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## Bluejay Diagnostics (NASDAQ: BJDJ) - Buy

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### Getting Ready to File – IL6 Test Holds Promise to Shift the Treatment Paradigm for Sepsis and Beyond...

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Bluejay Diagnostics reported that it has filed a Pre-Submission package for the Symphony IL-6 Test with the FDA. The filing sets the stage for a smooth approval, i.e., feedback prior to submitting a medical device marketing application.

**Bluejay's Symphony looks like it will sing.** Bluejay as promised has now filed its Pre-Submission application with the FDA for the Symphony IL-6 Test and plans to initiate an expanded clinical testing program. The results from this clinical program form the basis of the company's planned 510(k) marketing application, intended to be submitted in Q3:22

**The Study:** Bluejay conducted its multicenter clinical study at two sites at the University of Texas Southwestern Medical Center's (William P. Clements Hospital and Zale Lipsey Pavilion Hospital), and at Parkland Memorial Hospital, all located in Dallas, Texas.

The study objectives:

- 1) Validating the use of unprocessed whole blood for the measurement of IL-6 (compared with the typical multistep laboratory processing required);
- 2) Comparison of the Symphony produced measurement values relative to other current standard laboratory tests;
- 3) Development of the clinical data to support moving the Symphony IL-6 testing into potential commercial use; and
- 4) Data to support approval.

**What is Symphony?** Symphony is an automated diagnostic system consisting of a fluorescence immuno-analyzer that uses a single-use diagnostic test cartridge with reagents integrated into the cartridge. Symphony utilizes a 'sample-to-result' format, which means that once a specimen is taken from the patient, it is placed in the cartridge. Then the cartridge is placed inside the analyzer, where the test is run in minutes without further technician intervention or additional reagent.

**A Paradigm Shift – A Rapid Point of Care Test for IL-6:** Bluejay's IL-6 test for sepsis triage is intended to measure IL-6 levels in whole blood samples in near-patient settings. Interleukin-6 (IL-6) is an established biomarker of immune system activation. It is elevated in infection, inflammation, and cancer. IL-6 presents as an early "first responder" and needs to be measured quickly and reliably.

**Valuation:** We project our model out to 2030. We apply a conservative 30% success probability to our projected revenues in our Symphony product model in addition to our 30% risk rate applied in our Free Cash Flow to the Firm (FCFF), discounted EPS (dEPS), and Sum-of-the-Parts (SOP) models, which are then equal-weighted and averaged and rounded to the nearest whole number to derive our 12-month projected price target of \$10.0

**Risks to our thesis include:** 1. Regulatory Approvals; 2. Clinical Science 3. Dependence on OEM suppliers; 4. Development of the target markets 5. Intellectual Capital 6. Dilution



The Symphony System

Source: Bluejay

Stock Data			
52-Week Range	\$1.45	-	\$6.25
Shares Outstanding (mil.)	19.5		
Market Capitalization (mil.)	\$30		
Enterprise Value (mil.)	\$6		
Debt to Capital	0%		
Book Value/Share	NA		
Price/Book	-		
Average Three Months Trading Volume (K)	NA		
Insider Ownership	50.9%		
Institutional Ownership	5.0%		
Short interest (mil.)	4.6%		
Dividend / Yield	\$0.00/0.0%		



**Company Description:** Bluejay is a late-stage company focused on improving patient outcomes through a more cost-efficient, rapid, point of care products for triage, diagnosis, and monitoring of disease progression (Sepsis). A market exists for this, a rapid on-site diagnostic system that can be employed for testing and monitoring. Bluejay's diagnostic system, Symphony, is an exclusive (licensed and patented), low-cost system that consists of a small footprint instrument and single-use indication-specific test cartridges, razor and razor blade model. The critical next step for the company is FDA approval of the IL-6 test for sepsis triage. The test itself provides a rapid solution (24-minute turnaround time) on-site in the clinic, Intensive Care Unit, Emergency Room, and in other hospital and clinical settings where rapid and reliable results are required.

