

Air Products

Near-term soft patch but longer term focus remains on clean hydrogen

Reiterate Rating: NEUTRAL | PO: 264.00 USD | Price: 218.02 USD

Chinese slowdown weighed on APD's F1Q

Air Products missed the bottom end of their F1Q24 guidance for the first time in more than 2 years (see Exhibits 1 and 2), with an EPS of \$2.82 (consensus \$3.01, BofA \$2.97), largely driven by Chinese slowdown and lower helium activity from a weak electronics market. Other headwinds in this quarter included inflation and costs from delays regarding sale of equipment for non-LNG projects, as well as other maintenance and project development costs. While price was slightly negative in APD's European business from surcharge reversals, operating profit continued to post gains (Exhibit 3).

F2024 outlook assumes stronger 2H

Softness in Asia and helium will remain near-term headwinds, which drives decreases in our F2Q EPS (\$2.75 vs \$3.18 prior). However, there are several factors which should lead to a 2H growth recovery: 1) Uzbekistan project should continue to ramp reaching full capacity (\$0.35/year run rate) in 2H, 2) LNG equipment growth will help offset sale of equipment headwinds in the remainder of FY24, 3) easier price comparisons in 2H in Americas and Europe will allow for more positive pricing growth. Our F24 EPS falls to \$12.55 from \$13.15 prior, due to a lower 1H, and our PO falls to \$264 from \$290, based on the average of our DCF (7.3% WACC vs 7.5% prior and 3.5% terminal growth) and a 20.0x P/E (previously 20.5x due to slower growth) applied to C2024E earnings.

Clean H2 remains long term growth driver

The majority of APD's capex budget for F2024 (\$5 - 5.5bn) will be for the ongoing investments of 4 large clean energy projects, namely the blue hydrogen project in Alberta, green ammonia project in NEOM, blue hydrogen/ammonia project in Louisiana, and the sustainable aviation fuel project in California. While the first of these projects is expected to be complete in 2025, the other 3 are all expected to be on stream in 2027. The company also has a green H2 project in New York, a green H2 project in north Texas, and a green H2 project in Arizona. CEO Seifi Ghasemi indicated the company was fully supportive of the Dept of Treasury's requirements for the full 45V tax credit for green H2, namely hourly compliance with nearby and recently constructed renewable power. While APD will be complaint with these requirements, our concern is that it could broadly slow other green H2 supply leading to prolonged delays in mobility demand.

Estimates (Sep) (US\$)	2022A	2023A	2024E	2025E	2026E
EPS	10.41	11.51	12.55	13.47	14.41
GAAP EPS	10.53	10.29	12.55	13.47	14.41
EPS Change (YoY)	15.4%	10.6%	9.0%	7.3%	7.0%
Consensus EPS (Bloomberg)			12.86	14.02	15.94
DPS	6.36	6.87	7.21	7.57	7.95
Valuation (Sep)					
P/E	20.9x	18.9x	17.4x	16.2x	15.1x
GAAP P/E	20.7x	21.2x	17.4x	16.2x	15.1x
Dividend Yield	2.9%	3.2%	3.3%	3.5%	3.6%
EV / EBITDA*	14.9x	13.4x	12.3x	11.3x	10.5x
Free Cash Flow Yield*	0.5%	-2.9%	-2.6%	-1.1%	-0.3%

* For full definitions of *IQmethod*SM measures, see page 7.

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Timestamp: 06 February 2024 05:48AM EST

06 February 2024

Equity

Key Changes

(US\$)	Previous	Current
Price Obj.	290.00	264.00
2024E Rev (m)	13,328.7	12,872.8
2025E Rev (m)	14,884.5	14,256.0
2026E Rev (m)	16,674.4	15,556.7
2024E EPS	13.15	12.55
2025E EPS	14.45	13.47
2026E EPS	16.25	14.41

