

Soligenix, Inc. (NASDAQ/SNGX)

July 28, 2020

Neutral : Model Updated for Dilution, Lowering to Neutral

We have updated our model, and in doing so, see that the company has been selling stock, both to raise capital and pay for R&D (milestone). The mathematical result is our valuation is lowered from \$3.00 to \$2.00 (\$2.49 rounded to \$2.00). Given the rise in the stock price, we can no longer justify our Buy rating. We also note the company announced news this morning of pre-clinical results for COVID, which seems "promotional." With pivotal data, the stock could be quite volatile. While we are hopeful for good data, we don't know. As such, more reasons for us to move to the side-line.

Investment Highlights

Mucositis: Top-Line Data Later this Year; Will it be Good? SGX942 has now completed enrollment. Recall that a recent positive DMC recommendation indicated that a positive effect had been seen, but to account for variability and maintain 90% statistical power, an increase was recommended. Increasing power is typically thought of as a "red-flag" once a trial has been initiated.

Mucositis is Exciting but Risky. Soligenix has also commenced its Phase 3 clinical study in oral mucositis in head and neck cancer patients. Oral mucositis is a common complication of cancer chemotherapy and radiation that causes the mucosal lining of the mouth to break down, forming severe ulcers. This is an area of unmet medical need where there are currently no approved drug therapies. Consequently, Soligenix introduced Dusquetide, which is a small-molecule peptide that modulates the innate immune system and has shown favorable results in Phase 1 and 2 studies.

SGX301. The company announced positive synthetic hypericin (SGX301) data, a treatment response, out to 12 weeks. The response rate in patients receiving a total of 12 weeks' treatment increased two and a half-fold. This data follows the previously announced six-week results where SGX301 met its primary endpoint. The study enrolled 169 patients randomized 2:1 to receive either SGX301 or placebo, demonstrating statistically significant treatment response (p=0.04) in the Composite Assessment of Index Lesion Score (CAILS) primary endpoint assessment at eight weeks for Cycle 1.

Gone in a "FLASH" (Fluorescent Light Activated Synthetic Hypericin). SGX301 (synthetic hypericin) is a topical ointment that is applied to CTCL lesions and then activated by safe, visible fluorescent light. This photodynamic therapy has reached its pivotal stage (Phase 3), and approximately 40 additional subjects are being randomized into the trial to maintain the assumption of 90% statistical power for the primary efficacy endpoint. This program has also received ongoing partial funding of approximately \$1.5 million over two years from the Small Business Innovative Research (SBIR) grant awarded by the National Cancer Institute (NCI).

Risk to our thesis, include the following: (1) clinical trial outcomes; (2) commercial; (3) employee; (4) financial; (5) intellectual property; (6) partnership; and (7) regulatory.

Jason H. Kolbert
 Head of Healthcare Research
 646-465-6891
 jkolbert@dawsonjames.com

Current Price	\$2.13		
Price Target	\$2.00		
Estimates	F2019E	F2020E	F2021E
Expenses (\$000s)	\$ 11,604	\$ 19,454	\$ 21,476
1Q March	\$ 2,517	\$ 8,569	\$ 5,369
2Q June	\$ 2,623	\$ 3,595	\$ 5,369
3Q September	\$ 3,056	\$ 3,625	\$ 5,369
4Q December	\$ 3,407	\$ 3,665	\$ 5,369
	F2019E	F2020E	F2021E
EPS (diluted)	\$ (0.45)	\$ (0.60)	\$ (0.15)
1Q March	\$ (0.09)	\$ (0.25)	\$ (0.04)
2Q June	\$ (0.12)	\$ (0.12)	\$ (0.04)
3Q September	\$ (0.14)	\$ (0.11)	\$ (0.04)
4Q December	\$ (0.11)	\$ (0.12)	\$ (0.04)
EBITDA/Share	(\$0.41)	(\$0.80)	(\$0.20)
EV/EBITDA (x)	0.0	0.0	0.0
Stock Data			
52-Week Range	\$0.85	-	\$3.54
Shares Outstanding (mil.)	29.0		
Market Capitalization (mil.)	\$62		
Enterprise Value (mil.)	\$54		
Debt to Capital	0%		
Book Value/Share	\$0.72		
Price/Book	21.6		
Average Three Months Trading Volume (K)	440		
Insider Ownership	2.9%		
Institutional Ownership	14.8%		
Short interest (mil.)	1.2%		
Dividend / Yield	\$0.00/0.0%		



