

## E2open

# 3QF24 SaaS revenue in guidance range, FY24 outlook narrowed

Maintain Rating: NO RATING | PO: NA | Price: 3.84 USD

## 3QF24 subscription revenue was in guidance range

E2open, a provider of SaaS-based supply chain software, reported 3QF24 (Nov) Subscription revenue of \$132.8mn, down (2.2)% y/y on a constant currency basis. This was slightly above \$131.7mn consensus and towards the upper end of prior \$130-133mn guidance range. 4QF24 (Feb) subscription revenue guidance of \$131-134mn suggests a ~3% y/y decline. Management narrowed FY24 (Feb-end) Subscription revenue guidance to \$533-536mn from \$530-538mn prior. We maintain No Rating as we think ETWO is not trading on fundamentals, considering Elliott Investment Management's 10/16/23 approach around "strategic opportunities" which could potentially include Elliott acting as "an acquirer, investor and/or financing source." Management acknowledged Elliott's filing on the conference call but made no additional comments.

## Better 3Q bookings drive backlog up y/y

Remaining performance obligations, a GAAP measure of backlog, increased to \$806.0mn from \$755.8mn in 2Q and was up 1.4% y/y. Management noted 3Q bookings improved versus 2Q and included several larger (i.e., >\$1mn/year) wins. During the quarter, E2open hired two new senior vice presidents (Sales Operations and Channels & Growth Initiatives). E2open has invested in strengthen its systems integrator relationships since 2022. This has historically been a smaller part of the company's go-to-market strategy.

## Taking action to improve churn, but likely elevated in 4Q

Lowering churn remains interim CEO Appel's "first priority." CEO Appel has reviewed atrisk customers up for renewal and is addressing churn among smaller transportation customers. However, Chief Commercial Officer Randolph noted that renewal decisions are "often made a year or more in advance" and management expects churn to remain elevated in 4QF24.

## Cost discipline drives margin stability

While the turnaround in SaaS revenue is likely to take time, E2open has been controlling costs well. 3Q's adjusted EBITDA margin of 35.1% was up 100bp y/y. Margins benefited from cost actions in the professional services division and other areas. Management maintained FY24 adjusted EBITDA guidance of \$215-220mn, or 34-35% margin.

Estimates (Feb) (US\$)	2022A	2023A	2024E	2025E	2026E
EPS	0.24	0.25	0.18	0.20	0.26
GAAP EPS	(0.68)	(2.15)	(1.31)	(0.16)	(0.03)
EPS Change (YoY)	200.0%	4.2%	-28.0%	11.1%	30.0%
Consensus EPS (Bloomberg)			0.18	0.18	0.21
DPS	0	0	0	0	0
Valuation (Feb)					
P/E	16.0x	15.4x	21.3x	19.2x	14.8x
EV/EBITDA*	15.8x	11.8x	11.8x	11.1x	9.9x
Free Cash Flow Yield*	1.7%	1.7%	5.4%	7.5%	8.5%
* For full definitions of <i>iQ</i> method <sup>SM</sup> measures, see page 4.					

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Refer to important disclosures on page 5 to 7. Analyst Certification on page 3. Price Objective Basis/Risk on page 3.

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#### 10 January 2024

#### Equity

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#### **Stock Data**

3.84 LISD Price Objective Date Established NΑ Investment Opinion 52-Week Range 2.15 USD - 7.21 USD Mrkt Val (mn) / Shares Out 1.165 USD / 303.3 Free Float 67.5% 8.09 USD Average Daily Value (mn) RofA Ticker / Exchange FTWO / NYS ETWO US / ETWO.N Bloomberg / Reuters ROE (2024E) 2.7% Net Dbt to Eqty (Feb-2023A) 35.0% 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".