**How is testing done today?** Currently, testing is generally performed in a laboratory, and the transportation and associated logistics of moving the samples to the lab and obtaining the result typically takes between eight and 48 hours. This compares to Bluejay's platform, which represents a "sample-to-result system" that has been shown in a clinical study to provide results in 24 minutes. **We see this as a paradigm shift.**

**What is the business model?** Bluejay's business model is razor and razor blades. That is to generate initial revenues from the sale of the tabletop Symphony instrument, and more importantly, from the ongoing sale of each single-use indication-specific cartridge, multiple tests may be run on each cartridge that is used on the Symphony instrument. Once the test material (generally a small volume blood sample) is transferred to a single-use cassette which is indication-specific, no additional sample preparation, pre-or post-, is required. The Symphony platform holds the promise to eliminate the time required for transportation and logistics as well as eliminate a large number of operational 'touch-points' involved in sample analysis. In our model, we assume an "occupancy or Utilization Rate" to adjust for the number of tests each cartridge represents.

**What are the origins of the technology?** The technology is the result of more than twelve years and  $\approx$ 50 million dollars of development by Toray Industries, Inc. ("Toray - Japan"), Bluejay's development partner. For the past three years, Toray has used the technology successfully as a Research Use Only ("RUO") product in Japan by selected clinical institutions for measurement of Interleukin-6 ("IL-6") in rheumatoid arthritis to monitor disease progression. Bluejay is now working to leverage the platform and drive it into commercial applications in the U.S.

**What are the regulatory hurdles?** The initial regulatory pathway is to label and distribute Symphony as an RUO product in the U.S. Certain laboratories may choose to utilize the RUO Symphony in laboratory-developed tests or LDTs. An LDT is a type of in vitro diagnostic test that is designed, manufactured, and used within a single laboratory. In parallel, the company is pursuing 510(k) clearance from the FDA to use Symphony for in vitro diagnostic use. In order to expedite the submission of Bluejay's 510(k), the company seeks to obtain data from laboratories using the RUO Symphony in LDTs. Prior to seeking 510(k) clearance for Symphony, the company is working to conduct additional clinical trials, which have already begun (commenced in September 2021). In early 2022 the company plans to submit a pre-submission application to the FDA presenting the study design and the data from their first set of studies. The company expects to work with regulators and, as needed, modify the ongoing studies and construct the 510(k) premarket notification clearance application. The goal is to submit a 510(k) premarket notification at the end of the third quarter of 2022.

**What's the initial target?** IL-6. The first diagnostic test in development is for triage of Sepsis in patients utilizing IL-6 as the target biomarker. According to a report by Market Data Forecast (February 2020), the total market for IL-6 testing for sepsis triage was \$934 million in 2020 and is estimated to reach \$1.4 billion by 2025, growing at a CAGR of 8.5%. IL-6 has important roles in both innate and adaptive immunity. IL-6 is one of the principal inflammatory cytokines released during trauma or infection. Measuring IL-6 can serve as an early warning sign of a patient's prognosis and inform quicker and more accurate healthcare. Unlike the conventional downstream biomarkers typically used for Sepsis, IL6 is released hours to days before procalcitonin ("PCT") and c-reactive protein ("CRP"). However, due to long wait times to receive lab results, IL-6 has had limited utility in healthcare. IL-6 is an inflammatory biomarker, also considered as a 'first-responder,' that is elevated in patients with infection, Sepsis, and septicemia. Reports have shown IL-6 concentrations correlate with severity of Sepsis, progression of cancer, rheumatoid arthritis, and many other severe conditions as defined by clinical and laboratory parameters. IL-6 is a clinically established biomarker for the assessment of the severity of infection and inflammation across many disease indications. IL-6 is a biomarker that appears early on as a 'first responder' during infection or inflammation. We believe detection of IL-6 early on might allow physicians to make better therapeutic and treatment decisions. Due to the clinical significance of IL-6 testing, hospital systems, and centralized testing labs routinely utilize IL-6 testing.

The importance of IL-6 testing has been further highlighted during the COVID-19 pandemic, and IL-6 concentrations in blood have been found to be heightened in patients with COVID-19-associated systemic inflammation and hypoxic respiratory failure. In addition, certain of the institutions that they are working with on their clinical studies have Clinical Laboratory Improvement Amendments ("CLIA") certified labs. These CLIA certified laboratories might adopt Symphony IL-6 tests for their clinical testing as laboratory-developed tests. BJDJX intends to submit an emergency use authorization ("EUA") application with the FDA for this indication.

