

LyondellBasell Industries

Limited traction outside of PE in 2024, reiterate Neutral

Reiterate Rating: NEUTRAL | PO: 101.00 USD | Price: 92.86 USD

PE recovering, other businesses struggling

Despite our expectations of a broader recovery in commodity chemicals in the years ahead, we see Lyondell's earnings growth as modest and thus reiterate our Neutral rating with a revised \$101 PO (vs \$103 previously). Our PO is now based on 8x 2024E EBITDA (vs 7.5x previously to reflect trough earnings). We believe that LYB's portfolio/mix of businesses is simply not well-positioned for the upcoming recovery vs other commodity stocks, and especially its closest peer. Key areas of concern are (1) LYB's polypropylene business which we believe will experience continued margin pressure due to oversupply, (2) greater exposure to naphtha in Europe vs more advantaged LPGs compared to peer DOW, (3) the oxyfuels business which has been overearning for the past couple of years, should keep l&D (Intermediates & Derivatives) earnings flattish for the next couple of years as margins mean-revert, and (4) the closure of the refinery which should shave a high-single digit % off LYB's EBITDA. We fine-tune our 2024-25E EBITDA estimates to \$5.5bn and \$5.65b, up just 5% and 8% vs 2023, respectively.

Circular plastic targeting 20c/lb premiums

Lyondell's sustainable plastic initiatives have 3 technology sources, namely mechanically recycled plastic, molecularly recycled with MoReTec pyrolysis, and renewable feedstock, which have been branded *Circulen*Recover, *Circulen*Revive, and *Circulen*Renew, respectively. The company has achieved 300kt of sales of these products, and is targeting 2mnt of annual volumes by 2030, which is expected to generate \$1bn of incremental EBITDA, representing ~20c/lb of additional margin. Given the additional processing costs to generate pyrolysis oil or renewable naphtha, both of which will require hydrogen, the targeted margin expansion will need premium pricing, and thus LYB is focused on customers that are committed to 100% sustainable packaging with branded products that accommodate such premium pricing.

Reshuffling portfolio and organic growth efforts

Besides circularity, LYB is investing in core businesses such as PE and PP through debottlenecks and M&A. Recently it acquired a 35% in Saudi Arabian PP producer NATPET for \$500mn and is examining adding PP/PDH capacity there. On the pruning side, LYB is divesting its ethylene oxide business to Ineos for \$700mn. Lastly, a lot of effort is dedicated to recoupling lost earnings at APS (Advanced Polymer Solutions).

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Estimates (Dec) (US\$)	2022A	2023A	2024E	2025E	2026E
EPS	12.51	8.40	8.90	9.70	11.55
GAAP EPS	11.87	6.21	8.90	9.70	11.55
EPS Change (YoY)	-33.2%	-32.9%	6.0%	9.0%	19.1%
Consensus EPS (Bloomberg)			9.13	10.79	10.85
DPS	4.70	4.94	5.18	5.36	5.55
Valuation (Dec)					
P/E	7.4x	11.1x	10.4x	9.6x	8.0x
GAAP P/E	7.8x	15.0x	10.4x	9.6x	8.0x
Dividend Yield	5.1%	5.3%	5.6%	5.8%	6.0%
EV / EBITDA*	6.7x	8.4x	8.0x	7.8x	7.0x
Free Cash Flow Yield*	14.0%	11.0%	6.7%	9.8%	8.8%
* For full definitions of <i>iQ</i> method ^{≤M} measures, see page 5.					

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Refer to important disclosures on page 6 to 8. Analyst Certification on page 4. Price
Objective Basis/Risk on page 4.

05 February 2024

Equity

Key Changes		
(US\$)	Previous	Current
Price Obj.	103.00	101.00
2024E Rev (m)	41,485.1	41,327.3
2025E Rev (m)	35,967.7	33,907.6
2026E Rev (m)	NA	35,154.6
2024E EPS	9.25	8.90
2025E EPS	9.85	9.70
2026E EPS	NA	11.55
2024E DPS	5.12	5.18

