for such strategies. This experience can serve as a constructive case study of how to navigate hurdles in growing such strategies into viable asset classes.
[143] Kelly and Ives, "These 12 Impact Funds Are Catalyzing Transitions to Employee Ownership"; First Nations Major Project Coalition; Fifty by Fifty / Employee Ownership News; Social Capital Partners; Rosen, "KKR Partner Pete Stavros to Set Up New Fund to Promote Employee Ownership."

also worth noting that allocation to more niche strategies and smaller fund managers could by default help address issues with high fund manager compensation.

What are investments in the middle of the risk-return spectrum which could be attractive? Would rethinking portfolio construction work? What new managers could be added to the portfolio through these strategies, and what existing managers could be engaged to pursue some of these strategies? Special situations teams and emerging manager programs could be part of the solution, but much more work needs to be done to ensure these interventions are significant enough to have a meaningful impact on institutional investors' portfolios, markets, and the economy.

2) Align Investment Team Incentives, Performance Reviews, Valuation Methodologies, and Benchmarking with ESG Goals and Systematic Risk Management

Within asset owners, allocators, and managers, ESG may be emphasized as important thematic considerations to analysts and portfolio managers, but typically, ESG teams exist which are smaller and separate from investment teams. In some cases, each team may also be incentivized and compensated differently. For instance, ESG teams may be evaluated based on measures relating to ESG performance, development and implementation of good governance policies and procedures, and engagement, while investment teams are typically incentivized largely by financial performance and often on a short-term basis – this results in inconsistent messaging to asset managers and portfolio companies.

For instance, investment teams are often evaluated based on Internal Rate of Return (IRR). IRR measures not only how much capital is returned to an investor, but over what time period. Returning capital to investors in shorter timeframes contributes to a stronger IRR. This feature is helpful to LPs because capital returned earlier can then be reinvested and have a stronger compounding effect. However, there are also a number of shortcomings of this approach. One that is particularly relevant to ESG integration is that the "time value of money" (TVM) element of IRR essentially means that investment professionals are incentivized to make as much money back as fast as possible – a concept that can be and often is at odds with long-term sustainable investing.

Pressure to deliver a higher IRR to LPs can result in investment professionals and management teams of portfolio companies cutting costs related to more nuanced ESG issues, such as stakeholder engagement, quality jobs, the quality of essential goods and services, or even environmental issues, like the integrity of biodiversity assessments prior to starting a construction project. It can also put pressure on investment teams to exit portfolio companies quickly, and therefore not invest in activities that may take longer to pay off. When it comes to day-to-day activities and decision-making, these tensions can result in portfolio companies feeling like they are getting conflicting signals from their investment professional and ESG contacts at their GP, and it can leave the ESG and investment professional teams at a GP feeling like they are getting those same conflicting signals from the ESG and investment teams of LPs. Members of our own team at PDI have experienced tension first-hand between the demands on the investment team to deliver a stronger IRR versus the priorities of the ESG team to ensure ESG integration is thorough.

Importantly, TVM is not a feature of valuation methodologies exclusive to the PE asset class. It is a backbone of valuation methodology across asset classes, because a dollar expected today is more valuable and less risky than expecting a dollar a year from now. TVM is a core component of discounting cash flows to determine present value.

There have been some efforts to align ESG and investment team incentives and activities. For instance, the Principles for Responsible Investment (PRI) has started to ask its signatories to report on how investment teams are incentivized, and whether they have any ESG-related KPIs tied to their compensation or performance reviews to complement financial KPIs. A number of asset managers have also started to require ESG training for their investment teams, and some ESG managers at PE GPs are also now participating in Investment Committees. In the world of private capital impact investing, some GPs are experimenting with tying carried interest to impact outcomes. These are important steps in the right direction and should not be overlooked or neglected. However, we would argue that the following are also critical:

- *Establish a systems-level approach with the tone set from the top:* Asset owners and allocators should ensure that incentives are thoroughly addressed throughout the capital markets value chain, aligning their own ESG team and investment team incentives, which then sets a more aligned tone for incentives of fund managers and their ESG and investment teams, which then sets the tone and incentives for portfolio company executives, through to middle management, to workers. Asset owners and allocators should review their own incentives and those of their fund managers and portfolio companies regularly to ensure they are aligned.

- *Reconsider prioritization of valuation methodologies:* Importantly, alignment would not just result in adding ESG-oriented KPIs to investment professional performance reviews, but would also incorporate alternative valuation methodologies to complement those with a TVM-element, against which performance is measured. For instance, the emphasis on IRR – which we do not advocate fully discarding due to a number of benefits of that method - could be diluted, with more emphasis placed on Total Value Paid In (TVPI), or Multiple on Invested Capital (MOIC). Success of investment teams, consultants, and therefore asset managers and portfolio companies would therefore be evaluated partly with an eye toward reinvestment and opportunity cost, but also with less pressure to return capital in too short of a timeframe that compromises the integrity of ESG integration. Only integrating ESG-related KPIs without also addressing such structural issues can result in unaddressed factors working against strong ESG integration.

- *The understanding of risk needs to be reinterpreted and reconsidered in how investment professionals and portfolios are evaluated:* Yes, a dollar returned tomorrow is worth more and is less risky than a dollar returned a year from now. However, if the dollar returned in the near term also brings more risk to the entire portfolio in the form of systematic risk, this should be factored in.

  Just as data is now demonstrating that holding stocks for longer periods of time may produce stronger returns than constant trading, a longer-dated fund or PCV may produce stronger returns, as well. Investment professionals should be rewarded for patience and pursuit of alternative approaches to the norm where appropriate. Developing performance incentives, reviews, and compensation structures for investment professionals focused on long-term returns and risk management could help. Such efforts could also be combined with promoting a work environment and culture that welcomes challenges from team members and invites opposing perspectives. In terms of career opportunity, maintaining a positive work culture and offering compensation that is rewarding but not egregious could retain professionals who otherwise might be tempted to pursue more lucrative careers with asset managers.[144]

Career risk and opportunity are often key reasons why investment professionals, consultants, and advisors of asset owners and allocators defer to selecting asset manager incumbents and traditional structures. Hiring managers who already have strong demand from other investors offers a cloak of protection should something go wrong. Investment professionals and consultants may feel it is too risky to select a new manager, or they may feel that a new investment structure does not fit within the boundaries of return expectations for the assigned portfolio. Committing to a culture that embraces diversity amongst team members and their ideas and that encourages exploration of new opportunities and understanding of risk can help address this among asset owners, allocators, and consultants. Unfortunately, risk from lack of diversity in the portfolio that comes with reallocating to large existing managers is not well accounted for through traditional investment analysis, MPT, and portfolio construction approaches. Measures can be put in place that address this, as described below. In terms of performance reviews and incentives, it is critical that asset owners, allocators, and consultants integrate the importance of taking advantage of dynamic new strategies and relationships into account. These are gating issues to deconsolidating capital flows through stronger allocations to emerging managers and those with regenerative investment structures (e.g. RBF, equity redemptions, employee or community ownership).

- *Reconsider benchmarking practices:* Benchmarks of the past may no longer be relevant in the current market environment, where the size of asset classes like equities and PE have exploded and returns are harder to come by. Given significant issuance of corporate debt over the past decades, benchmarks of equity asset classes could also be adjusted to account for such leverage. Moreover, financial benchmarks are based on decades of cheap or free human and natural capital - their values may therefore be inflated. Particularly in a low growth environment and at a time when the world's debt overhang may continue to put a drag on growth, it seems unlikely that the returns of the past can be reliably expected. Today's global economic situation and the impacts of the pandemic have also made it clear that there is a skewed distribution of risk across the economy, with workers and vulnerable populations often bearing risks and creating value for which they are uncompensated.[145] True ESG integration would acknowledge that we need new models of risk sharing - the returns that have historically assumed capital providers are the only risk takers should actually be shared with other risk takers, as well. This analysis is reflected in Schroeder's work to understand how historical returns would have been calculated, fully accounting for these ESG-related costs.[146] As such, in order to accurately argue that ESG produces outsized returns, we may need to adjust our historical benchmarks for that to be true.

[144] Regarding career opportunity, interest in working with asset managers has often been cited as one of the contributing factors to investment professionals and consultants reinvesting with the largest asset managers – in order to maintain the relationship.

[145] In operating companies, stakeholders who create value and take risks can include both workers (as previously noted) and customers or users (for instance, users of platform technology companies who provide data). Business solutions to address the latter include platform cooperative models. In the case of real assets, like infrastructure, local "host" communities can bear significant risk in the form of land, resource, and cultural heritage loss. They, too, could be compensated through equity carve outs or profit-sharing. These models embody the concept of "predistribution."

[146] Schroders, "Schroders Launches SustainEx."

Staying with the status quo and benchmarks of the past consolidates capital flows to chase the same assets, reduces diversification of the portfolio, neglects the opportunity to take advantage of market inefficiencies, pushes valuations up, increases asset class correlation, and increases systematic risk.[147] It is commonly known that performance of the largest managers is not the best in the market, but it also isn't the worst. These managers have tended to produce relatively consistent returns. However, especially as capital flows increase to PE and PD, there is concern that returns are waning. If the goal of investing in high-risk asset classes is to generate higher returns, then asset owners and allocators may do better to invest in smaller and emerging managers, where, as described previously, data suggests returns are often stronger.

It is also important to note that relative performance benchmarking can contribute to allocations to high-risk asset classes, even when the macroeconomic backdrop does not seem favorable. As such, reconsidering this practice can also help unlock solutions. As highlighted in the Financial Times regarding the recent HYB boom,

> *"While some investors have become uneasy with the quality of deals that have come to market, many say they feel forced to lend or face the consequences of underperforming rivals. Others are betting that a big rebound in the American economy will provide a boon to corporate profits that will boost companies across the ratings spectrum. 'The prudence that may have been there before is now non-existent,' said Jerry Cudzil, head of credit trading at TCW. 'In the near to medium term you will have a difficult time keeping up if you don't buy some of this stuff. That doesn't mean they are good deals. As a matter of fact, it's a good way to lose money long term.'"*[148]

Of course, pursuing smaller managers and deals may require additional manpower on teams. As part of PDI's future analysis and workshopping with asset owners and allocators, we aim to look into the economics of building stronger teams relative to investing with larger versus smaller managers and companies. Additionally, in our policy recommendations below, we touch on this issue.

The responsibilities for making these changes are not those of a particular individual or function alone. However, CIOs and consultants are uniquely positioned within and to large institutional investor organizations, because they sit at a vantage point across asset classes and therefore can recognize missed opportunities from status quo portfolio construction and asset allocation. They can promote a culture of diversity and open learning, encourage teams to consider new approaches to valuation methodologies and benchmarking, educate trustees on why changes are needed, and work with the governance and human resources functions of the organization to reconsider investment incentives and performance evaluations. Incentives at the asset owner and allocator levels are particularly important to fine-tune, because they can be even more misaligned than those of asset managers given lack of

[147] There are many additional barriers to selection of diverse and emerging managers, many of which have been covered extensively in other research that does not focus as much on incentive structures, valuation methodologies, and financial analysis. Implicit bias is a key factor, and we therefore also encourage asset owners and allocators to consider implicit bias training for their staff, consultants, and advisors. Another example is requiring "skin in the game" in terms of the commitment to invest in the fund by the GP founders. While the typical 1% of total fund AUM commitment by the GP can help to align the GP's interests with the LP, it also can exclude emerging and smaller managers who do not have the personal wealth to invest.

[148] Platt and Rennison, "Riskiest Borrowers Make up Biggest Share of Junk-Bond Deals since 2007."

clawback mechanisms (which could be considered as an additional tool). They also drive consultant recommendations and set the incentives for the rest of the capital markets value chain, including asset managers and portfolio companies. Overall, changes related to incentives, valuation methodologies, performance reviews, and benchmarking practices can reduce risk for all stakeholders and break procyclical investing habits.

3) Evolve Financial Analysis to Include a Focus on Systematic Risk and Return

As highlighted by corporate governance thought-leaders, Jon Lukomnik and Jim Hawley, traditional financial analysis tools are outdated. MPT was an approach to portfolio construction developed in the 1950s when markets were less efficient and investment management was not as institutionalized as it is today. Just as market structure has evolved, we need to refine our financial analysis techniques to include measurement and management of not only "financially material" risks to a company, but also systematic risks that manifest across portfolios. Yet systematic risk is not accounted for in the discount rates of investment analysis, nor might that be appropriate, for it would mean that an investor might be willing to take a higher risk today for the higher reward, ignoring the fact that it can jeopardize the long-term financial health of the fund. Another proposal which may hold some promise is that asset values could be weighted in inverse proportion to their risk.[149] As such, asset classes higher on the risk-return spectrum could be assigned a lower weight than those in a portfolio on the lower end of the risk-return spectrum. This would need to be thought through further and a methodology developed.

To work toward solutions, like banks, large institutional investors and NBFIs could develop robust risk management teams who participate in asset allocation and portfolio construction strategy. Within banks, the risk department reviews transactions for Value at Risk (VaR), franchise risk, regulatory risk, credit risk, and other aspects. Institutional investors could build robust multi-disciplinary teams of investment professionals, ESG professionals, risk management professionals, and economists who collectively make investment decisions. Building a strong mechanism to facilitate cross-learning between these teams can then lead to development of new valuation methodologies and tools to integrate systematic risk management into investment practices.

