Vodafone Group

Dividend next, a potential turning point

Reiterate Rating: BUY | PO: 122.00 GBp | Price: 68.60 GBp

05 February 2024

Equity

FY results provide the next major catalyst

Q3 results were broadly in-line with forecasts and messaging, with some welcome granularity around the phasing of German revenue drivers. Looking forward and with Iliad's offer for Italy rejected, we consider the next major catalyst for Vodafone's (VOD's) share price as it looks to rebase shareholder returns post with portfolio restructuring now underway. We model a scenario with VOD ex-Spain from FY March 25 and assume the merger of UK operations with Hutch from FY26 (both broadly in-line with expected timeline). The Spain sale dilutes initial cash flows c10% and the UK merger a further 20% with restructuring (FY26 aggregate peak -31%) although this unwinds by year 4 (FY29), then full run rate UK merger synergies support 5% group FCF accretion by FY30.

We assume VOD's priority is to derive a covered dividend floor with room to grow. Thus, based on 2/3 payout of diluted mid-term cash flows we model a 40% dividend cut (to €5.4c/share). With excess cash flow and sale proceeds, VOD can supplement with €1bn pa buyback to support DPS growth (up to 5% pa, per share price re-rating) within secure investment grade leverage. As a 12% total return profile this is not unattractive and is perhaps the best way to see the 'wood for the trees' amidst the complexity. Buy.

Q3 results / call feedback

VOD reported Q3 results broadly in-line with expectations and on the analyst call reiterated their strategic commitment to change with customer focus, to be simpler, and choosing where to operate. Highlights: 1) German MDU dynamic to commence Q4, driving negative service revs H1 25, then moderating H2, positive FY26. 2) Underlying German growth to accelerate, now finally past price-driven churn, 3) strong commitment to Business growth, should continue to accelerate Q4, FY25 with MS partnership (potential triple-digit NPV positive deal), 4) Will review shareholder returns at FY results.

Forecast adjustment

We make minor changes to reflect the phasing of German revenue drivers, FY 24/25 service revenues +0.4%/+1.0%, EPS -1.0/+2.9%. FY24 guidance on track, PO unchanged.

Estimates (Mar) (EUR)	2022A	2023A	2024E	2025E	2026E
EPS (Adjusted Diluted)	0.10	0.43	0.06	0.08	0.09
EPS Change (YoY)	427.7%	346.7%	-85.2%	23.7%	11.0%
Dividend / Share	0.09	0.09	0.09	0.09	0.09
ADR EPS (Adjusted Diluted - US$)	1.11	4.44	0.68	0.85	0.94
ADR Dividend / Share (US$)	1.05	0.94	0.97	0.97	0.97
Valuation (Mar)					
P/E	8.49x	1.83x	12.7x	10.3x	9.25x
Dividend Yield	11.2%	11.2%	11.2%	11.2%	11.2%
EV / EBITDA*	5.99x	6.21x	7.02x	6.93x	6.88x
Free Cash Flow Yield*	22.3%	20.3%	14.1%	15.2%	15.7%

* For full definitions of *iQmethod*SM measures, see page 13.

Key Changes

(EUR)	Previous	Current
2024E Rev (m)	44,113.3	44,168.4
2025E Rev (m)	44,167.1	44,502.4
2026E Rev (m)	44,259.6	44,538.1

David Wright >>
Research Analyst
MLI (UK)
+44 20 7995 6355
dawright@bofa.com

Titus Krahn >>
Research Analyst
MLI (UK)
titus.krahn@bofa.com

Stock Data

Price (Common / ADR)	68.60 GBp / 8.74 USD
Price Objective	122.00 GBp / 13.18 USD
Date Established	23-Jan-2024 / 5-Feb-2024
Investment Opinion	B-1-8 / B-1-8
52-Week Range	64.65 GBp-103.24 GBp
Market Value (mn)	18,576 GBP
Shares Outstanding (mn)	27,079.0 / 2,707.9
Average Daily Value (mn)	36.81 USD
Free Float	95.0%
BofA Ticker / Exchange	VODPF / LSE
BofA Ticker / Exchange	VOD / NAS
Bloomberg / Reuters	VOD LN / VOD.L
ROE (2024E)	2.8%
Net Dbt to Eqty (Mar-2023A)	84.8%
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[SM] Vodafone Group

Key Income Statement Data (Mar)	2022A	2023A	2024E	2025E	2026E
(EUR Millions)					
Sales	45,580	45,706	44,168	44,502	44,538
EBITDA Adjusted	15,208	14,665	12,978	13,157	13,251
Depreciation & Amortization	(9,858)	(9,649)	(9,114)	(8,787)	(8,655)
EBIT Adjusted	5,350	5,016	3,865	4,369	4,596
Net Interest & Other Income	(1,710)	(1,480)	(1,700)	(1,709)	(1,716)
Tax Expense / Benefit	(1,330)	(481)	(574)	(705)	(771)
Net Income (Adjusted)	2,773	11,818	1,753	2,168	2,406
Average Fully Diluted Shares Outstanding	29,012	27,680	27,680	27,680	27,680
Key Cash Flow Statement Data					
Net Income (Reported)	3,309	11,818	1,753	2,168	2,406
Depreciation & Amortization	9,858	9,649	9,114	8,787	8,655
Change in Working Capital	(31.0)	256	(175)	(75.0)	0
Deferred Taxation Charge	0	0	0	0	0
Other CFO	(224)	(9,464)	(584)	(449)	(341)
Cash Flow from Operations	**12,912**	**12,259**	**10,108**	**10,432**	**10,721**
Capital Expenditure	(8,306)	(8,378)	(7,609)	(7,430)	(7,490)
(Acquisition) / Disposal of Investments	NA	NA	NA	NA	NA
Other CFI	101	11,909	187	37.4	87.4
Cash Flow from Investing	**(8,205)**	**3,531**	**(7,421)**	**(7,393)**	**(7,402)**
Share Issue / (Repurchase)	(2,029)	(1,893)	0	0	0
Cost of Dividends Paid	(539)	(400)	(500)	(504)	(533)
Increase (decrease) debt	2,332	(3,702)	305	(43.0)	(295)
Other CFF	(4,785)	3,629	(2,796)	(2,448)	(2,196)
Cash Flow from Financing	**(5,021)**	**(2,366)**	**(2,992)**	**(2,995)**	**(3,024)**
Total Cash Flow (CFO + CFI + CFF)	**(314)**	**13,424**	**(305)**	**43.0**	**295**
FX and other changes to cash	1,989	(9,215)	305	(43.0)	(295)
Change in Cash	1,675	4,209	0	0	0
Change in Net Debt	657	(7,911)	305	(43.0)	(295)
Net Debt (Reported)	62,596	54,685	54,990	54,947	54,652
Net Debt (Adjusted)	41,578	33,375	33,680	33,637	33,342
Key Balance Sheet Data					
Property, Plant & Equipment	40,804	37,992	38,310	38,711	39,276
Goodwill	31,884	27,615	27,615	27,615	27,615
Other Intangibles	21,360	19,592	18,069	16,612	15,181
Other Non-Current Assets	31,368	39,660	39,431	39,218	38,921
Trade Receivables	11,019	10,705	10,705	10,705	10,705
Cash & Equivalents	7,496	11,705	11,705	11,705	11,705
Other Current Assets	10,022	8,252	8,252	8,252	8,252
Total Assets	153,953	155,521	154,087	152,817	151,655
Long-Term Debt	58,131	51,669	51,974	51,931	51,636
Other Non-Current Liabilities	5,198	4,785	4,785	4,785	4,785
Short-Term Debt	11,961	14,721	14,721	14,721	14,721
Other Current Liabilities	21,686	19,863	20,013	20,163	20,313
Total Liabilities	96,976	91,038	91,493	91,600	91,455
Total Equity	56,977	64,483	62,595	61,217	60,200
Total Equity & Liabilities	153,953	155,521	154,087	152,817	151,655
Business Performance*					
Return On Capital Employed	2.71%	3.37%	2.16%	2.47%	2.64%
Return On Equity	5.02%	20.0%	2.80%	3.52%	3.95%
Operating Margin	11.9%	30.3%	8.75%	9.82%	10.3%
Free Cash Flow (MM)	5,193	4,508	3,137	3,384	3,486
Quality of Earnings*					
Cash Realization Ratio	4.66x	1.04x	5.77x	4.81x	4.46x
Asset Replacement Ratio	0.84x	0.87x	0.83x	0.85x	0.87x
Tax Rate	32.4%	3.75%	24.7%	24.5%	24.3%
Net Debt/Equity	110%	84.8%	87.9%	89.8%	90.8%
Interest Cover	2.72x	2.90x	2.27x	2.56x	2.68x

* For full definitions of *iQmethod*[SM] measures, see page 13.