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Stock Data

Price	218.02 USD
Price Objective	264.00 USD
Date Established	6-Feb-2024
Investment Opinion	B-2-7
52-Week Range	217.03 USD - 307.71 USD
Mrkt Val (mn) / Shares Out (mn)	48,509 USD / 222.5
Free Float	99.7%
Average Daily Value (mn)	265.35 USD
BofA Ticker / Exchange	APD / NYS
Bloomberg / Reuters	APD US / APD.N
ROE (2024E)	18.6%
Net Dbt to Eqty (Sep-2023A)	50.6%
ESGMeter TM	High

ESGMeter is not indicative of a company's future stock price performance and is not an investment recommendation or rating. ESGMeter is independent of BofA Global Research's equity investment rating, volatility risk rating, income rating, and price objective for that company. For full details, refer to ["BofA ESGMeter Methodology"](#).

iQprofileSM Air Products

iQmethodSM – Bus Performance*

(US\$ Millions)	2022A	2023A	2024E	2025E	2026E
Return on Capital Employed	8.3%	8.5%	7.8%	7.3%	7.1%
Return on Equity	17.4%	18.7%	18.6%	18.3%	18.1%
Operating Margin	19.0%	21.7%	23.1%	22.2%	21.7%
Free Cash Flow	244	(1,421)	(1,262)	(537)	(137)

iQmethodSM – Quality of Earnings*

(US\$ Millions)	2022A	2023A	2024E	2025E	2026E
Cash Realization Ratio	1.4x	1.3x	1.4x	1.6x	1.6x
Asset Replacement Ratio	2.2x	3.4x	3.5x	3.1x	2.8x
Tax Rate	18.2%	18.8%	18.1%	18.1%	18.1%
Net Debt-to-Equity Ratio	27.2%	50.6%	67.7%	76.0%	81.1%
Interest Cover	18.8x	15.4x	13.9x	14.5x	15.1x

Income Statement Data (Sep)

(US\$ Millions)	2022A	2023A	2024E	2025E	2026E
Sales	12,699	12,600	12,873	14,256	15,557
% Change	23.0%	-0.8%	2.2%	10.7%	9.1%
Gross Profit	3,286	3,767	4,097	4,412	4,734
% Change	4.8%	14.6%	8.8%	7.7%	7.3%
EBITDA	4,247	4,702	5,140	5,581	6,018
% Change	9.4%	10.7%	9.3%	8.6%	7.8%
Net Interest & Other Income	431	470	488	548	598
Net Income (Adjusted)	2,316	2,563	2,796	3,001	3,210
% Change	15.4%	10.7%	9.1%	7.3%	7.0%

Free Cash Flow Data (Sep)

(US\$ Millions)	2022A	2023A	2024E	2025E	2026E
Net Income from Cont Operations (GAAP)	2,316	2,563	2,796	3,001	3,210
Depreciation & Amortization	1,338	1,358	1,522	1,708	1,885
Change in Working Capital	(116)	(425)	(293)	34	49
Deferred Taxation Charge	32	(25)	14	0	0
Other Adjustments, Net	(400)	(266)	(50)	(31)	(31)
Capital Expenditure	(2,927)	(4,626)	(5,250)	(5,250)	(5,250)
Free Cash Flow	244	-1,421	-1,262	-537	-137
% Change	-72.0%	NM	11.2%	57.4%	74.5%
Share / Issue Repurchase	0	0	0	0	0
Cost of Dividends Paid	(1,383)	(1,497)	(1,572)	(1,688)	(1,772)
Change in Debt	366	2,901	2,810	2,000	2,000

Balance Sheet Data (Sep)

(US\$ Millions)	2022A	2023A	2024E	2025E	2026E
Cash & Equivalents	2,711	1,617	2,238	1,900	1,879
Trade Receivables	1,794	1,700	1,898	1,940	2,117
Other Current Assets	1,778	1,883	1,807	1,759	1,749
Property, Plant & Equipment	14,161	17,472	21,567	25,109	28,474
Other Non-Current Assets	6,749	9,330	9,583	9,633	9,683
Total Assets	27,193	32,003	37,094	40,343	43,903
Short-Term Debt	11	260	16	16	16
Other Current Liabilities	3,455	3,636	3,095	3,128	3,348
Long-Term Debt	6,434	9,281	13,770	15,770	17,770
Other Non-Current Liabilities	3,591	3,166	3,155	3,155	3,155
Total Liabilities	13,490	16,342	20,036	22,069	24,289
Total Equity	13,702	15,660	17,058	18,273	19,614
Total Equity & Liabilities	27,193	32,003	37,094	40,343	43,903

* For full definitions of iQmethodSM measures, see page 7.

