



# Duos Technologies Group, Inc.

Reports Q4 about inline and maintains strong 2023 guidance. Continued strong growth for its RIP over the next year should drive stock higher. Raising P/T to \$5.25.

**Q4 about inline:** Duos recently (on March 30) reported its fiscal Q4 2022 (ending December) results. Revenue was \$5.9 million (+60% y-o-y), compared to our and consensus estimates of \$7.6 million. EPS was \$(0.14), compared to our estimate of \$(0.10) and consensus of \$(0.09). In early February, the company preannounced Q4 revenues of ~\$6.3 million.

**Strong Q4 growth:** Q4 benefited from the deployment of two additional RIPs for Class 1 railroad customers, significantly increasing its revenue base.

**Slight decrease in backlog:** Backlog at Q4 was \$10.7 million, down from \$12.0 at Q3. Of which ~\$8.4 million is expected to be recognized in 2023.

**Maintains strong 2023 guidance:** The company maintained 2023 guidance for revenue of \$20 – 21 million (originally provided in February 2023).

**Raising estimates:** We are raising our 2023 estimates for revenue to \$20 million, from \$18 million, and for EPS to \$(0.61) from \$(0.74).

**Focused on RIP (Railcar Inspection Portal):** The company has developed the Railcar Inspection Portal (RIP) that provides both freight and transit railroad customers and select government agencies the ability to conduct fully automated inspections of trains while they are in transit.

**RIP system and benefits:** The RIP system, which incorporates a variety of sophisticated optical technologies, illumination and other sensors, scans each passing railcar to create an extremely high-resolution image set from a variety of angles including the undercarriage. These images are then processed through various methods of artificial intelligence (“AI”) algorithms to identify specific defects and/or areas of interest on each railcar.

**7 million scans in 2022:** Duos believes the market opportunity for its Rail Inspection Portal (RIP) business is substantial. In 2022, the company estimated that it performed over seven million comprehensive railcar scans. Of this, it estimated that 573,000 were unique railcars, representing ~35% of the total freight car population in North America. While this may seem a lot, there are a lot of rules and regulations requiring rail car inspections such that there are still a lot of market growth opportunities.

**Market opportunities:** There are an estimated 1.6 million railcars, 140,000 track miles, and over 500 rail yards in North America. There is a big push by federal regulators and railroad companies to move towards advanced technology and automation to reduce costs, increase efficiency, and improve safety.

**Recent train derailments can be major opportunities:** The recent (in February 2023) major train derailment in Ohio of highly hazardous materials may be a catalyst for the railroads or its regulatory agencies to elevate safety inspections requirements including using Duos RIP technologies.

**New capital:** In March (just completed Q1), the company raised \$4 million selling preferred stock (convertible at \$3.00/share). We believe the company has enough cash into mid-2024.

**Positive risks versus rewards:** Overall, concerns outweighed by growth prospects and valuation. Duo’s main RIP product still has long commercialization challenges ahead, but we believe the ~billion dollars market potential presents high rewards for the risks.

**Current valuation attractive:** We are maintaining our BUY rating, but raising our 12-month price target to \$5.25 from \$5.00 based on a NPV analysis. This represents significant upside from the current share price and we believe appropriately balances out the high risks with large upside opportunities.

## Company Description

Duos Technologies Group, based in Jacksonville, FL develops and operates intelligent vision based inspection technology solutions for rail, logistics, intermodal, and government customers.

United States  
Technology

April 2, 2023

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## Stock Data

Exchange:	NasdaqCM
52-week Range:	1.80 – 5.70
Shares Outstanding (million):	8.4
Market cap (\$million):	\$24
EV (\$million):	\$19
Debt (\$million):	\$0
Cash (\$million):	\$5
Avg. Daily Trading Vol. (\$million):	\$0.2
Float (million shares):	3
Short Interest (million shares):	0.1
Dividend, annual (yield):	\$0 (NA%)

## Revenues (US\$ million)

	2023E (Cur.)	2023E (Old)	2024E (Cur.)	2024E (Old)
Q1 Mar	2.7E	2.5E	3.1E	
Q2 Jun	4.2E	3.8E	4.7E	
Q3 Sep	5.2E	4.2E	5.9E	
Q4 Dec	7.9E	7.7E	8.8E	
Total	20.0E	18.3E	22.4E	
EV/Revs	1.0x		0.8x	

## Earnings per Share (pro forma)

	2023E (Cur.)	2023E (Old)	2024E (Cur.)	2024E (Old)
Q1 Mar	(0.25)E	(0.27)E	(0.18)E	
Q2 Jun	(0.19)E	(0.27)E	(0.12)E	
Q3 Sep	(0.15)E	(0.22)E	(0.12)E	
Q4 Dec	0.04E	0.01E	0.05E	
Total	(0.61)E	(0.74)E	(0.36)E	
P/E	N/A		N/A	

## Important Disclosures

Ascendant Capital Markets LLC seeks to do business with companies covered by its research team. Consequently, investors should be aware that the firm may have a conflict of interest that could affect the objectivity of this report. Investors should consider this report as only a single factor in making an investment decision.

For analyst certification and other important disclosures, refer to the Disclosure Section, located at the end of this report, beginning on page 12.

## COMPANY UPDATE

Rating: BUY

Ticker: DUOT

Price: \$2.80

Target: \$5.25  
(from \$5.00)

## **OVERVIEW**

- Duos recently (on March 30) reported its fiscal Q4 2022 (ending December) results.
- Revenue was \$5.9 million (+60% y-o-y), compared to our and consensus estimates of \$7.6 million.
- EPS was \$(0.14), compared to our estimate of \$(0.10) and consensus of \$(0.09).
- Q4 guidance was for revenue of \$7.4 – 8.9 million. In early February, the company preannounced Q4 revenues of ~\$6.3 million.
- The company maintained 2023 guidance for revenue of \$20 – 21 million (originally provided in February 2023).
- We are raising our 2023 estimates for revenue to \$20 million, from \$18 million, and for EPS to \$(0.61) from \$(0.74).
- We are initiating our 2024 estimates for revenue of \$22 million, and for EPS of \$(0.36).