**Beyond IL6?** The company is developing a pipeline of diagnostic tests for Symphony, including triage of myocardial infarction (“MI”), congestive heart failure (“CHF”), neutropenic Sepsis in cancer, and other disease diagnostic indications using the same Symphony platform. The company plans to pursue the general diagnostic marketplace following a sufficient clinical trial to support a 510(k) submission with the FDA, with the initial indication as a general diagnostic test for Sepsis in the triage of patients. *Source: Adapted from Bluejay Diagnostics Filings.*

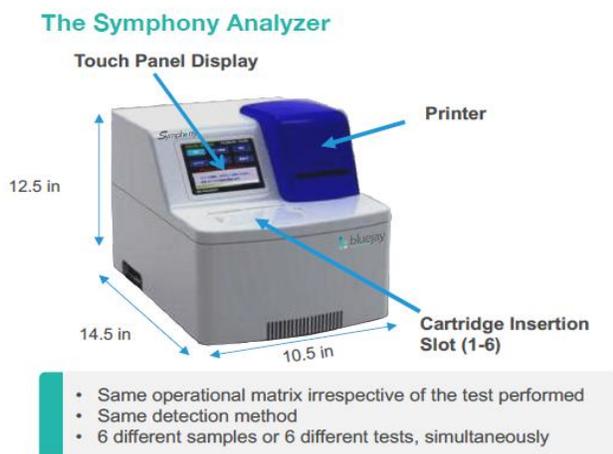
**Financials:** Bluejay, on November 10, 2021, announced the pricing of an upsized \$21.6 million underwritten Initial Public Offering of 2,160,000 units, at a unit price of \$10.00. Additional financing may be needed depending on the timing of commercialization and a determination (and we assume so, in our model) around how best to achieve market share, which could require additional spending.

**Why Symphony – What are the Platform / Product Advantages?**

- **Ease of Use.** Symphony is a sample-to-result system. No sample preparation or pre-processing is required. Once the samples are placed inside the cartridge, and the cartridge is placed in the analyzer, the technician does not need to monitor the test and can complete other unrelated tasks.
- **Cost Savings.** It’s likely that the Symphony system coupled with a competitive pricing strategy will make it possible for providers, clinics, and hospitals that have cost constraints to adopt in-house testing. Future customers may either purchase the analyzer or lease it at an affordable price through a third-party leasing company. We assume a typical Symphony test will cost approximately \$80 (the cost of the single-use cartridge to the healthcare facility) compared to the roughly \$275 per test (estimated) that is typically charged by a third-party lab, excluding overhead and transportation costs.
- **Time Savings.** Saving pre-processing time for samples reduces the time to test results by approximately one to two hours, depending on the pre-processing required for a particular assay system. Furthermore, as current tests can only be performed in a laboratory, the transportation, and logistics of transporting the samples to the lab and obtaining the result take between eight and 48 hours. Based on the results of a prior study (the Japan Study), it’s anticipated that the Symphony system could eliminate the time required for transportation and logistics and eliminate the number of operational ‘touch-points’ from ‘sample-to-result’ from six to two.
- **Space Savings.** Symphony’s significantly smaller tabletop design (14.5 inches by 10.5 inches), compared to the 100-200 square feet of space required by other diagnostic systems, will make it possible for many healthcare providers to perform in-house testing where there is limited available laboratory space.
- **Versatile Platform with the Capability to Deliver a Broad Test Menu.** The Symphony platform has the potential for broad application across a number of areas in near-patient diagnostic testing. The same analyzer can be utilized for future planned diagnostic tests.
- **Throughput and Multiple Testing Capability.** The platform has the ability to analyze up to six distinct targets or six different patient samples simultaneously within approximately 24 minutes. This functionality will allow any organization to run multiple tests or panels on a single analyzer.

**Exhibit 1. The Symphony Platform – A Razor & Razor Blade**

Analyzer and Cartridge basics



Source: Bluejay Diagnostics.

