The Capital Allocation and Agency Problems with Index Funds

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Introduction

The three largest mutual fund providers—Vanguard, BlackRock, and StateStreet—now manage more than $15 trillion. It is an amount equivalent to one-third of the United States' GDP. 82 percent of all assets flowing into all investment funds, both active and passive, over the last decade have gone to the "Big Three." For the first time in 2019, passive inflows surpassed those of active.[1]

Throughout history, the mutual fund and the index fund have been thought of as benign, or better yet, that they are the most reliable ways to obtain market returns. They are the bastion of the individual investor. It is true that the diversification and low fees of mutual funds has greatly expanded access to the markets without requiring high levels of risk. By some estimations, index funds allow investors to get the same access to the markets as any other vehicle for a tenth of the cost.[2]

However, has anyone considered the downsides? Do capital markets facilitate the efficient allocation of capital if half of participants are agnostic to fundamentals? This paper examines how the mutual fund and index fund have grown so large, and what the prevalence of passive strategies means for capital markets and corporate governance.

The Ups And Downs of Corporate Governance and Capital Markets

It's easy to bash Wall Street. It unites a lot of people. However, the way that the market currently operates has been pushed as the only way markets *can* function. Today, you hear a lot of about securitization. Everything has a price. LinkedIn premium? People buy things that have doubtful value, like non-fungible tokens. Wall Street banks get rich by buying and selling securities ten milliseconds quicker than someone else. It's funny to think that most transactions are on the secondary market, meaning no new capital is actually going to businesses. We should recall, however, that the origins of this system were courageous and innovative campaigns to make the world a better place.

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[1] Graham Steele. The New Money Trust: How Large Money Managers Control Our Economy and What We Can Do About It. American Economics Liberties Project. November 23, 2020. Accessible at https://www.economicliberties.us/our-work/new-money-trust/s

[2] Annie Lowrey. "Could Index Funds Be Worse Than 'Marxism'?" *The Atlantic*. April 5, 2021. Accessible at https://www.theatlantic.com/ideas/archive/2021/04/the-autopilot-economy/618497/

The inventor of value investing was Benjamin Graham. He's the one who taught Warren Buffett how to invest. The year was 1926 and the stock market was not much different than a betting pool. The notion of "intrinsic value" was non-existent, and so was the notion that companies were supposed to *maximize* investor returns. Graham set his eyes on Northern Pipeline, one of the eight companies spun out of John Rockefeller's Standard Oil. This was before the SEC required public companies to file regular financial reports. However, the Interstate of Commerce Commission collected detailed information about the railroads. The only guy on Wall Street to realize that was Benjamin Graham. Not surprisingly, he found that there was still a high degree of cross-ownership among the railroads. More importantly, he struck gold: Northern Pipeline was hiding millions of dollars worth of securities and railroad bonds from its shareholders. Graham would then wager one of the first major activism fights in history. He believed that Northern Pipeline could distribute as much as $90 worth of dividends per share and still be a healthy, debt-free company. That was money that investors could allocate else where. And not to mention, Norther Pipeline was taxed on its interest income. Graham was able to get a meeting with the financial advisor to the Rockefeller Foundation. The advisor explained that the foundation didn't interfere with its holdings' business practices, so Graham then went around and convinced as many shareholders as he could to vote for his board replacements. By 1927, he succeeded. Graham was on the board, and the board quickly approved a dividend.[3] A new era of corporate governance—one that put shareholders ahead of lackluster managers—began. Similarly, this campaign engendered a new era of corporate transparency and financially sound valuations that would make the market more efficient.

"WARNING: If any banker, lawyer, shipper, supplier or other person solicits your proxy for the present Board, ask him what his special interests are, or what your Company is paying for his services. Like the bankers now on your Board, he, too, may be hoping to receive special favors from your railroad or from the bankers"[4]

—Robert Young in a newspaper ad for his proxy campaign against the board of New York Central

A decade later, Robert Young, the "Populist of Wall Street," took on another railroad company, New York Central. He pioneered the use of newspaper ads for his campaign. This appealed to the employees of New York Central who owned shares through the employee stock purchase

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[3] Jeff Gramm. *Dear Chairman.* Harper Business. 2016. Chapter 1

[4] Jeff Gramm. *Dear Chairman.* Harper Business. 2016. Chapter 2, page 23

plan. Although he was fighting for financial restructuring and for routes that would make traveling easier and cheaper for consumers, his campaign was mostly a repudiation of an entrenched management team that was in cahoots with bankers and didn't properly attend to the company. His slate of directors included businessmen, a retired employee, and a woman. To understand how out of touch the New York Central's board was, here is what the chairman put out in a written newspaper ad: "You do not learn railroading relaxing at Palm Beach, Newport and other resorts at which Mr. Young spends the greater part of his time. I know, because in recent years, I have spent a good deal of my time engaged in more or less similar pursuits. But then, I do not aspire to be chief executive officer of the New York Central."[5] Young gained control of the company.

Many others have since ridden the gravy train of shareholder activism. Activism was used for good against the railroads, but it has also been used for bad. Corporate takeovers were a game that caused massive layoffs. Some activists felt that because at one particular time, a company might be worth more dead than alive, they should liquidate it. Gone are the virtues of resilience or nurturing. Paul Singer's Elliot Management was responsible for the merger of Cabelas and Bass Pro Shops in 2019, which erased 2,000 jobs from the 6,500 person town of Sidney, Nebraska, plummeting housing prices.[6] This version of shareholder primacy angers both Tucker Carlson and Elizabeth Warren.[7] While it seemed just that shareholders should deserve the profits of the company they own and that management teams should be held accountable, shareholder primacy also jettisoned corporate culture that put employees and communities first.

The moral of these stories is that there have always been conflicts in capital markets and corporate governance, and there always will be. The good guy can become the bad guy decades later. The story of activism is fun. Each activist was a colorful figure, usually with something to prove. Benjamin Graham was overflowing with wisdom. Robert Young had a populist bluster. Ross Perot, after being bought out of General Motors, would go on to receive the most votes (19 percent) an independent presidential candidate has ever garnered. Karla

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[5] Jeff Gramm. *Dear Chairman.* Harper Business. *2016.* Chapter 2, page 38

[6] Charles Couger and Alex Pfeiffe. "The death of Sidney, Nebraska: How a hedge fund destroyed 'a good American town'" *Fox News*. December 3, 2019. Accessible at https://www.foxnews.com/us/paul-singer-sidney-nebraska-cabelas-bass-pro-shops-merger

[7] Elizabeth Warren. "End Wall Street's Stranglehold On Our Economy." Medium. July 18, 2019. Accessible at https://medium.com/@teamwarren/end-wall-streets-stranglehold-on-our-economy-70cf038bac76

Scherer waged one of the weirdest corporate battles of all time against her ex-husband. John Bogle, however, was boring. He talked about the individual investor and the soul of capitalism. The index fund was called the pursuit of meritocracy, and has been referred to as the couch potato portfolio. Bogle was a frugal, hard-working man who took home a $100,000 salary that was dwarfed by those of most major financial figures. But today we find ourselves in a position where index funds own half of the public market and are only set to grow larger.[8] Some would say we have entered a new era of Robber Barons or a Gilded Age. The market distortions created by indexing strategies, the absolute failure of mutual funds to be good stewards of capital, and the cartel-like incentives common owners potentially create should make us question the merits of mutual funds as they stand.

John "Jack" Bogle

"If a statue is ever erected to honor the person who has done the most for American investors, the hands down choice should be Jack Bogle."[9]

—Warren Buffett

John Bogle grew up in New Jersey. He was from a middle class family that suffered from the 1929 crash. Bogle started working various jobs at age 10 to support his family, instilling a strong work ethic and frugality that stayed with him his whole life. Even after leaving Vanguard, he continued to write speeches and books despite a long history of heart troubles and a surgery. He graduated cum laude from Blair Academy, a boarding school in New Jersey. He then made it to Princeton on a generous scholarship. In his senior thesis, he presciently wrote about the economic role of the mutual fund, at a time when they were almost non-existent.[10] The progenitor of the mutual fund was the Alexander Fund, started by Wallace Alexander in 1907. But in 1951, when Bogle wrote his thesis, the mutual fund industry had 51 million shareholders and managed $3 billion in assets, which accounted for 1.5 percent of total

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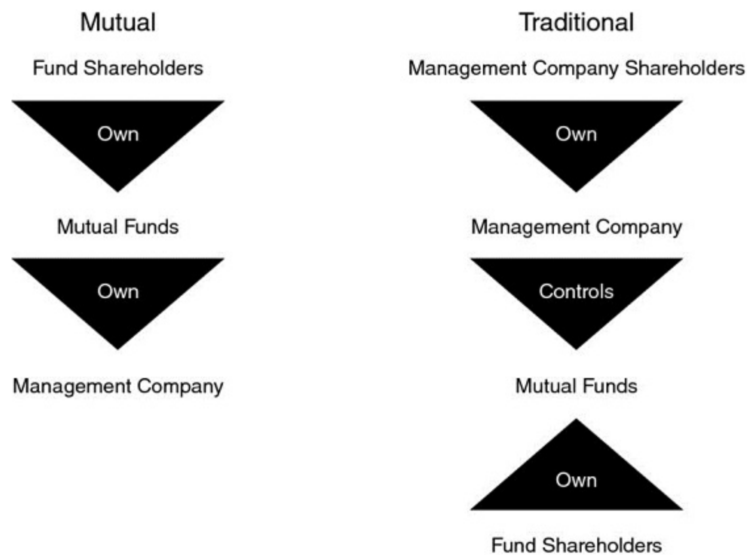
[8] Mike Green on The Acquirers Podcast. "Ep. 55 Michael Green – Passive Agro, Passive Risks To The Market, Shorting XIV, And What's A Value Guy To Do?" March 2, 2020. Accessible at https://acquirersmultiple.com/2020/03/ep-55-the-acquirers-podcast-michael-green-passive-agro-passive-risks-to-the-market-shorting-xiv-and-whats-a-value-guy-to-do/

[9] John Bogle. *Stay The Course: The Story of Vanguard and the Index Revolution.* Wiley. 2019.

[10] Lewis Braham. *The House That Bogle Built.* McGraw-Hill. 2011. Chapter 1

savings.[11] His thesis easily landed him a job at Wellington Management Company, the fourth largest mutual fund at the time.[12]

Like Benjamin Graham, Bogle also believed that the world of finance needed reform from the inside (Bogle later wrote *New Perspectives for An Intelligent Investor*, an allusion to Graham's famous book, *Intelligent Investor*[13]). But instead of trying to hold management teams accountable, Bogle sought to expand access to the markets. He wanted to "democratize" investing. Wellington Management Company was a good place to start. It had grown strongly after the 1929 crash, since it had a conservative reputation. Wellington didn't borrow against its assets, and invested in more bonds than other providers.[14]



Source: John Bogle. *Stay The Course: The Story of Vanguard and the Index Revolution.* Wiley. 2019. Page 35

Although they were called "mutual" funds, that's not exactly what they were. The first open-end mutual fund, the Massachusetts Investors Trust, was a true mutual fund: owned by the shareholders.[15] In 1958, however, a fiduciary rule allowed fund companies to sell their

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[11] Lewis Braham. *The House That Bogle Built.* McGraw-Hill. 2011. Chapter 3

[12] Lewis Braham. *The House That Bogle Built.* McGraw-Hill. 2011. Chapter 2

[13] Lewis Braham. *The House That Bogle Built.* McGraw-Hill. 2011. Chapter 13, page 160

[14] Lewis Braham. *The House That Bogle Built.* McGraw-Hill. 2011. Chapter 2

[15] Lewis Braham. *The House That Bogle Built.* McGraw-Hill. 2011. Chapter 18, page 225

management contracts to outside investors.[16] Subsequently, the vast majority of mutual funds had two boards: one for the funds, and one to manage the funds, called a management company. The management company would oversee administrative tasks, like distribution and advisory services. But profits that flowed to the management company necessarily were deducted from the fund shareholders. Fighting this, in addition to pushing low costs, would define Bogle's momentous impact on the investing world.

Bogle became CEO of Wellington Management in 1967, after a merger with a go-go fund from Boston.[17] The merger was contrary to the conservative investing approach Bogle was used to, but Bogle knew his "bagel shop" wouldn't stand a chance against the "doughnut shops" (such as Fidelity), so he proposed the acquisition.[18] He soon became sickened by the Boston group's equity flush strategies and loyalty to institutional investors. Bogle sought to reel in the company, and address the common investor. In a January 1974 memo that he presented to the management board, Bogle proposed that the Wellington funds, owned by the shareholders, acquire the Wellington Management company. He calculated that there would be $2 million in savings, a 40 percent cost reduction. The proposal fell on deaf ears, and, amid a broader disagreement, the Wellington Management board voted 10-1 to fire Bogle (he recused himself from the vote).[19] "Fired with enthusiasm," Bogle rallied the fund managers to vote for his mutualization proposal.[20] On June 20, 1974, the fund managers, to the board's surprise, voted for a mutualization structure. Wellington Management accepted but retained distribution and advisory functions. The funds themselves would have to take on the legal compliance tasks, all financial accounting, and the role of ensuring that the funds' prices reached the newspapers.[21]

Bogle created the Vanguard Group Inc. on September 24, 1974, a company owned by each of the 11 Wellington funds' 380,000 shareholders that would provide the administrative services to each fund manager. It would operate at cost and would not take home profits. Any leftover reserves would be returned to the fund shareholders. Serving as the President and CEO of

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[16] Lewis Braham. *The House That Bogle Built.* McGraw-Hill. 2011. Chapter 18, page 225

[17] Lewis Braham. *The House That Bogle Built.* McGraw-Hill. 2011. Chapter 4, page 36

[18] John Bogle. *Stay The Course: The Story of Vanguard and the Index Revolution.* Wiley. 2019. Page 47

[19] Lewis Braham. *The House That Bogle Built.* McGraw-Hill. 2011. Chapter 5, page 47

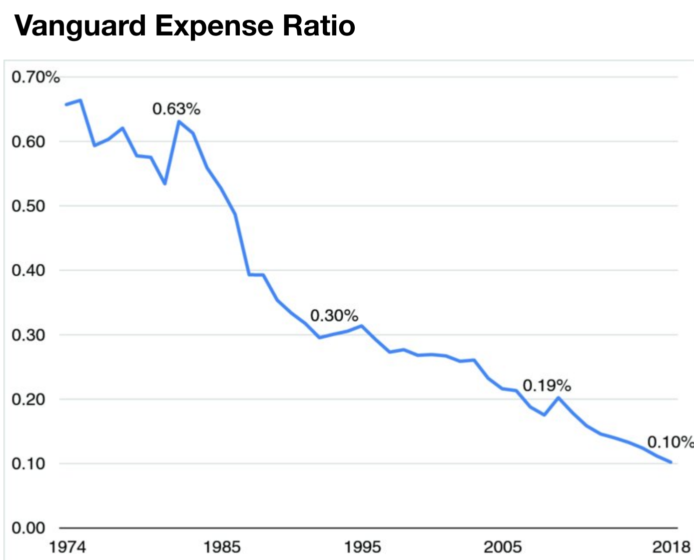
[20] John Bogle. *Stay The Course: The Story of Vanguard and the Index Revolution.* Wiley. 2019. Page 59

[21] Lewis Braham. *The House That Bogle Built.* McGraw-Hill. 2011. Chapter 5, page 52

Vanguard, Bogle continued taking the same salary as he had before, a relatively small, fixed payment of $100,000.[22]

Bogle was now finally able to focus solely on the client: by reducing management fees. At the time (1975), the expense ratio was around 0.89 percent.[23] From 1981 to 1995, Bogle cut annual portfolio advisory costs from 0.2 percent, to 0.1 percent in 1995, saving shareholders $85 million annually. This didn't happen without backlash. A senior executive at a competing mutual fund told Bogle, "By giving the client a fair shake, you're going to destroy this industry." Bogle was reassured he was doing something right.[24] In contrast to today's myopic profit-maximizing norm, pursuing mutualization seems regressive. Indeed, when the New York Stock Exchange repealed the ban on banks going public in 1970, not surprisingly, they started to abandon their partnership structure and went public.[25]

Vanguard Expense Ratio



Source: John Bogle. *Stay The Course: The Story of Vanguard and the Index Revolution.* Wiley. 2019. Page 105

In 1993, Bogle authored *Bogle on Mutual Funds*, a guide for new investors and a call for improvement in the industry. He wrote, "This industry can have lower costs for customers, create much better disclosure, have honest advertising, and be overseen by more responsible

[22] Lewis Braham. *The House That Bogle Built.* McGraw-Hill. 2011. Chapter 6, page 55

[23] Lewis Braham. *The House That Bogle Built.* McGraw-Hill. 2011. Chapter 7, page 70

[24] Lewis Braham. *The House That Bogle Built.* McGraw-Hill. 2011. Chapter 5, page 56

[25] Andrew Schrieber. "The Investment Bank Job The US Securities and Exchange Commission v Goldman Sachs". The Kenyan Institute for Ethics at Duke University.

directors."[26] This echoed his shareholder letters and meetings with the press. In 1991, Bogle delivered a speech called "Losing Our Way: Where Are The Independent Directors?" He criticized mutual funds that had increased their fees, despite increased economies of scale and the use of existing shareholder capital to subsidize gaining new shareholders.[27] He even angered the lobbying arm of the mutual fund industry, the Investment Company Institute. Listeners to his speeches called him a communist and a Marxist. Bogle replied, "In the office, I am often called a fascist."[28] After his forceful retirement due to age, Bogle continued the fight for the common investor, testifying in front of Congress for measures such as a fiduciary standard that would give mutual fund shareholders primacy over management boards.[29] Bogle was the real deal.

To the everyday investor, the advent of the mutual fund sure felt like a "democratization" of investing. The mutual fund revolution ran parallel to the increased access to financial tools by the middle class. Through innovations like credit cards, IRAs and the advent of discount brokerages like Charles Schwab and TD Ameritrade, the middle class joined the money class.[30] By the end of the 1990s, ABC's *Who Wants to Be a Millionaire?* had become the signature show of the era. Baby Boomers fantasized about retiring at 50. And ominously, Gen X-er's came up with their own vision of the American dream: wealth without working.[31] In 1983, only 15.9 percent of American households owned stocks. By 2000, 50 percent did. Most of that exposure came through 401(k) plans via stock mutual funds.[32] Vanguard's assets grew from $2.4 billion in 1980 to $540 billion by the end of 1990.[33]

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[26] Lewis Braham. *The House That Bogle Built.* McGraw-Hill. 2011. Chapter 13, page 160

[27] Lewis Braham. *The House That Bogle Built.* McGraw-Hill. 2011. Chapter 13, page 162

[28] Lewis Braham. *The House That Bogle Built.* McGraw-Hill. 2011. Chapter 13, page 163

[29] Lewis Braham. *The House That Bogle Built.* McGraw-Hill. 2011. Chapter 16, page 227

[30] Lawrence Ritter. "Where's the Money?" *The New York Times.* October 23, 1994. Accessible at https://www.nytimes.com/1994/10/23/books/where-s-the-money.html

[31] Maggie Mahar. *Bull! A History of the Boom and Bust, 1982-2004*. Harper Collins. 2004. Chapter 2

[32] Lewis Braham. *The House That Bogle Built.* McGraw-Hill. 2011. Chapter 8, page 77

[33] Lewis Braham. *The House That Bogle Built.* McGraw-Hill. 2011. Chapter 8, page 75

American Or Un-American: Index Funds

Soon after creating Vanguard, Bogle unveiled the first retail index fund in August 1976, named the Vanguard First Index Investment Trust (it was later renamed as the Vanguard 500 Index). An index fund tracks the market or a sector of the market. Its returns should match the market less any frictions, including management fees, transaction costs, and drag. Truth be told, Bogle's main reason for introducing the index fund was to further internalize Vanguard's activities, specifically the advisory function, so as to weaken the grasp of Wellington Management. Bogle did, however, believe the product would benefit his shareholders.[34]

In the 1970s, there were generally two schools of index fund proponents, whose ideologies would eventually converge. Out of the University of Chicago, the efficient market hypothesis laid the framework for creating passive market tracking vehicles. Their belief was that the market was an adequate enough mechanism to set *proper* asset prices. Some took that to mean that doing one's own research on individual companies was basically futile. University of Chicago academics were part of the first index fund construction at Wells Fargo, and others went on to start Dimensional Fund Advisors, the first real index competitor that Vanguard faced.[35] The other school was based on modern portfolio theory, which came from Harry Markowitz. From him was the theory that investors should consider the risk of their aggregate portfolio, rather than the idiosyncratic risks of each stock they owned. This gave rise to diversification. Bill Sharpe's "The Arithmetic of Active Management" took it further. He claimed that a passive vehicle that holds the market will match the market. This makes sense, but it implies that all active investors constitute the rest of the market. It is then a zero-sum game, or in fact a net negative game since active players take higher fees. Therefore, a low-cost diversification strategy is superior to any active strategy. Bogle had voiced similar sentiments in his 1951 Princeton thesis.[36] Bogle didn't fully subscribe to the efficient market hypothesis. He instead adhered to his own "cost matters hypothesis."[37] However, fundamentalists, such as Bogle, were warm to the EMH. Influenced by Benjamin Graham's ideas such as "intrinsic value," the hyper-rationality of the EMH was attractive to them. Though, the fundamentalists might want to re-read Graham's chapter titled "The Relationship of Intrinsic Value to Market

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[34] Lewis Braham. *The House That Bogle Built.* McGraw-Hill. 2011. Chapter 11, page 121

[35] Lewis Braham. *The House That Bogle Built.* McGraw-Hill. 2011. Chapter 11, page 131

[36] Lewis Braham. *The House That Bogle Built.* McGraw-Hill. 2011. Chapter 11, page 119

[37] Lewis Braham. *The House That Bogle Built.* McGraw-Hill. 2011. Chapter 11, page 124

Price” in *Security Analysis*, where he acknowledges that markets are vulnerable to irrational human emotion.[38]

Three years before Bogle introduced the Vanguard 500 Index fund, Princeton Professor Burton Malkiel published the famous *A Random Walk Down Wall Street*. The book is still in print today, in its 12th edition.[39] The publication marked a watershed moment in finance, as everyone now understood the EMH. Book quotes like, “A blindfolded chimpanzee throwing darts at the Wall Street Journal can select a portfolio that can do just as good as the experts,” gave credence to the idea of passive, highly diversified portfolios.[40] Famed economist Paul Samuelson pleaded for someone to make a retail index fund in an article named “Challenge to Judgement,”[41] and casted aspersions on active investor’s "Napoleonic delusions of being able to pick winners that will quadruple their money.”[42] Charley Ellis wrote “The Losers Game” (referring to active funds) the following year. These three put Bogle over the edge, and made him a true believer in the index fund.[43] Malkiel and Ellis would join Vanguard’s board.[44]

The public’s reaction to Bogle’s release of the index fund was markedly negative. From the 1960s until the 1970/1974 bear market, anyone wealthy enough to play in the stock market was either doing it themselves or paying some gunslinger fund manager.[45] Market participants were not looking to meet the market, they were looking to beat it! Commentators called the index fund “the pursuit of mediocrity.” It was “Un-American” and “a formula for a solid, consistent, long-term loser.”[46]

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[38] Benjamin Graham. *Security Analysis.* McGraw-Hill. 1934.