An enabling environment to support the integration of systematic risk and return is critical. The Predistribution Initiative is working with partners to launch initiatives to better integrate systematic risk management into investment practices, as described in the policy and field building section of recommendations below. Additionally, the Predistribution Initiative is conducting further research on the relationships between capital structure, market volatility, risk, and return. Questions explored include the relationship between fragile capital structures and investor returns, whether that risk has been priced in at various points in recent history (particularly since the Modigliani and Miller studies), and if fragile capital structures do have negative societal impacts and market risks, how do or should those get priced in?

[149] Sgouros, "The Case for New Pension Accounting Standards."

4) Develop Responsible Debt Practices

Investors and lenders could consider whether "responsible debt" thresholds – such as simple leverage ratios and limits on EBITDA add-backs - should be set when GPs structure an investment. LPs could demand such thresholds when considering an investment in a PE fund or debt product and conduct due diligence on past practices. Deeper analysis on credit quality can help prevent contributing to a fragile capital structure.

Understanding the uses of funds for a particular loan or bond issuance, or underlying a structured product, or in a PE fund's strategy, may also be steps in the right direction. For instance, is the debt being used for buybacks and dividends that leave the company with a capital structure vulnerable to risks, or M&A that contributes to corporate consolidation and squeezes out opportunity for SMEs?

Lenders and fixed income investors could integrate parameters around these activities, as well as other ESG-related issues, into due diligence, covenants, and engagement with asset managers and companies. PE LPs could integrate such parameters into due diligence and Limited Partnership Agreements (LPAs), and public equity investors could consider the debt side of capital structures more in financial and ESG analysis.

5) Evaluate Fund Manager Compensation with an ESG Lens

Investors might ask their fund managers to report on their own impacts on inequality. For instance, GPs could report both on the pay ratios between corporate executives in portfolio companies and the average worker in each company (inclusive of contracted labor), but also between average workers and senior executives in the fund manager. Targets could be set to narrow pay ratios, with specific attention to scaling pay based on local living wages and opportunities for workers to build wealth (and communities in the case of real assets or platform investments).

As mentioned previously, some fund managers are even beginning to explore sharing equity and profits in portfolio companies with workers, which could meaningfully increase these workers' wealth. The same can also be done with communities in the case of real assets, or platform investments.[150] There are a number of emerging best practices for such investments which lay out important guidelines to avoid pushing too much risk to workers, among other considerations.[151] From an alpha generation perspective, in PE, LPs often conduct diligence on fund managers to ensure the investment team is well-incentivized, asking questions such as how much carried interest goes to which team members. Growing data suggests that companies which pay and treat their workers better perform better. As such, investors may be leaving money on the table if portfolio company worker compensation is not commensurate with returns and workers aren't well incentivized in addition to investment teams. Moreover, as previously mentioned, in companies, and often in real assets and platform investments, it is not just financial capital that is put at risk. Workers and communities often take real risks and create significant value, but too often with little reward – leaving the system weak, fragile, and lacking resilience.

[150] For instance, the First Nations Major Projects Coalition has been advocating for such interventions. More information may be found on their website.
[151] See, for instance: Rose, et al., *Guidelines for Equitable Employee Ownership Transitions.*

Even with such interventions, if fund manager compensation continues to be extremely high, then most of the wealth generated from the investments will pool to the very few individuals who are fund executives, who are then in a vastly greater position to buy equities, real estate, and other assets, pushing these investments to higher valuations and further out of reach for those who have less to invest, thereby exacerbating inequality. It is impossible to systemically narrow the wealth gap without also taking into account fund manager compensation and lowering it when it reaches such levels.

As such, there are not only commercial reasons, but also strong ESG rationale, for lowering management fees for mega-fund managers. This could take the form of scaling the management fee relative to AUM, the GP proposing an annual general and administrative budget to LP Advisory Committee for approval, lower and/or more transparent fees between GPs and their portfolio companies, among other interventions.

Without adjustments to narrowing compensation ratios throughout the capital markets value chain, it is unlikely SDG 10 regarding inequality will ever be reached. From a beta (or systematic risk) perspective, narrowing pay ratios and improving worker (and in certain situations community) compensation helps reduce wealth inequality, keeps economic demand strong, markets stable, and society peaceful.

6) Measure and Manage Fund Manager Political Spend & Corporate Capture

As mentioned, high fund manager AUM and corresponding compensation can contribute to political spend, lobbying, and corporate capture. There is growing momentum in the ESG community to engage portfolio companies on their lobbying and political spend. Similar engagement, disclosure metrics, and performance thresholds could be developed for asset managers. Asset owners and allocators could:

- Ask their fund managers to report on their own lobbying and political spend;
- Ask their fund managers to align lobbying and political spend with stated ESG goals; and,
- Integrate guidelines and key performance indicators (KPIs) for the above into fund documentation, such as LPAs.

Information could cover both the fund manager level, as well as key people at the fund manager, and trade associations.[152]

7) Measure and Manage Fund Manager Tax Practices

Another way fund managers can contribute to systematic risk is through tax avoidance. It has been argued that in many geographies, markets and companies are not well-regulated due to governments' lack of resources. Similarly, social safety nets are being eroded by lack of funding. And, importantly, in geographies like the US, cities and states often do not have the funding that they need to support their

[152] Examples of guidance, resources, and initiatives focused on these issues include: Preventable Surprises, "Corporate Lobbying Alignment Project (CLAP)"; Kalb and Tillemann, "How to Avoid Funding Treason"; Weiss, "Investors Seek to Reassess Political Spending at Largest Firms"; University of Michigan Erb Institute, "Corporate Political Responsibility Taskforce" ; Kishan, "Global Sustainability Group Wants to Know Who Money Managers Are Lobbying." Additionally, the World Benchmarking Alliance's Core Social Indicator #18 on 'responsible lobbying' offers guidance.

pension funds, thereby making the pension funds even more reliant on portfolio returns to cover their liabilities and creating perverse incentives for responsible investment.

Asset managers avoid taxes in a number of ways. The “carried interest loophole” is perhaps the most well-known, and portfolio companies benefitting from city and state tax incentives with little accountability around promises in return is also well-documented. Fund managers also often domicile their funds in tax havens. While we are in favor of tax efficiency, tax avoidance results in ESG risks and societal instability.

We therefore encourage investors to conduct diligence on their fund managers related to tax practices. If a portfolio company is receiving a tax incentive, what is the probability of that company delivering on its promises? What will the savings or growth for that government and/or its constituents be relative to the loss in tax revenue? How is the company held accountable and what are public reporting requirements? Was the local community consulted in developing the arrangement, and were their concerns and feedback taken into account? Similarly, for domiciling funds, how are various investors in a deal benefitting from this practice, and which governments and people are left at a disadvantage and how? What are the negative impacts, and how do they create systemic and systematic risks? These are questions we would encourage asset owners and allocators to ask of their asset managers and hold them accountable.[153]

8) Invest in Industries that Contribute to Sustainable Economic Growth

If a significant percentage of investors’ returns is influenced by systematic factors, then it is critical to invest in the health of the system. Doing so not only contributes to maintenance of the economy and market, but it also can produce strong returns. Examples of industries include sustainable infrastructure, affordable housing, and regenerative agribusiness. As the economist, Atif Mian, highlights, consumer discretionary products and services have been taking a larger and larger share of investment, and debt is a growing part of the global economy. We will need more constructive growth opportunities than just consumer spending to escape from our current downward spiral toward a debt trap. The aggressiveness of the escape plan, or investment in growth, will need to be both sustainable and strong, given data that suggests debt-laden economies struggle with economic growth and existential threats such as climate change.

There is incredible unlocked value in defensive yet growing industries like sustainable infrastructure, affordable housing, and regenerative agribusiness. These are industries that people and our economies depend on. There is significant demand, and yet these are often underserved and overlooked. Potential for sustainable infrastructure is well-documented and reflected in, for instance, US President Joe Biden’s stimulus plans.

In terms of affordable housing, at a time when commercial real estate may be weakened from COVID-19, there is potential to pursue sustainable retrofits of distressed buildings, such as hotels, malls, and offices for the purposes of affordable housing. Such investment models could include responsibly

[153] A recent report on illicit and legal tax avoidance highlights investors as contributors to the tax loss of $500-600 billion to governments annually through profit shifting practices, funds that could otherwise be used for the SDGs (Financial Accountability Transparency & Integrity, *Financial Integrity for Sustainable Development).* Additionally, the World Benchmarking Alliance’s Core Social Indicator 16 asks about the entity’s public global tax approach.

structured rent-to-own programs to help build wealth more evenly across the economy. Quality jobs could also be created in the process (particularly through the use of responsible contractor policies).

9) Engage Beneficiaries and Stakeholders of Companies and Institutions within the Portfolio

As the phrase, "Nothing about us without us" suggests, solutions to people's problems cannot be solved without the design-input of those people whom those interventions are intended to support. [153] Given how intermediated the capital markets value chain is, asset owners and allocators are often many degrees removed from workers and communities at the portfolio company level. This distance results in situations where these investors do not realize or have access to information about how their activities are creating negative impacts on the ground where portfolio companies operate. Often these investors don't even know the right questions to ask.

Asset owners and allocators typically rely on their fund managers to report back to them on ESG and impact issues at the portfolio company level. In turn, these fund managers rely on their portfolio companies' management teams to express any problems and proposed solutions. And yet, it is often the individuals in the workforce or communities of the underlying portfolio companies who have the greatest concerns. Such concerns may be at best misunderstood or at worst manipulated to the advantage of intermediaries in this extensive game of telephone. By the time information reaches the asset owner or allocator, it is often distorted or lacking in significance.

Potential solutions asset owners and allocators could consider to remain aware of emerging stakeholder concerns include:

- *Requiring grievance mechanisms of portfolio companies and asset managers:* Grievance mechanisms have long been advocated for by human rights specialists and are a core component of good governance in frontier markets investments. These mechanisms assign roles, responsibilities, policies, and procedures for companies to enable their stakeholders to (anonymously and confidentially if appropriate) express and escalate grievances and for these grievances to be reviewed and reconciled in a fair, transparent manner with non-retaliation and whistleblower protection. Asset owners and allocators could demand reporting on Grievance Mechanism structures, implementation, and notification of any material grievances from their asset managers and portfolio companies. Asset owners and allocators could even have their own grievance mechanisms, particularly if they do direct investments, or for situations in which stakeholders feel they could benefit from direct appeal to a higher power if their initial concerns expressed to companies and fund managers are not addressed satisfactorily.[154]

[153] Best known as a slogan from the disability rights movement, disability rights activist James Charlton tracked the emergence of "Nothing about us without us" to a 16th century law limiting the power of a king. It was then used by Eastern European labor organizers, and by disability rights advocates in South Africa in the 1980s. Over time, it has been adopted by other movements, but always holding the same meaning: it is essential to include those who are impacted by the policies in question, in the policy making process itself.

[154] A number of organizations have strong guidance on the development of grievance mechanisms and disclosure requirements. The World Benchmarking Alliance, for instance, includes these considerations as part of its Core Social Indicators 7 (grievance mechanism for workers) and 8 (grievance mechanisms for external individuals and communities).

- *Requiring investment professionals, ESG teams, and risk management specialists to visit portfolio companies on a regular basis and engage with workers and stakeholders directly*: However, pre-planned site visits also risk being "staged" in advance, so that portfolio companies present themselves in the best possible light even if they do not operate in that fashion on a day-to-day basis.

- *Recognizing that unions and assuring freedom of association and collective bargaining are critical channels to facilitate worker feedback and communicate needs*: Unfortunately, unions have been on the decline due to both anti-union sentiment – including among investors, as well as the "fissuring" of the workplace through the replacement of full-time labor with contracted and outsourced labor.[154] Investors can engage their portfolio companies and asset managers to ensure that rights to freedom of association and collective bargaining are protected and achievable. They can also gather data on portfolio companies who bar class-action lawsuits, use mandatory arbitration clauses, non-competes, or other restrictions on workers and engage with those companies and fund managers appropriately.

- Perhaps one of the strongest ways to stay on top of emerging ESG issues and "dynamic materiality" is to ensure company and fund manager boards of directors and other governance structures are diverse, with representation from impacted stakeholder groups.[155] For instance, worker and community representatives could be selected to serve on portfolio companies' boards of directors, or even funds' investment committees. Such dynamics would offer ongoing and iterative two-way learning between investors and their stakeholders. Investors would better understand stakeholders' concerns, and stakeholders could better understand the pressures that investors face in terms of meeting return expectations. Such dynamics allow for stronger communication, trust-building, and co-creation of solutions between typically polarized actors.