**Exhibit 2. The Clinical Pathway**
**Elements of Clinical Testing Program: Expected to Completed by Q3:22 (using ~250 subjects):**

Testing Program	Testing Sites	
Reference Range Study	 UT Southwestern Medical Center.  Zale Lipshy Pavilion Hospital	William P. Clements Jr. University Hospital
Cut-Off Value Study		
Cut-Off Validation Study		
Analytical Testing		

Milestone	Target Timing
Initial Testing Program at UT Southwestern	Underway
UT Southwestern Testing Program results form the basis of FDA Pre-submission application	January 2022
Conduct an expanded Testing Program	Q1-Q3:2022
File an FDA 510(K)* application for the use of the Symphony IL-6 Test for sepsis triage/monitoring	Q3: 2022

Source: Bluejay Diagnostics

**Product Model & Assumptions**

- Our model is based on the number of units placed and the revenues associated with each unit.
- We assume a price of \$80 per test to the company. If we further assume each cartridge can handle six tests.
- We include an occupancy factor – meaning that not every cartridge will be fully utilized (six tests per cartridge=100%) and not every system.
- We assume up to five cartridges may be used per day x five days a week x 52 weeks a year.
- The market opportunity is large, with 270,000 sepsis patients in the U.S. annually and a significant number of facilities that treat patients, many of which do not have any in-house testing capabilities.
- We assume commercialization can begin by 2024 as trial users are converted to commercial ones
- We assume gradual market penetration over the next decade.
- We apply a probability of success factor of just 30% or a risk cut of 70% in our model. As the product becomes approved, this factor is expected to rise (probability-rises; risk factor declines). As units are placed, this, too, drives an adjustment to our assumed success.
- We believe our assumptions are modest as the market for Sepsis alone is suggested to reach \$2 billion by the end of the decade.
- Our model does not assume any profit associated with the sale or lease of Symphony units.

**Simplified IL6 Product Model**

Symphony Model - Sepsis Triage	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032
Sepsis Incidence (U.S.) - CDC	270,000	283,500	297,675	312,559	328,187	344,596	361,826	379,917	398,913	418,859	439,802
Systems Placed	30	150	300	580	750	1000	1250	1500	1750	2000	2200
Cartridge per System	3120	3120	3120	3120	3120	3120	3120	3120	3120	3120	3120
Tests Per Cartridge	6	6	6	6	6	6	6	6	6	6	6
Percent Occupancy of Tests & Cartridges	10%	15%	20%	25%	30%	35%	35%	35%	35%	35%	35%
Number of Annual Tests	56,160	421,200	1,123,200	2,714,400	4,212,000	6,552,000	8,190,000	9,828,000	11,466,000	13,104,000	14,414,400
Price per Test	\$80	\$80	\$90	\$90	\$100	\$100	\$110	\$110	\$110	\$110	\$110
Probability of Success	30%	30%	30%	30%	30%	30%	30%	30%	30%	30%	30%
Annual Revenues (IL6) - Millions	\$1	\$10	\$30	\$73	\$126	\$197	\$270	\$324	\$378	\$432	\$476

Source: Dawson James

**Valuation:** Our valuation for Bluejay Diagnostics is based on revenue projections which are difficult with any accuracy to forecast. We know the market itself is quite large. Beyond product approval, the challenge will be the placement of units and the utilization of those units. We see this as a gradual process. To adjust for the associated risks, not just with approval but a successful product launch, we apply just a 30% assumed success in our model. The subsequent revenues are then fed into our income statement. To the income statement metrics, we then model a target valuation. We assume the company does raise additional capital, and as such, our valuation math is based on the 2030 fully diluted share count. We apply a 30% risk rate in these models: free cash flow to the Firm (FCFF), discounted EPS (dEPS), and Sum-of-the-Parts (SOP). We select 30% for micro-capitalized growth companies, and this represents our highest risk rate. The result of these three models is then equal-weighted and averaged, and rounded to the nearest whole number to provide a 12-month target price.