[39] Wikipedia. Accessible at https://en.wikipedia.org/wiki/A_Random_Walk_Down_Wall_Street

[40] Lewis Braham. *The House That Bogle Built.* McGraw-Hill. 2011. Chapter 11, page 123

[41] Lewis Braham. *The House That Bogle Built.* McGraw-Hill. 2011. Chapter 11, page 120

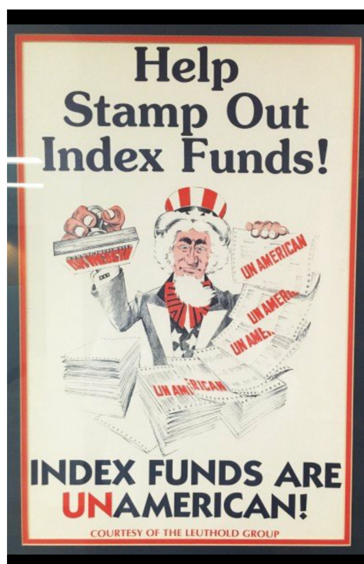
[42] Ben Steverman. “Guess Who Just Turned 40 and Is Worth $3.6 Trillion?” *Bloomberg.* August 31, 2016. Accessible at https://www.bloomberg.com/news/articles/2016-08-31/the-index-fund-turns-40-and-gets-its-revenge

[43] Lewis Braham. *The House That Bogle Built.* McGraw-Hill. 2011. Chapter 11, page 120

[44] Lewis Braham. *The House That Bogle Built.* McGraw-Hill. 2011. Chapter 11

[45] Marc Faber. Gloom Doom Boom Report. October 2016

[46] Lewis Braham. *The House That Bogle Built.* McGraw-Hill. 2011. Chapter 11, page 121



Source: https://www.reddit.com/r/wallstreetbets/comments/aine4x/index_funds_are_for_commie_cowards/

Expectedly, demand for the product was low. Bogle hoped to start the fund with $150 million under management, but only raised $14 million in its first year. But come the 1990s, index proponents began to win the ideological argument. Bogle said, "Index funds are a result of skepticism that any given financial manager can outperform the market. How can anyone possibly pick which stock funds are going to excel over the next 10 years?" From 1985 to 1999, the Vanguard 500 Index retuned 1,204 percent, compared to 886 percent for the average large-cap blend fund. The Vanguard index had $1 billion under management in 1988, $1.8 billion in 1990, $9.4 billion in 1995, and $107 billion at the end of the dot-com bubble that burst in March 2000.[47] And today, it is common knowledge that the index fund, also known as the couch potato portfolio, is a safe and effective way to get exposure to the market.

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Of course, despite the best of intentions, the mutual fund revolution wasn't what it was reputed to be. As a bull market fueled by low interest rates and speculation drove stock prices up, and the middle class thought they were finally reaping the benefits of capitalism. As the stock market tumbled in March 2000, the everyday investor was left desperate and confused, while the mutual funds had taken home stone cold cash.

The 401(k) absolved corporations of guaranteeing retirement payouts. Assets in 401(k)s went from $0 in 1980 to $1.7 trillion in 2000. About half of that went to the mutual fund industry,

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[47] Lewis Braham. *The House That Bogle Built.* McGraw-Hill. 2011. Chapter 11, page 129

while much of the remainder went into employer's stock (which was quite unfortunate for Enron employees later in 2001).[48] Mutual funds would set up contracts with corporations, charge advisory fees, and gain their business by voting their shares in the company deferentially. Despite Bogle's low-cost revolution, mutual funds still had higher management fees than pension funds, layering on another expense to the American worker. Financial columnist Lewis Braham called it a "Herculean" marketing effort—by mutual funds, and the press—to convince the public that the shift into investing was fair and that anyone could get rich.[49] For example, *New York Times* columnist Thomas Friedman described this new era of markets as democratic.[50] Of course, the idea of shareholder democracy is false. One share, one vote means the system is a plutocracy. Your ten shares in Apple won't grant you influence over Tim Cook, and if your money is in a mutual fund, you don't have the ability to vote your shares anyways. The cruel irony is that there is no better alternative to the mutual or index fund. Bogle has minted more millionaires than Warren Buffet.[51] By Vanguard calculations, from its inception in 1974 to 2018, it has saved investors $217 billion, an amount that disqualified many from investing in the first place.[52] In a 2003 study, Burton Malkiel found that actively managed portfolios do not, on average, provide a higher risk-adjusted net return over passively managed portfolios on average.[53]

Incentives And Structures

Mutual funds weren't the reason that middle class Americans flocked to equities and started investing. Mutual funds merely provided an avenue to do so. They benefited greatly from rising stocks and capitalized on this by gathering assets. The fact of the matter is that people weren't entering the markets out of *desire*, but out of *necessity*.

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[48] Lewis Braham. *The House That Bogle Built.* McGraw-Hill. 2011. Chapter 8, page 79

[49] Lewis Braham. *The House That Bogle Built.* McGraw-Hill. 2011. Chapter 8, page 76

[50] Maggie Mahar. *Bull! A History of the Boom and Bust, 1982-2004*. Harper Collins. 2004. Chapter 2

[51] Marc Faber. Gloom Doom Boom Report. October 2016.

[52] John Bogle. *Stay The Course: The Story of Vanguard and the Index Revolution.* Wiley. 2019. Page 105

[53] Burton Malkiel. "Passive Investment Strategies and Efficient Markets." European Financial Management, Vol. 9, No. 1 (2003), pp. 1-10.

First, it must be established that mutual funds don't particularly care about overvaluations. Yes, the industry is filled with Bogle-heads and true believers in making investing affordable. But as a business, such funds they structurally work fine with overvaluations. The vast majority of mutual funds compensate their fund managers by assets-under-management, not fund performance. Mutual funds don't market their S&P 500 index, they market their low costs or their niche offerings, like BlackRock's iShares MSCI USA Min Vol Factor ETF. The business strategy is largely economies of scale. The managerial incentive is to build an empire. Any sustained overvaluations in the market increase manager compensation. Clearly, offering a 3x Leveraged Bullish S&P 500 ETF and a 3x Leveraged Bearish S&P 500 ETF means you don't care how appropriate valuations are.

Today, indexes make up about 80 percent of the mutual fund industry. Back in the time frame of 1995, they accounted for about 5 percent of the industry.[54] For an index fund, the business operation is simple: customer puts cash in, buy; customer wants to cash out, sell. There is never any consideration of the underlying fundamentals. This problem exacerbated the dot-com bubble, and we are experiencing it again today.[55]

One of the biggest beneficiaries of the bull market could arguably be the mutual funds, as they were the intermediaries between investors and their money. They would collect their management fees whether the stock market went up or down. It is just like an investment bank collecting fees on a merger. As long as the deal is done, do they really care if synergies materialize?

Another component that laid the foundation for the growth of the mutual fund was the 401(k). Its birth, on January 1, 1980, was a melancholy day for the American worker.[56] It had humble beginnings, invented by consultant Ted Benna who wanted to provide more retirement benefits to his clients' employees.[57] Soon after, the IRS proposed formal rules for 401(k)s to address inefficient tax rules in defined benefit plans. Managers liked the idea, since they likely stepped

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[54] John Bogle. *Stay The Course: The Story of Vanguard and the Index Revolution.* Wiley. 2019. Page 208

[55] Mike Green. "The Great Rotation: Stocks to Consumption." *Real* Vision. March 9, 2017. https://www.realvision.com/shows/the-interview/videos/the-great-rotation-stocks-to-consumption

[56] Lewis Braham. *The House That Bogle Built.* McGraw-Hill. 2011. Chapter 8, page 76

[57] Investopedia. "Why Were 401(k) Plans Created?" Updated January 18, 2021. Available at https://www.investopedia.com/ask/answers/100314/why-were-401k-plans-created.asp

into their role with large accumulated benefit obligations. Previous managers deferred promises of swaths of wealth to their successors. Not to mention, people were giving up smoking and turning to healthier foods.[58] The 401(k) gave the corporation a way minimize its future debts. Mutual funds capitalized on this and started making relationships with the companies, showing off their menus of funds. They were competing with pension fund managers.

The mostly bullish market of 1982 to 1999 laid the foundation—it was proof of concept—for the passive fund. The underlying mechanisms, from investment strategy to central bank policy, still remain today. It is a useful exercise to look at the influences and reactions to all that occurred.

Alan Greenspan's New Economy

The term central banker is a misnomer. The bureaucrats at the Fed don't engage in activities that are similar to a commercial bank or investment bank. They are central planners. The Federal Reserve enforces banking regulations and standardizes the currency, but its main job is to pick an interest rate to within two decimal places that is the "right one." It's also an agency shrouded in secrecy. The Fed only releases FMOC meeting minutes five years after their occurrence. What Greenspan said in those meetings in the 1990s counter what he said in public.[59] Texas Representative Ron Paul recalls that Greenspan would limit the number of Congress members he would take questions from in committee hearings. They'd have to wait months to get to him.[60] In the meetings Paul was able get with Greenspan, Paul would plead with him to stop slashing rates, in disbelief that Greenspan once shared his libertarian aspiration of returning to a gold standard.[61]

Come the election of Reagan in 1980, Americans were hopeful for economic recovery from the recession. They were desperate for work.[62] Under Fed Chairman Paul Volcker, interest rates as high as 16 percent, and unemployment also high. Unemployment finally reduced labor costs,

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[58] Maggie Mahar. *Bull! A History of the Boom and Bust, 1982-2004*. Harper Collins. 2004. Chapter 7, page 103

[59] William Fleckenstein. *Greenspan's Bubbles: The Age Of Ignorance At The Fed.* McGraw-Hill. 2008. Introduction

[60] Matt Taibbi. *Griftopia.* Random House. 2011. Chapter 2

[61] Ron Paul. *End the Fed.* Grand Central Publishing. 2009. Chapter 6

[62] Lewis Braham. *The House That Bogle Built.* McGraw-Hill. 2011. Chapter 10

and in August 1982, Volcker declared that he would cut rates. And as a result, the bull market began.[63]

"It is hard to imagine a more stupid or more dangerous way of making decisions than by putting those decisions in the hands of people who pay no price for being wrong."
—Thomas Sowell

Before the 1970s, the Fed had the view that they could manage demand by increasing taxes and increasing spending to keep unemployment low and keep the economy going. Its goal was to fight inflation. In the 1970s, many of the Neo-Keynesian relationships started to break down. The Phillips curve, which was supposed to govern the relationship between inflation and unemployment, was rendered useless as the economy achieved low inflation and unemployment at the same time. Greenspan then decided to not manage inflation, but rather manage asset price expectations. The prevailing view was that the Fed should raise interest rates ("take away the punch bowl") to suppress speculation. However, Greenspan ignored that wisdom.[64] Every time financial conditions tightened, he cut rates to facilitate borrowing and lending to keep the market up. This experiment started in 1989, two years into his role as Chairman.[65] It was clear Greenspan's main interest was protecting his Wall Street buddies: he also cut rates when financial conditions were objectively improving or clearly frothy.[66]

Wall Street loves rate cuts. Ignoring the long-term consequences, rate cuts appreciate the value of old bonds. And as new bond yields decline, equities look more attractive. With lower returns from saving cash, people are inclined to spend or invest in riskier assets. Meanwhile, investment banks rack up fees underwriting debt for companies that want to borrow on the cheap. As stated in the above section, mutual funds can be lumped in with Wall Street here.

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[63] Lewis Braham. *The House That Bogle Built.* McGraw-Hill. 2011. Chapter 10

[64] Mike Green on Valuetainment Economics podcast. "The Rise & Fall of Passive Investing." November 13, 2020. Accessible at https://www.youtube.com/watch?v=4JUEC93O8A4

[65] Mike Green on Valuetainment Economics podcast. "The Rise & Fall of Passive Investing." November 13, 2020. Accessible at https://www.youtube.com/watch?v=4JUEC93O8A4

[66] William Fleckenstein. *Greenspan's Bubbles: The Age Of Ignorance At The Fed.* McGraw-Hill. 2008. Chapter 3

"If Wall Street had a chisel, Alan Greenspan's smiling face would today be carved on Mount Rushmore."[67]

—Bill Fleckenstein, a hedge fund manager who ran a short-only fund that rode some dot-com stocks down to zero

Greenspan was spineless and unscrupulous. He bent to the commentators and politicians of both sides. He was a man whose economics rabbi, Arthur Burns, was a Republican career bureaucrat,[68] yet whose social circle included the zealous Ayn Rand, the novelist who started objectivism, an ideology that promotes ruthless self-interest to the point of denouncing charity.[69] His influencers might explain his actions. In the words of journalist Matt Taibbi, the American system "preaches sink-or-swim laissez-faire capitalism to most but acts as a highly interventionist, bureaucratic welfare state for a select few."[70]

In 1984, Greenspan wrote to a concerned Ed Gray, who was then the Federal Home Loan Bank board chairman, saying that the deregulation of the savings and loans (S&Ls) practices of thrift enterprises was working as planned. He mentioned 17 thrifts he thought were sound, and said that the management team of the Keating thrift enterprise Lincoln Savings and Loan, who he was currently doing a consulting job for, was a good example. Four years later, 15 of the 17 enterprises he mentioned were out of business. Lincoln Savings and Loan was seized by Federal regulators in 1989, costing taxpayers $2.5 billion.[71] Overall, the taxpayer would be footing $132.1 billion in bailouts for S&L companies.[72]

To address this, Greenspan began easing monetary conditions in 1989. But, other players associated with the S&L thrifts were suffering: the issuers of the junk bonds were starting to default. In particular, Citi bank's stock hit an 11-year low. The Fed axed the federal funds rate from 4.5 percent to 3.5 percent. Borrowing at short-term rates and loaning at long-term rates,

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[67] William Fleckenstein. *Greenspan's Bubbles: The Age Of Ignorance At The Fed.* McGraw-Hill. 2008. Introduction

[68] Matt Taibbi. *Griftopia.* Random House. 2011. Chapter 2, page 38

[69] Matt Taibbi. *Griftopia.* Random House. 2011. Chapter 2

[70] Matt Taibbi. *Griftopia.* Random House. 2011. Chapter 2, page 36

[71] William Fleckenstein. *Greenspan's Bubbles: The Age Of Ignorance At The Fed.* McGraw-Hill. 2008. Chapter 1

[72] Wikipedia. Accessible at https://en.wikipedia.org/wiki/Savings_and_loan_crisis

Citi was given considerable breathing room.[73] And just like that, the “Greenspan Put” was invented. In May 1989, the federal funds rate was 9 percent. By July 1991, it was 5.75 percent. He then cut the rate down to 3 percent by September 1992, and held the historically low rate for fifteen more months.[74]

It was clear that the Fed’s express purpose was to be a backstop for Wall Street. Many later examples, like the bail out of Long Term Capital Management, a hedge fund, support this view. As a result, all of Wall Street, and those with exposure, had immense, unbridled market confidence. Every time a crisis occurred, even idiosyncratically, such as in the case of LTCM, the Fed would be there to inject liquidity.

To anyone preserving their money, the effect of lower interest rates mean savings in a banks can’t provide enough yield. The short-term interest rate of 4 percent percent in 1991 was the lowest it had been in 27 years.[75] Equities, therefore, were the only viable option. The key is not that the people were capitalizing on low interest rates, they were putting money into equities because they *had to*.

The share of households with stock (indirectly or directly) went from 19 percent in 1983 to 49 percent in 1999.[76] As interest rates moved to lows unimaginable, people, comprised mainly of Baby Boomers, flocked to equities, mostly through mutual funds. Previously used to 15 percent yields, the regular person was yearning for a mere 8 percent. In the summer of 1992, 1 in 10 mutual fund shareholders were new customers. 75 percent of the novices went into equity funds.[77] Many likely didn’t even know that their principal was at risk. The makeup of the stock market had changed. Those with incomes lower than $250,000 increased their share of ownership of the market from 24 percent in 1983 to 43 percent by 1992.[78]

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[73] Maggie Mahar. *Bull! A History of the Boom and Bust, 1982-2004*. Harper Collins. 2004. Chapter 6, page 95

[74] Matt Taibbi. *Griftopia.* Random House. 2011. Chapter 2

[75] Maggie Mahar. *Bull! A History of the Boom and Bust, 1982-2004*. Harper Collins. 2004. Chapter 6, p 86

[76] Maggie Mahar. *Bull! A History of the Boom and Bust, 1982-2004*. Harper Collins. 2004. Chapter 2, p 18

[77] Maggie Mahar. *Bull! A History of the Boom and Bust, 1982-2004*. Harper Collins. 2004. Chapter 7, page 114

[78] Maggie Mahar. *Bull! A History of the Boom and Bust, 1982-2004*. Harper Collins. 2004. Chapter 7, page 115

While Greenspan forced unwilling and naive investors into the market, he also channelled his Randianism, telling those who knew how to play the game to play. This is the era when Oliver Stone's Gordon Gekko, based on Ivan Boesky, immortalized the phrase "greed is good."

There's no other good explanation other than interest rates for the increase in stock ownership. There was no bottoms-up cultural revolution that made everyday people want to invest in equities. The academic developments in finance that may have made investing in equities a pragmatic choice such as modern portfolio theory, weren't strong enough either. Those developments mostly occurred back in the 1960s. In fact, before the nineties, main street America wasn't too fond of Wall Street. Insider trading scandals in Lower Manhattan and job destroying corporate takeovers gave Wall Street a bad name.[79] Some financiers, like Michael Milken, were sent to jail.[80]

Come the recession of 1991, the middle class' psychology changed. Due to the decline in the housing market (some areas' values decreased by a third[81]) and stagnant wages,[82] people were looking for a way to score. In 1995, more citizens visited casinos than theme parks.[83] Reports from financial institutions permeated the psyche. A Merrill Lynch report from 1994 read, assuming "even moderate cuts in future Social Security benefits…the baby boomers may be saving less than one-tenth of what is required for a secure retirement."[84] (This was despite a regressive Social Security tax hike that Greenspan proposed to Reagan.[85]) People didn't have more money to save. So they bought into the market. The only caveat was that those few who

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[79] Maggie Mahar. *Bull! A History of the Boom and Bust, 1982-2004*. Harper Collins. 2004. Chapter 7, p116

[80] Since then, Milken has repaired his reputation, though not as much through his own charity work than what lays in his career's wake. Through the 1990s, the use of junk bonds sky rocketed despite his sentencing. His junk bond experiment has expanded access to credit to countless people. Jeff Gramm. *Dear Chairman. Harper Business.* 2016. Chapter 5, page 90.

[81] Maggie Mahar. *Bull! A History of the Boom and Bust, 1982-2004*. Harper Collins. 2004. Chapter 7, page 116

[82] Gerald Davis. *The Vanishing Corporation*. Berrett-Koehler. 2016.

[83] Maggie Mahar. *Bull! A History of the Boom and Bust, 1982-2004*. Harper Collins. 2004. Chapter 12, page 211

[84] Maggie Mahar. *Bull! A History of the Boom and Bust, 1982-2004*. Harper Collins. 2004. Chapter 7, page 117

[85] Matt Taibbi. *Griftopia.* Random House. 2011. Chapter 2

did have excess capital, turned to consumption instead of investing as the greed era began.[86] By 1992, Americans with incomes under $75,000 owned 42 percent of all publicly traded stocks.[87]

Financial journalist Maggie Mahar points out that this monumental effort by the press and the financial community—mutual funds included—to get Americans into stock and bond funds may have carried out on false premises. A 37 year-old putting just $60,000 into a risk-free-30-year Treasury bond in 1992 would grow to $500,000 by the time they were 67.[88] Studies such as Bessembinder (2018) show that only four percent of stocks since 1926 have outperformed T-bills.[89] Investors, however, were being told that equity had a premium. The equity premium in the Capital Asset Pricing Model outright assumes outright that any equity has a higher expected return over a risk-free asset.