Company Sector

Telecom Services-Wireless/Cellular

Company Description

Vodafone provides telecoms services, including mobile voice, data and fixed communications. The Group has c450m fixed and mobile customers, with operations across more than 30 countries worldwide. Its main European businesses are in Germany, Italy, Spain, the UK. The UK-listed company also has an extensive EM portfolio, with exposure to wireless businesses in India, and S Africa.

Investment Rationale

We rate Vodafone Buy. Restructuring is complex and Germany faces operational headwinds. However, looking through the complexity we envisage a new, more constructive shareholder remuneration policy and portfolio restructuring to provide scale and support better returns., or to exit where there is no route to do so.

Stock Data

Shares / ADR	10.00
Price to Book Value	0.4x

Key Changes

(US$)	Previous	Current
Price Obj.	13.28	13.18
2024E EPS	0.69	0.68
2025E EPS	0.82	0.85
2026E EPS	0.92	0.94

Investment conclusions

Q3 results were broadly in-line with BofA expectations and VOD Group messaging, and with more granularity around the phasing of German revenue drivers we make some minor changes to forecasts. Note however that we remain more cautiously positioned versus FY25/26 consensus Group expectations given that we price in the potential impact of Egyptian devaluation (priced into market forward currency forecast).

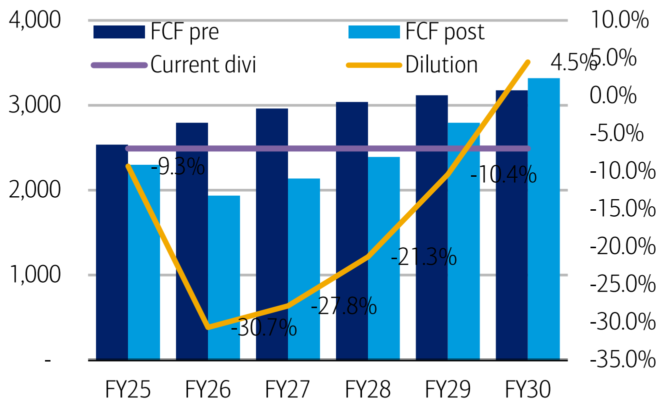
Meanwhile, with VOD having rejected Iliad's approach for its Italian business we look forward to the next core catalyst for Vodafone shares which we expect to be the rebasing of shareholder remuneration prospects at FY results in May.

As a reminder of our approach, we focus on portfolio restructuring and the immediate impact on free cash flows that should shape - per Vodafone's commentary - its capital allocation policy. We base our analysis on the closure of the Spanish sale (due imminently) and proposed merger of UK operations with Hutch (estimated completion end calendar 2024).

Our conclusion is that distributable free cash flow is diluted around 10% by the sale of Spain in FY25, although this unwinds over time with improved coupons on preference equity. And that the UK merger should be an incremental 20% dilution as restructuring costs weigh heavily (together 31% in FY March 26) before unwinding as synergies accrue. We forecast group FCF accretion only by FY March 2030.

Exhibit 1: Distributable FCF – pre/post Spain/UK M&A

Post M&A FCF below current divi payout FY25-28, Group accretion by FY30

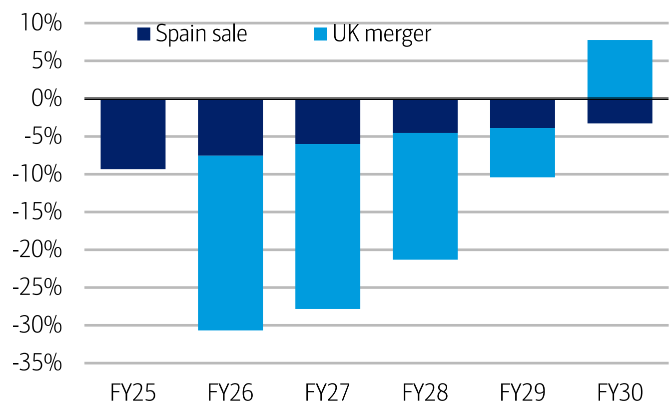


Source: BofA Global Research estimates, company report

BofA GLOBAL RESEARCH

Exhibit 2: Distributable FCF dilution– Spain/UK composition

Spain initially 10% dilutive but unwinds with preference equity coupons, UK dilution material with £500m integration costs before Y5 £700m synergy.



Source: BofA Global Research estimates, company report

BofA GLOBAL RESEARCH

A key observation is that current dividend (€9c DPS outflow c€2.5bn) is uncovered from FY25-28 under our scenario, too long to be a sustainable policy. Thus, in our scenario, we consider a revised policy during this interim period (as has been openly communicated by VOD management), with 2/3 average cash flow payout deriving a 40% dividend cut (initially to €5.4c DPS, outflow €1.5bn).

This frees cash flow while additional balance sheet headroom is freed up by Spanish sale proceeds (less incremental UK debt), enabling VOD to supplement dividend with buyback of €1bn per annum during the period, fuelling DPS growth (up to 5% PA) based on a static payout and reduced share count.

Beyond FY28 with a potential call option to acquire the Merged UK minority stake (cost c€7.5bn), leverage could nudge up but with full run rate synergies emerging to manage back down in just one year. VOD could choose to maintain dividend here, or even continue growth as payout ratio continues to fall.

Exhibit 3: Group Net Debt & leverage impact, dividend cut scenario, EURm
Deducting Spanish proceeds FY25, adding initial incremental UK debt FY26, adjusting for new cash flows and buyback/dividend cut

Net Debt	**FY 24**	**FY25**	**FY26**	**FY27**	**FY28**	**FY29**	**FY30**
b/f		**33,686**	**29,780**	**32,317**	**32,674**	**32,778**	**38,986**
- M&A Spain proceeds		- 4,100					
- M&A UK new debt			1,978			7,433	-
- Post M&A cash flow		- 2,300	- 1,937	- 2,138	- 2,391	- 2,795	- 3,320
- Divi +1yr		1,495	1,495	1,495	1,495	1,569	1,648
(divi / FCF payout)		65%	77%	70%	63%	56%	50%
- Buyback		1,000	1,000	1,000	1,000		
c/f	**33,686**	**29,780**	**32,317**	**32,674**	**32,778**	**38,986**	**37,315**
- Leverage	2.6	2.4	2.5	2.5	2.4	2.8	2.6
- proportionate		2.4	2.4	2.4	2.3	2.8	2.6
Shares		27,680	26,390	25,101	23,811	22,521	22,521
Buyback		- 1,290	- 1,290	- 1,290	- 1,290	-	-
Share price (EUR)		78	78	78	78	78	78
New DPS p/sh		5.4	5.7	6.0	6.3	6.6	6.9
- YoY			5%	5%	5%	5%	5%
- yield		7%	7%	8%	8%	9%	9%

Source: BofA Global Research estimates

BofA GLOBAL RESEARCH

Our conclusion is that VOD could rebase payout during the initially dilutive period, but supplement with buyback until full UK integration and synergy realization on a 4-5 year outlook. This would provide a more visible, sustainable base to grow dividend, and from an attractive initial yield of 7%.

Q3 call feedback

We noted the following, brief presentation highlights:

- UK reaching first place NPS for the first time.
- VOD business strong in digital services and IoT. Microsoft partnership to accelerate this.
- African financial services growth strong.
- Already completed 1/3 role reduction target.
- Continuing with portfolio restructuring, with continue to pursue options in Italy.

And in response to Q&A:

- **German MDU revenue at risk**: expect volumes to become more material this calendar year, tracking this in detail. This week will launch an above the line TV campaign in Germany. Trends so far consistent with trial period. Regarding revenue trends. Will take some time. Anecdotally, not obviously OTT heavy customer base, could be some stickiness with status quo. Will see the first impact in Q4 to carry through to H1 FY25. Hope to achieve flat Q4 SR with MDU decline offset by Business. Into FY25, MDU impact will move Germany into negative growth, to moderate H2 with 1&1 dynamic. Then returning to decent growth FY26.
- **German underlying growth**: Do now expect from Q4 a continued acceleration in underlying SR growth. As of Feb, finally behind the price driven churn. Too early to pre-judge any price actions through FY25.