### Exhibit 3. Free Cash Flow Model

Average	\$	10
Price Target	\$	10
Year		2023

#### DCF Valuation Using FCF (min):

units ('000 - Cnd\$)	2021E	2022E	2023E	2024E	2025E	2026E	2027E	2028E	2029E	2030E
EBIT	(2,376)	(6,128)	(1,566)	5,961	33,827	71,891	134,329	192,651	237,208	278,259
Tax Rate	0%	0%	0%	0%	0%	10%	20%	30%	40%	40%
EBIT(1-t)	(2,376)	(6,128)	(1,566)	5,961	33,827	64,702	107,463	134,856	142,325	166,956
CapEx	(6)	-	-	-	-	-	-	-	-	-
Depreciation	47	-	-	-	-	-	-	-	-	-
Change in NWC	-	-	-	-	-	-	-	-	-	-
FCF	(2,336)	(6,128)	(1,566)	5,961	33,827	64,702	107,463	134,856	142,325	166,956
PV of FCF	(3,037)	(6,128)	(1,204)	3,527	15,397	22,654	28,943	27,939	22,682	26,607
Discount Rate	30%									
Long Term Growth Rate	1%									
Terminal Cash Flow	581,466.16									
Terminal Value YE2030	92,666									
NPV	239,211									
NPV-Debt	4									
Shares out (thousands)	24,020	2030E								
NPV Per Share	\$	10								

Source: Dawson James estimates

### Exhibit 4. Discounted EPS Model

Current Year	2023
Year of EPS	2030
Earnings Multiple	10
Discount Factor	30%
Selected Year EPS	\$ 6.95
NPV	\$ 11

		Discount Rate and Earnings Multiple Varies, Year is Constant					
		2030 EPS					
Earnings Multiple		5%	10%	15%	20%	25%	30%
2		\$9.88	\$7.13	\$5.23	\$3.88	\$2.92	\$ 2.22
5		\$24.70	\$17.83	\$13.06	\$9.70	\$7.29	\$ 5.54
10		\$49.39	\$35.67	\$26.13	\$19.40	\$14.58	\$ 11.08
15		\$74.09	\$53.50	\$39.19	\$29.10	\$21.86	\$ 16.61
20		\$98.79	\$71.33	\$52.26	\$38.79	\$29.15	\$ 22.15
25		\$123.48	\$89.16	\$65.32	\$48.49	\$36.44	\$ 27.69
30		\$148.18	\$107.00	\$78.38	\$58.19	\$43.73	\$ 33.23
35		\$172.88	\$124.83	\$91.45	\$67.89	\$51.01	\$ 38.77

Source: Dawson James estimates

### Exhibit 5. Sum-of-the-Parts Model

Sum of the Parts	LT Gr	Discount Rate	Yrs. to Mkt	% Success	Peak Sales MMs	Term Val
IL-6	1%	30%	3	30%	\$951	\$3,281
NPV						\$9.32
Beyond IL6	1%	30%	8	30%	\$50	\$172
NPV						\$0.13
Net Margin						50%
MM Shrs OS						24
Total						\$9

Source: Dawson James estimates

**Risks to our thesis** include: (1) Regulatory Approvals; (2) Clinical Science (3) Dependence on OEM suppliers; (4) Development of the target markets (5) Intellectual Capital (6) Dilution Risks. In addition, the company details the following additional risks:

- The company is likely to incur losses for the foreseeable future until it is able to generate sufficient revenue from product sales.
- Losses from operations could raise doubts regarding the company's ability to continue as a going concern. The ability to continue as a going concern likely requires additional funding to finance the company's operations.
- The company's product candidates are dependent on its license agreement with Toray. The license agreement imposes significant obligations on the company, including the potential obligation to pay the minimum royalties upon regulatory approval. If the company's license agreement with Toray is terminated for any reason, the company may not be able to generate revenues, and its business could cease.
- The regulatory approval pathway the company must navigate may be expensive, time-consuming and uncertain, and may prevent the company from obtaining approval for the marketing of its product candidates.
- There can be no assurance that the company will successfully complete any clinical evaluation studies necessary to receive regulatory approvals.
- The company's success is highly dependent on its IL-6 product candidates, which are yet to be approved and, even if approved, may not be accepted by the marketplace.
- The company is dependent on third parties to manufacture its product candidates.
- If Toray is unable to successfully protect or enforce its intellectual property and proprietary rights or elects not to do so, the company's competitive position will be harmed.
- If others claim that the company or Toray are infringing on their intellectual property rights, the company may be subject to costly and time-consuming litigation.
- The company may face competition from companies that have greater resources creating a tough to compete environment.