The average 401(k) or IRA investor didn't care about P/E ratios. Mutual funds, like Vanguard led by St. Jack, bridged the knowledge gap. Soon, America became obsessed with the market. Mutual funds would buy the hottest stocks, and people would buy the hottest funds.

Soon, Greenspan actually got the message. As early as 1994, Greenspan thought there was a bubble. In February of 1994, he raised rates by a modest one percent, the first time he had raised rates in five years. The transcript of the secret April 18, 1994 FMOC meeting indicated that Greenspan noted that the rate increases "defused a significant part of the bubble which had previously built up."[90] In another FMOC meeting the following month, he slightly shifted his view, saying "I think there's still a lot of bubble around." In May, he hiked rates by one half a percentage point. He continued modestly hiking the rates until February 1995, which then

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[86] Maggie Mahar. *Bull! A History of the Boom and Bust, 1982-2004*. Harper Collins. 2004. Chapter 7, page 118

[87] Maggie Mahar. *Bull! A History of the Boom and Bust, 1982-2004*. Harper Collins. 2004. Chapter 7, 105

[88] Maggie Mahar. *Bull! A History of the Boom and Bust, 1982-2004*. Harper Collins. 2004. Chapter 7, page 118

[89] Hendrik Bessembinder. Do Stocks Outperform Treasury Bills? (May 28, 2018). Journal of Financial Economics (JFE), Forthcoming, Available at SSRN: https://ssrn.com/abstract=2900447

[90] William Fleckenstein. *Greenspan's Bubbles: The Age Of Ignorance At The Fed.* McGraw-Hill. 2008. Chapter 1

stood at 6 percent.[91] Then, unprovoked, in July of 1995, he started cutting rates again, even though the market was 20 percent higher than when he identified the bubble at the start of the prior year. By the end of 1995, once the market was 35 percent higher than when he uttered the word, he made no mention of a bubble in FMOC meetings or in public. In 1995, the real bull market took the reins.

Greenspan invoked the efficient market hypothesis, and effectively worked backwards. Under the EMH, if stocks are high, there must be real economic growth, he argued. He came up with the idea of a "New Economy," theorizing that high-flying technology stocks were proof that monumental changes in technology and productivity were occurring, and also that those effects led to an overstatement of inflation. Greenspan argued that in a world increasingly dependent on software, "intellectual services," like certain R&D expenditures should be capitalized.

In line with Greenspan, the fiction writers at the Bureau of Labor Statistics massaged the CPI calculations to make the inflation rate appear smaller. Some of the changes were humorous, such as "hedonic adjustments," whereby increases in the price of products had to be offset by their increase in quality. Hedonic adjustments meant that features, like airbags on a car, would reduce the cost of the car in the CPI calculations, even though air bags cost consumers more. It also allowed for considerable discretion in valuing quality changes. The price of a car in the United States increased 308 percent from 1979 to 2004, yet the BLS calculated that it had only increased by 71 percent. Congress believed these numbers and offloaded reserves for Social Security benefits. Social Security payments are also not adjusted for inflation. Anyone receiving Social Security benefits or holding an inflation-indexed bond (e.g. TIPS) was impacted directly.

Mutual funds also rode the imaginary wave. They had bought the "New Economy" illusion, as many had. A 1996 Lou Harris poll showed that 56 percent of mutual fund advisors believed the stock market would keep rising for the next 10 years. Never mind the remarkable 14 percent annual returns of the preceding decade. 29 percent of the respondents actually believed the market would return more than 14 percent.[92]

Prodded by mutual fund pitchmen, who purported that American exceptionalism would practically guarantee 11 percent annual returns, Americans piled on into mutual funds, mostly

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[91] Matt Taibbi. *Griftopia.* Random House. 2011. Chapter 2

[92] Maggie Mahar. *Bull! A History of the Boom and Bust, 1982-2004*. Harper Collins. 2004. Chapter 12, page 211

through their 401(k)s.[93] By 1998, three quarters of corporate retirement plans were in 401(k)s.[94] People were picking the funds they invested in. Soon, the American people espoused the Greenspan ideology themselves.[95] With rates at historic lows, they *needed* to believe Greenspan. Artifacts like Bogle's *Common Sense on Mutual Funds* had people thinking that they had the wherewithal become great capitalists. CNBC started reporting "real time" updates, driving speculation.[96]

At this point, it is crucial to come back to the mutual and index fund strategy. Checks were flying into mutual fund offices. Were they to tell their customers that stocks were overvalued? No, their algorithm is cash in, buy more, regardless of price. This is easy to see with index funds. For actively managed mutual funds, cash was flying in so fast that managers just put their money into blue chips or otherwise large, highly liquid, or popular stocks[97] in what became known as the second "Nifty Fifty."[98] This doesn't look like what a fiduciary is supposed to do. That mutual funds are asset gathering machines became apparent. Again, mutual fund managers are compensated by assets under management, not performance. The business model of a mutual fund is to spread fees across more assets. Far from providing safe funds, mutual funds started marketing highly specialized funds, like the Vanguard Ohio Long-Term Tax Exempt Fund. Yes, even the conservative Vanguard couldn't resist. Since the beginning of the bull market, Vanguard added 82 new funds, totaling 103 in March 2000.[99] By 1996, there were more than 6,000 mutual funds an investor could put their money into.[100] As John Keynes,

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[93] Maggie Mahar. *Bull! A History of the Boom and Bust, 1982-2004*. Harper Collins. 2004. Chapter 2, page 22

[94] Maggie Mahar. *Bull! A History of the Boom and Bust, 1982-2004*. Harper Collins. 2004. Chapter 2, page 23

[95] William Fleckenstein. *Greenspan's Bubbles: The Age Of Ignorance At The Fed.* McGraw-Hill. 2008. Chapter 2

[96] Maggie Mahar. *Bull! A History of the Boom and Bust, 1982-2004*. Harper Collins. 2004. Chapter 9, page 161

[97] Maggie Mahar. *Bull! A History of the Boom and Bust, 1982-2004*. Harper Collins. 2004. Chapter 13, page 224

[98] Maggie Mahar. *Bull! A History of the Boom and Bust, 1982-2004*. Harper Collins. 2004. Chapter 3, page 41

[99] Lewis Braham. *The House That Bogle Built.* McGraw-Hill. 2011. Chapter 10, page 110

[100] Maggie Mahar. *Bull! A History of the Boom and Bust, 1982-2004*. Harper Collins. 2004. Chapter 13, page 220

whose economic theory is the foundation of central banking, said, "never be wrong on your own."[101]

In December 1996, Greenspan gave his famous "irrational exuberance" speech, his first real public hint that there was bubble. The next day, the NYSE plunged 140 points in the first hour of trading and the *New York Times* ran a front page story, with the headline "Stocks Worldwide Dive, as Greenspan Questions Euphoria."[102] He learned his lesson to not doubt the market. He doubled down on his New Economy theory and touted rises in productivity. The S&P 500 gained about 31 percent in 1997.[103] He made three rate cuts in 1998. One of them was four days after a company called theglobe.com went public at $9 and closed at $63.50. Its market cap was $5 billion and its total earnings for the first three quarters of 1998 were less than $2.7 million. From February 1996 to October 1999, Greenspan grew the money supply by $1.6 trillion, which is roughly 20 percent of GDP.[104] Many took Greenspan's speeches to heart, including respected economists and journalists like Kevin Hassett and James Glassman, who both authored the sensational *Dow 36,000* which argued that stocks would quadruple over the next five years.[105] Anyone who didn't believe Greenspan was also essentially saying every investor in the market was wrong. Although Fed staffer Mike Prell brought up the issue, no one at the Fed ever asked him any questions about it.[106] Greenspan's predecessor also sounded the alarm in May 1999.[107] Over the course of 1998 to 2000, he pumped liquidity into the market at every financial tightening: bailing out hedge fund Long Term Capital Management, cutting

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[101] Jeremy Grantham. "Grantham: How to survive betting against the bull." *Investment News.* April 24, 2012. Accessible at https://www.investmentnews.com/grantham-how-to-survive-betting-against-the-bull-43807

[102] Matt Taibbi. *Griftopia.* Random House. 2011. Chapter 2

[103] William Fleckenstein. *Greenspan's Bubbles: The Age Of Ignorance At The Fed.* McGraw-Hill. 2008. Chapter 2

[104] Matt Taibbi. *Griftopia.* Random House. 2011. Chapter 2

[105] Aaron Brown. "'Dow 36,000' Looks Less Daft But Still Misses the Point." *Bloomberg.* January 21, 2020. Accessible at https://www.bloomberg.com/opinion/articles/2020-01-21/-dow-36-000-looks-less-daft-but-still-misses-the-point

[106] William Fleckenstein. *Greenspan's Bubbles: The Age Of Ignorance At The Fed.* McGraw-Hill. 2008. Chapter 4

[107] William Fleckenstein. *Greenspan's Bubbles: The Age Of Ignorance At The Fed.* McGraw-Hill. 2008. Chapter 3

rates in response to the ruble collapse, and printing $147 billion, in response to the Y2K scare.[108]

A 1999 *Time* magazine adorned its cover with Alan Greenspan, flanked by Clinton officials Bob Rubin and Larry Summers, with the headline, "The Committee to Save the World: The inside story of how the Three Marketeers have prevented a global economic meltdown—so far." Despite acknowledging the bubble as early as the start of 1994, Greenspan publicly maintained that knowing one is in a bubble is an impossible task. For example, in an August 2002 speech, Greenspan said, "it was very difficult to definitively identify a bubble until after the fact—that is, when it's bursting confirmed its existence."[109]

"Greenspan apparently had little interest in nipping problems in the bud, preferring instead to clean up whatever mess he left behind with the same actions that started the problem—namely, easy money."[110]

—Bill Fleckenstein

The mutual fund industry grew astronomically from 655 funds at the start of 1982, to 8,155 by March 2000.[111] It was also true that while the bubble lasted, putting money into a mutual fund was essentially the best way to invest one's money. This is a scary dynamic that persists today. Considerations about how index funds perpetuate market distortions, and their consequences, are examined below.

"You will never see another financial crisis in your lifetime."

—Janet Yellen, spring 2018

"I do worry that we could have another financial crisis."

—Janet Yellen, fall 2018[112]

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[108] Matt Taibbi. *Griftopia.* Random House. 2011. Chapter 2

[109] William Fleckenstein. *Greenspan's Bubbles: The Age Of Ignorance At The Fed.* McGraw-Hill. 2008. Chapter 1

[110] William Fleckenstein. *Greenspan's Bubbles: The Age Of Ignorance At The Fed.* McGraw-Hill. 2008. Chapter 1

[111] Lewis Braham. *The House That Bogle Built.* McGraw-Hill. 2011. Chapter 10, page 110

[112] Matthew Piepenburg. "The Death of Logic." Gold Switzerland. February 22, 2021. Accessible at https://goldswitzerland.com/the-death-of-logic/

Boom-busts are not inevitable. In the periods before the formation of the Fed and central banks, *systemic* speculative booms and crashes were exceedingly rare.[113] Do you really think Jeff Bezos would be worth $185 billion[114] (post-divorce) if financial crises had not dampened competition? Boom-busts cause a concentration of wealth. It may also be said that speculative periods arguably accelerate innovation in technology. But is it such a good thing that Bezos wants to move manufacturing to the moon[115] while here, in the United States, we still suffer with economic inequality, violence, and despair?

Active Is Dying

"We've presumed that everybody else is [performing the due diligence] for us, therefore it's a fool's game to do it ourselves."[116]

—Mike Green, macro fund manager

While the dot-com bubble grew, the media kept prodding the public on. The cover of *Forbes* in March 1996 read "In Greenspan We Trust."[117] Sell side analysts at big banks became media and radio taking heads. Mary Meeker of Morgan Stanley was heralded as the "Queen of the Net." Henry Blodget of Merrill Lynch was expecting a $12 million salary. It was weird that these analysts were getting so much attention. Their incentives were not to opine honestly on valuations. Instead, they were beholden to their institutional customers, who wanted the consistent earnings growth. They also served as the public relations arm of the bank. When they gave a company a strong buy rating, that company was more likely to use them for their investment banking needs. The cat was out of the bag too. *The New York Times* cited Merrill

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113 Mark Thornton. *The Skyscraper Curse*. Mises Institute. 2018.

114 Bloomberg Billionaires Index. Accessible at https://www.bloomberg.com/billionaires/?sref=RYeRFDzU, accessed April 3, 2021

115 G. Clay Whittaker. "Jeff Bezos Thinks We Should Build Factories In Space." *Popular Science.* June 2, 2016. Accessible at https://www.popsci.com/bezos-industrial-work-belongs-in-space/

116 Mike Green on OddLots podcast. "Why Passive Investing Might Be Distorting The Market." *Bloomberg Markets.* February 11, 2020. Accessible at https://www.youtube.com/watch?v=_kVpFDxr6xM

117 Maggie Mahar. *Bull! A History of the Boom and Bust, 1982-2004*. Harper Collins. 2004. Chapter 14, page 244

Lynch's lack of superstar tech analysts that could attract Silicon Valley customers as the reason its stock lagged in 1999. A fund manager once called Blodget and told him he was "pathetic" and that he was "disgusted" by his behavior. The investor was referring to Blodget's lack of "enthusiasm," when he talked about one of the stocks the manager owned. Blodget had even received physical threats that were left on his voicemail. It's not surprising that even though Blodget saw the bubble forming, he kept whistling through the graveyard.[118]

Greenspan invaded the psyche of Upper East Side cocktail party goers and middle class capitalists. Everyone, including the very rich and smart, were mesmerized. Jeremy Grantham recalled the year of 1999, when his investors were addicted to the market momentum.

> It was psychologically extremely painful because the clients were uniquely vindictive, neither before nor since have they taken that attitude. There was something about that tech bubble of 1999 that made the clients talk as if we had personally insulted them, [and] we had deliberately attempted to lose the money. In other setbacks, that has not been the case…The reason they were upset is they completely bought into the new golden era that Alan Greenspan and others were talking about, that the internet was going to drive away the dark clouds of ignorance and productivity would go through the roof and stay there forever.[119]

Many financiers rational enough to see through the narrative were fired, quit or closed down shop. Legendary hedge fund manager Julian Robertson closed down, despite predicting the tech bubble since investors didn't believe him. Jeff Vinik, one of the most famous mutual fund managers, who was managing Fidelity's active Magellan Fund, resigned in 1996 after he underweighted tech stocks[120] and rebalanced into bonds right before an interest rate hike.[121] Fidelity's George Vanderheiden also resigned in late 1999, despite predicting the crash and the

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[118] Maggie Mahar. *Bull! A History of the Boom and Bust, 1982-2004*. Harper Collins. 2004. Prologue, page xviii

[119] Jeremy Grantham. "Jeremy Grantham's Big Calls: Emerging Markets, Venture Capital, and the Green Revolution." *Real* Vision. November 23, 2020. Accessible at https://www.realvision.com/shows/mike-green-in-conversation/videos/jeremy-granthams-big-calls-emerging-markets-venture-capital-and-the-green-revolution

[120] Maggie Mahar. *Bull! A History of the Boom and Bust, 1982-2004*. Harper Collins. 2004.

[121] Arthur Louis. "Fidelity Magellan Manager Quits / Big mutual fund stalled in '96." *SFGate*. May 24, 1996. https://www.sfgate.com/news/article/Fidelity-Magellan-Manager-Quits-Big-mutual-fund-2980082.php

subsequent resurgence in value opportunities.[122] These managers won the battle but lost the war. Being too early meant being wrong.[123] To me, that sounds antithetical to the role of capital markets. This myopic and time-sensitive game has nothing to do with allocating appropriate capital to fund business operations.

"The key to Tiger's success over the years has been a steady commitment to buying the best stocks and shorting the worst. In a rational environment, this strategy functions well. But in an irrational market, where earnings and price considerations take a back seat to mouse clicks and momentum, such logic, as we have learned, does not count for much."[124]

—Julian Robertson

Julian Robertson is one of the most legendary hedge fund managers of all time. He started his fund, Tiger, in the 1980s, and achieved an annual compound rate of return of 32 percent through the 1990s.[125] Robertson became fearful of the tech bubble. He underweighted his holdings in the sector to the cries of his investors. The pressure became too great. Robertson started Tiger managing $8.8 billion, and grew it up to $22 billion in 1998. His investors started liquidating their funds to get in on the dot-com action. Tiger closed down days after the crash with only $6.6 billion still under management.

Robertson noted that it was basically like a Ponzi scheme. The only way for active managers to survive the mass hysteria brought about by bubbles was to ride them, thus perpetuating the inflated values, and then timing the crash perfectly. From a pure value investing perspective, Julian Robertson was one of the best who ever lived. As another hedge manager put it at the

[122] Gavin Baker. "Lessons from George Vanderheiden, one of the greatest investors I've ever known." *Medium*. December 26, 2020. Accessible at https://gavin-baker.medium.com/lessons-from-george-vanderheiden-one-of-the-greatest-investors-ive-ever-known-4bfa74c4b6d4

[123] Others who resigned include Oakmont's Robert Sanborn and Merrill Lynch's Chuck Clough. Lewis Braham. *The House That Bogle Built.* McGraw-Hill. 2011. Chapter 18

[124] Sharon Walsh and Frank Swoboda. "Robertson To Close Tiger Funds." March 31, 2000. Accessible at https://www.washingtonpost.com/wp-srv/WPcap/2000-03/31/077r-033100-idx.html

[125] Richard Loth. "The Greatest Investors: Julian Robertson." *Investopedia.* 2015. Accessible at https://web.archive.org/web/20151127062306/http://www.investopedia.com/university/greatest/julianrobertson.asp

time, “If he and Warren Buffett are the rational investors of our age, then this is a sign that the rational investor has given up. This is symptomatic of what investors face today.”[126]

I have a close personal friend who currently works in Robertson’s family office. He tells me when he doesn’t have any stocks in mind for his personal portfolio, he just puts his money in the SPY (StateStreet’s S&P 500 index) or the Russel 2000 and watches it grow.

From another angle, the relative costs of active funds have gone up because of low interest rates and the advancement of technology. In 1980, when many of the well known hedge fund managers started their funds, interest rates were at a high. When cash yields something like 8 percent, there is a lot less incentive to seek high-risk, high-reward investments to make 12 percent returns, or whatever the benchmark is. Today, at 0 percent interest rates, this is not the case. Value investors are on the decline. Passive and quantitative are in style. With passive and quantitative, entrepreneurs can easily “backtest” their algorithms or indices, and get them easily approved by the SEC. To be an active manager today, you need to hire a trader, lawyer, and portfolio manager. You go through a lengthy approval process, and if you’re just starting out, you need to market yourself without a “back-tested track record.”[127] These costs are too high to bear when interest rates are low.

Culturally, active is also on the decline. Descriptively, there has been less public interest in the space, and the duty of active to provide liquidity to the market has been ignored. Baby Boomers were the 401(k) generation. They loved making money. Their time gave celebrity status to investors like Warren Buffet, Charlie Munger, and Julian Robertson. Those men are now dinosaurs. Today, we don’t have any legendary investors. The dinosaurs themselves tell us to put our money in indexes.[128] To be fair, many who would’ve gone the hedge fund route have gotten into private equity, which gets less attention. In today’s climate, being a billionaire just attracts negative publicity. However, the corollary is scary. Despite all the talk about Robinhood

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[126] Sharon Walsh and Frank Swoboda. “Robertson To Close Tiger Funds.” March 31, 2000. Accessible at https://www.washingtonpost.com/wp-srv/WPcap/2000-03/31/077r-033100-idx.html

[127] Mike Green. “The Great Rotation: Stocks to Consumption.” *Real* Vision. March 9, 2017. https://www.realvision.com/shows/the-interview/videos/the-great-rotation-stocks-to-consumption

[128] Charles Ellis. *The Index Revolution: Why Investors Should Join It Now.* Wiley. 2016.

investors and the Wall Street Bets community, 90 percent of millennial inflows go to passive.[129] Only 2 percent of Robinhood option trades are in the green.[130] Passive will keep growing.

"Most institutional and individual investors will find the best way to own common stock is through an index fund that charges minimal fees. Those following this path are sure to beat the net results (after fees and expenses) delivered by the great majority of investment professionals."[131]
—Warren Buffett

Indexing Is A Momentum Strategy

If the only way to purchase public equities was via a public market-wide index fund, the correlation of stock movements would be 1. The pro-indexing argument says that fundamental analysis is futile because someone else is doing the job for you. Burton Malkiel admitted that passive investors are free-riders.[132] Could it be possible that a critical mass of passive renders the public market dysfunctional?

It would be wrong to assume that as indexing rises, a linear trend in capital allocation based off of fundamentals deteriorates. Active managers do what they can, including producing a documentary[133], to inform investors so that stocks are fairly valued. Caution, however, should be exercised.

"The ideas of economists and political philosophers, both when they are right and when they are wrong, are more powerful than is commonly understood. Indeed the world is ruled by little else.

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[129] Mike Green on OddLots podcast. "Why Passive Investing Might Be Distorting The Market." *Bloomberg Markets.* February 11, 2020. Accessible at https://www.youtube.com/watch?v=_kVpFDxr6xM

[130] Jim Chanos. "The Golden Age of Corporate Fraud." *Real Vision*. December 17, 2020. Accessible at https://www.youtube.com/watch?v=u1LsVZN6wzg

[131] Charles Ellis. *The Index Revolution: Why Investors Should Join It Now.* Wiley. 2016. *Page 172*

[132] Burton Malkiel in Foreword of John Bogle. *Stay The Course: The Story of Vanguard and the Index Revolution.* Wiley. 2019.

