

RingCentral

Profitability initiatives continue to bear fruit

Reiterate Rating: BUY | PO: 65.00 USD | Price: 26.50 USD

Operational discipline worthy of recognition

We view 1Q results as further validation that the RNG margin expansion/FCF generation bull thesis has teeth. Key positive highlights from the quarter include 1) rev and profitability guidance raised, 2) constructive commentary on the sustainability of margin improvement, 3) management's expected timeline for hitting key FCF targets shifting forward, and 4) demand trends/win rates/ARPU holding steady. We flag that the midpoints of revenue and OpM guidance suggest Y/Y non-GAAP operating profit dollar growth of roughly 65%. RNG also highlighted new products like RingSense and RingCentral for Teams 2.0 which we expect to provide meaningful support to growth in the medium-term. Reiterate Buy.

1Q results and guide solid

RingCentral reported 1Q23 total revenue of \$533.7mn (+14.1% YoY) above our and consensus estimate of \$529.0mn and \$527.9mn respectively. Subscription revenue of \$508.3mn (+15.5% YoY) was also above our \$504.9mn and consensus \$504.1mn. Total ARR grew 14% YoY to \$2.16bn. Non-GAAP gross margin was 78.5% and 1Q23 operating margin of 17.2% was above our estimate of 16.5%. Management provided initial 2Q23 guidance for total revenue of \$535mn to \$537mn (consensus \$536.2mn), subscription revenue of \$511mn to \$513mn (consensus \$511.9mn) and non-GAAP EPS of \$0.74 to \$0.76 (consensus \$0.73). Management also slightly raised FY23 subscription and total revenue guidance at the mid to \$2.086bn to \$2.104bn (consensus \$2.09bn) and \$2.187bn to \$2.205bn (consensus \$2.19bn). FY23 non-GAAP operating margin guidance was also raised to at least 18.5% (from 18%), with RNG continuing to expect to exit 2023 at 20%+ non-GAAP OpMs.

Reiterate Buy and \$65 PO

Our PO of \$65 represents EV/Rev of 3.0x our CY24 estimates and implies an EV/Rev/Growth multiple of 0.2x. Our 3.0x multiple is a premium to the peer group at 2.3x (inline on EV/Rev/Growth) based on margin upside, positive FCF and market share gains. We maintain our Buy rating based on higher top line growth relative to peers, FCF generation potential, accelerating partnership revenue and a differentiated product offering.

Estimates (Dec) (US\$)	2021A	2022A	2023E	2024E	2025E
EPS	1.34	1.99	3.25	4.08	4.79
GAAP EPS	(4.02)	(9.23)	(1.74)	(0.23)	0.96
EPS Change (YoY)	36.7%	48.5%	63.3%	25.5%	17.4%
Consensus EPS (Bloomberg)			3.08	3.67	3.95
DPS	0	0	0	0	0
Valuation (Dec)					
P/E	19.8x	13.3x	8.2x	6.5x	5.5x
GAAP P/E	NM	NM	NM	NM	27.6x
Dividend Yield	0%	0%	0%	0%	0%
EV / EBITDA*	14.1x	8.3x	6.2x	4.9x	4.2x
Free Cash Flow Yield*	3.1%	4.1%	9.5%	13.5%	19.2%

* For full definitions of *iQmethod*SM measures, see page 8.

10 May 2023

Equity

Key Changes

(US\$)	Previous	Current
2023E Rev (m)	2,191.2	2,196.9
2024E Rev (m)	2,520.8	2,527.0
2025E Rev (m)	2,965.4	2,932.8
2023E EPS	3.21	3.25
2024E EPS	4.05	4.08
2025E EPS	4.83	4.79

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Stock Data

Price	26.50 USD
Price Objective	65.00 USD
Date Established	4-Jan-2023
Investment Opinion	C-1-9
52-Week Range	25.32 USD - 75.91 USD
Mkt Val (mn) / Shares Out (mn)	2,567 USD / 96.9
Average Daily Value (mn)	45.19 USD
BofA Ticker / Exchange	RNG / NYS
Bloomberg / Reuters	RNG US / RNG.N
ROE (2023E)	NA
Net Dbt to Eqty (Dec-2022A)	NA

ESGMeter™ Medium

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"](#).

