Letter to Clients
February, 2018

Ch-ch-ch-ch-Changes

"Turn and face the strange."

David Bowie, "Changes"

How should an investor process disruptive change? What should a company do when faced with a strange new competitive landscape? While these are perennial questions for investors and companies alike, they seem especially urgent when the winds of change, mostly but not exclusively driven by advances in technology, feel like they're sustained and gaining in intensity, creating a gale of transformation. Yet while change presents pitfalls as well as opportunities for both businesses and investors, the correct response to it is often less than clear. In our search for companies that can earn above market returns on capital and equity over the long term, it's our job to understand changes in a company's operating environment and to assess, in the face of an uncertain future, whether that company's approach to those changes is too little, too much or just about right—and, indeed, whether the changes afoot are so profound as to compromise a company's business model entirely. While we're sure there's been lots of academic time and thought devoted to these issues, we have little patience for theory. Instead, we'd like to lay out what we do in practice.

A Change Is Gonna Come*

Change is inevitable but there are numerous reasons why assessing it and its implications in the context of investing is so tricky. Change (and we're really talking here about significant change) comes in many forms and it rarely observes the social niceties. It can be noisy, chaotic, disorderly, and haphazard. It can also proceed with stealth, in fits and starts, or abruptly dissipate, leaving little trace. Every era contends with its own array of changes, whether they're apparent in the moment or only in hindsight. One of the reasons we like companies that are resilient—that have flexibility built into their business models and that have developed cultures that are tolerant of change—is that the world is never static; it exists in a constant state of flux, punctuated by periodic seismic events. A company that's not fleet on its feet and that's too rigid to adapt to evolving circumstances is too brittle to reliably survive change and continue to prosper. But even the most strategically adept company can founder if it finds itself in the crosshairs of sweeping change that fundamentally redefines its industry.

One can argue whether or not we're in a period of accelerating change, but it seems abundantly clear that today we're in a period of intense observable change. The way we conduct our personal and economic lives is, in many cases, measurably different from how we lived a mere fifteen years ago. Look no further than the ubiquity and allure of personal technology devices, the ability to do remotely what used to require a physical presence, and the increasingly sophisticated deployment of robotics and artificial intelligence in a wide range of settings and applications. But the kinds of marquee changes that produce breathless predictions of paradigm shifts don't always end up producing the expected result. For example, in some ways, the most profound consequence of the high tech revolution is the democratization of certain functions such as logistics across companies, placing less well run companies on more even footing in competing with their rivals and thereby refocusing the competitive battle onto other capabilities. The fact that those logistics innovations allow for better inventory management and faster fulfillment is great for customers but less significant to the long-run success of an individual company once everyone can do it.

As this example illustrates, further complicating any analysis of change and its likely impacts is that change does not occur in a closed system, and the response to it is typically dynamic. Those feeling its negative impact—brick-and-mortar retail, for example, in the face of competition from Amazon and the like—tend to respond and adapt. The feedback effects of change can produce a whirlpool of confusion and generate an iterative process whereby adaptation on both sides of the divide results in the convergence of business models (as is happening today in some corners of retail) that may or may not prove out over time. Questions of first-, second-, and third-mover advantage and the adaptability of strategic direction necessarily come into play, on the one hand, as do questions of lock-in due to issues of culture and existing asset base, on the other. While the spirit may be willing to change, pre-existing commitments and investments may weaken the capacity to do so.

Them Changes*

It is in this context that we as investors must cut through the weeds and ultimately answer four key questions—to the best of our ability, at least—in order to assess the implications of change on both current and prospective holdings:

- *Is the change in question temporary or enduring?* This is an important threshold question. As long-term investors, secular change matters, but temporary change does not (or not much). While temporary change is what provides us with investment fodder—stock market participants that misgauge the permanence of a change can help weaken the stock price—it's of no big practical significance when it comes to an analysis of the long-term viability of a company. The importance of this distinction underlies the question of whether **Chipotle**, for example, is a compelling investment or an ambitious concept that can't live up to its promise. If the food safety scares that laid waste to the company's stock price are endemic to the chain or, even if not endemic, if those scares are sufficient to have permanently changed consumer perception of the brand, then investors are right to flee the stock. But if those scares are limited in scope, if processes can be put into place to avoid them in the future, and if the brand is sufficiently resilient, then the problem is likely of only temporary importance.