[133] Lawrence Delevingne. "Bill Ackman's new Herbalife play: A documentary film." *CNBC.* May 2, 2014. Accessible at https://www.cnbc.com/2014/05/02/bill-ackmans-new-herbalife-play-a-documentary-film.html

Practical men, who believe themselves to be quite exempt from any intellectual influence, are usually the slaves of some defunct economist."

—John Maynard Keynes[134]

If you asked a student studying finance what the price of a stock is, they would probably tell you that it is the discounted future cash flows of the company in reference. This is not true. The price of a stock is determined by supply and demand.

Everyone knows the adage “buy low, sell high.” Yet, everyone forgets this rule when it comes to indexing. Before 2004, index funds were market cap weighted (they are now float weighted).[135] For an index like the Standard & Poor’s 500, under a market cap weighted index, funds would construct this index by holding stocks of each of the largest 500 companies that are listed an a US-based stock exchange in proportion to how much each company makes up the aggregate market cap of all those companies. With every rebalancing, which occurs every quarter or so, index funds buy high and sell low. If Apple made up 5 percent of the S&P 500 in quarter one, but speculators drive up the price of Apple, so that at the rebalancing point it makes up 6 percent of the S&P 500, the index will sell off their holdings of companies that now account for less of the index, and buy more Apple. In a bond index the fund overweights companies that have more debt. Ultimately, indexing is a simple algorithm that buys when flows come in, and sells when customers redeem their money.

How did we get here? In the 1960s, Harry Markowitz, who later won a Nobel Memorial Prize for this contribution, came up with the notion, trivial today, that investors should consider their aggregate (portfolio) risk, instead of trying to manage the individual risks of each of the assets they were invested in. In academic terms, a diverse enough portfolio meant investors could pay less attention to idiosyncratic risks, like a bad CEO or industry wide shock, and would now only be subject to systemic risks, like a global pandemic. This led to the developments of modern portfolio theory and showed the benefits of diversification.[136] While modern portfolio theory has greatly benefited all investors, especially those in mutual funds, it sowed the seeds for the erosion of proper due diligence. If one is not paying attention to each individual asset

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[134] John Maynard Keynes. *The General Theory of Employment, Interest, and Money*. Palgrave Macmillan. 1936.

[135] Mike Green on Valuetainment Economics podcast. “The Rise & Fall of Passive Investing.” November 13, 2020. Accessible at https://www.youtube.com/watch?v=4JUEC93O8A4

[136] Conversation with Professor Jason Hall of the Stephen M. Ross School of Business at the University of Michigan

they are invested in—since more research will not be compensated with adequate risk reductions—assets become more prone to incorrect pricing.

At the same time, the efficient market hypothesis came out of the Chicago Booth School of Business. Academics define three levels of efficient markets, but the essential proposition is that a stock's price fully reflects all public information about the stock. In other words, the market is good enough at pricing stocks, and is frictionless enough, so that the best estimate of a company's intrinsic worth is its market capitalization. While it bestowed rationality on the market which was reminiscent of Graham's "intrinsic value," in some ways, it was antithetical to Graham's value investing strategy about doing one's own research.

There were many problems with the efficient market hypothesis. Economists, back then and today still, have become too romantic about empiricism.[137] This logic-less way of studying phenomena inevitably has critical biases. In making the EMH, the academics focused on discrete events that were easy to study and were more likely to be more efficient: earnings announcements, dilutive stock offerings, stock splits, and mergers.[138] It was also a preposterous time to suggest markets had achieved near perfect efficiency. The 1960's was the era of the "go-go" market, the third major merger wave in the United States, where corporate raiders scoured the market for bargains and companies that had valuations below their net asset values.

The danger of the efficient market hypothesis was that it gave credence to the index momentum strategy.[139] If Apple went from 5 percent of the S&P 500 to 6 percent, then that was because the market had, as accurately as it could, priced in all public information about Apple. It thus made people think that the new stock price of Apple was the most reasonable estimation of its worth.

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[137] Alexander Salter. "How Economics Lost Itself in Data." *The Wall Street Journal*. January 27, 2021. Accessible at https://www.wsj.com/articles/how-economics-lost-itself-in-data-11611775849

[138] Jeff Gramm. *Dear Chairman. Harper Business. 2016.* Chapter 3, page 65

[139] Mike Green on Hidden Forces podcast. "The Rise of Passive Investing and the Fall of the Free Market." December 15, 2019. Accessible at https://podcasts.apple.com/us/podcast/mike-green-greatest-story-ever-sold-rise-passive-investing/id1205359334?i=1000459730711

Some funds offered were more explicitly momentum based. For these funds, allocation was based on the trailing 12 or 24-months earnings growth or price movement, a backward looking formal momentum strategy.[140]

Why haven't we stopped using momentum strategies? They work, and work well. They are self-reinforcing until the music stops. Today, BlackRock's momentum fund's 5-year annual return has been 20.06 percent versus its S&P 500 which was 16.78 percent.[141] Richard Driehaus, who ran a discretionary momentum fund named Driehaus Capital Management, had annual average returns (net of fees) of an incredible 40.9 percent for the years 1987 to 1993.[142]

Mike Green, a macro analyst who has worked for the likes of George Soros and Peter Thiel who specializes in market structures, attributes some of the overvaluations during the dot-com bubble to index funds.[143] Before the dot com crash, Cisco had a higher index weighting than Exxon and GE, even though Cisco produced less earnings and cash flow.[144] Theres were issues from the combination of market cap indexes, tech hype, and the general push into equities. One of the differences between a tech company and one from another industry is the high level of insider ownership. With higher levels of insider ownership, there are fewer outstanding shares available. Therefore, when index funds went to build and rebalance their indexes, they were putting much more upward pressure on the stock prices of these high market cap, low float companies that were prevalent in the tech industry. In 2004, index funds quietly changed to a float-based construction method to mitigate some of this liquidity issue.[145]

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[140] James Chen. "Momentum Fund." Investopedia. Updated November 18, 2020. Accessible at https://www.investopedia.com/terms/m/momentumfund.asp

[141] BlackRock Investment Funds. Accessible at https://www.blackrock.com/us/individual/products/investment-funds#!type=all&style=All&fsac=43535%7C43580%7C43581%7C43584%7C43585%7C43615&search=momentum&view=perfNav, accessed March 27, 2021

[142] Alyssa Lappen. "Married to the market." *Institutional Investor.* November 1993.

[143] Mike Green. "The Great Rotation: Stocks to Consumption." *Real* Vision. March 9, 2017. https://www.realvision.com/shows/the-interview/videos/the-great-rotation-stocks-to-consumption

[144] Lewis Braham. *The House That Bogle Built.* McGraw-Hill. 2011. Chapter 18

[145] Mike Green. "The Great Rotation: Stocks to Consumption." *Real* Vision. March 9, 2017. https://www.realvision.com/shows/the-interview/videos/the-great-rotation-stocks-to-consumption

What is the big deal about momentum strategies? If they work well and are accessible to everyone, what is wrong? While today's high unemployment remains high and the Dow Jones grows, one might conclude that the market is disconnected from reality.[146] But financial markets effect the real economy. A company with sustained overvaluations leads to the misallocation of capital. In 1900, Cisco was trading at 20 times earnings. With every incremental piece of news, Cisco's stock went up. The indices rebalanced to weight Cisco more heavily, and momentum funds bought more too. A graph of Cisco's stock price then was basically a vertical line. Cisco made it appear like they were paying employees better by using their inflated stock price to fund salaries, reducing reported expenses on their income statement, which made the company look even more profitable.[147] With this market power, Cisco started using its stock to fund acquisitions. These institutional investors were putting hard pressure on Cisco to boost its earnings, so they applauded these acquisitions which were accretive on paper. Cisco lost 85 percent of its market value during the burst. It is important to remember that companies can fund acquisitions via stock instead of boot. Market valuations facilitate proper allocations of capital.

An overpriced stock also gives the wrong signals to other stakeholders. In 2006, Eddie Lampert, the chairman of Sears Holdings put it nicely. According to hedge fund manager and author Jeff Gramm, Lampert was asking an investing conference how it was possible to properly run a company when it is overpriced. How can managers meet unrealistic investor expectations? (Take more risk.) But then, how does one deal with employee morale, when hard working employees see their employer's stock inevitably go down? Lampert knew what he was talking about: the day before the conference, Sears was trading at $175. It was now at $35.[148]

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[146] Lucy Bayly. "Real unemployment rate closer to 10 percent, says Fed Chair Jerome Powell." *NBC.* February 10, 2021. Accessible at https://www.nbcnews.com/business/economy/real-unemployment-rate-closer-10-percent-says-fed-chair-jerome-n1257331

[147] Maggie Mahar. *Bull! A History of the Boom and Bust, 1982-2004*. Harper Collins. 2004. Chapter 12, page 207

[148] Jeff Gramm. *Dear Chairman. Harper Business. 2016.* Chapter 3, page 66

"The return pattern of the newly-included S&P 500 member changes magically and quickly. It begins to move more closely with its 499 new neighbors and less closely with the rest of the market. It is as if it has joined a new school of fish."[149]

—Jefferey Wurgler, NYU Professor of Finance

The full potential of index funds was realized in 1994 when the chairman of the SEC, Arthur Levitt, a Wall Street veteran, oversaw a study on the use of futures by mutual funds. He was a fighter for the individual investor. He had the support of Warren Buffet in 1991, when he campaigned against the Financial Accounting Standards Board for more transparent executive compensation accounting, since he recognized that the prevalent insider stock options being issued diluted the value of existing shares.[150] Using "cash-free" options as compensation but reporting them as an expense was one of many corporate gimmicks used to meet the demands of institutional investors' who wanted consistent earnings growth. Familiar with derivatives, in 1994, Levitt commissioned a large study to evaluate the risks of allowing mutual funds to use derivatives. At this time, indexes only accounted for 2 percent of the investment universe since they had not fully proved themselves yet.[151] More importantly, they still hadn't calibrated their distribution and trading activities to retain the integrity of the indexes. Under the Investment Company Act of 1940, mutual funds were restricted from using leverage.[152] Since derivatives were an obligation to a stakeholder other than fund shareholders, the SEC interpreted this prohibition to generally include futures. Therefore, the use of futures was limited. At the time, only 2.13 percent of total net assets in mutual funds consisted of futures, and 84 percent of those futures were used for fixed income funds.[153] So generally, there were two ways to track an equity index back then: "complete replication," whereby all the stocks in

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[149] Wurgler, Jeffrey A., On the Economic Consequences of Index-Linked Investing (July 24, 2010). CHALLENGES TO BUSINESSES IN THE TWENTY-FIRST CENTURY: THE WAY FORWARD, W.T. Allen, R. Khurana, J. Lorsch, G. Rosenfeld, eds., 2010, Available at SSRN: https://ssrn.com/abstract=1667188

[150] Maggie Mahar. *Bull! A History of the Boom and Bust, 1982-2004*. Harper Collins. 2004. Chapter 8, page 124

[151] Mike Green on Valuetainment Economics podcast. "The Rise & Fall of Passive Investing." November 13, 2020. Accessible at https://www.youtube.com/watch?v=4JUEC93O8A4

[152] Mike Green on Valuetainment Economics podcast. "The Rise & Fall of Passive Investing." November 13, 2020. Accessible at https://www.youtube.com/watch?v=4JUEC93O8A4

[153] Testimony of Arthur Levitt Concerning Derivative Financial Instruments May 25, 1994. Accessible at http://3197d6d14b5f19f2f440-5e13d29c4c016cf96cbbfd197c579b45.r81.cf1.rackcdn.com/collection/papers/1990/1994_0525_LevittDerivatives.pdf

the index were bought according to their weighting, or "stratified sampling," whereby samples were taken to avoid the liquidity problems of smaller companies.[154] Index funds were experiencing heavy tracking error, since there were large fluctuations in liquidity between securities in the index. Despite still being a sliver of the investment universe, they were already big enough that their transactions had material market impacts.[155] This creates drag whereby the index fund is comprised of a distribution of assets that does not match the index. John Bogle Jr. does his best to avoid market impacts by capping the assets under management at his three mutual funds in Massachusetts at the tiny level of $100 million.[156] The use of futures helps mitigate market impacts, since the transactions are not immediate purchases and prices can be locked in. Gus Sauter, a fund manager at Vanguard, who later pioneered the ETF movement[157], identified this in 1987.[158] Levitt's study convinced the SEC to make it easier for mutual funds to use futures, which ignited a revolution in derivatives in the 1990s. It helped that Greenspan was not worried about risks from derivatives, who had said that there was "negligible" risk that derivatives could someday require a taxpayer bailout (recall AIG).[159] Index funds went from 2 percent of the investment universe to 10 percent over the course of a couple of years.[160] The share of passively managed investments then rose to 34 percent in 2010[161] to

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[154] Rupert Bruce. "Star Trackers Seek to Beat the Indexes." *The New York Times.* February 29, 1992. Accessible at https://www.nytimes.com/1992/02/29/business/worldbusiness/IHT-star-trackers-seek-to-beat-the-indexes.html

[155] Lewis Braham. *The House That Bogle Built.* McGraw-Hill. 2011. Chapter 16, page 234

[156] Lewis Braham. *The House That Bogle Built.* McGraw-Hill. 2011. Chapter 16, page 235

[157] John Bogle. *Stay The Course: The Story of Vanguard and the Index Revolution.* Wiley. 2019. Page 113

[158] Lewis Braham. *The House That Bogle Built.* McGraw-Hill. 2011. Chapter 11, page 130

[159] Saul Hansell. "Derivatives Get a Key Supporter." *The New York Times.* May 26, 1994. https://www.nytimes.com/1994/05/26/business/company-news-derivatives-get-a-key-supporter.html

[160] Mike Green on Valuetainment Economics podcast. "The Rise & Fall of Passive Investing." November 13, 2020. Accessible at https://www.youtube.com/watch?v=4JUEC93O8A4

[161] Lidia Bolla, Alexander Kohler and Hagen Wittig (2016): *Index-Linked Investing—A Curse for the Stability of] Financial Markets around the Globe?* Journal of Portfolio Management Spring 2016, Vol. 42, No. 3: pp. 26–43

about 50 percent today.[162] Since around 1997, strong co-movement in the stock market has been trending upwards.[163]

The benchmark mantra, which was started by financial advisor and data provider Morning Star during the 1990s, also means that active managers are being measured against say, the S&P 500, which forces them to hold high concentrations of the underlying assets in the S&P 500. As high-profile activist Bill Ackman notes, individual investors are as myopic as anyone else. If a fund underperforms the benchmark by a considerable amount just once, they move their money.[164] Thus, active managers too are now forced to invest similar to an index fund. This "closet indexing" has been trending since the mid-1990s.[165]

This all suggests individual stock movements have less to do with real information, but instead are due to their inclusion in an index. Numerous studies have shown the large jumps in valuations of companies when they get included in major indexes. Penn State researchers showed a statistically significant mean abnormal S&P 500 inclusion announcement-day return of 5.67 percent for the period 1993 to 2001.[166] NYU Professor Jefferey Wurgler also shows that when a stock is included in the S&P 500, its stock price movements become closely correlated with S&P 500 returns, diverging from previous movement trends. It's troubling that this pattern is occurring with the largest and most liquid stocks.[167]

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[162] Annie Lowrey. "Could Index Funds Be Worse Than 'Marxism'?" *The Atlantic*. April 5, 2021. Accessible at https://www.theatlantic.com/ideas/archive/2021/04/the-autopilot-economy/618497/

[163] Rodney Sullivan and James Xiong. How Index Trading Increases Market Vulnerability (September 26, 2011). Financial Analysts Journal, Available at SSRN: https://ssrn.com/abstract=1908227

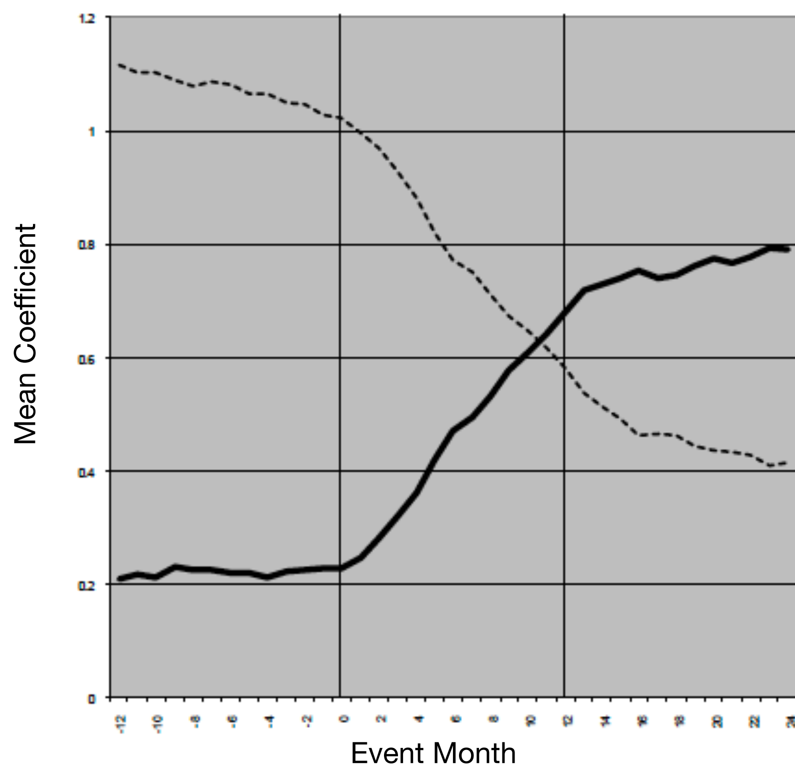
[164] Bill Ackman, 2015 Letter to Shareholders, Pershing Square Capital Management LP, January 26, 2016

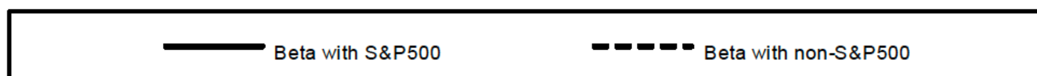
[165] Rodney Sullivan and James Xiong. How Index Trading Increases Market Vulnerability (September 26, 2011). Financial Analysts Journal, Available at SSRN: https://ssrn.com/abstract=1908227

[166] William Elliott, et al. "What Drives the S&P 500 Inclusion Effect? An Analytical Survey." *Financial Management*, vol. 35, no. 4, 2006, pp. 31–48. *JSTOR*, www.jstor.org/stable/30137808

[167] Wurgler, Jeffrey A., On the Economic Consequences of Index-Linked Investing (July 24, 2010). CHALLENGES TO BUSINESSES IN THE TWENTY-FIRST CENTURY: THE WAY FORWARD, W.T. Allen, R. Khurana, J. Lorsch, G. Rosenfeld, eds., 2010, Available at SSRN: https://ssrn.com/abstract=1667188

Changes in Comovement Patterns of Stocks Added to the S&P 500





Source: Wurgler, Jeffrey A., On the Economic Consequences of Index-Linked Investing (July 24, 2010). CHALLENGES TO BUSINESSES IN THE TWENTY-FIRST CENTURY: THE WAY FORWARD, W.T. Allen, R. Khurana, J. Lorsch, G. Rosenfeld, eds.

On August 23, 2016, an analyst at Alliance Bernstein decided to analyze the impact of passive investors on the mining sector, which possesses the major qualities of a sector that is heavily dependent on proper capital allocation: it is capital intensive, sensitive to volatility, systemically important, has a long lead time and similarly takes a long time to generate alpha. Although markets go back further than Genesis, only until the development of copper porphyry deposits at the start of the twentieth century, did markets take on their modern form of supplying capital to large, risky, long-term projects, that is ever apparent today with the IPOs of tech companies with negative cash flows. The Bernstein theory asserts that passive cannot properly allocate capital, since it is inherently backward looking. A passive strategy buys assets according to their current value in the financial economy, while ignoring future needs of the real economy. Compare that to an active strategy, which anticipates the fundamental changes that will affect an asset's fair value. Passive is momentum, while active is self-correcting. The analysts determined that passive concentration slowed the pricing ability of the market, which has caused major differences between real expectations and market prices in commodities. They

also discuss the co-movement issue.[168] Swiss practitioners Bolla, Kohler and Wittig use cross-regional regressions to suggest a casual link between the share of passively held assets and trading volume and liquidity. They determined that there was a strong relationship where a higher passive share increased commonality of returns and liquidity, which increased the likelihood of tail-end event.[169] Although indexing is an outgrowth of portfolio theory, the co-movement effects of passive ironically make it harder to diversify a portfolio.