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Refer to important disclosures on page 9 to 11. Analyst Certification on page 7. Price Objective Basis/Risk on page 7.

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iQprofileSM RingCentral

iQmethodSM – Bus Performance*

(US\$ Millions)	2021A	2022A	2023E	2024E	2025E
Return on Capital Employed	7.6%	12.7%	23.7%	26.2%	25.7%
Return on Equity	29.4%	688.2%	NM	NM	132.1%
Operating Margin	10.2%	12.4%	18.5%	21.4%	22.6%
Free Cash Flow	80	105	243	345	492

iQmethodSM – Quality of Earnings*

(US\$ Millions)	2021A	2022A	2023E	2024E	2025E
Cash Realization Ratio	1.2x	1.0x	1.1x	1.0x	1.2x
Asset Replacement Ratio	0.6x	0.4x	0.5x	0.4x	0.4x
Tax Rate	NM	NM	NM	NM	NM
Net Debt-to-Equity Ratio	216.0%	NM	NM	270.8%	45.3%
Interest Cover	NA	NA	NA	NA	NA

Income Statement Data (Dec)

(US\$ Millions)	2021A	2022A	2023E	2024E	2025E
Sales	1,595	1,988	2,197	2,527	2,933
% Change	34.7%	24.7%	10.5%	15.0%	16.1%
Gross Profit	1,241	1,555	1,730	2,006	2,336
% Change	36.9%	25.3%	11.3%	15.9%	16.5%
EBITDA	287	492	661	829	974
% Change	50.8%	71.3%	34.1%	25.5%	17.5%
Net Interest & Other Income	(1)	1	10	10	10
Net Income (Adjusted)	125	191	322	426	520
% Change	37.7%	52.8%	68.1%	32.5%	22.0%

Free Cash Flow Data (Dec)

(US\$ Millions)	2021A	2022A	2023E	2024E	2025E
Net Income from Cont Operations (GAAP)	(376)	(888)	(172)	(24)	104
Depreciation & Amortization	125	247	255	289	312
Change in Working Capital	52	12	1	(69)	(123)
Deferred Taxation Charge	NA	NA	NA	NA	NA
Other Adjustments, Net	351	821	285	251	308
Capital Expenditure	(73)	(86)	(126)	(101)	(110)
Free Cash Flow	80	105	243	345	492
% Change	NM	31.9%	131.8%	42.1%	42.4%

Balance Sheet Data (Dec)

(US\$ Millions)	2021A	2022A	2023E	2024E	2025E
Cash & Equivalents	267	270	431	776	1,268
Trade Receivables	233	311	403	500	583
Other Current Assets	151	215	386	564	691
Property, Plant & Equipment	167	185	208	168	98
Other Non-Current Assets	1,761	1,092	894	747	614
Total Assets	2,579	2,074	2,321	2,754	3,254
Short-Term Debt	0	0	0	0	0
Other Current Liabilities	526	653	668	701	665
Long-Term Debt	1,430	1,659	1,658	1,658	1,658
Other Non-Current Liabilities	84	46	70	70	70
Total Liabilities	2,041	2,357	2,396	2,429	2,393
Total Equity	538	(283)	(75)	326	861
Total Equity & Liabilities	2,579	2,074	2,321	2,754	3,254

* For full definitions of iQmethodSM measures, see page 8.

Company Sector

Server & Enterprise Software

Company Description

RingCentral offers a cloud-based solution for business communications that replaces legacy and expensive on-premise communications systems. It is delivered as an application that follows the user regardless of device (office phone, smartphone, desktop, tablet). Features include team collaboration, voice, text, fax, audio conferencing, and integration with document and customer relationship management systems.

