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Adaptation and Mitigation

Readers of our letter may remember that we divide our portfolio into three main categories: climate mitigators, adaptors and corporate leaders. The significant majority of the portfolio, about 80%, is invested into mitigators and adaptors. We allow for investments in corporate leaders, to enable us to invest in sectors that have less material exposure to climate change. In those instances, we look for companies that have demonstrated leadership around climate change. This ability to invest in corporate leaders helps mute some known factor risks in the portfolio that would be created by limiting our scope to companies with material risk to climate change. In this letter, however we will focus on the mitigators and adaptors.

It is not hard for Redwood Grove to find companies that are helping reduce carbon emissions. The challenge is finding ones with attractive valuations. That was particularly true at the end of 2020 and in the first quarter of 2021. In our 2020 fourth quarter letter, we wrote about the meteoric rise in the clean energy company valuations. The Wilderhill Clean Energy Index, a clean technology index, more than doubled in 2020 and saw the index's forward price to earnings triple that of the S&P 500. Much of the enthusiasm seemed to come from expectations about the incoming Biden Administration and their regulatory policy around climate. We wrote at the time that "we believe over time these [policy] changes will increasingly tilt the scale toward low carbon solutions....[however] optimism has grown and now appears more than fully priced into asset valuations. Our portfolio has benefited from this re-rating and we are now starting to pivot away from some clean tech investments. While we believe in clean tech's long-term growth prospects, we also think there will be more attractive entry points in the future."

On February 9th, the Wilderhill Clean Energy Index peaked, before dropping 40%. During this same period, the market as measured by the Russell 1000 Index was up 11%. Even with that sell off, most of the companies in the Wilderhill Index continue to trade at valuations too high for Redwood Grove's investment process.

Despite clean tech's high valuations, this volatility has allowed us to find pockets of opportunity. There are two common scenarios in which we find value in clean technologies. The first is when a company has well known idiosyncratic risk that causes it to fall out of favor. In those instances, we look for risk that we believe is short term and not a fundamental threat to the long-term growth prospects of the business. The second is when a traditional parent company, owns a clean tech company not fully valued by the market. In those instances, Redwood Grove looks for a catalyst to unlock the valuations of the

clean tech subsidiary. In the second quarter of 2021, we found examples of both, in Array Technologies (ARRY) and Flextronics (FLEX).

ARRY is a leading manufacturer of single motor ground mounting systems for utility scale solar projects. These tilt racking systems angle PV panels toward the sun throughout the day, increasing the amount of electricity produced by up to 25%. Tilt trackers are used in 74% of utility scale solar projects in the United States but only 30% of projects in Europe. The company, one of two main producers of trackers in the United States, thinks they can grow faster than the solar industry by also expanding into the European market. The company completed an Initial Public Offering in October of 2020 at just under \$40 a share. This represented a \$5.1 billion market cap on \$150mm of EBITDA. At the time, Array was another clean energy company being valued by the market far above our estimates of intrinsic value. The company's stock traded up 25% following the IPO. In the second half of the first quarter, with the clean tech sell off, ARRY's stock price started to slide. This attracted our attention, but the shares remained above our assessment of fair value.

Things got materially worse for the company when they pulled 2021 guidance in the first quarter. Steel which makes up almost half their cost of sales, had nearly tripled in price as the economy reopened. Array did not hedge this cost due to the short timeline between when they booked an order and when they bought the steel. However, steel prices were moving up so quickly they were forced to re-negotiate over 100 contracts and it was unclear how many of them would accept the higher pricing. The company responded by entering a long-term contract with Nucor a steel manufacturer to hedge some of their input costs. The terms of that deal were not released and given the timing may not have been at long term favorable levels for the company. Shares fell precipitously. We started to look more closely.

Redwood Grove's investment team built two discounted cash flow models, one using Wall Street estimates and one using off-Wall Street resources. The off-Wall Street resources included IRENE, Woods Mackenzie and RMI. The two models, both revealed similar price targets and margins of safety 30% above current levels. As part of our research, we also looked at ARRY's competitors. In this case their main competitor is Nextracker, a company that is owned by Flextronics (FLEX). FLEX a supply chain and logistics company happens to own the largest US Solar Tracker company.

As a global supply chain company, FLEX had been more careful about their input costs, and were likely to experience less of a negative impact from the rise of steel prices. When we looked at FLEX and Nextracker we concluded that either FLEX was cheap, or the market was undervaluing Nextracker by about 50%. FLEX had already announced they were planning to spin off Nextracker in 2021, but with their closest competitors share price falling, it was unclear if those plans would be shelved.

In 2021, total Solar Photovoltaic installations are expected to be 145,300 MW, industry experts future installations estimate vary but are approximately 270,000 MW by 2030. It is worth noting that past estimates for electric vehicles and renewable energy adoption have proven to be meaningfully below actual adoption. However, for modeling purposes and determining intrinsic value we rely on the more conservative estimates. Pricing poses a headwind as solar costs have come down. While price declines in recent years have slowed, we model the potential that they will reaccelerate to approximately negative 5% a year. Given those assumptions ARRY and Nextracker should be able to see top line growth above 10%, without any benefit from the largely untapped European market. This makes ARRY and FLEX's below market valuations look particularly attractive. In the case of ARRY, we are still waiting for management to update guidance and the impact of unhedged steel prices, so we have only taken a 1%

position until there is more information. In both ARRY and FLEX, the short-term risks could provide more attractive entry points but looking out over 3-5 years we believe this could be a compelling time to invest.