Modeling Assumptions: SGX301

- Prevalence.** There are an estimated 40,000 individuals who have been diagnosed with CTCL worldwide. In the United States, 3,000 new cases are diagnosed each year.
- Clinical and regulatory outcome assumptions.** We assume final topline results for the SGX301 Phase 3 study will become available soon. If the trial is successful, we expect an NDA / approval in 2021. As such, we anticipate that Soligenix will begin to commercialize SGX301 in 2021.
- Product assumptions.** We assume that a yearly treatment cycle for SGX 301 costs \$8,000. We also predict that the cost of the drug will increase by 1% per year, but this number may be too conservative since the current off-label treatments are priced at \$10,000.
- Risk adjustment.** We assign a 33% risk adjustment to our therapeutic model of SGX301 based on the Phase 3 approval rate of drugs in the oncology field, according to BioMedTracker and Amplion.

Exhibit 1. SGX301 Model

SGX301 (CTCL)													
SGX301 Revenues Model	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
CTCL Prevalance	40,000	42,800	45,796	49,002	51,942	55,058	58,362	61,280	64,344	67,561	70,264	73,074	75,997
Market Size Growth	7%	7%	7%	6%	6%	6%	5%	5%	5%	4%	4%	4%	3%
Treated with SGX 301	37,000	39,590	42,361	45,327	48,046	50,929	53,985	56,684	59,518	62,494	64,994	67,594	70,297
Eligible patients with insurance etc. (75%)	27,750	29,693	31,771	33,995	36,035	38,197	40,489	42,513	44,639	46,871	48,745	50,695	52,723
Market Penetration	0%	0%	0%	4%	6%	8%	10%	12%	14%	16%	18%	19%	20%
Treatable Patients	0	0	0	1360	2162	3056	4049	5102	6249	7499	8774	9632	10545
Average Cost of Therapy	\$8,000	\$8,000	\$8,000	\$8,000	\$8,080	\$8,161	\$8,242	\$8,325	\$8,408	\$8,492	\$8,577	\$8,663	\$8,749
Price Growth	0%	0%	0%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%
Total Sales (\$millions)	\$ -	\$ -	\$ -	\$ 11	\$ 17	\$ 25	\$ 33	\$ 42	\$ 53	\$ 64	\$ 75	\$ 83	\$ 92
Risk Adjusted	33%	33%	33%	33%	33%	33%	33%	33%	33%	33%	33%	33%	33%
Total Sales (US) (\$millions)	\$ -	\$ -	\$ -	\$ 4	\$ 6	\$ 8	\$ 11	\$ 14	\$ 17	\$ 21	\$ 25	\$ 28	\$ 30

Source: Dawson James estimates

Modeling Assumptions: SGX942 (Dusquetide)

- Prevalence.** Oral Mucositis affects over 180,000 head and neck cancer patients worldwide. We expect that the number of patients with this condition can continue to grow by 1% annually.
- Clinical and regulatory outcome assumptions.** We assume that the company can complete its Phase 3 study no later than 2020. We expect an NDA submission in 2020 with approval and marketing by 2021. For Europe, we assume approval a year later in 2022.
- Product assumptions.** We assume the cost of a yearly treatment cycle is \$6,000.
- Risk adjustment.** We assign a 33% risk adjustment to our therapeutic model of SGX942 based on the Phase 3 approval rate of drugs in the field of oncology, according to BioMedTracker and Amplion.