- **Business growth,** UK/Italy/Germany dynamics: Business should continue to accelerate, also aggregate Q4. Composition should include some strong improvement in Germany (IoT heavy market given manufacturing industry), UK & Italy could see some slower growth due to project phasing. But other Europe should also be better. MS partnership could further benefit FY25.

- **Data traffic growth**: Current levels of capex support current levels.

- **B2B growth, margin mix:** connectivity margins are similar to consumer, wider cloud services more dilutive by a couple of pps. But this is much lower in terms of capital intensity.

- **Shareholder returns**: Said in Nov would review capital allocation once the Spanish deal closes. So likely May results. Dividend should be covered.

- **Microsoft deal dynamics**: Considering data centres, most are leased and not owned. There could be some small capex/opex shift, e.g. opex consumed through Azur cloud platform (moving 10,000 servers), but countered by other synergies. But the shift is unlikely to be dramatic. VOD considers the partnership to be a tripe digit NPV benefit.

Forecast adjustment

We make a series of minor adjustments, primarily reflecting the expected phasing of German MDU revenues, impacting Q4 (FY24) but with some earlier than expected support from the 1&1 deal in FY25 (we assume 15% of customers are migrated). PO unchanged.

Exhibit 4: VOD Group forecast change, £m

Minor changes reflect German phasing, Other Europe better than expected, Other Asia below.

	New				**Old**				**Chg**			
Group	**Mar 24E**	**Mar 25E**	**Mar 26E**	**Mar 27E**	**Mar 24E**	**Mar 25E**	**Mar 26E**	**Mar 27E**	**Mar 24E**	**Mar 25E**	**Mar 26E**	**Mar 27E**
Revenues	44,168	44,502	44,538	45,645	44,113	44,167	44,260	45,359	0.1%	0.8%	0.6%	0.6%
EBITDAaL	12,978	13,157	13,251	13,659	13,016	13,115	13,235	13,643	-0.3%	0.3%	0.1%	0.1%
PBT	2,327	2,873	3,177	3,786	2,350	2,791	3,120	3,730	-1.0%	2.9%	1.8%	1.5%
EPS	6.3	7.8	8.7	10.3	6.4	7.6	8.5	10.2	-1.0%	2.9%	1.8%	1.5%
DPS	9.0	9.0	9.0	9.0	9.0	9.0	9.0	9.0	0.0%	0.0%	0.0%	0.0%
Capex	-7,609	-7,430	-7,490	-7,699	-7,627	-7,408	-7,480	-7,688	-0.2%	0.3%	0.1%	0.1%
FCF pre divi	2,187	2,534	2,786	2,954	2,181	2,537	2,794	2,963	0.3%	-0.1%	-0.3%	-0.3%
FCF VOD guide	3,137	3,384	3,486	3,554	3,131	3,387	3,494	3,563	0.2%	-0.1%	-0.2%	-0.2%
Net Debt	33,680	33,637	33,342	32,879	33,686	33,640	33,337	32,865	0.0%	0.0%	0.0%	0.0%
Service revenues	**Mar 24E**	**Mar 25E**	**Mar 26E**	**Mar 27E**	**Mar 24E**	**Mar 25E**	**Mar 26E**	**Mar 27E**	**Mar 24E**	**Mar 25E**	**Mar 26E**	**Mar 27E**
Germany	11,419	11,307	11,689	11,979	11,477	11,273	11,722	12,013	-0.5%	0.3%	-0.3%	-0.3%
Italy	4,201	4,241	4,312	4,430	4,201	4,241	4,312	4,430	0.0%	0.0%	0.0%	0.0%
UK	5,644	5,863	5,995	6,129	5,624	5,843	5,974	6,108	0.3%	0.4%	0.4%	0.4%
Spain	3,444	3,444	3,495	3,548	3,435	3,435	3,486	3,539	0.3%	0.3%	0.3%	0.3%
Other Europe	4,719	4,880	5,002	5,127	4,439	4,591	4,706	4,823	6.3%	6.3%	6.3%	6.3%
Europe	**29,256**	**29,563**	**30,317**	**31,033**	**28,991**	**29,195**	**30,008**	**30,716**	**0.9%**	**1.3%**	**1.0%**	**1.0%**
Vodacom	5,960	5,758	5,366	5,581	5,960	5,758	5,366	5,581	0.0%	0.0%	0.0%	0.0%
Other Asia	1,671	1,853	1,569	1,569	1,818	1,876	1,589	1,589	-8.1%	-1.2%	-1.2%	-1.2%
Other and eliminations	481	484	484	496	446	446	446	457	7.8%	8.6%	8.5%	8.5%
Group	**37,368**	**37,659**	**37,736**	**38,678**	**37,215**	**37,275**	**37,408**	**38,342**	**0.4%**	**1.0%**	**0.9%**	**0.9%**

Source: BofA Global Research estimates

BofA GLOBAL RESEARCH

Proforma Vodafone / Dividend analysis

Forecasting the financial outlook for Vodafone is complex and uncertain given that there are deals close to completion (Spain), deals proposed but not yet approved from a regulatory standpoint (UK) and deals that are only in formative stages of discussion (Italy).

And this presents a further challenge for Vodafone that has committed to reviewing its capital allocation policy following portfolio restructuring. Our view is that Vodafone would prefer to reset expectations and provide stability rather than constantly adjusting its policy after each deal. Thus, we put ourselves in Vodafone's shoes (so to speak), modelling what we think are the more likely transactions to complete, and what the implications could be.

To recap recent (material) M&A deals and discussions:

- **Spain**: Vodafone announced the sale of Spanish operations to Zegona in October 2023 for €5bn (implied 5.3x EV/EBITDAaL) comprising €4.1bn cash proceeds and €900m redeemable preference shares with a yield of 5% in years 1-3, then 10%/12.5%/15% thereafter. VOD will retain annual service fees of €110m. With no regulation due, the deal is expected to close in calendar Q1 2024.

  We expect this deal to complete at any time, with buyer funds raised and no regulatory complications.

- **UK**: VOD announced a proposed merger with Hutch's Three in the UK in June 2023. Both companies will inject Debt (VOD £4.3bn, Hutch £1.7bn) to balance a 51:49 shareholding in favour of VOD who will consolidate the operation. The merger is expected to deliver £700m OpFCF synergy from Year 5 with £500m interrogation costs in the near-term. FCF should be positive by year 4. Then both VOD and Hutch have call/put options on the Hutch stake 3 years post completion. Deal completion is expected by end of calendar 2024 as it requires regulatory approval form the UK CMA (competition market authority).

  UK regulatory commentary is that absolute number of mobile operators (this would represent a 4-3 network consolidation) is not a primary driver of competitive analysis. And while VOD/Three would derive an outsized operator with c44% mobile subscriber share, it would be mobile only versus converged competitors BT and VMO2, thus more balanced on a service revenue basis. There could be remedies around spectrum caps but we believe this deal has a good likelihood of completion.

- **Italy**: VOD has publicly discussed the potential (and need) for Italian consolidation for some time, alongside other market participants. In February 2022 Iliad offered to acquire Vodafone Italy for €11.25bn, but Vodafone rejected the approach. Iliad has since made another offer in December 2023 valuing VOD Italy at €10.45bn via €6.5bn cash and €2bn shareholder loan for an initial 50% stake that would be sold in 10% annual tranches over the subsequent 5 years. VOD has acknowledged the offer and rejected it.

  There are multiple moving parts in Italy with Fastweb also reported to be interested in Vodafone, while Telecom Italia management has indicated a willingness to participate in market consolidation and reports suggest Wind Tre could participate too. So while there is another Iliad offer, we are less sure of an outcome, and regulation would be a significant hurdle with any proposed consolidation of Iliad, which was the effective remedy to the merger on Wind and Tre in 2018.

In conclusion, our approach to a 24-36m outlook that could shape policy is to consider the Spanish and UK deals, but to side-line Italy for now, with the caveat that any deal could further adjust expectations.

Proforma model

Our analysis begins with YE 2024 group unadjusted forecasts then we deduct Spain (impact March YE 25), deduct standalone UK (impact March YE 26), add-back merged UK (impact March YE 26) and model the impact on cash flows and leverage. Based on these we consider the potential for adjustments to cash returns.

Underlying assumptions

The following table comprises our forecasts for VOD Group (untouched and published), VOD Spain, VOD UK and merged UK operations. Some core assumptions:

- Spain standalone: We use current forecasts for Spain EBITDAaL and capex, but assume no cash tax per company commentary (and supported by multiple losses at ONO). We do not consider debt, as we include the net benefits of sale proceeds as a separate line in the cash flow analysis.