## **ADDITIONAL DETAILS**

- Gross profit for the quarter was \$2.1 million, compared with our estimate of \$2.2 million.
- Gross margin for the quarter was 36%, versus 17% last year and our expectation of 29%.
- Operating expenses were \$3.1 million, versus our expectation of \$2.9 million.
- Operating loss was \$1.0 million, versus our expectation of a loss of \$0.7 million.
- Net loss was \$1.0 million, versus our expectation of a loss of \$0.7 million.
  
- In November, the company appointed Andrew Murphy, formerly the company's Vice President of Finance, as its new Chief Financial Officer. Mr. Murphy replaces Adrian Goldfarb who will remain with Duos in a consulting capacity and will take on a new position within Duos' newly formed Industry Advisory Group.

The company's balance sheet had ~\$5 million in cash and no debt (estimated cash as of now), compared with \$5 million in cash and no debt at the end of September. In March (just completed Q1), the company raised \$4 million selling preferred stock (convertible at \$3.00/share).

Exhibit 1: Duos Technologies Group Corporate Overview (as of January 2023)



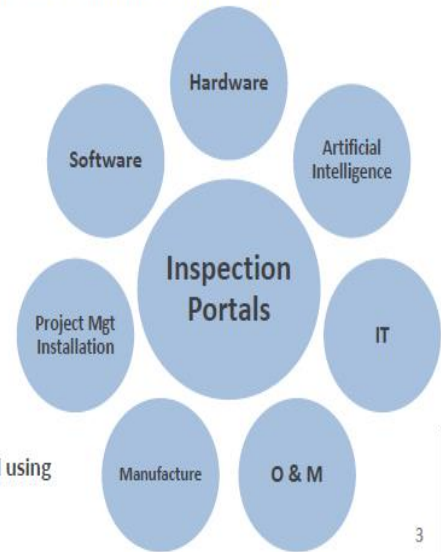
## Duos Technologies Overview – Nasdaq: DUOT



Advanced technology company that specializes in **Machine Vision & Artificial Intelligence** to analyze fast moving objects.

We help customers move commerce safer and more efficiently.

- Headquarters in Jacksonville, FL
- ~ 75 Employees
- 15 x Portals deployed/contracted
- FY 2021 Revenue: \$8M
- FY 2022 Revenue: ~\$16.5 - \$18.0M
- FY 2023 Revenue: ~\$20.0 - \$24.0M  
*(Objective)*



All aspects of solutions self-performed using our intellectual property and patents.

**duostech** | Nasdaq: DUOT  
connected intelligence

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Source: Company reports.

Exhibit 2: Duos Investment Highlights (as of January 2023)

# Investment Highlights



## Significant Global Market Opportunities\*

- Combined North American markets exceed **\$24B**
- **\$3.5B** Rail Transportation
- **\$2.3B** Global Cargo Inspection
- **\$4.7B** Aviation Maintenance and Repair Operations
- **\$13.5B** 5G/Edge Data Centers

\* Multiple sources previously cited



## Strong Rail Industry Tailwinds

- Industry rapidly moving toward automation and optimization to reduce costs, increase safety and improve efficiency
- Planned deployments of Duos owned portals in strategic locations on North American rail network



## Expanded Potential Customer Base

- Multiple multi-million dollar deployments announced in 2022 continuing in 2023
- Potential for 100s of additional customers through **new subscription data** program



## Superior Proprietary Technology

- Spent majority of 2021 on further developing in-house technologies to enable exponential scaling in 2022 – 20
- Significant capabilities to acquire **value added data** for Class 1 & transit rail companies



## Improving Financial Position

- 2021 revenue of **\$8.25 million**
- 2022 expected revenue of **\$16.5 - \$18 million with improved margins anticipated**
- Improved Balance sheet with sufficient working capital  
- **Strengthening cash position to tackle subscription market**
- Increasing project scopes & recurring revenue base



## Built for the Future

- Expanded AI and deep learning functionality
- Developed "**Expert AI**" concept
- Launch **AI Detection Catalogue**
- Ongoing Focus on AI and Software Technology  
- Expect increased margins and recurring revenues





Exhibit 3: Duos Railcar Inspection Portal (RIP)

## Our Rail Solution

**rip**® is a **modular** intelligent visualization system that provides **real-time**, high resolution, **four-sided 360° imagery** of railcars at high speeds.

## Railcar Inspection Portal (**rip**®) modules

**apis**® Automated Pantograph Inspection System

**vue**® Vehicle Undercarriage Examiner

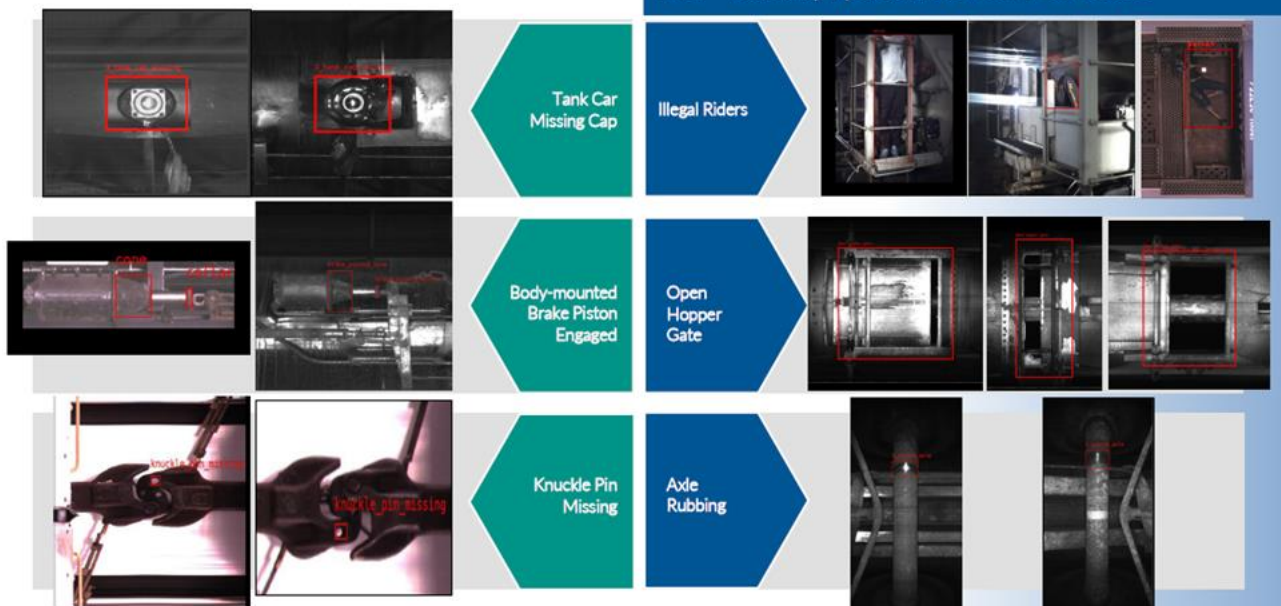
**t-vue**™ Thermal Vehicle Undercarriage Examiner

