

Dropbox

Bull thesis tipping; Downgrade to Underperform from Buy

Rating Change: UNDERPERFORM | PO: 28.00 USD | Price: 32.54 USD

Double Downgrading DBX to Underperform from Buy

The DBX bull thesis has played out. We [initiated on DBX in September 2022](#) (see report) based on the thesis of strong FCF generation, P/FCF as an empirical factor for outperformance during Fed tightening, upside to consensus, and potential to return material capital to shareholders through buybacks. Yesterday's results, guidance, and commentary suggest a negative inflection of DBX's risk/reward profile. Operational headwinds including increased churn, top of funnel weakness, slower share repurchase than projected, and lower FCF guidance create a negative setup for shares in 2024. Our preference is also shifting to longer duration and self-help software where DBX's FCF generation and steady growth present less opportunity for multiple expansion.

Results disappointing, rev and FCF guide below Street

DBX ended 4Q23 with 18.12mn paying users – down 50,000 sequentially (as compared to Q/Q net paying user adds of 130K in the prior quarter). Management commentary suggests sequential paying user growth could fluctuate between pos/neg in 2024, and 1Q24 rev guidance implies Q/Q pressure. The company introduced 2024 rev guidance of \$2,535mn-\$2,550mn (below consensus \$2,577mn) and FCF guidance of \$930mn at the mid (consensus \$961mn). We have lowered our 2024 revenue and FCF 2% and 5%.

Mounting headwinds create challenging '24 setup

Dropbox faced headwinds during the quarter, with ARR and total paying users declining slightly Q/Q. Headwinds cited include macro driven increases in price sensitivity, tech sector RIFs leading to seat rationalization, and an intentional paring back of the Family plan, among others. While New AI products such as Dash are compelling, they will take time to influence DBX's growth trajectory.

Lowering PO to \$28, implying 10.5x P/CY24E FCF

We lower our PO to \$28 (from \$34), still based on a discounted cash flow analysis (assumptions unchanged: WACC 9% and terminal growth rate 2%) and implies a 2024 P/FCF multiple of 10.5x (vs 12.2x prior), compared to the less than 10% software growers peer group average of 18.3x. We believe the 10.5x multiple is justified given DBX's intensifying headwinds and limited long-term growth levers.

Estimates (Dec) (US\$)	2022A	2023A	2024E	2025E	2026E
EPS	1.58	1.98	2.00	2.26	2.48
GAAP EPS	1.52	1.31	0.80	0.95	1.02
EPS Change (YoY)	2.6%	25.3%	1.0%	13.0%	9.7%
Consensus EPS (Bloomberg)			2.07	2.28	2.50
DPS	0.04	0.03	0.01	0	0
Valuation (Dec)					
P/E	20.6x	16.4x	16.3x	14.4x	13.1x
GAAP P/E	21.4x	24.8x	40.7x	34.3x	31.9x
Dividend Yield	0.1%	0.1%	0%	0%	0%
EV / EBITDA*	13.8x	12.2x	12.1x	11.7x	11.2x
Free Cash Flow Yield*	6.8%	6.8%	8.2%	8.9%	8.7%

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

16 February 2024

Equity

Key Changes

(US\$)	Previous	Current
Inv. Opinion	B-1-9	B-3-9
Inv. Rating	BUY	UNDERPERFORM
Price Obj.	34.00	28.00
2024E Rev (m)	2,579.9	2,535.5
2025E Rev (m)	2,680.1	2,568.6
2026E Rev (m)	NA	2,633.6
2025E EPS	2.38	2.26
2026E EPS	NA	2.48
2024E DPS	0.02	0.01

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Stock Data

Price	32.54 USD
Price Objective	28.00 USD
Date Established	16-Feb-2024
Investment Opinion	B-3-9
52-Week Range	18.71 USD - 33.43 USD
Mkt Val (mn) / Shares Out (mn)	11,191 USD / 343.9
Free Float	95.6%
Average Daily Value (mn)	93.33 USD
BofA Ticker / Exchange	DBX / NAS
Bloomberg / Reuters	DBX US / DBX.OQ
ROE (2024E)	NA
Net Dbt to Eqty (Dec-2023A)	NA

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".