- *Is the change occurring over a time period that matters?* If the change is slow enough, even if it's a meaningful change, it might either lie beyond our investment horizon or be gradual enough to allow for successful adaptation by those in its cross-hairs. For example, the advent of electric trucks is a potential threat to **Cummins** and the diesel and gas-powered engines it produces. Yet for all the hoopla surrounding the Tesla semi-truck (which purportedly has a 500 mile range on a single charge and, according to Elon Musk, will "blow your mind clear out of your skull and into an alternate dimension"), it is not at all clear that certain structural impediments to its widespread adoption have been resolved—or are even close to resolution—including (but not limited to) the heavy weight of the lithium battery that would be required to power it, the lack of network density of recharging stations, the amount of time required for a recharge, the cost to run versus relatively cheap diesel fuel, and so on. Obviously, the question is the timeframe over which such impediments are likely to be addressed and whether Cummins has enough time in the interim to anticipate and respond to the threat. The caveat here—and the reason not to dismiss out of hand a change whose impact looks like it will only be felt far in the future—is that even if change is likely to take place over a very long time, if the market understands that, it will begin to factor that into the price of a company/industry well in advance of the change coming to fruition. In addition, slow-moving change can accelerate unexpectedly once it reaches a tipping point of adoption.

- *What is the meaning of the change?* Maybe the most critical of these questions, as well as perhaps the most difficult to answer, is what the change really means for individual industries and companies. Sometimes change looks to be momentous and all-encompassing but when you consider what it might actually mean in practice to real

21 Dupont Circle NW, Suite 500 Washington, DC 20036 202.828.6200 (6208 fax) www.marshfieldinc.com

companies doing real things, its threat potential needs to be reassessed. Retail provides an example. Clearly, the ability to shop on the internet has put pressure on traditional brick-and-mortar retailers that compete directly with online vendors. But before signing the death certificate for all old-school retailers, you have to differentiate between the kinds of sales that can be successfully conducted at a distance and the kinds of sales that might continue to be successful in the physical domain. We can think of two categories of products that are not easily disintermediated by the internet: those requiring a service component, immediate fulfillment, and breadth of stock (such as **AutoZone** and **O'Reilly** offer in the auto parts realm) and those too inexpensive to justify delivery costs (**Ross Stores**). On the other side of the ledger, sometimes change might look to be minimal but its practical implications can be huge. Wells Fargo exemplifies this kind of stealth game-change. Some years ago, Wells introduced what at the time was a revolutionary concept of cross-selling banking products, an approach that was soon adopted by much of the retail banking industry. While Wells' inching up its cross-selling goal to eight services from six or seven a few years back appeared to be a modest shift of little real consequence, it resulted in a target that was hard to hit and, combined with a misaligned incentive system, laid the groundwork for the fake account scandal that continues to roil the firm.

- *Is the company reacting to change—whether as a threat or an opportunity—appropriately*? Finally, it's important to understand what a company is doing to respond to the change in question. If it's in the position to exploit a change to its advantage, is it doing so? If the change represents more risk than opportunity, is it addressing that threat with sufficient speed and seriousness? Are there other players with which it competes that are taking a different—and better—approach to these matters? A good example of these issues lies in so-called fintech, which encompasses everything from algorithm-based robo-advisers and "smart beta" portfolios to online lending and cryptocurrency trading. It's been getting a lot of attention recently, raising questions about the continued vitality of more traditional offerings in the advisory and banking spaces. As the early reports of start-ups poised to disintermediate traditional financial businesses started surfacing, **Goldman Sachs** had little public reaction. Over time, though, Goldman has made small but deliberate forays into fintech that suggest it's looking both to open new avenues for growth (as in the case of Marcus, its online lending platform) and take a defensive posture in the event these new technologies gain traction (as in the case of setting up a trading desk to make markets in bitcoin and similar currencies). Nothing about their response seems panicky, and in true Goldman fashion, they've both taken their time to develop technology in-house and been circumspect in their approach (e.g., they've required many customers to set aside assets equal to the full

21 Dupont Circle NW, Suite 500 Washington, DC 20036 202.828.6200 (6208 fax) www.marshfieldinc.com

value of their bitcoin futures trade). The question is, of course, whether they're doing enough in the face of what could be a slow-moving takeover of traditional lending and advisory services.

Visa and **MasterCard**, both of which operate in the fast-evolving payments space, have taken a slightly different, but equally measured approach to the ferment in their industry. At the core of each of their businesses are the "rails" across which payments travel. Because replicating those rails would be tantamount to building a whole new railroad, much of the threat they face from technological change is in more peripheral parts of their business. But since they can play defense with the best of them, they each spend a fair amount on R & D in order to keep pace with outside innovators. They also have a robust acquisition strategy aimed at picking off those innovations that they see as likely to be successful. As with Goldman, the question is whether they're doing the right things, both offensively and defensively, to address what lies ahead.