## **iQ**profile<sup>™</sup> E2open

iQmethod <sup>™</sup> – Bus Performance*					
(US\$ Millions)	2022A	2023A	2024E	2025E	2026E
Return on Capital Employed	0.3%	0.1%	0.1%	1.0%	2.1%
Return on Equity	3.1%	3.0%	2.7%	3.2%	4.1%
Operating Margin	4.1%	0.6%	0.6%	7.4%	14.9%
Free Cash Flow	19	20	63	87	99
iQmethod <sup>™</sup> – Quality of Earnings*					
(US\$ Millions)	2022A	2023A	2024E	2025E	2026E
Cash Realization Ratio	0.6x	0.8x	1.4x	1.6x	1.3x
Asset Replacement Ratio	0.2x	0.2x	0.1x	0.2x	0.2x
Tax Rate	24.0%	24.0%	24.0%	24.0%	24.0%
Net Debt-to-Equity Ratio	20.4%	35.0%	34.2%	31.2%	27.3%
Interest Cover	0.6x	0.1x	0x	0.5x	1.2x
Income Statement Data (Feb)					
(US\$ Millions)	2022A	2023A	2024E	2025E	2026
Sales	479	652	633	661	715
% Change	41.8%	36.1%	-2.9%	4.4%	8.2%
Gross Profit	344	448	437	459	500
% Change	42.9%	30.3%	-2.4%	4.9%	9.0%
EBITDA	162	217	218	232	259
% Change	48.4%	33.7%	0.4%	6.4%	11.6%
Net Interest & Other Income	(34)	(77)	(98)	(95)	(92)
Net Income (Adjusted)	81 281.6%	85	66	77	100
Free Cash Flow Data (Feb) (US\$ Millions)	2022A	2023A	2024E	2025E	20261
Net Income from Cont Operations (GAAP)	(11)	(53)	(69)	(35)	
Depreciation & Amortization	143	213	214	(33)	11
Change in Working Capital	89			183	
		552	294		152
Deferred Taxation Charge	NA			183 (33) NA	152 (34)
Deferred Taxation Charge Other Adjustments, Net		552	294	(33)	152 (34) NA
• • • • • • • • • • • • • • • • • • • •	NA	552 NA	294 NA	(33) NA	152 (34) NA 5
Other Adjustments, Net	NA (170)	552 NA (644)	294 NA (344)	(33) NA 5	152 (34) NA 5 (36)
Other Adjustments, Net Capital Expenditure Free Cash Flow % Change	NA (170) (32)	552 NA (644) (48)	294 NA (344) (32)	(33) NA 5 (33)	152 (34) NA 5 (36)
Other Adjustments, Net Capital Expenditure Free Cash Flow % Change Share / Issue Repurchase	NA (170) (32) <b>19</b>	552 NA (644) (48) <b>20</b>	294 NA (344) (32) <b>63</b>	(33) NA 5 (33) <b>87</b> <b>37.8%</b> 0	152 (34) NA 5 (36) <b>99</b> <b>13.6</b> %
Other Adjustments, Net Capital Expenditure Free Cash Flow % Change Share / Issue Repurchase Cost of Dividends Paid	NA (170) (32) <b>19</b> <b>NM</b> 0	552 NA (644) (48) <b>20</b> <b>3.4%</b> 0	294 NA (344) (32) <b>63</b> <b>215.3%</b> 0	(33) NA 5 (33) <b>87</b> <b>37.8%</b> 0	152 (34) NA 5 (36) <b>99</b> <b>13.6%</b>
Other Adjustments, Net Capital Expenditure Free Cash Flow % Change Share / Issue Repurchase	NA (170) (32) <b>19</b> <b>NM</b> 0	552 NA (644) (48) <b>20</b> <b>3.4%</b> 0	294 NA (344) (32) <b>63</b> <b>215.3%</b>	(33) NA 5 (33) <b>87</b> <b>37.8%</b> 0	11 152 (34) NA 5 (36) <b>99</b> 13.6% 0 (55)
Other Adjustments, Net Capital Expenditure Free Cash Flow % Change Share / Issue Repurchase Cost of Dividends Paid Change in Debt  Balance Sheet Data (Feb)	NA (170) (32) <b>19</b> <b>NM</b> 0 0 447	552 NA (644) (48) <b>20</b> <b>3.4%</b> 0 0 97	294 NA (344) (32) <b>63</b> <b>215.3%</b> 0 0 (55)	(33) NA 5 (33) <b>87</b> <b>37.8%</b> 0 0 (55)	152 (34) NAM 5 (36) 99 13.6% (0 (55)
Other Adjustments, Net Capital Expenditure Free Cash Flow % Change Share / Issue Repurchase Cost of Dividends Paid Change in Debt  Balance Sheet Data (Feb) (US\$ Millions)	NA (170) (32) 19 NM 0 0 447	552 NA (644) (48) <b>20</b> <b>3.4%</b> 0 0 97	294 NA (344) (32) <b>63</b> <b>215.3%</b> 0 0 (55)	(33) NA 5 (33) 87 37.8% 0 0 (55)	152 (34) NA 5 (36) 99 13.6% C C (55)