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Stock Data

Price	92.86 USD
Price Objective	101.00 USD
Date Established	5-Feb-2024
Investment Opinion	B-2-7
52-Week Range	81.24 USD - 102.05 USD
Mrkt Val (mn) / Shares Out	30,272 USD / 326.0
(mn)	
Free Float	79.6%
Average Daily Value (mn)	143.57 USD
BofA Ticker / Exchange	LYB / NYS
Bloomberg / Reuters	LYB US / LYB.N
ROE (2024E)	22.3%
Net Dbt to Eqty (Dec-2023A)	60.1%
ESGMeter™	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".

iQprofile[™] LyondellBasell Industries

iQmethod [™] – Bus Performance*					
(US\$ Millions)	2022A	2023A	2024E	2025E	2026E
Return on Capital Employed	14.6%	10.1%	9.8%	10.4%	12.1%
Return on Equity	33.6%	21.4%	22.3%	24.2%	27.7%
Operating Margin	10.6%	8.3%	9.1%	11.4%	12.8%
Free Cash Flow	4,229	3,342	2,043	2,955	2,653
<i>iQ</i> method [™] – Quality of Earnings*					
(US\$ Millions)	2022A	2023A	2024E	2025E	2026
Cash Realization Ratio	1.5x	1.8x	1.4x	1.7x	1.4>
Asset Replacement Ratio	1.5x	1.0x	1.4x	1.5x	1.5>
Tax Rate	18.0%	8.4%	20.0%	18.0%	18.0%
Net Debt-to-Equity Ratio	72.0%	60.1%	65.1%	69.2%	60.8%
Interest Cover	20.8x	9.9x	9.7x	10.0x	12.0>
Income Statement Data (Dec)					
(US\$ Millions)	2022A	2023A	2024E	2025E	2026
Sales	50,451	41,086	41,327	33,908	35,155
% Change	9.3%	-18.6%	0.6%	-18.0%	3.7%
Gross Profit	8,028	6,511	7,024	6,799	7,491
% Change	-22.0%	-18.9%	7.9%	-3.2%	10.2%
EBITDA	6,527	5,222	5,476	5,645	6,284
% Change	-30.8%	-20.0%	4.9%	3.1%	11.3%
Net Interest & Other Income	(325)	(425)	(161)	(81)	(71)
Net Income (Adjusted) % Change	4,118 -34.1%	2,741 -33.4%	2,878 5.0%	3,077 6.9%	3,606 17.2%
Free Cash Flow Data (Dec)					
(US\$ Millions)	2022A	2023A	2024E	2025E	2026
Net Income from Cont Operations (GAAP)	4,123	2,746	2,885	3,084	3,613
Depreciation & Amortization	1,267	1,543	1,552	1,489	1,490
Change in Working Capital	97	(112)	(293)	681	(145)
Deferred Taxation Charge	369	48	0	0	(
Other Adjustments, Net	263	717	(2)	0	(6)
Capital Expenditure	(1,890)	(1,600)	(2,100)	(2,300)	(2,300)
Free Cash Flow	4,229	3,342	2,043	2,955	2,653
% Change	-26.3%	-21.0%	-38.9%	44.7%	-10.2%
Share / Issue Repurchase	(420)	(211)	(1,000)	(1,500)	(500)
Cost of Dividends Paid	(3,246)	(1,612)	(1,675)	(1,700)	(1,732)
Change in Debt	234	(125)	0	(200)	(200)
Balance Sheet Data (Dec)					
(US\$ Millions)	2022A	2023A	2024E	2025E	2026
Cash & Equivalents	2,151	3,390	2,758	2,313	2,533
Trade Receivables	3,593	3,507	3,988	3,768	3,906
Other Current Assets	6,101 15,387	6,338	6,619	5,187 16,823	5,261 17,633
		15,464 8,301	16,012 8,061	7,741	7,426
Property, Plant & Equipment	0.122		0,001	7,741	
Other Non-Current Assets	9,133 36 365		37 437	35 837	46 / FI
Other Non-Current Assets Total Assets	36,365	37,000	37,437	35,832 899	
Other Non-Current Assets Total Assets Short-Term Debt	36,365 781	37,000 899	899	899	899
Other Non-Current Assets Total Assets Short-Term Debt Other Current Liabilities	36,365 781 5,979	37,000 899 6,251	899 6,720	899 5,749	899 5,817
Other Non-Current Assets Total Assets Short-Term Debt Other Current Liabilities Long-Term Debt	36,365 781 5,979 10,540	37,000 899 6,251 10,333	899 6,720 10,333	899 5,749 10,133	5,817 9,933
Other Non-Current Assets Total Assets Short-Term Debt Other Current Liabilities Long-Term Debt Other Non-Current Liabilities	36,365 781 5,979 10,540 6,322	37,000 899 6,251 10,333 6,459	899 6,720 10,333 6,459	899 5,749 10,133 6,459	5,817 9,933 6,459
Other Non-Current Assets Total Assets Short-Term Debt Other Current Liabilities Long-Term Debt	36,365 781 5,979 10,540	37,000 899 6,251 10,333	899 6,720 10,333	899 5,749 10,133	36,760 899 5,817 9,933 6,459 23,108 13,652

