December 8, 2017

Cohu, Inc.: COHU

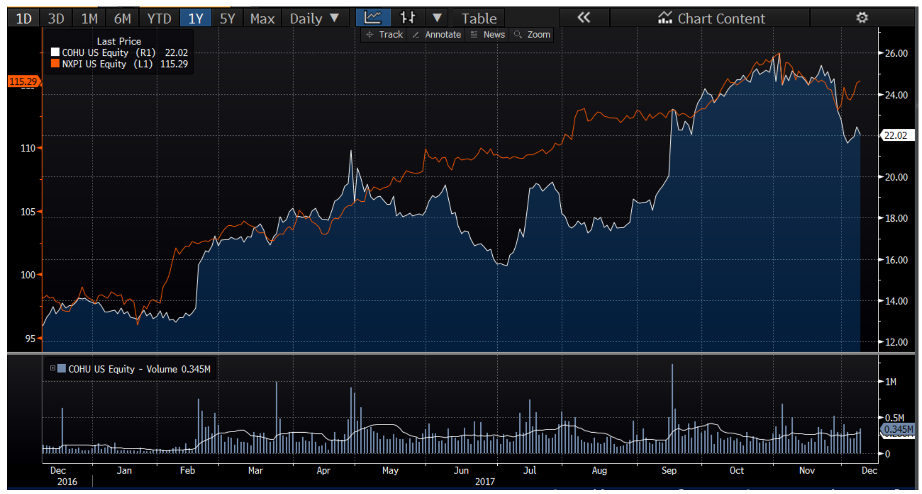
Nicholas Matzelevich

Sector: Technology
Industry: Semiconductor Equipment & Materials
Current Price: $22.02
Target Price: $24.36

Company Description: Cohu, Inc. is a supplier of semiconductor test and inspection handlers, micro-electro mechanical system test modules, test contactors, and thermal sub-systems to global semiconductor manufacturers. Their products are used to test semiconductor chips as a means of quality control for their customers. The company conducts their operations in Asia, Europe, and North America.

BUY

Current Price:	$22.02
Target Price:	$24.36
Market Cap:	$616.11M
LTM ROIC:	26.4%
LTM WACC:	18.6%
EBITDA Margin	27.0%
Volume:	0.257M



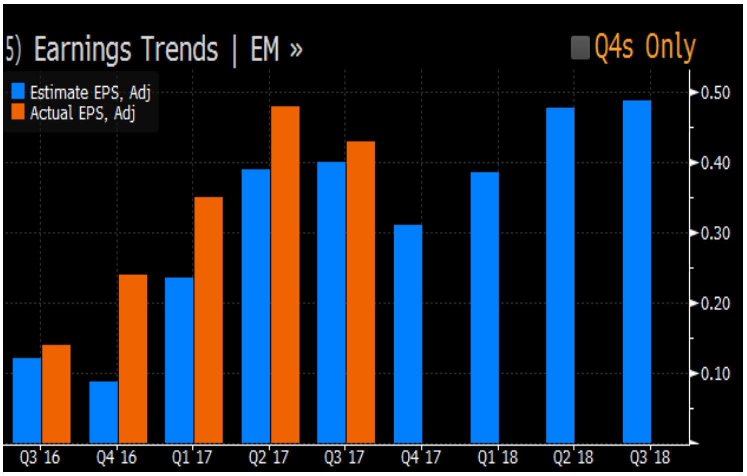
Thesis: Cohu, Inc. is poised for significant growth in the years ahead. This growth will be spurred by their recently released new products, expansion of the automotive IC market, and their improved financial model to achieve $500M in sales in the next 3-5 years. Currently, the market has not reacted to these catalysts, providing a unique mispricing opportunity that must be capitalized on as soon as possible.

Catalysts: Forward looking projections that call for positive/negative outlook that will strengthen your thesis. Example:

- Short Term (within the year): New product launches proving viable in the market.
- Mid Term (1-2 years): Expansion of Automotive IC market
- Long Term (3+): Improved financial model will lead to better margins and more profitability.