Other Adjustments, Net Capital Expenditure Free Cash Flow % Change Share / Issue Repurchase Cost of Dividends Paid Change in Debt  Balance Sheet Data (Feb) (US\$ Millions) Cash & Equivalents	NA (170) (32) 19 NM 0 0 447	552 NA (644) (48) <b>20</b> <b>3.4%</b> 0 0 97	294 NA (344) (32) <b>63</b> <b>215.3%</b> 0 0 (55)	(33) NA 5 (33) 87 37.8% 0 0 (55) 2025E 121	152 (34) NA 5 (36) <b>99</b> <b>13.6%</b> C C (55)
Other Adjustments, Net Capital Expenditure Free Cash Flow % Change Share / Issue Repurchase Cost of Dividends Paid Change in Debt  Balance Sheet Data (Feb) (US\$ Millions) Cash & Equivalents Trade Receivables	NA (170) (32) 19 NM 0 0 447 2022A 155 155	552 NA (644) (48) <b>20</b> <b>3.4%</b> 0 0 97	294 NA (344) (32) <b>63</b> <b>215.3%</b> 0 0 (55) <b>2024E</b> 90 166	(33) NA 5 (33) 87 37.8% 0 0 (55) 2025E 121 177	152 (34) NA 5 (36) 99 13.6% C C (55)
Other Adjustments, Net Capital Expenditure Free Cash Flow % Change Share / Issue Repurchase Cost of Dividends Paid Change in Debt  Balance Sheet Data (Feb) (US\$ Millions) Cash & Equivalents Trade Receivables Other Current Assets	NA (170) (32) 19 NM 0 0 447 2022A 155 155 45	552 NA (644) (48) <b>20</b> <b>3.4%</b> 0 0 97 <b>2023A</b> 93 175 37	294 NA (344) (32) <b>63</b> <b>215.3%</b> 0 0 (55) <b>2024E</b> 90 166 50	(33) NA 5 (33) 87 37.8% 0 0 (55)  2025E 121 177 52	152 (34) NAM 5 (36) 99 13.6% (0 (55) 2026l 163 196 57
Other Adjustments, Net Capital Expenditure Free Cash Flow % Change Share / Issue Repurchase Cost of Dividends Paid Change in Debt  Balance Sheet Data (Feb) (US\$ Millions) Cash & Equivalents Trade Receivables Other Current Assets Property, Plant & Equipment	NA (170) (32) 19 NM 0 0 447 2022A 155 155 45 66	552 NA (644) (48) <b>20</b> <b>3.4%</b> 0 0 97 <b>2023A</b> 93 175 37 72	294 NA (344) (32) 63 215.3% 0 0 (55) 2024E 90 166 50 72	(33) NA 5 (33) 87 37.8% 0 0 (55) 2025E 121 177 52 73	152 (34) NAM 5 (36) 99 13.6% (C (55) 2026l 163 196 577
Other Adjustments, Net Capital Expenditure Free Cash Flow % Change Share / Issue Repurchase Cost of Dividends Paid Change in Debt  Balance Sheet Data (Feb) (US\$ Millions) Cash & Equivalents Trade Receivables Other Current Assets Property, Plant & Equipment Other Non-Current Assets	NA (170) (32) 19 NM 0 0 447 2022A 155 155 45 66 4,983	552 NA (644) (48) <b>20</b> <b>3.4%</b> 0 0 97 <b>2023A</b> 93 175 37 72 4,023	294 NA (344) (32) <b>63</b> <b>215.3%</b> 0 0 (55) <b>2024E</b> 90 166 50 72 3,840	(33) NA 5 (33) 87 37.8% 0 0 (55)  2025E 121 177 52 73 3,691	152 (34) NAM 5 (36) 99 13.6% (C (55) 2026l 163 196 57 78 3,574
Other Adjustments, Net Capital Expenditure Free Cash Flow % Change Share / Issue Repurchase Cost of Dividends Paid Change in Debt  Balance Sheet Data (Feb) (US\$ Millions) Cash & Equivalents Trade Receivables Other Current Assets Property, Plant & Equipment Other Non-Current Assets Total Assets	NA (170) (32) 19 NM 0 0 447 2022A 155 155 45 66 4,983 5,405	552 NA (644) (48) 20 3.4% 0 0 97 2023A 93 175 37 72 4,023 4,400	294 NA (344) (32) 63 215.3% 0 0 (55) 2024E 90 166 50 72 3,840 4,219	(33) NA 5 (33) 87 37.8% 0 0 (55)  2025E 121 177 52 73 3,691 4,115	152 (34) NAM 5 (36) 99 13.6% (C (55) 2026l 163 196 57 78 3,574
