

Disclosure: Portions of this report are excerpted from Sigma Lab's filings, website(s), presentations or other public collateral. We have attempted to identify those excerpts by *italicizing* them in the text.

We just initiated coverage of Sigma at the end of October and they have since released 3QF19 results which were largely in line with our estimates. Much difference was in R&D where they spent about \$100,000 more than we anticipated, which is not particularly surprising or concerning for that matter given the "show-me" approach they have taken with prospective manufacturing customers. That said, the stock has had a marked run since the initiation, and outside of the notion that the stock was considerably undervalued at \$.51 and perhaps someone also figured that out, as near as we can tell, the most visible catalyst seems to be some investor relations efforts that hit the tape. Granted, they have announced a couple of new arrangements in Finland and Japan, respectively, as well as a topical new hire, but we are not sure those amounted to *doubling of the stock* sort of catalysts. Again, we are inclined to believe that the IR efforts have been effective.

Regardless, as we addressed in the initial coverage, we suspect the Company will need to raise an additional \$5 million to \$6 million to get them to cash flow neutral, and we suspect that will need to happen through 2020, with half of that likely having to come in between now and Q1-2020. We would look for them to take advantage of the run up in the stock to engage that sort of transaction. For those who may have purchased the stock around our typical "long haul" thesis, that may not be topical. However, for those who may have bought the stock for a trade, consider yourself on notice of the likelihood of a transaction. To that end, if history serves, those sorts of transactions generally put pressure on the share price. On the other hand, that may also provide an opening for those who missed the run but like the story. It may prove prescient to pay attention here.

Lastly, we attended the Company's presentation at LD Micro last week, which did not include anything we did not already know, but we did have some discussions with a handful of attendees we are close to and were familiar with the story on at least some level. There was a general theme amongst those. Succinctly, we talked to several people who knew and had largely been disappointed by the Company's progress over the past several quarters. That is a theme that permeated many of the presenters this year and is one that is not atypical in the microcap space in general. That said, we tend to think that many have stopped paying attention, which is often a good setup for improving results. We remain bullish on Sigma's prospects, as we continue to believe they provide a missing piece to the 3D metal manufacturing industry that has perhaps kept the industry from expanding as rapidly as it might have otherwise.

We have provided an update to the model with a few small adjustments.

