BEHIND
THE NUMBERS
Quality of Earnings Analysis

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Air Products & Chemicals (APD)

We are raising our earnings quality rating of APD to 4+ (Acceptable) and adding to our Top Buy list.

For an explanation of the EQ Review Rating scale, please refer to the end of this report.

Summary

For the March 2022 quarter, APD's adjusted EPS of $2.38 beat forecasts by 1 cent. We give high marks that adjusted EPS and GAAP EPS were the same – no adjustments made. Plus, in recent quarters, APD has only reported adjustments for truly one-time items such as a gain on an asset transfer. It does appear that while energy costs remain high, they are no longer rising at the same rates, and APD's price increases have pulled ahead of cost increases last quarter.

- Pension income fell by $8.5 million y/y costing APD 3.1 cents in EPS
- Share compensation fell by $1.9 million y/y helping EPS by 0.7 cents
- Losses on hedging fell by $10.0 million y/y helping EPS by 4.5 cents
- The tax rate declined 180bp y/y helping EPS by 5.3 cents

Of these items, we would expect the tax rate to continue benefitting from APD increasing its investments in lower-tax areas overseas. We also believe there could be an adjustment to future earnings related to Russia and Ukraine. Russia is less than $25 million in sales and APD is divesting there and moved $54.1 million in assets to "other receivables" – we could see that being written off in the future. Also, Ukraine had a project under construction with $45 million spent so far. Ukraine is less than $5 million in sales, and if that project is not resumed – we could see the $45 million being written off too.

Raw Material Costs – Muddy Margin Analysis

Higher raw material costs make pass-through contracts appear to have lower margins. On-Site facilities are normally about half of APD revenues (51% in the 3/22 quarter and 49% for fiscal 2021 ended 9/21). These are facilities that supply gases to a specific customer on a long-term contract of 15-20 years. This is where the bulk of APD's pass-through contracts exist too. That simply means that APD is contracted to be paid a specific dollar figure per volume delivered. The raw materials and electricity appear in the revenue and cost of sales as the same figure. When the price of these items increases, the sales figure rises but the profit figure stays the same – it appears profitability is declining, which is not the case. Here is a simple illustration of what is happening:

	Base Period	**Costs Rise**	**Next Quarter**	**Costs Rise**	**Next Quarter**
Sales	$100	$20	$120	$35	$155
Cost of Sales	$80	$20	$100	$35	$135
Operating Profit	$20		$20		$20
Profit Margin	20.0%		16.7%		12.9%

The key is to focus on dollar figures for profit, not the margin. APD does a great job breaking out figures for pass-through items. For example, for the 1Q22 in December, APD noted that it had 26% y/y sales growth, with 14% coming from pass-through contracts and the higher costs seen in the market. That accounted for a 450bp decline in adjusted EBITDA margin. For 2Q22 in March, 18% y/y sales growth had 6% coming from pass-through contracts.

At the same time, the Merchant business where APD sells and delivers product to other customers does not have pass-through arrangements. APD generally raises prices during times of inflation to recover higher costs, but there can be a lagging impact. It appears that APD has managed to pull ahead of some of the inflation in the most recent quarter:

- From 3/22 earnings call: *"Volume was favorable at $0.18 and price net of variable cost was $0.14 as our price actions more than offset the unprecedented energy cost increases. For the quarter, our price actions alone before netting against variable cost contributed around $0.50."*

- From the 12/21 earnings call: "*Price for the quarter was again strong, the 4% gain for the region was equivalent to 10% on the merchant business, Price was better across all major products. This is the 13th consecutive quarter of year-on-year price improvement. Energy cost pass-through drove a 15% sales increase, with the much higher natural gas prices. EBITDA was 16% ahead of last year, as positive volume, price, better equity affiliate income and lower maintenance costs more than offset higher inflation. EBITDA margin was 230 basis points lower. However, energy costs pass-through negatively impacted EBITDA margin by approximately 500 basis points."*

	2Q22	1Q22	4Q21	3Q21	2Q21	1Q21
EBITDA Margin	34.6%	33.5%	36.6%	37.5%	37.3%	39.2%
EBITDA $	$1,019	$1,003	$1,041	$976	$934	$932

Margins were above 40% in the past before inflation came through the income statement and APD is still targeting returning to that level. But the key point here is inflation raises revenue and costs and makes it appear the company is less profitable. Yet, actual dollar figures are rising. Getting past the lag impact of cost inflation preceding price hikes in the merchant business is also helping.