**Exhibit 6. Income Statement**

BJDX, Inc. Income Statement (\$000)																		
YE Dec. 31	2021E	1Q22E	2Q22E	3Q22E	4Q22E	2022E	1Q23E	2Q23E	3Q23E	4Q23E	2023E	2024E	2025E	2026E	2027E	2028E	2029E	2030E
<b>Revenue (\$000)</b>																		
Symphony Revenues - IL6 (risk adjusted probability)	-	-	-	-	-	-	2,426	2,527	2,527	2,628	10,109	30,326	73,289	126,360	196,560	270,270	324,324	378,378
Symphony Revenues - Non- IL6													2,000	5,000	15,000	25,000	35,000	40,000
<b>Total Revenues</b>	-	-	-	-	-	-	2,426	2,527	2,527	2,628	10,109	30,326	75,289	131,360	211,560	295,270	359,324	418,378
<b>Expenses</b>																		
COGS	-	-	-	-	-	-	1,213	1,264	1,264	1,314	5,054	15,163	30,116	45,976	63,468	88,581	107,797	125,513
% COGS							50%	50%	50%	50%	50%	50%	40%	35%	30%	30%	30%	30%
Gross Profit	-	-	-	-	-	-	1,213	1,264	1,264	1,314	5,054	15,163	45,173	85,384	148,092	206,689	251,527	292,865
Research & Development	883	148	154	154	161	618	240	250	250	260	1,000	2,000	2,040	2,081	2,122	2,165	2,208	2,252
General & Administrative	895	1,200	1,250	1,250	1,300	5,000	1,224	1,275	1,275	1,326	5,100	5,202	5,306	5,412	5,520	5,631	5,743	5,858
Marketing & Business Development	500	122	128	128	133	510	125	130	130	135	520	2,000	4,000	6,000	6,120	6,242	6,367	6,495
<b>Total expenses</b>	1,918	1,471	1,532	1,532	1,593	6,128	1,589	1,655	1,655	1,721	6,620	9,202	11,346	13,493	13,763	14,038	14,319	14,605
Operating Profit	(1,918)	(1,471)	(1,532)	(1,532)	(1,593)	(6,128)	(376)	(391)	(391)	(407)	(1,566)	5,961	33,827	71,891	134,329	192,651	237,208	278,259
<b>Oper Margin</b>																		
Interest Income (expense)	(462)					-					-	-	-	-	-	-	-	-
Other Income	4					-					-	-	-	-	-	-	-	-
<b>Pre-tax income</b>	(2,376)	(1,471)	(1,532)	(1,532)	(1,593)	(6,128)	(376)	(391)	(391)	(407)	(1,566)	5,961	33,827	71,891	134,329	192,651	237,208	278,259
<b>Pretax Margin</b>																		
Income Tax (Benefit)		-	-	-	-	-	-	-	-	-	-	-	-	7,189	26,866	57,795	94,883	111,304
<b>Tax Rate</b>		0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	10%	20%	30%	40%	40%
<b>GAAP Net Income</b>	(2,376)	(1,471)	(1,532)	(1,532)	(1,593)	(6,128)	(376)	(391)	(391)	(407)	(1,566)	5,961	33,827	64,702	107,463	134,856	142,325	166,956
<b>GAAP-EPS</b>	(0.21)	(0.11)	(0.12)	(0.12)	(0.12)	(0.48)	(0.03)	(0.02)	(0.02)	(0.02)	(0.08)	0.26	1.46	2.77	4.57	5.69	5.97	6.95
Non GAAP EPS (dil)	(0.21)	(0.11)	(0.12)	(0.12)	(0.12)	(0.48)	(0.03)	(0.02)	(0.02)	(0.02)	(0.08)	0.26	1.46	2.77	4.57	5.69	5.97	6.95
Wgtd Avg Shrs (Bas) - '000s	11,581	12,697	12,723	12,748	12,774	12,735	12,799	22,825	22,870	22,916	20,353	23,031	23,216	23,402	23,590	23,779	23,970	24,162
Wgtd Avg Shrs (Dil) - '000s	11,581	12,799	12,824	12,850	12,876	12,837	12,824	22,850	22,896	22,941	20,378	23,033	23,195	23,358	23,522	23,687	23,853	24,020