Company Sector

Chemicals-Specialty

Company Description

Air Products is an industrial gas company which generated \$12.6bn in FY23. The gases businesses recovers and distributes industrial gases such as oxygen, nitrogen, helium, argon, and hydrogen, and a variety of medical and specialty gases for use in a variety of end markets such as energy, manufacturing, healthcare, food & beverage, metals, and chemicals. They have operations in over 50 countries (44% Americas, 31% Asia, 25% Europe, 1% Middle East) and a working force of 19k diverse employees.

Investment Rationale

We rate shares of APD Neutral as valuation is fair based on our view of increased risk in the business platform. APD should continue to see growth as it flexes price on its legacy franchise and positions itself to capture volumes through new project wins.

Stock Data

Average Daily Volume 1,453,519

Quarterly Earnings Estimates

	2023	2024
Q1	2.64A	2.82A
Q2	2.74A	2.75E
Q3	2.98A	3.42E
Q4	3.15A	3.55E

Exhibit 1: History of EPS Performance vs Guidance

APD broke its three-quarter streak of beating guidance estimates, with an \$0.08 miss in F1Q24

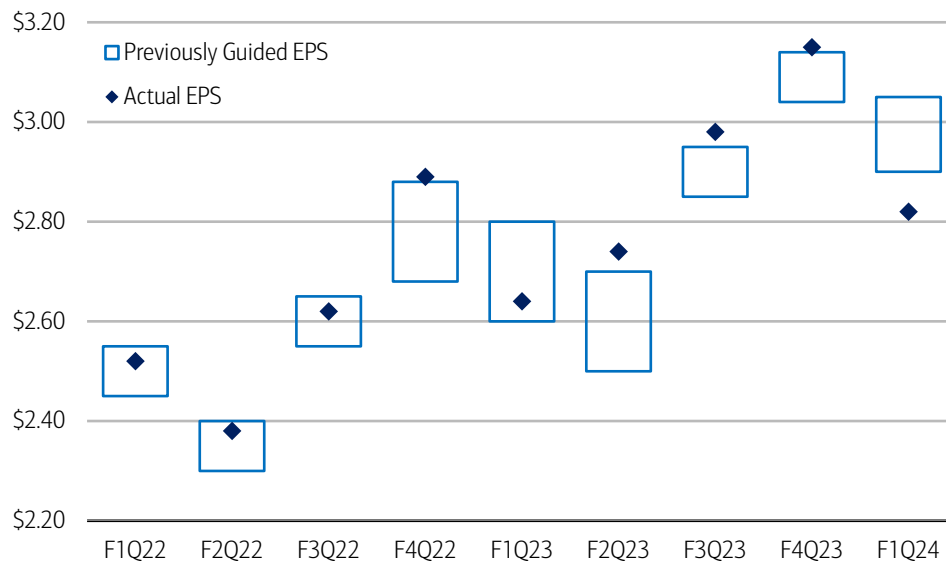
	F1Q22	F2Q22	F3Q22	F4Q22	F1Q23	F2Q23	F3Q23	F4Q23	F1Q24
Previous Guide	\$2.45 to \$2.55	\$2.30 to \$2.40	\$2.55 to \$2.65	\$2.68 to \$2.88	\$2.60 to \$2.80	\$2.50 to \$2.70	\$2.85 to \$2.95	\$3.04 to \$3.14	\$2.90 to \$3.05
Actual Earnings	\$2.52	\$2.38	\$2.62	\$2.89	\$2.64	\$2.74	\$2.98	\$3.15	\$2.82
% Beat/Miss	Within guidance	Within guidance	Within guidance	0.3%	Within guidance	1.6%	0.9%	0.3%	(2.8%)