Moreover, ESG and impact investing frameworks need to be developed with input from stakeholders. A recent report by the First Nations Major Projects Coalition highlights this need, reading, "Current ESG standards were created by the private sector and for the private sector, and as a result, these standards have little to do with Indigenous territories, lands and waters, Indigenous inherent, constitutional or treaty rights, our Indigenous knowledge, or our cultural heritage, principles, or traditions."[156] This statement reflects sentiment among many civil society representatives and makes it clear there is much work to be done. [157]

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[154] https://www.fissuredworkplace.net/

[155] For more information on the concept of dynamic materiality, see, for instance: Eccles, "Dynamic Materiality And Core Materiality: A Primer For Companies And Investors."

[156] Podlasly, Lindley-Peart, and von der Porten, "Indigenous Sustainable Investment: Discussing Opportunities in ESG."

[157] A partner of PDI who focuses on civil society engagement in the development of ESG and impact investing metrics and disclosures is Rights CoLab, https://rightscolab.org/.

10) Evaluate Whether Your Own Corporate Governance and Investment Practices Can Improve

We've mentioned throughout this report that incentives and expectations throughout the capital markets value chain are shaped by the tone from the top. As such, the corporate governance arrangements of asset owners and allocators influence those of managers and portfolio companies.[158] Tone from the top is essential not just within organizations for strong ESG integration, but across organizations and value chains, including the capital markets value chain.

Large institutional asset owners and allocators are typically governed by trustees, boards of directors, and / or investment committees (for simplicity, we only refer to "trustees" below, but the recommendations may apply to all three categories). Selection and training of these individuals then influences the culture and governance of the organization. As such, it is critical that:

- *Trustees are knowledgeable in finance, but limited from conflicts of interest:* Sometimes a trustee's main profession is in the asset management industry. In such situations, organizations should ensure appropriate checks are in place to avoid conflicts of interest and the "revolving door" syndrome present in public governance spheres. From another angle, it is also important for trustees to be financially literate. Too often, lack of financial literacy leaves trustees dependent on consultants who may not have fully aligned interests with the institution (this could be addressed, however, through improvement of incentives, as mentioned previously). If a trustee is sourced for her/his/their deep understanding and representation of affected stakeholders, but is not literate in finance, then capacity building support could be offered by a variety of sources to avoid bias in favor of particular investment strategies.

- *Trustees are sourced from diverse backgrounds:* This practice helps to foster an appreciation of value of different types of asset managers, portfolio companies, and asset classes, as well as a diverse understanding of risk and opportunity.

- *Trustees are educated about ESG integration and systematic risk management:* There has been a strong push from the ESG and impact investing community for companies to have climate and ESG-competent boards of directors.[159] Given institutional investors sit at the top of the capital markets value chain, the same should also be true for these investors.[160]

- *Trustees' fiduciary duty should include safeguarding long-term returns:* While trustees may review quarterly and annual reports on return targets, ultimately, their interests should focus on the long-term health of the entity. The avoidance of short term pay and incentives that are achieved at the expense of long-term goals should not only apply at the investment professional and consultant levels, but also at the trustee-level.

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[158] A number of organizations are beginning to evaluate corporate governance activities at the asset owner and allocator levels in order to incentivize improved performance. The publication ImpactAlpha launched a new column authored by Imogen Rose-Smith, and other examples include the World Benchmarking Alliance's development of the Financial System Benchmark, and top100funds Global Pension Transparency Benchmark.
[159] For instance, see: Whelan, "Boards Are Obstructing ESG — at Their Own Peril" and Ramani, "Why You Should Care About Climate-Competent Boards."
[160] Examples of programs that support trustees in such education include David Wood's Trustee Leadership Forum at the Harvard Kennedy School, https://iri.hks.harvard.edu/trustee-leadership-forum.

Additionally, some have proposed integrating ESG into Investment Belief Statements (IBS). A number of investors have or are considering developing IBSs that reflect the need for systematic health of environmental, social, and financial systems and of the capital markets. Investment Policy Statements (IPS) can then build on IBSs to show how investors will respect those statements in practice. This would be a strong step in the right direction and provide authority for trustees and CIOs to pursue strategies that integrate systematic risk management and forward-thinking approaches to dynamic materiality into investment decision making and expectations of investees.

11) Engage on Policy and Field-building

There has been increasing debate about voluntary initiatives by investors versus those imposed by public policy when it comes to Building Back Better, an improved form of capitalism that works for all stakeholders, impact investing, and stronger ESG practices in the private sector. We believe that for a variety of reasons, both corporate governance-led solutions, as well as public policy solutions, are needed. They often go hand-in-hand and inform or build on one another. And, importantly, it is impossible to only pursue change through policy when policy is so influenced by the private sector through lobbying and political spending practices.

In development of public policy proposals, investors also often value opportunities to consider the challenges and solutions together, recognizing that outcomes can then inform improved rules and regulation. While it is important to safeguard against political capture, such engagement does not always dilute the effectiveness of the policies and regulation, but sometimes quite the opposite. Often policy makers do not understand investors, their motivations, challenges, and why they do what they do. Blunt policy tools may then be developed which can have unintended negative consequences or a significant backlash. Given institutional investors have been key actors in these asset classes and capital structures, it is critical to engage them regarding appropriate safeguards and disclosures, and to make space for a laboratory for research and development (R&D) of reforms before they are formalized into laws and regulation. In this sense, we expect that field building organizations like ours, together with academics and other stakeholders, can provide space for this activity.

Examples of issues that could benefit from this type of “R&D” include:

1) *Supporting efforts to reinterpret fiduciary duty and financial materiality and participate in the co-creation of metrics to measure and manage against systematic risks:*

   There has been growing interest in the idea of redefining or reinterpreting fiduciary duty to clarify that it should include ESG integration.[161] The interpretation of financial materiality deserves similar attention. While progress is being made in the European Union to capture environmental and social issues through the “double materiality” concept, the US has not pursued similar initiatives. It would behoove investors, particularly Universal Owners, to engage courts, regulators, and policy makers to reinterpret fiduciary duty so that it requires ESG integration, as well as materiality to include disclosure of activities that contribute to systematic

[161] For instance, see: UN PRI, "Fiduciary Duty.”

risk.[162] Such disclosure would not only be at the portfolio company level, but also would require NBFIs to disclose risks of their activities, such as investment structuring. Disclosure can then incentivize market actors to self-reflect and reconsider their negative impacts. It can also allow other stakeholders to better understand their business models and hold them accountable.

Importantly, if we are to make the most of measuring and managing activities that contribute to such risks, then further analysis is needed regarding the planetary boundaries, social norms, and tipping points or thresholds where these risks cause irreversible harm. While the UN SDGs offer some guidance, many of their targets are high-level and/or difficult for the private sector to apply. The SDGs are important guideposts, but metrics against certain tipping points and against which the private sector can measure and manage its own activity are needed. Some effort is being made to develop and fine-tune “science based targets” for investors and companies to contextualize how their own activities contribute to tipping points on social issues, climate, biodiversity and other systemic risks. With these targets, private sector actors can then develop more effective goals and KPIs. In terms of issues discussed in this paper and their relation to socioeconomic tipping points, thresholds could be developed for fund manager compensation, responsible debt, political spend, and tax practices, among other issues.[163]

2) *Supporting efforts to reduce pressure on pension funds:*

Many institutional investors are under pressure to produce high single-digit returns in a low interest rate environment in order to cover their liabilities, particularly defined benefit pension plans.[164] Yet, this has become increasingly difficult, and it puts pressure on portfolio companies and asset managers to squeeze out returns, whether through cutting costs, raising prices, and/or layering on debt.

Analysts at Morgan Stanley recently described these tight funding dynamics, noting:

> *"Perhaps the simplest explanation for the shift from public to private equity is the needs and demands of institutional investors. For most pension funds and endowments, the primary investors in U.S. private equity, liabilities have increased while expected asset returns have decreased. For example, a large gap has opened between the assets and liabilities for pension funds in the U.S. Estimates for these unfunded pension liabilities run from about $1.6 to $6 trillion, depending on the method and assumptions you use. There are three levers to reduce the gap: contribute more to the plan, provide less to the*

[162] Examples of risks that impact investors’ portfolios even if they do not clearly impact a company’s financials (and as such do not qualify as being “financially material”) in the near-term include the quality of wages and benefits, fund manager compensation, the domiciling of funds in tax havens, and leverage, as discussed in this report. When these trends are present across many companies or investment structures in the economy and therefore the financial system, they manifest as systemic and/or systematic risks to institutional investors’ portfolios. For further reading on the materiality of systematic risk, see Lukomnik and Hawley, “Rethinking What Drives Materiality.”
[163] Examples of organizations supporting the development of these frameworks include, but are not limited to, the Science Based Targets Initiative, r3.0, the World Benchmarking Alliance, and the Taskforce on Inequality-related Financial Disclosures (TIFD). The Predistribution Initiative and our partner organization, Rights CoLab, are collaborating with other organizations to develop TIFD. More information on TIFD can be found at: www.thetifd.org. The Predistribution Initiative is also collaborating with a community of practitioners through the organization, Imperative 21, to advance reinterpretations of financial materiality.
[164] For further evidence, see Walsh, “Marching Orders for the Next Investment Chief of CalPERS: More Private Equity.”

> *beneficiaries, or generate a higher return on the assets under management. Since the first two levers are not popular, most chief investment officers strive for the third."*[165]

Given rising economic inequality and the related societal and market risks, we agree that providing less to beneficiaries is an unattractive option which would only exacerbate such problems. In this report, we have attempted to solve for the unattractiveness of contributing more to the plan by suggesting an alternative asset allocation strategy that relies on deconsolidating capital flows. However, even this approach might require larger investment teams and therefore slightly more funding for a pension fund. It is worth conducting analysis on how much additional funding would be needed to expand team capabilities relative to the estimated returns that could be produced.

There may be merit to approving further funding inflows to alleviate pressure on return ratios. For public pension funds, this would be through legislatures. For union pension funds, it means strengthening unions. For this to happen, public engagement and education could help foster an understanding among constituents and communities of why approving additional funding inflows benefits them.

However, there are also good arguments for why additional funding inflows are not necessary and may even deter from other critical public spending. For instance, some argue that traditional accounting standards for pension funds could be revisited, as they do not accurately reflect liabilities, existing funding inflows, and the strength of the sponsor. According to this argument, since liabilities are magnified, expected future inflows are not adequately considered, and the strength of the fund sponsor is not accounted for through existing accounting standards, pension funds are incentivized to take greater risks and migrate up the risk-return spectrum in an attempt to cover expected payouts.[166]

In any case, public pension funds that are well funded adopt similar investment strategies as those which are not, so it may not be funding inflows which are the primary influence on current asset allocation strategies.

3) *Support policies that reign in moral hazard in markets:*

While we and many would agree that central banks globally have had little alternative but to support markets in crises recently, market conditions should not have been so unstable and vulnerable in the first place. The excess of debt in the markets forced the hand of central banks to provide support or otherwise risk a liquidity and potentially a solvency crisis. There never should have been such a build-up of high-risk debt in the first place. Investors and lenders need to face consequences for making risky bets. The nature of capital markets is that high risk can be rewarded with high return, but there is also the potential for loss of capital. If that potential for loss is perceived to be non-existent because of a central bank "put," then investors aren't really taking much risk, but they are reaping significant rewards. In reality, someone does take that risk, and it is the public, tax payers, the government, and workers and stakeholders of vulnerable companies. Eventually, investors do take the risk in the form of macroeconomic impacts, but it is delayed.

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[165] Mauboussin and Callahan, "Public to Private Equity in the United States: A Long-Term Look."
[166] See, for instance: Sgouros, "The Case for New Pension Accounting Standards."

It is also worth noting that central bank interventions have buoyed markets to the point where there cannot be the level of creative destruction many would argue is needed for a healthy economy, and it has become difficult for distressed investors and those with capital to identify buying opportunities.

To this end, we would argue that moving forward, macroprudential discipline should be introduced to the market so that investors and companies understand as they make new decisions that high-risk bets can mean a total loss of capital. For instance, as suggested in the Financial Times regarding dividend recapitalizations,

> *"It may be that the company whose initial leverage was say five times debt to EBITDA, has delevered through growth and debt paydown to three times. The dividend debt simply takes it back to their original LBO leverage. The dividend is the interim prize for those operational and financial improvements. Dividend recaps are not necessarily improper. But buyout firms should face consequences either in the market or from regulators if companies eventually go bankrupt. Legally, a dividend could be clawed back if a company goes bankrupt quickly after the payout. But in big leverage transactions, the consequences of risky dealings should extend for a more meaningful amount of time. If a private equity firm wants to take cash early funded by debt, fine. But such impatience should lead to scrutiny and redress for a much longer period."*[167]

In the United Kingdom, proposals are being advanced to restrict dividends and bonuses if companies cannot cover payments from reserves or if there is a risk of insolvency.[168] Additionally, given the growth of capital markets as core funding mechanisms for businesses since the GFC, there are also strong arguments made globally for mandating regulation for NBFIs comparable to traditional banks. Some of these proposals call for recognizing some of the larger NBFIs as Systemically Important Financial Institutions (SIFI). Others recognize that the NBFI universe is quite large with numerous types of funds, investment vehicles, and strategies, some of which are riskier than others, and that risk may be widely dispersed across actors. As such, it may be more appropriate to regulate certain financing activities rather than entities. Still others call for "supervision," but not necessarily restrictive "regulation."

