



Boston Trust Walden

Principled Investing.

ESG IMPACT REPORT

Fourth Quarter 2023

A modern, competitive, and healthy financial marketplace requires investors to consistently evaluate, identify, and address evolving market risk. For decades, Boston Trust Walden has seen the changing climate physically disrupt global supply chains, halt manufacturing, and strain natural resource availability. We've witnessed persistent inequality and toxic workplaces lead to employee strikes, regulatory noncompliance, and heightened reputational risk. Yet, we have also observed effective management of material environmental, social, and governance (ESG) risks can increase operational efficiency, attract and retain key talent, strengthen supply chains, develop new products, and successfully identify new markets.

Since 1975, Boston Trust Walden has integrated ESG factors into investment strategies on behalf of our clients — one of the longest track records of any institutional investment manager. ESG considerations are integral to our investment philosophy and part of our fiduciary duty to ensure client assets are invested in a set of securities well positioned to minimize risk and produce sustainable returns. To be competitive, companies must effectively manage material ESG risks and capitalize on emerging opportunities.

Thus, a core component of our equity research process is recognizing the financial materiality (or significance) of ESG factors related to a potential investment. For companies considered for investment in client portfolios, an ESG analyst and investment analyst review the company simultaneously and collaboratively. We illustrate this process below using a case study of the company Air Products and Chemicals Inc. (NYSE: APD).

ESG INTEGRATION CASE STUDY

AIR PRODUCTS AND CHEMICALS

Company Overview

A leader in process gases, APD is the world's largest supplier of hydrogen with 50% market share among third-party industrial gas providers. The company produces gases like hydrogen, syngas, and oxygen to help customers operate efficiently and in a more environmentally friendly manner. APD's customers use these gases for medical applications, cleaning, fueling, purifying, food & beverage preservation, and manufacturing.

Our Analysis

For all potential investments, Boston Trust Walden ESG analysts and investment analysts work together to evaluate a company's performance with two objectives in mind: 1) to enhance our understanding of potential financial outcomes associated with issues ranging from risks (e.g., physical risks to operations) to opportunities (e.g., generating new sources of revenue); and 2) to identify potential ESG risks and opportunities for further investigation. Issues range from broad sector considerations to company-specific items and are informed by potentially material ESG issues, as identified by the Sustainability Accounting Standards Board (SASB), in addition to our own knowledge and experience. Boston Trust Walden analysts seek to identify both risks and opportunities, recognizing ESG factors can be positive, neutral, or negative.

From our initial review of APD, we noted the company possessed several attributes: a dominant market position in hydrogen, strong growth supported by secular tailwinds, and industry-leading margins. Our analysts also observed the company to have above-average profitability and stability, largely attributed to its emphasis on localized, on-site deliveries.

Further, our analysts noted APD continues to increase investment in clean energy, spurred by rising demand for clean energy solutions and government initiatives that aim to limit greenhouse gas (GHG) emissions. In its low-carbon future scenario, the International Energy Agency (IEA) estimates that hydrogen may account for 10% of total global energy in 2050, up from almost zero currently.¹ The US Inflation Reduction Act and the European Union's climate subsidies provide incentives to increase the production of green and blue hydrogen, in recognition of their promise as low-carbon fuels for hard-to-decarbonize sectors like steel and cement manufacturing, fertilizer production, and long-haul trucking.

Following our initial review, an area for further research was APD's significant investment into new gasification projects. Our analysts reviewed a variety of third-party resources and conducted their own primary research. They sought to answer two key questions:

- What are the risks and opportunities associated with gasification projects?
- To what extent might the risks and opportunities, if they do occur, affect the company's financial results?

¹ <https://www.economist.com/business/2023/07/03/can-a-viable-industry-emerge-from-the-hydrogen-shakeout>

Understanding the ESG Risks and Opportunities

Potential ESG risks and opportunities for industrial gas companies include workforce health and safety, GHG emissions, energy and water management, community relations, and product impact. In the case of APD, our research indicated its GHG emissions and the company's role in the global transition to clean energy were the most important factors to assess. The analysts explored other risks, which were ultimately deemed to be either immaterial or effectively managed.