FCF: Free cash flow

ARR = Annual recurring revenue

RIF = reduction in force

FSS = file sync and share

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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 Dropbox

iQmethodSM – Bus Performance*

(US\$ Millions)	2022A	2023A	2024E	2025E	2026E
Return on Capital Employed	34.1%	37.0%	33.8%	38.4%	43.2%
Return on Equity	NM	NM	NM	354.6%	180.3%
Operating Margin	30.9%	32.8%	32.5%	33.7%	34.4%
Free Cash Flow	764	759	920	996	977

iQmethodSM – Quality of Earnings*

(US\$ Millions)	2022A	2023A	2024E	2025E	2026E
Cash Realization Ratio	1.4x	1.1x	1.4x	1.4x	1.3x
Asset Replacement Ratio	0.2x	0.1x	0.1x	0.1x	0.1x
Tax Rate	NM	18.2%	23.0%	23.0%	23.0%
Net Debt-to-Equity Ratio	NM	NM	NM	-201.0%	-182.2%
Interest Cover	NA	NA	35.8x	NA	NA

Income Statement Data (Dec)

(US\$ Millions)	2022A	2023A	2024E	2025E	2026E
Sales	2,325	2,502	2,536	2,569	2,634
% Change	7.7%	7.6%	1.4%	1.3%	2.5%
Gross Profit	1,914	2,064	2,093	2,126	NA
% Change	9.7%	7.8%	1.4%	1.6%	NA
EBITDA	876	990	1,005	1,039	1,079
% Change	9.7%	13.0%	1.5%	3.4%	3.8%
Net Interest & Other Income	6	16	(23)	13	16
Net Income (Adjusted)	574	685	679	747	788
% Change	-5.8%	19.4%	-0.9%	10.0%	5.5%

Free Cash Flow Data (Dec)

(US\$ Millions)	2022A	2023A	2024E	2025E	2026E
Net Income from Cont Operations (GAAP)	553	454	271	314	324
Depreciation & Amortization	157	170	182	174	174
Change in Working Capital	(57)	(147)	59	65	3
Deferred Taxation Charge	NA	NA	NA	NA	NA
Other Adjustments, Net	144	307	432	465	497
Capital Expenditure	(34)	(24)	(25)	(22)	(20)
Free Cash Flow	764	759	920	996	977
% Change	7.9%	-0.5%	21.2%	8.3%	-2.0%
Share / Issue Repurchase	(914)	(673)	(456)	(456)	(656)
Cost of Dividends Paid	(15)	(10)	(5)	0	0
Change in Debt	(128)	(127)	(91)	(85)	(85)

Balance Sheet Data (Dec)

(US\$ Millions)	2022A	2023A	2024E	2025E	2026E
Cash & Equivalents	233	615	974	1,393	1,630
Trade Receivables	54	69	72	74	76
Other Current Assets	1,203	833	842	837	841
Property, Plant & Equipment	308	309	242	175	107
Other Non-Current Assets	1,312	1,158	1,148	1,148	1,148
Total Assets	3,110	2,984	3,278	3,627	3,801
Short-Term Debt	0	0	0	0	0
Other Current Liabilities	1,197	1,202	1,313	2,070	2,078
Long-Term Debt	1,374	1,378	1,378	682	682
Other Non-Current Liabilities	849	570	520	521	521
Total Liabilities	3,420	3,149	3,211	3,272	3,281
Total Equity	(309)	(166)	67	354	520
Total Equity & Liabilities	3,110	2,984	3,278	3,626	3,801

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

Company Sector

Server & Enterprise Software

Company Description

Dropbox is a leading global file sync and share (FSS) platform that helps transform the way people and teams work together. Dropbox provides a wide variety of services ranging from team collaboration and content management to eSignature and content backup. The company's customers include individuals, families, teams and organizations of all sizes. Dropbox has 700M+ registered users, 17M+ of which are paying users.