Earnings Performance:

As shown in the provided graph, Cohu has beaten 8 out of their past 8 quarterly earnings. Most recently, Cohu beat their 3Q17 estimated EPS by $0.03, for a quarterly EPS of $0.43. Cohu achieved $93.7M in revenue for the quarter, keeping consistent with their projections. Cohu's success in this quarter is attributable to several factors. First, the company had stronger reoccurring sales from their customers in the computing market, which increased demand for their test contactors and spring probes. Second, Cohu received repeat orders for their newest configuration of their Eclipse handler, one of their many semiconductor testing products, in addition to increasing shipments of gravity handlers for automotive and industrial applications. Finally, Cohu made significant progress their new PANTHER probing system, acquiring a new customer and achieving initial customer acceptance from their existing customers.



Looking ahead to 4Q17, Cohu is expecting their revenue to be $84M, $0.6M higher than an estimated $83.4M. The company sees the further adoption of their PANTHER system and the increase in demand for their test contactor products as significant revenue drivers for the upcoming quarter. The existing initial customer adoption of the PANTHER system and the reoccurring sales of the contact systems from the previous quarter coupled with the current boom in semiconductor market makes Cohu's estimates achievable and likely to happen.

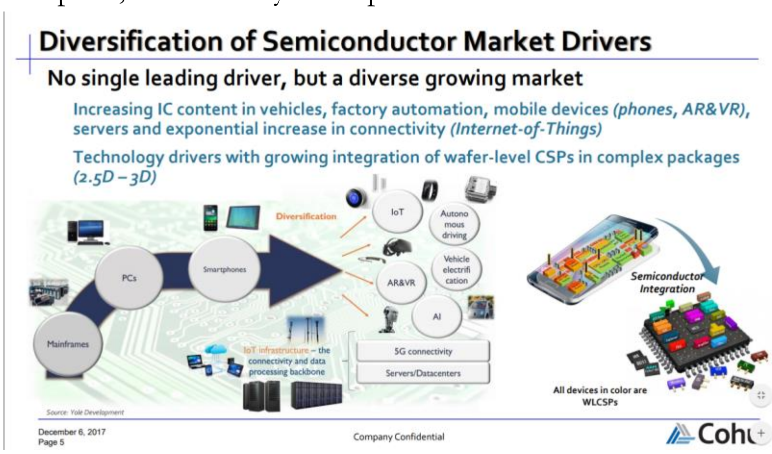
Business Description:

Cohu, Inc. is an industry leader in the semiconductor equipment and materials sector, providing semiconductor test and inspection handlers, micro-electro mechanical systems test modules, test contactors, and thermal sub-systems to the global semiconductor market. The company operates in Asia, Europe, and North America, manufacturing and selling their products. In essence, Cohu provides testing equipment for each type of semiconductor chip that is manufactured by leading semiconductor manufacturers. These test equipment products are designed to measure quality and performance of a semiconductor chip prior to shipment to customers.

Recently, Cohu has made an effort to grow their revenue by implementing a new business model, the Cohu500, which has set a goal to reach $500M in sales within 3-5 years. To help achieve this goal, Cohu acquired Kita Manufacturing Co. LTD in January 2017 to further expand into the spring probe contactor market. Kita is based in Japan, which is part of Cohu's Asia segment. Most of Cohu's revenue, 51.8% FYE2016, is from Asia. This is mostly due to the fact that most semiconductor manufacturing companies have their plants located in Asia. To help improve operating expenses, Cohu has recently moved most of their manufacturing to Malaysia. With the improvement and increasing need for technology, Cohu's most profitable segment is expected to grow over the next several years.

Industry Outlook:

Cohu, Inc. operates in the semiconductor equipment and materials industry, which is a subindustry of the overall semiconductor industry. The semiconductor equipment industry is highly competitive and characterized by rapid technological change. In addition to the traditional competitive factors of performance and price, this industry's competitive factors also include customer support and installed base of products.