Other Adjustments, Net Capital Expenditure Free Cash Flow % Change Share / Issue Repurchase Cost of Dividends Paid Change in Debt  Balance Sheet Data (Feb) (US\$ Millions) Cash & Equivalents Trade Receivables Other Current Assets Property, Plant & Equipment Other Non-Current Assets Total Assets Short-Term Debt	NA (170) (32) 19 NM 0 0 0 447 2022A 155 155 45 66 4,983 5,405 0	552 NA (644) (48) <b>20</b> <b>3.4%</b> 0 0 97 <b>2023A</b> 93 175 37 72 4,023 <b>4,400</b> 0	294 NA (344) (32) 63 215.3% 0 0 (55) 2024E 90 166 50 72 3,840 4,219 0	(33) NA 5 (33) 87 37.8% 0 0 (55)  2025E 121 177 52 73 3,691 4,115 0	152 (34) NAM 5 (36) 99 13.6% (C (55) 2026l 163 196 57 78 3,574 4,067
Other Adjustments, Net Capital Expenditure Free Cash Flow % Change Share / Issue Repurchase Cost of Dividends Paid Change in Debt  Balance Sheet Data (Feb) (US\$ Millions) Cash & Equivalents Trade Receivables Other Current Assets Property, Plant & Equipment Other Non-Current Assets Short-Term Debt Other Current Liabilities	NA (170) (32) 19 NM 0 0 0 447 2022A 155 155 45 66 4,983 5,405 0 433	552 NA (644) (48) 20 3.4% 0 0 97 2023A 93 175 37 72 4,023 4,400 0 324	294 NA (344) (32) 63 215.3% 0 0 (55) 2024E 90 166 50 72 3,840 4,219 0 283	(33) NA 5 (33) 87 37.8% 0 0 (55)  2025E 121 177 52 73 3,691 4,115 0 273	152 (34) NAM 5 (36) 99 13.6% (C (55) 2026l 163 196 57 78 3,574 4,067
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Other Adjustments, Net Capital Expenditure Free Cash Flow % Change Share / Issue Repurchase Cost of Dividends Paid Change in Debt  Balance Sheet Data (Feb) (US\$ Millions) Cash & Equivalents Trade Receivables Other Current Assets Property, Plant & Equipment Other Non-Current Assets Short-Term Debt Other Current Liabilities Long-Term Debt Other Non-Current Liabilities	NA (170) (32) 19 NM 0 0 0 447 2022A 155 155 45 66 4,983 5,405 0 433 867 622	552 NA (644) (48) 20 3.4% 0 0 97 2023A 93 175 37 72 4,023 4,400 0 324 1,046 303	294 NA (344) (32) 63 215.3% 0 0 (55) 2024E 90 166 50 72 3,840 4,219 0 283 1,002 269	(33) NA 5 (33) 87 37.8% 0 0 (55)  2025E 121 177 52 73 3,691 4,115 0 273 947 250	152 (34) NA 5 (36) 99 13.6% C C (55) 2026l 163 196 57 78 3,574 4,067 C 271 892 231
Other Adjustments, Net Capital Expenditure Free Cash Flow % Change Share / Issue Repurchase Cost of Dividends Paid Change in Debt  Balance Sheet Data (Feb) (US\$ Millions) Cash & Equivalents Trade Receivables Other Current Assets Property, Plant & Equipment Other Non-Current Assets Total Assets Short-Term Debt Other Current Liabilities Long-Term Debt	NA (170) (32) 19 NM 0 0 0 447 2022A 155 155 45 66 4,983 5,405 0 433 867	552 NA (644) (48) 20 3.4% 0 0 97 2023A 93 175 37 72 4,023 4,400 0 324 1,046	294 NA (344) (32) 63 215.3% 0 0 (55) 2024E 90 166 50 72 3,840 4,219 0 283 1,002	(33) NA 5 (33) 87 37.8% 0 0 (55)  2025E 121 177 52 73 3,691 4,115 0 273 947	152 (34) NA 5 (36) <b>99</b> <b>13.6%</b>