Company Sector

Chemicals-Major

Company Description

LyondellBasell is a leading producer of petrochemicals with \$5.2bn in EBITDA in 2022. Over half of earnings are generated in the company's Olefins & Polyolefins - Americas segment where costs are linked to the price of cheap natural gas in the US, while selling prices are correlated with the price of oil. The company has pursued a strategy of low-cost, high ROIC debottlenecks coupled with cash returns to shareholders.

Investment Rationale

We rate LYB shares at Neutral, reflecting a balanced risk-reward at these levels. On the positive side, our petrochemical sentiment indicator is close to inflecting positively and margins in LYB's core Olefins & Polyolefins businesses are likely to move past trough levels in 2024. However, we balance these tailwinds against our view the polyethylene margins will expand slowly in the next few years and a potential risk to earnings as some of LYB's chemical chains are overearning currently.

Stock Data

Average Daily Volume

1,546,067

Quarterly Earnings Estimates

	2023	2024
Q1	2.51A	1.53E
Q2	2.18A	2.45E
Q3	2.46A	2.74E
Q4	1.26A	2.18E

Exhibit 1: Lyondell Income Statement Summary We expect ~\$5.5bn in 2024 EBITDA

Net Sales	2021	2022	1Q23	2Q23	3Q23	4Q23	2023	1Q24E	2Q24E	3Q24E	4Q24E	2024E	2025E
Olefins and Polyolefins - Americas	\$15,002	\$13,935	\$2,808	\$2,727	\$2,881	\$2,864	\$11,280	\$2,770	\$2,701	\$3,016	\$3,026	\$11,513	\$12,142
Olefins and Polyolefins - EAI	13,490	12,823	2,892	2,729	2,446	2,412	10,479	2,701	2,700	2,618	2,434	10,453	10,862
Intermediates and Derivatives	10,180	12,950	2,682	2,662	3,081	2,661	11,086	2,414	2,739	2,838	2,785	10,775	11,098
Advanced Polymer Solutions	5,145	5,231	997	960	899	842	3,698	897	1,008	971	926	3,802	3,993
Refining	8,002	11,893	2,190	2,459	2,665	2,400	9,714	2,400	2,600	2,600	2,400	10,000	0
Technology	843	693	139	154	218	152	663	153	189	214	170	726	763
Other	(6,489)	(7,074)	(1,461)	(1,385)	(1,565)	(1,402)	(5,834)	(1,486)	(1,486)	(1,486)	(1,486)	(5,943)	(4,950)
Consolidated Net Sales	46,173	50,451	10,247	10,306	10,625	9,929	41,086	9,850	10,451	10,771	10,256	41,327	33,908
Change	66%	9%	-22%	-31%	-13%	-3%	-19%	-4%	1%	1%	3%	1%	-18%
EBITDA													
Olefins and Polyolefins - Americas	5,273	2,734	541	679	479	604	2,303	507	594	671	677	2,449	2,566
Olefins and Polyolefins - EAI	1,777	181	77	84	(45)	(87)	29	(39)	62	138	76	238	696
Intermediates and Derivatives	1,471	1,872	426	472	708	265	1,871	469	547	523	370	1,909	1,823
Advanced Polymer Solutions	464	312	26	34	18	12	90	21	44	32	29	126	164
Refining	(52)	1,078	315	114	105	51	585	57	118	99	99	373	0
Technology	514	366	73	79	146	77	375	76	98	118	89	381	397
Corporate & Other	(10)	(16)	(6)	(12)	(1)	(12)	(31)	0	0	0	0	0	0
