



April 24th, 2023

Redwood Grove's Impact Report

Climate research and analysis have been an integral part of Redwood Grove Capital's investment process since its inception in 2016. Redwood Grove's process has always had two distinct and equally important parts – a fundamental value analysis and a climate economic analysis. The results of our climate and fundamental analysis are visible in our market-beating returns. However, we also want to give our investors a more quantifiable and comparable way to understand how the portfolio performs from a climate perspective. To address this, we recently produced an impact report ([here](#)) that outlines the results of our net zero and climate analysis. In this report, we quantify the greenhouse gas emissions of our portfolio companies and their net zero targets, comparing both to market benchmarks.

While greenhouse gas emissions and net zero targets can be informative metrics, they do not capture the breadth of Redwood Grove's climate research. A focus on the economic impacts of climate change requires a much broader and deeper analysis. The full investment process considers a wide range of factors, including but not limited to capital spending, lobbying efforts, financial filings, academic and NGO research, regulatory environment, strategic positioning, physical impacts of a changing planet, and corporate structure. Greenhouse gas emissions and reduction targets alone are simply not sufficient to determine the economic impacts of climate change. To address that, the impact report also provides a more holistic summary of the climate thesis of each company in the portfolio. The nuanced, company-specific research is more instructive and informative to understanding the climate thesis of our investments, albeit less comparable and without a clean and simple set of metrics.

Impact Resistant Windows

This quarter, we added PGT Innovations. This letter explores the investment thesis to show the process used to find companies that both appear undervalued and are strategically well-positioned for a transition to a low-carbon economy.

Redwood Grove looks at four major secular trends to help find companies benefiting from the impacts of climate change. Those trends are technological innovations, the increasing physical impacts, consumer behavior, and regulatory changes. In the case of our newest investment, PGT Innovations, all four are drivers for improved performance. Additionally, when looking at the business, management and valuation the company, in our assessment was trading at a compelling valuation. PGT Innovations manufactures premium windows and doors in the United States. They are a leader in impact-resistant windows that both reduce damage created by storms and improve home insulation.

According to the U.S. Energy Information Administration, 20% of U.S. energy is used in the residential sector. Heating homes accounts for 37% of residential energy consumption. Heat loss through windows accounts for 10%-25% of a household's total energy consumption. This equates to about .75% to 2% of total energy consumption in the United States lost through residential windows every year. Single-pane

windows allow 20 times more heat loss through the window. PGT Innovations offers only 2- and 3-paned windows that increase insulation and reduce energy losses.

According to the Insurance Institute for Business and Home (IBHS) report, ten states have uniform statewide codes and enforcement for residential buildings that require storm protection.¹ Redwood Grove expects these standards to get increasingly stringent and more widespread. In part because storm damage caused by broken windows and doors is not limited to individual homes. When a building's exterior is penetrated it also increases flying debris. For example, if a house loses its roof, it is usually due to air pressure changes resulting from broken windows. Localities incentivized to protect the public built environment, are looking at windows and doors to reduce the increasing costs of storm damage. The National Institute of Building Sciences (NIBS) 2019 report showed that adopting model building codes saves \$11 for every \$1 spent.² In 2020 Florida implemented the 6th Edition of the Florida Building Code, which included changes to the certification of impact-resistant windows and doors. To accelerate adoption, Florida has waived the sales tax on impact-resistant windows.³

Hurricanes are becoming more intense, increasing storm damage, and moving areas of risk further inland. As the earth's climate continues to warm, the intensity of hurricanes will increase. In particular, Sea Surface Temperature (SST) continues to warm providing more energy for hurricanes. This has been both forecasted and observed over the past few decades, particularly in the Atlantic Basin. A study published in the journal Science in 2020 found the likelihood of category 3,4 and 5 hurricanes has increased by 8% per decade since 1979.⁴

One of the challenges to adopting double- and triple-paned windows is the increased weight of the window. Double- and triple-paned glass necessitates a stronger frame. PGT Innovations is working with Corning to produce a "next generation" triple pane window called Diamond Glass that weighs up to 45% less than a traditional triple pane window. The lighter weight has other benefits including less fuel consumption to transport and an easier installation process. At the same time, the new lighter window meets Miami-Dade's stringent impact-resistant testing standards. It is a small innovation that opens a large market. PGT hopes to introduce the Diamond Glass windows by year end.