- UK standalone: We use current forecasts for UK EBITDAaL and capex, and assume an interest charge based on the £4.3bn debt associated with VOD UK that will be injected into the merged entity (at VOD Group 2.5% cost of debt). Again we assume limited cash tax.

- Merged UK: We incorporate current VOD UK EBITDAaL and capex forecasts and those for Hutch UK (we consider reported data but normalise EBITDAaL for consistent SAC accounting, c40% lower). Then, per deal reports, we assume: 1) guidance for £700m OpFCF synergy phased into full run rate by year 5 (we assume 2/3 opex, 1/3 capex per previous precedent) and more up-front phased £500m integration costs, 2) £6bn debt (4.3 VOD 1.7 Hutch) associated with the merged entity at 2.5% cost of debt, 3) no cash taxes until material free cash flow positive in year 5, 4) no cash distribution until <2.5x leverage by year 5. We include a simple working to convert UK Merged EBITDA and FCF to EUR per forecast FX.

Exhibit 5: Underlying assumptions, Group untouched / Spain (both EURm), UK standalone / UK merged (both £m)
Building to data to model: proforma = Group untouched – Spain – UK standalone + UK merged.

Group untouched, EUR	**FY24**	**FY25**	**FY26**	**FY27**	**FY28**	**FY29**	**FY30**
EBITDAaL	13,016	13,115	13,235	13,643	13,962	14,294	14,607
FCF VOD	3,131	3,387	3,494	3,563	3,639	3,719	3,777
FCF clean	2,181	2,537	2,794	2,963	3,039	3,119	3,177
Net Debt	33,686	33,640	33,337	32,865	32,317	31,689	31,003
Leverage	2.6	2.6	2.5	2.4	2.3	2.2	2.1
SPAIN standalone, EUR	**Assumptions**	**FY25**	**FY26**	**FY27**	**FY28**	**FY29**	**FY30**
EBITDAaL		881	895	909	924	938	954
Capex		- 496	- 536	- 584	- 593	- 602	- 612
OpFCF		384	359	326	331	336	342
Taxed	0%	384	359	326	331	336	342
UK standalone, £	**Assumptions**	**FY25**	**FY26**	**FY27**	**FY28**	**FY29**	**FY30**
EBITDAaL		1,194	1,237	1,265	1,294	1,324	1,354
Capex		- 665	- 680	- 696	- 712	- 728	- 745
OpFCF		529	557	569	582	596	609
Interest, £4.3bn	2.5%	- 108	- 108	- 108	- 108	- 108	- 108
Taxed FCF	0%	422	449	462	475	488	502
- EUR		491	523	537	553	568	584
UK Merged, £	**Assumptions**		**FY 26**	**FY 27**	**FY 28**	**FY 29**	**FY 30**
EBITDAaL			1,456	1,459	1,586	1,861	2,173
- VOD			1,237	1,265	1,294	1,324	1,354
- Less VOD charges				-	-	-	-
- Hutch			345	347	349	350	352
- Synergy (opex 2/3)	467		23	47	93	187	467
- runrate			5%	10%	20%	40%	100%
- Integration	- 500		- 150	- 200	- 150		
Capex			- 1,412	- 1,400	- 1,390	- 1,359	- 1,234
- VOD			- 680	- 680	- 696	- 712	- 728
- Hutch			- 743	- 743	- 741	- 740	- 739
- Synergy (capex 2/3)	233		12	23	47	93	233

Exhibit 5: Underlying assumptions, Group untouched / Spain (both EURm), UK standalone / UK merged (both £m)
Building to data to model: proforma = Group untouched – Spain – UK standalone + UK merged.

Group untouched, EUR	**FY24**	**FY25**	**FY26**	**FY27**	**FY28**	**FY29**	**FY30**
EBITDAaL	13,016	13,115	13,235	13,643	13,962	14,294	14,607
FCF VOD	3,131	3,387	3,494	3,563	3,639	3,719	3,777
FCF clean	2,181	2,537	2,794	2,963	3,039	3,119	3,177
Net Debt	33,686	33,640	33,337	32,865	32,317	31,689	31,003
Leverage	2.6	2.6	2.5	2.4	2.3	2.2	2.1
SPAIN standalone, EUR	**Assumptions**	**FY25**	**FY26**	**FY27**	**FY28**	**FY29**	**FY30**
EBITDAaL		881	895	909	924	938	954
Capex		- 496	- 536	- 584	- 593	- 602	- 612
OpFCF		384	359	326	331	336	342
Taxed	0%	384	359	326	331	336	342
UK standalone, £	**Assumptions**	**FY25**	**FY26**	**FY27**	**FY28**	**FY29**	**FY30**
EBITDAaL		1,194	1,237	1,265	1,294	1,324	1,354
Capex		- 665	- 680	- 696	- 712	- 728	- 745
OpFCF		529	557	569	582	596	609
Interest, £4.3bn	2.5%	- 108	- 108	- 108	- 108	- 108	- 108
Taxed FCF	0%	422	449	462	475	488	502
- EUR		491	523	537	553	568	584
UK Merged, £	**Assumptions**		**FY 26**	**FY 27**	**FY 28**	**FY 29**	**FY 30**
OpFCF			**44**	**59**	**196**	**502**	**939**
Interest			- 150	- 153	- 155	- 154	- 146
Tax	10%		-	-	- 4	- 35	- 79
FCF			**- 106**	**- 94**	**37**	**314**	**714**
- Distribution							- 400
Net Debt	**6,000**		**6,106**	**6,200**	**6,163**	**5,849**	**5,536**
- Leverage x	0.0		4.2	4.2	3.9	3.1	2.5
EUR		0.86	0.86	0.86	0.86	0.86	0.86
EBITDA			1,693	1,697	1,846	2,165	2,528
FCF			- 123	- 109	43	365	830

Source: BofA Global Research estimates, company report

BofA GLOBAL RESEARCH

EBITDAaL impact (used within leverage)

Based on the assumptions above, we illustrate current untouched group EBITDAal forecasts, then:

- Deduct Spain EBIDTAaL from FY25.
- Add back newly consolidated Hutch EBITDAaL from FY26 and synergy (note that integration costs will not be reported at EBITDA but in restructuring cash flows).

We also present proportionate EBITDAaL given the 51% UK ownership from FY26.

Exhibit 6: Group EBITDAaL impact, EURm
Proforma = group untouched – Spain FY25 + new UK /synergy FY26

	FY24	FY25	FY26	FY27	FY28	FY29	FY30
EBITDAaL pre	**13,016**	**13,115**	**13,235**	**13,643**	**13,962**	**14,294**	**14,607**
- Spain, less EBITDAaL		- 881	- 895	- 909	- 924	- 938	- 954
- UK, add Hutch consol			402	404	406	408	410
- UK, add synergy			27	54	109	217	543
EBITDAaL post	**13,016**	**12,235**	**12,769**	**13,191**	**13,552**	**13,981**	**14,606**
- proportional		12,235	11,854	12,246	12,563	12,920	13,367

Source: BofA Global Research estimates

BofA GLOBAL RESEARCH

Free cash flow impact

Based on the assumptions above, we illustrate VOD's untouched 'guidance' free cash flow forecasts for comparability, but start from distributable free cash flow forecasts that include restructuring charges and spectrum, then:

- Deduct Spanish free cash flow from FY25.
- Add back the interest benefit (at VOD's 2.5% cost of debt) on E4.1bn cash consideration, and coupons on the €900m deferral (5% years 1-3, then 10%, 12.5/15% thereafter).
- Deduct standalone UK free cash flow from FY26, add back the merged entity free cash flow (initially dilutive, this includes restructuring charges).

We measure dilution, with Spain c10% and the UK initially a further 20% before normalising by year 4 cash flow positive and by year 5 at the group level.

Exhibit 7: Group free cash flow impact, EURm
proforma = Group untouched – Spain OpFCF + Spain proceeds - UK standalone + UK merged.

FCF pre	**FY24**	**FY25**	**FY26**	**FY27**	**FY28**	**FY29**	**FY30**
FCF pre - VOD	3,131	3,387	3,494	3,563	3,639	3,719	3,777
FCF pre - clean (ex restructure/spec)	2,181	2,537	2,794	2,963	3,039	3,119	3,177
- Spain, less standalone taxed OpFCF	-	- 384	- 359	- 326	- 331	- 336	- 342
- Spain, add interest on cash sale	2.5%	103	103	103	103	103	103
- Spain, add interest on def sale	5.0%	45	45	45	90	113	135
- UK, less standalone FCF			- 523	- 537	- 553	- 568	- 584
- UK add merger FCF			- 123	- 109	43	365	830
FCF post		**2,300**	**1,937**	**2,138**	**2,391**	**2,795**	**3,320**
- dilution		-9.3%	-30.7%	-27.8%	-21.3%	-10.4%	4.5%

Source: BofA Global Research estimates, company report

BofA GLOBAL RESEARCH

Net Debt impact – assuming dividend sustained.