Total	9,437	6,527	1,452	1,450	1,410	910	5,222	1,091	1,464	1,581	1,340	5,476	5,645
Change	141%	-31%	-28%	-41%	18%	5%	-20%	-25%	1%	12%	47%	5%	3%
Depreciation and Amortization	1,393	1,237	341	347	347	360	1,395	370	370	370	362	1,472	1,489
Operating Income Before Unusual Items	7,522	5,357	1,089	1,011	1,014	315	3,429	695	1,048	1,148	884	3,775	3,852
Net Interest Expense	510	258	93	87	88	80	348	95	95	100	100	390	385
Equity (Income) / Loss	(461)	(5)	(17)	12	(6)	31	20	(26)	(46)	(63)	(94)	(229)	(304)
Other Expense / (Income)	(115)	72	(5)	7	31	24	57	0	0	0	0	0	0
Pretax Income	7,587	5,032	1,018	905	901	180	3,004	626	999	1,111	878	3,614	3,771
Income Taxes	1,325	904	195	192	97	(233)	251	125	200	222	176	723	679
Income Before Nonrecurring items	6,249	4,118	820	710	801	410	2,741	497	795	885	702	2,878	3,077
Nonrecurring Items	(578)	(213)	(348)	(86)	(57)	(226)	(717)	0	0	0	0	0	0
Net Income	5,671	3,905	472	624	744	184	2,024	497	795	885	702	2,878	3,077
Diluted EPS Before Nonrecurring	\$18.72	\$12.51	\$2.50	\$2.18	\$2.46	\$1.26	\$8.40	\$1.52	\$2.45	\$2.74	\$2.18	\$8.90	\$9.70
Change Before Gains/(Charges)	227%	-33%	-38%	-58%	26%	-7%	-33%	-39%	13%	11%	74%	6%	9%
Diluted Shares Outstanding (Million)	333.9	329.1	327.0	326.0	325.0	326.0	326.2	325.3	324.0	322.7	321.4	323.4	317.1
Segment Sales Growth:	1000	==:	222/	222/	100/	C0/		10/	10/	F0/	60/	/	=0/
Olefins and Polyolefins - Americas	106%	-7%	-22%	-33%	-19%	6%	-19%	-1%	-1%	5%	6%	2%	5%
Olefins and Polyolefins - EAI	61%	-5%	-23%	-27%	-17%	1%	-18%	-7%	-1%	7%	1%	0%	4%
Intermediates and Derivatives	62%	27%	-20%	-29%	-6%	4%	-14%	-10%	3%	-8%	5%	-3%	3%
Advanced Polymer Solutions	31% 69%	2% 49%	-29% -19%	-33% -35%	-31% -3%	-24% -9%	-29% -18%	-10% 10%	5%	8% -2%	10% 0%	3% 0%	5% 0 %
Refining Technology	28%	-18%	-19%			-9% 5%			6% 23%				
Consolidated Net Sales	66%	9%	-23%	-21% -31%	26% -13%	-3%	-4% -19%	10% -4%	23% 1%	-2% 1%	12% 3%	10% 1%	-18%
EBITDA Margins Before Special Items	25 10/	10.50	10.20/	2400/	16.60/	21.10/	20.40/	10.30/	22.00/	22.20/	22.40/	21.20/	31.10/
Olefins and Polyolefins - Americas	35.1%	19.6%	19.3%	24.9%	16.6%	21.1%	20.4%	18.3%	22.0%	22.2%	22.4%	21.3%	21.1%
Olefins and Polyolefins - EAI	13.2%	1.4%	2.7%	3.1%	-1.8%	-3.6%	0.3%	-1.4%	2.3%	5.3%	3.1%	2.3%	6.4%
Intermediates and Derivatives	14.4%	14.5%	15.9%	17.7%	23.0%	10.0%	16.9%	19.4%	20.0%	18.4%	13.3%	17.7%	16.4%
Advanced Polymer Solutions	9.0%	6.0%	2.6%	3.5%	2.0%	1.4%	2.4%	2.3%	4.3%	3.3%	3.1%	3.3%	4.1%
Refining Technology	-0.6% 61.0%	9.1% 52.8%	14.4% 52.5%	4.6% 51.3%	3.9%	2.1%	6.0% 56.6%	2.4%	4.6% 52.0%	3.8%	4.1%	0.0% 52.5%	0.0% 52.0%
	61.0%	52.8%	52.5%	51.3%	67.0%	50.7%	56.6%	50.0%	52.0%	55.0%	52.0%	52.5%	52.0%
Total	20.4%	12.9%	14.2%	14.1%	13.3%	9.2%	12.7%	11.1%	14.0%	14.7%	13.1%	13.2%	16.6%