Exhibit 2. SGX942 Model

SGX942 (Mucositis)													
SGX942 Revenues Model U.S.	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
Head and neck cancer	180,000	181,800	183,618	185,454	187,309	189,182	191,074	192,984	194,914	196,863	198,832	200,820	202,829
Market Size Growth	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%
Treated with Radiation	166,500	168,165	169,847	171,545	173,261	174,993	176,743	178,511	180,296	182,099	183,920	185,759	187,616
Eligible patients with insurance etc. (75%)	124,875	126,124	127,385	128,659	129,945	131,245	132,557	133,883	135,222	136,574	137,940	139,319	140,712
Market Penetration	0%	0%	0%	5%	7%	10%	15%	20%	25%	30%	33%	33%	34%
Treatable Patients	0	0	0	6433	9096	13124	19884	26777	33805	40972	45520	45975	47842
Average Cost of Therapy	\$6,000	\$6,000	\$6,000	\$6,000	\$6,000	\$6,000	\$6,000	\$6,000	\$6,000	\$6,000	\$6,000	\$6,000	\$6,000
Price Growth	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Total Sales (\$millions)	\$ -	\$ -	\$ -	\$ 39	\$ 55	\$ 79	\$ 119	\$ 161	\$ 203	\$ 246	\$ 273	\$ 276	\$ 287
Risk Adjusted	33%	33%	33%	33%	33%	33%	33%	33%	33%	33%	33%	33%	33%
Total Sales (US) (\$millions)	\$ -	\$ -	\$ -	\$ 13	\$ 18	\$ 26	\$ 39	\$ 53	\$ 67	\$ 81	\$ 90	\$ 91	\$ 95

SGX942 (Mucositis)													
SGX942 Revenues Model EU	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
Head and neck cancer	180,000	181,800	183,618	185,454	187,309	189,182	191,074	192,984	194,914	196,863	198,832	200,820	202,829
Market Size Growth	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%
Treated with Radiation	166,500	168,165	169,847	171,545	173,261	174,993	176,743	178,511	180,296	182,099	183,920	185,759	187,616
Eligible patients with insurance etc. (75%)	124,875	126,124	127,385	128,659	129,945	131,245	132,557	133,883	135,222	136,574	137,940	139,319	140,712
Market Penetration	0%	0%	0%	0%	5%	9%	12%	15%	18%	21%	24%	27%	30%
Treatable Patients	0	0	0	0	6497	11812	15907	20082	24340	28681	33106	37616	42214
Average Cost of Therapy	\$6,000	\$6,000	\$6,000	\$6,000	\$6,000	\$6,000	\$6,000	\$6,000	\$6,000	\$6,000	\$6,000	\$6,000	\$6,000
Price Growth	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Total Sales (\$millions)	\$ -	\$ -	\$ -	\$ -	\$ 39	\$ 71	\$ 95	\$ 120	\$ 146	\$ 172	\$ 199	\$ 226	\$ 253
Risk Adjusted	33%	33%	33%	33%	33%	33%	33%	33%	33%	33%	33%	33%	33%
Total Sales (EU) (\$millions)	\$ -	\$ -	\$ -	\$ -	\$ 13	\$ 23	\$ 31	\$ 40	\$ 48	\$ 57	\$ 66	\$ 74	\$ 84
Total Sales (WW) (\$millions)	\$ -	\$ -	\$ -	\$ 13	\$ 31	\$ 49	\$ 71	\$ 93	\$ 115	\$ 138	\$ 156	\$ 166	\$ 178

Source: Dawson James estimates

Valuation. Our valuation methodology begins with our projected revenues from our product models. We apply assumptions for the timing of approval, launch dates, and product attributes to estimate revenues. These estimates feed into our income statement through the year 2030. Our therapeutic models include a probability of success factor or risk rate of 33% based on the success of Phase 3 drugs in the oncology industry, as stated by BioMedTracker and Amplion. The result of these projections is then fed into our income statement projections. Our price target is derived from an equal-weighted average of free cash flow to the firm (FCFF), discounted EPS (EPS), and sum-of-the-parts (SOP) models. For companies that have strong foundations with established products and revenues (visible earnings), we typically discount 10%, while emerging growth companies such as Soligenix, which are not yet profitable, we use our maximum risk rate of 30%. The result is rounded to the nearest whole number. Our projected share count is based on the out-year (2030) and assumes additional capital raises (dilution). The result is our target falls from \$3.00 to \$2.00 (the actual value is \$2.49, rounded to \$2.00).