Source: Company filings, BofA Global Research

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Exhibit 2: History of EPS Performance vs Guidance

APD broke its three-quarter streak of beating guidance estimates, with an \$0.08 miss in F1Q24



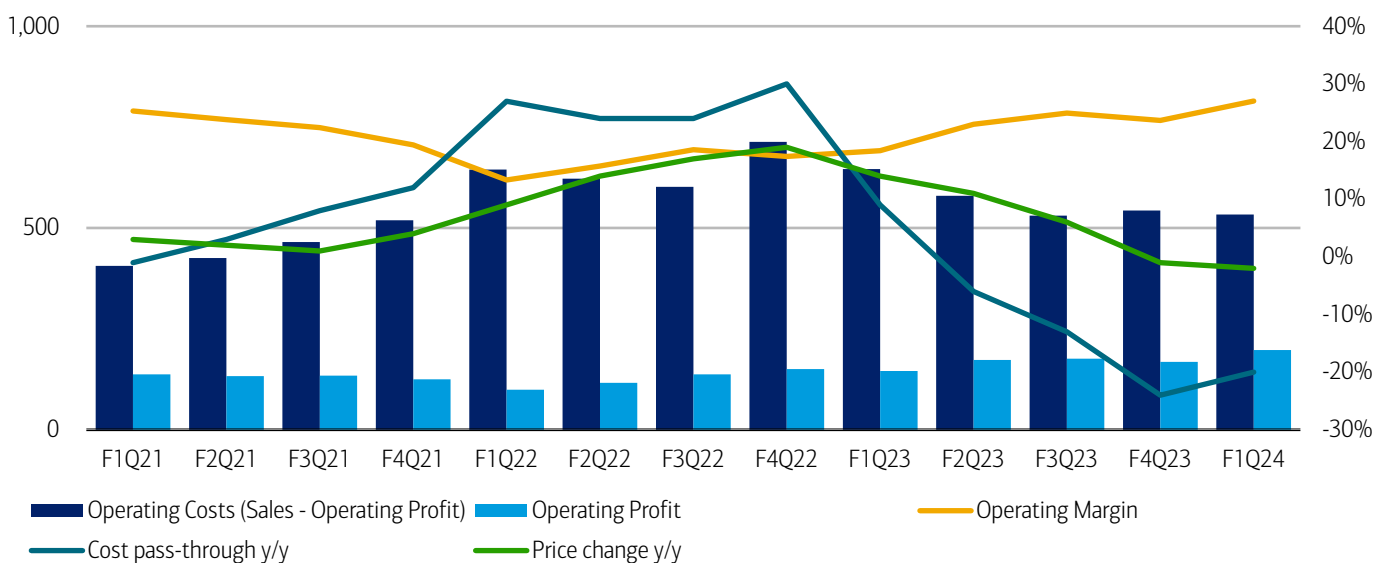
Source: Company filings, BofA Global Research

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Exhibit 3: Air Products Europe Operating Metrics

APD saw operating margin accretion despite sequential decline in pricing growth

Note: F1Q21-F4Q21 pricing and cost pass-through are for the EMEA division before resegmentation



Source: Company Data and BofA Global Research Estimates

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Exhibit 4: Air Products Income Statement Summary