5,405

4,400

4,219

4,115

4,067

## **Company Sector**

Industrials/Multi-Industry

## **Company Description**

E2open offers SaaS-based supply chain management software. The company's B2B network supports over 270,000 suppliers & transport companies. Key offerings include transportation/logistics systems, global trade management, supply chain planning, channel management, and supplier management.

#### **Investment Rationale**

We have removed the investment opinion on the company's stock. Investors should no longer rely on our previous opinion or price objective.

#### Stock Data

Average Daily Volume

2,106,224

#### **Quarterly Earnings Estimates**

	2023	2024
Q1	0.06A	0.05A
Q2	0.05A	0.04A
Q3	0.06A	0.04E
Q4	0.07A	0.05E



\* For full definitions of  $\emph{IQ}\textit{method}^{\,\text{SM}}$  measures, see page 4.

**Total Equity & Liabilities** 

## Price objective basis & risk

## E2open (ETWO)

We have removed the investment opinion on the company's stock. Investors should no longer rely on our previous opinion or price objective.

## **Analyst Certification**

I, Andrew Obin, 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 - Multi-Industrials/Engineering and Construction Coverage Cluster

Investment rating	Company	Bof A Ticker	Bloomberg symbol	Analyst
BUY				
	APi Group	APG	APG US	Andrew Obin
	AspenTech	AZPN	AZPN US	Andrew Obin
	Atmus Filtration	ATMU	ATMU US	Andrew Obin
	Dover Corp	DOV	DOV US	Andrew Obin
	Eaton Corp PLC	ETN	ETNUS	Andrew Obin
	Emerson Electric Co	EMR	EMR US	Andrew Obin
	Flowserve	FLS	FLS US	Andrew Obin
	General Electric Company	GE	GE US	Andrew Obin
	Honeywell International Inc.	HON	HON US	Andrew Obin
	ITT Inc.	ITT	ITT US	Andrew Obin
	Montrose Environmental Group, Inc.	MEG	MEG US	Andrew Obin
	Parker Hannifin Corporation	PH	PH US	Andrew Obin
	PTC Inc.	PTC	PTC US	Andrew Obin
	Rush	RUSHA	RUSHA US	Andrew Obin
	Vertiv	VRT	VRT US	Andrew Obin
NEUTRAL				
	3M Company	MMM	MMM US	Andrew Obin
	AMETEK Inc	AME	AME US	Andrew Obin
	Fortive Corporation	FTV	FTV US	Andrew Obin
	Illinois Tool Works	ITW	ITW US	Andrew Obin
	Johnson Controls International PLC	JCI	JCI US	Andrew Obin
	Rockwell	ROK	ROK US	Andrew Obin
	Trane Technologies PLC	П	TT US	Andrew Obin
	Vontier	VNT	VNT US	Andrew Obin
UNDERPERFORM				
	Allegion	ALLE	ALLE US	Andrew Obin
	Ansys, Inc.	ANSS	ANSS US	Andrew Obin
	Carrier Global Corp.	CARR	CARR US	Andrew Obin
	Core & Main	CNM	CNM US	Andrew Obin
	John Bean Technologies	JBT	JBT US	Andrew Obin
	Keysight	KEYS	KEYS US	David Ridley-Lane, CFA
	Pentair plc	PNR	PNR US	Andrew Obin



## **Q**method <sup>su</sup> Measures Definitions

<b>Business Performance</b> Return On Capital Employed	Numerator NOPAT = (EBIT + Interest Income) × (1 — Tax Rate) + Goodwill Amortization	<b>Denominator</b> Total Assets – Current Liabilities +ST Debt +Accumulated Goodwill Amortization
Return On Equity Operating Margin Earnings Growth	Net Income Operating Profit Expected 5 Year CAGR From Latest Actual	Shareholders' Equity Sales N/A
Free Cash Flow  Quality of Earnings	Cash Flow From Operations — Total Capex  Numerator	N/A <b>Denominator</b>
Cash Realization Ratio Asset Replacement Ratio Tax Rate Net Debt-To-Equity Ratio Interest Cover	Cash Flow From Operations Capex Tax Charge Net Debt = Total Debt — Cash & Equivalents EBIT	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	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

EV / EBITDA Enterprise Value Basic EBIT + Depreciation + Amortization

\*\*Menthod 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.

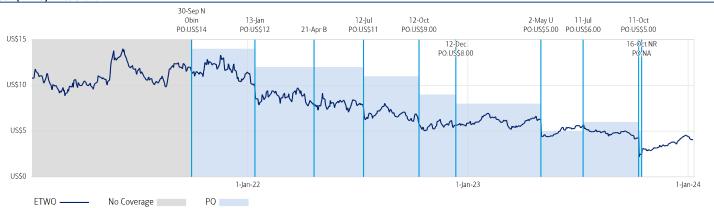
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## **Disclosures**

## **Important Disclosures**

#### E2open (ETWO) 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: Industrials/Multi-Industry Group (as of 31 Dec 2023)

Coverage Universe	Count	Percent	Inv. Banking Relationships R1	Count	Percent
Buy	45	50.56%	Buy	25	55.56%
Hold	26	29.21%	Hold	13	50.00%
Sell	18	20.22%	Sell	7	38.89%

#### 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%

RI 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 <sup>R2</sup>
Buy	≥ 10%	≤ 70%
Moutral	> 00%	< 300%

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.

N/A

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