**obliquevue**™ Oblique Vehicle Undercarriage Examiner






## Examples of Freight Railcar AI Detections

95%+ reliability ; portfolio of 28 AI Use Cases

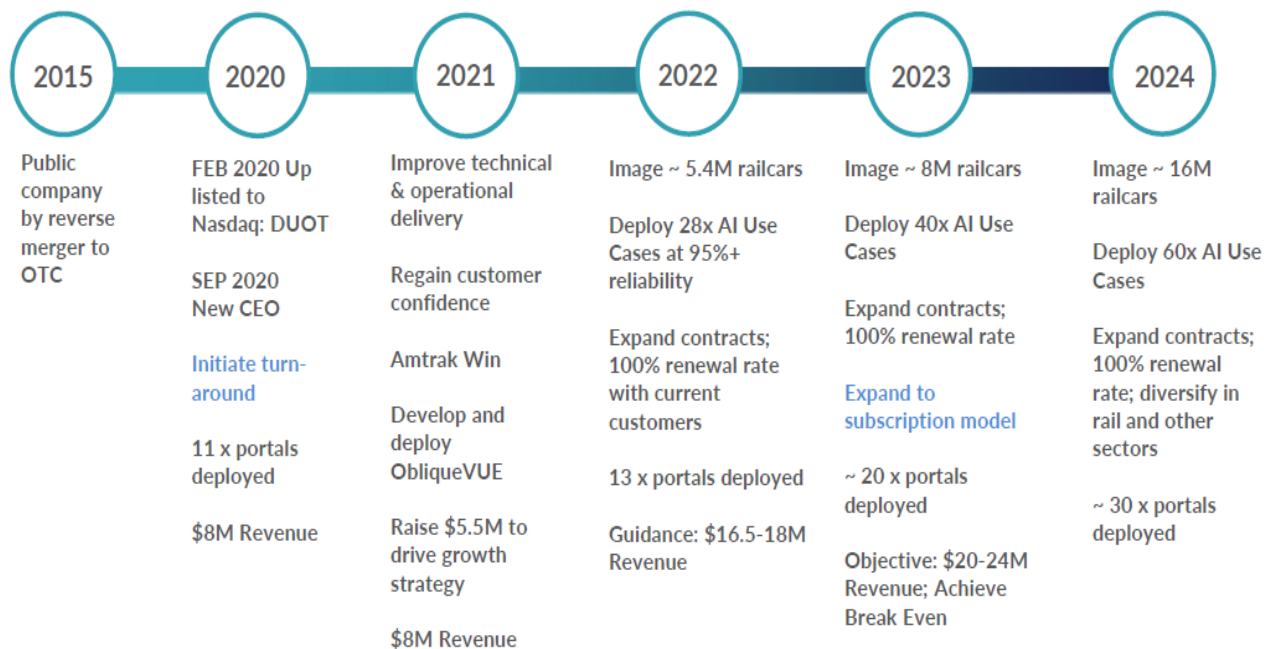


Source: Company reports.

**Exhibit 4: Duos Recent History and Future Growth Plans (as of January 2023)**

<p><b>2020-2021</b> BUSINESS TURNED AROUND Phase 0</p> 	<p><b>IMPROVED CUSTOMER EXPERIENCE</b></p> <ul style="list-style-type: none"> <li>• Technical Delivery / QA&amp;QC</li> <li>• Operational</li> <li>• Expand customer base / completing initial R&amp;D phase</li> <li>• Recurring Revenue</li> </ul>
<p><b>2022</b> INITIAL GROWTH Phase 1</p> 	<p><b>EXPAND RAIL CUSTOMER BASE</b></p> <ul style="list-style-type: none"> <li>• Pivot into other sectors through Business Development &amp; R&amp;D Architecture</li> <li>• M&amp;A</li> </ul>
<p><b>2023-24</b> GROWTH EXPANSION Phase 2</p> 	<p><b>EXPAND GLOBAL MARKET OPPORTUNITY</b></p> <ul style="list-style-type: none"> <li>• International Transportation Markets</li> </ul>

## History and Future Pathway



Source: Company reports.

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**Exhibit 5: Q4 2022 and Recent Highlights (as of March 30, 2023)**

**Fourth Quarter 2022 and Recent Operational Highlights**

- Performed over seven million comprehensive railcar scans in 2022 across 11 portals, of which more than 573,000 were unique railcars. This metric encompasses all railcars scanned at locations across the U.S., Canada, and Mexico, representing approximately 35% of the total freight car population in North America.
- Released 13 new AI detection models for use within the Company's Railcar Inspection Portal ("rip<sup>®</sup>" or "RIP<sup>®</sup>") solution since the end of the third quarter. The Company currently has 35 models deployed and operational for freight and transit customers with plans to reach up to 50 different models by the end of 2023.
- Achieved a 100% renewal rate on recurring revenue contracts throughout 2022 with \$2 million cash inflow from those contracts received during the first quarter of 2023. Underlying recurring revenues for support and artificial intelligence grew 32% in 2022.
- Entered 2023 with estimated total backlog of more than \$10.7 million of which the Company expects to recognize \$8.4 million during 2023.
- Secured contract modifications worth an additional \$1.1 million in upgrades to a new system for an existing customer in the passenger transportation sector. The add-ons are part of a long-term installation of the Company's high-end RIP, which is designed to capture images at up to 125 miles per hour.
- Appointed industry veteran Thomas Hughes to the newly created role of Vice President of Sales, where he is responsible for supporting the Company's commercial and go-to-market strategies for its new subscription offerings.
- Continued to invest in and expand intellectual property by submitting additional AI and engineering patent applications.