Source: Company Reports and BofA Global Research Estimates

BofA GLOBAL RESEARCH



Price objective basis & risk

LyondellBasell Industries (LYB)

Our \$101 PO is based on a 8.0x multiple to our 2024E EBITDA ex-Refining, plus the cumulative EBITDA generated by Refining through 2024 year-end. The multiple is a slight premium to historic average levels, reflecting below-normal profitability in 2024.

Upside risks to our price objective are an increase in global polyethylene demand, higher oil prices, and lower US NGL prices.

Downside risks to our price objective are lower oil prices, higher natural gas and feedstock costs and slower global economic growth leading to a slowdown in demand for polyethylene.

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

03 - Chemicais Coverag	e 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	GPRE	GPRE 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
INDERPERFORM				
	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
				•



IQmethod[™] Measures Definitions

Business Performance	Numerator	Denominator
Return On Capital Employed	NOPAT = (EBIT + Interest Income) × (1 – Tax Rate) + Goodwill Amortization	Total Assets — Current Liabilities + ST Debt + Accumulated Goodwill Amortization
Return On Equity	Net Income	Shareholders' Equity
Operating Margin	Operating Profit	Sales
Earnings Growth	Expected 5 Year CAGR From Latest Actual	N/A
Free Cash Flow	Cash Flow From Operations — Total Capex	N/A
Quality of Earnings	Numerator	Denominator
Cash Realization Ratio	Cash Flow From Operations	Net Income
Asset Replacement Ratio	Capex	Depreciation
Tax Rate	Tax Charge	Pre-Tax Income
Net Debt-To-Equity Ratio	Net Debt = Total Debt - Cash & Equivalents	Total Equity
Interest Cover	EBIT	Interest Expense
Valuation Toolkit	Numerator	Denominator
Price / Earnings Ratio	Current Share Price	Diluted Earnings Per Share (Basis As Specified)
Price / Book Value	Current Share Price	Shareholders' Equity / Current Basic Shares
Dividend Yield	Annualised Declared Cash Dividend	Current Share Price
Free Cash Flow Yield	Cash Flow From Operations - Total Capex	Market Cap = Current Share Price × Current Basic Shares
Enterprise Value / Sales	EV = Current Share Price × Current Shares + Minority Equity + Net Debt + Other LT Liabilities	Sales

EV / EBITDA Enterprise Value Basic EBIT + Depreciation + Amortization

Manethod3*is the set of BofA Global Research standard measures that serve to maintain global consistency under three broad headings: Business Performance, Quality of Earnings, and validations. The key features of

iQmethod are: A consistently structured, detailed, and transparent methodology. Guidelines to maximize the effectiveness of the comparative valuation process, and to identify some common pitfalls.

Radiatabase is our real-time global research database that is sourced directly from our equity analysts' earnings models and includes forecasted as well as historical data for income statements, balance sheets, and cash

flow statements for companies covered by BofA Global Research.

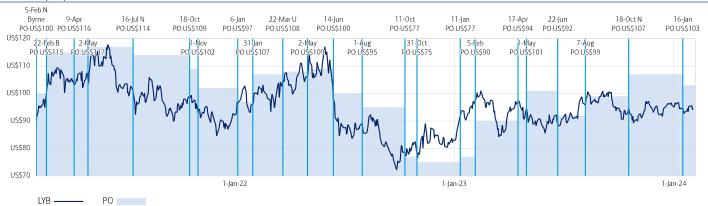
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Disclosures

Important Disclosures

LyondellBasell (LYB) Price Chart



B: Buy, N: Neutral, U: Underperform, PO: Price Objective, NA: No longer valid, NR: No Rating

The Investment Opinion System is contained at the end of the report under the heading "Fundamental Equity Opinion Key". Dark grey shading indicates the security is restricted with the opinion suspended. Medium grey shading indicates the security is under review with the opinion withdrawn. Light grey shading indicates the security is not covered. Chart is current as of a date no more than one trading day prior to the date of the report.

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%

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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%
Inderperform	N/A	> 20%

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