Investment Rationale

We rate Dropbox Underperform. Mounting operational headwinds including increased churn, top of funnel weakness, slower share repurchase and pressure on FCF skew DBX's risk/reward profile negatively, in our view.

Stock Data

Average Daily Volume 2,928,165

Quarterly Earnings Estimates

	2023	2024
Q1	0.42A	0.47E
Q2	0.51A	0.50E
Q3	0.56A	0.51E
Q4	0.50A	0.52E

Results disappointing, rev and FCF guide below Street

DBX reported results above Street expectations with total rev of \$635.0mn (+6.0% y/y) vs our \$631.5mn and consensus of \$631.1mn. DBX ended 4Q23 with 18.12mn paying users (-50K Q/Q), as compared to Q/Q net paying user adds of 130K in the prior quarter. DBX also reported average revenue per paying user (ARPU) of \$138.83, up 3.2% Y/Y and up 0.1% Q/Q, slightly above our estimate of \$137.74 and in line with consensus of \$138.71. Total ARR ended at \$2.523bn (+0.4% Y/Y, -0.1% Q/Q). Non-GAAP OpM of 32.2% was in line with our 32.4%. Management introduced 2024 rev guidance of \$2,535mn-\$2,550mn (below consensus \$2,577mn) and FCF guidance of \$930mn at the mid (consensus \$961mn).

Exhibit 1: Variance Analysis

DBX's 4Q23 revenues were slightly above our estimate

\$M (except per share data)	BofA Estimates	4Q23 Actuals	Variance
Revenue	\$631.5	\$635	1%
Gross profit	\$515	\$522	2%
R&D	\$163	\$159	-2%
S&M	\$103	\$111	8%
G&A	\$44	\$48	8%
Total opex (non-GAAP)	\$310	\$318	2%
Non-GAAP operating income	\$205	\$205	0%
Interest expense & other, net	\$5	\$5	-11%
Income (loss) before taxes	\$210	\$210	0%
Income taxes	(\$44)	(\$39)	-13%
Non-GAAP net income (loss)	\$166	\$171	3%
Non-GAAP earnings per share (basic)	\$0.49	\$0.51	4%
Non-GAAP earnings per share (diluted)	\$0.48	\$0.50	4%
Basic weighted avg shares outstanding	340	338	-1%
Diluted weighted avg shares outstanding	347	344	-1%
Margin Analysis			
Gross margin	81.5%	82.3%	0.8%
Research & development	25.8%	25.0%	-0.8%
Sales & marketing	16.3%	17.5%	1.2%
General & administration	7.0%	7.5%	0.5%
Operating margin	32.4%	32.2%	-0.2%
Net margin	26.2%	26.9%	0.7%
Balance sheet & cash flow data			
Cash & equivalents	\$1,379	\$1,356	-1.7%
Deferred revenue	\$726	\$725	-0.2%
Billings	\$623	\$625	0.4%
Cash flow from operations	\$228	\$200	-12.1%
Free cash flow	\$212	\$190	-10.3%

Source: BofA Global Research, company filings

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Exhibit 2: We are lowering our 2024 revenue and FCF estimates

Summary of estimate changes

	1Q24E				2024E				2025E			
	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
Revenue	\$628	2.8%	\$628	2.7%	\$2,580	3.3%	\$2,536	1.4%	\$2,680	3.9%	\$2,569	1.3%
Operating income	\$209	19.5%	\$200	14.4%	\$850	3.6%	\$823	0.4%	\$901	6.0%	\$865	5.1%
Operating margin	32.9%		32.9%		32.9%		32.5%		33.6%		33.7%	
FCF	\$239	73.2%	\$204	48.0%	\$963	23.3%	\$920	21.2%	\$1,048	8.9%	\$996	8.3%
Diluted EPS	\$0.48	13.6%	\$0.47	12.2%	\$2.00	2.0%	\$2.00	0.8%	\$2.38	18.8%	\$2.26	13.2%