Source: Company reports.

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**Exhibit 6: Duos Technologies Group, Inc. Stock Price (5-Years)**



Source: <https://bigcharts.marketwatch.com/>

**Exhibit 7: Consensus Expectations (as of March 30, 2023)**

	Revenue (mil)			EPS	
	2022E	2023E		2022E	2023E
Q1 Mar	\$1.4A	\$2.6E	Q1 Mar	\$(0.49)A	\$(0.29)E
Q2 Jun	\$3.6A		Q2 Jun	\$(0.22)A	
Q3 Sep	\$4.0A		Q3 Sep	\$(0.30)A	
Q4 Dec	\$7.6E		Q4 Dec	\$(0.09)E	
<b>Total</b>	<b>\$16.6E</b>	<b>\$18.4E</b>	<b>Total</b>	<b>\$(1.02)E</b>	<b>\$(0.78)E</b>

\*Quarterly estimates may not add to annual estimates due to variations in contributing estimates and rounding.

Source: Company report, Refinitiv, and Ascendant Capital Markets estimates



## FINANCIAL MODEL

### Duos Technologies Group, Inc.

Income Statement (\$ mils)	Mar-21	Jun-21	Sep-21	Dec-21	2021	Mar-22	Jun-22	Sep-22	Dec-22	2022	Mar-23	Jun-23	Sep-23	Dec-23	2023	Mar-24	Jun-24	Sep-24	Dec-24	2024
Fiscal Year End: December 31	Q1A	Q2A	Q3A	Q4A	FY-A	Q1A	Q2A	Q3A	Q4A	FY-A	Q1E	Q2E	Q3E	Q4E	FY-E	Q1E	Q2E	Q3E	Q4E	FY-E
<b>Total Revenue</b>	<b>2.2</b>	<b>0.6</b>	<b>1.7</b>	<b>3.7</b>	<b>8.3</b>	<b>1.4</b>	<b>3.6</b>	<b>4.0</b>	<b>5.9</b>	<b>15.0</b>	<b>2.7</b>	<b>4.2</b>	<b>5.2</b>	<b>7.9</b>	<b>20.0</b>	<b>3.1</b>	<b>4.7</b>	<b>5.9</b>	<b>8.8</b>	<b>22.4</b>
Cost of Revenues	2.7	2.2	2.8	3.1	10.8	1.2	2.3	2.9	3.8	10.3	1.9	2.7	3.3	4.9	12.8	2.0	2.9	3.6	5.2	13.7
Gross Profit	(0.6)	(1.5)	(1.1)	0.6	(2.6)	0.2	1.3	1.1	2.1	4.7	0.9	1.4	1.9	3.0	7.2	1.1	1.7	2.3	3.6	8.7
Sales & marketing	0.3	0.4	0.4	0.2	1.2	0.3	0.4	0.3	0.4	1.3	0.3	0.5	0.5	0.5	1.7	0.3	0.5	0.5	0.4	1.7
Research & development	0.1	0.1	0.1	0.1	0.3	0.4	0.5	0.3	0.4	1.7	0.3	0.5	0.6	0.5	1.8	0.3	0.5	0.5	0.5	1.8
Administration	0.9	1.0	1.0	0.6	3.4	2.1	1.8	2.3	2.4	8.6	2.1	2.1	2.1	2.4	8.6	2.0	1.9	2.3	2.2	8.4
Restructuring and other					0.0					0.0					0.0					0.0
Total operating expenses	1.2	1.4	1.4	0.9	4.9	2.9	2.7	3.0	3.1	11.6	2.7	3.0	3.1	3.3	12.1	2.6	2.8	3.3	3.2	11.9
<b>Operating income (loss)</b>	<b>(1.8)</b>	<b>(2.9)</b>	<b>(2.4)</b>	<b>(0.2)</b>	<b>(7.5)</b>	<b>(2.6)</b>	<b>(1.4)</b>	<b>(1.9)</b>	<b>(1.0)</b>	<b>(6.9)</b>	<b>(1.8)</b>	<b>(1.6)</b>	<b>(1.3)</b>	<b>(0.3)</b>	<b>(4.9)</b>	<b>(1.5)</b>	<b>(1.1)</b>	<b>(1.1)</b>	<b>0.4</b>	<b>(3.2)</b>
Interest income (expense)	(0.0)	(0.0)	(0.0)	(0.0)	(0.0)	(0.0)	(0.0)	(0.0)	(0.0)	(0.0)	(0.0)	(0.0)	(0.0)	(0.0)	(0.0)	(0.0)	(0.0)	(0.0)	(0.0)	(0.0)
Other income (expense)	1.4	0.0	0.0	0.0	1.5	0.0	0.1	(0.1)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Income before income taxes	(0.4)	(3.0)	(2.5)	(0.2)	(6.0)	(2.6)	(1.3)	(1.9)	(1.0)	(6.9)	(1.8)	(1.6)	(1.3)	(0.3)	(4.9)	(1.5)	(1.1)	(1.1)	0.4	(3.2)
Income taxes	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Net income (loss)	(0.4)	(3.0)	(2.5)	(0.2)	(6.0)	(2.6)	(1.3)	(1.9)	(1.0)	(6.9)	(1.8)	(1.6)	(1.3)	(0.3)	(4.9)	(1.5)	(1.1)	(1.1)	0.4	(3.2)
Nonrecurring/noncash adjustments					0.0					0.0					0.0					0.0
<b>Net income (pro forma)</b>	<b>(0.4)</b>	<b>(3.0)</b>	<b>(2.5)</b>	<b>(0.2)</b>	<b>(6.0)</b>	<b>(2.6)</b>	<b>(1.3)</b>	<b>(1.9)</b>	<b>(1.0)</b>	<b>(6.9)</b>	<b>(1.8)</b>	<b>(1.6)</b>	<b>(1.3)</b>	<b>(0.3)</b>	<b>(4.9)</b>	<b>(1.5)</b>	<b>(1.1)</b>	<b>(1.1)</b>	<b>0.4</b>	<b>(3.2)</b>
EBITDA	(1.6)	(2.7)	(2.3)	0.1	(6.5)	(2.2)	(1.0)	(1.8)	(0.6)	(5.5)	(1.4)	(1.2)	(0.9)	0.1	(3.5)	(1.2)	(0.7)	(0.7)	0.8	(1.8)
Shares, Basic	3.5	3.6	3.6	4.2	3.7	5.4	6.1	6.5	6.9	6.2	7.0	8.4	8.5	8.6	8.1	8.7	8.8	8.9	9.0	8.9
Shares, Diluted	3.5	3.6	3.6	4.2	3.7	5.4	6.1	6.5	6.9	6.2	7.0	8.4	8.5	8.6	8.1	8.7	8.8	8.9	9.0	8.9
EPS Basic (pro forma)	(\$0.11)	(\$0.83)	(\$0.68)	(\$0.05)	(\$1.63)	(\$0.49)	(\$0.22)	(\$0.30)	(\$0.14)	(\$1.11)	(\$0.25)	(\$0.19)	(\$0.15)	(\$0.04)	(\$0.61)	(\$0.18)	(\$0.12)	(\$0.12)	\$0.05	(\$0.36)
EPS Diluted (pro forma)	(\$0.11)	(\$0.83)	(\$0.68)	(\$0.05)	(\$1.63)	(\$0.49)	(\$0.22)	(\$0.30)	(\$0.14)	(\$1.11)	(\$0.25)	(\$0.19)	(\$0.15)	(\$0.04)	(\$0.61)	(\$0.18)	(\$0.12)	(\$0.12)	\$0.05	(\$0.36)
<b>Margins</b>																				
Gross margin	-27%	-237%	-61%	17%	-31%	15%	35%	27%	36%	32%	32%	34%	36%	38%	36%	35%	37%	39%	41%	39%
Sales & marketing	14%	54%	21%	6%	15%	20%	10%	7%	6%	9%	11%	11%	9%	6%	9%	10%	10%	8%	5%	8%
Research & development	3%	12%	3%	1%	3%	30%	15%	8%	6%	11%	11%	11%	6%	9%	9%	10%	10%	9%	6%	8%
Administration	41%	151%	55%	16%	41%	149%	49%	58%	40%	57%	75%	50%	40%	30%	43%	65%	40%	40%	25%	38%
Operating margin	-85%	-455%	-141%	-6%	-90%	-184%	-39%	-46%	-16%	-46%	-65%	-38%	-24%	-4%	-25%	-50%	-23%	-18%	5%	-14%
Tax rate, GAAP	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Net margin	-19%	-455%	-141%	-5%	-73%	-184%	-37%	-48%	-16%	-46%	-65%	-38%	-24%	-4%	-25%	-50%	-23%	-18%	5%	-14%
<b>YY % change</b>																				
Total Revenue	117%	-67%	36%	-2%	3%	-33%	458%	131%	60%	82%	90%	15%	30%	32%	33%	12%	12%	12%	12%	12%
Gross margin	-12%	-920%	331%	-82%	-192%	-139%	-183%	-203%	247%	-286%	294%	10%	71%	39%	51%	23%	22%	21%	21%	21%
Sales & marketing	-57%	13%	3%	-42%	72%	-77%	32%	-21%	28%	8%	-78%	52%	3%	0%	27%	-82%	52%	1%	-6%	-1%
Research & development	-98%	30%	-28%	-5%	-93%	74%	21%	-38%	8%	556%	-82%	52%	26%	-18%	9%	-83%	52%	13%	0%	1%
Administration	-83%	12%	-2%	-38%	-32%	-37%	-17%	32%	1%	153%	-76%	1%	1%	13%	-1%	-77%	-6%	26%	-6%	-2%
Operating income (loss)	-13%	107%	-10%	-42%	12%	45%	-53%	-24%	301%	-8%	-33%	13%	-33%	-67%	-28%	-14%	-32%	-16%	-240%	-35%
Net income (loss)	-81%	101%	-10%	-53%	-11%	551%	-55%	-21%	377%	14%	-33%	18%	-35%	-67%	-28%	-14%	-32%	-16%	-240%	-35%
EPS Diluted (pro forma)	-86%	100%	-11%	-61%	-20%	330%	-73%	-56%	191%	-32%	-49%	-15%	-51%	-73%	-45%	-31%	-35%	-20%	-233%	-40%

Source: Company reports and Ascendant Capital Markets estimates.