For Net Debt / leverage we illustrate VOD's untouched Net Debt carried forward from FY24 forecasts, then:

- Deduct Spanish proceeds in FY25, add incremental £1.7bn UK merger debt in FY26, add a payment to acquire Hutch minorities per the call option in FY29 (year 4, as the asset moves into positive cash flow, at implied 8.5x EBITDAaL).
- Deduct adjusted free cash flows defined above.
- Add back dividend outflow assuming no change to current €9c DPS.

We illustrate implied Net Debt/EBITDAaL and also include a proportionate multiple given the 51% ownership of the UK EBITDAaL and Net Debt.

Exhibit 8: Group Net Debt impact, EURm

Deducting Spanish proceeds, adding UK debt, adjusting for new cash flows.

Net Debt	FY 24	FY25	FY26	FY27	FY28	FY29	FY30
B/f	33,375	33,686	29,776	32,308	32,661	32,761	39,891
- M&A Spain		- 4,100					
- M&A UK			1,978			7,433	
- Cash flow		- 2,300	- 1,937	- 2,138	- 2,391	- 2,795	- 3,320
- Divi +1yr		2,491	2,491	2,491	2,491	2,491	2,491
c/f	**33,686**	**29,776**	**32,308**	**32,661**	**32,761**	**39,891**	**39,062**
- Leverage	2.6	2.4	2.5	2.5	2.4	2.9	2.7
- prop		2.4	2.4	2.4	2.3	2.9	2.7

Source: BofA Global Research estimates, company report

BofA GLOBAL RESEARCH

Initial conclusions

Given deal proceeds, VOD's leverage should remain broadly stable and secure at c2.5x until the payment to acquire Hutch minorities in year 4 moves this upwards. However interim FY25-28 cash flows are diluted c23% from pre-deal levels at an average €2.2bn level and thus below the c€2.5bn current dividend outflow.

Our view is that while a brief period with dividend uncovered could be considered, a 3–4-year gap is too long and that VOD will choose to rebase the dividend lower to levels that could be guaranteed and used as a base to grow. Per our point around leverage being stable, and as a fuel to potential DPS growth, we expect VOD to 'fill the gap' with buyback (as has been alluded to by the CEO and CFO).

Adjusting shareholder remuneration assumptions

With the above in mind, we consider the potential to reduce dividend outflow and balance with buyback, both assuming that leverage around 2.5x is maintained.

The following working considers a potential reduction in payout of FY 25-28 average free cash flow, and the implications for dividend. Our assumption is that a cut of 40% should broadly assume a more secure 2/3 payout (broadly in-line with sector average) to provide a buffer to delever and as a base to grow.

Exhibit 9: Dividend cut scenario based on sustainable payout

A 40% cut to divi reduces payout during the dilutive M&A period.

FY25-FY28 average FCF	2,192
Payout	68%
New payout	1,495
Old payout	2,491
Change	-40%

Source: BofA Global Research estimates, company report

BofA GLOBAL RESEARCH

We then model a modified Net Debt working, assuming new payout initially but a 4-year FY25-28 €1bn per annum buyback to broadly bridge the gap to 2.5x leverage before easing in FY 29 ahead of the UK minority acquisition, nudging leverage upwards.

Note that we model the impact of buyback on dividend assuming a static share price at the time of writing that would support compound DPS growth of 5%. Clearly this could translate into an increase in share price and reduced dividend growth. From FY 28 onwards as UK cash flow accretion kicks in we assume hard coded 5% dividend increase.

Our conclusion is that a rebased dividend reduces cash flow payout pressure during the initially dilutive M&A period, but that buyback using proceeds should support divi growth during that period ahead of UK cash flow accretion from FY29 onwards that should support more organic growth based on payout.

Exhibit 10: Group Net Debt impact, dividend cut scenario, EURm
Deducting Spanish proceeds (FY25), adding UK debt FY26/29), adjusting for new cash flows and buyback/dividend cut

Net Debt	**FY 24**	**FY25**	**FY26**	**FY27**	**FY28**	**FY29**	**FY30**
b/f		33,686	29,780	32,317	32,674	32,778	38,986
- M&A Spain		- 4,100					
- M&A UK			1,978			7,433	-
- Cash flow		- 2,300	- 1,937	- 2,138	- 2,391	- 2,795	- 3,320
- Divi +1yr		1,495	1,495	1,495	1,495	1,569	1,648
(divi / FCF payout)		65%	77%	70%	63%	56%	50%
- Buyback		1,000	1,000	1,000	1,000		
c/f	33,686	29,780	32,317	32,674	32,778	38,986	**37,315**
- Leverage	2.6	2.4	2.5	2.5	2.4	2.8	2.6
- proportionate		2.4	2.4	2.4	2.3	2.8	2.6
Shares		27,680	26,390	25,101	23,811	22,521	22,521
Buyback		- 1,290	- 1,290	- 1,290	- 1,290	-	-
Share price (EUR)		78	78	78	78	78	78
New p/sh		5.4	5.7	6.0	6.3	6.6	6.9
- YoY			5%	5%	5%	5%	5%
- yield		7%	7%	8%	8%	9%	9%

Source: BofA Global Research estimates, company report

BofA GLOBAL RESEARCH

Price objective basis & risk

Vodafone Group (VODPF / VOD)
Our 122p PO (US$13.18 ADR) is based on a sum-of-the-parts analysis.

We value each of the European subsidiaries (where Vodafone discloses revenues, EBITDA and capex) via DCF and/or multiples. We apply multiples of 5.0-6.5x EBITDAaL for operations in Europe and 4.5-6.0x in emerging markets. In line with the remaining coverage, we apply a conglomerate discount of 10% for the group.

We include liabilities for future License spend and potential German capex network investment. We include assets for VOD's deferred tax asset.

Upside risks to our PO are:
1) Market consolidation leading to improved pricing power, 2) unexpected and positive macroeconomic changes, given VOD's diversified footprint.

Downside risks to our PO are:
1) Pressing needs to invest in cable operations in the face of fibre competition, 2) Ongoing dilutive ROCE in non-core regions, 3) unexpected and negative macroeconomic changes, given VOD's diversified footprint.

Analyst Certification

I, David Wright, 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.

EMEA - Telecoms Coverage Cluster

Investment rating	Company	BofA Ticker	Bloomberg symbol	Analyst
BUY				
	BT	BTGOF	BT/A LN	David Wright
	Cellnex	CLNXF	CLNX SQ	David Wright
	Cellnex	CLLNY	CLLNY US	David Wright
	Deutsche Telekom	DTEGY	DTEGY US	David Wright
	Deutsche Telekom	DTEGF	DTE GY	David Wright
	Freenet AG	FRTAF	FNTN GY	Titus Krahn
	Helios Towers plc	HTWSF	HTWS LN	David Wright
	Inwit	IFSUF	INW IM	David Wright
	Orange	FNCTF	ORA FP	Titus Krahn
	Orange	ORAN	ORAN US	Titus Krahn
	Tele2 AB	TLTZF	TEL2B SS	Titus Krahn
	Telefonica SA	TEFOF	TEF SQ	David Wright
	Telefonica SA	TEF	TEF US	David Wright
	United Internet AG	UDIRF	UTDI GY	Titus Krahn
	Vodafone Group	VOD	VOD US	David Wright
	Vodafone Group	VODPF	VOD LN	David Wright
NEUTRAL				
	1&1 AG	DRHKF	1U1 GY	Titus Krahn
	KPN	KKPNF	KPN NA	Titus Krahn
	Liberty Global	LBTYA	LBTYA US	David Wright
	Telecom Italia -RSP	TIAJF	TITR IM	David Wright
	Telecom Italia SPA	TIIAY	TIIAY US	David Wright
	Telecom Italia SPA	TIAOF	TIT IM	David Wright
	Telenor	TELNF	TEL NO	Titus Krahn
	Telenor	TELNY	TELNY US	Titus Krahn
UNDERPERFORM				
	Bouygues	BOUYF	EN FP	Titus Krahn
	Elisa	ELMUF	ELISA FH	Titus Krahn