Climate and Infrastructure

The heat dome in the Pacific Northwest stressed infrastructure in ways that were not imagined when built. When Portland reached 117 degrees Fahrenheit their mass transit system shut down because their power cables were pushed past their limit, in some cases searing apart. Attempts to fix them were thwarted because it was so warm repair people were unable to work outside. Increasingly, climate change is creating conditions that are outside the bands imagined when infrastructure was built. The increased stress on infrastructure and the need for more climate resilient replacement remains, in our assessment, an unpriced risk and opportunity. This long-term trend is part of our analysis in names like United Rentals and our former holding, Ameresco.

In addition to shorter life cycles, assets such as real estate once thought to be in safe locations are increasingly finding themselves in harm's way. Coastal real estate in Miami and low-lying areas in New Orleans are now more widely understood to be at risk. Housing prices have started to reflect what some call "climate gentrification." From 2013-2018, houses in Florida at higher elevations increased in price faster than their low elevation beach front properties. And since 2018, homes at a higher risk due to sea level rise risk areas have declined in value. Interestingly, this is mostly due to consumer preference, not economic levers like higher financing costs. Based on our research and a recent paper from the University of Pennsylvania, we believe there is little evidence in loan denials due to climate risks.¹ This asset risk exposure is something we incorporate into our analysis of retail banks, particularly ones with large mortgage books.

The rising sea level impact on public traded companies goes well beyond financial exposure to mortgages. As just one example, according to the report, *Lights Out: Climate Change Risk to Internet Infrastructure*, a one-foot rise in sea level will significantly impact our internet infrastructure. The authors mapped incursions zones projections from the National Oceanic Atmospheric Administration (NOAA) against the Internet Atlas, a map of internet assets. They found that one foot of sea level rise, expected by 2030, would inundate 235 data centers. This represents about 1/10th of existing data centers in the United States.² The potential need to replace 10% of existing data center infrastructure over the next 9 years, in a period of data center growth, is part of our analysis for portfolio holdings like Western Digital and Intel. It also informed our analysis of AT&T and Century Link: both companies have attractive valuations until one considers their data centers and fiber cables are at a higher risk than peers to sea level rise than their peers.

The range of climate impacts is difficult to assess, and we certainly do not always get it right. We are interpreting scientific forecasts that give a range of outcomes with ever widening "tail" events. The extreme weather in Portland and around the world has startled scientists because records are being broken by much larger margins than previously forecasted. One name we purchased last year was Portland General Electric (POR). A utility that serves the urban footprint of Portland. It recently closed the Boardman Coal plant and is adding 250 MW of capacity in renewables to meet demand for its Green

¹ <https://www.nber.org/papers/w27930>

² <https://ix.cs.uoregon.edu/~ram/papers/ANRW-2018.pdf>

Futures Impact Program. We added the name following an energy hedging trade error that cost the company \$150 million and concerns about wildfires increased. We were less worried than the market about wildfires because of the utilities largely urban footprint. However, with recent extreme temperatures in Portland, POR's ability to serve its customers was constrained by the unexpectedly high demand for air conditioning. This follows extreme weather this winter which damaged POR infrastructure and has hurt earnings. Extreme weather will increasingly hurt the profits of companies in most industries.

Closing Thoughts

Net Zero. You may have read the term in the news recently. An increasing number of countries, businesses and asset managers have been making pledges to get to Net Zero, typically, by 2050. The paper commitments reflect the growing understanding of the importance of climate action. The "Golden Triangle" of China, the EU and the US which accounts for 46% of global Greenhouse Gas Emissions have all made Net Zero Commitments. 417 of the 2000 largest companies by sales have made some form of commitment to Net Zero.³

According to an excellent report from Oxford's Net Zero initiative called *Taking Stock: A Global Assessment of Net Zero Targets*, there is a wide variation in how companies are approaching this commitment.⁴ Most concerning is that despite the commitments, few companies have concrete or even conceptual plans to achieve them. We recently spoke with a company that had made a Net Zero pledge. When we asked about their plans to get there, they told us they had "committed" to having a plan by 2030. Yet even those companies that do have plans, vary significantly. Understanding which companies are approaching it with integrity is a focus at Redwood Grove.

For example, approximately 90% are reliant on offsets, a strategy that some studies show, do not always create additional carbon emissions reductions. Those offsets generated through new forests which is considered a best practice have a limit. For instance, two companies alone, Eni and International Airline Group would need 1/8th of the planet's entire potential new forest offsets to reach Net Zero. There is no substitute to actual carbon reductions.

We mention this not to be pessimistic, but to highlight that meaningful change is hard. There remains a gap between rhetoric and reality. However, NetZero pledges are gaining meaningful traction and are a very powerful framework to begin the process of transitioning to a low carbon economy.

With gratitude,

The image shows two handwritten signatures in black ink. The first signature is 'Red' and the second is 'Gray'. Both are written in a cursive, flowing style.

³ https://ca1-eci.edcdn.com/reports/ECIU-Oxford_Taking_Stock.pdf?mtime=20210323005817&focal=none

⁴ https://ca1-eci.edcdn.com/reports/ECIU-Oxford_Taking_Stock.pdf?mtime=20210323005817&focal=none

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The WilderHill Clean Energy Index (“Wilderhill Index”) tracks the clean energy sector, specifically, businesses that stand to benefit substantially from a societal transition toward use of cleaner energy, zero-CO2 renewables, and conservation.

The S&P 500 Index (“S&P 500”) is a market capitalization-weighted index of common stocks of large capitalization companies. Companies in the S&P 500 have market capitalizations of at least \$5 billion.

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