PGT Innovations is a vertically integrated windows manufacturer. In addition to making their own panes and insulation, they have the capacity to cut, temper, and laminate glass. They sell windows through a network of independent dealers. With the acquisition of New South Window Solution in 2020 they acquired the largest retail network in Florida. The company also operates in Western markets, particularly some of the fastest-growing states by GDP. In 2021 the company's gross margin was hurt by rising prices, which ultimately they were able to pass on to customers while increasing their backlog proving their pricing power. This has allowed PGT Innovations to have the highest margins among its direct peers (i.e. JELD-WEN or Masonite).

¹ https://ibhs.org/wp-content/uploads/RatingtheStates_2021.pdf

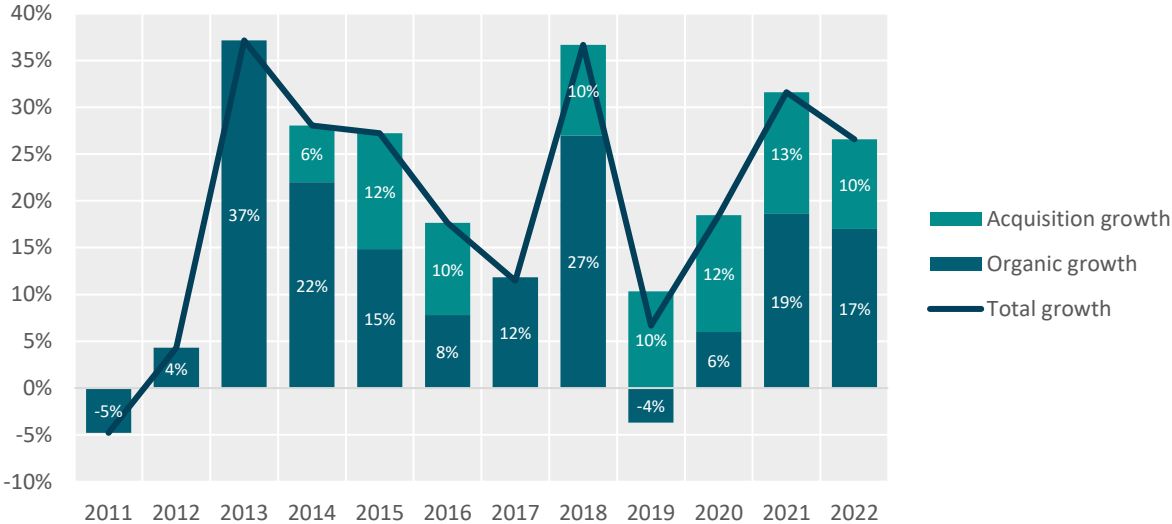
² https://ibhs.org/wp-content/uploads/RatingtheStates_2021.pdf

³ This temporary tax relief ends on July 1st, 2024.

⁴ <https://www.pnas.org/doi/full/10.1073/pnas.1920849117>

Since 2013 the company has grown through acquisitions and organic growth. They have a revenue CAGR in the last decade of 21.4%, 13.8% of which was organic. At the time of purchase the company was trading at 12x EV/EBITDA a slight discount to the S&P 500 but with a higher long-term organic growth rate. That growth rate has been supported by their ability to acquire companies at a discounted multiple consolidating the highly fragmented market.

