Non-zero Outcomes in the Information Age

Broadening the Definition of Fiduciary Duty for the Mindful Investor and Company

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Transactions between companies and customers in a capitalist system can often be explained by the economic concept of game theory. Assuming people and companies are acting rationally (not always a safe assumption, but it works for the discussion here), game theory provides a strategy for logical decision making to maximize outcomes for participants. A zero-sum outcome is one where every time one person wins, another person loses equally. A negative non-zero-sum (NZS) outcome implies all parties net out to being worse off. We are focused on positive NZS outcomes wherein a decision made by one party improves, on the whole, all parties involved. Historically, game theory takes into account only the obvious players impacted by the decision. However, we argue here that this legacy way of playing the game of capitalism is increasingly dangerous. Instead, companies and consumers need to take into account the impact of their decisions on the silent players of the game – the environment and society as a whole. In this broader context, the idea of fiduciary duty, a loosely defined term governing how a company or investor operates with a duty to their investors, must be broadened to include a larger set of players and impact. Once you make that leap in logic, it highlights the rising vulnerability of many companies and investors. We have seen, with rising frequency, examples of management teams and investors rooted in "Industrial Age logic" that will no longer produce value for their constituents, which constitutes a breach of fiduciary duty in the 21st century.

In the paper *Complexity Investing*, first made public in 2014, we argued that investors and corporate strategies that were overly focused on legacy concepts of "barriers to entry" and "competitive moats" are missing the more important characteristic of NZS outcomes, or win-win results. Here is an excerpt from the paper:

> A company that operates a platform focused on creating value for all participants, including itself, is creating large amounts of NZS. Specifically, when companies create significantly more value for their ecosystem than for their own treasury, the win-win positive spiral is optimal. The relative level of NZS between customers and companies is generally more important than the absolute level – it will vary by industry.
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> As transparency and the velocity of information sharing increase in the world, it will become increasingly challenging for companies to extract positive sums from their customers. While traditional investors seek businesses with "high barriers"

and “wide moats,” we believe this practice is misinformed. A barrier or moat today becomes a vulnerability tomorrow. Rather than create large barriers (which often turn out to be temporary and/or artificial), companies should focus on maximizing NZS.

Long-term thinking (beyond 5 years) is crucial for creating NZS because shorter-term sacrifices are often required. Significant ongoing, long-term investments are also required to continue innovation and non-zero value creation.

Companies that are disrupting large, established markets often do so with a value proposition that offers more opportunity for NZS. Often these companies are attacking an industry with large existing switching barriers, which allows the challenger to grow slowly (small position in a very large, addressable market with the negative feedback loop of high switching costs) and invest for the long term with a disruptive model that creates more NZS for the ecosystem constituents.

For further context on the idea of NZS, Robert Wright in his book “Nonzero: The Logic of Human Destiny” notes:

> In short, both organic and human history involve the playing of ever-more-numerous, ever-larger, and ever-more-elaborate non-zero-sum games. It is the accumulation of these games—game upon game upon game that constitutes the growth in biological and social complexity...I like to refer to this accumulation as an accumulation of "non-zero-sumness." Non-zero-sumness is a kind of potential—a potential for overall gain, or for overall loss, depending on how the game is played.

If you will allow us to get a little bit more technical on game theory, the concept of Pareto efficient outcomes is an important factor in increasing NZS outcomes. For anyone who slept through the economics class on game theory, a Pareto efficient game outcome implies that no decision would make any one party better off without making another party worse off. In other words, we think of it as the point at which you stop creating NZS or positive-sum, win-win outcomes. Further, in our context, a Pareto optimal outcome is one in which any further changes in a transaction between a company and its constituents no longer produces more NZS.

So, what does that mean for investors, boards, and management teams? In terms of traditional ways of running a business, we argued in *Complexity Investing* that it does not always make sense to maximize pricing or earnings short term. Instead, a clear focus on long-term goals, innovation, and creating win-win outcomes are more important. In that context we argued for looking more broadly at a company and its interactions with customers, suppliers, employees, and shareholders – the more obvious upstream and downstream players in the game theory outcome.