The Alliance Bernstein note was written by Inigo Fraser-Jenkins, a well-known quantitative sell side analyst, and it was provocatively titled, "The Silent Road to Serfdom: Why Passive Investing is Worse Than Marxism," alluding to Hayek. The note made the argument that, at least in a Soviet-style centrally planned economy, the apparatchiks would *try* to allocate capital efficiently, while passive managers ignore fundamentals all together. Although Bill Ackman raised passive concerns in his 2015 shareholder letter half a year earlier[170], this piece stuck a note with index maximalists. Bogle-heads laughed it off, and Burton Malkiel wrote a rebuttal in the *Wall Street Journal,* citing the historical outperformance of indexes over active.[171] Every major financial news site covered the piece, and although they mostly laughed at the hyperbole, the journalists now knew to keep their eyes open. Matt Levine, a popular financial columnist at *Bloomberg*, has been particularly keen on the index fund controversy. In an email exchange with *Bloomberg*, Michael Burry, the quirky hedge fund manager who predicted the housing crisis and was the focus of Michael Lewis' *The Big Short*, said we are in a "passive bubble" that rewards large companies at the expense of small companies.[172] Due to the liquidity issues of small cap companies, and because indexing is a momentum strategy, indexing creates a big-get-bigger phenomenon. Since the Bernstein note, there have been many developments in index fund research. The characteristically provocative Lucian Bebchuk,

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[168] Inigo Fraser-Jenkins. "The Silent Road to Serfdom: Why Passive Investing is Worse Than Marxism." Bernstein. August 23, 2016

[169] Lidia Bolla, Alexander Kohler and Hagen Wittig (2016): *Index-Linked Investing—A Curse for the Stability of] Financial Markets around the Globe?* Journal of Portfolio Management Spring 2016, Vol. 42, No. 3: pp. 26–43

[170] Bill Ackman, 2015 Letter to Shareholders, Pershing Square Capital Management LP, January 26, 2016

[171] Heejin Kim and Myungshin Cho. "The Big Short's Michael Burry Sees a Bubble in Passive Investing." *Bloomberg.* August 28, 2019. Accessible at https://www.bloomberg.com/news/articles/2019-08-28/the-big-short-s-michael-burry-sees-a-bubble-in-passive-investing

[172] Heejin Kim and Myungshin Cho. "The Big Short's Michael Burry Sees a Bubble in Passive Investing." *Bloomberg.* August 28, 2019. Accessible at https://www.bloomberg.com/news/articles/2019-08-28/the-big-short-s-michael-burry-sees-a-bubble-in-passive-investing

who leads Harvard's corporate governance department, started looking at the quality of stewardship at index funds. John Coates, another Harvard law professor who is now an acting director at the SEC[173], wrote a paper called "The Problem of Twelve," hypothesizing that we are approaching a world where just twelve individuals might control all of corporate America due to the rising concentration of index providers.[174]

"If everybody indexed, the only word you could use is chaos, catastrophe. There would be no trading, there would be no way to convert a stream of income into a pile of capital or a pile of capital into a stream of income. The markets would fail."

—John Bogle, 2017[175]

After The Bubble

"Those who cannot remember the past are condemned to repeat it."

—George Santayana

After the dot-com crash, something happened that had not occurred in prior crashes. People didn't sell. Passive inflows remained stable in the years 1999-2001.[176] People had taken the "buy and hold" ethos to heart. The indexing experiment was set in stone.

To address the decimated equity prices, Greenspan slashed rates to an all-time low of 1 percent, sowing the seeds for the housing crisis.[177] This was done with support of Neo-Keynesians, like *New York Times* columnist Paul Krugman, who notoriously wrote:

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[173] SEC. "John Coates Named Acting Director of the Division of Corporation Finance." February 1, 2021. Accessible at https://www.sec.gov/news/press-release/2021-19

[174] John Coates. The Future of Corporate Governance Part I: The Problem of Twelve (September 20, 2018). Harvard Public Law Working Paper No. 19-07, Available at SSRN: https://ssrn.com/abstract=3247337

[175] Sonali Basak. "Bogle Says If Everybody Indexed Markets Would Fail Under Chaos." *Bloomberg.* May 6, 2017. Accessible at https://www.bloomberg.com/news/articles/2017-05-06/bogle-says-if-everybody-indexed-markets-would-fail-under-chaos

[176] Marc Faber. Gloom Doom Boom Report. October 2016

[177] Matt Taibbi. *Griftopia.* Random House. 2011. Chapter 2

> To fight this recession the Fed needs more than a snapback; it needs soaring household spending to offset moribund business investment. And to do that, as Paul McCulley of Pimco put it, Alan Greenspan needs to create a housing bubble to replace the Nasdaq bubble.[178]

When the crash happened in 2008, the value of State Street's index fund that tracks the S&P 500, SPY, halved over the course a year and a half. While Barclay's was in distress, the bank auctioned off its ETF business, Barclay's Global Investors, and BlackRock bought it for $13.5 billion, more than doubling its AUM.[179] BlackRock obtained the "iShares" brand. The corollary of crashes is that the big get bigger, and the small get smaller. Every time there is a crash, the scales are temporarily shifted to big firms, which if they take advantage of it, come out stronger. Monetary policy should be a much more important discussion in our politics.

However, with the above exception, unlike in the dot-com bubble, passive didn't play much of a role in the housing crisis. Yet, trading derivatives, made up of hundreds of loans that no one cared to double check the value of, was eerily similar to the index funds buying up the market with no regard for fundamentals.

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George Bush came into office in 2001 after a campaign that advocated tax cuts. The "Bush Tax Cut" was the Economic Recovery Tax Act of 2001. Included were retirement plan changes that were favorable to increased saving. Portman-Cardin Provisions raised the limits on how large contributions could be.[180] Employees 50 years or older could "catch-up" by contributing

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[178] Paul Krugman. "Dubya's Double Dip?" *The New York* Times. August 2, 2020. Accessible at https://www.nytimes.com/2002/08/02/opinion/dubya-s-double-dip.html?scp=4&sq=krugman%20mcculley%20bubble&st=cse

[179] Annie Massa. "BlackRock's Decade: How the Crash Forged a $6.3 Trillion Giant." *Bloomberg.* August 30, 2018. Accessible at https://www.bloomberg.com/news/articles/2018-08-30/blackrock-s-decade-how-the-crash-forged-a-6-3-trillion-giant

[180] United States Senate. "Overview of Portman-Cardin Provisions Enacted Into Law." Accessible at https://www.portman.senate.gov/sites/default/files/Overview%20of%20Portman.pdf

another few thousand dollars to their plans.[181] This legislation was meaningful in cementing the use of 401(k)s and IRAs.

The Pension Protection Act of 2006 was then passed, which supported contribution participation. Before the act, the employee would generally bear the responsibility of contributing to their plan and choosing how to do that. Recall in the 1990s when America became obsessed with yield and people were sifting through the *Wall Street Journal* for the best funds.[182] Legislators were concerned that the average employee was not contributing as much as they needed to, and that they didn't know how to allocate their funds. If contributors did not select what products to invest in, their funds would be put into a money market fund.[183] The bill made two major changes. It set automatic contributions into 401(k)s as a default; employees would need to opt out, making it more likely that individuals would be saving for retirement. The bill also defined the qualified default investment alternative (QDIA), which identified what could be set as the default vehicle contributions go to. The human resources team constructed the default menu from those criteria, which inevitably have consisted of diversified, passive vehicles.[184] Yet still, in 2008, just 60 percent of eligible employees contributed to their 401(k).[185]

In 2012, the Department of Labor decided to further define QDIAs. They dictated that target date funds are practically the only QDIA. Target date funds are a vehicle that was invented in 2003. A target date fund is a mix of passive equity and passive bond funds that allocates more towards bonds with the employee's age. Nearly 80 percent of all dollars going into 401(k)s are now flowing into target date funds.[186]

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[181] Mike Green. "The Great Rotation: Stocks to Consumption." *Real* Vision. March 9, 2017. https://www.realvision.com/shows/the-interview/videos/the-great-rotation-stocks-to-consumption

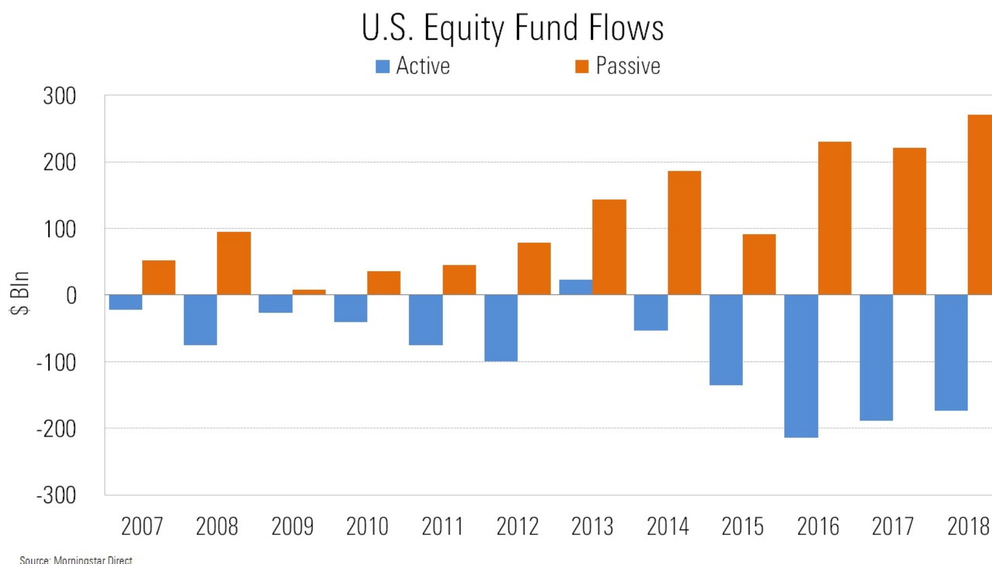
[182] Maggie Mahar. *Bull! A History of the Boom and Bust, 1982-2004*. Harper Collins. 2004. Chapter 2, page 24

[183] Mike Green on Valuetainment Economics podcast. "The Rise & Fall of Passive Investing." November 13, 2020. Accessible at https://www.youtube.com/watch?v=4JUEC93O8A4

[184] Mike Green. "The Great Rotation: Stocks to Consumption." *Real* Vision. March 9, 2017. https://www.realvision.com/shows/the-interview/videos/the-great-rotation-stocks-to-consumption

[185] Lewis Braham. *The House That Bogle Built.* McGraw-Hill. 2011. Chapter 8, page 76

[186] Mike Green on Valuetainment Economics podcast. "The Rise & Fall of Passive Investing." November 13, 2020. Accessible at https://www.youtube.com/watch?v=4JUEC93O8A4



Source: https://www.morningstar.com/insights/2020/01/29/fund-flows-recap

In 2013, the Obama White House launched an investigation into expanding the applicability of Employee Retirement Income Security Act's fiduciary duties to various retirement savings plans.[187] By their estimates, biased financial advice snatched $17 billion a year from retirement accounts.[188] By 2015, they proposed a controversial fiduciary rule that would make all financial professionals that work or advise on retirement plans legally and ethically fiduciaries.[189] Smaller registered investment advisors and actively managed funds protested the rule, since it would significantly increase compliance costs. Even larger retirement advisors, such as MetLife Inc. and American International Group were sold in anticipation of the rule's implementation.[190] Previously, advisors had to offer "suitable" recommendations. Now, as fiduciaries, they had to

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[187] Michael Barr, Howell Jackson, and Margaret Tahyar. *Financial Regulation: Law and Policy*, (2d ed., 2018 Foundation Press).

[188] Investopedia. "Everything You Need To Know About the DOL Fiduciary Rule." Updated December 19, 2019. Accessible at https://www.investopedia.com/updates/dol-fiduciary-rule/

[189] Mike Green on OddLots podcast. "Why Passive Investing Might Be Distorting The Market." *Bloomberg Markets.* February 11, 2020. Accessible at https://www.youtube.com/watch?v=_kVpFDxr6xM

[190] U.S. Chamber of Commerce. "Lawsuit Filed to Challenge New Department of Labor Rule That Prevents Financial Professionals from Best Serving Retirement Savers." June 2, 2016. Accessible at https://www.uschamber.com/press-release/lawsuit-filed-challenge-new-department-labor-rule-prevents-financial-professionals

recommend the "best" possible funds.[191] As a result, the menu of choices offered to an employee had to consist of low-fee funds, which are, by definition, index funds or target date funds. Corporation are now liable for excess fees charged by funds they recommended. Worse, they are liable for underperformance of recommendations.[192] The takeaway is "don't try to beat the market, be the market." This ignited a shift into passive vehicles in 2016.

After the passage of the Tax Cut and Jobs Act of 2017, the most substantial tax reform bill since the Reagan years, some congressmen were concerned that President Trump wasn't being fiscally responsible. Some pointed out the increase in stock buybacks.[193] The Congress members began writing the SECURE Act. One of the original goals was to reduce the tax deductibility of 401(k)s beyond a certain level. BlackRock and Vanguard got their hands on it and *extended* the tax deductibility of 401(k)s. They also deferred the age of "required" withdrawals from 70.5 to 72, expanding the time workers would remain their customers.[194]

The Big Three spend a lot on lobbying. Vanguard spent $2.5 million in 2019 on lobbying efforts.[195] In total, the Big Three spent $6.4 million in 2019.[196] Richard Neal (D-MA), the Chairman of the Means and Ways Committee, which writes the legislation for issues including

[191] Reuters. "The Trump Administration Reportedly Plans to Delay the 'Fiduciary' Rule for 180 Days." *Reuters.* February 10, 2017. Accessible at https://fortune.com/2017/02/10/trump-administration-labor-department-fiduciary-rule-delay/

[192] Mike Green on OddLots podcast. "Why Passive Investing Might Be Distorting The Market." *Bloomberg Markets.* February 11, 2020. Accessible at https://www.youtube.com/watch?v=_kVpFDxr6xM

[193] Annie Knott. "Why The Tax Cuts And Jobs Act (TCJA) Led To Buybacks Rather Than Investment." *Forbes.* February 21, 2019. Accessible at https://www.forbes.com/sites/annemarieknott/2019/02/21/why-the-tax-cuts-and-jobs-act-tcja-led-to-buybacks-rather-than-investment/?sh=be24bba37fbc

[194] Mike Green. Real Vision interview. "The Perils of Passive Indexation." December 11, 2019

[195] OpenSecrets. Accessible at https://www.opensecrets.org/federal-lobbying/clients/summary?cycle=2019&id=D000022305

[196] OpenSecrets. Accessible at https://www.opensecrets.org/orgs/vanguard-group/lobbying?id=D000022305, https://www.opensecrets.org/orgs/state-street-corp/lobbying?id=D000029194, and https://www.opensecrets.org/orgs/blackrock-inc/lobbying?id=D000021872

retirement and tax issues, received about $30,000 from the mutual fund industry leading up to the SECURE Act.[197]

"[To] get a monopoly; let Society work for you; and remember that the best of all business is politics, for a legislative grant, franchise, subsidy or tax exemption is worth more than a Kimberly or Comstock lode, since it does not require any labor, either mental or physical, for its exploitation."[198]

—Confessions of a Monopolist

The joke today is that Democrats hire from BlackRock and Republicans hire from Goldman. Goldman is notorious for its cutthroat attitude towards other banks and its willingness to leverage government.[199] Its nickname is "Government Sachs."[200] BlackRock too, which is the largest index provider, has also deeply embedded itself in the political realm.

Larry Fink, the CEO of BlackRock, routinely meets with world leaders. In July 2018, he participated in a dinner U.K. Prime Minister Theresa May hosted for President Donald Trump. Since the 2008 crisis, the firm has had 400 meetings or calls with senior US officials and more than 50 with senior UK officials.[201] In January 2019, President-Elect Joe Biden visited Larry

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197 David Dayen. "The House Has Found Bipartisan Agreement on Reform to Retirement Accounts. Be Afraid." May 22, 2019. Accessible at https://theintercept.com/2019/05/22/secure-act-retirement-accounts/

198 Frederic Howe. *Confessions of a Monopolist.* The Public Publishing Company. 1906.

199 Matt Taibbi. *Griftopia.* Random House. 2011. Chapter 2

200 Dealbook. "The People From 'Government Sachs.'" *The New York Times.* March 16, 2017. Accessible at https://www.nytimes.com/2017/03/16/business/dealbook/goldman-sachs-goverment-jobs.html

201 Juliet Samuel. "BlackRock in the spotlight." *The Spectator.* November 17, 2018. Accessible at https://www.spectator.co.uk/article/blackrock-in-the-spotlight

Fink in BlackRock's New York office to discuss the state of the world. Fink told Biden, "I'm here to help."[202] In the 2018 election cycle, BlackRock donated $1.5 million to federal candidates.[203]

Further, the human capital at the Manhattan office and the Beltway are becoming more synonymous. The firm has hired at least 84 former US government officials since 2004.[204] These include influential figures like Cheryl Mills, Hillary Clinton's former chief of staff,[205] and Brian Deese, a climate adviser to President Obama.[206] Carol Lee was taken in by the SEC from BlackRock's compliance department.[207]

More recently, BlackRock has been able to use its leverage to convince the government to not consider it a systemically important financial institution (SIFI)[208], a designation colloquially known as "too big to fail," despite managing client money totaling $8.7 trillion.[209] After the 2008 crisis, the Office of Financial Research at the Treasury Department warned that large asset managers pose a risk to the financial system. BlackRock paid $46,000 to Senator Mark Warner

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[202] Edward-Isaac Dovere. "Biden's Anguished Search for a Path to Victory." *The Atlantic.* February 4, 2019. Accessible at https://www.theatlantic.com/politics/archive/2019/02/joe-biden-close-running-president-despite-doubts/581956/

[203] Brian Dewan. "New Report Details How BlackRock Fought Off Government Regulation by Spending Big in Washington." September 5, 2019. Accessible at https://campaignforaccountability.org/new-report-details-how-blackrock-fought-off-government-regulation-by-spending-big-in-washington/

[204] Juliet Samuel. "BlackRock in the spotlight." *The Spectator.* November 17, 2018. Accessible at https://www.spectator.co.uk/article/blackrock-in-the-spotlight

[205] Juliet Samuel. "BlackRock in the spotlight." *The Spectator.* November 17, 2018. Accessible at https://www.spectator.co.uk/article/blackrock-in-the-spotlight

[206] Jeff Hauser and Eleanor Eagan. "'Middle Class Joe' Biden Courts Wall Street Oligarch, BlackRock's Larry Fink." *The Daily Beast.* February 11, 2019. Accessible at https://www.thedailybeast.com/middle-class-joe-biden-courts-wall-street-oligarch-blackrocks-larry-fink

[207] Annie Massa. "BlackRock's Decade: How the Crash Forged a $6.3 Trillion Giant." *Bloomberg.* August 30, 2018. Accessible at https://www.bloomberg.com/news/articles/2018-08-30/blackrock-s-decade-how-the-crash-forged-a-6-3-trillion-giant

[208] David Dayen. "How BlackRock Rules the World." *The American Prospect.* September 27, 2018. Accessible at https://prospect.org/economy/blackrock-rules-world/

[209] ADV Ratings. Accessible at https://www.advratings.com/company/blackrock, accessed April 1, 2021

(D-VA), who then switched his stance on BlackRock, now defending them.[210] In 2014, the U.S. panel altered its approach to financial stability risks, and said it would focus on monitoring large asset managers' "products and activities" instead of the firms themselves.[211] This is a break from how the Financial Stability Oversight Council regulates banks. To be clear, SIFI designations for any firm or product have externalities, but this effort highlights the power of BlackRock.

President Joe Biden put BlackRock's Brian Deese back into politics as the current director of the National Economic Council.[212] He also brought in Adewale Adeyemo, a former senior adviser and interim chief of staff to Larry Fink and president of the Obama Foundation, to serve as Deputy of the Treasury Secretary under Janet Yellen.[213] Vice President Kamala Harris chose BlackRock's Global Chief Investment Strategist Mike Pyle, a former Obama aide, to be her chief economic advisor.[214] There is no doubt that BlackRock's government involvement has strengthened the voice of behemoth, low-fee mutual funds and helped keep their heads under the parapet.

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Each regulation mentioned above was made with the best of intentions. For the most part, each has been about protecting citizens, encouraging them to save for retirement, and making that process simpler.

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[210] Brian Dewan. "New Report Details How BlackRock Fought Off Government Regulation by Spending Big in Washington." September 5, 2019. Accessible at https://campaignforaccountability.org/new-report-details-how-blackrock-fought-off-government-regulation-by-spending-big-in-washington/

[211] Ryan Tracy and Sarah Krouse. "One Firm Getting What It Wants in Washington: BlackRock." *The Wall Street Journal.* April 20, 2016. Accessible at https://www.wsj.com/articles/one-firm-getting-what-it-wants-in-washington-blackrock-1461162812

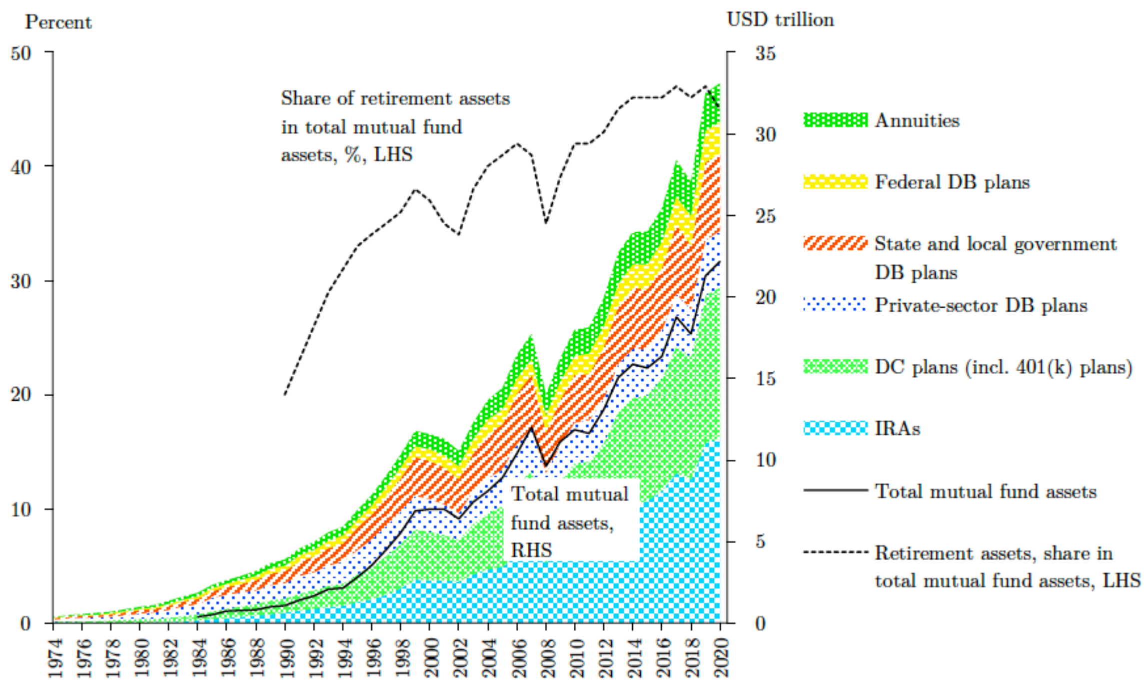
[212] Jeff Hauser and Eleanor Eagan. "'Middle Class Joe' Biden Courts Wall Street Oligarch, BlackRock's Larry Fink." *The Daily Beast.* February 11, 2019. Accessible at https://www.thedailybeast.com/middle-class-joe-biden-courts-wall-street-oligarch-blackrocks-larry-fink

[213] Alan Rappeport. "Biden Pick for Treasury's No. 2, a Moderate Voice, Breaks Racial Barrier." *The New York Times.* December 1, 2020. Accessible at https://www.nytimes.com/2020/12/01/us/politics/treasury-Adewale-Adeyemo.html

[214] Thornton McEnery. "Kamala Harris' top economic advisor is another BlackRock exec." *The New York Post.* January 8, 2021. Accessible at https://nypost.com/2021/01/08/kamala-harris-top-economic-advisor-is-another-blackrock-exec/

The graph below shows the holdings of mutual fund assets over time. Notice the post-1994 Levitt commission jump, the increasing holdings during the 1995-1999 period, the sharp increase after the Bush tax cuts, slight steepening in 2006 after the Pension Protection Act, the large 2012 increase in assets, the increase in 2017 with the phase in of the fiduciary rule, and the increase in assets with the passing of the SECURE Act in 2019. You can also notice the growing percent of mutual fund assets coming from retirement plans.