Investors can also engage on topics related to bankruptcy law, tax treatment of carried interest, tax treatment of interest, and limited liability structure to reduce risks mentioned in this report.

4) *Engage policy makers on supporting fiscal policy to support sustainable growth:*

As noted previously, global debt burdens have become so significant that it will be difficult for society to grow out of them. Monetary policy alone only exacerbates these problems in the absence of constructive fiscal policy. And both monetary and fiscal policy interventions should include sustainability requirements to avoid costly externalities to society, such as climate change, pollution, degradation of nature, and human rights abuses, and wealth inequality. We are pleased to see that central banks globally are now considering such aspects in their future policy interventions (e.g. incentives and requirements for "bail-out" support to be tied to business transitions toward sustainability).

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[167] "Private Equity: Quick Recap."
[168] Thomas and Pickard, "UK Companies Face Curbs on Dividend and Bonus Payments."

Investors should encourage such sustainability requirements, as well as for governments to invest more to support growth and innovation in the form of risk capital, such as grants, first loss equity capital, guarantees, and concessionary debt. These forms of capital can derisk investments, thereby attracting commercial investors in a deal structure. As such, this form of financing is referred to as “blended finance.”[169] Some of the most important innovations of our modern era have been funded with government support, such as the Internet and renewable energy. If governments are able to participate in some upside when these innovations result in returns – for instance through a sovereign wealth fund - they can support the resiliency of public finances so that they are not drained when crises do happen, and so that they are well-resourced to prevent them. A sovereign wealth fund could also consider distributing dividends to citizens to reduce wealth inequality. Alternatively, concessionary debt, guarantees, or even grants could be awarded to low income communities or workers who have an interest in buying equity in their company or project, or to diverse and emerging fund managers to build capacity.

In terms of other support measures, governments could consider ways to incentivize more worker and community ownership of businesses through tax incentives, pricing incentives, and capacity building programs. In the US, policies could mandate Community Reinvestment Act (CRA) requirements of NBFIs similar to those of banks.[170]

[169] Additional recommended resources on blended finance include: Convergence website; GIIN, “Blended Finance Working Group”; and Blended Finance Taskforce website.
[170] Petrou, *Engine of Inequality*. Additionally, we note that all incentives mentioned in this section would need to be structured thoughtfully so as not to deplete public resources, and to offer transparency and accountability regarding the recipient’s activities.

Conclusion

Prior to COVID-19 and the events of 2020, many were expecting a corporate debt crisis as a result of even a slight drop in revenues, a rise in interest rates, or other catalysts. While COVID-19 was a trigger arguably worse than many previously predicted, the economy was already on shaky ground, with real risks for businesses, workers, and communities. Now, in response to recent central bank interventions, borrowing has only increased and markets have rallied, while the real economy lags behind.[171] For all of the concern from institutional investors about the difficulty of achieving targeted returns in a low interest rate environment, high debt burdens make it unlikely that governments will proactively raise interest rates any time soon. On the other hand, there are also risks of inflation which could force rates to rise, but in an unwelcome fashion for investors. Are we doubling down on instability, or Building Back Better?

Building Back Better will not be successful if it is built on a house of cards of fragile debt burdens. It is critical that corporates, sovereigns, and investors take into account how capital structure and various investment products themselves have ESG implications – with potential to negatively impact workers, society, and the stability of our economy, and therefore markets and financial returns.

The Predistribution Initiative has launched the Asset Owner & Allocator Capacity Building & Research Project to explore these questions. The project invites diverse stakeholders, including, but not limited to, investors, intermediaries, civil society, labor advocates, academics, policy makers and regulators, among others, to address this critical gap. Importantly, this framing and discussion paper is not intended to offer prescriptive solutions, but rather to present preliminary ideas and raise awareness about risks, which can therefore result in a forum for healthy debate and co-creation. We are doubtful that we could mature these recommendations into a one-size fits all approach. The involvement of trustees, boards of directors, investment committees, and CIOs in particular in shaping these interventions are imperative to their success.

Outcomes of the project include:

1) Further empirical analysis about relationships between trends, such as:
    a. The links between high leverage and job quality, labor share, and the quality and affordability of goods and services;
    b. The relationships between the size of capital flows from asset owners and allocators to asset managers to companies and corporate consolidation;
    c. The impact of weak capital structures on investor returns over time;
    d. Understanding corporate and private equity motivations for leverage; and,
    e. Alternative approaches to strategic asset allocation and any adjustments needed to build supporting infrastructure, as well as corresponding transaction costs.
2) Co-created interventions that asset owners and allocators can pursue to address these systematic risks in their portfolios.

[171] Smith, "U.S. Corporate Bond Sales Smash Record, Soaring Over $1 Trillion"; "A Dangerous Gap: The Markets v the Real Economy"; IIF, "Global Debt Monitor."

As investors increasingly allocate to asset classes higher up on the risk-return spectrum, it is essential to consider adjustments to the underlying investment structures that arguably made our economy vulnerable — even *prior to* COVID-19.

Following the publication of this working paper, the Predistribution Initiative welcomes and will be convening follow-on discussions with stakeholders to fine-tune our understanding of the issues and workshop the pros, cons, and alternatives to potential solutions. We expect to periodically update this paper throughout this period. We then expect to publish a more formal version of this paper reflecting learnings and summarizing any co-created solutions in late 2021 or early 2022. We thank you for your interest and look forward to your feedback.

Bibliography

"A Dangerous Gap: The Markets v the Real Economy." *The Economist,* May 9, 2020. https://www.economist.com/weeklyedition/2020-05-09.

"A Surge in Inflation Looks Unlikely, but it is Still Worth Keeping an Eye On." *The Economist,* December 12, 2020. https://www.economist.com/briefing/2020/12/12/a-surge-in-inflation-looks-unlikely.

Adalet McGowan, Müge, Dan Andrews, and Valentine Millot. "The Walking Dead? Zombie Firms and Productivity Performance in OECD Countries." *Economic Policy* 33, no. 96 (2018): 685–736. https://doi.org/10.1093/epolic/eiy012.

Adrian, Tobias. ""Low for Long" and Risk-Taking." *International Monetary Fund,* no. 2020/015 (2020). https://www.imf.org/en/Publications/Departmental-Papers-Policy-Papers/Issues/2020/11/23/Low-for-Long-and-Risk-Taking-49733

Adrian, Tobias and Fabio Natalucci. "Financial Perils in Check for Now, Eyes Turn to Risk of Market Correction." *IMF Blog*. *International Monetary Fund,* January 27, 2021. https://blogs.imf.org/2021/01/27/financial-perils-in-check-for-now-eyes-turn-to-risk-of-market-correction/.

Ahmed, Murad, Jamie Smyth, and Kaye Wiggins. "Private Equity's New Bet on Sport: Buy the League." *Financial Times,* January 21, 2021. https://www.ft.com/content/24e9fc43-4187-4884-8efe-7a6efb496f24.

American Economic Liberties Project. "Homepage." https://www.economicliberties.us/.

Americans for Financial Reform. "Fact Sheet: Private Equity Vultures Eye Real Estate During Coronavirus Crisis." April 28, 2020. https://ourfinancialsecurity.org/2020/04/fact-sheet-private-equity-vultures-eye-real-estate-during-coronavirus-crisis/.

Americans for Financial Reform. *The Deadly Combination of Private Equity and Nursing Homes During a Pandemic*. August 6, 2020. https://ourfinancialsecurity.org/2020/08/report-3-private-equity-nursing-homes-coronavirus/

Appelbaum, Eileen, and Rosemary L. Batt. *Private Equity at Work: When Wall Street Manages Main Street*. New York: Russell Sage Foundation, 2014.

Aramonte, Sirio. "Private Credit: Recent Developments and Long-Term Trends." *BIS Quarterly Review,* March 1, 2020. https://www.bis.org/publ/qtrpdf/r_qt2003v.htm.

Aramonte, Sirio, and Fernando Avalos. "Structured Finance Then and Now: A Comparison of CDOs and CLOs." *BIS Quarterly Review*, September 22, 2019. https://www.bis.org/publ/qtrpdf/r_qt1909w.htm.

Atkins, John. "US High Yield Bonds Q4 Review: All Gas, No Brake, in Record-Setting Year." *S&P Global Market Intelligence,* December 22, 2020. https://www.spglobal.com/marketintelligence/en/news-insights/latest-news-headlines/us-high-yield-bonds-q4-review-all-gas-no-brake-in-record-setting-year-61842935.

Autor, David, David Dorn, Lawrence F. Katz, Christina Patterson, and John Van Reenen. "Concentrating on the Fall of the Labor Share." *American Economic Review* 107, no. 5 (2017): 180–85. https://doi.org/10.1257/aer.p20171102.

Autor, David, David Dorn, Lawrence F. Katz, Christina Patterson, and John Van Reenen. "The Fall of the Labor Share and the Rise of Superstar Firms." *Quarterly Journal of Economics*. Vol. 135, 2020. https://doi.org/10.1093/qje/qjaa004.

Austin, Duncan. "Milton Friedman's Hazardous Feedback Loop." *Responsible Investor,* September 14, 2020. https: //www.responsible-investor.com/articles/duncan-austin-milton-friedman-s-destabilising-feedback-loop.

Azar, Joss, Ioana Elena Marinescu, and Marshall Steinbaum. "Labor Market Concentration." *SSRN Electronic Journal*, 2018. https://doi.org/10.2139/ssrn.3088767.

Azar, Joss, Sahil Raina, and Martin C. Schmalz. "Ultimate Ownership and Bank Competition." *SSRN Electronic Journal*, 2016. https://doi.org/10.2139/ssrn.2710252.

Bain & Company. *Global Private Equity Report.* 2021. https://www.bain.com/insights/topics/global-private-equity-report/.

Baird, Ross. *The Innovation Blind Spot: Why We Back the Wrong Ideas, and What to Do about It*. Dallas, TX: BenBella Books, Inc, 2017.

Baker, Scott R. "Debt and the Consumption Response to Household Income Shocks." Rochester, NY: Social Science Research Network, February 20, 2015. https://doi.org/10.2139/ssrn.2541142.

Banerjee, Ryan, and Boris Hofmann. "The Rise of Zombie Firms: Causes and Consequences." *BIS Quarterly Review*, 2018. https://www.bis.org/publ/qtrpdf/r_qt1809g.htm.

"Banks Lose out to Capital Markets When it Comes to Credit Provision." *The Economist,* July 25, 2020. https://www.economist.com/finance-and-economics/2020/07/25/banks-lose-out-to-capital-markets-when-it-comes-to-credit-provision

Barajas, Adolfo and Fabio Natalucci. IMFBlog. "Confronting the Hazards of Rising Leverage." *IMF Blog*. *International Monetary Fund,* March 29, 2021. https://blogs.imf.org/2021/03/29/confronting-the-hazards-of-rising-leverage/.

Barkai, Simcha. "Declining Labor and Capital Shares." *Journal of Finance* 75, no.5 (Spring 2020): 2421-2463. https://doi.org/10.1111/jofi.12909.

Baue, Bill and Ralph Thurm. "Sustainable Finance Blueprint: Systemic Transformation to a Regenerative & Distributive Economy." r3.0, June 2020. https://www.r3-0.org/wp-content/uploads/2020/06/BP6-Sustainable-Finace-Draft-For-Public-Comment-June-2020.pdf

Ben-Ami, Aner. "Don't Go Chasing Unicorns." (Blog). *Medium*, March 7, 2018. https://blog.usejournal.com/dont-go-chasing-unicorns-2fa84d88437.

Benmelech, Efraim, Nittai Bergman, and Hyunseob Kim. "Strong Employers and Weak Employees: How Does Employer Concentration Affect Wages?" *SSRN*, November 28, 2019. https://doi.org/10.2139/ssrn.3146679.

Bernanke, Ben S. "What the Fed Did and Why: Supporting the Recovery and Sustaining Price Stability." *Washington Post*. November 4, 2010. http://www.washingtonpost.com/wp-dyn/content/article/2010/11/03/AR2010110307372.html.

Bernstein, Peter L. *Capital Ideas: The Improbable Origins of Modern Wall Street*. New York: John Wiley & Sons, 2005.

BIS. "Markets Rise despite Subdued Economic Recovery." In *BIS Quarterly Review*. September 2020. https://www.bis.org/publ/qtrpdf/r_qt2009a.htm.

Bivens, Josh. *Inequality is Slowing U.S. Economic Growth: Faster Wage Growth for Low- and Middle-Wage Workers is the Solution.* Economic Policy Institute, December 12, 2017. https://www.epi.org/publication/secular-stagnation/.

Blended Finance Taskforce. "Homepage." Accessed April 5, 2021. https://www.blendedfinance.earth/.

Blom, Barry and Amber Marcellino. *An Update to the Budget Outlook: 2020 to 2030.* Congressional Budget Office, September 2020. https://www.cbo.gov/publication/56542

Board of Governors of the Federal Reserve System. "2. Borrowing by Businesses and Households." In *Financial Stability Report - May 2020*. Last updated May 20, 2020. https://www.federalreserve.gov/publications/2020-may-financial-stability-report-borrowing.htm.