We have decreased our F24 EPS estimate to \$12.55 from \$13.15

	1Q22	2Q22	3Q22	4Q22	2022	1Q23	2Q23	3Q23	4Q23	2023	1Q24	2Q24E	3Q24E	4Q24E	2024E	2025E	2026E
Net Sales:																	
Industrial Gases - Americas	\$1,224	\$1,187	\$1,416	\$1,542	\$5,369	\$1,384	\$1,373	\$1,261	\$1,351	\$5,369	\$1,252	\$1,404	\$1,340	\$1,450	\$5,445	\$6,322	\$7,110
Industrial Gases - Asia	780	751	751	860	3,143	778	814	823	802	3,216	794	806	819	859	3,278	3,392	3,568
Industrial Gases - Europe	744	739	740	864	3,086	792	753	707	712	2,963	731	729	776	848	3,085	3,472	3,807
Industrial Gases - Middle East	24	29	35	42	130	41	45	40	37	163	35	42	41	39	158	163	166
Gases Sub-Total	2,772	2,705	2,943	3,307	11,728	2,995	2,985	2,830	2,901	11,711	2,813	2,981	2,976	3,197	11,966	13,349	14,650
Corporate and other	222	240	247	263	971	179	215	204	290	889	185	222	210	290	907	907	907
Consolidated Total	2,994	2,945	3,189	3,570	12,699	3,175	3,200	3,034	3,191	12,600	2,997	3,203	3,186	3,487	12,873	14,256	15,558
Adjusted EBITDA																	
Industrial Gases - Americas	457	449	481	515	1,902	515	514	568	601	2,198	561	553	618	667	2,400	2,608	2,806
Industrial Gases - Asia	339	322	324	373	1,357	345	350	357	318	1,370	327	356	366	347	1,397	1,502	1,626
Industrial Gases - Europe	163	190	207	217	777	208	251	254	250	962	267	261	285	298	1,111	1,184	1,255
Industrial Gases - Middle East	103	83	81	75	342	77	107	108	102	394	103	42	113	129	387	440	481
Gases Sub-Total	1,061	1,044	1,093	1,180	4,378	1,146	1,222	1,286	1,270	4,924	1,258	1,213	1,382	1,442	5,295	5,734	6,169
Corporate and other	(58)	(25)	(12)	(36)	(131)	(62)	(71)	(78)	(11)	(222)	(84)	(32)	(20)	(19)	(155)	(152)	(150)
Consolidated Total	1,003	1,019	1,081	1,145	4,247	1,084	1,151	1,208	1,259	4,702	1,175	1,180	1,363	1,422	5,140	5,581	6,019
Consolidated Total	332	336	337	333	1,338	322	340	340	357	1,358	349	380	380	412	1,522	1,708	1,885
Operating Income	523	562	627	700	2,413	652	645	703	739	2,739	667	695	807	811	2,979	3,170	3,375
Interest Expense	31	32	33	33	128	41	41	47	48	178	54	54	54	54	214	219	224
Income Before Taxes	663	660	721	800	2,843	735	779	831	864	3,209	782	762	945	979	3,467	3,718	3,973
Income Taxes	113	123	134	147	517	136	154	153	160	603	142	138	171	177	628	673	720
Tax Rate	17%	19%	19%	18%	18%	19%	20%	18%	19%	19%	18%	18%	18%	18%	18%	18%	18%
Net Income from Operations	560	531	582	643	2,316	587	611	663	702	2,563	628	613	763	792	2,796	3,001	3,210
Earnings Per Share																	
Change (before Special Items)	\$2.52	\$2.38	\$2.62	\$2.89	\$10.41	\$2.64	\$2.74	\$2.98	\$3.15	\$11.51	\$2.82	\$2.75	\$3.42	\$3.55	\$12.55	\$13.47	\$14.41