Retirement assets and their share of mutual fund assets, 1974–2020



Source: Benjamin Braun. “Asset Manager Capitalism as a Corporate Governance Regime.” March 2021. Max Planck Institute for the Study of Societies. Accessible at https://osf.io/preprints/socarxiv/v6gue

Capital Stewardship

"Vanguard's vote and our voice on governance are the most important levers we have to protect our clients' investments."[215]

—William McNabb, Vanguard's then-CEO

Thus far, the distortions that index funds create on the markets are clear. However, markets don't exist in a vacuum; the same problems that produced unchecked prices and the rejection of fundamentals manifest in the corporate governance of public companies.

Since the advent of the mutual fund, theorizers have tendered reasons for why the vehicle would be a good steward of capital. The *Fortune* magazine article that inspired Bogle's 1951 thesis that got him his job at Wellington Management, which identified the mere 125 firm industry[216], made the notion that the industry "could become immensely influential…the ideal champion of the small stockholder in controversies with…corporate management."[217] The mutual fund industry, under Bogle's lead, would surely be the champion of the individual investor, but not of corporate governance. This is because mutual funds are agents with no skin in the game. This was a concern Adam Smith had about public companies in *The Wealth of Nations*.[218]

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The story of General Motors tells the deep misfortune of companies whose investors are agnostic. In this scenario, it wasn't just index funds. Most investors were disconnected.

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[215] Lucian Bebchuk. "Index Funds and the Future of Corporate Governance: Theory, Evidence, and Policy." Harvard Law School Forum. November 28, 2018. Accessible at https://corpgov.law.harvard.edu/2018/11/28/index-funds-and-the-future-of-corporate-governance-theory-evidence-and-policy/

[216] John Bogle. *Stay The Course: The Story of Vanguard and the Index Revolution.* Wiley. 2019. Page 40

[217] John Bogle. *Stay The Course: The Story of Vanguard and the Index Revolution.* Wiley. 2019. Page 40

[218] José Azar. The Common Ownership Trilemma (September 10, 2019). Available at SSRN: https://ssrn.com/abstract=3451462

The superstar engineer, whose invention precedes him, John DeLorean, quit General Motors in 1973 and wrote the bestseller *On A Clear Day You Can See General Motors*. What he noticed was that when leadership lack proper incentives, the whole company succumbs to myopia and group think. He didn't yet know that the worst was yet to come.

During the 1920s, investor bases were described as "owner capitalists." They were people or firms that had large blocks of ownership and exerted managerial oversight. General Motors' previous CEO Alfred Sloan could he characterized as an owner capitalist. He had a large stake in General Motors and fought tirelessly for the company's success. He attributes the impressive rise of General Motors in the 1950s to his management style, whereby dissent was encouraged and management was extremely decentralized. Over Sloan's tenure, he turned what was an insolvent company in 1920 into the one that constituted half of the automotive market share by 1956.[219]

When Smith took the reins in 1981, General Motors had deteriorated into a highly centralized, bureaucratic organization. Unfortunately, he did not make improvements. For investors, the writing was on the wall. In total, Smith spent almost $100 billion on silly acquisitions and R&D.[220] For example, the company paid $5 billion to purchase a defense contractor that made satellites.[221] New car models failed miserably. In 1984, one of the misguided acquisitions was Ross Perot's tech company. The deal made Perot the largest shareholder of GM and a director.[222] Perot was surprised but accepted the lucrative offer.

It didn't take long for Perot to sour on General Motors. He lambasted Smith and the other directors. They had minimal stock ownership, were seen as bullies to employees, and were making terrible financial choices. A year later, the board offered to buyout Perot for $700 million. He would have to resign from the board. On December 1, 1986, the contract was signed. Perot could not believe that not a single director opposed the proposition. He shortly released a press release:

> At a time when General Motors is
> —closing 11 plants,

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[219] Jeff Gramm. *Dear Chairman.* Harper Business. 2016. Chapter 5, page 101

[220] Jeff Gramm. *Dear Chairman.* Harper Business. 2016. Chapter 5, page 98

[221] Jeff Gramm. *Dear Chairman.* Harper Business. 2016. Chapter 5, page 111

[222] Jeff Gramm. *Dear Chairman.* Harper Business. 2016. Chapter 5, page 96

—putting over 30,000 people out of work,
—cutting back on capital expenditures,
—losing market share,
—and having problems with profitability,
I have just received $700 million. […] I cannot accept this money without giving the GM directors another chance to consider this decision.[223]

Though the subject permeated through newsrooms, institutional investors didn't care. Despite media traction, the buyout succeeded with only 20 percent of shareholders dissenting. Investors were asleep at the wheel, even when General Motors' troubles were not just apparent, but were "[poking] us in the head and stomach," in the words of Charlie Munger.[224] Ironically, the story of General Motors evolved during the Vietnam era, a high point in American questioning of the status-quo. It seemed the prevailing financial wisdom was impervious.

Part of the General Motors story surely has to do with the agency problems identified by Berle and Means. If a company has a set of large and diverse shareholders, who is really overseeing management? Portfolio theory takes it a step further: small shareholders not only lack a voice, but they lack a need to have a voice. Take a company like Facebook or Tesla: each has heavy ownership by motivated insiders (Mark Zuckerberg has effective control of 58 percent of Facebook with super class voting shares[225]). This owner-manager structure enables the innovation we have witnessed in these companies (although manager entrenchment has its own problems, as we know from Robert Young). At the height of General Motors in the 1950s, institutional ownership accounted for 10 percent ownership in the total market. By the late 1980s, 50 percent of the market was held by institutional owners. Although this included discretionary hedge funds, the majority of institutional owners were pension funds and was shifting to mutual funds.

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[223] Jeff Gramm. *Dear Chairman.* Harper Business. 2016. Chapter 5, page 114

[224] Jeff Gramm. *Dear Chairman.* Harper Business. 2016. Chapter 5, page 119

[225] Betsy Atkins. "Facebook Strong Arms Investors Who Want Zuckerberg Out." *Forbes.* June 7, 2019. Accessible at https://www.forbes.com/sites/betsyatkins/2019/06/07/facebook-strong-arms-investors-who-want-zuckerberg-out/?sh=664951375901

"Broad institutional ownership had the peculiar effect of disempowering shareholders. By the time GM bought Ross Perot off its board, shareholders had little say in the company's affair beyond muted grumbling."[226]

—Jeff Gramm, hedge fund manager and author of Dear Chairman

The General Motors debacle actually woke up some investors, particularly the California Public Employees Retirement System (CalPERS). CalPERS wrote a letter to General Motor's board to remove Smith as CEO.[227] CalPERS has since been a characteristically engaged investor.

At the time, in the late 1980s, new ideas of corporate governance emerged. Hostile takeovers as a method of holding a management team accountable no longer make sense. In 1982, Martin Marietta, a defense contractor led by military veterans, fought bravely (and recklessly) against a tender offer from Bendix, a manufacturing company led by the eccentric Bill Agee. The two companies ultimately each owned half of one another (a tactic known as the Pac-Man defense).[228]

Despite developments in aligning management incentives through stock ownership and introducing outside directors, a large set of diverse (and diversified) shareholders meant there were few who could take on the monitoring responsibility. Since passive funds were gaining a foothold in the market, some saw them as a promising solution to the diverse shareholder issue. All of the shares one owns in a mutual fund are controlled by the mutual fund. The fund has the right to vote those shares, which they essentially always do so in a centralized fashion. Some believed that mutual funds would use that right to engage with management teams to defend shareholders. They believed that index funds, though passive vehicles, were competing with non-equity investments, like real estate, and were also competing against active investors. They thought that this competition would encourage index funds to monitor the companies they own.[229] But that is obviously not what happened. Managers of passive funds are compensated by assets under management, not performance. If they did care about performance, and they engaged with portfolio companies, they would be subsidizing profits for

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[226] Jeff Gramm. *Dear Chairman.* Harper Business. 2016. Chapter 5, page 117

[227] Jeff Gramm. *Dear Chairman.* Harper Business. 2016. Chapter 5, page 119

[228] Hope Lampert. *Till Death Do Us Part.* Signet. 1984

[229] Bernard Black. Agents Watching Agents: The Promise of Institutional Investor Voice (1992). UCLA Law Review, Vol. 39, pp. 811-893, 1992, Available at SSRN: https://ssrn.com/abstract=1132082

their competitors. Their competitors include other passive funds, and moreover, active funds with large bets on those companies, voiding the above argument. It is still an issue of collective action.

The only exception to the collective action problem would be if a firm had large holdings in a certain company or sets of companies.[230]

The other common reasoning index-enthusiasts promoted was that since index funds have no option to vote with their feet, they would work with what they had in their portfolio.[231] Indexes only sell for customer redemptions and index re-weightings, not for overvaluations or unrealized value. The voting records of the Big Tree show that their engagement is very low.

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With the rise of the institutional investor, the Berle and Means prediction of the mature company being owned by dispersed, "atomistic" investors didn't materialize. Although returns flow to fund shareholders, the largest 20 institutional investors own 33 percent of the 20 largest companies.[232]

However, the consequences Berle and Means predicted have been realized. Today's public company is owned by apathetic investors and atomistic investors. Mixing these two causes concern. Atomistic investors don't vote. This is the Berle Means problem. When mutual funds vote, they realize more control due to these atomistic investors. However, what is clearly more worrisome than their votes is their apathy. An average of 92.5 percent of the Big Three's

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[230] Lucian Bebchuk, Alma Cohen and Scott Hirst. The Agency Problems of Institutional Investors (June 1, 2017). Journal of Economic Perspectives, Vol. 31 pp. 89-102 (Summer 2017)., Harvard Law School Olin Discussion Paper No. 930, Available at SSRN: https://ssrn.com/abstract=2982617

[231] Lucian Bebchuk, Alma Cohen and Scott Hirst. "Index Fund Stewardship." Harvard Law School Forum on Corporate Governance. June 12, 2018. Accessible at https://corpgov.law.harvard.edu/2018/06/12/index-fund-stewardship/

[232] Lucian Bebchuk, Alma Cohen and Scott Hirst. The Agency Problems of Institutional Investors (June 1, 2017). Journal of Economic Perspectives, Vol. 31 pp. 89-102 (Summer 2017)., Harvard Law School Olin Discussion Paper No. 930, Available at SSRN: https://ssrn.com/abstract=2982617

portfolio companies received no shareholder engagement whatsoever during the years 2017 through 2019.[233]

It is easy to figure out why mutual funds are so apathetic. When Bogle introduced the Vanguard First Index Investment Trust, he had just one staff member to manage the votes.[234] During the 1980s, passive investors, like mutual funds and pension funds sat idly as raiders, like Carl Icahn stole company capital and shareholder wealth via greenmail. One pension fund manager who didn't even understand what a poison pill was, said, "I'll define the long term. That's my job."[235] Today, Vanguard has just 15 staff that oversee voting and stewardship across its 13,000 portfolio companies. BlackRock has 24 for its 14,000 portfolio companies. And State Street has fewer than 10.[236] This means that a very small number of relatively uninformed people are responsible for casting meaningful blocks of votes. From 2012 to 2018, BlackRock, State Street, and Vanguard voted against corporate compensation proposals an average of 2.0 percent, 2.9 percent, and 4.4 percent of the time, respectively.[237]

Moreover, there are direct incentives for mutual funds to be deferential to management teams. This phenomenon has played out since the introduction of the 401(k).[238] The index providers derive business from 401(k)s providers that are mostly public companies.[239] Since their invention, mutual funds have sought to profit from them, at the expense of shareholders.

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[233] Graham Steele. The New Money Trust: How Large Money Managers Control Our Economy and What We Can Do About It. American Economics Liberties Project. November 23, 2020. Accessible at https://www.economicliberties.us/our-work/new-money-trust/s

[234] Sarah Krouse, David Benoit and Tom McGinty. "Meet the New Corporate Power Brokers: Passive Investors." *The Wall Street Journal.* October 24, 2016. Accessible at https://www.wsj.com/articles/the-new-corporate-power-brokers-passive-investors-1477320101

[235] Jeff Gramm. *Dear Chairman.* Harper Business. 2016. Chapter 4, page 92

[236] Lucian Bebchuk, Alma Cohen and Scott Hirst. The Agency Problems of Institutional Investors (June 1, 2017). Journal of Economic Perspectives, Vol. 31 pp. 89-102 (Summer 2017)., Harvard Law School Olin Discussion Paper No. 930, Available at SSRN: https://ssrn.com/abstract=2982617

[237] Graham Steele. The New Money Trust: How Large Money Managers Control Our Economy and What We Can Do About It. American Economics Liberties Project. November 23, 2020. Accessible at https://www.economicliberties.us/our-work/new-money-trust/s

[238] Lewis Braham. *The House That Bogle Built.* McGraw-Hill. 2011. Chapter 8, page 76

[239]Lucian Bebchuk, Alma Cohen and Scott Hirst. The Agency Problems of Institutional Investors (June 1, 2017). Journal of Economic Perspectives, Vol. 31 pp. 89-102 (Summer 2017)., Harvard Law School Olin Discussion Paper No. 930, Available at SSRN: https://ssrn.com/abstract=2982617

Mutual funds would pay consultants to recommend their funds to companies.[240] By one 2004 estimate, 90 percent of 401(k)s were engaged in "revenue sharing" plans.[241] Some of these concerns were mitigated in the Pension Protection Act of 2006.[242] In 2015, 60 percent of 401(k)s were held in mutual funds.[243] Today, human resources departments have a large role in selecting what funds to put employee 401(k)s in.[244] There is an obvious incentive to choose funds from providers that "like" the company. It is similar to how companies like to hire investment banks whose sell side analysts "like" them. Employees have the option of directing their money as they please, but it is a lengthy and burdensome process to elect for something different. As mentioned earlier, due to the Pension Protection Act of 2006, employee money is by default put into 401(k)s that are almost always invested in passive funds.[245] The index funds engage with these companies to market their QDIAs, which since 2012, have been target date funds.[246] Several studies have shown that corporate relations affects mutual fund voting decisions. In particular, they show that the funds are deferential to the desires of the incumbent management teams, which makes sense given the companies are sources of business for them.[247]

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[240] Lewis Braham. *The House That Bogle Built.* McGraw-Hill. 2011. Chapter 6, page 77

[241] Lynn O'Shaughnessy. "Investing; A 401(k) Picks a Mutual Fund. Who Gets a Perk?" *The New York Times.* February 15, 2004. Accessible at https://www.nytimes.com/2004/02/15/business/investing-a-401-k-picks-a-mutual-fund-who-gets-a-perk.html

[242] Wikipedia. Accessible at https://en.wikipedia.org/wiki/Pension_Protection_Act_of_2006

[243] Lucian Bebchuk, Alma Cohen and Scott Hirst. The Agency Problems of Institutional Investors (June 1, 2017). Journal of Economic Perspectives, Vol. 31 pp. 89-102 (Summer 2017)., Harvard Law School Olin Discussion Paper No. 930, Available at SSRN: https://ssrn.com/abstract=2982617

[244] Mike Green on OddLots podcast. "Why Passive Investing Might Be Distorting The Market." *Bloomberg Markets.* February 11, 2020. Accessible at https://www.youtube.com/watch?v=_kVpFDxr6xM

[245] Mike Green on Valuetainment Economics podcast. "The Rise & Fall of Passive Investing." November 13, 2020. Accessible at https://www.youtube.com/watch?v=4JUEC93O8A4

[246] Mike Green on OddLots podcast. "Why Passive Investing Might Be Distorting The Market." *Bloomberg Markets.* February 11, 2020. Accessible at https://www.youtube.com/watch?v=_kVpFDxr6xM

[247] Ashraf, Rasha, Narayanan Jayaraman, and Harley E. Ryan Jr. 2012. "Do Pension-Related Business Ties Influence Mutual Fund Proxy Voting? Evidence from Shareholder Proposals on Executive Compensation." *Journal of Financial and Quantitative Analysis* 47(3): 567–88.

Additionally, under the Exchange Act of 1934, those who own 5 percent or more of a publicly traded company must register their stake with the SEC.[248] Owners who are "passive" must file a Section 13G. Owners who are active, meaning they seek high levels of engagement with the company, must file a 13D. 13Ds are subject to substantially more disclosure requirements, reducing mutual fund providers' incentive to engage.[249] BlackRock only ran its first activist campaign in 2016.[250]

Investment banks provide advisory services to companies for investor relations purposes. PJT Partners has an investor relations arm. Goldman Sachs and Evercore are known for their activism defense practices, which help companies navigate contentious shareholders. Similar to a sell side analyst, the service is partly run to source future, more lucrative, investment banking services. From conversations I've had with Evercore, it appears that the activist defense job emphasizes lobbying institutional investors to be in favor of the company (which the investment bank is working for and wants more business from) rather than analyzing the demands of an activist. Evercore and BlackRock share the same New York office building.[251]

On February 17, 2015, Trian Partners, an activist hedge fund, led by Nelson Peltz, that is known for addressing long-term strategic goals rather than myopic recapitalizations, submitted a white paper to the SEC, with the slogan "DuPont Can Be Great."[252] Although DuPont's stock looked like it was performing well, this was relative to the overall market. Trian pointed out that compared to competitors, such as Monsanto, DuPont was trailing. The white paper identified multiple missteps that showed poor corporate governance and a complete lack of effort to maintain market share. For example, Trian criticized DuPont's CEO for selling a large fraction of her shares in DuPont to index funds, which reduced her incentive to maximize DuPont

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[248] Lucian Bebchuk, Alma Cohen and Scott Hirst. The Agency Problems of Institutional Investors (June 1, 2017). Journal of Economic Perspectives, Vol. 31 pp. 89-102 (Summer 2017)., Harvard Law School Olin Discussion Paper No. 930, Available at SSRN: https://ssrn.com/abstract=2982617

[249] Lucian Bebchuk, Alma Cohen and Scott Hirst. The Agency Problems of Institutional Investors (June 1, 2017). Journal of Economic Perspectives, Vol. 31 pp. 89-102 (Summer 2017)., Harvard Law School Olin Discussion Paper No. 930, Available at SSRN: https://ssrn.com/abstract=2982617

[250] Steven Solomon. "Rise of Institutional Investors Raises Questions of Collusion." *The New York Times.* April 12, 2016. Accessible at https://www.nytimes.com/2016/04/13/business/dealbook/rise-of-institutional-investors-raisesquestions-of-collusion.html

[251] Conversations I've had with Evercore.

[252] Trian Partners DuPont deck. February 17, 2015. Accessible at https://www.sec.gov/Archives/edgar/data/30554/000093041315000692/c80358_ex-1.htm

shareholder value. Peltz expressed frustration that "DuPont willingly violated a Monsanto patent, then chose to pay $750m more than required in a settlement, and entered a licensing agreement with Monsanto until 2023, effectively pre-committing future cash flows to the competitor,"[253] according to Oxford Professor Martin Schmalz. DuPont's R&D had also been lacking. Mutual funds voted against Peltz's slate of directors, despite support for Trian from the largest proxy advisory firm Institutional Shareholder Services. The company lost billions in market capitalization, and Monsanto's stock rose 3.5 percent. The vote garnered attention, since BlackRock, Vanguard, and State Street, usually referred to as "passive" investors, played a crucial role in the campaign's failure.[254] Peltz's proxy contest won the votes of most active managers with stakes in the company.[255] Events such as this one have made some researchers believe that not only do passive investors hamper economic productivity, but also stifle healthy competition.

Common Ownership

"Show me the incentive and I will show you the outcome."