In the first couple of centuries of capitalism as we know it, the Pareto optimal outcome for a company selling a widget to a customer generally assumed that you charge as much as a customer is willing to pay for the product. This generally involved exploiting some sort of information advantage – you had knowledge your customers didn't have that allowed you to make an outsized return on a supply chain, brand, or pool of data. These are largely the pillars of Michael Porter's "5 Forces" of competitive advantage, which we believe are increasingly tenuous in the modern era of capitalism. In the rising transparency of the Information Age and velocity with which information now travels, these legacy exploitations to maximize shareholder returns not only fall short, but can become an Achilles' heel for companies and their employees, shareholders, suppliers, etc.

Our view of Pareto optimal outcomes in the 21st century Information Age, which we covered in *Complexity Investing* 5 years ago, defined win-win outcomes as creating more value for your constituents (customers, employees, suppliers) than for the company itself. This somewhat paradoxical strategy is often seen inside the big Internet platforms – in some ways the creators, or at least commercializers, of the Information Age. The compounding externalities of products like Google Search, Amazon Web Services, Microsoft's Azure cloud computing platform, Netflix are obvious – customers save while also receiving a better solution to the legacy alternatives.

Our view has evolved since then, and we feel we did not go far enough in *Complexity Investing* when discussing NZS and optimal outcomes. Although we alluded to a broader context of game theory participants with an example on fast food ("Another example is fast food – it is quite cheap and appears to offer a NZS scenario, but when you take into account the long term healthcare costs and burden to society, it is not Pareto optimal."), time has enabled us to see that company strategy must take into account the broader consequences of the environment and social impact of their products. The players of the game are no longer just a board of directors and a set of equity shareholders. The players of the game in the 21st century include our planet, the environment, society at large, and every human, animal, and plant on earth!

You can get wrapped up in a web of unintended consequences given the interconnectedness and complexity of the global economy – so rather than becoming too paralyzed to make any decision lest you harm a flea on the back of a rodent in some distant land – perhaps we need to simplify the situation. A simple question can help in the decision process to maximize NZS for the long term: "Are we creating more value for our constituents than for ourselves?" Here constituents includes employees, customers, shareholders, suppliers, the environment, and the broader social context. If a decision significantly makes one of these players worse off in order to grow corporate free cash flow in the short term, it's probably not the best decision.

Microsoft CEO Satya Nadella highlights this strategy perfectly in comments to industry analysts in January of 2019:

> "...so that's why I'm not one of those guys who celebrates some market cap measure because I think all of that is – I mean that's just not stable, at least not

with our business model – because our business model fundamentally is about creating more surplus outside us. We will only be long term successful if people are making more money around us.

"...simply put for a multinational company we have to accept that unless you are really adding an economic service in every country you are operating in, truly, that is measured by employment, measured by taxes you pay, measured by essentially all of the prosperity around your activity that gets created locally, if that is not true, I just don't see how the world just kind of says "let's just go back to this thing". I mean basically, look, globalization was fantastic except that it hollowed out the middle in many parts, not just in the United States, but all over the world and given that, I think everybody is going to be looking to say, "Ok how do I get back?" and the equation between innovation and democracy or whatever form of government they have and economic prosperity that's broadspread because that's the only way to stay in power and so given that we as a business community better be sure we are in harmony with those goals.

"...It means structuring simply a business model that allows you to create for every dollar that you make multiple orders of dollars beyond that in our channel broadly speaking. What are the local startups? What are the localized feeds? Who are the local SI's? What's the total employment digital skills inside of the companies?"

To contrast this idealized view of a NZS-driven corporate strategy, we were struck by news of activist hedge fund investors who claimed a board of a public company filing for bankruptcy had a singular duty to equity holders only. The specific company and investor involved here is less important than the illustration of a growing naivete on the part of investors who fail to see a broader duty for corporate boards emerging that encompasses both social and environmental issues. If a company neglects needed investment, perhaps even endangering lives or harming the environment, in order to maintain high dividends and share repurchases, such a company will likely find themselves without customers and perhaps even bankrupt long term.