Exhibit 3. FCFF Model

Average	\$	2.49
Price Target	\$	2
Year		2020

DCF Valuation Using FCF (mln):

units ('000 - Cnd\$)	2020E	2021E	2022E	2023E	2024E	2025E	2026E	2027E	2028E	2029E	2030E
EBIT	(19,454)	(5,149)	12,737	31,199	52,633	74,638	97,314	120,690	139,670	150,494	164,167
Tax Rate	20%	25%	30%	34%	34%	34%	34%	34%	34%	34%	34%
EBIT(1-t)	(15,563)	(3,861)	8,916	20,591	34,738	49,261	64,227	79,655	92,182	99,326	108,350
CapEx	-	-	-	-	-	-	-	-	-	-	-
Depreciation	57	60	63	66	69	73	77	80	84	89	93
Change in NWC	-	-	-	-	-	-	-	-	-	-	-
FCF	(15,506)	(3,801)	8,979	20,658	34,808	49,334	64,304	79,736	92,266	99,415	108,444
PV of FCF	(11,928)	(2,249)	4,087	7,233	9,375	10,221	10,248	9,775	8,701	7,211	6,051
Discount Rate	30%										
Long Term Growth Rate	1%										
Terminal Cash Flow	377,683										
Terminal Value YE2020	21,074										
NPV	79,798										
NPV-Debt	1,583										
Shares out (thousands)	36,854										2030E
NPV Per Share	\$ 2										

Source: Dawson James estimates

Exhibit 4. Discounted EPS Model

Current Year	2020
Year of EPS	2030
Earnings Multiple	10
Discount Factor	30%
Selected Year EPS	\$ 2.95
NPV	\$ 2.14

Source: Dawson James

Discount Rate and Earnings Multiple Varies, Year is Constant							
2030 EPS							
Earnings Multiple	2.1	5%	10%	15%	20%	25%	30%
0	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$ -
5	\$9.05	\$5.68	\$3.64	\$2.38	\$1.58	\$1.07	\$ 1.07
10	\$18.09	\$11.36	\$7.28	\$4.76	\$3.16	\$ 2.14	\$ 2.14
15	\$27.14	\$17.04	\$10.93	\$7.14	\$4.75	\$ 3.21	\$ 3.21
20	\$36.18	\$22.72	\$14.57	\$9.52	\$6.33	\$ 4.28	\$ 4.28
25	\$45.23	\$28.41	\$18.21	\$11.90	\$7.91	\$ 5.34	\$ 5.34
30	\$54.28	\$34.09	\$21.85	\$14.28	\$9.49	\$ 6.41	\$ 6.41
35	\$63.32	\$39.77	\$25.50	\$16.66	\$11.08	\$ 7.48	\$ 7.48

Source: Dawson James estimates

Exhibit 5. Sum of the Parts Model

Soligenix Inc. Sum of the Parts	LT Gr	Discount Rate	Yrs. to Mkt	% Success	Peak Sales MMs	Term Val
SGX301 (CTCL)	1%	30%	2	65%	\$200	\$690
NPV						\$2.16
SGX942 (Oral Mucositis)	1%	30%	3	55%	\$100	\$345
NPV						\$0.70
Pipeline	1%	30%	6	15%	\$400	\$1,379
NPV						\$0.35
Net Margin						30%
MM Shrs OS						37
Total						\$3

Source: Dawson James estimates

Risk Analysis

In addition to the typical risks associated with development-stage specialty pharmaceutical companies, potential risks specific to Soligenix are as follows:

Clinical Trial Risk. There can be no assurances that the outcome of the current trials is successful.

Commercial risk. Fluorescent Light Activated Synthetic Hypericin represents a new paradigm in the treatment of CTCL. Adoption may take longer than expected.

Employee risk. Soligenix Inc. has an experienced management team in its president and CEO, CFO, CSO, and CMO. Soligenix plans to bring its proposed products to market in the next two years. The success of the company may depend on the experience, abilities and continued services of its senior officers, sales staff, and key scientific personnel.

Financial risk. Soligenix is not a profitable company. While the company has a cash balance at this time, it's likely that it will need to raise additional capital continue to fund operations through NDA application and approval. There are no assurances that the company will be able to successfully raise capital and do so on favorable terms.

Intellectual property risk. The company may have to defend its patents and technical know-how, and there can be no assurances that the patents will not be infringed upon or will be held as valid if challenged, and the company may infringe on third parties' patents.

Partnership risks. Soligenix depends on government funding for the public health solutions program. This funding can be canceled at any time.

Regulatory risk. Soligenix must be able to obtain NDA approval before commercial sales of its products can commence in the United States. The timing of these approvals is uncertain. Additionally, the government's biodefense priority might change, affecting the commercial development of RiVax.