———. "Federal Reserve Announces Extensive New Measures to Support the Economy." March 23, 2020. https://www.federalreserve.gov/newsevents/pressreleases/monetary20200323b.htm.

———. *Quarterly Report on Federal Reserve Balance Sheet Developments.* August 2020. https://www.federalreserve.gov/monetarypolicy/bsd-overview-202008.htm.

———. "Nonfinancial Corporate Business; Debt Securities and Loans; Liability, Level [BCNSDODNS]." Retrieved from Federal Reserve Bank of St. Louis April 5, 2021. https://fred.stlouisfed.org/series/BCNSDODNS.

Brandel, Jennifer, Mara Zepeda, Astrid Scholz, and Aniyia Williams. "Zebras Fix What Unicorns Break." *Medium*, July 13, 2017. https://medium.com/zebras-unite/zebrasfix-c467e55f9d96.

Buck, Frank. "Leveraged Lending and Corporate Borrowing: Increased Reliance on Capital Markets, With Important Bank Links." *Federal Deposit Insurance Corporation Quarterly* 13, no. 4 (2019). https://www.fdic.gov/bank/analytical/quarterly/2019-vol13-4/fdic-v13n4-3q2019-article2.pdf.

Butler, Patrick and Dominic Rushe. "UN Accuses Blackstone Group of Contributing to Global Housing Crisis." *The Guardian,* March 26, 2019. http://www.theguardian.com/us-news/2019/mar/26/blackstone-group-accused-global-housing-crisis-un.

Celarier, Michelle. "Egregious Founder Shares. Free Money for Hedge Funds. A Cluster***k of Competing Interests. Welcome to the Great 2020 SPAC Boom." *Institutional Investor*, September 21, 2020. https://www.institutionalinvestor.com/article/b1ngx7vttq33kh/Egregious-Founder-Shares-Free-Money-for-Hedge-Funds-A-Cluster-k-of-Competing-Interests-Welcome-to-the-Great-2020-SPAC-Boom.

Center for Responsive Politics. "Homepage." Accessed April 5, 2021. https://www.opensecrets.org/.

———. "Summary." Private Equity & Investment Firms. Data from February 2021. https://www.opensecrets.org/industries/indus.php?ind=f2600

Chappe, Raphaele and Delilah Rothenberg. "A More Thoughtful Private Equity Model." *Top1000Funds*, August 13, 2020. https://www.top1000funds.com/2020/08/a-more-thoughtful-private-equity-model/.

Chen, Vivien Lou and Katherine Greifeld. "In New 60/40 Portfolio, Riskier Hedges Are Displacing U.S. Debt." *Bloomberg*, October 20, 2020. https://www.bloomberg.com/news/articles/2020-10-20/in-new-60-40-portfolio-riskier-hedges-are-displacing-u-s-debt.

Chopra, Rohit. Letter to Congress. July 24, 2018. https://www.ftc.gov/system/files/documents/public_statements/1395538/cmr_chopra_letter_to_congress_on_opioid_treatment.pdf.

———. Statement Regarding Private Equity Roll-ups and the Hart-Scott Rodino Annual Report to Congress Commission File No. P110014. July 8, 2020. https://www.ftc.gov/system/files/documents/public_statements/1577783/p110014hsrannualreportchoprastatement.pdf.

Chursin, Julia, Christina Padgett, and Amol Joshi. "US Speculative-Grade Default Rate Surges in Q2 2020 as Coronavirus Fallout Takes Toll." *Moody's Investors Service*, July 31, 2020. https://www.moodys.com/research/Moodys-US-speculative-grade-default-rate-surges-in-Q2-2020--PBC_1240217.

Clement, Douglas. "The Wealth Gap and the Race between Stocks and Homes." *Federal Reserve Bank of Minneapolis,* July 31, 2018. https://www.minneapolisfed.org:443/article/2018/the-wealth-gap-and-the-race-between-stocks-and-homes.

Clements, Bendict, Ruud Mooij, Sanjeev Gupta, and Michael Keen. "Chapter 2. The IMF and Income Distribution." *Inequality and Fiscal Policy* https://doi.org/10.5089/9781513567754.071. (United States: International Monetary Fund, 2015).

Cohen, Patricia. "We All Have a Stake in the Stock Market, Right? Guess Again." *New York Times*, February 8, 2018. https://www.nytimes.com/2018/02/08/business/economy/stocks-economy.html.

Coller Capital. *Global Private Equity Barometer Summer 2020.* Summer 2020. https://www.collercapital.com/coller-capital-global-private-equity-barometer-summer-2020?utm_source=newsletter&utm_medium=email&utm_campaign=newsletter_axiosprorata&stream=top.

Convergence. "Homepage." Accessed April 5, 2021. https://www.convergence.finance/.

Cortese, Amy. "The Surprising Climate Carveouts in the U.S. Spending Package." *ImpactAlpha,* January 4, 2021. https://impactalpha.com/u-s-spending-package-delivers-downpayment-on-climate-plan/.

Cox, Lloyd. "Nationalism and Populism in the Age of Globalization." In *Nationalism: Themes, Theories, and Controversies*, edited by Lloyd Cox, 97–131. Singapore: Springer, 2021. https://doi.org/10.1007/978-981-15-9320-8_5.

Cox, Dylan and Zane Carmean. *Global Private Debt Report – 2020 Annual.* PitchBook, 2020. https://files.pitchbook.com/website/files/pdf/PitchBook_2020_Annual_Global_Private_Debt_Report.pdf

Cumming, Chris. "Private Equity Smashes Its Campaign-Spending Record with 2020 Races." *Wall Street Journal*, October 25, 2020. https://www.wsj.com/articles/private-equity-smashes-its-campaign-spending-record-with-2020-races-11603620001.

Davis, Alexander. "VC Deals and Trumpism: How Much Changed in Four Years?" *PitchBook*. January 20, 2021. https://pitchbook.com/newsletter/vc-deals-and-trumpism-how-much-changed-in-four-years-yVG.

De Loecker, Jan, and Jan Eeckhout. "The Rise of Market Power and the Macroeconomic Implications." NBER Working Paper 23687. 2017. https://doi.org/10.3386/w23687.

De Loecker, Jan, Jan Eeckhout, and Gabriel Unger. "The Rise of Market Power and the Macroeconomic Implications." *The Quarterly Journal of Economics* 135, no. 2 (May 1, 2020): 561–644. https://doi.org/10.1093/qje/qjz041.

Detrixhe, John and Dan Kopf. "The US Stock Market's Wealth Generator Has Failed Black Americans." *Quartz*, June 2, 2020. https://qz.com/1863690/the-us-stock-market-is-yet-another-system-that-has-failed-black-americans/.

Due Diligence 2.0 Commitment. "Homepage." Accessed March 31, 2021. https://www.duediligencecommitment.com.

Duhigg, Charles. "How Venture Capitalists Are Deforming Capitalism." *New Yorker,* November 23, 2020. https://www.newyorker.com/magazine/2020/11/30/how-venture-capitalists-are-deforming-capitalism.

Eaton Partners. *LP Pulse Survey Results.* December 2020. https://www.stifel.com/Newsletters/InvestmentBanking/BAL/Marketing/StifelSays/2020/EatonSurveyResults_Dec2020.pdf

Eccles, Robert G. "Dynamic Materiality and Core Materiality: A Primer For Companies And Investors." January 17, 2021. https://www.forbes.com/sites/bobeccles/2020/01/17/dynamic-materiality-and-core-materiality-a-primer-for-companies-and-investors/?sh=1c9f86972e6a.

Edgecliffe-Johnson, Andrew. "A Crisis Is an Ideal Time to Raise Pay." *Financial Times,* July 12, 2020. https://www.ft.com/content/a8385de5-e7cb-4fef-9e97-ac5fdc74015b.

Edwards, Jim. "The Risk 'Leveraged Loan' Market Just Sunk to a Whole New Low." *Business Insider,* February 17, 2019. https://www.businessinsider.com/leveraged-loan-record-87-percent-covenant-lite-2019-2.

Emmons, William R. "Don't Expect Consumer Spending To Be the Engine of Economic Growth It Once Was." *Federal Reserve Bank of St. Louis*, January 1, 2012. https://www.stlouisfed.org/publications/regional-economist/january-2012/dont-expect-consumer-spending-to-be-the-engine-of-economic-growth-it-once-was

"Everything Is Private Equity Now." *Bloomberg,* October 3, 2019. https://www.bloomberg.com/news/features/2019-10-03/how-private-equity-works-and-took-over-everything.

Fairview Capital. *Market Review of Woman and Minority-Owned Private Equity and Venture Capital Firms,* 2019. http://fairviewcapital.com/ourview/fairview-capital-2019-market-review-of-woman-and-minority-owned-private-equity-and-venture-capital-firms/.

Farre-Mensa, Joan, Roni Michaely, and Martin C. Schmalz. *Financing Payouts.* Ross School of Business, Paper no. 1263 (December 11, 2020). https://doi.org/10.2139/ssrn.2535675.

Fernyhough, Wylie, Rebecca Springer, and Andrew Akers. *US PE Breakdown – 2020 Annual.* PitchBook, 2020. https://files.pitchbook.com/website/files/pdf/2020_Annual_US_PE_Breakdown.pdf?pdf=repromo.

Fifty by Fifty. "Homepage." Accessed March 29, 2021. https://www.fiftybyfifty.org/.

Financial Accountability, Transparency & Integrity. *Financial Integrity for Sustainable Development*, February 2021. https://www.factipanel.org/explore-the-report.

Financial Stability Board. *Global Monitoring Report on Non-Bank Financial Intermediation 2019.* January 19, 2020. https://www.fsb.org/wp-content/uploads/P190120.pdf.

———. *Global Monitoring Report on Non-Bank Financial Intermediation 2020*. December 16, 2020. https://www.fsb.org/2020/12/global-monitoring-report-on-non-bank-financial-intermediation-2020/.

First Nations Major Project Coalition. "Homepage." Accessed March 29, 2021. https://www.fnmpc.ca.

Foroohar, Rana. "Why Big Investors Are Buying up American Trailer Parks." *Financial Times,* February 7, 2020. https://www.ft.com/content/3c87eb24-47a8-11ea-aee2-9ddbdc86190d.

Gallup. "Stock Market." *Gallup*, April 13, 2007. https://news.gallup.com/poll/1711/Stock-Market.aspx.

———. "Monstrous Capital Structures Are a Menace to Corporate America," August 28, 2020. https://www.ft.com/content/d21be1d5-a3dc-4277-9fb4-da84a14f94e8.

Gara, Antoine and Eliza Haverstock. "How Spacs Became Wall Street's Money Tree." *Forbes*. November 19, 2020. https://www.forbes.com/sites/antoinegara/2020/11/19/the-looming-spac-meltdown/.

Gara Anotine and Nathan Vardi. "Inside The $2.5 Trillion Debt Binge That Has Taken S&P 500 Titans Including Boeing and AT&T From Blue Chips To Near Junk." *Forbes*. Accessed March 2, 2021. https://www.forbes.com/sites/antoinegara/2020/05/21/inside-the-25-trillion-debt-binge-that-has-taken-sp-500-titans-including-boeing-and-att-from-blue-chips-to-near-junk/.

Geifer, James, Dylan Cox, Hilary Wiek, Wylie Fernyhough, Zane Carmean, and Cameron Stanfill. *Private Fund Strategies Report – Q2 2020.* PitchBook, August 2020. https://files.pitchbook.com/website/files/pdf/PitchBook_Q2_2020_Private_Fund_Strategies_Report.pdf.

Global Impact Investing Network. "Blended Finance Working Group." Accessed April 5, 2021. https://thegiin.org/blended-finance-working-group.

Gopal, Prashant. "U.S. Homebuyers Face Worst Affordability Squeeze in 12 Years." *Bloomberg*, December 31, 2020. https://www.bloomberg.com/news/articles/2020-12-31/homebuyers-in-u-s-face-worst-affordability-squeeze-in-12-years.

Gordon, Jeffrey N. "Systematic Stewardship." Prepared for Conference on Rethinking Stewardship, October 23, 2020. https://ecgi.global/sites/default/files/gordon_systematic_stewardship_draft _1.2._102020.pdf.

Gray, Jack. "Credit Downgrades Present 'Serious Challenges' for Pension Schemes - AXA IM." *Pensions Age Magazine*, September 14, 2020. https://www.pensionsage.com/pa/Credit-downgrades-present-serious-challenges-for-pension-schemes-AXA.php.

Gupta, Atul, Sabrina T. Howell, Constantine Yannelis, and Abhinav Gupta. "Does Private Equity Investment in Healthcare Benefit Patients? Evidence from Nursing Homes." Working Paper Series, no. w28474. Cambridge, Mass: National Bureau of Economic Research, 2021.

Guriev, Sergei. "Labor Market Performance and the Rise of Populism." *IZA World of Labor*, July 8, 2020. https://doi.org/10.15185/izawol.479.

Gutiérrez, Germán, and Thomas Philippon. "Investment-Less Growth: An Empirical Investigation." Cambridge, MA: National Bureau of Economic Research, December 2016. https://doi.org/10.3386/w22897.