—Charlie Munger

The final extension of the corporate governance problem with passive investors is common ownership. In his blog, Schmalz, who authored what could be called the seminal paper on

Dupont (DD)	%	Monsanto (MON)	%
The Vanguard Group, Inc.	5.5	The Vanguard Group, Inc.	6.4
BlackRock Fund Advisors	5.0	BlackRock	5.5
State Street global Advisors	4.9	Fidelity Management & Research Co.	4.7
Capital Research & Management Co.	4.0	State Street global Advisors	4.6
Trian Fund Management LP	2.7	Capital Research & Management Co.	3.3
Fidelity Management & Research Co.	2.5	Sands Capital Management LLC	2.7

Source: https://viewfromoxford.com/how-passive-funds-prevent-competition/

[253] Martin Schmalz. "How common owners change competitive outcomes." *View From Oxford.* May 15, 2015. Accessible at https://viewfromoxford.com/how-passive-funds-prevent-competition/

[254] Martin Schmalz. "How common owners change competitive outcomes." *View From Oxford.* May 15, 2015. Accessible at https://viewfromoxford.com/how-passive-funds-prevent-competition/

[255] Bill Ackman, 2015 Letter to Shareholders, Pershing Square Capital Management LP, January 26, 2016

common ownership years earlier, identified that the major shareholders of both DuPont and Monsanto were the same funds: these were mainly Vanguard, BlackRock, and State Street.[256] Any efforts to increase market share at the expense of profits, such as lowering seed prices or increasing R&D spend, would provide no benefit to the major shareholders of DuPont and Monsanto.

The idea of common ownership is a new paradigm of monopoly power. Under the Adam Smith model, which seems simple today, a firm's purpose is to maximize the wealth of its shareholders.[257] After Milton Friedman penned the eloquently reasoned piece called "The Social Responsibility of Business is to Increase its Profits" published in the *New York Times* magazine in 1970[258], shareholder primacy became synonymous with profit maximization, or the "Friedman Doctrine."[259] Interestingly, Friedman's other works did not assume that shareholder wealth was the same as profits.[260]

However, what happens if one firm's shareholders are the same as their competitor's? Assume Coca-Cola and Pepsi were owned completely by the same person. The two firms would have no reason to compete, and the structure would essentially change the objective function of each firm.[261] Following the Berle and Means principles, some atomistic investor owning both Coca-Cola and Pepsi is no cause for concern. But those dynamics start to change once non-atomistic owners become large and sticky, however.

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[256] Martin Schmalz. "How common owners change competitive outcomes." *View From Oxford.* May 15, 2015. Accessible at https://viewfromoxford.com/how-passive-funds-prevent-competition/

[257] Martin Schmalz presentation at FTC Hearing, Dec. 6, 2018, accessible at https://www.ftc.gov/system/files/documents/public_events/1422929/cpc-hearings-nyu_12-6-18.pdf, page 183

[258] Milton Friedman. "The Social Responsibility of Business is to Increase its Profits." *The New York Times.* September 13, 1970. Accessible at http://umich.edu/~thecore/doc/Friedman.pdf?mod=article_inline

[259] Martin Lipton. "Beyond Friedman's Doctrine: The True Purpose of the Business Corporation." *ProMarket.* September 28, 2020. Accessible at https://promarket.org/2020/09/28/friedman-doctrine-true-purpose-corporation-new-paradigm/

[260] José Azar. The Common Ownership Trilemma (September 10, 2019). Available at SSRN: https://ssrn.com/abstract=3451462

[261] Martin Schmalz. Common-Ownership Concentration and Corporate Conduct

Starting in the 18th century, America's corporate governance regime could be described as a Quaker dominated mercantile class, with many family-run businesses.[262] With the industrial revolution, Robber Barons of the 19th century dominated. After monopoly break-ups, a managerial class then emerged, that was quickly called into question by shareholder activists, like Benjamin Graham. With the introduction of pension funds from the likes of General Motors, and after a string of corporate takeovers, an era of individual shareholder primacy emerged. With the roots planted in 1980, as the bull market ending in the dot-com bubble emerged, "asset manager capitalism," an outgrowth of portfolio theory, prevailed, being fully realized after the 2008 financial crisis.[263]

Table 1: Hallmarks of historical corporate governance regimes

Main shareholders	Robber barons	Households	Pension funds	Asset managers
Concentration of ownership	High	Low	Medium	High
Control of shareholders	Strong	Weak: exit	Medium: exit or voice	Potentially strong: voice, no exit
Portfolio diversification	Low	Low	Medium	High (indexed)
Interest in firms	High	High	Medium	Low
Corp Gov Regime	Finance capitalism	Managerialism	Shareholder primacy	Asset manager capitalism
Growth Regime	Monopoly capitalism	Fordism	Privatized Keynesianism	Asset manager capitalism

Source: Benjamin Braun. "Asset Manager Capitalism as a Corporate Governance Regime." March 2021. Max Planck Institute for the Study of Societies. Accessible at https://osf.io/preprints/socarxiv/v6gue

In 1984, a Harvard professor named Julio Rotemberg became curious about "monopolistic competition," and laid out the theoretical framework by which common ownership would manifest.[264] He concluded that to avoid such anti-competitive effects, policy makers should

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[262] Lewis Braham. *The House That Bogle Built.* McGraw-Hill. 2011. Chapter 14, page 191

[263] Benjamin Braun. "Asset Manager Capitalism as a Corporate Governance Regime." March 2021. Max Planck Institute for the Study of Societies. Accessible at https://osf.io/preprints/socarxiv/v6gue

[264] Jim Aisner. "Harvard Business School Professor Julio Rotemberg Dies at 63." Harvard Business School. April 6, 2017. Accessible at https://www.hbs.edu/news/releases/Pages/professor-julio-rotemberg.aspx

consider taxing portfolio diversification.[265] Farrell (1985) asserted that when firms are held by an individual whose ownership stake is greater than their consumption stake, profits are pursued over consumer surplus. For any of the behemoth mutual funds, that case is met.[266]

Rubin (2006) proposed the theory that diversified shareholders care about industry or economy performance, not individual firm performance.[267] Economically that theory holds in cases such as the Texaco and Pennzoil litigation battle in the early 1900s. The "black knight" Pennzoil litigated Texaco into bankruptcy, winning an $11 billion award, over Texaco's interference in Pennzoil's attempted acquisition of Getty Oil.[268] The deployment of capital for litigation might make sense to a non-diversified shareholder of either firm, but to a diversified shareholder, wealth was being transferred from their pockets to lawyers' pockets. From a societal perspective, this is also probably not favorable (unless you really like lawyers). However, diversified investors should consider that when firms do not pursue profit maximization of their own firm when it comes to product and labor markets, they engender unfavorable conditions for long-term economic growth.[269]

Other contributors to the theory include Hansen and Lott (1996)[270] and Admati, Peiderer, and Zechner (1994),[271] O'Brien, Salop (2000)[272], and Gilo, David, Yossi Moshe, Yossi Spiegel

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[265] Julio Rotemberg. Financial transaction costs and industrial performance. Working Paper. MIT. 1984.

[266] Joseph Farrell. Owners, Consumers, and Efficiency. MIT Department of Economics. May 1985.

[267] Rubin, Amir, 2006, Diversification and corporate decisions, *Corporate Ownership and Control* 3, 209-212.

[268] Robert Lloyd. Pennzoil V. Texaco, Twenty Years After: Lessons For Business Lawyers. University of Tennessee. January 2004.

[269] Rubin, Amir, 2006, Diversification and corporate decisions, *Corporate Ownership and Control* 3, 209-212.

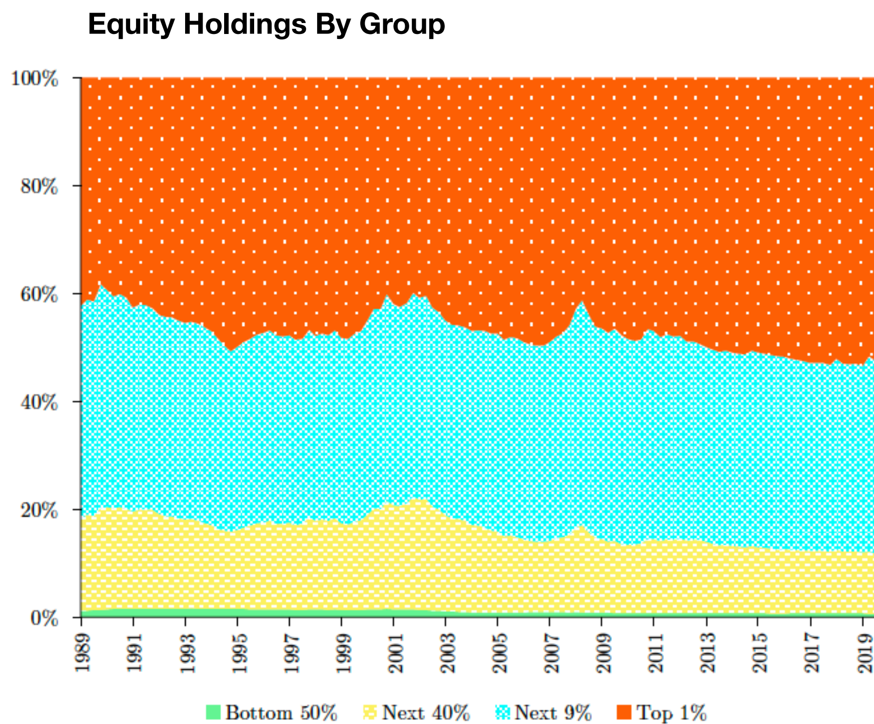
[270] Hansen, Robert G., and John R. Lott, 1996, Externalities and corporate objectives in a world with diversified shareholder/consumers, *Journal of Financial and Quantitative Analysis* 31, 43-68.

[271] Admati, Anat R., Paul Peiderer, and Josef Zechner, 1994, Large shareholder activism, risk sharing, and financial market equilibrium, *Journal of Political Economy* 102, 1097-1130.

[272] O'Brien, Daniel P., and Steven C. Salop, 2000, Competitive effects of partial ownership: Financial interest and corporate control, *Antitrust Law Journal* 67, 559-614.

(2006)[273]. Together, the theory of how diverse and diversified shareholders could change the traditionally accepted objective function of a firm has existed for decades. But in social sciences, measurable effects require a critical mass of evidence.

Now that passive funds hold about half of all public equities, the effects have been observable. If every shareholder was fully diversified (for the sake of argument, consider this to include all public equities), the incentive of every public firm would be to act as an economy-wide monopoly.[274] Around 2014, researchers found empirical evidence that commonly owned firms raised prices in a manner that appears to be oligopolistic.



Source: Benjamin Braun. "Asset Manager Capitalism as a Corporate Governance Regime." March 2021. Max Planck Institute for the Study of Societies. Accessible at https://osf.io/preprints/socarxiv/v6gue

Similar to the regressive interest rate manipulation tax, whereby those who require more cash on hand suffer from dollar devaluation, an economy-wide monopoly also disproportionately

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273 Gilo, David, Yossi Moshe, and Yossi Spiegel, 2006, Partial cross ownership and tacit collusion, *RAND Journal of Economics* 37, 81-99.

274 José Azar. The Common Ownership Trilemma (September 10, 2019). Available at SSRN: https://ssrn.com/abstract=3451462

benefits those who have more money in the stock market over those who cannot afford to save. To put this in perspective, the top 1 percent own 50 percent of the corporate equity and mutual fund shares, and the top 10 per cent own 86 percent.[275] By the same token, lowering interest rates below market dictated levels and mass portfolio diversification create economic inequality. The index fund may be the champion of the individual investor, but it may not be the champion of the individual.

In 2014, University of Michigan Professor Martin Schmalz (who is now at Oxford), economist José Azar who was working at Charles Rivers Associates at the time, and his colleague Isabel Tecu, released a working paper that for the first time showed empirical evidence of anticompetitive effects from diversified shareholdings, by looking at the airlines industry. Azar had been musing on this for years, publishing his first paper on the topic in 2012 in the form of his Princeton PhD thesis.[276] The 2014 "Airlines Paper" concluded that common ownership of airlines was correlated with ticket price increases of 3 to 7 percent.[277] The paper was met with an extreme backlash. For reasons beyond my knowledge, the paper was characterized as evidence of explicit collusion directed by index fund managers. BlackRock's head of policy and stewardship Barbara Novick, who led the lobbying effort to avoid a SIFI designation[278], called it a "sensationalist campaign."[279] Before the paper was even published in the *Journal of Finance* in 2018, Harvard Law Professor Einer Elhauge proposed to use the Clayton Act's Section 7 to prevent firms from owning stakes in competing firms.[280] Professors Eric Posner and Glen Weyl

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[275] Benjamin Braun. "Asset Manager Capitalism as a Corporate Governance Regime." March 2021. Max Planck Institute for the Study of Societies. Accessible at https://osf.io/preprints/socarxiv/v6gue

[276] Eric Posner and Glen Weyl. *Radical Markets.* Princeton University Press. 2018.

[277] José Azar, Martin Schmalz, and Isabel Tecu. Anticompetitive Effects of Common Ownership (May 10, 2018). Journal of Finance, 73(4), 2018, Available at SSRN: https://ssrn.com/abstract=2427345

[278] Dawn Lim. "Barbara Novick, BlackRock's Most Powerful Woman, Is Finally Retiring." *The Wall Street Jounral.* January 13, 2021. Accessible at https://www.wsj.com/articles/barbara-novick-blackrocks-most-powerful-woman-is-finally-retiring-11610546400

[279] ECGI Focus Panel. "Common Ownership: Antitrust Meets Corporate Governance." European Corporate Governance Institute. Accessible at https://www.youtube.com/watch?v=R2Nv6vWb_pI

[280] Elhauge, Einer R., Horizontal Shareholding (March 10, 2016). 109 Harvard Law Review 1267 (2016), Harvard Public Law Working Paper No. 16-17, Available at SSRN: https://ssrn.com/abstract=2632024

from the University of Chicago called the issue “the antitrust challenge of our time.”[281] BlackRock called out Schmalz et al. for not yet publishing their data, which for a yet to be published paper is common. However, such a large debate about an issue in absence of replicability is rare.[282] (They published the data when the paper was published.) Every financial news journal had an article covering the issue. Eric Posner and Glen Weyl later wrote a book in 2020, *Radical Markets*, where they call for “dismembering the octopus.”[283]

What ensued was a mischaracterization of the claims. The debate quickly moved from the theoretical foundations and calculations to questions of whether large index providers were explicitly telling corporations to collude. Recalling Bebchuk’s research on the low engagement rates and poor stewardship of index funds, a clear mechanism or incentive to tell managers to collude is highly questionable. In fact, Bebchuk wrote his own response to the research, not properly identifying the claims, titled “The Misguided Attack on Common Ownership.”[284] Schmalz et al. certainly have never claimed that the fund providers consciously call for collusion. The paper makes the claim that by nature of diversified portfolios that are so large, it is not surprising if competition is dampened. In fact, later publications by the authors have hinted at what is the most reasonable conclusion, which is that the passive nature of the funds actually contributes to the problem.[285]

It is worth noting that the large index providers have*,* on rare occasion, overtly called for product and labor level changes, deviating from the “high level” engagement narrative. In 2018, a group of institutional investors—namely State Street, TIAA’s investment manager Nuveen,

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[281] FTC Prepared Remarks on “Taking Stock: Assessing Common Ownership.” June 1, 2018/ Accessible at https://www.ftc.gov/system/files/documents/public_statements/1382461/phillips_-_taking_stock_6-1-18_0.pdf

[282] ECGI Focus Panel. “Common Ownership: Antitrust Meets Corporate Governance.” European Corporate Governance Institute. Accessible at https://www.youtube.com/watch?v=R2Nv6vWb_pI

[283] Eric Posner and Glen Weyl. *Radical Markets.* Princeton University Press. 2018. Chapter 4, page 59

[284] Bebchuk, Lucian A. and Hirst, Scott, The Misguided Attack on Common Ownership (December 1, 2018). Harvard Public Law Working Paper No. 19-10, Duke Law School Public Law & Legal Theory Series, Available at SSRN: https://ssrn.com/abstract=3298983 or http://dx.doi.org/10.2139/ssrn.3298983

[285] Miguel Anton, Florian Ederer, Mireia Gineand, and Martin Schmalz. Common Ownership, Competition, and Top Management Incentives (November 13, 2020). Ross School of Business Paper No. 1328, European Corporate Governance Institute (ECGI) - Finance Working Paper No. 511/2017, Available at SSRN: https://ssrn.com/abstract=2802332

and some pension funds including CalPERS—banded together to address the two large firearm manufacturers Strum, Ruger & Co and American Outdoor Brands Corp. (Smith & Wesson). They laid out demands that even included product changes. The companies obliged to increasing their reporting on gun violence, but otherwise scoffed at the demands.[286] This voids the theory that the "Big Three" don't at least try to effectuate product-level changes. However, more importantly, the vote-with-one's-feet theory is turned upside down. Previous theorizers believed that since index funds cannot vote with their feet, they would be incentivized to push for changes at companies. But as it turns out, the inability to divest ownership in a company means that managers can ignore shareholder demands.

Nevertheless, Second Amendment fans aren't keen on product changes. Managers in other industries might welcome recommendations. At a panel at the World Economic Forum in Davos, Larry Fink said, "We can tell a company to fire 5000 employees tomorrow or tell a company to do something that maybe is bad for the environment, and if that maximizes return for the company, we did something well."[287] It is clear that index funds *can* effectuate changes, even at the product and labor levels. But ultimately, these funds often don't engage, and their real impact is on lack of managerial incentives. As BlackRock's Barbara Novick has mentioned, airlines make up less than half a percent of their holdings.[288]

The "Airlines Paper" was also attacked for some of its calculations. Some of Schmalz et al.'s colleagues do not think they are the best.[289] Specifically, the method of measuring common ownership, the main explanatory variable in the study, has been called into question. Schmalz et al. use a Modified Herfindahl-Hirschman Index (MHHI) that was developed by Georgetown

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[286] Janet Lorin, John Gittelsohn, and Polly Mosendz. "Investors With $4.8 Trillion Push Gun Industry for Reform." *Bloomberg.* November 14, 2018. Accessible at https://www.bloomberg.com/news/articles/2018-11-14/investors-with-4-8-trillion-push-firearms-industry-for-reform

[287] ProMarket Writers. "Unusual Debate at Davos: Lobbying, Maximizing Shareholder Value and the Duty of CEO's." *ProMarket.* April 1, 2016. Accessible at https://promarket.org/2016/04/01/unusual-debate-at-davos-lobbying-maximizing-shareholders-value-and-the-duty-of-ceos/

[288] ECGI Focus Panel. "Common Ownership: Antitrust Meets Corporate Governance." European Corporate Governance Institute. Accessible at https://www.youtube.com/watch?v=R2Nv6vWb_pI

[289] Conversation with a professor at the Stephen M. Ross School of Business at the University of Michigan

Law professor Steven Salop and then-Deputy Director of FTC's Bureau of Economics[290] Daniel O'Brien in 2000.[291] In 2015, O'Brien wrote a paper that disagreed with how Schmalz et al. had applied the MHHI.[292] The MHHI is built off of the commonly used Herfindahl-Hirschman index (HHI). The HHI is a measure of industry concentration. An industry's HHI is computed by summing the squares of each firm's market share in a defined industry. An industry with a firm that controls 50 percent of the market and with 50 firms that each control 1 percent of the market, would have an HHI slightly above 0.25. In antitrust law, a merger that increases an industry's HHI by 0.02 is considered anti-competitive.[293] The MHHI adds a delta to measure both ownership distributions. Critics have noted that some drivers of the delta and prices are shared. For example, if industry-wide demand rises, capacity restraints of high market share firms could mean that other firms increase their market share of the expanding industry. This leads to a higher MHHI delta, but increased demand is also a reasonable explanation for higher prices.[294]

There have also been criticisms of the data used. The study covers the period from 2002 to 2014. This was a tumultuous time for the airline industry, with at least eleven bankruptcies and five mergers.[295] Unfortunately, studying product market level effects is extremely difficult. There is a reason why Schmalz et al. chose to look at the airlines industry. Airlines are rather unique, in that there are thousands of markets that have cross-sectional variance. Each route is basically a market.[296] If applied to say the beer industry, which shares airlines' homogenous

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[290] Daniel P. O'Brien's Presentation on Common Ownership. December 8, 2018. Accessible at https://www.ftc.gov/news-events/audio-video/audio/daniel-p-obriens-presentation-common-ownership

[291] Daniel P. O'Brien & Steven C. Salop, *Competitive Effects of Partial Ownership: Financial Interest and Corporate Control*, 67 ANTITRUST L.J. 559, 594-602 (2000)

[292] Pauline Kennedy, Daniel P. O'Brien, Minjae Song, and Keith Waehrer, The Competitive Effects of Common Ownership: Economic Foundations and Empirical Evidence (July 24, 2017). Available at SSRN: https://ssrn.com/abstract=3008331 or http://dx.doi.org/10.2139/ssrn.3008331

[293] Thomas Philippon. *The Great Reversal: How America Gave Up On Free Markets.* Belknap Press. 2019.