Investment Rationale

RingCentral offers a cloud-based service that replaces the need to install business communication systems (dubbed PBXs) on-premise, offering advantages such as minimal investment and management ease. This architecture aligns well with hybrid work trends likely to persist post-COVID. The company's partnerships with legacy communications are a top factor in RingCentral's differentiation and should support the company's high growth profile and margin expansion for the foreseeable future.

Stock Data

Average Daily Volume 1,705,114

Quarterly Earnings Estimates

	2022	2023
Q1	0.39A	0.76A
Q2	0.45A	0.77E
Q3	0.55A	0.83E
Q4	0.60A	0.89E

Exhibit 1: Variance analysis

1Q23 revenue beat our estimate by roughly 1%

\$ in Thousands (except per share data)	BofA Estimates	1Q23 Actuals	Variance
Revenues			
Services	\$504,916	\$508,294	1%
Product	\$24,126	\$25,395	5%
Total revenues	\$529,042	\$533,689	0.9%
Total cost of revenues	\$110,375	\$114,526	4%
Gross profit	\$418,668	\$419,163	0%
Operating expenses			
Research and development	\$63,485	\$59,818	-6%
Sales and marketing	\$221,669	\$219,010	-1%
General and administrative	\$44,969	\$48,327	7%
Total operating expense	\$330,122	\$327,155	-1%
Income/(Loss) from operations	\$88,545	\$92,008	4%
Other income (expense), net	\$1,489	\$2,488	67%
Net income before taxes	\$90,034	\$94,496	5%
Corporate tax expense	\$20,258	\$21,262	5%
Proforma net income	\$69,777	\$73,234	5%
Proforma EPS	0.72	\$0.76	5%
GAAP Net Income	(\$55,719)	(\$54,399)	NA
GAAP EPS	\$ (0.58)	\$ (0.57)	NA
Diluted shares outstanding (proforma)	96,363	95,720	-1%
Growth Analysis Y-Y			
Services	14.8%	15.5%	5.2%
Product	-13.0%	-8.4%	NA
Total revenues	13.1%	14.1%	7.6%
Income/(Loss) from operations	82.0%	89.1%	8.7%
Proforma net income	85.9%	95.1%	11%
Proforma EPS	82.6%	92.6%	12%
Margin Analysis			
Gross margin	79.1%	78.5%	-1%
Research and development	12.0%	11.2%	-7%
Sales and marketing	41.9%	41.0%	-2%
General and administrative	8.5%	9.1%	7%
Operating margin	16.7%	17.2%	3%
Pre-tax margin	17.0%	17.7%	4%
Tax rate - pro forma	22.5%	22.5%	0%
Net Margin	13.2%	13.7%	4%
Balance Sheet & Cash Flow Analysis			
Total cash and equiv.	\$180,322	\$274,804	52%
Cash Flow from Operations	(64,975)	108,533	NA
Free Cash Flow	(\$89,662)	\$87,214	NA

Source: BofA Global Research, company filings

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Exhibit 2: Estimate changes

We are increasing our 2023 revenue estimate to \$2.197bn

	2Q23E				2023E				2024E			
	Previous Estimate	Previous Y/Y Growth	New Estimate	New Y/Y Growth	Previous Estimate	Previous Y/Y Growth	New Estimate	New Y/Y Growth	Previous Estimate	Previous Y/Y Growth	New Estimate	New Y/Y Growth
Services	\$507,432	9.6%	\$511,829	10.6%	\$2,094,700	11.0%	\$2,099,122	11.2%	\$2,425,817	15.8%	\$2,430,743	15.8%
Product	\$23,912	0.0%	\$23,912	0.0%	\$96,482	-4.1%	\$97,751	-2.8%	\$95,022	-1.5%	\$96,228	-1.6%
	\$531,34		\$535,74		\$2,191,18		\$2,196,87		\$2,520,83		\$2,526,97	
Total revenues	4	9.1%	1	10.0%	2	10.2%	2	10.5%	9	15.0%	0	15.0%
Proforma net income	\$76,824	79.7%	\$74,750	74.8%	\$323,563	69.0%	\$321,818	68.1%	\$419,787	29.7%	\$426,423	32.5%
Pro forma EPS	0.78	74.9%	0.77	73.0%	3.26	63.8%	3.25	63.6%	4.05	24.2%	4.08	25.3%

