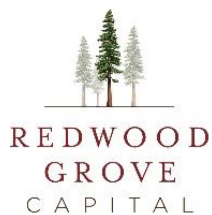


Jan 29th, 2019

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Dear Investor,

The end of 2018 was a bumpy ride for most equity investors. The market's steep fourth quarter decline affected value stocks more than growth stocks as concerns focused on higher interest rates (hurting companies with more financial leverage) and an economic slowdown (hurting companies that are more cyclical). As a result, losses in the fund were concentrated in two cyclical and financially leveraged companies, Western Digital (WDC) and United Rentals (URI). Despite these two stocks generating losses in the portfolio, we remained optimistic and have added to both holdings. We discuss why WDC at the current valuation is particularly attractive later in this letter.

Importantly, each portfolio holding may see accelerated growth over time as the economics of climate change become undeniable. United Rentals (discussed in our June 2018 letter) faces increased demand owing to volatile and costly extreme weather and wildfires. Western Digital and their semiconductor chips and 5G technology will act as a backbone to the efficiencies created by IoT, Automated Vehicles, and Smart Buildings.

In Redwood Grove Capital's first 22 months, there was growing evidence that the impacts of climate change are accelerating as are the economic costs to corporations. We are just starting to see equity prices reflect these risks and opportunities, but only in the most extreme cases (i.e. Pacific Gas and Electric which we'll discuss later in the letter). In the last month alone, two scientific reports came out affirming the accelerating impacts of climate change. Science Journal published data that oceans are warming 40% faster than calculated by scientists in a 2014 U.N. report. This matters because our oceans absorb 90% of the warming associated with Greenhouse Gases trapped in the atmosphere. The National Academy of Sciences reported that Greenland is melting four times faster than it was in 2003. This acceleration of ice sheet melt is unprecedented. What corporate management teams are doing to respond is increasingly differentiated from their competitors. While the differences in responses are often dramatic, they are typically not captured in a screening process.

## A Value Portfolio With A Growth Future

As value managers, our approach is to find companies with attractive fundamental earnings and cash flow prospects relative to their current price. Generally, we invest in companies when the short-term risks are evident, and their price relative to the long-term prospects provides opportunity for meaningful compounded growth. We are attracted to companies that are inexpensive when compared with: their

average valuation for the last 5 years; the S&P 500 Index sector; and, our expectations for long term growth in earnings and cash flow.

We invest in each company based on its own merit. However, it is also instructive to see the portfolio characteristics. Today, the weighted average trailing P/E multiple of our portfolio is 13x, a large discount to its 5-year average P/E of 28x. In contrast, the S&P 500 Index trailing P/E multiple is currently 17x, slightly less than the 5-year average of 18x. Thus, our portfolio companies have gone from a significant premium valuation to a discount to the Index and to their 5-year average. Other metrics, such as EV/EBITDA also confirm the portfolio's below market valuation. Importantly, the portfolio consists of companies with sales growth expected to exceed that of the Index. Western Digital (WDC) is a company with low valuation metrics and better long-term growth prospects than the S&P500.

While disappointed with WDC's performance in 2018, we believe that the longer-term investment thesis remains strong. The data storage industry, where WDC is a leader, will get more important over time. The company manufactures the two predominate kinds of data storage technologies, NAND and Hard Disk Drives (HDD). NAND, or solid-state storage is more expensive but faster and more reliable. It's the memory that can be found in your iPhone. HDD which involves a spinning disk drive is cheaper to manufacture and is commonly used in laptops and cloud servers. As NAND gets cheaper it is replacing demand for HDD.

Currently, investors are worried about the short-term supply and demand dynamics for NAND manufacturers. WDC expects NAND growth in units to be 36-38% in CY2019, which is less than the 40-45% long term growth anticipated by the industry. This growth differential has created NAND oversupply and pricing pressure.

NAND memory supplies three major markets: Mobile, Client SSD and Enterprise & Cloud. The demand weakness for NAND can be attributed to: 1. Soft smartphone demand 2. Lumpy hyperscale investment cycle and 3. Conservative inventory positions among customers/channels. These concerns are exacerbated by increased macroeconomic and geopolitical risk. As a result, WDC management has forecast a meaningful drop in earnings. All the public NAND manufacturers acknowledge these challenges and have announced plans to reduce capital expenditures in hopes of re-balancing supply and demand. Toshiba Memory Corporation, privately held by the Bain consortium, has yet to publicly announce their plans and they do not have an obligation to do so. However, we believe that all the manufacturers will reduce production until it is in line with demand.

While manufacturers are reducing supply to adapt to the short-term dynamics, we are confident NAND's price decline will re-accelerate demand. While that hyperscale demand growth for NAND can provide volatile price swings, the relatively stable HDD business's cash flow should provide a price floor for the stock. As a result, we find WDC's undervalued at current levels: 5.1x NTM PE, 3.0x EV/EBITDA and 0.8x EV/Sales. For comparison, WDC competitor Seagate, a strong leader in the HDD storage industry, trades at: 7.5x NTM PE, 5.5x EV/EBITDA and 1.2x EV/Sales. At current prices, WDC is given little to no value for their NAND business. This is likely to change as NAND pricing stabilizes due to manufacturing restraint. Given our longer-term view of strong storage demand growth, we find WDC to be a unique opportunity to own a growth company at value prices. The low price provides an opportunity for higher returns.