EMEA - Telecoms Coverage Cluster

Investment rating	Company	BofA Ticker	Bloomberg symbol	Analyst
	Proximus	BGAOF	PROX BB	Titus Krahn
	Swisscom	SWZCF	SCMN SW	Titus Krahn
	Swisscom	SCMWY	SCMWY US	Titus Krahn
	Telia Company	TLSNF	TELIA SS	Titus Krahn
	Telia Company	TLSNY	TLSNY US	Titus Krahn
RSTR				
	Telefonica Deutschland	TELDF	O2D GY	David Wright

*iQ*method[SM] 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

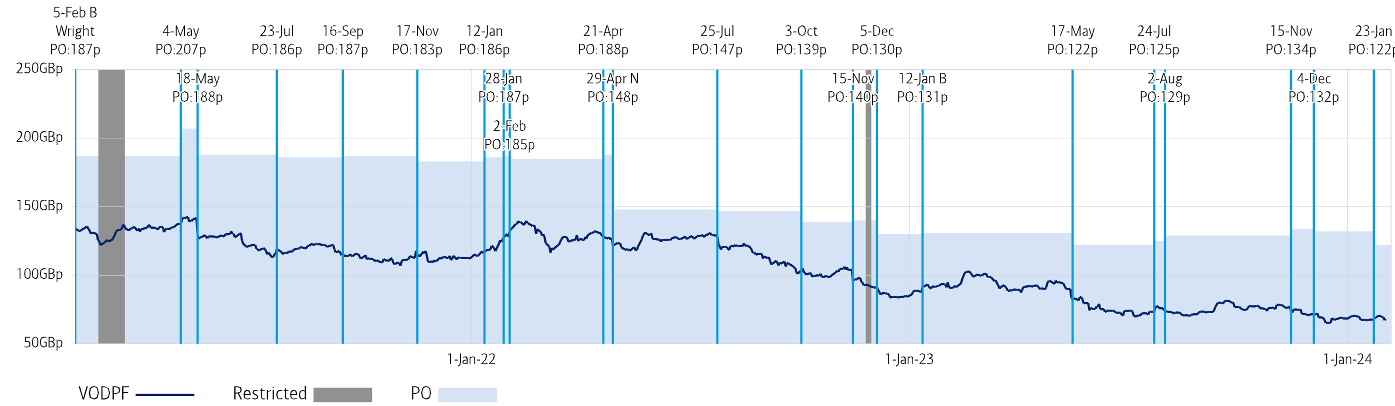
iQmethod[SM] is the set of BofA Global Research standard measures that serve to maintain global consistency under three broad headings: Business Performance, Quality of Earnings, and validations. The key features of iQmethod are: A consistently structured, detailed, and transparent methodology. Guidelines to maximize the effectiveness of the comparative valuation process, and to identify some common pitfalls.

iQdatabase® 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.

Disclosures

Important Disclosures

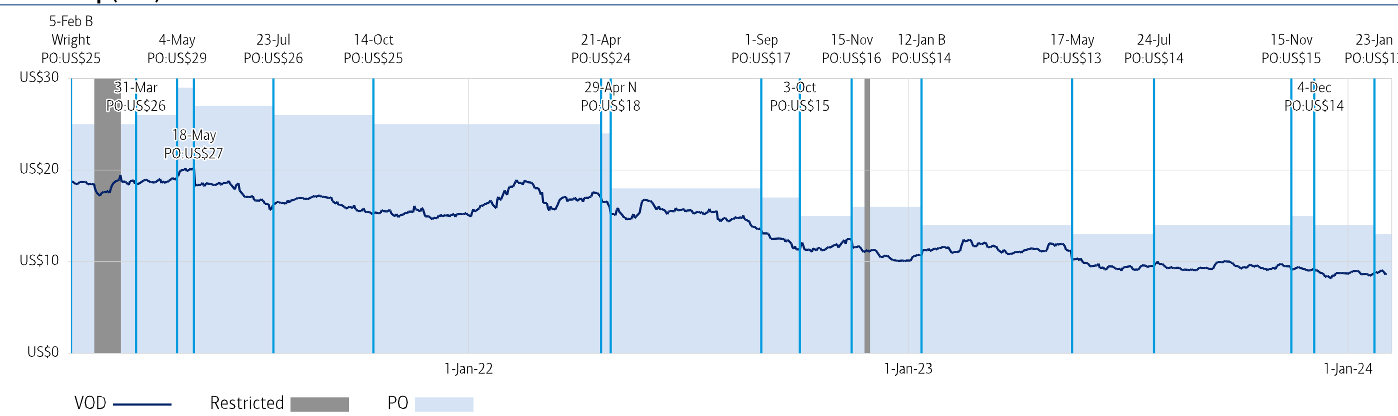
Vodafone Group (VODPF) Price Chart



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.

Vodafone Group (VOD) 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: Telecommunications Group (as of 31 Dec 2023)

Coverage Universe	Count	Percent	Inv. Banking Relationships [R1]	Count	Percent
Buy	57	51.82%	Buy	43	75.44%
Hold	27	24.55%	Hold	17	62.96%
Sell	26	23.64%	Sell	12	46.15%

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.

FUNDAMENTAL EQUITY OPINION KEY: Opinions include a Volatility Risk Rating, an Investment Rating and an Income Rating. VOLATILITY RISK RATINGS, indicators of potential price fluctuation, are: A - Low, B - Medium and C - High. INVESTMENT RATINGS reflect the analyst's assessment of both a stock's absolute total return potential as well as its attractiveness for investment relative to other stocks within its Coverage Cluster (defined below). Our investment ratings are: 1 - Buy stocks are expected to have a total return of at least 10% and are the most attractive stocks in the coverage cluster; 2 - Neutral stocks are expected to remain flat or increase in value and are less attractive than Buy rated stocks and 3 - Underperform stocks are the least attractive stocks in a coverage cluster. An investment rating of 6 (No Rating) indicates that a stock is no longer trading on the basis of fundamentals. Analysts assign investment ratings considering, among other things, the 0-12 month total return expectation for a stock and the firm's guidelines for ratings dispersions (shown in the table below). The current price objective for a stock should be referenced to better understand the total return expectation at any given time. The price objective reflects the analyst's view of the potential price appreciation (depreciation).

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%

[R2]Ratings dispersions may vary from time to time where BofA Global Research believes it better reflects the investment prospects of stocks in a Coverage Cluster.

INCOME RATINGS, indicators of potential cash dividends, are: 7 - same/higher (dividend considered to be secure), 8 - same/lower (dividend not considered to be secure) and 9 - pays no cash dividend. *Coverage Cluster* is comprised of stocks covered by a single analyst or two or more analysts sharing a common industry, sector, region or other classification(s). A stock's coverage cluster is included in the most recent BofA Global Research report referencing the stock.

Price Charts for the securities referenced in this research report are available on the Price Charts website, or call 1-800-MERRILL to have them mailed.
BofAS or one of its affiliates acts as a market maker for the equity securities recommended in the report: Vodafone Group.
BofAS or an affiliate was a manager of a public offering of securities of this issuer within the last 12 months: Vodafone Group.
The issuer is or was, within the last 12 months, an investment banking client of BofAS and/or one or more of its affiliates: Vodafone Group.
BofAS or an affiliate has received compensation from the issuer for non-investment banking services or products within the past 12 months: Vodafone Group.
The issuer is or was, within the last 12 months, a non-securities business client of BofAS and/or one or more of its affiliates: Vodafone Group.
BofAS or an affiliate has received compensation for investment banking services from this issuer within the past 12 months: Vodafone Group.
BofAS or an affiliate expects to receive or intends to seek compensation for investment banking services from this issuer or an affiliate of the issuer within the next three months: Vodafone Group.
BofAS or one of its affiliates is willing to sell to, or buy from, clients the common equity of the issuer on a principal basis: Vodafone Group.
The issuer is or was, within the last 12 months, a securities business client (non-investment banking) of BofAS and/or one or more of its affiliates: Vodafone Group.
BofA Global Research personnel (including the analyst(s) responsible for this report) receive compensation based upon, among other factors, the overall profitability of Bank of America Corporation, including profits derived from investment banking. The analyst(s) responsible for this report may also receive compensation based upon, among other factors, the overall profitability of the Bank's sales and trading businesses relating to the class of securities or financial instruments for which such analyst is responsible.