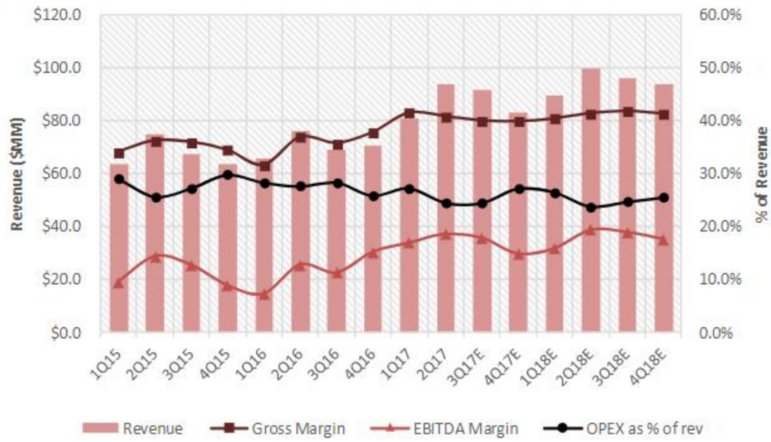
The semiconductor equipment industry is also highly cyclical, tending to mimic the cyclicality of the semiconductor chip industry. The cyclicality of the semiconductor equipment market is attributable to the purchase timing and technology requirements of the semiconductor chip manufacturers. Periodically, chip production capacities will exceed the global demand for semiconductor chips, causing chip prices to fall. As a result, it is hard to forecast chip demand. However, the semiconductor market is expanding and diversifying due to development of new technologies, such as internet capabilities in automotive products. As a result, the semiconductor equipment industry will grow to meet these needs.

While Cohu, Inc. sells many of its products to the Asian market, it also experiences heavy competition from the Japanese and Korean markets, which represent a majority of the market share for semiconductor equipment. Additionally, many of these Japanese and Korean companies are part of larger corporations that manufacture their own equipment and semiconductor chips.

Although the semiconductor industry has taken a hit over the past couple weeks, it is still in a boom. This decrease in overall stock share is due to investors taking their profits and reinvesting them in underperforming blue chip stocks. Since the middle of 2016, the semiconductor equipment market has been growing to meet the needs of semiconductor chip makers as the market is in an upswing. While some have speculated that the market is reaching its peak, the development of new technologies and new potential customers in the automotive IC market will keep the overall market growing beyond expectations.

Business Model – Cohu500:

Beginning in early 2016, Cohu has implemented a new business model, the Cohu500, to grow the company's revenue to $500M in the next 3-5 years. Cohu has done an impressive job implementing this



strategy, as shown by their improving EBITDA margin and decreasing operating expense as a % of revenue. Since 2015, Cohu has grown its EBITDA margin from 9% to 10% in 2016, and is expecting an EBITDA margin of 16% at FYE2017. This is mostly attributable to the company shifting a large portion of their manufacturing capabilities to a lower cost facility in Malaysia. Currently, Cohu has approximately 90% of its handler products shipping out of the Malaysia facility. Additionally, Cohu has improved their operating expenses as a % of revenue over the past several quarters, from 59.12% FYE2015 to 51.91% LTM, showing the company's commitment to the Cohu500. The sustained improvement of these margins are a marked indicator of the continued success of the Cohu500, and should continue to grow to 20% looking ahead to the achievement of the business model.

