Marshfield Associates

Letter to Clients
December, 2020

Home on the Range

"I can live with doubt and uncertainty and not knowing. I think it's much more interesting to live not knowing than to have answers which might be wrong."

Richard Feynman

In thinking back on the letters we've written over the years, it occurs to us that each one, in its own way, was an attempt to address how best to deal with uncertainty.[1] Just as there are only two plots in story-telling: a person goes on a journey or a stranger comes to town, there is really only one theme in our business, and that is the future. By its very nature, investing is about what the future might look like and how best to profit from it. More specifically, our particular style of investing demands that we develop opinions about what lies ahead for individual companies that we might want to own. The inherent uncertainty (and threat of capital destruction if we're wrong!) embedded in that question has led us to take a dual approach: one protective and the other predictive. The former includes things like a margin of safety in our buy price and a willingness to hold cash until we find something we really like, strategies calculated to buffer the portfolio against bad things happening and to limit their impact when they inevitably do. The predictive approach, on the other hand, includes things like our valuations (which themselves include protective elements such as conservative inputs) and our theories about the evolving structure of an industry, which provide insight into likely winners and losers. This second approach seeks to convert what we can and do know today into rough but hopefully useful and actionable predictions about the future. We've written a great deal over the years about our protective measures, but thought it might be worth another look at how we think about predicting and, more specifically, under what circumstances we're willing to engage in it. In essence, our view comes down to probability and precision: if it is within our intellectual wheelhouse, if probability is meaningfully on our side, and if the question we're trying to answer can tolerate some imprecision, we will accept the challenge. However, where the

[1] Note to the purist: for the sake of simplicity, we are conflating the concepts of risk and uncertainty in this newsletter. To economists, risk applies to situations where, though the outcome of a set of circumstances is unknown, we can measure the odds. Uncertainty applies where the information needed to assess risk/odds is not fully known or even knowable. Much of what we will discuss in this letter is about how to assign odds to definable risks but we also touch on how we protect against the consequences of true uncertainty.

"tail risk" is too great or actionable projection requires a point estimate as opposed to a range within which we can be correct, we will demur.

Before we go on, though, a potshot at some of our competition: many in our business mistakenly believe that they can defy uncertainty and predict the future with particularity. Such hubris often takes the form of unconscious mental shortcuts that project past as prologue, overweight the loudest and most vivid evidence, and allow comfort to be taken in the warm embrace of groupthink. Over the years, we have amassed a veritable armory of weapons to combat such behavioral tendencies in our own work. We will save a deep dive into that arsenal for a later time. We will instead focus in this letter on how we think about probability and how we seek to imbue our predictive processes with rigor notwithstanding the fact that they operate within the realm of the unknown.

What We Can't Know and Why it Doesn't Matter Anyway

We're often asked what we think the economy/interest rates/political landscape will look like in [name your timeframe] and what that will mean for the stock market. Our answer is always a disappointing "we don't know and if we did, we couldn't predict how the stock market would respond anyway." First, we have no greater insight than the experts who spend their lives studying these issues. Nor do we have the arrogance to tackle intricate and complex questions of, say, what interest rates will be in six months (can anyone, really?). And if we can't have an information or analytic advantage, we tend to be very cautious about weighing in. Certainly, it appears to us that those who cultivate a reputation for calling bear markets do so with a fair amount of bull compost; the intellectual topsoil is riddled with predictions of big crashes by those who went mysteriously silent on the next one, suggesting that luck is the main fertilizer for such "forecasts." Remember Elaine Garzarelli? Exactly.

Second, any time the question demands an unqualified yes/no answer or a point estimate numerical response, you'll find us ducking behind our desks unless the answer is obvious (e.g., will the sun rise tomorrow?). And yet so many questions about the future are framed in ways where the response is of no practical use *unless* it comes in point estimate form. No range of possible outcomes needs apply. Not to pick on economists, indeed we have one we like very much on our own team, but when an investment is predicated on a particular level of economic growth, having 74% of economists believing in that growth number and the remainder dissenting just won't work for us. We have long believed, based on our experience, that it is very difficult to predict macro events accurately enough to be useful to a thoughtful investor. Given that such things represent the accretion of many smaller ones, building up the larger picture is especially difficult, though it often looks simple and obvious in hindsight. While you may have some ability to understand directionally where we are headed (and roughly where within an economic cycle we may be), it seems to us to be a fool's errand to put a number on it. Accurate predictions of this sort require a daisy chain of assumptions, each of which itself is difficult to know with any degree of precision, such that the cumulative chance of being consistently right becomes vanishingly small.