Gonna Change My Way of Thinking*

In thinking about change—and in particular the kinds of significant, upset-the-apple-cart kind of change we're talking about here—it is essential to accept that there can be no definitive answer to the above questions. It's therefore important to think more as a handicapper than as a point-estimate prognosticator. A necessary part of the analysis of any company, even one in a very stable business, is a forward projection of what the industry and company are likely to look like in the future, something that necessarily involves uncertainty. But overlaying this kind of analysis with the consideration of potentially huge disruptive change both expands the set of possible outcomes and increases the complexity of the analysis—and therefore the likelihood of being wrong. Notwithstanding this, we as investors must wrestle with these questions all the time.

We use a number of tools to try to handicap the outcome of potential game-changing trends. And while these tools are imperfect, they at least allow us to draw certain conclusions: first, they let us determine whether the level of uncertainty is so high and the potential consequences of being wrong so grave that we have no business making the investment (or keeping the company); second, they allow us to bound the array of likely outcomes so we can get a feel for the range of possibilities, whether good, bad, or neutral; and third, they often help illuminate investment opportunities in companies that might be better able to either embrace or sidestep the change that's in the offing.

21 Dupont Circle NW, Suite 500 Washington, DC 20036 202.828.6200 (6208 fax) www.marshfieldinc.com

- *Look to historical analogies*. While it's our general practice to better understand a company or an industry through analogy to others within our knowledge base, it is especially important that we do so when the elephant in the conference room is change—and significant change, at that. In trying to understand Chipotle, for example, we can look to the numerous examples of food-borne illness and other health scares related to fast food over the years. From the 1993 *E. coli* outbreak affecting over 700 people at 73 Jack in the Box restaurants (including four children who died and numerous other people who developed lasting kidney and brain injuries) to the more recent **Yum! Brands'** food safety scandals in China (not to mention viral videos of rats purportedly taking over a co-branded KFC/Taco Bell in New York City), we've seen this movie before. In each case—even with Jack in the Box—customers returned and the companies weathered the crisis after some time in the penalty box. But the fact that Chipotle is a premium-priced brand that stands for "food with integrity" (rather than cheap, good-tasting, and filling) and the contemporary reality that it inhabits a new world in which social media makes it simple to spread the "news" (whether true or not), raises some doubt as to whether these examples are truly analogous.

  We believe that an earlier analogy helps shed some additional light. The Tylenol tampering murders in 1982, in which bottles of Tylenol were laced with potassium cyanide, resulted in a massive shock to Johnson & Johnson's stock price and market share, not to mention public trust. Many marketers and analysts predicted that the company would be unable to recover. But quick action by the company in recalling 31 million bottles of Tylenol capsules and offering free replacement product in a safer tablet form, along with the deployment of tamper-resistant packaging helped quell the public's concern. As a result, it saw both its stock price and market share recover relatively quickly. Chipotle took a page from Johnson & Johnson's book by being up front about certain quality control issues, offering special incentives to customers to give them another try, hiring a well-respected director of food safety, and introducing such new preventive measures as supplier interventions, farmer support and training, enhanced restaurant procedures and inspections, and ingredient traceability. It also introduced certain common sense changes like a more generous sick leave policy for employees. While store visits have yet to fully recover and while social media remains quick to pounce on any reports of illness associated with the chain, we believe that, in the long-run, the Chipotle story will align itself with historic precedent rather than open a completely new chapter in how the public responds to such crises. As such, we feel pretty comfortable that this series of health episodes represents a temporary rather than a permanent setback for the company.

21 Dupont Circle NW, Suite 500 Washington, DC 20036 202.828.6200 (6208 fax) www.marshfieldinc.com

- *Follow the data*. The real world impact of a potential change is purely theoretical until the confirming (or disconfirming) evidence starts coming in. Unfortunately, however, the data can be confusing and even at odds with theory when a change is in the early stages of taking hold. Further, as noted above, feedback effects can even reverse some of those data points as responses to that change start having an impact. Many years ago, we owned Mattel, the toy manufacturer famous for its iconic Barbie® doll. We bought the old-school toy stock in the face of a shifting landscape in which we foresaw that interactive and computerized toys and games were about to become ascendant. Mattel's response to those changes seemed spot-on in our view: it had acquired The Learning Company, which produced interactive educational software, on the promise that over time it could combine physical toys with computerized elements, thus leveraging its existing competitive advantage in a way that positioned it nicely for the future. The acquisition, however, turned out to be a complete disaster, start to finish[1]. In the meantime, the "age compression" that we worried would accelerate, in which children abandoned traditional toys earlier and earlier as they grew more "sophisticated" in the faster paced cultural environment, unfolded much as we had anticipated. Sales of Barbie® began to fall as older girls who had formed her core constituency eschewed her for computer games and cooler-seeming rivals. The data was coming in clear, confirming that old school toy manufacturing had a shrinking demographic base. Unless it was able to hitch its wagon successfully to the new era, it was clear that it was in for a troubled future. Accordingly, we sold the company in 2001, largely unscathed due to a decent entry price. While Barbie® has managed since then to adapt to some extent (e.g., feedback has occurred), the company's revenue growth has been anemic at best.