Exhibit 6. Income Statement

Soligenix Inc., Inc. Income Statement (\$000)																										
Soligenix Inc... YE Dec. 31	1Q18A	2Q18A	3Q18A	4Q18A	2018A	1Q19A	2Q19A	3Q19A	4Q19A	2019A	1Q20A	2Q20E	3Q20E	4Q20E	2020E	2021E	2022E	2023E	2024E	2025E	2026E	2027E	2028E	2029E	2030E	
Revenue (\$000)																										
SGX942 (Mucositis) (WW)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	12,737	30,875	49,374	70,865	92,781	115,128	137,912	155,679	165,511	178,311	
SGX-301	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3,590	5,765	8,229	11,013	14,015	17,340	21,016	24,835	27,536	30,446	
Total Product Sales	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	16,327	36,640	57,604	81,878	106,796	132,468	158,928	180,513	193,047	208,756	
% Chg																										
License Revenue	777	1,368	1,064	756	3,965	640	1,061	947	568	3,216	845															
Grant Revenue	342	358	317	259	1,276	505	484	308	117	1,414	79															
Cost of Grant Revenue	(979)	(1,494)	(1,237)	(888)	(4,598)	(928)	(1,087)	(965)	(587)	(3,567)	(830)															
% Sequential Growth																										
Total Revenues	141	232	144	127	644	217	458	289	98	1,063	95	-	-	-	-	16,327	36,640	57,604	81,878	106,796	132,468	158,928	180,513	193,047	208,756	
Expenses																										
Cost of Goods Sold & Acquired in Process R&D	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1,633	3,664	5,760	8,188	10,680	13,247	15,893	18,051	19,305	20,876	
COGS % Sales												10%	10%	10%	10%	10%	10%	10%	10%	10%	10%	10%	10%	10%	10%	
Research and development	1,803	1,170	1,395	2,382	6,751	1,643	1,854	2,267	2,359	8,123	2,700	2,725	2,750	2,775	10,950	11,169	11,393	11,620	11,853	12,090	12,332	12,578	12,830	13,086	13,348	
R&D % Revs																										
G&A	732	651	668	902	2,952	874	769	789	1,048	3,481	5,869	870	875	890	8,504	8,674	8,847	9,024	9,205	9,389	9,577	9,768	9,963	10,163	10,366	
Stock-based compensation - R&D																										
Stock-based compensation - G&A																										
Non-GAAP Adj																										
Total expenses	2,535	1,821	2,063	3,284	9,703	2,517	2,623	3,056	3,407	11,604	8,569	3,595	3,625	3,665	19,454	21,476	23,904	26,405	29,245	32,158	35,155	38,239	40,845	42,554	44,590	
Oper. Inc. (Loss)	(2,394)	(1,589)	(1,919)	(3,157)	(9,059)	(2,300)	(2,165)	(2,767)	(3,309)	(10,541)	(8,474)	(3,595)	(3,625)	(3,665)	(19,454)	(5,149)	12,736	31,199	52,633	74,638	97,313	120,689	139,669	150,493	164,167	
Oper Margin	NM	0	1	1	1	1	1	1	1	1	1															
Interest Income	17	33	57	52	159	50	41	46	12	149	(23)															
Interest expense											22															
Other Income (expense)									426	426	57															
Change in fair value of warrant liability																										
Pre-tax income	(2,377)	(1,556)	(1,862)	(3,105)	(8,900)	(2,250)	(2,124)	(2,721)	(2,872)	(9,966)	(8,418)	(3,595)	(3,625)	(3,665)	(19,454)	(5,149)	12,737	31,199	52,633	74,638	97,314	120,690	139,670	150,494	164,167	
Pretax Margin	NM	0	1	1	1	1	1	1	1	1	1															
Income Tax (Benefit)	-	-	-	-	-	-	-	-	611	611	837	(719)	(725)	(733)	(1,340)	(1,287)	3,821	10,608	17,896	25,378	33,087	41,035	47,488	51,169	55,818	
Tax Rate	0%	0%	0%	0%	0%	0%	15%	15%	15%	15%	20%	20%	20%	20%	20%	25%	30%	34%	34%	34%	34%	34%	34%	34%	34%	
GAAP Net Income (loss)	(2,377)	(1,556)	(1,862)	(3,105)	(8,900)	(2,250)	(2,124)	(2,721)	(2,261)	(9,356)	(7,581)	(2,876)	(2,900)	(2,932)	(16,289)	(3,861)	8,916	20,593	34,739	49,263	64,228	79,657	92,183	99,327	108,352	
GAAP-EPS	(0.27)	(0.18)	(0.11)	(0.24)	(0.79)	(0.12)	(0.12)	(0.14)	(0.11)	(0.49)	(0.32)	(0.12)	(0.12)	(0.12)	(0.68)	(0.15)	0.33	0.74	1.20	1.63	2.05	2.44	2.72	2.81	2.95	
Non GAAP EPS (dil)	(0.27)	(0.18)	(0.11)	(0.24)	(0.30)	(0.09)	(0.12)	(0.14)	(0.15)	(0.49)	(0.25)	(0.12)	(0.11)	(0.12)	(0.60)	(0.15)	0.33	0.74	1.20	1.63	2.05	2.44	2.72	2.81	2.95	
Wgtd Avg Shrs (Bas) - '000s	8,735	8,743	17,495	13,178	13,178	18,079	18,437	20,095	20,296	19,377	23,405	23,639	24,875	25,124	24,261	25,759	26,804	27,893	29,025	30,204	31,430	32,706	34,035	35,416	36,854	
Wgtd Avg Shrs (Dil) - '000s	8,735	8,743	17,495	13,178	13,178	18,079	18,437	20,095	20,296	19,377	30,296	23,639	25,875	25,124	24,261	25,759	26,804	27,893	29,025	30,204	31,430	32,706	34,035	35,416	36,854	