Special Items	19%	15%	13%	15%	15%	5%	15%	14%	9%	11%	7%	0%	15%	13%	9%	7%	7%
Reported Earnings Per Share	0.00	0.02	0.00	0.10	0.12	(0.07)	(0.77)	(0.30)	(0.08)	(1.21)	(0.08)	0.00	0.00	0.00	0.00	0.00	0.00
Shares Outstanding (Mil.)	\$2.52	\$2.41	\$2.62	\$2.99	\$10.53	\$2.57	\$1.97	\$2.67	\$3.08	\$10.29	\$2.73	\$2.75	\$3.42	\$3.55	\$12.55	\$13.47	\$14.41
	222.6	222.5	222.5	222.5	222.5	222.6	222.7	222.8	222.8	222.7	222.8	222.8	222.8	222.8	222.8	222.8	222.8
Sales Growth:																	
Industrial Gases - Americas	31%	12%	33%	38%	29%	13%	16%	-11%	-12%	2%	-10%	2%	6%	7%	2%	16%	12%
Industrial Gases - Asia	9%	8%	0%	14%	8%	0%	8%	10%	-7%	2%	2%	-1%	0%	7%	2%	3%	5%
Industrial Gases - Europe	5%	2%	-3%	0%	1%	-6%	3%	1%	0%	0%	9%	10%	15%	17%	13%	3%	2%
Industrial Gases - Middle East	22%	10%	48%	40%	30%	75%	55%	0%	0%	34%	-14%	-5%	3%	8%	-3%	4%	2%
Gases Sub-Total	25%	16%	21%	30%	23%	8%	10%	-4%	-12%	0%	-6%	0%	5%	10%	2%	12%	10%
Corporate and other	37%	46%	48%	-12%	23%	-19%	-10%	-17%	11%	-8%	3%	3%	3%	0%	2%	0%	0%
Consolidated Total	26%	18%	22%	26%	23%	6%	9%	-5%	-11%	-1%	-6%	0%	5%	9%	2%	11%	9%
Adjusted EBITDA Growth																	
Industrial Gases - Americas	14%	0%	3%	8%	6%	13%	14%	18%	17%	16%	9%	8%	9%	11%	9%	9%	8%
Industrial Gases - Asia	2%	2%	-5%	13%	3%	2%	9%	10%	-15%	1%	-5%	2%	3%	9%	2%	8%	8%
Industrial Gases - Europe	-19%	-3%	4%	8%	-2%	28%	32%	23%	15%	24%	28%	4%	13%	19%	16%	7%	6%
Industrial Gases - Middle East	230%	182%	175%	89%	164%	-25%	29%	34%	36%	15%	34%	-61%	4%	27%	-2%	14%	9%
Gases Sub-Total	10%	5%	6%	13%	8%	8%	17%	18%	8%	12%	10%	-1%	7%	13%	8%	8%	8%
Corporate and other	80%	-55%	-79%	525%	-14%	7%	184%	562%	-70%	70%	35%	-55%	-75%	77%	-30%	-2%	-1%
Consolidated Total	8%	9%	11%	10%	9%	8%	13%	12%	10%	11%	8%	3%	13%	13%	9%	9%	8%
Adjusted EBITDA Margins:																	
Industrial Gases - Americas	35%	36%	32%	32%	34%	36%	35%	43%	42%	39%	42%	37%	44%	43%	41%	39%	37%
Industrial Gases - Asia	43%	42%	42%	43%	42%	43%	42%	42%	39%	42%	41%	43%	44%	39%	42%	43%	45%
Industrial Gases - Europe	20%	23%	25%	23%	23%	24%	29%	32%	31%	29%	34%	32%	33%	31%	32%	31%	30%
Industrial Gases - Middle East	46%	40%	39%	28%	37%	32%	18%	32%	28%	27%	30%	18%	34%	31%	28%	31%	33%
Gases Sub-Total	33%	34%	33%	32%	33%	35%	35%	40%	38%	37%	39%	37%	41%	39%	39%	38%	37%
Corporate and other	-27%	-11%	-5%	-14%	-14%	-37%	-34%	-40%	-5%	-26%	-47%	-16%	-11%	-8%	-19%	-18%	-18%
Consolidated Total	29%	30%	30%	29%	30%	31%	31%	34%	34%	33%	34%	34%	37%	35%	35%	34%	34%