Source: BofA Global Research

BofA GLOBAL RESEARCH

Exhibit 3: Income statement

RNG reported 1Q23 revenues of \$533.7mn

\$ Thousands, except EPS	YEAR FY21A	YEAR FY22A	Mar 1Q23A	Jun 2Q23E	Sep 3Q23E	Dec 4Q23E	YEAR FY23E	YEAR FY24E	YEAR FY25E
Revenues									
Services	1,482,080	1,887,756	508,294	511,829	526,720	552,279	2,099,122	2,430,743	2,832,492
Product/pro-serv/other	112,674	100,574	25,395	23,912	25,545	22,899	97,751	96,228	100,329
Total revenues	1,594,754	1,988,330	533,689	535,741	552,265	575,178	2,196,872	2,526,970	2,932,821
Cost of revenues		25%					10.5%	15%	16%
Service	260,562	331,748	92,429	93,072	95,780	100,427	381,708	437,534	509,848
Product/other	93,679	102,003	22,097	20,807	22,227	19,925	85,056	83,718	87,287
Total cost of revenues	354,241	433,751	114,526	113,878	118,007	120,352	466,764	521,252	597,135
Gross profit (total)	1,240,513	1,554,579	419,163	421,862	434,258	454,826	1,730,109	2,005,718	2,335,686
Operating expenses									
Research and development	221,885	246,987	59,818	61,610	63,510	66,145	251,084	276,207	314,729
Sales and marketing	705,021	888,028	219,010	219,654	220,906	227,195	886,765	981,880	1,124,797
General and administrative	151,491	173,677	48,327	46,609	45,286	46,589	186,812	207,174	234,499
Total operating expense	1,078,397	1,308,692	327,155	327,873	329,702	339,930	1,324,660	1,465,260	1,674,025
Income/(Loss) from operations	162,116	245,887	92,008	93,989	104,556	114,896	405,448	540,458	661,661
EBITDA	287,408	492,448	149,526	156,608	170,042	184,376	660,551	829,050	973,813
Other income (expense), net	(513)	1,115	2,488	2,463	2,438	2,414	9,804	9,765	9,756
Net income before taxes	161,603	247,002	94,496	96,452	106,994	117,310	415,252	550,223	671,417
Corporate tax expense	36,361	55,586	21,262	21,702	24,074	26,395	93,433	123,800	151,069
Proforma net income	125,242	191,416	73,234	74,750	82,920	90,914	321,818	426,423	520,348
Proforma EPS	1.34	1.99	0.76	0.77	0.83	0.89	3.25	4.08	4.79
GAAP Net Income	(376,250)	(879,166)	(54,399)	(48,806)	(38,239)	(28,955)	(170,399)	(24,252)	103,054
GAAP EPS	(4.02)	(9.23)	(0.57)	(0.51)	(0.39)	(0.29)	(1.74)	(0.23)	0.96
Basic shares outstanding	93,500	95,236	95,720	95,920	98,420	100,920	97,745	103,420	107,420
Weighted average shares diluted	93,500	96,219	96,883	97,083	99,583	102,083	98,908	104,583	108,583