Source: Dawson James estimates and Company Reports

Important Disclosures:

Price Chart:



Price target and rating changes over the past three years:

Initiated – Buy – August 5, 2019 – Price Target \$3.00
 Update – Buy – August 14, 2019 – Price Target \$3.00
 Update – Buy – August 28, 2019 – Price Target \$3.00
 Update – Buy – November 20, 2019 – Price Target \$3.00
 Update – Buy – December 4, 2019 – Price Target \$3.00
 Update – Buy – February 12, 2020 – Price Target \$3.00
 Update – Buy – March 31, 2020 – Price Target \$3.00
 Update – Buy – May 1, 2020 – Price Target \$3.00
 Update – Buy – June 24, 2020 – Price Target \$3.00
 Rating Change – Neutral – July 28, 2020 – Price Target \$2.00

Dawson James Securities, Inc. (the “Firm”) is a member of the Financial Industry Regulatory Authority (“FINRA”) and the Securities Investor Protection Corporation (“SIPC”).

The Firm does not make a market in the securities of the subject company(s). The Firm has NOT engaged in investment banking relationships with SNGX in the prior twelve months, as a manager or co-manager of a public offering and has NOT received compensation resulting from those relationships. The Firm may seek compensation for investment banking services in the future from the subject company(s). The Firm has NOT received any other compensation from the subject company(s) in the last 12 months for services unrelated to managing or co-managing of a public offering.

Neither the research analyst(s) whose name appears on this report nor any member of his (their) household is an officer, director or advisory board member of these companies. The Firm and/or its directors and employees may own securities of the company(s) in this report and may increase or decrease holdings in the future. As of June 31, 2020, the Firm as a whole did not beneficially own 1% or more of any class of common equity securities of the subject company(s) of this report. The Firm, its officers, directors, analysts or employees may affect transactions in and have long or short positions in the securities (or options or warrants related to those securities) of the company(s) subject to this report. The Firm may affect transactions as principal or agent in those securities.

Analysts receive no direct compensation in connection with the Firm's investment banking business. All Firm employees, including the analyst(s) responsible for preparing this report, may be eligible to receive non-product or service-specific monetary bonus compensation that is based upon various factors, including total revenues of the Firm 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.

Although the statements in this report have been obtained from and are based upon recognized statistical services, issuer reports or communications, or other sources that the Firm believes to be reliable, we cannot guarantee their accuracy. All opinions and estimates included in this report constitute the analyst's judgment as of the date of this report and are subject to change without notice.

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.

Rating 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.

Ratings Distribution	Company Coverage		Investment Banking	
	# of Companies	% of Total	# of Companies	% of Totals
Market Outperform (Buy)	23	88%	4	17%
Market Perform (Neutral)	3	12%	1	33%
Market Underperform (Sell)	0	0%	2	0%
Total	26	100%	7	27%

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.