Source: Company financials, BofA Global Research estimates

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Price objective basis & risk

Air Products (APD)

Our \$264 PO is based on the average of a 3 stage DCF analysis and a 20.0x P/E as applied to a CY2024 EPS estimate. The 3-stage DCF is predicated on a 7.3% WACC and a 3.5% terminal growth rate.

Upside risks are a depreciating dollar, higher steel operating rates, a rebound in oil, an acceleration in global industrial production, and increased earnings growth from capital deployment.

Downside risks are a strengthening dollar, steel customer bankruptcy, declining oil prices, a reduction of hydrogen prices on the Gulf, and coal to chemicals customer bankruptcy.

Analyst Certification

I, Steve Byrne, CFA, hereby certify that the views expressed in this research report accurately reflect my personal views about the subject securities and issuers. I also certify that no part of my compensation was, is, or will be, directly or indirectly, related to the specific recommendations or view expressed in this research report.

US - Chemicals Coverage Cluster

Investment rating	Company	BofA Ticker	Bloomberg symbol	Analyst
BUY				
	Axalta Coating Systems	AXTA	AXTA US	Steve Byrne, CFA
	Bunge Limited	BG	BG US	Salvator Tiano, CFA
	CF Industries	CF	CF US	Steve Byrne, CFA
	Dow Inc	DOW	DOW US	Steve Byrne, CFA
	Eastman Chemical Co	EMN	EMN US	Salvator Tiano, CFA
	Element Solutions Inc.	ESI	ESI US	Steve Byrne, CFA
	Green Plains	GPPE	GPPE US	Salvator Tiano, CFA
	Huntsman Corp	HUN	HUN US	Salvator Tiano, CFA
	Linde	LIN	LIN US	Steve Byrne, CFA
	Linde	LINGY	LIN GY	Steve Byrne, CFA
	Nutrien	NTR	NTR US	Steve Byrne, CFA
	Olin Corp	OLN	OLN US	Steve Byrne, CFA
	PPG Industries Inc.	PPG	PPG US	Steve Byrne, CFA
	Sigma Lithium	SGML	SGML US	Steve Byrne, CFA
	The Mosaic Company	MOS	MOS US	Steve Byrne, CFA
NEUTRAL				
	Air Products	APD	APD US	Steve Byrne, CFA
	Albemarle	ALB	ALB US	Steve Byrne, CFA
	Archer-Daniels-Midland Company	ADM	ADM US	Salvator Tiano, CFA
	Corteva	CTVA	CTVA US	Steve Byrne, CFA
	Ecolab Inc	ECL	ECL US	Steve Byrne, CFA
	International Flavors & Fragrances	IFF	IFF US	Salvator Tiano, CFA
	LyondellBasell Industries	LYB	LYB US	Steve Byrne, CFA
	Origin Materials	ORGN	ORGN US	Steve Byrne, CFA
UNDERPERFORM				
	Celanese Corporation	CE	CE US	Salvator Tiano, CFA
	DuPont	DD	DD US	Steve Byrne, CFA
	FMC Corporation	FMC	FMC US	Steve Byrne, CFA
	RPM International Inc	RPM	RPM US	Steve Byrne, CFA
	Sherwin-Williams Company	SHW	SHW US	Steve Byrne, CFA
	Westlake Chemical Partners, LP	WLKP	WLKP US	Steve Byrne, CFA
	Westlake Corp	WLK	WLK US	Steve Byrne, CFA

iQmethodSM Measures Definitions

Business Performance

Return On Capital Employed

Return On Equity

Operating Margin

Earnings Growth

Free Cash Flow

Numerator

NOPAT = (EBIT + Interest Income) × (1 – Tax Rate) + Goodwill Amortization

Net Income

Operating Profit

Expected 5 Year CAGR From Latest Actual

Cash Flow From Operations – Total Capex

Denominator

Total Assets – Current Liabilities + ST Debt + Accumulated Goodwill

Amortization

Shareholders' Equity

Sales

N/A

N/A

Quality of Earnings

Cash Realization Ratio

Asset Replacement Ratio

Tax Rate

Net Debt-To-Equity Ratio

Interest Cover

Numerator

Cash Flow From Operations

Capex

Tax Charge

Net Debt = Total Debt – Cash & Equivalents

EBIT

Denominator

Net Income

Depreciation

Pre-Tax Income

Total Equity

Interest Expense

Valuation Toolkit

Price / Earnings Ratio

Price / Book Value

Dividend Yield

Free Cash Flow Yield

Enterprise Value / Sales

Numerator

Current Share Price

Current Share Price

Annualised Declared Cash Dividend

Cash Flow From Operations – Total Capex

EV = Current Share Price × Current Shares + Minority Equity + Net Debt +

Other LT Liabilities

Enterprise Value

Denominator

Diluted Earnings Per Share (Basis As Specified)