**Duos Technologies Group, Inc.**

Balance Sheet (\$ mils)	Mar-21	Jun-21	Sep-21	Dec-21	Mar-22	Jun-22	Sep-22	Dec-22	Mar-23	Jun-23	Sep-23	Dec-23	Mar-24	Jun-24	Sep-24	Dec-24
Fiscal Year End: December 31	Q1A	Q2A	Q3A	Q4A	Q1A	Q2A	Q3A	Q4A	Q1E	Q2E	Q3E	Q4E	Q1E	Q2E	Q3E	Q4E
<b>Assets</b>																
Cash and cash equivalents	7.1	4.8	2.3	0.9	5.3	6.3	5.0	1.1	4.9	3.2	1.9	1.5	0.9	(0.8)	(2.4)	(2.1)
Short term investments									0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Accounts receivable, net	1.4	0.2	0.4	1.8	0.3	0.3	2.2	3.4	1.2	1.8	2.3	3.5	1.4	2.1	2.6	3.9
Contract assets	0.0	0.2	0.2	0.0	0.3	0.7	0.8	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4
Inventory				0.3	0.3	0.8	0.7	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4
Deferred income taxes									0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prepaid expenses and other	0.7	0.7	0.6	0.3	0.8	0.7	0.7	0.4	1.0	1.5	1.9	2.9	1.1	1.7	2.2	3.3
Total current assets	9.2	6.0	3.5	3.3	7.1	8.8	9.4	6.8	9.0	8.4	8.0	9.8	5.2	4.8	4.2	6.9
Property and equipment, net	0.3	0.4	0.4	0.6	0.6	0.6	0.7	0.6	0.8	0.6	0.9	1.1	1.3	1.5	2.2	2.4
Operating lease				4.9	4.8	4.8	4.7	4.7	4.7	4.7	4.7	4.7	4.7	4.7	4.7	4.7
Intangibles, net	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3
Deferred income tax									0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Other	0.2	0.1	0.6	0.6	0.6	0.7	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6
<b>Total assets</b>	<b>9.7</b>	<b>6.5</b>	<b>4.6</b>	<b>9.5</b>	<b>13.2</b>	<b>15.0</b>	<b>15.6</b>	<b>13.1</b>	<b>15.5</b>	<b>14.7</b>	<b>14.5</b>	<b>16.4</b>	<b>12.1</b>	<b>11.9</b>	<b>12.1</b>	<b>15.0</b>
<b>Liabilities and stockholders' equity</b>																
Accounts payable	0.7	0.5	1.0	1.0	1.0	1.3	1.6	2.3	1.5	2.3	2.9	4.4	1.7	2.6	3.3	4.9
Accounts payable - related party	0.0	0.0							0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Accrued expenses	1.0	1.3	1.2	0.6	0.6	0.5	0.5	0.5	1.1	0.8	1.0	1.6	1.2	0.9	1.2	1.8
Deferred revenue	1.3	1.1	0.9	0.6					0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Deferred income tax									0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Contract liabilities				1.2	2.4	5.0	3.9	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Warrant liabilities									0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Other	0.4	0.2	0.6	0.4	0.5	0.6	0.5	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8
Short term debt	0.2	0.2	0.1	0.1	0.2	0.2	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
<b>Total current liabilities</b>	<b>3.6</b>	<b>3.2</b>	<b>3.7</b>	<b>3.9</b>	<b>4.5</b>	<b>7.6</b>	<b>6.6</b>	<b>4.5</b>	<b>4.4</b>	<b>4.9</b>	<b>5.7</b>	<b>7.7</b>	<b>4.7</b>	<b>5.3</b>	<b>6.2</b>	<b>8.4</b>
Deferred income taxes									0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Warrant liabilities									0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Other long term liabilities	0.1	0.1	0.0	0.0	0.0				0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Leases				4.7	4.7	4.6	4.6	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Deferred revenue									0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Long term debt									0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
<b>Total other liabilities</b>	<b>0.1</b>	<b>0.1</b>	<b>0.0</b>	<b>4.8</b>	<b>4.7</b>	<b>4.6</b>	<b>4.6</b>	<b>4.5</b>	<b>4.5</b>	<b>4.5</b>	<b>4.5</b>	<b>4.5</b>	<b>4.5</b>	<b>4.5</b>	<b>4.5</b>	<b>4.5</b>
Preferred stock	6.2	6.2	6.2	3.4	0.9	0.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Common stock	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.3	0.5	0.8	1.1	1.3	1.6	1.9	2.1
Additional paid-in capital	39.9	40.0	40.1	43.1	51.4	51.6	55.9	56.6	56.6	56.6	56.6	56.6	56.6	56.6	56.6	56.6
Retained earnings	(39.9)	(42.8)	(45.3)	(45.5)	(48.1)	(49.5)	(51.4)	(52.4)	(54.1)	(55.7)	(57.0)	(57.3)	(58.8)	(59.9)	(60.9)	(60.5)
Other	(0.2)	(0.2)	(0.2)	(0.2)	(0.2)	(0.2)	(0.2)	(0.2)	(0.2)	(0.2)	(0.2)	(0.2)	(0.2)	(0.2)	(0.2)	(0.2)
Accumulated other comprehensive income									4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
<b>Total stockholders' equity</b>	<b>6.1</b>	<b>3.2</b>	<b>0.9</b>	<b>0.8</b>	<b>3.9</b>	<b>2.8</b>	<b>4.3</b>	<b>4.1</b>	<b>6.5</b>	<b>5.2</b>	<b>4.2</b>	<b>4.2</b>	<b>2.9</b>	<b>2.1</b>	<b>1.3</b>	<b>2.0</b>
<b>Total stockholders' equity and liabilities</b>	<b>9.7</b>	<b>6.5</b>	<b>4.6</b>	<b>9.5</b>	<b>13.2</b>	<b>15.0</b>	<b>15.6</b>	<b>13.1</b>	<b>15.5</b>	<b>14.7</b>	<b>14.5</b>	<b>16.4</b>	<b>12.1</b>	<b>11.9</b>	<b>12.1</b>	<b>15.0</b>