Source: BofA Global Research estimates

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Exhibit 3: We expect 2024 revenues of \$2.536bn

DBX income statement

	Year 2021A	Year 2022A	Year 2023A	Mar 1Q24E	Jun 2Q24E	Sept 3Q24E	Dec 4Q24E	Year 2024E	Year 2025E	Year 2026E
Revenue	2,157.9	2,324.9	2,501.6	627.8	632.9	638.2	636.7	2,535.5	2,568.6	2,633.6
Y/Y rev growth	13%	7.7%	7.6%	3%	2%	1%	0%	1.4%	1.3%	2.5%
Q/Q rev growth				-1%	1%	1%	0%			
Cost of revenue	413.3	411.2	437.7	110.4	108.9	110.5	112.6	442.4	443.0	449.0
% Revs	19.2%	17.7%	17.5%	17.6%	17.2%	17.3%	17.7%	17.4%	17.2%	17.0%
Gross profit	1,744.6	1,913.7	2,063.9	517.4	524.0	527.7	524.1	2,093.2	2,125.6	2,184.7
Gross margin	80.8%	82.3%	82.5%	82.4%	82.8%	82.7%	82.3%	82.6%	82.8%	83.0%
R&D	542.9	651.4	648.9	163.2	160.1	163.4	161.7	648.4	644.0	647.1
% Revs	25.2%	28.0%	25.9%	26.0%	25.3%	25.6%	25.4%	25.6%	25.1%	24.6%
S&M	383.2	374.7	415.4	108.0	109.5	111.7	108.2	437.4	436.7	447.7
% Revs	17.8%	16.1%	16.6%	17.2%	17.3%	17.5%	17.0%	17.3%	17.0%	17.0%
G&A	171.5	168.6	179.7	46.5	46.2	46.0	45.8	184.4	179.8	184.4
% Revs	7.9%	7.3%	7.2%	7.4%	7.3%	7.2%	7.2%	7.3%	7.0%	7.0%
Total opex (non-GAAP)	1,097.6	1,194.7	1,244.0	317.7	315.8	321.0	315.8	1,270.3	1,260.5	1,279.2
Non-GAAP operating income	647.0	719.0	819.9	199.7	208.2	206.7	208.3	822.9	865.1	905.5
% Op. Margin	30.0%	30.9%	32.8%	31.8%	32.9%	32.4%	32.7%	32.5%	33.7%	34.4%
Interest expense & other, net	11.3	6.4	15.7	(6.3)	(4.6)	(4.5)	(7.6)	(23.0)	12.6	15.6
Income (loss) before taxes	658.3	725.4	835.6	193.4	203.6	202.2	200.7	799.9	877.7	921.1
Income taxes	(49.0)	(151.5)	(150.6)	(32.1)	(33.2)	(29.7)	(26.4)	(121.4)	(131.1)	(133.3)
Tax rate	7.4%	20.9%	18.0%	16.6%	16.3%	14.7%	13.2%	15.2%	14.9%	14.5%
Non-GAAP net income (loss)	609.3	573.9	685.0	161.4	170.4	172.4	174.3	678.5	746.6	787.7
% Y/Y	56%	-6%	19%	10%	-2%	-11%	2%	-1%	10%	6%
Non-GAAP earnings per share (basic)	\$1.57	\$1.59	\$2.01	\$0.48	\$0.51	\$0.52	\$0.53	\$2.04	\$2.31	\$2.53
Non-GAAP earnings per share (diluted)	\$1.54	\$1.58	\$1.98	\$0.47	\$0.50	\$0.51	\$0.52	\$2.00	\$2.26	\$2.48
Basic weighted avg shares outstanding	388	361	341	337	334	332	330	333	324	312
Diluted weighted avg shares outstanding	396	363	346	343	341	338	336	340	330	318