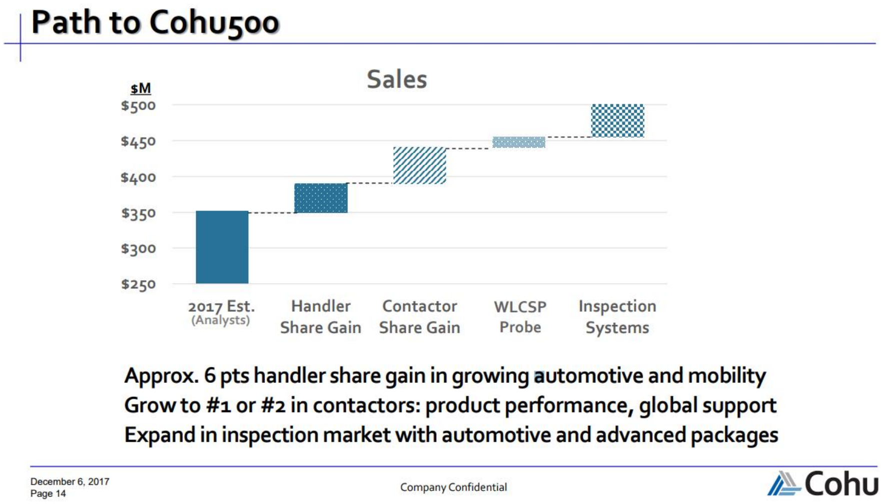
In addition to improving EBITDA margins, Cohu also looking to expand further into their automotive and mobility segment. Over the past three years, 40-55% of Cohu's system orders have been from the automotive and industrial markets, and the company is looking to grow a further 6 points from their handler products, spurred on by the release of their Aquilae Vision Inspection handler. Cohu also expects to grow a further 4-6 points from their test contactors, which has already expanded from their acquisition of Kita Manufacturing at the beginning of 2017. All of these products will be implemented in the automotive IC market. Currently, semiconductor chips are used in relatively simple capacities in the industry, such as power train and chassis monitoring. However, automotive manufacturers have started to incorporate further upgrades, such as entertainment, phone capabilities, and advanced driver assistance systems. These improvements can be seen in IC content per vehicle increasing from $297 per vehicle in 2012 to $344 per vehicle in 2016. Analyst estimates place the IC content per vehicle to reach $382 per vehicle and the total addressable market for automotive IC to reach $38B by the end of 2019. Given the high number of customer orders Cohu has in the automotive market, it can be expected for Cohu to follow these growth trends in the future.

Product Launches:

Recently, Cohu has released two new products, the PANTHER WLCSP Prober and Aquilae Vision Inspection. They are outlined below:

PANTHER WLSCP Prober:

Cohu released this product earlier this year, and has already shipped three of these systems to customers. Of note, one of these sales was to a new customer for back-end factory automation. While Cohu has not released the name of this customer, some analysts speculate that it is Samsung. If this is true, then Cohu could be developing an important customer relationship with one of the largest global semiconductor



manufacturers. In their business model, Cohu assumes $15M in revenue for the next 3-5 years. However, if Samsung proves to be the new customer, then revenues for this product are expected to be beyond $15M.

Aquilae Vision Inspection:

The relatively new release of this product in 2016 is a result of Cohu's acquisition of Ismeca in 2013, where Cohu acquired the market share leader of turret, inspection, and LED semiconductor test equipment. For 2016, analyst estimates place product revenue at $15M, however Cohu has estimated that this product will generate $45M over the next 3-5 years when implemented in the Cohu500. This would grab an additional 10% of their current market share in the $450M inspection system market.

Conclusion:

Cohu, Inc. is a leading global semiconductor equipment manufacturer that is poised for significant growth in the near future. Cohu has implemented a new business plan that has increased margins and placed the company at a competitive advantage to their peers. Their new product launches, the PANTHER and Aquilae Vision Inspection systems, have been accepted by their leading customers, and even generated some new business. Cohu is also looking to further expand into the automotive IC market, an emerging market that has upside growth potential to expand 4-6% by 2019.