Source: BofA Global Research, company filings

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Exhibit 4: Balance sheet

RNG ended 1Q23 with \$274.8mn in cash

\$ Thousands	YEAR FY21A	YEAR FY22A	Mar 1Q23A	Jun 2Q23E	Sep 3Q23E	Dec 4Q23E	YEAR FY23E	YEAR FY24E	YEAR FY25E
Current Assets									
Total cash and equiv.	267,162	269,984	274,804	299,595	374,953	430,712	430,712	776,187	1,268,084
Accounts receivable, net	232,842	311,318	315,335	300,015	358,972	402,625	402,625	499,704	582,559
Inventory	-	-	-	-	-	-	-	-	-
Deferred sales commission costs	102,572	158,865	181,358	321,444	303,746	333,603	333,603	506,456	629,793
Prepaid expenses and other current assets	48,165	55,849	79,533	49,556	50,808	52,341	52,341	57,398	61,405
Total Current Assets	650,741	796,016	851,030	970,611	1,088,478	1,219,281	1,219,281	1,839,745	2,541,841
 Gross PP&E	 129,254	 161,967	 170,690	 192,091	 214,152	 237,128	 237,128	 287,668	 346,324
Accumulated depreciation	(337,541)	(584,102)	(641,620)	(704,239)	(769,725)	(839,205)	(839,205)	(1,127,797)	(1,439,949)
PP&E, net	166,910	185,400	187,279	196,317	203,159	207,943	207,943	167,608	97,910
Operating lease right of use asset	47,294	35,433	34,138	34,138	34,138	34,138	34,138	34,138	34,138
Long-term investments	-	4,559	-	-	-	-	-	-	-
Deferred sales commission costs, noncurrent	723,448	438,579	390,459	390,459	390,459	390,459	390,459	390,459	390,459
Acquired intangibles, net	772,096	528,051	494,931	457,284	419,638	380,984	380,984	233,928	100,996
Other assets	218,550	85,624	88,583	88,583	88,583	88,583	88,583	88,583	88,583
	2,579,03								
Total Assets	9	2,073,662	2,046,420	2,137,392	2,224,455	2,321,388	2,321,388	2,754,462	3,253,927
Current Liabilities									
Accounts Payable	70,022	62,721	56,353	53,574	55,226	57,518	57,518	54,022	47,234
Accrued liabilities	279,798	380,113	314,902	348,232	358,972	368,114	368,114	371,401	314,897
Capital Lease ST	-	-	-	-	-	-	-	-	-
Short-Term Debt	-	-	-	-	-	-	-	-	-
Deferred Revenue	176,450	209,725	219,933	224,865	232,980	242,589	242,589	275,743	303,067
Total Current liabilities	526,270	652,559	591,188	626,670	647,178	668,221	668,221	701,166	665,198
 Long-Term Debt	 1,398,48	 9	 1,639,530	 1,639,530	 1,639,530	 1,639,530	 1,639,530	 1,639,530	 1,639,530
Other Long Term Liability	84,052	45,848	69,817	69,817	69,817	69,817	69,817	69,817	69,817
Capital Lease LT	31,812	20,182	18,391	18,391	18,391	18,391	18,391	18,391	18,391
	2,040,62								
Total Liabilities	3	2,357,000	2,318,926	2,354,408	2,374,916	2,395,959	2,395,959	2,428,904	2,392,936
Stockholders' Equity									
Cumulative Trans Adjustment									
Series A, B, C,D and E convertible preferred stock		199,449	199,449	199,449	199,449	199,449	199,449	199,449	199,449
Exchangeable share obligation (warrants)	1,286,97								
Common stock and Additional paid-in-capital	2	1,051,109	1,123,361	1,227,656	1,332,451	1,437,296	1,437,296	1,861,676	2,294,056
Accumulated Deficit	(748,556)	(1,533,896)	(1,595,316)	(1,644,122)	(1,682,361)	(1,711,316)	(1,711,316)	(1,735,568)	(1,632,514)
	2,579,03								
Total liabilities and shareholder equity	9	2,073,662	2,046,420	2,137,392	2,224,455	2,321,388	2,321,388	2,754,462	3,253,927