Source: BofA Global Research

BofA GLOBAL RESEARCH



Exhibit 4: DBX ended 2023 with \$1.35bn in cash and equivalents

DBX balance sheet

	Year 2021A	Year 2022A	Year 2023A	Mar 1Q24E	Jun 2Q24E	Sept 3Q24E	Dec 4Q24E	Year 2024E	Year 2025E	Year 2026E
Current assets										
Cash and cash equivalents	533	233	615	683	787	889	974	974	1,393	1,630
Short term investments	1,185	1,111	741	741	741	741	741	741	741	741
Trade and other receivables, net	50	54	69	69	68	71	72	72	74	76
Prepaid expenses and other current assets	82	93	92	89	88	93	101	101	96	100
Total current assets	1,850	1,490	1,517	1,582	1,685	1,794	1,888	1,888	2,304	2,547
Property & equipment, net	322	308	309	288	270	256	242	242	175	107
Intangible assets, net	54	88	58	58	58	58	58	58	58	58
Goodwill	357	403	402	402	402	402	402	402	402	402
Operating lease ROU asset	414	261	184	184	184	184	184	184	184	184
Other assets and deferred tax assets	95	560	514	509	504	504	504	504	504	504
Total assets	3,091	3,110	2,984	3,022	3,103	3,198	3,278	3,278	3,627	3,801
Current liabilities										
Accounts payable	26	39	39	32	32	32	32	32	32	32
Accrued and other current liabilities	141	140	155	197	196	199	196	196	207	205
Accrued compensation and benefits	139	132	109	41	68	87	109	109	112	115
Lease obligations	199	184	174	174	174	174	174	174	174	174
Deferred revenue	672	703	725	791	797	804	802	802	849	856
Convertible senior notes, current	0	0	0	0	0	0	0	0	696	696
Total current liabilities	1,176	1,197	1,202	1,235	1,266	1,296	1,313	1,313	2,070	2,078
Operating lease liability, non-current	632	585	311	311	311	311	311	311	311	311
Finance lease, non-current	168	152	169	169	169	169	169	169	169	169
Convertible senior notes	1,370	1,374	1,378	1,378	1,378	1,378	1,378	1,378	682	682
Other non-current liabilities	39	112	91	41	41	42	41	41	41	42
Total liabilities	3,385	3,420	3,149	3,133	3,164	3,195	3,211	3,211	3,272	3,281
Convertible preferred stock										
Additional paid-in capital	2,448	2,512	2,598	2,588	2,567	2,561	2,560	2,560	2,533	2,374
Accumulated deficit	(2,739)	(2,772)	(2,742)	(2,677)	(2,607)	(2,537)	(2,471)	(2,471)	(2,157)	(1,833)
Accumulated OCI (loss)	(3)	(49)	(22)	(22)	(22)	(22)	(22)	(22)	(22)	(22)
Total SE	(294)	(309)	(166)	(110)	(61)	3	67	67	354	520
Total liabilities & SE	3,091	3,110	2,984	3,022	3,103	3,198	3,278	3,278	3,627	3,801

Source: BofA Global Research, company filings

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Exhibit 5: We expect 2024 FCF of \$920mn

