



UConn Student Managed Fund

Air Products & Chemicals Ltd. (NYSE: APD)

FEBRUARY 8, 2022

Target Price: \$326.68
Current Price: \$252.81
Stop loss: \$202.25
52 Week High/Low: \$249.79/\$316.39

Market Cap (\$B): \$56.44 B
Dividend Yield: 2.36%
Beta: 0.83
ROE: 16.39%

P/E Ratio (TTM): 26.00
EV/EBITDA: 16.86
EBITDA Margin: 35.55%
Gross Margin: 30.39%

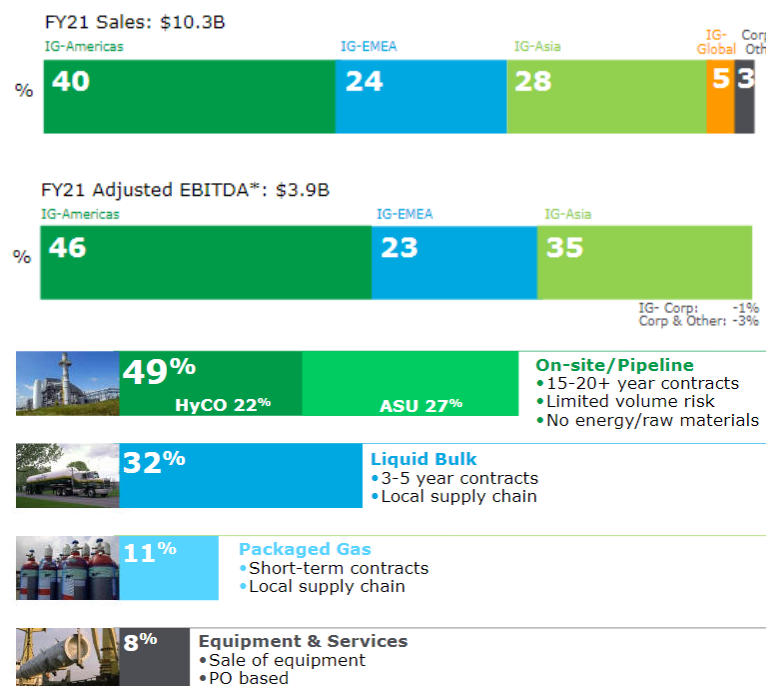
Company Overview

Air Products & Chemicals (APD) is one of the largest global producers of industrial gases and has a large specialty chemicals business. APD reported fiscal year 2020 (ending in September) results under five segments: Industrial Gases - Americas; Industrial Gases - EMEA (Europe, Middle East, and Africa); Industrial Gases - Asia; Industrial Gases - Global; and Corporate and Other.

The regional Industrial Gases (Americas, EMEA, and Asia) segments produce and sell atmospheric gases such as oxygen, nitrogen, and argon (primarily recovered by the cryogenic distillation of air), and process gases such as hydrogen, carbon monoxide, helium, syngas, and specialty gases. These segments supply gases to many industries, including metals, glass, chemical processing, energy production and refining, food processing, metallurgical industries, medical, and general manufacturing. APD is the world's largest provider of hydrogen, which is used by refiners to facilitate the conversion of heavy crude feedstock and lower the sulfur content of gasoline and diesel fuels.

Industrial Gases - Global (4% of FY 20 sales) includes cryogenic and gas processing equipment sales for air separation

The Corporate and other segment (2% of FY 20 sales) includes the LNG sale of equipment business, and the liquid helium and liquid hydrogen transport and storage container businesses, and corporate support functions that benefit all the segments. Corporate and other also includes income and expense that cannot be directly associated with the business segments, including foreign exchange gains and losses and stranded costs resulting from discontinued operations.



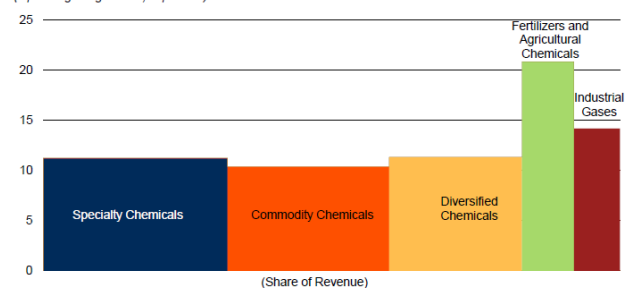
Industry Outlook

The industrial gas businesses are highly resilient to economic shocks, such as the financial crisis and the Covid-19 pandemic. During the Great Recession of 2008-2009, free cash flow remained strong in this sub-industry; the same was true during the 2020 recession. Industrial gas companies benefit from a high percentage of revenue derived from stable on-site businesses, which have fixed monthly charges and/or minimum purchase requirements. In general, industrial gas companies have a good degree of pricing power and have been able to consistently expand margins, even during periods of high inflation.