Ha, Jongrom and Gene Kindberg-Hanlon. "Asset Purchases in Emerging Markets: Unconventional Policies, Unconventional Times." *World Banks Blogs. World Bank*, January 13, 2021. https://blogs.worldbank.org/allaboutfinance/asset-purchases-emerging-markets-unconventional-policies-unconventional-times.

Haskel, Jonathan, and Stian Westlake. *Capitalism without Capital: The Rise of the Intangible Economy*. Princeton, New Jersey: Princeton University Press, 2018.

Hawley, James, and Andrew Williams. "The Emergence of Universal Owners: Some Implications of Institutional Equity Ownership." *Challenge* 43, no. 4 (2000): 43-61. http://www.jstor.org/stable/40722019.

———. "Universal Ownership: Exploring Opportunities and Challenges." Report prepared for conference at Saint Mary's College of California, April 10-11, 2006. https://community-wealth.org/sites/clone.community-wealth.org/files/downloads/report-hawley-williams.pdf.

Hawley, Jim and Jon Lukomnik. "Modernising Modern Portfolio Theory." *PRI Blog. Principles for Responsible Investment,* August 27, 2019. https://www.unpri.org/pri-blogs/modernising-modern-portfolio-theory/4765.article.

Hill, Jeremy and Max Reyes. "Bond Defaults Deliver 99% Losses in New Era of U.S. Bankruptcies." *Bloomberg*, October 26, 2020. https://www.bloomberg.com/news/articles/2020-10-26/bond-defaults-deliver-99-losses-in-new-era-of-u-s-bankruptcies?sref=mOGiuNeU.

Hodgson, Leah. "Pandemic Deepens Woes of UK's Private Equity-Backed Nursing Homes." *PitchBook*, September 21, 2020. https://pitchbook.com/news/articles/pandemic-private-equity-backed-nursing-homes.

Honeyman, Olen and Hanna Zhang. "When the Cycle Turns: The Continued Attack Of The EBITDA Add-Back." Accessed March 2, 2021. https://www.spglobal.com/ratings/en/research/articles/190919-when-the-cycle-turns-the-continued-attack-of-the-ebitda-add-back-11156255.

———. "When The Cycle Turns: The Continued Attack Of The EBITDA Add-Back." *S&P Global,* September 19, 2020. https://www.spglobal.com/ratings/en/research/articles/190919-when-the-cycle-turns-the-continued-attack-of-the-ebitda-add-back-11156255.

Human Rights Watch. “World Report 2017: Rights Trends in The Dangerous Rise of Populism.” January 12, 2017. https://www.hrw.org/world-report/2017/country-chapters/global-4.

Indap, Sujeet. “Private Equity’s High Nursing Home Death Rates.” *Financial Times.* March 3, 2021. https://www.ft.com/content/dcfea4a7-26ea-4e8e-a41d-0047965e6e46.

———. “Monstrous Capital Structures Are a Menace to Corporate America.” *Financial Times,* August 28, 2020. https://www.ft.com/content/d21be1d5-a3dc-4277-9fb4-da84a14f94e8.

International Monetary Fund. *Fiscal Monitor - April 2020.* https://www.imf.org/en/Publications/FM/Issues/2020/04/06/fiscal-monitor-april-2020.

———. *Global Financial Stability Report: Lower for Longer*. October 2019. https://www.imf.org/en/Publications/GFSR/Issues/2019/10/01/global-financial-stability-report-october-2019.

———. *Global Financial Stability Report: Bridge to Recovery.* October 2020. https://www.imf.org/en/Publications/GFSR/Issues/2020/10/13/global-financial-stability-report-october-2020.

Jacobius, Arleen. “Larger Share of Commitments Going to Megamanagers during Pandemic.” *Pensions & Investments,* August 24, 2020. https://www.pionline.com/alternatives/larger-share-commitments-going-megamanagers-during-pandemic.

Jensen, Michael C. “Agency Costs of Free Cash Flow, Corporate Finance, and Takeovers.” *The American Economic Review* 76, no. 2 (1986): 323–29. https://www.jstor.org/stable/1818789.

Jordà, Òscar, Martin Kornejew, Moritz Schularick, and Alan M. Taylor. “Zombies at Large? Corporate Debt Overhang and the Macroeconomy.” Federal Reserve Bank of New York, Working Paper Series, 2020, 1.000-46.000. https://doi.org/10.24148/wp2020-36.

Kakouris, Rachelle. “2021 Leveraged Loan Survey: Defaults Edge Higher; Credit Quality a Concern.” *(Blog). S&P Global Market Intelligence*, December 18, 2020. https://www.spglobal.com/marketintelligence/en/news-insights/blog/2021-leveraged-loan-survey-defaults-edge-higher-credit-quality-a-concern.

Kalb, Scott and Tomicah Tillemann. “How to Avoid Funding Treason.” *Top1000Funds,* January 26, 2021. https://www.top1000funds.com/2021/01/how-to-avoid-funding-treason/.

Kauffman. “Capital Access Lab.” Accessed March 2, 2021. https://www.kauffman.org/capital-access-lab/.

Kelly, Marjorie and Diane Ives. “These 12 Impact Funds Are Catalyzing Transitions to Employee Ownership.” *ImpactAlpha,* March 18, 2021. https://impactalpha.com/these-12-impact-funds-are-catalyzing-transitions-to-employee-ownership/.

Kishan, Saijel. "Global Sustainability Group Wants to Know Who Money Managers Are Lobbying." *Bloomberg Green*, December 3, 2020. https://www.bloomberg.com/news/articles/2020-12-03/global-sustainability-group-wants-to-know-who-money-managers-are-lobbying?sref=mOGiuNeU

Klausner, Michael, Michael Ohlrogge, and Emily Ruan. “A Sober Look at SPACs.” Rochester, NY: Social Science Research Network, October 28, 2020. https://doi.org/10.2139/ssrn.3720919.

Kraemer, W., Jon Palmer, Kirsten R. Mccabe. “Default, Transition, and Recovery: The S&P/LSTA Leveraged Loan Index Default Rate Is Expected To Reach 8% By June 2021.” November 2, 2020. https://www.spglobal.com/ratings/en/research /articles/201102-default-transition-and-recovery-the-s-p-lsta-leveraged-loan-index-default-rate-is-expected-to-reach-8-by-11714840.

Kusisto, Laura. “Investors Are Buying More of the U.S. Housing Market Than Ever Before.” *Wall Street Journal*, June 20, 2019. https://www.wsj.com/articles/investors-are-buying-more-of-the-u-s-housing-market-than-ever-before-11561023120.

Lattanzio, Gabriele, William L. Megginson, and Ali Sanati. “Listing Gaps, Merger Waves, and the New American Model of Equity Finance.” *SSRN*, 2019. https://doi.org/10.2139/ssrn.3329555.

Lazonick, William, Mustafa Erdem Sakinç, and Matt Hopkins. “Why Stock Buybacks Are Dangerous for the Economy.” *Harvard Business Review*, January 7, 2020. https://hbr.org/2020/01/why-stock-buybacks-are-dangerous-for-the-economy.

Le, Van, Andy Geilfuss, Bushan Artani, and Keenn Durham. *US PE Lending League Tables – Q2 2020.* PitchBook, 2020. https://files.pitchbook.com/website/files/pdf/PitchBook_Q2_2020_US_PE_ Lending_League_Tables.pdf

Lee, Justina. “JPMorgan Sounds Warning on Market Correlations at 20-Year Highs.” *BloombergQuint,* June 17, 2020. https://www.bloombergquint.com/onweb/jpmorgan-sounds-warning-on-market-correlations-at-20-year-highs.

“Leveraged Loans: The Unbearable Liteness of Covenants.” *Financial Times,* October 20, 2020. https://www.ft.com/content/0f125461-7125-4fce-ae2b-7a8058628c8f.

Levine, Matt. “Public Markets Don’t Matter Like They Used To." *Bloomberg*, August 5, 2020. https://www.bloomberg.com/opinion/articles/2020-08-05/public-markets-don-t-matter-like-they-used-to.

Lewis, Adam. “Bain Capital, KKR to Back Hardship Fund for Toys R Us Workers.” *PitchBook*, September 28, 2018. https://pitchbook.com/news/articles/bain-capital-kkr-to-back-hardship-fund-for-toys-r-us-workers

———. “PE Digs in as Battle to End Surprise Medical Bills Rages on." *PitchBook*, March 6, 2020. https://pitchbook.com/news/articles/pe-digs-in-as-battle-to-end-surprise-medical-bills-wages-on.

———. “PE Firms Keep Deploying Dividend Recaps despite the Risks." *PitchBook*, August 15, 2019. https://pitchbook.com/news/articles/pe-firms-keep-deploying-dividend-recaps-despite-the-risks.

———. “Private Equity Plays a Starring Role in 2020’s SPAC Boom." *PitchBook*. September 17, 2020. https://pitchbook.com/news/articles/private-equity-spacs-2020s.

———. “Top PE Lobbying Group Pauses Its Political Donations after Capitol Riot." *PitchBook*, January 13, 2021. https://pitchbook.com/news/articles/private-equity-lobbyist-aic-political-donations-capitol-riot.

Lewis, Jakema. “US High-Yield Bond Issuance Smashes August Record as Market Rolls On.” *S&P Global Market Intelligence,* September 9, 2020. https://www.spglobal.com/marketintelligence/en/news-insights/latest-news-headlines/us-high-yield-bond-issuance-smashes-august-record-as-market-rolls-on-60253665.

Light, Larry. “Corporate Finance Has Two New Ticking Debt Time Bombs a Decade After the Financial Crisis.” *Fortune*, December 29, 2019. https://fortune.com/2019/12/29/financial-crisis-corporate-debt-lev-loans-covenants/.

Liu, Ernest, Atif R. Mian, and Amir Sufi. “Low Interest Rates, Market Power, and Productivity Growth.” *SSRN,* 2019. https://doi.org/10.2139/ssrn.3320551.

Lowrey, Annie. “Are Stock Buybacks Starving the Economy?” *The Atlantic*, July 31, 2018. https://www.theatlantic.com/ideas/archive/2018/07/are-stock-buybacks-starving-the-economy/566387/.

Lukomnik, Jon and James Hawley. *Moving beyond Modern Portfolio Theory: Investing That Matters*. Abingdon, Oxon ; New York, NY: Routledge, 2021.

———. “Rethinking What Drives Materiality.” *High Meadows Institute, Inc.*, February 17, 2021. http://www.highmeadowsinstitute.org/changes-in-becoming-material/.

Luria, Neil and Gregory Hagood. “Private Equity May Be Repeating Mistakes with Physician Practice Management Companies.” *FierceHealthcare*, December 10, 2019. https://www.fiercehealthcare.com/practices/industry-voices-private-equity-may-be-repeating-mistakes-physician-practice-management.

Mackenzie, Michael and Eric Platt. “Asset Managers in $300bn Drive to Build Private Lending Funds." *Financial Times,* October 22, 2020. https://www.ft.com/content/b7e29f0d-d906-421c-9a0a-910099e6eed9.

Marks, Howard. "Coming into Focus." Memo to Oaktree clients. October 13, 2020. https://www.oaktreecapital.com/docs/default-source/memos/coming-into-focus.pdf.Martin-

Mason, J.W. *Disgorge the Cash: The Disconnect Between Corporate Borrowing and Investment.* Roosevelt Institute, 2015. https://cupdf.com/document/disgorge-the-cash-the-disconnect-between-corporate-borrowing-and-investment.html.

Mauboussin, Michael J. and Dan Callahan. “Public to Private Equity in the United States: A Long-Term Look.” *Morgan Stanley,* August 4, 2020. https://www.morganstanley.com/im/publication/insights/articles/articles_publictoprivateequityintheusalongtermlook_us.pdf?1596549853128.

McGavin, Ruth and Benjamin Robertson. “Private Equity Firms Quietly Return to Debt-Funded Payouts.” *Bloomberg*, July 28, 2020. https://www.bloomberg.com/news/articles/2020-07-28/private-equity-firms-quietly-return-to-debt-funded-payouts.

McGovern, Rachel and Libby Cherry. "Socially-Conscious Loans Attract Europe's Alternative Lenders." *Bloomberg*, January 22, 2021. https://www.bloomberg.com/news/articles/2021-01-22/socially-conscious-loans-attract-europe-s-alternative-lenders?cmpid=BBD012221_GREENDAILY&utm_medium=email&utm_source=newsletter&utm_term=210122&utm_campaign=greendaily&sref=mOGiuNeU.

McGrath, Charlie. "COVID-19 Couldn't Stop Venture Capital Deal-Making in North America." *(Blog). Preqin*, February 2, 2021. https://www.preqin.com/insights/research/blogs/covid-19-couldnt-stop-venture-capital-deal-making-in-north-america?utm_campaign=Preqin-Spotlight-2020&utm_medium=email&_hsmi=109343607&_hsenc=p2ANqtz-9rx7sZJVMUWLfj08Hl1PkhvoqFfgyv3L8MuMrhfMm2perMvB6so9NzHqy16GFrLEW1Bsu0isBreRfYexU8snEkiYwjxdyV7qD49_-cc2amtwlglAg&utm_content=109343607&utm_source=hs_email.