**Balance Sheet Drivers**

	Mar-21	Jun-21	Sep-21	Dec-21	Mar-22	Jun-22	Sep-22	Dec-22	Mar-23	Jun-23	Sep-23	Dec-23	Mar-24	Jun-24	Sep-24	Dec-24
	Q1A	Q2A	Q3A	Q4A	Q1A	Q2A	Q3A	Q4A	Q1E	Q2E	Q3E	Q4E	Q1E	Q2E	Q3E	Q4E
Prepaid as % of total rev	32%	114%	37%	8%	58%	20%	16%	7%	37%	37%	37%	37%	37%	37%	37%	37%
A/P as % of total rev	32%	82%	56%	28%	67%	36%	41%	39%	56%	56%	56%	56%	56%	56%	56%	56%
Accrued exp related as % of total rev	46%	197%	68%	17%	41%	14%	12%	8%	40%	20%	20%	20%	40%	20%	20%	20%
<b>Activity Ratios</b>																
A/R Days Sales Outstanding	58	33	20	43	21	8	50	52	40	40	40	40	40	40	40	40
<b>Book &amp; Cash Value (per share)</b>																
Book Value per Share (diluted)	\$1.71	\$0.89	\$0.24	\$0.19	\$0.74	\$0.46	\$0.67	\$0.59	\$0.93	\$0.62	\$0.50	\$0.49	\$0.33	\$0.24	\$0.15	\$0.22
Cash per Share (diluted)	\$2.00	\$1.36	\$0.63	\$0.21	\$1.00	\$1.03	\$0.77	\$0.16	\$0.71	\$0.38	\$0.22	\$0.18	\$0.10	-\$0.09	-\$0.27	-\$0.23
Net cash per Share (diluted)	\$1.93	\$1.31	\$0.61	\$0.20	\$0.96	\$1.00	\$0.75	\$0.16	\$0.70	\$0.38	\$0.22	\$0.17	\$0.10	-\$0.09	-\$0.27	-\$0.23

Source: Company reports and Ascendant Capital Markets estimates

**Duos Technologies Group, Inc.**

Cash Flow Statement (\$ mils)	Mar-21	Jun-21	Sep-21	Dec-21	2021	Mar-22	Jun-22	Sep-22	Dec-22	2022	Mar-23	Jun-23	Sep-23	Dec-23	2023	Mar-24	Jun-24	Sep-24	Dec-24	2024	
Fiscal Year End: December 31	Q1A	Q2A	Q3A	Q4A	FY-A	Q1A	Q2A	Q3A	Q4A	FY-A	Q1E	Q2E	Q3E	Q4E	FY-E	Q1E	Q2E	Q3E	Q4E	FY-E	
<b>Cash flow from operating activities</b>																					
Net income	(0.4)	(3.0)	(2.5)	(0.2)	(6.0)	(2.6)	(1.3)	(1.9)	(1.0)	(6.9)	(1.8)	(1.6)	(1.3)	(0.3)	(4.9)	(1.5)	(1.1)	(1.1)	0.4	(3.2)	
Depreciation	0.1	0.1	0.1	(0.0)	0.3	0.1	0.1	0.1	0.1	0.4	0.1	0.1	0.1	0.1	0.4	0.1	0.1	0.1	0.1	0.4	
Amortization	0.0	0.1	(0.1)	0.3	0.3	0.1	0.1	(0.2)	0.0	0.0				0.0						0.0	
Debt related amortization expense					0.0					0.0					0.0					0.0	
Dividend					0.0					0.0					0.0					0.0	
Stock comp	0.1	0.1	0.1	0.1	0.4	0.3	0.2	0.2	0.3	1.0	0.3	0.3	0.3	0.3	1.1	0.3	0.3	0.3	0.3	1.1	
Deferred rent					0.0					0.0					0.0					0.0	
A/R reserves			0.1		0.1					0.0					0.0					0.0	
Deferred income taxes					0.0					0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Change in fair value of warrant liability					0.0					0.0					0.0					0.0	
Writedowns and impairments					0.0					0.0					0.0					0.0	
Other gains/losses	(1.4)			0.0	(1.4)					0.0					0.0					0.0	
Other					0.0				0.2	0.2					0.0					0.0	
<b>Changes in operating assets and liabilities:</b>																					
Accounts receivable	(0.2)	1.1	(0.3)	(1.2)	(0.6)	1.4	0.0	(1.9)	(1.2)	(1.7)	2.2	(0.6)	(0.5)	(1.2)	(0.1)	2.1	(0.7)	(0.5)	(1.3)	(0.4)	
Contract assets	0.1	(0.1)	(0.1)	0.2	0.1	(0.3)	(0.4)	(0.1)	0.4	(0.4)					0.0					0.0	
Inventory				(0.2)	(0.2)	(0.0)	(0.5)	0.1	(0.7)	(1.1)					0.0					0.0	
Prepaid expenses & other curre	0.0	0.1	0.2	0.2	0.4	(0.3)	0.0	0.2	0.3	0.3	(0.6)	(0.5)	(0.4)	(1.0)	(2.5)	1.8	(0.6)	(0.4)	(1.1)	(0.3)	
Income tax					0.0					0.0					0.0					0.0	
Other assets			(0.6)		(0.6)			0.2	(0.2)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Accounts payable	0.1	(0.2)	0.4	0.1	0.4	(0.1)	0.4	0.3	0.6	1.2	(0.8)	0.8	0.6	1.5	2.1	(2.7)	0.9	0.7	1.7	0.5	