The market forecasts that the business environment will continue to improve due to the start-up and ramp-up of new projects. Consumption of industrial gases over the longer term are forecasted to continue to increase at the historical rate of 1.5 to 2 times that of industrial production, according to the CFRA APD Equity Research. In current market conditions there are secular tailwinds driving earnings growth for several years, including hydrogen mobility and carbon capture. Based on current market conditions, the consolidation within the industry has slowed, since the Praxair and Linde merger. The outcome of the deal reflected a small number of major global players and many smaller players. From this the market forecasts that ongoing acquisitions of smaller industrial gases companies by the larger companies will continue at a much smaller pace.

Industrial gases are produced primarily by air separation. Some gases include co-products or byproducts of these processes. The growth generated within this sub-industry should come from penetrating markets outside the U.S. and involve larger and more complex projects, including world-scale gasification projects. This exposes companies in this area to heightened levels of geopolitical and exchange rate risk

PROFIT SHARE MAP OF CHEMICALS SUB-INDUSTRIES (2016-2020 AVERAGE)
(Operating Margin EBIT, in percent)



Investment Thesis

- ✓ Expanding Air Products & Chemicals industrial gas business domestically and internationally
- ✓ The opening of future capital projects due to COVID backlog
- ✓ The acquisitions of gasification projects

Investment Risks

- Negative trends in global industrial production
- Declining demand in Air Products & Chemicals products
- Higher raw materials input cost

Financial Performance

Breakdown	TTM	9/30/2021	9/30/2020	9/30/2019	9/30/2018
> Total Revenue	10,942,000	10,323,000	8,856,300	8,918,900	8,930,200
Cost of Revenue	7,777,300	7,186,100	5,858,100	5,975,500	6,189,500
Gross Profit	3,164,700	3,136,900	2,998,200	2,943,400	2,740,700
> Operating Expense	913,000	869,100	760,600	773,600	778,100
Operating Income	2,251,700	2,267,800	2,237,600	2,169,800	1,962,600
> Net Non Operating Interest Inc...	-135,600	-141,800	-109,300	-137,000	-130,500
> Other Income Expense	463,900	381,400	295,500	256,700	182,900
Pretax Income	2,580,000	2,507,400	2,423,800	2,289,500	2,015,000
Tax Provision	462,200	462,800	478,400	480,100	524,300
> Net Income Common Stockhold...	2,177,500	2,099,100	1,886,700	1,760,000	1,497,800
Diluted NI Available to Com Stock...	2,177,500	2,099,100	1,886,700	1,760,000	1,497,800

Valuation Assumptions & Key Financials

We recommend a BUY rate for APD based on a target price of \$326.89 per share. This target price reflects a 24.26% margin of safety based on its closing price of \$ on February 8, 2022. We calculated WACC as 5.70%, assuming a terminal growth rate of 3% and a 20.47x exit EV/EBITDA.

Perpetuity Growth Method - Value per Share	
Free Cash Flow at year 2025	2,379.86
WACC	5.70%
Perpetuity Growth Rate	3.00%
Perpetuity Value in 5 years	90,693.49
Present Value of Perpetuity (@ WACC)	71,648.75
(+) Present Value of Free Cash Flows (@ WACC)	2,519.08
(=) Current Enterprise Value	74,167.83
(-) Long Term Debt	8,219.20
(+) Cash and Marketable Securities	5,800.80
(=) Equity Value	71,749.43
(-) Dilutive Options Outstanding	0.87
Dilutive Equity Value	71,748.56
Shares outstanding	221.46
Estimated Value per Share (USD)	323.98
Current Price (USD)	263.08
Estimated Upside	60.90

Terminal EBITDA Method	
Terminal EBITDA at year 2025	4,684.33
WACC	5.70%
Exit Enterprise Value / EBITDA	20.47
Terminal Value in 5 years	95,888.14
Present Value of Terminal Value (@ WACC)	72,666.22
(+) Present Value of Free Cash Flows (@ WACC)	2,519.08
(=) Current Enterprise Value	75,185.30
(-) Long Term Debt	8219.20
(+) Cash and Marketable Securities	5800.80
(=) Equity Value	72766.90
(-) Dilutive Options Outstanding	0.87
Dilutive Equity Value	72,766.03
Shares outstanding	221.46
Estimated Value per Share (USD)	328.57
Current Price (USD)	263.08
Estimated Upside	65.49

ESG Considerations

APD has no outstanding ESG issues. From reviewing the ESG report, APD has focused on setting policies and strategies focused on sustainability and further investment into carbon capture and alternative fuel technology.

ESG Risk Rating **COMPREHENSIVE** ?

10.8 Low Risk

Negligible **Low** Medium High Severe
0-10 10-20 20-30 30-40 40+

Ranking

Industry Group (1st = lowest risk)

Chemicals **3** out of 478

Universe

Global Universe **263** out of 15124

Last Update: Dec 4, 2021