McKinsey & Company. *Private Markets Come of Age: McKinsey Global Private Markets Review 2019.* https://www.mckinsey.com/~/media/mckinsey/industries/private%20equity%20and%20principal%20investors/our%20insights/private%20markets%20come%20of%20age/private-markets-come-of-age-mckinsey-global-private-markets-review-2019-vf.ashx

McLeod, Paul. "Here's How Private Equity Firms Targeted Republican Sen. John Cornyn With Dark Money To Preserve Surprise Medical Billing." *BuzzFeed*, October 19, 2020. https://www.buzzfeednews.com/article/paulmcleod/john-cornyn-surprise-medical-billing-ads.

Mendoza, Carmela. "LP Fees: Investors Strike Back?" *Private Equity International*, September 29, 2020. https://www.privateequityinternational.com/lp-fees-investors-strike-back/.

Metawe, Mohamed. "Populism and Domestic/International Politics: Theory and Practice." *Review of Economics and Political Science*, (January 1, 2020). https://doi.org/10.1108/REPS-11-2019-0146.

Mian, Atif, Ludwig Straub, and Amir Sufi. "The Saving Glut of the Rich." Cambridge, MA: National Bureau of Economic Research, April 2020. https://doi.org/10.3386/w26941.

Mirchandani, Bhakti. "What I Wish I Had Learned About Investing At Harvard Business School: Wellbeing And Risk-Adjusted Returns." *Forbes*, January 5, 2021. https://www.forbes.com/sites/bhaktimirchandani/2021/01/05/what-i-wish-i-had-learned-about-investing-at-harvard-business-school-wellbeing-and-risk-adjusted-returns/.

Modigliani, Franco, and Merton H. Miller. "The Cost of Capital, Corporation Finance and the Theory of Investment." *The American Economic Review* 48, no. 3 (1958): 261-97. Accessed April 3, 2021. http://www.jstor.org/stable/1809766.

Mondesir, Dominick and Bailey York. *European PE Breakdown – 2020 Annual.* PitchBook, 2020. https://files.pitchbook.com/website/files/pdf/PitchBook_2020_Annual_European_PE_Breakdown.pdf

Monks, Robert A. G. and Nell Minow. *Corporate Governance*. West Sussex: John Wiley & Sons, 2011.

Mueller, Holger, Paige Ouimet, and Elena Simintzi. "Wage Inequality and Firm Growth." Cambridge, MA: National Bureau of Economic Research, January 2015. https://doi.org/10.3386/w20876.

National Association of Investment Companies. *Examining The Returns: The Financial Returns of Diverse Private Equity Firms*. 2019. https://naicpe.com/wp-content/uploads/2020/03/2019-NAIC-ExaminingTheResults-FINAL.pdf.

"Navigating Through the Fog of Crisis." *Pensions & Investments,* June 29, 2020. https://supplements.pionline.com/risk-mitigation-strategies/2020-06-29/articles/navigating-through-the-fog-of-crisis.

Nicolaou, Anna, and James Fontanella-Khan. "The Fight for the Future of America's Local Newspapers." *Financial Times,* January 21, 2021. https://www.ft.com/content/5c22075c-f1af-431d-bf39-becf9c54758b.

Office of the New York State Comptroller. "Emerging Manager Program." Accessed March 29, 2021. https://www.osc.state.ny.us/common-retirement-fund/emerging-manager.

Organisation for Economic Co-operation and Development. *Owners of the World's Listed Companies*. October 17, 2019. https://www.oecd.org/corporate/Owners-of-the-Worlds-Listed-Companies.htm

Park, Andrew W. "Latest update from @BuzzFeed on the private equity dark money campaign in DC." Twitter, October 20, 2020. https://twitter.com/apark_/status/1318588223933849602.

Pascal, Paul. "Historical Patterns of Inequality and Productivity around Financial Crises."

Federal Reserve Bank of San Francisco, Working Paper 2017-23. 2020. https://doi.org/10.24148/wp2017-23.

Perlberg, Heather. "How Private Equity Is Ruining American Health Care." *Bloomberg*, May 20, 2020. https://www.bloomberg.com/news/features/2020-05-20/private-equity-is-ruining-health-care-covid-is-making-it-worse.

Petrou, Karen. *Engine of Inequality: The Fed and the Future of Wealth in America*. First Edition. Hoboken: Wiley, 2021.

Phalippou, Ludovic. "An Inconvenient Fact: Private Equity Returns & The Billionaire Factory." Rochester, NY: Social Science Research Network, June 10, 2020. https://doi.org/10.2139/ssrn.3623820.

Philippon, Thomas. *The Great Reversal: How America Gave up on Free Markets*. Cambridge, Massachusetts: The Belknap Press of Harvard University Press, 2019.

Platt, Eric, and Joe Rennison. "Riskiest Borrowers Make up Biggest Share of Junk-Bond Deals since 2007." *Financial Times,* February 15, 2021. https://www.ft.com/content/55ef91e2-5291-4a1e-8a41-42cdf1eb3124.

Podkul, Cezary. "'Fallen Angels' Fall Short of Expectations." *Wall Street Journal*, September 28, 2020. https://www.wsj.com/articles/fallen-angels-fall-short-of-expectations-11601285400.

Podlasly, Mark, Max Lindley-Peart, and Suzanne von der Porten. "Indigenous Sustainable Investment: Discussing Opportunities in ESG." Primer prepared for First Nations Major Project Coalition Industry Engagement Event, March 18-19, 2021. https://www.fnmpcindustryevent.com/esg-primer.

Pound, Jesse. "These Charts Show How CARES Act Savings Are Running out for Unemployed Americans." *CNBC*, October 19, 2020. https://www.cnbc.com/2020/10/19/these-charts-show-how-cares-act-savings-are-running-out-for-unemployed-americans.html.

Predistribution Initiative. "FAQ." Accessed April 5, 2021. https://predistributioninitiative.org/faq

Preqin. *Global Private Equity & Venture Capital Report*. February 4, 2020. https://www.preqin.com/insights/global-reports/2020-preqin-global-private-equity-venture-capital-report.

———. "Preqin Future of Alternatives 2025." Accessed March 29, 2021. https://view.ceros.com/preqin/preqin-future-of-alternatives-2025.

———. *Making the Case for First-Time Funds.* November 2016. https://docs.preqin.com/reports/Preqin-Special-Report-Making-the-Case-for-First-Time-Funds-November-2016.pdf

Preventable Surprises. "Corporate Lobbying Alignment Project (CLAP)." Accessed April 5, 2021. https://preventablesurprises.com/issues/corporate-lobbying-alignment-project-clap/.

Price, Dennis. "The Reconstruction: Overcoming Racial Bias to Optimize Asset Management for Returns – and Impact." ImpactAlpha, March 29, 2021. https://impactalpha.com/the-reconstruction-overcoming-racial-bias-to-optimize-asset-management-for-returns-and-impact/.

———. "Impact Investors Turn to Revenue-Based Financing to Bridge Capital Gaps for Founders of Color." *ImpactAlpha,* March 9, 2021. https://impactalpha.com/impact-investors-turn-to-revenue-based-financing-to-bridge-capital-gaps-for-founders-of-color/.

———. "Q&A with Founders First's Kim Folsom: Helping Diverse Founders Grow Businesses with Revenue-Based Financing." *ImpactAlpha,* July 28, 2020. https://impactalpha.com/qa-with-founders-firsts-kim-folsom-helping-diverse-founders-grow-businesses-with-revenue-based-financing/.

Primack, Dan. "Axios Pro Rata." *Axios,* March 3, 2021. https://www.axios.com/newsletters/axios-pro-rata-e074118d-97c4-4fc9-9d9a-97a28a0998da.html?utm_source=newsletter&utm_medium=email&utm_campaign=newsletter_axiosprorata&stream=top.

Principles for Responsible Investment. "Fiduciary Duty." Accessed March 2, 2021. https://www.unpri.org/policy/fiduciary-duty.

Private Debt Investor. "Deep Dive: How Is Covid-19 Changing Private Debt?" *Private Debt Investor* (blog), September 1, 2020. https://www.privatedebtinvestor.com/how-is-covid-19-changing-private-debt/.

"Private Equity: Quick Recap." *Financial Times,* September 17, 2020. https://www.ft.com/content/50bb3087-1bc0-42cc-bfe1-cba5a82a6254.

Proskauer. "Proskauer Releases 1H 2019 Private Credit Market Highlights." July 25, 2019. https://www.proskauer.com/report/proskauer-releases-1h-2019-private-credit-market-highlights.

PwC. *Asset and Wealth Management Revolution: The Power to Shape the Future.* 2020.

https://www.pwc.com/gx/en/industries/financial-services/assets/wealth-management-2-0-data-tool/pwc_awm_revolution_2020.pdf

r3.0.“Blueprint 6: Sustainable Finance.” Accessed April 1, 2021. https://www.r3-0.org/blueprint-6-sustainable-finance/.

Racial Justice Investing. “Homepage.” Accessed March 2, 2021. https://www.racialjusticeinvesting.org.

Ramani, Veena. “Why You Should Care About Climate-Competent Boards.” *Ceres,* October 26, 2017. https://www.ceres.org/news-center/blog/why-you-should-care-about-climate-competent-boards.

Rasmussen, Dan and Haonan Li. “The MBA Myth and the Cult of the CEO.” *Institutional Investor,* February 27, 2019. https://www.institutionalinvestor.com/article/b1db3jy3201d38/The-MBA-Myth-and-the-Cult-of-the-CEO.

“Record Rise in Government Debt Will Hit Emerging Markets Harder, Fitch Says.” *Reuters*, January 6, 2021. https://www.reuters.com/article/emerging-markets-debt-idINL8N2JH21G.

Rennison, Joe. “Fed Backstop Masks Rising Risks in America’s Corporate Debt Market.” *Financial Times,* December 22, 2020. https://www.ft.com/content/7fa7e230-5a8f-4a65-b8b7-ecd603a2a3d1.

———. “US Corporate Bond Issuance Hits $1.919tn in 2020, Beating Full-Year Record.” *Financial Times,* September 2, 2020. https://www.ft.com/content/a59c2a9d-5e0b-4cbc-b69e-a138de76a776

“Riskier Leveraged Loan Issuers Load up on Cov-Lite Deals.” *S&P Global Market Intelligence,* February 26, 2018. https://www.spglobal.com/marketintelligence/en/news-insights/latest-news-headlines/leveraged-loan-news/riskier-leveraged-loan-issuers-load-cov-lite-deals.

Rolandi, Alex. “Investors to Increase Private Markets Allocation, Study Finds.” *Funds Europe*, February 27, 2020. https://www.funds-europe.com/news/investors-to-increase-private-markets-allocation-study-finds.

Ronalds-Hannon, Eliza, Katherine Doherty, and Davide Scigliuzzo. “Wave of U.S. Bankruptcies Builds Toward Worst Run in Many Years.” *Bloomberg,* May 7, 2020. https://www.bloomberg.com/news/articles/2020-05-07/wave-of-bankruptcies-builds-as-debt-and-virus-clobber-companies

Rose, Jessica, Hilary Irby, Marjorie Kelly, and Robin Varghese. *Guidelines for Equitable Employee Ownership Transitions.* The Democracy Collaborative, June 1, 2020. https://cleo.rutgers.edu/wp-content/uploads/2020/06/GuidelinesForEquitableEO.pdf

Rosen, Corey. “KKR Partner Pete Stavros to Set Up New Fund to Promote Employee Ownership.” *Employee Ownership Blog*. *National Center for Employee Ownership*, February 19, 2021. https://www.nceo.org/employee-ownership-blog/kkr-partner-pete-stavros-set-new-fund-promote-employee-ownership#:~:text=Pete%20Stavros%2C%20a%20partner%20and,the%20Center%20for%20Shared%20Ownership.

Rothenberg, Delilah and Amanda Feldman. “A Resolution for Investors: You Must Engage on New Forms of Stakeholder Capitalism.” *Responsible Investor,* January 23, 2020. https://www.responsible-investor.com/articles/a-resolution-for-investors-you-must-engage-on-new-forms-of-stakeholder-capitalism.

———. “Leverage, Compensation and Taxation: Doing Due Diligence on Investment Fund Managers.” *ImpactAlpha,* January 7, 2020. https://impactalpha.com/leverage-compensation-and-taxation-doing-due-diligence-on-investment-fund-managers/.

Rothenberg, Delilah, Denise Hearn, and Raphaele Chappe. “Deconsolidating Capital Flows: Pros, Cons, and Approaches.” Presentation prepared for For The Long Term, January 26, 2021.

S&P Global Market Intelligence. “Defining 'leveraged'." Leveraged Loan Primer. 2019. https://www.spglobal.com/marketintelligence/en/pages/toc-primer/lcd-primer#sec1a

———. “S&P Global Rating Publishes Comprehensive CLO Primer.” September 27, 2018. https://www.spglobal.com/marketintelligence/en/news-insights/latest-news-headlines/leveraged-loan-news/sp-global-ratings-publishes-comprehensive-clo-primer

Samson, Adam. “Moody’s Warns on Frothy US Junk Bond Market.” *Financial Times,* December 20, 2019. https://www.ft.com/content/f818e5e2-2303-11ea-92da-f0c92e957a96.