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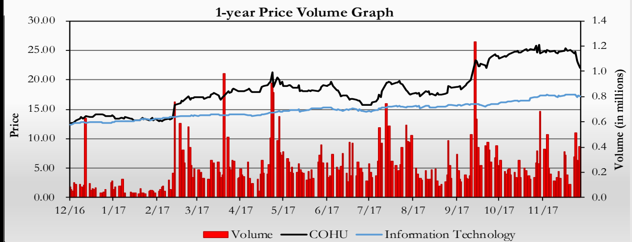
Cohu, Inc. (COHU) — CENTER FOR GLOBAL FINANCIAL STUDIES — NEUTRAL

Analysis by Nick Matzelevich	Current Price:	$21.78	Intrinsic Value	$20.86	Target 1 year Return: 13.03%
12/8/2017	Divident Yield:	1.2%	Target Price	$24.36	Probability of Price Increase: 93%



Description

Cohu, Inc., through its subsidiaries, engages in the development, manufacture, sale, and servicing of semiconductor test and inspection handlers, micro-electro mechanical system (MEMS) test modules, test contactors, and thermal sub-systems for semiconductor manufacturers and test subcontractors worldwide.

General Information

Sector	Information Technology
Industry	Semiconductors and Semiconductor Equipment
Last Guidance	November 3, 2015
Next earnings date	February 22, 2018
Estimated Country Risk Premium	7.54%
Effective Tax rate	25%
Effective Operating Tax rate	25%

Market Data

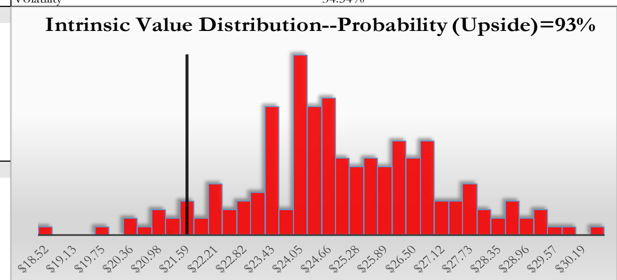
Market Capitalization	$611.59
Daily volume (mil)	0.21
Shares outstanding (mil)	28.29
Diluted shares outstanding (mil)	28.42
% shares held by institutions	116%
% shares held by investments Managers	73%
% shares held by hedge funds	9%
% shares held by insiders	3.60%
Short interest	1.08%
Days to cover short interest	1.10
52 week high	$26.17
52-week low	$12.31
Volatility	34.54%

Past Earning Surprises

Quarter ending	Revenue	EBITDA
9/24/2016	1.85%	-29.59%
12/31/2016	8.68%	63.72%
3/25/2017	3.90%	-3.82%
6/24/2017	0.93%	-3.63%
9/30/2017	2.35%	-2.56%
Mean	3.54%	4.82%
Standard error	1.4%	15.6%

Peers

- Axcelis Technologies, Inc.
- FormFactor, Inc.
- Xcerra Corporation
- Entegris, Inc.
- Veeco Instruments Inc.
- Teradyne, Inc.
- Rudolph Technologies, Inc.
- KLA-Tencor Corporation

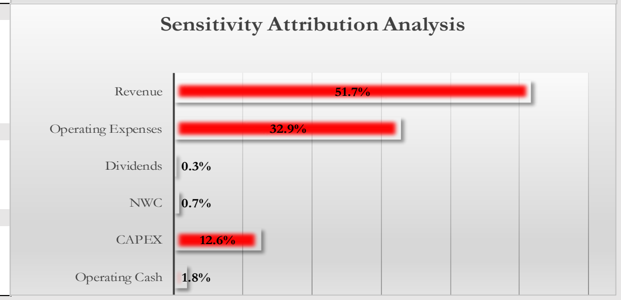


Management	Position	Total compensations growth	Total return to shareholders
Müller, Luis	President, CEO & Director	18.62% per annum over 4y	-0.53% per annum over 4y
Jones, Jeffrey	VP of Finance, CFO & Secret	8.74% per annum over 5y	-6.32% per annum over 5y
Chiang, Hock Woo	Vice President of Global Sal	-8.74% per annum over 1y	9.93% per annum over 1y
Kampfer, Thomas	VP of Corporate Development,	N/M	N/M
McFarlane, James	President of Delta Design Ki	-100% per annum over 4y	-0.53% per annum over 4y
Kabbani, Samer	President of Delta Design Sy	-100% per annum over 2y	15.44% per annum over 2y