Other Important Disclosures

From time to time research analysts conduct site visits of covered issuers. BofA Global Research policies prohibit research analysts from accepting payment or reimbursement for travel expenses from the issuer for such visits.
Prices are indicative and for information purposes only. Except as otherwise stated in the report, for any recommendation in relation to an equity security, the price referenced is the publicly traded price of the security as of close of business on the day prior to the date of the report or, if the report is published during intraday trading, the price referenced is indicative of the traded price as of the date and time of the report and in relation to a debt security (including equity preferred and CDS), prices are indicative as of the date and time of the report and are from various sources including BofA Securities trading desks.
The date and time of completion of the production of any recommendation in this report shall be the date and time of dissemination of this report as recorded in the report timestamp.

Recipients who are not institutional investors or market professionals should seek the advice of their independent financial advisor before considering information in this report in connection with any investment decision, or for a necessary explanation of its contents.
Officers of BofAS or one or more of its affiliates (other than research analysts) may have a financial interest in securities of the issuer(s) or in related investments.
Refer to BofA Global Research policies relating to conflicts of interest.
"BofA Securities" includes BofA Securities, Inc. ("BofAS") and its affiliates. Investors should contact their BofA Securities representative or Merrill Global Wealth Management financial advisor if they have questions concerning this report or concerning the appropriateness of any investment idea described herein for such investor. "BofA Securities" is a global brand for BofA Global Research.
Information relating to Non-US affiliates of BofA Securities and Distribution of Affiliate Research Reports:
BofAS and/or Merrill Lynch, Pierce, Fenner & Smith Incorporated ("MLPF&S") may in the future distribute, information of the following non-US affiliates in the US (short name: legal name, regulator): Merrill Lynch (South Africa): Merrill Lynch South Africa (Pty) Ltd., regulated by The Financial Service Board; MLI (UK): Merrill Lynch International, regulated by the Financial Conduct Authority (FCA) and the Prudential Regulation Authority (PRA); BofASE (France): BofA Securities Europe SA is authorized by the Autorité de Contrôle Prudentiel et de Résolution (ACPR) and regulated by the ACPR and the Autorité des Marchés Financiers (AMF). BofA Securities Europe SA ("BofASE") with registered address at 51, rue La Boétie, 75008 Paris is registered under no 842 602 690 RCS Paris. In accordance with the provisions of French Code Monétaire et Financier (Monetary and Financial Code), BofASE is an établissement de crédit et d'investissement (credit and investment institution) that is authorised and supervised by the European Central Bank and the Autorité de Contrôle Prudentiel et de Résolution (ACPR) and regulated by the ACPR and the Autorité des Marchés Financiers. BofASE's share capital can be found at www.bofaml.com/BofASEdisclaimer; BofA Europe (Milan): Bank of America Europe Designated Activity Company, Milan Branch, regulated by the Bank of Italy, the European Central Bank (ECB) and the Central Bank of Ireland (CBI); BofA Europe (Frankfurt): Bank of America Europe Designated Activity Company, Frankfurt Branch regulated by BaFin, the ECB and the CBI; BofA Europe (Madrid): Bank of America Europe Designated Activity Company, Sucursal en España, regulated by the Bank of Spain, the ECB and the CBI; Merrill Lynch (Australia): Merrill Lynch Equities (Australia) Limited, regulated by the Australian Securities and Investments Commission; Merrill Lynch (Hong Kong): Merrill Lynch (Asia Pacific) Limited, regulated by the Hong Kong Securities and Futures Commission (HKSFC); Merrill Lynch (Singapore): Merrill Lynch (Singapore) Pte Ltd, regulated by the Monetary Authority of Singapore (MAS); Merrill Lynch (Canada): Merrill Lynch Canada Inc, regulated by the Canadian Investment Regulatory Organization; Merrill Lynch (Mexico): Merrill Lynch Mexico, SA de CV, Casa de Bolsa, regulated by the Comisión Nacional Bancaria y de Valores; Merrill Lynch (Argentina): Merrill Lynch Argentina SA, regulated by Comisión Nacional de Valores; BofAS Japan: BofA Securities Japan Co., Ltd., regulated by the Financial Services Agency; Merrill Lynch (Seoul): Merrill Lynch International, LLC Seoul Branch, regulated by the Financial Supervisory Service; Merrill Lynch (Taiwan): Merrill Lynch Securities (Taiwan) Ltd., regulated by the Securities and Futures Bureau; BofAS India: BofA Securities India Limited, regulated by the Securities and Exchange Board of India (SEBI); Merrill Lynch (Israel): Merrill Lynch Israel Limited, regulated by Israel Securities Authority; Merrill Lynch (DIFC): Merrill Lynch International (DIFC Branch), regulated by the Dubai Financial Services Authority (DFSA); Merrill Lynch (Brazil): Merrill Lynch S.A. Corretora de Títulos e Valores Mobiliários, regulated by Comissão de Valores Mobiliários; Merrill Lynch KSA Company: Merrill Lynch Kingdom of Saudi Arabia Company, regulated by the Capital Market Authority.
This information: has been approved for publication and is distributed in the United Kingdom (UK) to professional clients and eligible counterparties (as each is defined in the rules of the FCA and the PRA) by MLI (UK), which is authorized by the PRA and regulated by the FCA and the PRA - details about the extent of our regulation by the FCA and PRA are available from us on request; has been approved for publication and is distributed in the European Economic Area (EEA) by BofASE (France), which is authorized by the ACPR and regulated by the ACPR and the AMF; has

been considered and distributed in Japan by BofAS Japan, a registered securities dealer under the Financial Instruments and Exchange Act in Japan, or its permitted affiliates; is issued and distributed in Hong Kong by Merrill Lynch (Hong Kong) which is regulated by HKSFC; is issued and distributed in Taiwan by Merrill Lynch (Taiwan); is issued and distributed in India by BofAS India; and is issued and distributed in Singapore to institutional investors and/or accredited investors (each as defined under the Financial Advisers Regulations) by Merrill Lynch (Singapore) (Company Registration No 198602883D). Merrill Lynch (Singapore) is regulated by MAS. Merrill Lynch Equities (Australia) Limited (ABN 65 006 276 795), AFS License 235132 (MLEA) distributes this information in Australia only to 'Wholesale' clients as defined by s.761G of the Corporations Act 2001. With the exception of Bank of America N.A., Australia Branch, neither MLEA nor any of its affiliates involved in preparing this information is an Authorised Deposit-Taking Institution under the Banking Act 1959 nor regulated by the Australian Prudential Regulation Authority. No approval is required for publication or distribution of this information in Brazil and its local distribution is by Merrill Lynch (Brazil) in accordance with applicable regulations. Merrill Lynch (DIFC) is authorized and regulated by the DFSA. Information prepared and issued by Merrill Lynch (DIFC) is done so in accordance with the requirements of the DFSA conduct of business rules. BofA Europe (Frankfurt) distributes this information in Germany and is regulated by BaFin, the ECB and the CBI. BofA Securities entities, including BofA Europe and BofASE (France), may outsource/delegate the marketing and/or provision of certain research services or aspects of research services to other branches or members of the BofA Securities group. You may be contacted by a different BofA Securities entity acting for and on behalf of your service provider where permitted by applicable law. This does not change your service provider. Please refer to the Electronic Communications Disclaimers for further information.

This information has been prepared and issued by BofAS and/or one or more of its non-US affiliates. The author(s) of this information may not be licensed to carry on regulated activities in your jurisdiction and, if not licensed, do not hold themselves out as being able to do so. BofAS and/or MLPF&S is the distributor of this information in the US and accepts full responsibility for information distributed to BofAS and/or MLPF&S clients in the US by its non-US affiliates. Any US person receiving this information and wishing to effect any transaction in any security discussed herein should do so through BofAS and/or MLPF&S and not such foreign affiliates. Hong Kong recipients of this information should contact Merrill Lynch (Asia Pacific) Limited in respect of any matters relating to dealing in securities or provision of specific advice on securities or any other matters arising from, or in connection with, this information. Singapore recipients of this information should contact Merrill Lynch (Singapore) Pte Ltd in respect of any matters arising from, or in connection with, this information. For clients that are not accredited investors, expert investors or institutional investors Merrill Lynch (Singapore) Pte Ltd accepts full responsibility for the contents of this information distributed to such clients in Singapore.

General Investment Related Disclosures:

Taiwan Readers: Neither the information nor any opinion expressed herein constitutes an offer or a solicitation of an offer to transact in any securities or other financial instrument. No part of this report may be used or reproduced or quoted in any manner whatsoever in Taiwan by the press or any other person without the express written consent of BofA Securities.