Source: BofA Global Research, company filings

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Exhibit 5: Cash flow statement

RNG generated \$108.5mn in CFO during 1Q23

\$ Thousands, except EPS	YEAR FY21A	YEAR FY22A	Mar 1Q23A	Jun 2Q23E	Sep 3Q23E	Dec 4Q23E	YEAR FY23E	YEAR FY24E	YEAR FY25E
Cash Flows from Operations:									
Net Income	(376,250)	(879,166)	(54,399)	(48,806)	(38,239)	(28,955)	(170,399)	(24,252)	103,054
Depreciation and Amortization	125,292	246,561	57,518	62,619	65,487	69,480	255,103	288,592	312,152
Prior Period Adj to Retained Earnings	-	-	-	-	-	-	-	-	-
Gain/(Loss) on non-cash items	33,128	203,483	1,646	-	-	-	1,646	-	-
Amortization of deferred sales commission costs	74,165	115,184	32,211	-	-	-	32,211	-	-
Amortization of debt discount and issuance costs	64,063	4,468	1,119	-	-	-	1,119	-	-
Reduction of operating lease right of use	-	19,907	5,053	-	-	-	5,053	-	-
Provision for bad debt	-	9,367	2,732	-	-	-	2,732	-	-
Stock based compensation	357,965	386,009	98,191	104,295	104,795	104,845	412,126	424,380	432,380
Other	(126,212)	309,678	(175)	-	-	-	-	-	-
Changes in Working Capital Accounts	(126,212)	224,186	(35,363)	(59,307)	(22,003)	(54,001)	(170,673)	(242,044)	(246,167)
Changes in Accounts Receivable	(64,940)	(87,843)	(6,749)	15,320	(58,957)	(43,653)	(94,039)	(97,079)	(82,855)
Changes in deferred sales commission costs	(178,358)	235,869	(19,403)	(140,086)	17,699	(29,858)	(171,648)	(172,853)	(123,337)
Changes in Inventory	-	-	-	-	-	-	-	-	-
Changes in Prepaids	9,111	3,812	(10,289)	29,977	(1,252)	(1,533)	16,903	(5,057)	(4,006)
Changes in Other Assets	-	-	-	-	-	-	-	-	-
Changes in Accounts Payable	17,852	(6,166)	(18,936)	(2,779)	1,652	2,291	(17,771)	(3,496)	(6,788)
Changes in Deferred Revenue	34,227	33,275	10,208	4,932	8,115	9,609	32,864	33,154	27,324
Changes in Liabilities	55,896	68,605	9,806	33,330	10,740	9,142	63,018	3,287	(56,505)
Total Cash Flow from Operating Activities	152,151	191,305	108,533	58,801	110,040	91,370	368,743	446,676	601,418
EBITDA	287,408	449,124	149,526	156,608	170,042	184,376	660,551	829,050	973,813
Investing Activities:									
(Purchase)/ sale of Fixed Assets	(28,959)	(32,713)	(8,723)	(21,401)	(22,061)	(22,976)	(75,161)	(50,539)	(58,656)
Capitalized software	(43,692)	(53,730)	(12,596)	(12,609)	(12,621)	(12,634)	(50,460)	(50,662)	(50,865)
Purchases of available-for-sale securities /LT intangibles	(11,880)	(3,990)	-	-	-	-	-	-	-
Intangible assets/M&A/proceeds from mkt sec	(312,298)	3,223	-	-	-	-	-	-	-
Total Cash Flow from Investing Activities	(396,829)	(87,210)	(21,319)	(34,010)	(34,682)	(35,610)	(125,621)	(101,201)	(109,521)
Financing Activities:									
Increase/(Decrease) in loan principal	(138,343)	-	-	-	-	-	-	-	-
Proceeds for issuance of stock in connection with stock plan	-	15,855	95	-	-	-	95	-	-
Payments for taxes related to net share settlement of equity awards	-	(7,598)	(1,736)	-	-	-	(1,736)	-	-
Payment for contingent consideration for business acquisition	-	-	-	-	-	-	-	-	-
Issuance/(Buy Back) of stock	11,292	(99,793)	(74,501)	-	-	-	(74,501)	-	-
Other/fin oblig/contingent consideration	-	(6,682)	(6,584)	-	-	-	-	-	-
Changes in Financing Activities	(127,051)	(98,218)	(82,726)	-	-	-	(76,142)	-	-
Currency Adjustments	(962)	2,822	332	-	-	-	332	-	-
Change in Cash and Cash Equivalents	(372,691)	8,699	4,820	24,791	75,357	55,760	167,312	345,475	491,897
Cash Beginning Balance	639,853	267,162	269,984	274,804	299,595	374,953	275,861	443,173	788,648
Cash Ending Balance	267,162	275,861	274,804	299,595	374,953	430,712	443,173	788,648	1,280,545