Accrued expenses	(0.0)	0.1	0.1	(0.7)	(0.5)	(0.0)	(0.1)	(0.0)	(0.0)	(0.2)	0.6	(0.3)	0.2	0.5	1.1	(0.3)	(0.3)	0.2	0.6	0.2	
Contract liabilities	(0.5)	0.0	0.3	0.7	0.5	0.5	2.7	(1.1)	(2.9)	(0.9)					0.0					0.0	
Deferred revenue	1.0	(0.2)	(0.2)	(0.3)	0.3					0.0					0.0					0.0	
Other liabilities	(0.0)	(0.1)	0.1	0.0	0.0	0.1	(0.0)	0.0	0.1	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
<b>Net cash (used in) provided by</b>	<b>(1.3)</b>	<b>(1.9)</b>	<b>(2.3)</b>	<b>(1.1)</b>	<b>(6.6)</b>	<b>(0.8)</b>	<b>1.1</b>	<b>(4.1)</b>	<b>(4.0)</b>	<b>(7.9)</b>	<b>0.1</b>	<b>(1.8)</b>	<b>(0.9)</b>	<b>(0.1)</b>	<b>(2.8)</b>	<b>(0.3)</b>	<b>(1.4)</b>	<b>(0.8)</b>	<b>0.6</b>	<b>(1.8)</b>	
<b>Cash flow from investing activities</b>																					
Purchases of property and equi	(0.1)	(0.1)	(0.1)	(0.2)	(0.5)	(0.1)	(0.0)	(0.3)	0.1	(0.3)	(0.3)	0.1	(0.3)	(0.3)	(0.8)	(0.3)	(0.3)	(0.8)	(0.3)	(1.8)	
Purchases of short-term investments					0.0					0.0					0.0					0.0	
Acquisitions	(0.0)				(0.0)		(0.0)	0.0	(0.3)	(0.3)					0.0					0.0	
Other					0.0					0.0					0.0					0.0	
<b>Net cash used in investing activ</b>	<b>(0.1)</b>	<b>(0.1)</b>	<b>(0.1)</b>	<b>(0.2)</b>	<b>(0.6)</b>	<b>(0.1)</b>	<b>(0.1)</b>	<b>(0.2)</b>	<b>(0.2)</b>	<b>(0.6)</b>	<b>(0.3)</b>	<b>0.1</b>	<b>(0.3)</b>	<b>(0.3)</b>	<b>(0.8)</b>	<b>(0.3)</b>	<b>(0.3)</b>	<b>(0.8)</b>	<b>(0.3)</b>	<b>(1.8)</b>	
<b>Cash flow from financing activities</b>																					
Issuance of debt		(0.2)	0.2		0.0					0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Repayment of debt	(0.0)	(0.0)	(0.3)	(0.1)	(0.4)	(0.2)	(0.1)	(0.1)	(0.0)	(0.4)					0.0					0.0	
Issuance of stock	4.5				4.5	5.5	0.0	3.2	0.4	9.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Proceeds from stock option exercises					0.0					0.0					0.0					0.0	
Other					0.0					0.0	4.0				4.0					0.0	
Dividends and distributions					0.0					0.0					0.0					0.0	
<b>Cash provided by (used in) fina</b>	<b>4.5</b>	<b>(0.2)</b>	<b>(0.1)</b>	<b>(0.1)</b>	<b>4.1</b>	<b>5.4</b>	<b>(0.1)</b>	<b>3.1</b>	<b>0.4</b>	<b>8.7</b>	<b>4.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>4.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	
Effect of exchange rate on cash					0.0					0.0					0.0					0.0	
<b>Net increase (decrease) in cash</b>	<b>3.1</b>	<b>(2.2)</b>	<b>(2.6)</b>	<b>(1.4)</b>	<b>(3.1)</b>	<b>4.4</b>	<b>0.9</b>	<b>(1.3)</b>	<b>(3.8)</b>	<b>0.2</b>	<b>3.8</b>	<b>(1.8)</b>	<b>(1.3)</b>	<b>(0.4)</b>	<b>0.4</b>	<b>(0.6)</b>	<b>(1.7)</b>	<b>(1.6)</b>	<b>0.3</b>	<b>(3.6)</b>	
<b>Beginning cash and equivalents</b>	<b>4.0</b>	<b>7.1</b>	<b>4.8</b>	<b>2.3</b>	<b>4.0</b>	<b>0.9</b>	<b>5.3</b>	<b>6.3</b>	<b>5.0</b>	<b>0.9</b>	<b>1.1</b>	<b>4.9</b>	<b>3.2</b>	<b>1.9</b>	<b>1.1</b>	<b>1.5</b>	<b>0.9</b>	<b>(0.8)</b>	<b>(2.4)</b>	<b>1.5</b>	
<b>Ending cash and equivalents</b>	<b>7.1</b>	<b>4.8</b>	<b>2.3</b>	<b>0.9</b>	<b>0.9</b>	<b>5.3</b>	<b>6.3</b>	<b>5.0</b>	<b>1.1</b>	<b>1.1</b>	<b>4.9</b>	<b>3.2</b>	<b>1.9</b>	<b>1.5</b>	<b>1.5</b>	<b>0.9</b>	<b>(0.8)</b>	<b>(2.4)</b>	<b>(2.1)</b>	<b>(2.1)</b>	