- *Map out the array of plausible outcomes*. When big change rears its head, it's not always immediately clear what the consequences of it are likely to be over time. But while it's not possible to identify the full range of potential outcomes, we nevertheless find it useful to identify what we think the array of reasonable possibilities is, along with the likely winners and losers. When we first started thinking about retail and the likely impact of the internet, we grouped vendors into three broad categories: those people patronized because they were low cost, those with a strong editorial component that typically catered to higher-end customers, and those in the middle with a value proposition that sought some degree of price competitiveness and some degree of quality content and selection. We believed that the latter group, which included the likes of Macy's and even Target, with its quasi-editorial stance, was likely to lose out to those on either end of the spectrum. We also predicted that the internet would

[1] In hindsight, it became clear that Mattel had failed to do proper due diligence before acquiring it, overpaid for it, and bungled its integration.

21 Dupont Circle NW, Suite 500 Washington, DC 20036 202.828.6200 (6208 fax) www.marshfieldinc.com

be able to take on the "winners" at each end of the spectrum more easily over time, thereby weakening the least good low cost players and the least distinctive full price editorialists. But we also understood that this was not the only possible outcome; it was also plausible that internet purveyors could get very good at providing editorial selection and that over time branded and luxury goods might find a more comfortable home on the web, thereby effectively disabling a larger swath of higher end outlets. It was also plausible that low cost providers like Walmart could figure out a way to out-Amazon Amazon or even that internet selling would never have sufficiently attractive economics to allow it to flourish. Only now is it becoming clear that some mixture of all-of-the-above appears to be occurring, but mapping out the various possibilities gave us insight into the kinds of investments we would be willing to make and those of which we would be smarter to steer clear.

A necessary part of this exercise is also to identify where there is a significant "fall off the cliff" risk. While owning Mattel through a long period of age compression making its toys obsolete would, to put it mildly, be unrewarding, the threat posed was not of the fall off the cliff variety. Years ago, we looked at Kodak, understanding that new technology was around that could supplant film photography but also that film for medical uses might be around for a while. It did not take us long to come to the conclusion that digital photography and imaging held the distinct possibility—if not the likelihood—that Kodak's business might one day fall off a cliff.[2]

In general, the earlier you are in the evolution of a change, the more speculative your assignment of possible outcomes and winners and losers is and the riskier your investment, should you choose to make one, will be. We know of a money manager with a big bet on bitcoin. While it might pan out as other than pure speculation, that's not the game we choose to play.

- *Ask: what is the path from plausible to likely?* None of this means, though, that absent detectable data points a big change can't be real—or imminent. Sometimes the conceptual argument is sufficiently powerful (and the consequences of being wrong too dire) that waiting for confirmation can be too risky. This can be especially compelling when the question is whether to sell or keep an existing holding. The threat of a fall off the cliff event (which the market typically understands sometime in advance of open-and-shut evidence) can make it essential to act in advance of robust confirmatory data. A number of years ago, for example, Marshfield held stock in Gannett, which owned a network of newspapers

[2] Kodak filed for bankruptcy in 2012. Last month, in what a Financial Times columnist dubbed "a last desperate bid for relevance", Kodak announced a digital ledger for photographers utilizing—what else?—blockchain technology.

in smaller cities, along with some cable and radio properties (as well as the hotel room staple *USA Today*). Our original theory of the company held that people in places like Elmira, New York would continue to turn to the local paper for news and classified advertisements and that the internet was unlikely to disintermediate those outlets any time soon. To the extent the data showed anything, it showed that, while circulation had been trending down for most newspapers for a long time, readership was still going up. At Gannett, classified ad revenues were, if not hearty, at least continuing to trend upwards, due in part to Gannett's early adoption of a web advertising strategy. It looked like our original theory was being borne out.