We have largely focused on the consequences of a broader definition of fiduciary duty encompassing more players of the game for higher NZS outcomes, but there is a clear analogy to investors as well. As investors, we not only need to support and push management teams toward higher NZS decisions with broader constituents, we ourselves need to assure we are making decisions that create more value for our investors – active managers should not earn fees when they serially underperform benchmarks after fees. Whether we are managing a hedge fund, mutual fund, or act as an investment advisor or consultant in the industry, our customers need to win more than we win. That means aligning portfolio construction with the goal of long-term positive outcomes. It also means investing in companies that understand the rapidly evolving and highly complex world we operate in – companies that are accounting for all possible players in the game for optimal win-win outcomes. This also means lower initial management fees with a higher degree of alignment on performance fees tied to long-term value creation. Further, the employees and corporate structure of an investment firm need to

take into account the same broader set of constituents as we recommend corporate boards and managements contemplate.

These last points are increasingly important as younger investors demand more accountability from the companies they work with and work for. The following is excerpted from Blackrock's annual letter to CEOs of companies they invest in:

> Companies that fulfill their purpose and responsibilities to stakeholders reap rewards over the long-term. Companies that ignore them stumble and fail. This dynamic is becoming increasingly apparent as the public holds companies to more exacting standards. And it will continue to accelerate as millennials – who today represent 35 percent of the workforce – express new expectations of the companies they work for, buy from, and invest in...
> In the years to come, the sentiments of these generations will drive not only their decisions as employees but also as investors, with the world undergoing the largest transfer of wealth in history: $24 trillion from baby boomers to millennials. As wealth shifts and investing preferences change, environmental, social, and governance issues will be increasingly material to corporate valuations.

The Paradox of Platforms and NZS

Before concluding, there is an important point to make regarding platform businesses that are growing to dominate capitalism in the 21st century. We expanded considerably on this topic in *Complexity Investing*, so will briefly set the table for a discussion here on NZS and platforms. When we talk about platforms, we are discussing those businesses that drive significant network effects or positive flywheel outcomes where the bigger they get, the bigger they get, and so on. For example, as Netflix obtains more data on viewing habits, it informs their spending on content, which drives more viewers, which drivers more data, etc. Likewise, as more people use Google's products like search and maps, these products become smarter and drive more usage, which allows them to be smarter, etc.

The heart of this trend is data. Data feed artificial intelligence, which feeds decision making, which tends to make successful companies even more successful. This is the power law math that we discussed at length which governs complex adaptive systems such as the global economy. The paradox is that we have already seen many companies who generate significant amounts of NZS fall victim to questionable decision making as they grow more and more powerful. Examples abound of abuse of privacy, environmental damage, or unnecessary increases in social inequality.

This problem of high NZS outcomes co-existing alongside the risk of abuse of power by large network effect platforms in the digital age calls for a high degree of mindful and conscious decision making by boards, management teams, and investors. When a decision is made to collect and leverage certain types of data, we have to ask whether the long-term optimal outcome will be derived from the decisions we make today. If we foresee potential for a

zero-sum or negative-sum outcome, we have to rethink the decision. As Satya Nadella stated in the prior quote, worth repeating here:

> "...simply put for a multinational company we have to accept that unless you are really adding an economic service in every country you are operating in, truly, that is measured by employment, measured by taxes you pay, measured by essentially all of the prosperity around your activity that gets created locally, if that is not true, I just don't see how the world just kind of says "let's just go back to this thing."

Conclusion

Our goal here is to convince economic actors – specifically boards, management teams, and investors – to think much more broadly about business and investment decisions. While we used to generally try to optimize for two players in a game – company and customer or mutual fund and investor, for example – that is no longer sufficient. The definition of fiduciary duty is changing in the 21st century and now includes disclosure of a wide range of bad behaviors. Transparency is rising and the velocity of information requires a focus on long-term non-zero-sum-maximizing decisions. Those decisions often, paradoxically, do not maximize traditional measures of shareholder returns in the short term, but will create bigger and stronger companies longer term that have an ability to more positively impact society and the environment. This critical type of thinking requires a high degree of mindful and conscious decision making with longer time horizons. Reorienting a corporate culture toward a long-term decision making framework is crucial to success, and that reorientation must start at the top of an organization and align incentives all the way down to impact even the smallest of decisions. Rather than become paralyzed by a series of compounding unintended consequences of every decision no matter how big or small, we argue to take into account your employees, customers, suppliers, and the broader environment and social consequences and simply ask the question: "Are we creating more value for our constituents than for ourselves?"

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