APD Appears Well-Positioned to Complete Its Build-Out

APD grows in a stair-step fashion. Projects take a long-time to build and do not generate revenues and cash flow until turned on. Thus the balance sheet reflects growing debt each quarter to fund additional growth capital spending. It spent $9.8 billion since 2018 in this area and expects to spend another $15.3 billion through 2027 as this program has grown since 2018.

APD is seeing growing EBITDA and free cash flow after maintenance spending and dividends is about $1.5 billion per year:

	2Q22	2Q21	2Q20	2Q19
TTM EBITDA	$4,039	$3,605	$3,649	$3,261
Interest/taxes	$459	$451	$464	$455
Maint. CapEx	$761	$655	$491	$389
Distributable Cash Flow	$2,819	$2,579	$2,694	$2,417
Dividends	$1,329	$1,185	$1,023	$966
Cash For Growth	$1,490	$1,394	$1,671	$1,451
Spent on Growth since '18	$9,800	$6,300	$3,900	$2,400
Future Spending	$15,300	$10,500	$7,800	$6,800

Looking at these figures there are some gives and takes:

- Positive- The EBITDA is growing and was impaired of late with cost increases exceeding price hikes to recover rising energy costs.

- Positive- New projects will keep turning on. Jazon I started in 2021 and has not annualized yet. Jiutai and Jazon II are expected in 1H23 (less than one year as fiscal 2023 starts Oct 1, 2022). Deborg and GCA are expected in 2H23. As these turn on, EBITDA should rise.

- Positive- Of the $15.3 billion to spend by the end of 2027, $1.5 billion per year in cash flow after the dividend and existing debt capacity of $7.9 billion (which assumes 3x trailing EBITDA for debt) covers nearly all of this. As EBITDA grows with new projects, more financing could likely be obtained there.

- Negative- Inflation can lead to some higher working capital investment that would be a drain on the free cash flow after the dividend. In the first 6 months of fiscal 2022, working capital was a $262 million cash drain vs. $91 million the year before.

- Negative- Does the dividend continue growing at 8% annually? Would APD need a year or two of more modest growth to preserve the cash flow to pay for growth?

Fulfillment Costs and Equipment Sales are Moving Together

We have talked about this in prior notes. APD sells and installs equipment at customer locations. It records payments received as Contract Liabilities which is the same as Deferred Revenues. Equipment installed is booked into an asset account called Current Contract Fulfillment Costs. It estimates the costs to complete the installation. It then recognizes the percentage of costs that have been incurred from total project cost and records the same percentage of revenue and costs. That pulls down the deferred revenue liability and the Current Contract Fulfillment Cost asset account.

There have been concerns with this because it would be possible to tweak revenue recognition or capitalize more costs and perhaps create more income in a given quarter. While these projects often take several quarters to complete, we have not seen much to concern us watching this over several years. A rising level for the asset called Contract Costs – tends to lead to higher revenues in the next quarter and vice versa. These balance sheet accounts appear to be turning quickly enough without problems. Also, we are seeing all the accounts move in the same direction with revenue tending to lag what the balance sheet accounts are doing by one quarter.

	2Q22	1Q22	4Q21	3Q21	2Q21	1Q21
Sales of Equipmt (I/S)	$239.8	$221.8	$297.9	$166.3	$163.8	$161.7
Contract Fulfillm Cost (B/S)	$226.6	$150.3	$125.5	$177.4	$154.5	$140.9
Contract Liabs (Def Rev) (B/S)	$636.6	$578.6	$425.2	$507.7	$472.4	$492.8

The first line is revenue being booked and is an income statement item. The other two are on the balance sheet. When the asset and liability grow, revenue jumps the next quarter, and when the balance sheet shrinks (projects are completed) revenue declines the next quarter. 3Q21-1Q22 shows this well.

We see little reason for concern in this area. It also appears that business has grown stronger for APD with that the balance sheet items at the highest level we've seen in years which could mean higher revenues in this area.

Hedging Gains/Losses Are Volatile

As noted in the introduction, a drop in the losses on hedges added $10 million to income or 4.5 cents for the March 2022 quarter. APD is buying and selling huge quantities of commodity items and it hedges much of its exposure there. It is producing and selling product in many overseas markets giving it a large FX exposure risk and it hedges that risk too. Finally, APD is working on several growth projects and building them. Much of that requires issuing debt and APD also hedges its interest rate exposure.