This document provides general information only, and has been prepared for, and is intended for general distribution to, BofA Securities clients. Neither the information nor any opinion expressed constitutes an offer or an invitation to make an offer, to buy or sell any securities or other financial instrument or any derivative related to such securities or instruments (e.g., options, futures, warrants, and contracts for differences). This document is not intended to provide personal investment advice and it does not take into account the specific investment objectives, financial situation and the particular needs of, and is not directed to, any specific person(s). This document and its content do not constitute, and should not be considered to constitute, investment advice for purposes of ERISA, the US tax code, the Investment Advisers Act or otherwise. Investors should seek financial advice regarding the appropriateness of investing in financial instruments and implementing investment strategies discussed or recommended in this document and should understand that statements regarding future prospects may not be realized. Any decision to purchase or subscribe for securities in any offering must be based solely on existing public information on such security or the information in the prospectus or other offering document issued in connection with such offering, and not on this document.

Securities and other financial instruments referred to herein, or recommended, offered or sold by BofA Securities, are not insured by the Federal Deposit Insurance Corporation and are not deposits or other obligations of any insured depository institution (including, Bank of America, N.A.). Investments in general and, derivatives, in particular, involve numerous risks, including, among others, market risk, counterparty default risk and liquidity risk. No security, financial instrument or derivative is suitable for all investors. Digital assets are extremely speculative, volatile and are largely unregulated. In some cases, securities and other financial instruments may be difficult to value or sell and reliable information about the value or risks related to the security or financial instrument may be difficult to obtain. Investors should note that income from such securities and other financial instruments, if any, may fluctuate and that price or value of such securities and instruments may rise or fall and, in some cases, investors may lose their entire principal investment. Past performance is not necessarily a guide to future performance. Levels and basis for taxation may change.

This report may contain a short-term trading idea or recommendation, which highlights a specific near-term catalyst or event impacting the issuer or the market that is anticipated to have a short-term price impact on the equity securities of the issuer. Short-term trading ideas and recommendations are different from and do not affect a stock's fundamental equity rating, which reflects both a longer term total return expectation and attractiveness for investment relative to other stocks within its Coverage Cluster. Short-term trading ideas and recommendations may be more or less positive than a stock's fundamental equity rating.

BofA Securities is aware that the implementation of the ideas expressed in this report may depend upon an investor's ability to "short" securities or other financial instruments and that such action may be limited by regulations prohibiting or restricting "shortselling" in many jurisdictions. Investors are urged to seek advice regarding the applicability of such regulations prior to executing any short idea contained in this report.

Foreign currency rates of exchange may adversely affect the value, price or income of any security or financial instrument mentioned herein. Investors in such securities and instruments, including ADRs, effectively assume currency risk.

BofAS or one of its affiliates is a regular issuer of traded financial instruments linked to securities that may have been recommended in this report. BofAS or one of its affiliates may, at any time, hold a trading position (long or short) in the securities and financial instruments discussed in this report.

BofA Securities, through business units other than BofA Global Research, may have issued and may in the future issue trading ideas or recommendations that are inconsistent with, and reach different conclusions from, the information presented herein. Such ideas or recommendations may reflect different time frames, assumptions, views and analytical methods of the persons who prepared them, and BofA Securities is under no obligation to ensure that such other trading ideas or recommendations are brought to the attention of any recipient of this information.

In the event that the recipient received this information pursuant to a contract between the recipient and BofAS for the provision of research services for a separate fee, and in connection therewith BofAS may be deemed to be acting as an investment adviser, such status relates, if at all, solely to the person with whom BofAS has contracted directly and does not extend beyond the delivery of this report (unless otherwise agreed specifically in writing by BofAS). If such recipient uses the services of BofAS in connection with the sale or purchase of a security referred to herein, BofAS may act as principal for its own account or as agent for another person. BofAS is and continues to act solely as a broker-dealer in connection with the execution of any transactions, including transactions in any securities referred to herein.

BofA ESGMeter Methodology:

ESGMeter is a proprietary metric based on quantitative analysis and fundamental analyst inputs that reflects our assessment of a company's Environmental, Social and Governance-related attributes. The ESGMeter is intended to indicate a company's likelihood of experiencing stronger financial stability (higher return on equity and lower earnings and price volatility) over the next three years relative to peer group. There are three ESGMeter levels - Low, Medium, and High - which indicate whether a company has attributes most likely to translate into superior financial stability (in the case of a High level) or weaker financial stability (in the case of a Low level) over the next three years relative to its peer group. A Medium level suggests that a company exhibits ESG characteristics that are likely associated with financial stability results in line with its peer group over the next three years. Full details of our methodology, financial stability definition and disclaimers are available at BofA ESGMeter methodology. ESGMeter is not indicative of a company's future stock price performance and is not an investment recommendation or rating. ESGMeter is independent of the BofA Global Research fundamental equity analyst's investment rating, volatility risk rating, income rating or price objective for that company.

Copyright and General Information:

Materials prepared by BofA Global Research personnel are based on public information. Facts and views presented in this material have not been reviewed by, and may not reflect information known to, professionals in other business areas of BofA Securities, including investment banking personnel. BofA Securities has established information barriers between BofA Global Research and certain business groups. As a result, BofA Securities does not disclose certain client relationships with, or compensation received from, such issuers. To the extent this material discusses any legal proceeding or issues, it has not been prepared as nor is it intended to express any legal conclusion, opinion or advice. Investors should consult their own legal advisers as to issues of law relating to the subject matter of this material. BofA Global Research personnel's knowledge of legal proceedings in which any BofA Securities entity and/or its directors, officers and employees may be plaintiffs, defendants, co-defendants or co-plaintiffs with or involving issuers mentioned in this material is based on public information. Facts and views presented in this material that relate to any such proceedings have not been reviewed by, discussed with, and may not reflect information known to, professionals in other business areas of BofA Securities in connection with the legal proceedings or matters relevant to such proceedings.

This information has been prepared independently of any issuer of securities mentioned herein and not in connection with any proposed offering of securities or as agent of any issuer of any securities. None of BofAS any of its affiliates or their research analysts has any authority whatsoever to make any representation or warranty on behalf of the issuer(s). BofA Global Research policy prohibits research personnel from disclosing a recommendation, investment rating, or investment thesis for review by an issuer prior to the publication of a research report containing such rating, recommendation or investment thesis.

Any information relating to the tax status of financial instruments discussed herein is not intended to provide tax advice or to be used by anyone to provide tax advice. Investors are urged to seek tax advice based on their particular circumstances from an independent tax professional.

The information herein (other than disclosure information relating to BofA Securities and its affiliates) was obtained from various sources and we do not guarantee its accuracy. This information may contain links to third-party websites. BofA Securities is not responsible for the content of any third-party website or any linked content contained in a third-party website. Content contained on such third-party websites is not part of this information and is not incorporated by reference. The inclusion of a link does not imply any endorsement by or any affiliation with BofA Securities. Access to any third-party website is at your own risk, and you should always review the terms and privacy policies at third-party websites before submitting any personal information to them. BofA Securities is not responsible for such terms and privacy policies and expressly disclaims any liability for them.

All opinions, projections and estimates constitute the judgment of the author as of the date of publication and are subject to change without notice. Prices also are subject to change without notice. BofA Securities is under no obligation to update this information and BofA Securities ability to publish information on the subject issuer(s) in the future is subject to applicable quiet periods. You should therefore assume that BofA Securities will not update any fact, circumstance or opinion contained herein.

Subject to the quiet period applicable under laws of the various jurisdictions in which we distribute research reports and other legal and BofA Securities policy-related restrictions on the publication of research reports, fundamental equity reports are produced on a regular basis as necessary to keep the investment recommendation current.

Certain outstanding reports or investment opinions relating to securities, financial instruments and/or issuers may no longer be current. Always refer to the most recent research report relating to an issuer prior to making an investment decision.

In some cases, an issuer may be classified as Restricted or may be Under Review or Extended Review. In each case, investors should consider any investment opinion relating to such issuer (or its security and/or financial instruments) to be suspended or withdrawn and should not rely on the analyses and investment opinion(s) pertaining to such issuer (or its securities and/or financial instruments) nor should the analyses or opinion(s) be considered a solicitation of any kind. Sales persons and financial advisors affiliated with BofAS or any of its affiliates may not solicit purchases of securities or financial instruments that are Restricted or Under Review and may only solicit securities under Extended Review in accordance with firm policies.

Neither BofA Securities nor any officer or employee of BofA Securities accepts any liability whatsoever for any direct, indirect or consequential damages or losses arising from any use of this information.