Source: BofA Global Research, company filings

BofA GLOBAL RESEARCH



Price objective basis & risk

RingCentral (RNG)

Our \$65 PO is based on 3.0x CY24e EV/revs. Our target multiple is a premium to the communication peer group at 2.3x but in line on EV/Rev/Growth. We believe that a premium is also supported by RNG's margin upside, positive FCF, and market share gains. The company has the largest scale among cloud-based pure-play vendors and the potential for market disruption.

Downside risks to our PO are 1) benefits of the Avaya and other partnerships taking longer than expected, 2) changes in strategic direction, 3) failure to scale upmarket, 4) higher-than-anticipated customer support and acquisition costs as the company scales up market, 5) macro economy negatively affecting the company's SMB-centric customer base, and 6) competition including Microsoft and Zoom Phone.

Analyst Certification

I, Michael J. Funk, 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 - Enterprise Software Coverage Cluster

Investment rating	Company	BofA Ticker	Bloomberg symbol	Analyst
BUY				
	8x8	EGHT	EGHT US	Michael J. Funk
	Alarm.com	ALRM	ALRM US	Michael J. Funk
	Amplitude, Inc.	AMPL	AMPL US	Koji Ikeda, CFA
	BILL	BILL	BILL US	Brad Sills
	CCC Intelligent Solutions	CCCS	CCCS US	Michael J. Funk
	Datadog Inc	DDOG	DDOG US	Koji Ikeda, CFA
	Dropbox	DBX	DBX US	Michael J. Funk
	Dynatrace	DT	DT US	Koji Ikeda, CFA
	Elastic NV	ESTC	ESTC US	Koji Ikeda, CFA
	Expensify	EXFY	EXFY US	Koji Ikeda, CFA
	GitLab Inc.	GTLB	GTLB US	Koji Ikeda, CFA
	Global-e Online Ltd.	GLBE	GLBE US	Koji Ikeda, CFA
	HashiCorp	HCP	HCP US	Brad Sills
	HubSpot	HUBS	HUBS US	Brad Sills
	Informatica Inc.	INFA	INFA US	Koji Ikeda, CFA
	Intapp Inc.	INTA	INTA US	Koji Ikeda, CFA
	Intuit	INTU	INTU US	Brad Sills
	JFrog Ltd	FROG	FROG US	Koji Ikeda, CFA
	MeridianLink, Inc.	MLNK	MLNK US	Koji Ikeda, CFA
	Microsoft Corporation	MSFT	MSFT US	Brad Sills
	nCino, Inc.	NCNO	NCNO US	Brad Sills
	NICE Ltd.	NICE	NICE US	Michael J. Funk
	NICE Ltd.	NCSYF	NICE IT	Michael J. Funk
	PowerSchool Holdings, Inc.	PWSC	PWSC US	Koji Ikeda, CFA
	RingCentral	RNG	RNG US	Michael J. Funk
	Salesforce.com	CRM	CRM US	Brad Sills
	ServiceNow	NOW	NOW US	Brad Sills
	Splunk	SPLK	SPLK US	Brad Sills
	UiPath	PATH	PATH US	Brad Sills
	Weave	WEAV	WEAV US	Michael J. Funk
	Workday Inc.	WDAY	WDAY US	Brad Sills
	Zeta Global	ZETA	ZETA US	Koji Ikeda, CFA
NEUTRAL				
	Adobe	ADBE	ADBE US	Brad Sills
	Alteryx, Inc	AYX	AYX US	Koji Ikeda, CFA
	Autodesk	ADSK	ADSK US	Michael J. Funk
	Bentley Systems	BSY	BSY US	Michael J. Funk
	BigCommerce Holdings, Inc.	BIGC	BIGC US	Koji Ikeda, CFA



