BEHIND THE NUMBERS
EARNINGS QUALITY & DIVIDEND SUSTAINABILITY RESEARCH

BTN Research

December 13, 2018 | www.btnresearch.com

Jeff Middleswart
jmiddleswart@btnresearch.com

Bill Whiteside, CFA
bwhiteside@btnresearch.com

Air Products & Chemicals (APD) EQ Review Update- 9/18 Quarter

Current EQ Rating*	Previous EQ Rating
3-	4-

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

We are lowering our rating on Air Products & Chemicals (APD) to a 3- (Minor Concern) from a 4- (Acceptable)

APD reported adjusted EPS of $2.00 in the 9/18 quarter, in-line with consensus estimates. There were 5 cps in non-GAAP adjustments made which included a pension settlement, tax reform items and a charge from a change in inventory method.

We noted a couple of specific items in the fourth fiscal quarter that prompted us to reduce the rating.

- Changes in estimates related to the company's use of percentage-of-completion accounting added $13 million to operating profits in the 9/18 quarter versus $2 million in the year-ago period. The $11 million improvement would have added about 4 cps to EPS in a quarter where earnings were in-line with estimates.

- APD changed its method of inventory accounting to 100% FIFO (first-in, first out). This resulted in a $24.1 million benefit to the quarter. The company adjusted this amount out of its non-GAAP earnings. Likewise, growth in adjusted inventory days looks good after adjusting for the change.

Changes in Estimates for Percentage-of-Completion Accounting

APD utilizes the percentage-of-completion method when accounting for equipment sales contracts. The company describes the utilization of the method in its 10-K as follows:

> *"Revenue from equipment sale contracts is recorded primarily using the percentage-of-completion method. Under this method, revenue from the sale of major equipment, such as LNG heat exchangers and large air separation units, is primarily recognized based on costs incurred to date compared with total estimated costs to be incurred. We estimate the profit on a contract as the difference between the total estimated revenue and expected costs to complete the contract and recognize the profit over the life of the contract.*
>
> ***Accounting for contracts using the percentage-of-completion method requires management judgment relative to assessing risks and their impact on the estimate of revenues and costs.*** *Our estimates are impacted by factors such as the potential for incentives or penalties on performance, schedule and technical issues, labor productivity, the complexity of work performed, the cost and availability of materials, and performance of subcontractors.* ***When adjustments in estimated total contract revenues or estimated total costs are required, any changes in the estimated profit from prior estimates are recognized in the current period for the inception-to-date effect of such change.*** *When estimates of total costs to be incurred on a contract exceed estimates of total revenues to be earned, a provision for the entire estimated loss on the contract is recorded in the period in which the loss is determined."*

APD disclosed the following quarterly impact from changes to estimates related to percentage-of-completion accounting:

	9/30/2018	6/30/2018	3/31/2018	12/31/2017
Gain/(Loss) From Change in % of Completion Estimates	$13	$15	$10	$0

	9/30/2017	6/30/2017	3/31/2017	12/31/2016
Gain/(Loss) From Change in % of Completion Estimates	$2	$15	$12	-$2

We can see that the 9/18 quarter profit benefitted from a $13 million change in estimates compared to just $2 million last year. Regardless of whether the change in estimates is

warranted, we view the larger benefit as a non-operational gain without which EPS would have been about 4 cps lower.

Inventory Change to FIFO

We have previously complimented APD on its use of the LIFO (last-in, first-out) inventory valuation for its US gas business. However, on July 1, the company moved all of its inventories to the FIFO (first-in, first-out) method as discussed in the following disclosure from the 10-K filing for the fiscal year ended 9/18:

> *As discussed in Note 1, Major Accounting Policies, we changed our accounting method for U.S. inventories from a LIFO basis to a FIFO basis effective 1 July 2018. As of 30 September 2017, inventories valued using the LIFO method comprised approximately 49% of consolidated inventories before LIFO adjustment. Liquidation of LIFO inventory layers prior to our change in accounting policy in fiscal year 2018 and in fiscal years 2017 and 2016 did not materially affect the results of operations. We did not restate prior period financial statements for the change in U.S. inventories as the impact was not material.* ***Instead, the Company applied the accounting change as a cumulative effect adjustment to cost of sales in the fourth quarter of fiscal year 2018. This change increased inventories by $24.1 at 1 July 2018 and increased pre-tax income from continuing operations by $24.1 for the quarter and fiscal year ended 30 September 2018.***

FIFO is consistent with international accounting standards and it does make for consistent treatment for all segments. However, we still frown on the switch to FIFO, especially in times of rising costs. Matching older, lower-cost inventories with current sales prices results in artificially higher profits if costs are rising

With this in mind, let's look at inventory DSIs over the last eight quarters:

	9/30/2018	6/30/2018	3/31/2018	12/31/2017
COGS	$1,566	$1,545	$1,507	$1,572
Inventory	$396	$322	$340	$347
COGS YOY growth	1.3%	4.0%	7.3%	19.4%
Inventory YOY growth	18.1%	9.8%	5.3%	5.0%
Inventory DSIs	23.1	19.0	20.6	20.2

	9/30/2017	06/30/2017	3/31/2017	12/31/2016
COGS	$1,545	$1,486	$1,404	$1,317
Inventory	$335	$293	$323	$331
COGS YOY growth	14.7%	12.6%	15.7%	1.6%
Inventory YOY growth	31.5%	-52.0%	-50.3%	-50.3%
Inventory DSIs	19.8	18.0	21.0	22.9

If we adjust the 9/18 inputs for the $24.1 million reduction in COGS and subsequent increase to inventory, we get an adjusted DSI figure of 21.4 compared to the non-adjusted 23.1. That brings the year-over-year increase to DSI down to 1.6 which is not concerning.

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 recent 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 Concerns"	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 may 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 the next quarter. 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.

Disclosure

BTN Research is a research publication structured to provide analytical research to the financial community. Behind the Numbers, LLC is not rendering investment advice based on investment portfolios and is not registered as an investment adviser in any jurisdiction. Information included in this report is derived from many sources believed to be reliable (including SEC filings and other public records), but no representation is made that it is accurate or complete, or that errors, if discovered, will be corrected.

The authors of this report have not audited the financial statements of the companies discussed and do not represent that they are serving as independent public accountants with respect to them. They have not audited the statements and therefore do not express an opinion on them. Other CPAs, unaffiliated with Mr. Middleswart, may or may not have audited the financial statements. The authors also have not conducted a thorough "review" of the financial statements as defined by standards established by the AICPA.

This report is not intended, and shall not constitute, and nothing contained herein shall be construed as, an offer to sell or a solicitation of an offer to buy any securities referred to in this report, or a "BUY" or "SELL" recommendation. Rather, this research is intended to identify issues that investors should be aware of for them to assess their own opinion of positive or negative potential.

Behind the Numbers, LLC, its employees, its affiliated entities, and the accounts managed by them may have a position in, and from time-to-time purchase or sell any of the securities mentioned in this report. Initial positions will not be taken by any of the aforementioned parties until after the report is distributed to clients, unless otherwise disclosed. It is possible that a position could be held by Behind the Numbers, LLC, its employees, its affiliated entities, and the accounts managed by them for stocks that are mentioned in an update, or a BTN Thursday Thoughts.