DBX Cash flow statement

	Year	Mar	Jun	Sept	Dec	Year	Mar	Jun	Sept	Dec	Year	Year	Year
	2022A	1Q23A	2Q23A	3Q23A	4Q23A	2023A	1Q24E	2Q24E	3Q24E	4Q24E	2024E	2025E	2026E
Operating activities													
Net income	553	69	43	114	227	454	66	70	70	65	271	314	324
Depreciation and amortization	157	43	43	42	43	170	45	46	46	46	182	174	174
Stock-based compensation	331	76	95	84	83	338	93	98	98	102	391	425	460
Amortization of deferred commissions	40	11	10	9	8	39	10	9	9	9	37	37	37
Amortization of debt issuance costs	4	1	1	1	1	4	1	1	1	1	4	4	0
RE impairment	175	0	2	0	(157)	(155)	0	0	0	0	0	0	0
Other / deferred tax assets	(406)	17	15	17	33	81	0	0	0	0	0	0	0
Change in operating assets and liabilities:													
Trade and other receivables, net	(6)	(4)	(3)	(4)	(4)	(15)	(0)	1	(3)	(0)	(3)	(2)	(2)
Prepaid expenses and other current assets	(50)	(7)	(10)	(6)	(17)	(41)	3	1	(5)	(8)	(9)	5	(5)
Other assets	58	1	3	3	17	23	5	5	0	0	10	0	0
Accounts payable	13	(0)	7	1	(6)	1	(7)	(0)	1	(1)	(7)	0	0
Accrued expenses and other current liabilities	11	26	(33)	(2)	(12)	(21)	42	(1)	3	(3)	41	12	(2)
Accrued compensation	(7)	(92)	27	20	23	(23)	(68)	26	20	22	0	3	3
Deferred revenue	26	25	7	0	(10)	22	66	6	7	(2)	77	46	7
Non-current liabilities	(102)	(25)	(18)	(22)	(29)	(94)	(50)	(0)	1	(1)	(50)	0	1
Net cash used in operating activities	797	140	188	256	200	784	206	261	247	231	945	1,019	997
Investing activities													
Capital expenditures	(34)	(2)	(3)	(9)	(10)	(24)	(1)	(5)	(9)	(9)	(25)	(22)	(20)
Purchase of intangible assets	0	0	0	0	0	0	0	0	0	0	0	0	0
Purchase (sale) of ST investments, net	(358)	122	162	(61)	(80)	144	0	0	0	0	0	0	0
Maturities of ST investments	389	78	42	78	55	252	0	0	0	0	0	0	0
Business acquisitions, net of cash acquired	(75)	0	0	0	0	0	0	0	0	0	0	0	0
Other	29	3	5	3	12	24	0	0	0	0	0	0	0
Net cash used in investing activities	(49)	201	206	10	(22)	395	(1)	(5)	(9)	(9)	(25)	(22)	(20)
Financing activities													
Principal payments on capital lease obligations	(128)	(32)	(32)	(31)	(31)	(127)	(23)	(23)	(23)	(23)	(91)	(85)	(85)
Proceeds for issuance of convertible notes	0	0	0	0	0	0	0	0	0	0	0	0	0
Early termination fees	0	0	0	0	0	0	0	(15)	0	0	(15)	(36)	0
Convertible note hedge	0	0	0	0	0	0	0	0	0	0	0	0	0
Proceeds from warrants (convert financing)	0	0	0	0	0	0	0	0	0	0	0	0	0
Share repurchases for tax withholding	(119)	(34)	(32)	(34)	(35)	(135)	(34)	(34)	(34)	(34)	(136)	(136)	(136)
Common stock repurchases	(795)	(175)	(154)	(104)	(106)	(540)	(80)	(80)	(80)	(80)	(320)	(320)	(520)
Proceeds from issuance of common stock	0	0	1	1	0	3	0	0	0	0	0	0	0
Payments of deferred offering costs	0	0	(0)	0	0	(0)	0	0	0	0	0	0	0
Other	0	0	0	0	0	0	0	0	0	0	0	0	0
Net cash provided by financing activities	(1,042)	(241.3)	(217.3)	(168.6)	(172)	(799)	(136)	(151)	(137)	(137)	(561)	(576)	(740)
Cash summary													
Effect of exchange rate changes on cash	(7)	1	1	(4)	4	2							
Change in cash	(300)	100	178	94	11	382	68	105	101	85	359	420	236
Cash and cash equivalents at beginning of period	533	233	333	510	604	233	615	683	787	889	615	974	1,393
Cash and cash equivalents at end of period	233	333	510	604	615	615	683	787	889	974	974	1,393	1,630