Scheltens, Liz. “How Did American CEOs Get so Rich?” *Vox*, October 11, 2019. https://www.vox.com/videos/2019/10/11/20909869/ceo-pay-stock-buybacks.

Schroders. “Schroders Launches SustainEx: A Cutting Edge Approach to ESG.” May 20, 2019. https://www.schroders.com/en/us/private-investor/media-centre/sustainex-a-cutting-edge-approach-to-esg/.

Schwartz, Herman Mark. “American Hegemony: Intellectual Property Rights, Dollar Centrality, and Infrastructural Power.” *Review of International Political Economy* 26, no. 3 (2019): 490–519. https://doi.org/10.1080/09692290.2019.1597754.

Scott, Dylan. “Private equity ownership is killing people at nursing homes.” *Vox*, February 22, 2021. https://www.vox.com/policy-and-politics/22295461/nursing-home-deaths-private-equity-firms

———. “Nursing Homes Are Getting Bought up by Wall Street and It’s Leading to More Deaths.” *Vox*, February 22, 2021. https://www.vox.com/policy-and-politics/22295461/nursing-home-deaths-private-equity-firms.

Semuels, Alana. “When Wall Street Is Your Landlord.” *The Atlantic*, February 13, 2019. https://www.theatlantic.com/technology/archive/2019/02/single-family-landlords-wall-street/582394/.

Serino, et al., “Credit Trends: Risky Credits: The Drop-Off To The ‘CCC’ Rating Category From ‘B-’ Still Looms Large.” June 29, 2020. https://www.spglobal.com/ratings/en/research/articles/200629-credit-trends-risky-credits-the-drop-off-to-the-ccc-rating-category-from-b-still-looms-large-11549477.

Sgouros, Tom. "The Case for New Pension Accounting Standards." *National Conference of Public Employee Retirement Systems*, May 2019. https://www.ncpers.org/files/The%20Case%20for%20New%20Pension%20Accounting%20Standards_May%202019.pdf.

Sharma, Ruchir. “This Is How the Coronavirus Will Destroy the Economy.” *New York Times*, March 16, 2020. https://www.nytimes.com/2020/03/16/opinion/coronavirus-economy-debt.html.

“Should the World Worry About America’s Corporate-Debt Mountain?” *The Economist*, March 14, 2019. https://www.economist.com/briefing/2019/03/14/should-the-world-worry-about-americas-corporate-debt-mountain.

Sidra. “The Effect Of New Politics On The Global Economy.” Accessed March 30, 2021. http://sidracapital.com/portfolio-item/the-effect-of-new-politics-on-the-global-economy/.

Siegel, Jeremy. “Higher Inflation Is Coming and It Will Hit Bondholders.” *Financial Times,* January 19, 2021. https://www.ft.com/content/6536113f-f509-41e2-bee0-597ed90843b6.

Smith, Molly. “U.S. Corporate Bond Sales Smash Record, Soaring Over $1 Trillion." *Bloomberg*, May 28, 2020. https://www.bloomberg.com/news/articles/2020-05-28/fed-fueled-borrowing-binge-hits-1-trillion-mark-at-record-rate.

Smith, Robert, Stephen Morris, and Martin Arnold. “ECB Threatens Banks with Capital ‘Add-Ons’ over Leveraged Loan Risks.” *Financial Times,* January 17, 2021. https://www.ft.com/content/c87dad6b-fc6d-4b4d-9206-1a45a670102d.

Social Capital Partners. “Homepage.” Accessed March 29, 2021. https://www.socialcapitalpartners.ca.

———. “Taylor Guitars’ Transitions to 100% Employee Ownership with Support from the Healthcare of Ontario Pension Plan (HOOPP) and Social Capital Partners (SCP).” February 16, 2021. https://www.newswire.ca/news-releases/taylor-guitars-transitions-to-100-employee-ownership-with-support-from-the-healthcare-of-ontario-pension-plan-hoopp-and-social-capital-partners-scp--857853786.html.

Song, Jae, David J Price, Fatih Guvenen, Nicholas Bloom, and Till von Wachter. “Firming Up Inequality*.” *The Quarterly Journal of Economics* 134, no. 1 (February 1, 2019): 1–50. https://doi.org/10.1093/qje/qjy025.

Steele, Graham. “The New Money Trust: How Large Money Managers Control Our Economy and What We Can Do About It.” *American Economic Liberties Project,* November 23, 2020. https://www.economicliberties.us/our-work/new-money-trust/

Stiglitz, Joseph E. and Hamid Rashid. “How to Prevent the Looming Sovereign-Debt Crisis.” *Project Syndicate*, July 31, 2020. https://www.project-syndicate.org/commentary/how-to-prevent-looming-debt-crisis-developing-countries-by-joseph-e-stiglitz-and-hamid-rashid-2020-07.

Stoller, Matt. “How to Get Rich Sabotaging Nuclear Weapons Facilities.” *BIG (Newsletter). Matt Stoller,* January 3, 2021. https://mattstoller.substack.com/p/how-to-get-rich-sabotaging-nuclear.

Summers, Larry. “The Age of Secular Stagnation.” February 15, 2016. http://larrysummers.com/2016/02/17/the-age-of-secular-stagnation/.

The Center for Popular Democracy. *Pirate Equity: How Wall Street Firms are Pillaging American Retail.* July 23, 2019. https://www.populardemocracy.org/pirateequity

The Institute of International Finance. "Global Debt Monitor.” Accessed March 2, 2021. https://www.iif.com/Research/Capital-Flows-and-Debt/Global-Debt-Monitor.

Tepper, Jonathan, and Denise Hearn. *The Myth of Capitalism: Monopolies and the Death of Competition*. Hoboken, New Jersey: Wiley, 2019.

Thomas, Daniel, and Jim Pickard. “UK Companies Face Curbs on Dividend and Bonus Payments.” *Financial Times,* March 18, 2021. https://www.ft.com/content/41cff27d-de7b-4cdc-8700-b7439c3bca49.

Tiftik, Emre, Khadija Mahmood, and Sonja Gibbs. “Global Debt Monitor Attack of the Debt Tsunami.” *Institute of International Finance,* November 18, 2020. https://file-us.clickdimensions.com/iifcom-ai7nn/files/globaldebtmonitor_nov2020_v1.pdf.

Tufford, Harlan. “CEO Pay from Start to Finish.” *MSCI*, March 22, 2021. https://www.msci.com/www/research-paper/ceo-pay-from-start-to-finish/02396553468.

University of Michigan Erb Institute. “Corporate Political Responsibility Taskforce.” https://erb.umich.edu/corporate-political-responsibility-taskforce/.

U.S. Bureau of Economic Analysis. "Gross Domestic Product [GDP]." Retrieved from Federal Reserve Bank of St. Louis April 5, 2021. https://fred.stlouisfed.org/series/GDP.

———. “Shares of Gross Domestic Product: Personal Consumption Expenditures.” *Federal Reserve Bank of St. Louis*, last updated March 25, 2021. https://fred.stlouisfed.org/series/DPCERE1Q156NBEA.

United Nations Office of the High Commissioner for Human Rights. "States and Real Estate Private Equity Firms Questioned for Compliance with Human Rights.” News release, March 26, 2019. https://www.ohchr.org/EN/NewsEvents/Pages/DisplayNews.aspx?NewsID=24404&LangID=E.

U.S. Office of Management and Budget and Federal Reserve Bank of St. Louis. “Federal Debt: Total Public Debt as Percent of Gross Domestic Product.” Federal Reserve Bank of St. Louis, last updated March 25, 2021. https://fred.stlouisfed.org/series/GFDEGDQ188S.

Vandevelde, Mark. “How the Biggest Private Equity Firms Became the New Banks.” *Financial Times,* September 19, 2018. https://www.ft.com/content/ec43db70-ba8e-11e8-94b2-17176fbf93f5.

Walsh, Mary Williams. “Marching Orders for the Next Investment Chief of CalPERS: More Private Equity." *New York Times*, October 19, 2020. https://www.nytimes.com/2020/10/19/business/calpers-pension-private-equity.html.

Warmbrodt, Zachary. “Biden’s Wall Street Backers Face New Threat from Warren." *Politico*, January 19, 2021. https://www.politico.com/news/2021/01/19/elizabeth-warren-private-equity-459813.

Watts, William. “Without QE, the S&P 500 Would Be Trading Closer to 1,800 than 3,300, Says Société Générale.” *MorningStar,* November 6, 2020. https://www.morningstar.com/news/marketwatch/20201106781/without-qe-the-sp-500-would-be-trading-closer-to-1800-than-3300-says-socit-gnrale.

Weil, David. "Homepage." The Fissured Workplace. Accessed April 5, 2021. https://www.fissuredworkplace.net/.

Weiss, Laura. “Investors Seek to Reassess Political Spending at Largest Firms.” *CQ News,* February 3, 2021. https://politicalaccountability.net/hifi/files/CPA---CQ-ESG-Briefing---Investors-seek-to-reassess-political-spending-at-largest-firms---02-03-21---CPA-included.pdf.

Wheatley, Jonathan, and Andrew Jack. “World Bank Piles Pressure on Private Creditors for EM Debt Relief.” *Financial Times,* September 16, 2020. https://www.ft.com/content/e57f8164-02fb-46e7-abfb-519ed10cb030.

Whelan, Tensie. “Boards Are Obstructing ESG — at Their Own Peril.” *Harvard Business* Review, January 18, 2021. https://hbr.org/2021/01/boards-are-obstructing-esg-at-their-own-peril.

Wiek, Hilary and Wylie Fernyhough. "Q1 2021 Benchmarks." Deck presented at PitchBook Private Market Fund Performance: Spotlight on First-Time and Emerging Managers Webinar. Accessed March 29, 2021. https://files.pitchbook.com/website/files/pdf/Q1_2021_Benchmarks_Webinar_Deck.pdf.

Willmer, Sabrina. "Private Equity Loses Its Shield as U.S. Cracks Down on Fraud." *Bloomberg*, February 22, 2021. https://www.bloomberg.com/news/articles/2021-02-22/the-feds-pierce-private-equity-s-defenses-against-whistleblowers.

Wirz, Matt and Nick Timiraos. "The Next Coronavirus Financial Crisis: Record Piles of Risky Corporate Debt." *Wall Street Journal*, March 19, 2020. https://www.wsj.com/articles/the-next-coronavirus-financial-crisis-record-piles-of-risky-corporate-debt-11584627925.

Wiggins, Kaye. "How Selling to Yourself Became Private Equity's Go-to Deal." *Financial Times,* December 28, 2020. https://www.ft.com/content/ee914ea4-4ad9-4eec-97c3-95af841122bf.

Wigglesworth, Robin. "Coronavirus: Is Investment Management the Weak Link?." *Financial Times,* April 13, 2020. https://www.ft.com/content/d9812fee-798a-11ea-9840-1b8019d9a987.

Wilder, Jacob. "How Secondary Buyouts Became Ubiquitous: SBOs as an Exit and Deal Sourcing Strategy." *PitchBook Blog. Pitchbook,* August 24, 2018. https://pitchbook.com/blog/how-secondary-buyouts-became-ubiquitous-sbos-as-an-exit-and-deal-sourcing-strategy.

Wolff, Edward. "Household Wealth Trends in the United States, 1962 to 2016: Has Middle Class Wealth Recovered?" Cambridge, MA: National Bureau of Economic Research, November 2017. https://doi.org/10.3386/w24085.

Women in VC. "The Untapped Potential of Women-Led Funds." October 2020. https://assets.ctfassets.net/jh572x5wd4r0/7qRourAWPj0U9R7MN5nWgy/711a6d8344bcd4fbe0f1a6dcf766a3c0/WVC_Report_-_The_Untapped_Potential_of_Women-Led_Funds.pdf.

World Benchmarking Alliance. "Social Transformation." Accessed April 5, 2021. https://www.worldbenchmarkingalliance.org/social-transformation-benchmark/

Yuk, Pan Kwan, Jonathan Guthrie, and Andrew Whiffin. "Why Rescue Finance Will Slow Recovery for Businesses." *Financial Times,* August 26, 2020. https://www.ft.com/content/3afb13c5-99d1-418f-ad51-33f3d6db81ca.

Zebras Unite. "Homepage." Accessed April 5, 2021. https://zebrasunite.coop/.

Zhu, Jane M., Lynn M. Hua, and Daniel Polsky. "Private Equity Acquisitions of Physician Medical Groups Across Specialties, 2013-2016." *JAMA* 323, no. 7 (February 18, 2020): 663. https://doi.org/10.1001/jama.2019.21844.

Zwick, Josh and Alex Bernhardt. "Is Coronavirus About to Cause the Next Global Financial Crisis?" *Brink,* April 13, 2020. https://www.brinknews.com/zombies-fallen-angels-coronavirus-the-next-great-financial-crisis-recession-corporate-debt-bonds/.