Source: Company reports and Ascendant Capital Markets estimates

## **ANALYST CERTIFICATION**

Each analyst hereby certifies that the views expressed in this report reflect the analyst's personal views about the subject securities or issuers. Each analyst also certifies that no part of the analyst's compensation was, is, or will be, directly or indirectly, related to the specific recommendations or views expressed in this report. The analyst who prepared this report is compensated based upon the overall profitability of Ascendant Capital Markets, LLC, which may, from time to time, include the provision of investment banking, financial advisory and consulting services. Compensation for research is based on effectiveness in generating new ideas for clients, performance of recommendations, accuracy of earnings estimates, and service to clients.

## **Duos Technologies Group, Inc.**

- Ascendant Capital Markets, LLC has not received compensation for advisory or investment banking services from the company in the past 12 months.

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Risks to attainment of our share price target include balance sheet/liquidity risks, technological changes, customer demand for software, AI, and inspection technologies, investor sentiment for investing in technology stocks, enterprise sentiment and industry growth for technology companies, competition, changing macroeconomic factors, and changes in government regulations.

## **Ascendant Capital Markets, LLC Rating System**

**BUY:** We expect the stock to provide a total return of 15% or more within a 12-month period.



**HOLD:** We expect the stock to provide a total return of negative 15% to positive 15% within a 12-month period.

**SELL:** We expect the stock to have a negative total return of more than 15% within a 12-month period.

Total return is defined as price appreciation plus dividend yield.

### Ascendant Capital Markets, LLC Distribution of Investment Ratings (as of January 15, 2023)

Rating	Count	Percent	Investment Banking Services Past 12 months	
			Count	Percent
Buy	44	98%	18	41%
Hold	0	0%	0	0%
Sell	1	2%	0	0%
Total	45	100%	18	40%

### Other Important Disclosures

Our analysts use various valuation methodologies including discounted cash flow, price/earnings (P/E), enterprise value/EBITDAS, and P/E to growth rate, among others. Risks to our price targets include failure to achieve financial results, product risk, regulatory risk, general market conditions, and the risk of a change in economic conditions.

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