Source: BofA Global Research, company filings

BofA GLOBAL RESEARCH

Price objective basis & risk

Dropbox (DBX)

Our \$28 PO is based on a weighted bull/base/bear case DCF analysis assigned 25%/50%/25% weights respectively (assumptions: WACC 9% and terminal growth rate 2%). Our \$28 PO represents a 2024E P/FCF multiple of 10.5x, compared to the less than 10% software growers peer group average of 18.3x. We believe the 10.5x multiple is justified given mounting headwinds impacting revenue and FCF, and the company's limited long-term growth levers.

Downside risks to our PO: 1) increased competition leading to greater than expected pricing pressure 2) greater than expected user churn, and 3) slower than expected paying user growth.

Upside risks to our PO: 1) better than expected execution leading to higher FCF generation 2) reaccelerating paying user growth, and 3) improving churn trends.

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
	Adobe	ADBE	ADBE US	Brad Sills
	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
	Dynatrace	DT	DT US	Koji Ikeda, CFA
	Elastic NV	ESTC	ESTC US	Koji Ikeda, CFA
	GitLab Inc.	GTLB	GTLB US	Koji Ikeda, CFA
	Global-e Online Ltd.	GLBE	GLBE US	Koji Ikeda, CFA
	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
	MongoDB Inc	MDB	MDB US	Brad Sills
	nCino, Inc.	NCNO	NCNO US	Adam Bergere
	NICE Ltd.	NICE	NICE US	Michael J. Funk
	NICE Ltd.	NCSYF	NICE IT	Michael J. Funk
	PagerDuty	PD	PD US	Koji Ikeda, CFA
	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
	UiPath	PATH	PATH US	Brad Sills
	Unity	U	U US	Michael J. Funk
	Weave	WEAV	WEAV US	Michael J. Funk
	Workday Inc.	WDAY	WDAY US	Brad Sills
	Zeta Global	ZETA	ZETA US	Koji Ikeda, CFA
	ZoomInfo	ZI	ZI US	Koji Ikeda, CFA
NEUTRAL				
	Autodesk	ADSK	ADSK US	Michael J. Funk



US - Enterprise Software Coverage Cluster

Investment rating	Company	BofA Ticker	Bloomberg symbol	Analyst
	Bentley Systems	BSY	BSY US	Michael J. Funk
	BigCommerce Holdings, Inc.	BIGC	BIGC US	Koji Ikeda, CFA
	Coveo	YCVO	CVO CN	Koji Ikeda, CFA
	Datadog Inc	DDOG	DDOG US	Koji Ikeda, CFA
	DocuSign	DOCU	DOCU US	Brad Sills
	Freshworks, Inc.	FRSH	FRSH US	Adam Bergere
	HashiCorp	HCP	HCP US	Brad Sills
	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
	Oracle Corporation	ORCL	ORCL US	Brad Sills
	Paycom	PAYC	PAYC US	Adam Bergere
	Paylocity	PCTY	PCTY US	Adam Bergere
	Shopify, Inc.	SHOP	SHOP US	Brad Sills
	Snowflake	SNOW	SNOW US	Brad Sills
	Veeva Systems, Inc.	VEEV	VEEV US	Brad Sills
	Zoom Video Communications	ZM	ZM US	Michael J. Funk
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
	Confluent	CFLT	CFLT US	Brad Sills
	CS Disco, Inc.	LAW	LAW US	Koji Ikeda, CFA
	Dropbox	DBX	DBX US	Michael J. Funk
	Enfusion, Inc.	ENFN	ENFN US	Koji Ikeda, CFA
	Five9	FIVN	FIVN US	Michael J. Funk
	Guidewire Software, Inc.	GWRE	GWRE US	Michael J. Funk
	Twilio	TWLO	TWLO US	Michael J. Funk
	Vertex, Inc.	VERX	VERX US	Brad Sills
RSTR				
	Splunk	SPLK	SPLK US	Brad Sills