Shareholders' Equity / Current Basic Shares

Current Share Price

Market Cap = Current Share Price × Current Basic Shares

Sales

Basic EBIT + Depreciation + Amortization

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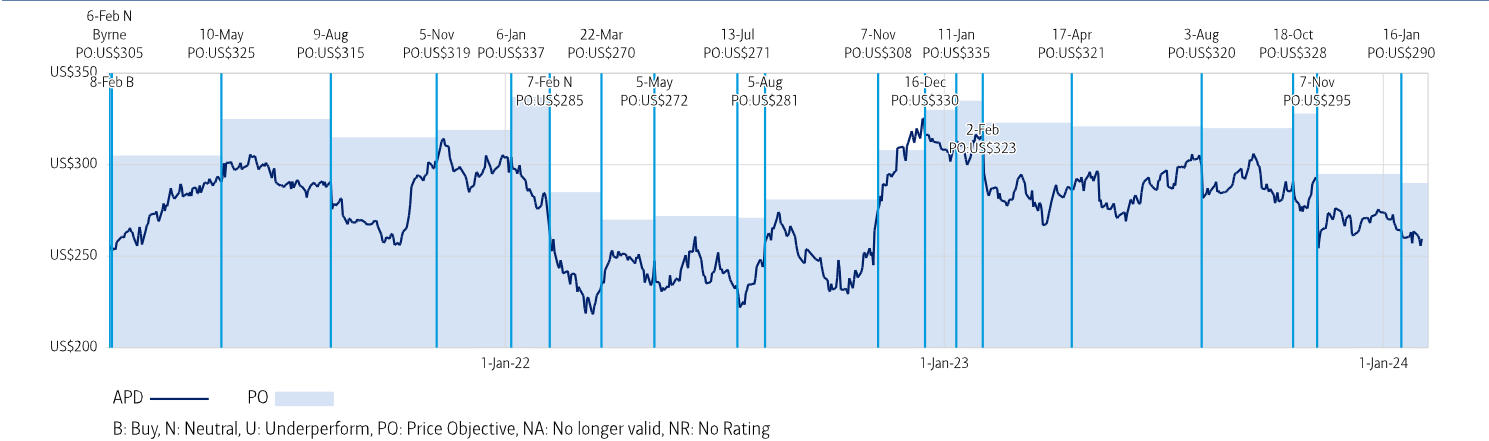
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Air Products (APD) Price Chart



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Equity Investment Rating Distribution: Chemicals Group (as of 31 Dec 2023)

Coverage Universe	Count	Percent	Inv. Banking Relationships ^{R1}	Count	Percent
Buy	66	47.83%	Buy	33	50.00%
Hold	33	23.91%	Hold	16	48.48%
Sell	39	28.26%	Sell	20	51.28%

Equity Investment Rating Distribution: Global Group (as of 31 Dec 2023)

Coverage Universe	Count	Percent	Inv. Banking Relationships ^{R1}	Count	Percent
Buy	1895	53.62%	Buy	1083	57.15%
Hold	832	23.54%	Hold	454	54.57%
Sell	807	22.84%	Sell	383	47.46%

^{R1} Issuers that were investment banking clients of BofA Securities or one of its affiliates within the past 12 months. For purposes of this Investment Rating Distribution, the coverage universe includes only stocks. A stock rated Neutral is included as a Hold, and a stock rated Underperform is included as a Sell.

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Investment rating	Total return expectation (within 12-month period of date of initial rating)	Ratings dispersion guidelines for coverage cluster ^{R2}
Buy	≥ 10%	≤ 70%
Neutral	≥ 0%	≤ 30%
Underperform	N/A	≥ 20%

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