Finally, and this cannot be emphasized enough, you have no idea what expectations are already embedded in the stock market and what emotions will shape its reaction to a particular event, at least not in the short or even medium term. Returning to the matter of predicting interest rates, it's clear to us that few, if any, investors can consistently out-predict what the market, in the form of the yield curve, is already assuming (indeed, if we could do so, we could make a fortune trading bonds). As we wrote four years ago in the aftermath of the 2016 presidential contest, however you viewed the outcome, you were likely to have been at least somewhat surprised by the stock market's reaction to it. Recall that the stock market is a crowd-sourced series of judgments of market participants with respect to hundreds of stocks (500, to be exact, if we're talking about the S & P 500); its direction, especially in the short term, reflects a combination of emotion and educated guesses dressed up as analysis. Of the many examples that come to mind, think of this year, which has featured a pandemic that has so far killed a quarter of a million people in the U.S. alone—and yet as of this writing the market is up circa 15 percent.

A number of clients have asked us what we think the recent elections mean for both the economy and for various categories of policy going forward (corporate and individual income taxation, bank regulatory policy, trade policy, you name it). We can say the following with assurance: not only do we not know the details of what a Biden administration will do, we do not know yet what the Senate divide will be and/or mean. While as sentient citizens we have educated guesses, we believe we would be remiss in imposing those on our clients in the form of investment analysis. Sure, we have a sense that certain regulations will be reinstituted and the social safety net bolstered, but the devil is always in the details with respect to such changes and we're no more privy to those than anyone else. This does not, however, stop us from doing various thought experiments to understand the kinds of things that might present threats or opportunities in the future. For example, suspecting that the new administration might impose more restrictive requirements on for-profit educational institutions leads us to assess what that might mean for our holding in that industry, **Strategic Education**. Anticipating possibilities is not the same as saying that they will in fact eventuate and making a decision based on that conclusion (for the record, given that STRA is well-positioned to ace whatever test is imposed on it, regulation actually happens to advantage it versus its for-profit peers). That projection is nice, but we would never make it the sole premise of either an investment or a divestiture.

Really, all this is to say that we understand that we know neither what the future holds nor what various possible futures might mean for either the real economy or the stock market. At Marshfield, our way of dealing with uncertainty is, first, to understand that unexpected and even unlikely events often happen, and, second, to be extremely careful with your money and our investment decisions. We don't hoard our cash, but we commit it only when we believe we've found a good company that has demonstrated resilience (i.e., the ability to deal with crises) over time and that is priced when we buy it to allow for hiccups. That—and the belief that American companies have long managed to figure out how to serve their markets through both rough circumstances and smooth ones—give us more confidence in our own approach than in one that purports definitively to know what is going to happen.

What We Can (Sort of) Know and Why it Matters—Part 1

Just as the sun coming up tomorrow is overwhelmingly likely, so are certain other kinds of events that we feel comfortable projecting forward and relying on as investors. And a single big idea that we feel confident projecting forward is, we believe, far better than that daisy chain of multiple "and thens", each of which needs to eventuate in order for the chain to cohere. For example, we believe it is close to axiomatic that railroads will continue to be needed for the transport of goods, at least within the time horizon of our investing. Certain kinds of things can only be shipped by rail; to the extent that commodities like grain are not economic to transport by truck in this country, rail is the default option. To the extent that there is any meaningful tail risk with regard to this prediction, it is slender indeed.[2] Disintermediation might displace brick and mortar stores, new technology and AI might displace conductors, but physical goods will still need to be moved from point A to point B by rail. While our investment in **Union Pacific** is premised on additional factors, such as the oligopolistic nature of the industry and UNP's robust margins and strong cash flows, the virtual certainty that they will still be hauling freight and probably earning decent returns fifteen years from now gives us additional comfort that we're on the right track. Similarly, going back to Strategic Education, we're confident to the point of putting all our money on red at the roulette table that people will continue to need college degrees in order to advance in the workplace, especially as an information-centric job market increasingly treats college as the new high school. This doesn't have to be true; it's simply overwhelmingly likely to be the case. Whether students choose a Strayer or Capella degree as opposed to one from elsewhere is secondary to this key insight; certainly, an expanding market is highly likely to benefit all reasonably decent competitors, including Strategic Education.

Along these same lines, we like companies that allow us, through their own business design, to be a little imprecise in our vision of the future. One of the many reasons we admire **Ross Stores** and **TJX** is that we are not required to make a call on fashion trends or the future popularity of particular designers.

[2] Certain commodities like coal, already in decline, will continue their contraction, of course. We take such things into account in our valuations.