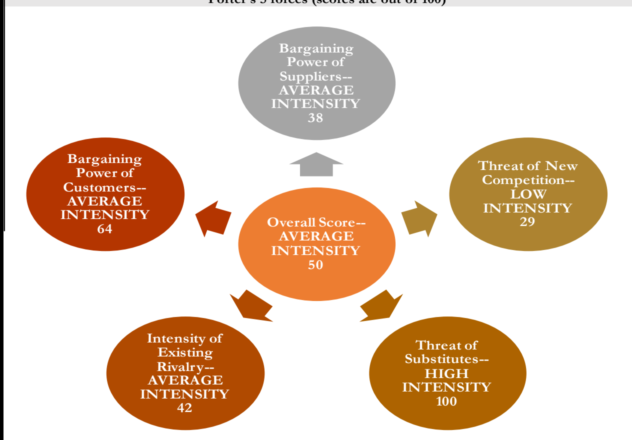
Profitability	COHU (LTM)	COHU (5 years historical average)	Peers' Median (LTM)
Return on Capital (GAAP)	18.9%	-2.03%	6.24%
Operating Margin	11%	-0.60%	6.01%
Revenue/Capital (GAAP)	1.80	3.36	1.04
ROE (GAAP)	8.3%	2.8%	7.5%
Net margin	8.3%	4.0%	9.2%
Revenue/Book Value (GAAP)	1.00	0.71	0.81

Invested Funds	COHU (LTM)	COHU (5 years historical average)	Peers' Median (LTM)
Cash/Capital	43.1%	19.4%	28.7%
NWC/Capital	18.7%	14.0%	15.9%
Operating Assets/Capital	21.0%	50.8%	45.6%
Goodwill/Capital	17.2%	15.8%	9.8%

Capital Structure	COHU (LTM)	COHU (5 years historical average)	Peers' Median (LTM)
Total Debt/Market Capitalization	0.04	0.01	0.12
Cost of Existing Debt	10.5%	10.5%	6.7%
CGFS Rating (F-score, Z-score, and default Probability)	A	B	BB
WACC	18.0%	18.7%	16.6%



Porter's 5 forces (scores are out of 100)



Valuation

Period	Revenue Growth Forecast	NOPAT Margin Forecast	Revenue to Capital Forecast
Base Year	23%	12.5%	0.89
9/30/2018	13%	11.7%	0.84
9/30/2019	10%	11.3%	0.81
9/30/2020	2%	10.7%	0.75
9/30/2021	2%	10.5%	0.70
9/30/2022	2%	14.0%	0.67
9/30/2023	3%	14.2%	0.62
9/30/2024	3%	14.4%	0.59
9/30/2025	3%	14.6%	0.56
9/30/2026	3%	14.8%	0.53
9/30/2027	3%	14.9%	0.51
Continuing Period	3%	15.1%	0.49

Period	Return on Capital Forecast	WACC Forecast	Price per share Forecast
Base Year	11.1%	18.0%	$20.62
9/30/2018	9.9%	11.0%	$24.19
9/30/2019	9.2%	11.0%	$26.93
9/30/2020	8.0%	11.1%	$29.65
9/30/2021	7.3%	11.1%	$32.34
9/30/2022	9.4%	11.2%	$35.05
9/30/2023	8.9%	11.2%	$37.81
9/30/2024	8.5%	11.3%	$40.60
9/30/2025	8.1%	11.3%	$43.43
9/30/2026	7.8%	11.4%	$46.30
9/30/2027	7.6%	11.4%	$49.20
Continuing Period	7.4%	11.4%	