IQmethodSM Measures Definitions**Business Performance**

Return On Capital Employed

Return On Equity

Operating Margin

Earnings Growth

Free Cash Flow

Quality of Earnings

Cash Realization Ratio

Asset Replacement Ratio

Tax Rate

Net Debt-To-Equity Ratio

Interest Cover

Valuation Toolkit

Price / Earnings Ratio

Price / Book Value

Dividend Yield

Free Cash Flow Yield

Enterprise Value / Sales

EV / EBITDA

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

Numerator

Cash Flow From Operations

Capex

Tax Charge

Net Debt = Total Debt – Cash & Equivalents

EBIT

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

Total Assets – Current Liabilities + ST Debt + Accumulated Goodwill Amortization

Shareholders' Equity

Sales

N/A

N/A

Denominator

Net Income

Depreciation

Pre-Tax Income

Total Equity

Interest Expense

Denominator

Diluted Earnings Per Share (Basis As Specified)

Shareholders' Equity / Current Basic Shares

Current Share Price

Market Cap = Current Share Price × Current Basic Shares

Sales

Basic EBIT + Depreciation + Amortization

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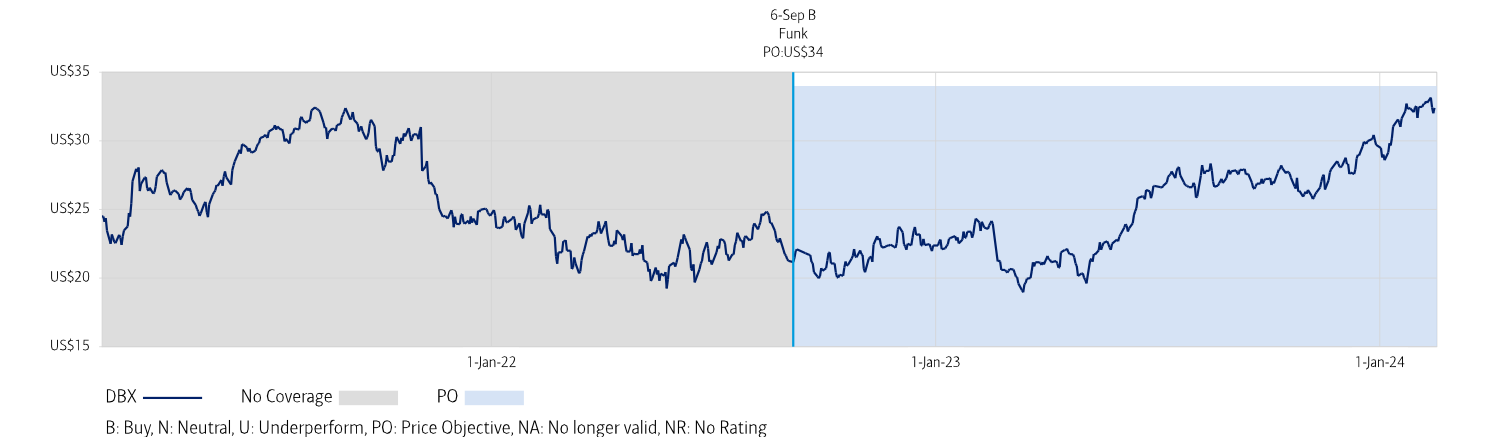
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Important Disclosures

Dropbox (DBX) Price Chart



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

Coverage Universe	Count	Percent	Inv. Banking Relationships ^{R1}	Count	Percent
Buy	215	53.09%	Buy	111	51.63%
Hold	97	23.95%	Hold	45	46.39%
Sell	93	22.96%	Sell	24	25.81%

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

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

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

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

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