US - Enterprise Software Coverage Cluster

Investment rating	Company	BofA Ticker	Bloomberg symbol	Analyst
	Confluent	CFLT	CFLT US	Brad Sills
	Copperleaf Technologies, Inc.	YCPLF	CPLF CN	Koji Ikeda, CFA
	Coveo	YCVO	CVO CN	Koji Ikeda, CFA
	DocuSign	DOCU	DOCU US	Brad Sills
	Freshworks, Inc.	FRSH	FRSH US	Adam Bergere
	Jamf	JAMF	JAMF US	Koji Ikeda, CFA
	Lightspeed Commerce Inc.	LSPD	LSPD US	Koji Ikeda, CFA
	Lightspeed Commerce Inc.	YLSPD	LSPD CN	Koji Ikeda, CFA
	LiveVox Holdings	LVOX	LVOX US	Michael J. Funk
	Oracle Corporation	ORCL	ORCL US	Brad Sills
	Shopify, Inc.	SHOP	SHOP US	Brad Sills
	Unity	U	U US	Michael J. Funk
	Veeva Systems, Inc.	VEEV	VEEV US	Brad Sills
	Vertex, Inc.	VERX	VERX US	Brad Sills
	Zoom Video Communications	ZM	ZM US	Michael J. Funk
	ZoomInfo	ZI	ZI US	Koji Ikeda, CFA

UNDERPERFORM

	AvidXchange, Inc.	AVDX	AVDX US	Brad Sills
	Blackbaud, Inc.	BLKB	BLKB US	Koji Ikeda, CFA
	BlackLine, Inc.	BL	BL US	Koji Ikeda, CFA
	C3.ai	AI	AI US	Brad Sills
	CS Disco, Inc.	LAW	LAW US	Koji Ikeda, CFA
	Enfusion, Inc.	ENFN	ENFN US	Koji Ikeda, CFA
	Everbridge	EVBG	EVBG US	Koji Ikeda, CFA
	Five9	FIVN	FIVN US	Michael J. Funk
	Guidewire Software, Inc.	GWRE	GWRE US	Michael J. Funk
	Kaltura, Inc.	KLTR	KLTR US	Michael J. Funk
	Twilio	TWLO	TWLO US	Michael J. Funk
	Veritone, Inc.	VERI	VERI US	Koji Ikeda, CFA

RSTR

	VMware	VMW	VMW US	Brad Sills
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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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Important Disclosures

RingCentral (RNG) Price Chart



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

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Equity Investment Rating Distribution: Technology Group (as of 31 Mar 2023)

Coverage Universe	Count	Percent	Inv. Banking Relationships ^{R1}	Count	Percent
Buy	229	53.88%	Buy	107	46.72%
Hold	105	24.71%	Hold	50	47.62%
Sell	91	21.41%	Sell	29	31.87%

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

Coverage Universe	Count	Percent	Inv. Banking Relationships ^{R1}	Count	Percent
Buy	1869	53.01%	Buy	1030	55.11%
Hold	827	23.45%	Hold	476	57.56%
Sell	830	23.54%	Sell	389	46.87%

^{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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