And yet. We worried that the demographics of readership was such that a new generation of adults would not adopt the paper habit (they didn't); we worried that alternative sites for real estate and job listings would decouple from newspapers and gain an independent audience (they did); and we worried that advertiser migration to the company's website would not make up for the lost print revenue (it didn't). But without real-time evidence, those worries were merely theoretical. What got us to sell Gannett, though, was not just that these fears were *plausible*, but that we believed they were *likely*. It wouldn't take much for small changes in the demographics of readership and small advances in the functionality of internet alternatives to dent our original theory. In this alternate world, though newspapers would continue to exist, the flywheel of readership and advertisements was no longer a simple virtuous circle where more eyeballs begat more ad spend and more ad spend would attract more eyeballs, but instead one where a gradual reversal of both prevailed. The year after we sold Gannett, its ad revenue was down precipitously and has been largely falling ever since. As for feedback effects: newspapers continue to upgrade their online offerings, with national papers (especially in the current nanosecond news cycle) racking up healthy numbers of views, but the economics continue to be challenging.

In contrast, while electric semi-trucks with a decent range and favorable economics could present a formidable challenge for Cummins, the likelihood of that happening in the near future is, we believe, in serious question. Notwithstanding the hype and the adulatory reporting of early orders by trucking fleets seeking a PR win, the challenges faced by Tesla are not easily surmounted. In a recent meeting with **John Deere**, we asked about electric engines for farm equipment. It was CEO Sam Allen's firm view that, while smaller equipment like lawn mowers, where an owner needs it to run for only around 2-3 hours, would gravitate toward electric engines, larger equipment with more intense power needs would not. For commercial agriculture or construction, he explained, the battery required for the power load and duration needed does not yet exist. His prediction: "you will see a diesel engine augmented with additional power from electrification, but diesel will remain at the heart of the machine". While one man's view, however well informed, is not dispositive, the road from plausible to likely has yet to be laid out, much less paved. At a minimum, the advent of electric vehicles capable of supplanting the diesel or natural gas engine appears to be sufficiently far off that Cummins (and Deere, for that matter) have enough time to adapt.

Waiting on the World to Change*

Some investors elect to wade into the thick of change, wagering that the risk of their chosen outcome not coming to pass is worth the hefty payoff if it does. Since our mandate (and our temperamental predisposition) is to outperform the market while also preserving capital, such a high stakes approach is not an option for us (sowing the wind too often ends with you reaping the whirlwind). We try instead to focus on areas on the fringes of big change. We also try to find the plumb line through that change to what will continue to exist even in the face of disruption. For us, the highest praise we can give an investment is "not much has to happen to make this work." Circling back to retail, our investments in AutoZone, O'Reilly, and Ross Stores exemplify this. As traditional brick-and-mortar retail reels from online competition, it's pretty clear to us that certain forms of it will continue, for the reasons mentioned above, to command consumer loyalty. And as consumers seem to be intent on purchasing more goods, whether at Amazon or in physical stores, those goods need to be transported, often through long distances and across borders with complex customs regulations. Thus, the services provided by **Expeditors International** are highly likely, we believe, to continue to be relevant, even in a world in which consumers buy most of what they need or want online. And while internet-based competitors to Expeditors have arisen, we're not especially worried; as the company's former CEO Peter Rose once quipped, "most freight doesn't have arms, legs, mouths (thankfully) or ears" and competent people on the ground will always be needed to see it through.

Money Changes Everything*

Change is unavoidable in investing and transformational change is inherent in a thriving market economy. Unless you're willing to fish in a stagnant pool and settle for a mediocre catch (we're not), you need some appetite for change as an investor in order to outperform. Indeed, by exploiting others' misjudgments about the future, we affirmatively embrace change, since embedded in every investment is the belief that either things will get better for the company/industry and/or the market will recognize that it made a mistake. But we approach change guardedly and court it only where we don't need to take a huge leap of faith about what lies in store. Investing in the teeth of major disruptive change typically forces you to make such an untethered leap. So while it's fun to speculate about how robots could put people out of work, and how autonomous vehicles might take over the roadways, and that cryptocurrencies could crowd out fiat currencies, we'll leave that to the armchair investor. Putting real money on the line forces you to focus on what you can know or predict with some degree of certainty. Ultimately, the critical question becomes how much uncertainty is acceptable and how grave the consequences are of guessing wrong (and how much those consequences can be mitigated by a good entry price). But no matter the level and pace of change, there are certain abiding principles on which we rely: the basic mechanisms of economics and the fundamental tenets of our investment philosophy. Plus ça change, plus c'est la même chose.

Marshfield Associates

*With thanks to Sam Cooke, Buddy Miles, Bob Dylan, John Mayer, and Cyndi Lauper (and of course, the late, great, David Bowie).

21 Dupont Circle NW, Suite 500 Washington, DC 20036 202.828.6200 (6208 fax) www.marshfieldinc.com