Projected Operating Model

| Projected Operating Model | | | | | | | | | | | | | | | | | | |
|---|-----------|-----------|---------------|------------|--------------|------------|------------|------------|---------------|--------------|---------|------------|---------|------------|----------|------------|-----------|---------------|
| | _ | | | | | | | | | | | | | | | | | |
| Sigma Labs, Inc. | _ | | | | | | | | | | | | | | | | | |
| Prepared By: Dave Lavigne, Trickle Research | _ | | | | | | | | | | | | | | | | | |
| | (Actual) | | | (Actual) | | (Actual) | | (Estimate) | (Estimate) | (Estimate) | | (Estimate) | | (Estimate) | | (Estimate) | | (Estimate) |
| | 3/31/2019 | | 6/30/2019 | | 9/30/2019 | | 12/31/2019 | | Fiscal 2019 | 3/31/2020 | | 6/30/2020 | | 9/30/2020 | | N 1 | | Fiscal 2020 |
| | | | - | | | | - | | | | | | | | | | | |
| REVENUES | S | 64,450 | \$ | 33,582 | \$ | 171,003 | \$ | 110,000 | \$ 379,035 | \$ 22 | 20,000 | s | 385,000 | \$ | 770,000 | \$ | 990,000 | \$ 2,365,000 |
| COST OF REVENUE | \$ | 96,555 | \$ | 60,625 | \$ | 178,760 | \$ | 105,000 | \$ 440,940 | \$ 16 | 50,000 | \$ | 242,500 | \$ | 435,000 | \$ | 545,000 | \$ 1,382,500 |
| GROSS PROFIT | S | (32,105) | s | (27,043) | S | (7,757) | | 5,000 | \$ (61,905) | \$ 6 | 0,000 | \$ 1 | 42,500 | \$ 3 | 335,000 | S | 445,000 | \$ 982,500 |
| EXPENSES: | | | | | | | | · | s - | | | | | | | | | \$ - |
| Salaries & Benefits | \$ | 512,560 | \$ | 581,356 | \$ | 644,800 | \$ | 603,300 | \$ 2,342,016 | \$ 60 | 06,600 | \$ | 611,550 | \$ | 623,100 | \$ | 629,700 | \$ 2,470,950 |
| Stock-Based Compensation | \$ | 254,206 | \$ | 220,360 | \$ | 154,202 | \$ | 150,000 | \$ 778,768 | \$ 15 | 50,000 | \$ | 150,000 | \$ | 75,000 | \$ | 75,000 | \$ 450,000 |
| Operating R&D Costs | \$ | 145,272 | \$ | 118,845 | \$ | 212,230 | \$ | 211,970 | \$ 688,317 | \$ 20 | 07,700 | \$ | 215,400 | \$ | 226,950 | \$ | 253,900 | \$ 903,950 |
| Investor & Public Relations | \$ | 157,789 | \$ | 157,318 | \$ | 194,130 | \$ | 160,000 | \$ 669,237 | \$ 16 | 50,000 | \$ | 160,000 | \$ | 160,000 | \$ | 160,000 | \$ 640,000 |
| Legal & Professional Service Fees | \$ | 184,570 | \$ | 218,919 | \$ | 116,221 | \$ | 202,200 | \$ 721,910 | \$ 20 | 04,400 | \$ | 207,700 | \$ | 215,400 | \$ | 219,800 | \$ 847,300 |
| Office Expenses | \$ | 166,110 | \$ | 184,068 | \$ | 186,430 | \$ | 178,300 | \$ 714,908 | \$ 18 | 31,600 | \$ | 186,550 | \$ | 198,100 | \$ | 204,700 | \$ 770,950 |
| Depreciation & Amortization | \$ | 48,383 | \$ | 49,203 | \$ | 52,636 | \$ | 50,250 | \$ 200,472 | \$: | 50,501 | \$ | 50,754 | \$ | 51,008 | \$ | 51,263 | \$ 203,525 |
| Other Operating Expenses | \$ | 38,209 | \$ | 38,994 | \$ | 40,265 | \$ | - | \$ 117,468 | \$ | - | S | - | \$ | - | \$ | - | \$ - |
| Total Operating Expenses | \$ 1 | ,507,099 | \$ 1 | 1,569,063 | \$ | 1,600,914 | \$ | 1,556,020 | \$ 6,233,096 | \$ 1,56 | 0,801 | \$ 1,5 | 581,954 | \$ 1,5 | 549,558 | \$ 1 | ,594,363 | \$ 6,286,675 |
| LOSS FROM OPERATIONS | \$(I | ,539,204) | S() | 1,596,106) | \$(] | 1,608,671) | \$(] | 1,551,020) | \$(6,295,001) | \$(1,500 |),801) | \$(1,4 | 39,454) | \$(1,2 | 14,558) | \$(1, | ,149,363) | \$(5,304,175) |
| OTHER INCOME (EXPENSE) | | | | | | | | | s - | | | | | | | | | \$ - |
| Interest Income | \$ | 5,782 | \$ | 7,016 | \$ | 4,812 | \$ | 2,892 | \$ 20,502 | \$ | (987) | \$ | 3,270 | \$ | 170 | \$ | 4,954 | \$ 7,407 |
| State Incentives | \$ | 51,877 | | | \$ | - | \$ | - | \$ 51,877 | \$ | - | \$ | - | \$ | - | \$ | - | \$ - |
| Change in fair value of derivative liabilities | | | | | \$ | - | \$ | - | s - | \$ | - | \$ | - | \$ | - | \$ | - | \$ - |
| Exchange Rate Gain (Loss) | \$ | (446) | \$ | (2,264) | \$ | (549) | \$ | - | \$ (3,259) | \$ | - | \$ | - | \$ | - | \$ | - | \$ - |
| Interest Expense | \$ | (2,122) | \$ | (2,136) | \$ | (2,149) | \$ | (2,149) | \$ (8,556) | \$ (| (2,149) | \$ | (2,149) | \$ | (2,149) | \$ | (2,149) | \$ (8,596) |
| Loss on Disposal of Assets | | | | | \$ | 5,763 | \$ | - | \$ 5,763 | \$ | - | \$ | - | \$ | - | \$ | - | \$ - |
| Debt discount amortization | \$ | - | \$ | - | \$ | - | \$ | - | s - | \$ | - | \$ | - | \$ | - | \$ | - | \$ - |
| Total Other Income (Expense) | S | 55,091 | s | 2,616 | \$ | 7,877 | \$ | 743 | \$ 66,327 | \$ (3 | 3,136) | s | 1,121 | \$ | (1,979) | s | 2,805 | \$ (1,189) |
| LOSS BEFORE PROVISION FOR INCOME TAXES | \$(] | ,484,113) | \$() | 1,593,490) | S(] | 1,616,548) | \$(I | 1,551,763) | \$(6,245,914) | \$(1,497 | 7,665) | \$(1,4 | 40,575) | \$(1,2 | 212,579) | \$(1, | ,152,168) | \$(5,302,987) |
| Provision for Income Taxes | \$ | - | \$ | - | S | - | \$ | - | s - | \$ | - | S | - | \$ | - | S | - | S - |
| Net Loss | \$(1 | ,484,113) | S() | 1,593,490) | S(] | 1,616,548) | \$(I | 1,551,763) | \$(6,245,914) | \$(1,497 | 7,665) | \$(1,4 | 40,575) | \$(1,2 | 12,579) | \$(1, | ,152,168) | \$(5,302,987) |
| Preferred Dividends | | | | | \$ | - | \$ | - | S - | \$ | - | S | - | \$ | - | S | - | S - |
| Net Loss applicable to Common Stockholders | \$ (1 | ,484,113) | \$ (] | 1,593,490) | \$(] | 1,616,548) | \$(] | 1,551,763) | \$(6,245,914) | \$(1,497 | 7,665) | \$(1,4 | 40,575) | \$(1,2 | 12,579) | \$(1, | ,152,168) | \$(5,302,987) |
| Net Loss per Common Share - Basic and Diluted | \$ | (0.16) | \$ | (0.15) | \$ | (0.11) | \$ | (0.11) | \$ (0.51) | \$ | (0.08) | \$ | (0.07) | \$ | (0.05) | \$ | (0.05) | \$ (0.25) |
| Weighted Average Number of Shares Outstanding - Basic and Diluted | 9 | ,334,757 | 10 | ,777,590 | 1 | 4,197,205 | 1 | 4,424,478 | 12,183,508 | 19,40 | 0,669 | 19,5 | 579,240 | 22,9 | 960,523 | 23 | ,022,527 | 21,240,740 |