The energy-intensive production of industry gases results in a significant greenhouse gas emissions footprint, exposing the company to climate risks, including legislative, regulatory, and societal responses to global climate change. In the case of APD, the company's 2022 GHG emissions totaled approximately 27 million metric tons, putting the company in the top decile of carbon emitters in the S&P 500. As such, future taxation of carbon emissions could present a significant incremental operational expense. To potentially mitigate this risk, the company set a goal to reduce its emissions intensity by one-third by 2030. Further, as APD advances no- and low-carbon projects, the company anticipates ongoing improvement in its emissions intensity over time.

According to the company, however, APD's products enabled customers to avoid 86 million metric tons of CO₂ emissions — more than three times APD's own direct and indirect emissions.

APD's current 10-year capital deployment plans include approximately \$20 billion in investment, with \$15 billion allocated to energy transition projects, including several large-scale green and blue hydrogen gasification projects. While hydrogen is the most abundant element on Earth, it is not readily available in its pure form. The predominant method for purifying hydrogen involves separating methane (CH₄) into hydrogen and carbon dioxide (CO₂) via steam methane reforming, commonly referred to as "grey hydrogen." CO₂ is released into the atmosphere as a byproduct of the process. Consequently, companies within the industry are directing a substantial amount of capital expenditure toward the development of projects that more sustainably produce hydrogen.

APD's green hydrogen gasification projects result in no CO₂ emissions, simultaneously reducing the company's emissions profile and providing customers with a low-carbon fuel. Over a third of the company's planned investments relate to green hydrogen projects. These projects do, however, carry project-related risks linked to scaling the technology at levels previously unseen. The economics of these projects are also highly uncertain as both demand and profitability are dependent on government incentives. For example, grey hydrogen can be produced profitably at less than \$2 per kilogram. In contrast, green hydrogen can cost two to three times that and relies on a combination of improving economics, buyers willing to pay a premium for the environmental attributes, and government incentives to close the gap.² In the US, for example, the Inflation Reduction Act offers an \$85 bonus credit per metric of CO₂ captured and sequestered as well as up to \$3 per kg of green hydrogen.³

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² <https://www.economist.com/business/2023/07/03/can-a-viable-industry-emerge-from-the-hydrogen-shakeout>

³ https://bipartisanpolicy.org/download/?file=/wp-content/uploads/2022/08/Energy-IRA-Brief_R04-9.26.22.pdf

Along with high capital investment requirements and long investment cycles, these projects burden the company's balance sheet. Over the past five years, APD's capital investment increased from 12% of sales to 25% of sales. The relationship between capital investment and sales is an indicator of the amount of investment required to sustain or grow a business. Twelve percent is considered capital intensive, 25% even more so. To fund the capital investment, APD has increased its debt, with its leverage ratio increasing from 1x to 2x. Debt is likely to further increase to meet planned investments. Therefore, there are significant risks associated with the interest rate environment, profitability of new projects, and changes to government incentives.

Our Investment Decision

Boston Trust Walden makes active investment decisions based on our assessment of a security's financial quality, the sustainability of its business model, and valuation, informed by our analysis of ESG risks and opportunities. Our conclusion was that APD exhibits above-average quality and sustainability compared to its sector peers thanks to the stability and profitability of its core industrial gas business and efforts to manage risks associated with its GHG emissions profile. The energy transition presents growth opportunities, but the size, nature, and location of the anticipated capital investment introduces significant additional risk. Portfolio managers will monitor this risk carefully, along with valuation, as they determine the role of APD in Boston Trust Walden's investment strategies.

IN SUMMARY

Air Products and Chemicals is an example of how ESG factors can affect corporate performance and why we consider ESG analysis a crucial element in our assessment of companies. We believe it is prudent to recognize the potential financial materiality of ESG factors and are committed to doing so as we seek to invest client assets in a set of securities positioned to minimize risk and produce sustainable returns.

Past performance is not indicative of future results. The security presented is shown only to illustrate the firm's process for evaluating an issuer in the course of implementing its investment strategy. The security should not be viewed as a recommendation of the firm, and it should not be assumed that an investment in the security was or would be profitable.