Figure 1.
Decomposition of PGTI’s growth. Source: RGC



The company, we believe, is currently trading at fundamentally attractive levels, likely due to concerns about a downturn in the residential construction market. However, Redwood Grove believes this discount is overstated because almost 60% of the revenue comes from the remodeling market which has proven more resilient in a downturn for new home construction. In addition, the long-term growth rate of the company looks compelling with the potential to improve with increased regulations and consumers increasingly impacted by more severe storms. Nonetheless, we have entered the position cautiously as Redwood Grove anticipates increased volatility due to concerns about a pending recession.

Closing thoughts

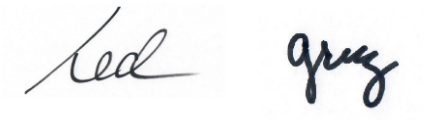
Turns out climate change is helping America’s game, baseball. At least according to research coming from Dartmouth College.⁵ Warmer temperatures reduce air density resulting in the “climate ball era.” The report analyzed 100,000 major league games and 220,000 individual hits. It concluded that 500 home runs since 2010 were the result of higher-than-average temperatures. This like all climate-related impacts are likely to increase over the coming decades. While Redwood Grove is not going to start looking for baseball manufacturing companies, the report is continued evidence that climate change is impacting a wide range of aspects of everyday life in ways that often go unnoticed.

You may have noticed that Redwood Grove has a new logo and color scheme. We are updating our website and presentation to reflect this so do not be startled by the changes, it is still us! Our goal

⁵ <https://home.dartmouth.edu/news/2023/04/spike-major-league-home-runs-tied-climate-change>

remains to identify climate risks and opportunities that will help Redwood Grove outperform. For the planet's sake, we hope the market follows. Thank you for your continued trust in us.

With gratitude,

A handwritten signature in black ink that reads "Red Grove". The word "Red" is written in a cursive style, and "Grove" is written in a more stylized, slightly blocky cursive.

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Performance results shown for the Fund are presented on a net basis, reflecting the deduction of, among other things: management fees, brokerage commissions, administrative expenses, and accrued performance allocation or incentive fees, if any. Net performance includes the reinvestment of all dividends, interest, and capital gains.

The Russell 1000 Value Index is the benchmark for Redwood Grove Capital Fund, LP (“Redwood Grove Capital” or the “Fund”). The Index is designed to be a measure of the large and mid-sized capitalization companies in the United States equities market. The Index is a composite of roughly 1,000 securities issued by the largest companies in the U.S. in terms of market capitalization. The Index is a subset of the securities found in the Russell 1000. The Index is not necessarily indicative of the investment strategy for the Fund. Assets and securities contained within the Index are different than the assets and securities contained in the Fund will therefore have different risk and reward profiles.

A variety of factors may cause indexes such as the Russell 1000 Value Index and the Russell 1000 Growth Index to be an inaccurate benchmark for a particular fund, and the Indexes do not necessarily reflect the actual investment strategy for Redwood Grove. The returns of market indexes are provided in these materials for comparison purposes only and the comparison does not mean that there necessarily will be a correlation between the returns of the Fund, on the one hand, and either of these indexes, on the other hand. These indices have not been selected to represent an appropriate benchmark against which to compare the Fund’s performance; but, rather, are disclosed to allow for comparison of sample transactions’ performance to that of certain well-known and widely recognized indexes. The returns of the Fund would differ from these indices in that, among other reasons, the Fund is, or will be, actively managed and may use leverage. Such indices are unmanaged and are not subject to fees and expenses, including transaction costs, typically associated with private investment funds.

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.

The S&P 500 and Wilderhill Index (the “Indices”) are not necessarily indicative of the investment strategy for Redwood Grove Capital Fund. An investment cannot be made directly in an index. Due to these differences, comparison to an index should not be relied upon as an accurate measure of comparison. The benchmarks referenced are included for informational purposes to show the general trend in the markets for the periods indicated and are not intended to imply that the portfolio was similar to the market indices either in composition or element of risk. There are significant differences between client accounts and the indices herein including, but not limited to, risk profile, liquidity, volatility, and asset composition. For the foregoing and other reasons, the performance of Redwood Grove Capital may not be comparable to the Indices.