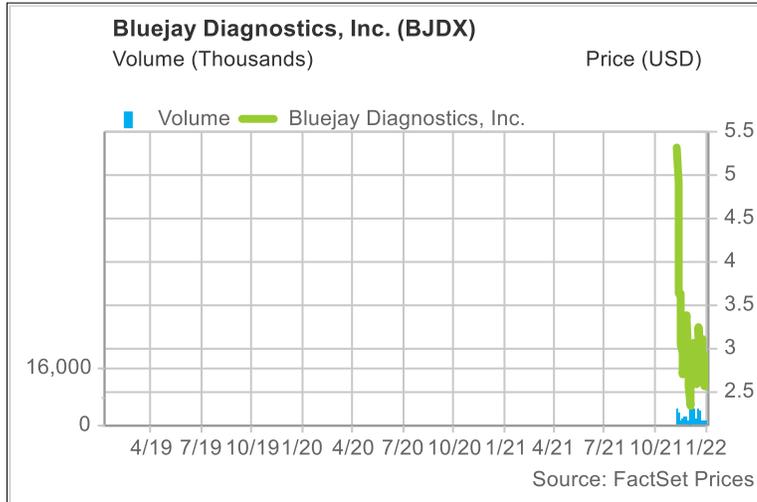
Source: Dawson James estimates, company reports

Companies mentioned in this report:

Toray (Japan)

**Important Disclosures:**

**Price Chart:**



Price target and ratings changes over the past three years:

Initiated – Buy – January 12, 2022 – Price Target \$10.0

Update – Buy – January 14, 2022 – Price Target \$10.0

Update – Buy – January 31, 2022 – Price Target \$10.0

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**Information about valuation methods and risks can be found in the "Valuation" and "Risk Analysis" sections of this report.**

The securities of the company discussed in this report may be unsuitable for investors depending on their specific investment objectives and financial position. This report is offered for informational purposes only and does not constitute an offer or solicitation to buy or sell any securities discussed herein in any jurisdiction where such would be prohibited. Additional information is available upon request.

**Ratings Definitions:**

- 1) **Buy:** The analyst believes the price of the stock will appreciate and produce a total return of at least 20% over the next 12-18 months.
- 2) **Neutral:** The analyst believes the price of the stock is fairly valued for the next 12-18 months.
- 3) **Sell:** The analyst believes the price of the stock will decline by at least 20% over the next 12-18 months and should be sold.

The following chart reflects the range of current research report ratings for all companies, followed by the analysts of the Firm. The chart also reflects the research report ratings relating to those companies for which the Firm has performed investment banking services.

Current as of... 31-Jan-22

	<b>Company Coverage</b>		<b>Investment Banking</b>	
<b>Ratings Distribution</b>	# of Companies	% of Total	# of Companies	% of Totals
Market Outperform (Buy)	29	73%	6	21%
Market Perform (Neutral)	11	28%	0	0%
Market Underperform (Sell)	0	0%	0	0%
Total	40	100%	6	15%

**Analyst Certification:**

The analyst(s) whose name appears on this research report certifies that 1) all of the views expressed in this report accurately reflect his (their) personal views about any and all of the subject securities or issuers discussed; and 2) no part of the research analyst's compensation was, is, or will be directly or indirectly related to the specific recommendations or views expressed by the research analyst in this research report; and 3) all Dawson James employees, including the analyst(s) responsible for preparing this research report, may be eligible to receive non-product or service-specific monetary bonus compensation that is based upon various factors, including total revenues of Dawson James and its affiliates as well as a portion of the proceeds from a broad pool of investment vehicles consisting of components of the compensation generated by investment banking activities, including but not limited to shares of stock and/or warrants, which may or may not include the securities referenced in this report.