These companies premise their concept on the enduring popularity of good value and the pleasure of the treasure hunt. The durability of their value proposition is further bolstered by the not insignificant hurdles faced by any internet rival seeking to succeed at the price points in question. We trust those two companies to make their own real time judgments as to what's selling and how to merchandise their stores accordingly. Likewise, we do not have to make projections about the future price of real estate when we own shares in **NVR**; the homebuilder operates through options on land rather than a stock of owned property, thereby neatly bypassing the risk of holding inventory that might diminish in value or prove to be poorly located. It therefore is better able to calibrate its operations to the particular environment in which it finds itself, building houses at attractive prices tuned to the current market. A company like **Expeditors** is similarly freed up to move with the market as circumstances (and trade policies) change. By not owning the assets by which it ships product on behalf of its customers, it's able to assess the current marketplace and, with its vast network of relationships and scale, contract advantageously for its client and, by extension, itself. What these companies all have in common is that their strategy is one that allows them to adapt to the environment in which they find themselves, limiting the "lock-in", whether through inventory, asset ownership, or brand investment, that would otherwise constrain them and their actions in the times to come. For our money, having to make fewer assumptions about the future is better, and leaving decisions to those on the ground and in the moment is best of all.

What the above analysis might also give you is insight into why we consider both culture and management to be so crucial. By acknowledging that we can't know in advance precisely what the future will look like, we are inherently ceding to future management the responsibility of adapting to new environments. Understanding a culture and the kinds of people that a company is likely to embrace are both important elements of our analysis. It is also why change at the top is among the most dangerous in the lifecycle of a company, especially for those companies less tethered to legacy assets. To the extent that we are selecting companies whose future decision-making is of critical importance because they are implicitly deferring certain decisions to a time other than the here and now—and by definition that means to the management team then in place—we are doing so in the belief that our companies will also be pretty intelligent about to whom they bequeath their leadership. This is why you sometimes see us sell when we do not like a new CEO or management team or when we judge that a culture has degraded or been corrupted over time.

What We Can (Sort of) Know and Why it Matters—Part 2

To repeat the (accurate, we believe) truism: while in the short term the stock market is a voting machine, in the long term, it is a weighing machine. In other words, the actual value of a company has a certain gravitational pull; the "votes" for a stock tend to form a cloud around intrinsic value, sometimes overshooting, sometimes undershooting.[3] If we find a company we like and believe that we can "know" certain things about the road ahead (e.g., that physical goods will continue to be shipped), then our next obligation is to figure out what we should pay for it and, by extension, where within that cloud of prices we will make our move.[4] Trigger warning: doing so requires some assumptions about the future.

Four years ago, in the wake of the 2016 presidential election, we wrote a letter (Poll Dance, April 2017) in which we sought to analogize what we do to what pollsters do, with all the caveats about outlier outcomes, sampling errors, and methodological quirks relevant to that profession. Given that the stock market is effectively a moving poll about individual companies based on what a motley crew of participants of varying degrees of insight, intelligence, and emotional restraint believe, it was our view that to do better than the market, we simply needed to be better "pollsters". In essence, polling requires two judgments based on the facts at hand: who will win and with what degree of likelihood. Similarly, successful investment (at least as we conceive of it at Marshfield) requires us to answer two fundamental questions: what companies will very likely "win" over time (see above) and what price should we pay to own their shares?

When most people think of a valuation, they think in terms of a point estimate with precise boundaries. When we think of valuation, however, we think of ranges: ranges within which the variables we use are likely to be correct and, as a final output, a range of likely values which incorporates those assumptions. The concept of a point estimate holds no persuasiveness in the context of an unknown future; the best we can do is predict the neighborhood, not the exact address, of where a company's intrinsic value lies. In this way, we can take advantage of that "cloud" of prices assigned by the stock market in order to buy and sell advantageously.

The catch, however, is that, notwithstanding the fact that we are operating well within the realm of unknowability, it is still incumbent upon us to deploy data and empiricism—but to do that in a way that recognizes the limitations intrinsic to each. First, a primer on valuation: our valuations seek to measure the free cash

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[3] This is not to say that the market's stabs at valuation can't miss the mark for a very long time and by a very long distance. While new information gets disseminated and absorbed by the market very quickly, it tends to be understood and properly integrated over a longer timeframe. Moreover, the more information there is that can usefully be extrapolated to paint a reasonably clear picture of the future, the more likely share price and valuation are to reside in the same zipcode. The more speculative a company's valuation—think tech companies with little in the way of earnings and a brief track record—the freer a stock price tends to be to wander off.