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Rating System Overview:

There are no letters in the rating system (Buy, Sell Hold), only numbers. The numbers range from 1 to 10, with 1 representing 1 "investment unit" (for my performance purposes, 1 "investment unit" equals \$250) and 10 representing 10 investment units or \$2,500. Obviously, a rating of 10 would suggest that I favor the stock (at respective/current levels) more than a stock with a rating of 1. As a guideline, here is a suggestion on how to use the allocation system.

Our belief at Trickle is that the best way to participate in the micro-cap/small cap space is by employing a diversified strategy. In simple terms, that means you are generally best off owning a number of issues rather than just two or three. To that point, our goal is to have at least 20 companies under coverage at any point in time, so let's use that as a guideline. Hypothetically, if you think you would like to commit 25,000 to buying micro-cap stocks, that would assume an investment of 1000 per stock (using the diversification approach we just mentioned, and the 20-stock coverage list we suggested and leaving some room to add to positions around allocation upgrades. We generally start initial coverage stocks with an allocation of 4. Thus, at 1000 invested per stock and a typical starting allocation of 4, your "investment unit" would be the same 250 we used in the example above. Thus, if we initiate a stock at a 4, you might consider putting 1000 into the position. If we then reduce the allocation from 6 to 4 you might consider selling whatever number of shares you purchased with 2 of the original 4 investment units. Again, this is just a suggestion as to how you might be able to use the allocation system to manage your portfolio.

For those attached to more traditional rating systems (Buy, Sell, Hold) we would submit the following guidelines.

A Trickle rating of 1 thru 3 would best correspond to a "Speculative Buy" although we would caution that a rating in that range should not assume that the stock is necessarily riskier than a stock with a higher rating. It may carry a lower rating because the stock is trading closer to a price target we are unwilling to raise at that point. This by the way applies to all of our ratings.

A Trickle rating of 4 thru 6 might best (although not perfectly) correspond to a standard "Buy" rating.

A Trickle rating of 7 thru 10 would best correspond to a "Strong Buy" however, ratings at the higher end of that range would indicate something that we deem as quite extraordinary..... an "Extreme Buy" if you will. You will not see a lot of these.