APD markets its positions to market on a regular basis and much of the gains and losses are cumulatively recorded in AOCL (Accumulated Other Comprehensive Loss) and impact the equity balance but not income. That is for positions that are designated as a hedge. When a position is not a hedge or no longer meets the criteria to be a hedge and involves a derivative – the gain or loss is recorded as income and normally appears in "Other non-operating income, expense" line. Often there is a small amount of loss or income in a given quarter:

	2Q22	1Q22	4Q21	3Q21	2Q21	1Q21
Hedging loss (gain)	$26.0	$18.7	$20.0	-$13.1	$36.0	-$1.3

While this bounces around a bit, we are going to consider has there been a more weird time than in the last several quarters? FX markets went crazy from 2019 to 2020 to 2021. Commodity costs crashed in early 2020 and then rose considerably in 2021 and now even interest rates are rising.

In any given quarter the y/y change for APD may be 1-4 cents in this area. We think this is very minor for a company that is expected to earn north of $10 per share.

Joint Ventures Pose Some Additional Risks

Many of the new JVs under construction are in Saudi Arabia and China, which brings some FX issues. As APD found during Covid in 2020 when its Lu'An facility in China was closed during lockdowns – it may not have some risk of that recurring. That could also mean projects are not completed on time even though APD may still need to keep investing new money to complete the new plants.

In cases where the JVs are not consolidated, they are treated as equity investments. The share of the earnings recognized is not cash. Only dividends paid to the various partners represent cash in the door. To us that poses a risk in that it can lead to overstatements for EBITDA. Also, APD wants to leverage new plants after start-up to help pay for the remaining projects under construction. As a JV, it may not have that ability, or the dividend being paid to APD may not justify as much additional debt as an EBITDA figure could.

Explanation of EQ Rating Scale

6- (Exceptionally Strong)- Indicates uncommonly conservative accounting policies to the point that revenue and earnings are essentially understated relative to the company's peers. Higher possibility of reporting positive earnings surprises

5 (Strong)- Indicates the company has no areas of concern with its reported results and we see very little risk of the company disappointing due to recent results being overstated from aggressive reporting in recent periods.

4 (Acceptable)- Indicates the company may have exhibited a minor “red flag”, but the severity of the issue is not yet a concern. Minimal risk of an earnings disappointment resulting from previous earnings or cash flow overstatement

3 (Minor Concern)- Indicates the company has exhibited either a larger number of or more serious warning signs than companies receiving a 4. The likelihood of an immediate earnings or cash flow disappointment is not considered to be high, but the signs mentioned deserve a higher degree of attention in the future.

2 (Weak) Indicates the company’s recently reported results have benefitted materially from aggressive accounting. Follow up work should be performed to determine the nature and extent of the problem. There is a possibility that upcoming results could disappoint as the impact of unsustainable benefits disappears.

1 (Strong Concern)- Indicates that the company’s recent results are significantly overstated and that we view a disappointment in upcoming quarters is highly likely

In addition to the numerical rating, the EQ Review Rating also include either a minus or plus sign. A minus sign indicates that our analysis shows the overall earnings quality of the company has worsened since the last review and there is a possibility the numerical rating will fall should the problem continue into upcoming quarters. Likewise, a positive sign indicates that the overall earnings quality is improving, and the company may see an upgrade in its numerical rating should the trend continue.

Key Points to Understand About the EQ Score

The EQ Review Rating is much more than a blind, quantitative scoring method. While we utilize proprietary adjustments, ratios, and methods developed over decades of earnings quality analysis, the foundation of all of our analysis is reading recent SEC filings, press releases, conference call transcripts and in some cases, conversations with managements.

The EQ Review Rating is not comparable to a traditional buy/sell rating. The Rating is intended to specifically convey the extent to which reported earnings may be over/understated. Fundamental factors such as forecasts for future growth, increasing competition, and valuation are not reflected in the rating. Therefore, a high score does not in itself indicate a company is a buy but rather indicates that recent results are a good indication of the underlying earnings and cash generation capacity of the company. A low score (1-2) will likely result in us performing a more thorough review of fundamental factors to determine if the company warrants a full-blown sell recommendation.

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