[4] At first blush, this may seem to be at odds with our earlier argument about the futility of predicting the stock market's response to political news. It is true that as new information gets absorbed and metabolized by market participants, it often has an impact on the share price of individual companies to which that information is relevant. The cloud of valuations will likely shift. Yet how it responds to news in the short term and where it settles in the longer term can be very different indeed, especially as emotion and embedded expectations are more likely to color analysis in the short term.

flow generated on an annual basis over a period of fifteen years (our theoretical investment horizon), with a terminal value we establish following that period. Free cash flow in this context means the cash generated that does not need to be invested back into the business to either sustain the company's ongoing operations or fuel its future growth. That cash flow is discounted back to the present by a rate that incorporates both a risk-free rate of return and an equity risk premium—the extra amount we want to be paid for the risk of investing in equities. Each of these steps demands assumptions about what the future is likely to hold. And each of these assumptions (e.g., whether railroads will be able to continue to raise prices at or above the rate of inflation), based upon history and our understanding of the world and what the future might bring, embodies a range of possibilities, from optimistic to pessimistic. While past is not prologue—and we are careful not to accept the almost inevitably enthusiasm-bloated predictions of management about future sales growth and margin prospects—history does give us a starting point for judgments about possible sales growth rates, margins, capital expenditures, and working capital requirements (note, however, that we are careful not to make too many assumptions and we tend to stick to micro rather than macro data).[5] Each assumption we choose represents a point along the range of likely possibilities. We typically start by choosing a point near, but more conservative than, the midpoint of those ranges. Once we assign values to the handful of inputs required, we calculate a per share intrinsic value of the stock. We then "stress-test" that value by changing the inputs so that we understand which of our assumptions we need to be most thoughtful about to be confident in the result.

But our conservatism does not end there; to account for the possibility of unanticipated bumps in the road, not to mention errors in our valuation and elsewhere in our analysis, we impose a margin of safety as a protective measure (as opposed to a predictive one). This margin represents at least a 20% discount to the output of our analytical process,[6] yielding a buy price that is anything but rich. In this way, we believe that we will have taken into account both (1) the historical data available to us and (2) our informed opinion about how the future might differ from the past based upon such things as evolution in the structure of the industry and changes in company strategy. And we will have used this information judiciously to arrive at what we believe encompasses a range of (collectively) highly probable forecasts.

To the extent that our aggregated assumptions err on the side of conservatism—and we work hard to make sure that they do, though not excessively so—that is fine by us. On the continuum of errors to make in this business (and there are

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[5] Anyone who has listened to a company's quarterly earnings call with analysts has heard a company provide "guidance" as to future sales and margins. Not only do we ignore these, we actively disdain them. Many of our companies in fact do as well, providing the bare minimum, amply caveated, despite the maneuvers of analysts trying to get them to provide point estimates.
[6] But it can be much higher if we think that the investment is riskier than our norm or simply if the industry is new to us. In addition, we demand even greater margins as we add to positions.

many!), we would much prefer to engage in a sin of omission (missing a good company) than one of commission (buying a bad company or paying far too much for a good one), and our valuation process skews in that direction intentionally. When it comes to making a sale, we do the same: if reasonably optimistic assumptions are required to justify the share price of a stock, we will begin to sell the name, thereby taking advantage of the cloud of valuation around it along the upper end of our range of assumptions. Simply put, we are not trying to buy at the bottom and sell at the top; we are trying to position ourselves advantageously along the range of possible valuations by buying stocks when they are inexpensive and selling them when they are expensive.

It is particularly important to note that, even though there is no precision in this process, there is rigor, replicability, and reliable data. Following the numbers in order to establish a range of likely values is perhaps the closest we can get to objective truth. While a gut assessment, in comparison, can help in judging firm culture and management reliability (more on that at another time), it is of no use—dare we say it is dangerous—in arriving at numerical ranges that capture the distribution of likely future outcomes.

By way of analogy, we will take a short walk through the weeds of presidential polling, another analytical system that seeks to understand the future through data on the ground today. For months prior to the 2020 presidential election, the data was crystal clear: Joe Biden had a 7-9 point national lead, a slightly smaller lead in the tipping point states, and was competitive in states that Democrats not only didn't win in 2008 but in which then-Senator Barack Obama didn't even try to compete en route to his eventual electoral triumph. Not only was the data persuasive, it was remarkably stable despite turbulent macro factors: a global pandemic, a massive recession, and social unrest. The numbers barely moved no matter what happened or what a candidate said or did. Nate Silver of 538.com, probably the most well-known polling analyst around,[7] had given Donald Trump an approximately 30% chance to win in 2016. When Trump won, critics jumped all over Silver for this so-called missed call, despite the fact that the 30% chance he assigned to a Trump victory was significantly higher than most analysts gave. But more importantly, the critique missed the mark on the nature of predictions and analysis. Things with a 30% likelihood occur all the time! Flip a coin twice in a row; a heads-heads sequence is not rare, nor should it be a particular surprise when it happens. By comparison, this time around by election night, Silver had assigned to Trump an 11% chance of winning.