[294] Thomas Lambert and Michael Sykuta. "Calm Down about Common Ownership." *Cato Institute.* Fall 2018. Accessible at https://www.cato.org/sites/cato.org/files/serials/files/regulation/2018/9/regulation-v41n3-4.pdf

[295] ECGI Focus Panel. "Common Ownership: Antitrust Meets Corporate Governance." European Corporate Governance Institute. Accessible at https://www.youtube.com/watch?v=R2Nv6vWb_pI

[296] Conversation with Martin Schmalz

properties, one could draw a relationship between prices and common ownership levels. However, it ignores the fact that there might be economic or other reasons that explain why some firms are less commonly owned than others. The only other major studies on common ownership have been on generic drugs[297] and retail banking.[298]

The common ownership theory permeated through the financial press. However, it also reached the masses, being much more palpable and personal. Among other economics books, common ownership comes up in the 2020 book *Death's of Despair*, the data-driven *Hillbilly Elegy*, written by economist Economist Anne Case and Nobel Prize winner Angus Deaton.[299] The topic has popped up in the BogleHeads forum.[300]

To contextualize common ownership, the studies have come at a time of rising concentrations of wealth and industry. Before 1980, wealth inequality was growing between the lower and middle class, attributable to the "college premium."[301] After 1980, inequality between the lower and middle classes continued, but the inequality between the middle and upper classes has risen sharply.[302] Perhaps not surprisingly, this has corresponded with a sharp increase in industry concentration. Economists, such as Thomas Philippon, believes that concentration of power and ownership, too often achieved through regulations and lobbying, is the culprit for worsening conditions. It has resulted in growing profits but stagnant wages and lack of investment.[303] At the very least, the common ownership debate has attracted attention over its potential welfare implications.

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[297] Xie, Jin, and Joseph Gerakos. 2020. "The Anticompetitive Effects of Common Ownership: The Case of Paragraph IV Generic Entry." *AEA Papers and Proceedings*, 110: 569-72.

[298] José Azar, Sahil Raina, and Martin Schmalz. Ultimate Ownership and Bank Competition (May 4, 2019). Available at SSRN: https://ssrn.com/abstract=2710252

[299] Anne Case and Angus Deaton. *Deaths Of Despair And The Future Of Capitalism.* Princeton University Press. 2020. Chapter 15

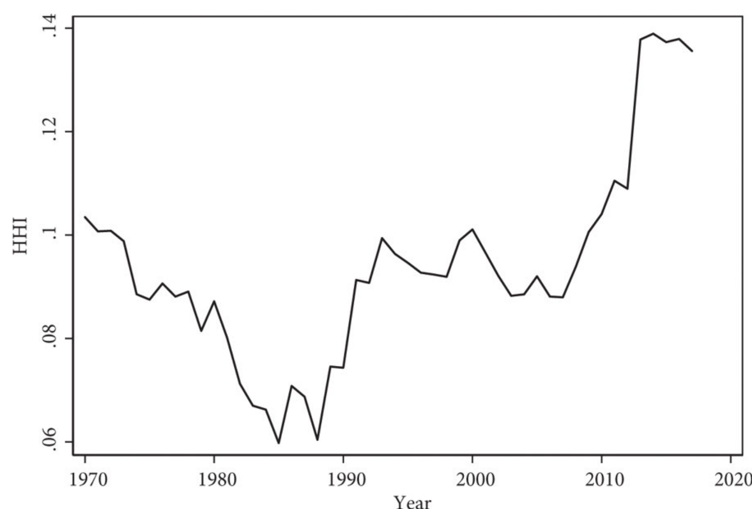
[300] "Is Vanguard anti-competitive?" Bogleheads.org. Accessible at https://www.bogleheads.org/forum/viewtopic.php?f=10&t=249735

[301] Thomas Philippon. *The Great Reversal: How America Gave Up On Free Markets.* Belknap Press. 2019.

[302] Thomas Pikkety. *Capital In the Twenty-First Century*. Belknap Press. 2017. Chapter 9, page 304

[303] Thomas Philippon. *The Great Reversal: How America Gave Up On Free Markets.* Belknap Press. 2019.

United States Airlines HHI



Source: Thomas Philippon. *The Great Reversal: How America Gave Up On Free Markets.* Belknap Press. 2019. Page 62

However, along with the anomalies of the airline industry in the study's years, these other trends complicate the analysis. Interestingly, income inequality, industry concentration, and common ownership trend together, since about 1980. Azar has shown that common ownership is correlated with lower wages ("monopsony').[304] Philippon has shown that firms with higher MHHIs invest less. Those excess funds tend to be allocated to stock buy backs. This trend began around 1990, was not significant until the 2000s, and took off after the 2008 financial crisis. This has occurred despite growing firm profitability.[305]

What is clear is that there is a very strong theoretical framework through which managers are less inclined to compete, due to cross-owning and passive funds. However, it is premature to say that that is how it plays out. Explicit collusion is ruled out. To what extent do managers pay attention to the other holdings of their shareholders? Though Vanguard owns just 9.41 percent of United Airlines, it is the airline's largest shareholder. Does United Airlines consider that Vanguard owns 9.91 percent of Delta? 2.43 percent of United Airlines is owned by JETS, an ETF issued by U.S. Global Investors that is constructed exclusively of airline stocks.[306] United

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[304] Azar, J. A., I. Marinescu, M. I. Steinbaum, and B. Taska (2018). Concentration in US labor markets: Evidence from online vacancy data. NBER Working Paper No. 24395, National Bureau of Economic Research, Cambridge, MA, March.

[305] Thomas Philippon. Investment-less Growth: An Empirical Investigation.

[306] FactSet April 17, 2021

Airline's second largest shareholder is PRIMECAP, which owns 3 to 10 percent of each of the six largest American airlines.[307]

It is very difficult to come to any conclusions. However, it would be a logical progression from these discussions to believe that due to their owners' passive nature, whereby managers face too little monitoring, it would lessen their efforts to steal market share.

Index and mutual funds have no material incentive to either increase or decrease competition within an industry. In fact, José Azar, the researcher who initiated the empirical research on the topic of common ownership, has released a working paper that claims inter-industry effects of common ownership are monopolistic, but are actually outweighed by intra-industry common ownership. In other words, the set of firms that should be considered in a common ownership study should span multiple industries. He concludes the net effect of common ownership is actually reduced prices for airlines.[308] Not only does Vanguard own all the major airlines, but it also owns Expedia and similar firms that rely on airline success for shareholder returns.

The theoretical frameworks are very logical. The empirical evidence shows that at least some effects occur directly related to common ownership. However, I believe there is a larger story taking place. To reconcile the contradictions and weak spots of the common ownership theory such as the lack of explicit collusion and the differences in inter and intra industry effects, there is Charlie Munger's quote: "Show me the incentive, and I will show you the outcome." As previously noted, these behemoths employ tiny teams to oversee stewardship. It is also doubtful that managers would consciously act on the diversified portfolios of their owners. Instead, this appears to be a continuation of the passive theme of index funds not holding managers accountable or even being deferential. Through this lens, it makes sense that the Big Three rarely engage with firms. Managers face low accountability to their major collective shareholders that are deferential to them. As a result, these loosened incentives soften competition.

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[307] Martin Schmalz, Common-Ownership Concentration and Corporate Conduct (May 10, 2018). Annual Review of Financial Economics, Vol. 10, December 2018, CESifo Working Paper Series No. 6908, Available at SSRN: https://ssrn.com/abstract=3046829

[308] Azar, José and Vives, Xavier, Revisiting the Anticompetitive Effects of Common Ownership (March 15, 2021). Available at SSRN: https://ssrn.com/abstract=3805047 or http://dx.doi.org/10.2139/ssrn.3805047

Final Thoughts

"The argument that common ownership could produce anti-competitive effects is certainly a plausible one."
—Burton Malkiel, author of "A Random Walk Down Wall Street" and 28-year board member of Vanguard[309]

In the foreword of Bogle's last book, *Stay the Course: The Story of Vanguard and the Index Revolution,* Burton Malkiel is oddly on the defensive. He spends more time addressing these recent concerns discussed here than extolling the story of himself, Bogle, Vanguard, and index funds. He admits that passive funds are "free-riders" and that the common ownership debate has merits.[310]

What are we to do about index funds? They've enabled the individual to invest in an affordable manner. However, they empower people like Larry Fink. They pose a threat to the proper allocation of capital in the public markets. They have forced the sheriffs of the markets to retire.

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Policy prescriptions to address the capital market or corporate governance distortions are necessarily radical. For example, a University of Chicago professor proposes treating passive funds like a derivatives holder, whereby voting shares would be illegal.[311] Posner argued that the funds should be limited to owning no more than 1 percent in more than one firm in an industry.[312]

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[309] Burton Malkiel in Foreword of John Bogle. *Stay The Course: The Story of Vanguard and the Index Revolution.* Wiley. 2019.

[310] Burton Malkiel in Foreword of John Bogle. *Stay The Course: The Story of Vanguard and the Index Revolution.* Wiley. 2019.

[311] Dorothy S. Lund, The Case Against Passive Shareholder Voting (March 21, 2018). 43 Journal of Corporation Law 493 (2017) , University of Chicago Coase-Sandor Institute for Law & Economics Research Paper No. 829, Available at SSRN: https://ssrn.com/abstract=2992046 or http://dx.doi.org/10.2139/ssrn.2992046

[312] Eric A., Fiona M. Scott Morton, and E. Glen Weyl. 2017. "A proposal to limit the anticompetitive power of institutional investors." *Antitrust Law Journal* 81 (3): 669-728.

Some have also considered break-ups of the index funds. An antimonopoly sentiment is growing in the American public. The academic leaders are calling themselves the "New Brandeis Movement," named after classical liberal Supreme Court Justice Louis Brandeis, who coined the phrase "the curse of bigness."[313] This sentiment is mostly directed at technology, banks, tele-communications, and basically any super concentrated industry that is top of mind[314], which seems to exclude BlackRock and Vanguard. Today's economic situation—growing corporate profits, industry concentration, and stagnant wages—provides fertile ground for public support. Even Friedrich Hayek supported break-ups when necessary, quoting Franklin Delano Roosevelt's 1938 speech calling for a break-up of the steel industry in the prologue of *The Road To Serfdom*.[315] But the political power and real benefits of low-cost mutual funds precludes antitrust action. It is also necessary to consider if a set of dispersed passive funds that in aggregate are the same size as they were before would materially shift corporate influence to active investors.

There is some small hope in executive compensation changes, whereby incentives would be internalized. Renumeration packages that include relative performance compensation would strongly incentivize companies to compete. As it stands, stock options indexed against competitor stock or an industry index are essentially illegal. They are subject to prohibitive taxes since if they are in-the-money when granted, the authorities tax that difference immediately and also impose a 20 percent penalty.[316] Overturning that regulation, assuming it is implemented, could help mitigate the common ownership concerns and stir meaningful R&D spending. Of course, benchmarks have flaws, so calibration would be necessary.

Ultimately, however, there is still a principal-agents problem. Changing compensation packages could only mitigate, but not eliminate, the mismatch in incentives. Therefore, proposals of entirely "new" styles of corporate governance should be considered.

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[313] Jeffrey Rosen. "The Curse of Bigness." *The Atlantic.* June 3, 2016. Accessible at https://www.theatlantic.com/politics/archive/2016/06/the-forgotten-wisdom-of-louis-d-brandeis/485477/

[314] David Dayen. "This Budding Movement Wants to Smash Monopolies." *The* Nation. April 4, 2017. Accessible at https://www.thenation.com/article/archive/this-budding-movement-wants-to-smash-monopolies/

[315] Friedrich Hayek. *Road To Serfdom.* George Routledge & Sons. 1994. Prologue

[316] Robert Pozen. "A Nobel Idea to Pay CEOs What They're Actually Worth." *The Wall Street* Journal. Accessible at https://www.wsj.com/articles/a-nobel-idea-to-pay-ceos-what-theyre-actually-worth-1479168732

"It is contagion that determines the fate of a theory in social science, not its validity."[317]

—Nassim Taleb, The Black Swan

We are taught that capital markets are axiomatically there to aid in the allocation of capital. This *a priori* reasoning is used to suggest that there *must* always be active managers. Markets are as old as time, but public markets are somewhat new. The Buttonwood Agreement, signed on May 17, 1792, is the founding document of the New York Stock Exchange.[318] The S&P 500 did not exist until March 4, 1957.[319] Markets have never been structured with half of the decision makers not knowing what they are buying, which is where we find ourselves today.

"This is very much like the bubble in synthetic asset-backed CDOs before the Great Financial Crisis in that price-setting in that market was not done by fundamental security-level analysis, but by massive capital flows based on Nobel-approved models of risk that proved to be untrue."[320]

—Michael Burry, the man who shorted the market in 2008 and subject of The Big Short by Michael Lewis

Since the retail index fund was invented in 1976, it took until 1990 for index funds to make up 6 percent of Vanguard's funds. They now account for more than 74 percent of Vanguard's funds.[321] 80 percent of inflows into 401(k)s are now target date funds. Vanguard controls 40 percent of the target date fund market.[322] IRAs and 401(k)s have seen minimal outflows, as the

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[317] Nassim Taleb. *The Black Swan: The Impact of the Highlight* Improbable. Random House. 2007. Page 277

[318] Bob Pisani. "This single-paged document started the New York Stock Exchange 225 years ago" *CNBC.* May 17, 2017. Accessible at https://www.cnbc.com/2017/05/17/this-single-paged-document-started-the-new-york-stock-exchange-225-years-ago.html

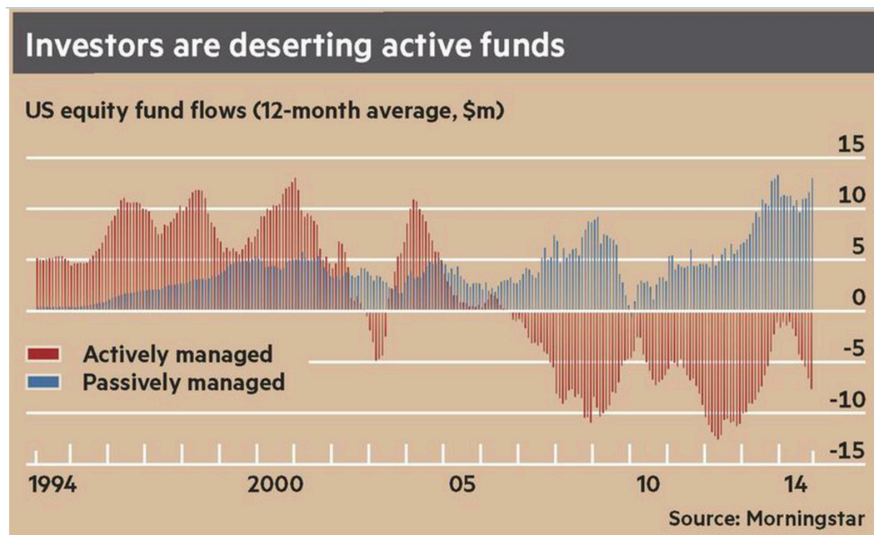
[319] Caroline Valetkevitch. "Key dates and milestones in the S&P 500's history" Reuters. May 6, 2013. Accessible at https://www.reuters.com/article/us-usa-stocks-sp-timeline-idUSBRE9450WL20130506

[320] Reed Stevenson. "The Big Short's Michael Burry Explains Why Index Funds Are Like Subprime CDOs." *Bloomberg* Quint. September 4, 2019. Accessible at https://www.bloombergquint.com/markets/michael-burry-explains-why-index-funds-are-like-subprime-cdos

[321] John Bogle. *Stay The Course: The Story of Vanguard and the Index Revolution.* Wiley. 2019. Page 263

[322] Mike Green on Narratives Podcast. "Episode 33: Passive Investing, and China Conflict with Mike Green." May 15, 2021. Accessible at https://www.youtube.com/watch?v=E8HdWoPLLyc

Baby Boomers who were the first to invest through them are still mostly below the age of required withdrawal.



Source: Marc Faber. Gloom Doom Boom Report. October 2016

The 401(k) was introduced in 1978 and the IRA was introduced in 1974. A total of 47 years have passed since then. The twenty-something workers starting out at the advent of those retirement plans are now around 70 years old. For their entire lives, they have been contributing a portion of their paycheck every two weeks or so. As their contributions have increasingly gone to index funds, these have been non-discretionary purchases. In the history of the 401(k) and IRA, there have been no major outflows. December 2018 saw the largest withdrawals in history from the United States' equity market, as some Silent Generation who were transferred from defined benefit plans to defined contributions plans, as well as the oldest Boomers started withdrawing. With the passage of the SECURE Act, the required starting withdrawal age was extended from 70.5 to 72. Come 2022, much larger outflows will occur when a larger mass of Baby Boomers start withdrawing from their retirement plans.[323] The index funds have never witnessed a seismic outflow, and what that means for the public market is frightening.

[323] Mike Green on The Acquirers Podcast. "Ep. 55 Michael Green – Passive Agro, Passive Risks To The Market, Shorting XIV, And What's A Value Guy To Do?" March 2, 2020. Accessible at https://acquirersmultiple.com/2020/03/ep-55-the-acquirers-podcast-michael-green-passive-agro-passive-risks-to-the-market-shorting-xiv-and-whats-a-value-guy-to-do/

"The directors of [public] companies, however, being the managers rather of other people's money than of their own, it cannot well be expected that they should watch over it with the same anxious vigilance with which the partners in a private copartnery frequently watch over their own."[324]

—Adam Smith, The Wealth of Nations

In Adolf Berle and Gardiner Means' *Modern Corporation and Private Property*, they cite the worrisome "revolution" of the "separation of ownership from control." Mutual fund providers are asset gathering machines, not fiduciaries. Using the cash-in-buy and cash-out-sell algorithm, indexes don't consider fundamentals. With merely a few dozen staff for stewardship, these funds don't hold managers accountable. Regulation cannot change the underlying incentives, and while index funds control the narrative and the government, regulation is not viable.

Therefore, structural changes in ownership regimes and corporate governance are required to solve the problem. Deriving insights from Christopher Alexander's *The Timeless Way of Building* and the economist Elinor Ostrom's political economy of the commons, Marjorie Kelly, who has dedicated her life to studying local wealth creation, weaves together many ideologies that have previously been presented as mutually exclusive: the proletariat owning the means of production, mutualism and collectivism, and anarcho-capitalism. Ultimately, Kelly provides a path to increasing one's "skin in the game." This is a good place to start in addressing the issues with passive investors.

In her book, *Owning Our Future*, Kelly examines small grassroots movements that redefine ownership. For example, while most companies will try to minimize what they pay to their suppliers, the opposite is true at Organic Valley, a company that posted $1.1 billion in sales last year.[325] That's because the suppliers own the company. They issue only preferred stock to outside investors. Many other forms of ownership exist, such as a New Hampshire trailer park that pooled their assets to buy the land they lived on when facing eviction. SC Johnson is founder owned. Minwind, a Minnesota wind farm, is community owned. Kelly also writes about

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[324] Adam Smith. *An Inquiry Into the Nature and Causes of the Wealth of Nations.* University of Chicago Press. 2008. Book 5: Of the Revenue of the Sovereign or Commonwealth. Chapter I: Of the Expenses of the Sovereign or Commonwealth. Page 990.

[325] "Organic Valley exceeds $1.1 billion in sales for fourth consecutive year." *Lacrosse Tribune.* May 17, 2020. Accessible at https://lacrossetribune.com/community/vernonbroadcaster/news/organic-valley-exceeds-1-1-billion-in-sales-for-fourth-consecutive-year/article_7dc594fe-9d8c-567b-a928-33593dab21a8.html

the John Lewis Partnership in the United Kingdom, that is employee owned. While visiting, Kelly picked out a salesman who wore a bow-tie to work, a manifestation of the knowledge that his actions in the corporate setting directly impact his well-being. The principal and agent have been merged.

"You could trace the biggest financial crisis in the history of the world back to [the decision of John Gutfreund to turn] Salomon Brothers from a private partnership into Wall Street's first public corporation."[326]

—Michael Lewis, The Big Short

When the 2008 financial crisis occurred, community banks and credit unions fared better than their too-big-to-fail counterparts. For example, a North Carolina bank called Self-Help Credit Union was a member-owned credit union. Over 15 years, it had processed close to $6 billion in mortgage loans to underserved communities, the same subprime borrowers that constituted the "equity" tranche in mortgage-back collateralized debt obligations (or in the synthetic CDO, the credit default swap). While lawyers and bankers had no clue what they were buying, they saw their banks collapse. By contrast, Self-Help, like most of the 8,000 consumer owned credit unions in the United States, required no bailouts whatsoever. Community banks were the only sector of the banking industry to show growth in lending in the early post-crash period. Many of these lenders didn't quickly sell off the mortgages like a hot potato, but kept them on their balance sheets. They had skin in the game. The bank Kelly uses, Beverly Cooperative Bank, had just ten foreclosures during the period of the crisis. Unfortunately, regulators slapped burdensome capital requirements on them and sent auditors after them. Moving forward, it might serve us well to remember the Bailey Building and Loan mutual bank from *It's A Beautiful Life.*[327]

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326 Michael Lewis. *The Big Short: Inside the Doomsday Machine*. W.W. Norton & Company, 2010. Page 304

[327] Marjorie Kelly. *Owning Our Future.* Berrett-Koehler Publishers. 2012.

"Most fundamental of all, the position of ownership has changed from that of an active to that of a passive agent. In place of actual physical properties over which the owner could exercise direction and for which he was responsible, the owner now holds a piece of paper representing a set of rights and expectations with respect to an enterprise. But over the enterprise and over the physical property—the instruments of production—in which he has an interest, the owner has little control. At the same time he bears no responsibility with respect to the enterprise or its physical property. It has often been said that the owner of a horse is responsible. If the horse lives he must feed it. If the horse dies he must bury it. No such responsibility attaches to a share of stock. The owner is practically powerless through his own efforts to affect the underlying property."[328]

—Adolf Berle and Gardiner Means, The Modern Corporation and Private Property

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[328] Adolf Berle and Gardiner Means, *The Modern Corporation and Private Property.* Transaction Publishers,1999, originally published in 1932 by Harcourt, Brace & World, Inc. Chapter IV: The Dispersion of Stock Ownership, page 64