## Climate Risks and Opportunities

The Yale Program on Climate Communication (YPCC) conducts scientific research on public climate knowledge and attitudes. The 2018 Climate Opinion Survey found that 70% of Americans think climate change is happening. An equal number of respondents (70%) thought global warming would harm plants and animals. But only 41% of Americans think the impacts of climate change will harm them personally. In other words, climate change is bad for the environment, but that has little to do with me.

Similarly, according the YPCC, 63% of voters are worried about global warming. However, given 28 issues to rank on importance like gun control and the deficit, global warming ranked in the bottom half at number 15. And if you excluded people who identified as "Liberal Democrats," it ranked at near the very bottom of issues voters' concerns. Despite the troubling news, climate is a worry, not yet a priority.

Not surprisingly, these two mindsets are evident in the investment community as well. Investors are increasingly willing to pay lip service to the issues of climate change, with Social Responsible Investing accounting for $23 trillion of asset under management. Like voters who think climate will impact the global environment, but will not impact them personally, the vast majority of ESG managers are happy with greenwashing strategies that ignore the economic realities of global warming.

The recently announced Pacific Gas and Electric bankruptcy is an excellent case study. It demonstrates that the economic impacts of climate change are happening now, that many investors do not prioritize these risks, and that climate investing requires a deeper analysis than looking at simple data metrics like the commonly used carbon footprint relative to the company's peers.

When we first launched Redwood Grove at the start of 2017, we were hesitant to invest in utilities. However, PG&E and SEMPRA were two that we looked at closely. PG&E and SEMPRA are number one and two in the country respectively based on percentage of their base load purchased from renewables. Initially we focused on their leadership position in renewables. The thinking was they could be advantaged relative to other utilities if federal regulations were to encourage the adoption of renewables through a carbon tax.

In addition, PG&E has incorporated climate change concerns into their business model. They have an internal climate resilience working group, a dozen climate scientists on staff, work with many environmental NGO's and voluntarily report their greenhouse gas emissions data to CDP and The Climate Registry. This is why in 2017, PG&E was given an "A-" the second highest climate rating from the Carbon Disclosure Project. This was the highest rating for any U.S. utility and top 10 "climate score" out of CDP's 365 globally rated utilities. Not surprisingly, PG&E appeared in many ESG portfolios.

The risk we could not get comfortable with was the increasing number of fires, acreage burned and cost of fires in PG&E's 70,000 square mile footprint. We knew that climate scientists have long warned about longer fire seasons and the corresponding increase in acreage burned. And we could see that annual acres burned by wildfires in California had more than doubled from 400k to 800k in the past thirty years. Making matters more difficult for PG&E, California utilities are liable for damages caused by fires started by their equipment, even if it was not the result of negligence. Gov. Brown reduced the potential costs to utilities in 2018 by signing a bill that raised the standard for liability to "reasonable effort" but this did not go into effect until January 1st, 2019.

Unfortunately for PG&E, 17 of the 21 Northern California fires in 2017 were determined to have been started by their equipment. They are also expected to be liable for damages caused by 2018 Camp fire which was the most destructive fire in California history, killing 86 people and destroying the town of Paradise. The company said they expected to face $30 billion of liabilities, which would exceed their insurance and assets. This in addition to some political maneuvering forced the company to announce they were filing for bankruptcy at the end of January. Following the announcement, the headline in the Wall Street Journal read "PCG: The First Climate-Change Bankruptcy, Probably not the Last." We could not agree more.

Avoiding an investment in PG&E has been fortunate. But the potential bankruptcy has provided interesting opportunities moving forward. In a Chapter 11 bankruptcy, the court has enormous power. It must weigh the interests of multiple parties all with varying claims to the assets of the company. The company's commitment to renewable energy raises one of the more interesting questions to come out of the PG&E bankruptcy. Utility scale renewable energy projects have been financed by developers by entering into long-term Purchase Power Agreements (PPA). A willingness to buy renewable energy for 15-20 years at rates set when the project is built has been critical for the development of renewables. Since the costs to build utility scale renewables projects drops every year, older contracts were signed at much higher prices than current electricity rates. As a frame of reference, the cost per megawatt of renewable energy ranged between $75-125 in 2012. The current rate is $25-$50 per megawatt. The older PPA contracts, in theory, may be renegotiated in bankruptcy court, providing capital for the company's creditors. PG&E has made this case. As of the end of 2017, according to Bloomberg's New Energy Finance group and Morgan Stanley, the company has long term PPA's that have more than $3.5-2 billion remaining value. If those contracts were re-struck at today's prices the company would free up $1.2-2billion of capital.

As the risks of bankruptcy for PG&E grew, we confirmed that the Yieldco we own, Pattern Energy, had limited PPA exposure to PG&E. Interestingly, now that the PG&E bankruptcy has been announced, those Yieldcos with the most significant exposure to Pacific Gas and Electric are trading at what appears to be too great a discount. This is an area where we have started to find investment opportunities.

We remain optimistic about the portfolio's long-term prospects. And that climate change will increasingly become an economic issue that cannot be ignored by the markets. We appreciate your continued confidence in us.

Best,