Prior to this year's election and after digesting this data, an interested observer was left with a choice between two analytical approaches heading into the vote: (1) accept the data, with caveats; while polls can be flawed and operate with a large margin of error (and there is a range of outcomes which may belie the conventional wisdom), in the end, Biden was a heavy, heavy favorite, or (2)

[7] The arcane world of polling is inhabited by pollsters, who conduct the polls, and polling analysts, who critique and aggregate the information offered by the polls.

discount the data based on the hunch that the polls would once again be "wrong"—they were in 2016 and maybe they would be again! Besides, all the enthusiasm seemed to be on the side of the incumbent President, as suggested in this New York Times Opinion piece:

> My parents, who are divorced and haven't agreed on anything in 20 years, both plan to vote for Joe Biden. They say that, in their respective circles, this makes them unique. My father's wife will vote for Mr. Trump ("401(k)," she says), as will all his friends. My mom says many of her girlfriends will go for Mr. Trump, and she hasn't been able to match with any man on Bumble who isn't a Trump voter.
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> She lives in Montgomery County, just southwest of here, and went to the same high school as Jill Biden. The front yards of the houses flanking my mom's, the one across the street and three more on the block feature Trump signs. There is one Biden sign on the street. One of my mom's acquaintances recently held a Trump-themed birthday party for her child. Icing on each cookie read, "Make ninth birthdays great again."

Fundamentally, the choice was a classic "head vs. heart" dilemma, and the "heart" side didn't just have Trump partisans assuming the best about their preferred candidate's fate; nervous Democrats assumed the worst, remembering the traumatic loss suffered on election night four years earlier. Each side had an emotionally-motivated reason, if not a factually-based one, to doubt the predictions. Even Silver had an emotional hiccup, but consummate professional that he is, he resisted the urge to amend his predictions:

> The two strong "gut" feelings I had in defiance of our forecast were that Joe Biden wouldn't win Georgia and Jamie Harrison would win South Carolina, so that's why I STFU about my gut feelings and trust our forecast.

As evidenced by the outcome of the 2016 election, the likelihood of a Trump victory was not just non-zero, it was actually rather significant in the scheme of how we look at things; if not a lock, it was well within the realm of real possibility. Were this a stock the conceptual case for which broke along similar lines of probability, we would not have made the "win" call for either Clinton or Trump—and therefore not made the investment at all, attractive valuation or not. The broader takeaway, however, is to trust the numbers;[8] once we use our analytical skills to develop our valuation assumptions and the intrinsic value range, we seek to avoid the (inevitable) emotional interference that pushes us to redefine those assumptions and ranges. The danger is especially acute when current events seem to augur a different set of results, as in the anecdotal evidence above.

[8] And here, we believe we have a real edge on polling, where the data is neither "shy" nor lacking a landline.

We led off this letter with a quotation from Richard Feynman, the Nobel Prize-winning physicist. The warning that preceded this excerpt is perhaps even more relevant to what we do: “The first principle is that you must not fool yourself, and you are the easiest person to fool”. Investors are people first, and people tend to want to follow the crowd and to act in the face of frightening or exciting news. We believe it is our job to slow down, to think, to consider various possibilities, and to adhere to the judgments we have made through calm and informed analysis. We believe that our healthy respect for uncertainty—and for our own inability to pretend to precision in the dark arts of prognostication—have helped us develop systems for approaching the future in as protective a way as possible without stymieing our ability to act when based on our carefully cultivated set of predictive tools. Such things as our requirement of a robust margin of safety, our conservative valuation discipline, the questions we ask ourselves as part of our system of checklists (e.g., what biases we might be bringing to the table, what analogies to other companies we can make, how likely it is that an extreme event could befall the company, etc.) are all designed both to buffer us against unwelcome and unanticipated outcomes and to squeeze as much clarity as we can out of the facts on the ground today that might shed light on tomorrow. And, as we hope you know, while we feel quite comfortable constructing our home on the range of possible outcomes, our process is always attuned to the discouraging word that could prove us wrong.

Marshfield Associates