

Company Description:

CEVA is the world's leading licensor of signal processing platforms and artificial intelligence processors for the greater connected world under the upcoming fifth generation of internet. Their operations focus on six main divisions including imaging and computer vision, AI and deep learning, connectivity, wireless communication, audio, speech, and voice, and multipurpose digital signal processing all with an emphasis on 5G.

BUY

Current Price: \$26.66
 Target Price: \$30.77
 Market Cap: \$588.2M
 Beta: 1.76

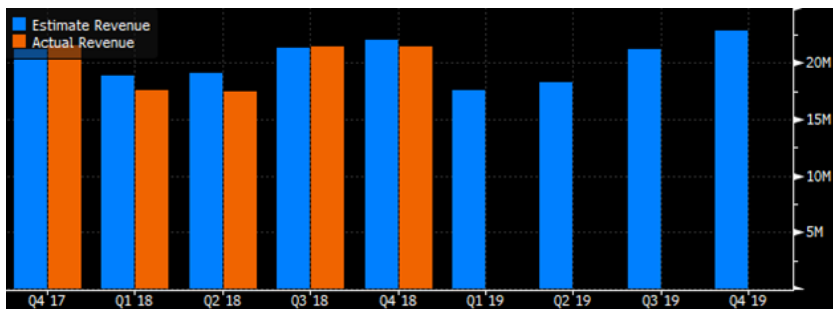


Thesis: CEVA have poised themselves well for the upcoming industry shift to 5G technologies. As companies transition to these new 5G technologies they will have to adopt CEVA's proprietary systems generating massive licensing revenue. This proprietary technology coupled with an extremely well managed balance sheet make CEVA not only a strong, competitive company but also a target for acquisition.

Catalysts:

- Continuing to license drone technologies to build base revenue
- Transition to 5G and IoT
- Possible acquisition target

Earnings Performance:



As seen in the chart to the right CEVA has shown some issues with hitting earnings in the past, however, I believe this is about to change. CEVA saw a decline in revenue last year but with its recent deal with DJI Drones, they now have an all-new source of revenue from the world's largest drone

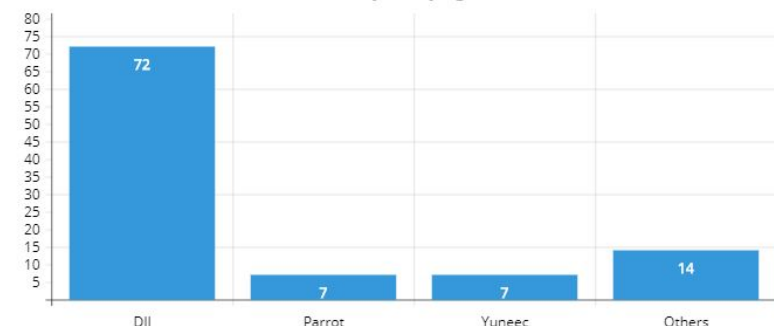
company. Additionally, CEVA's unique business model in licensing its technologies gives it the unique opportunity to create a base recurring revenue they will not decrease in the foreseeable future. Revenue is the key metric to watch for this company because of their business model allows them to command their costs. In the past when they have struggled to turn profit it was because of their dedication to maintaining high amounts of R and D in order to foster future growth and revenue streams.

Section 1: The Drone Business and Creating a Base

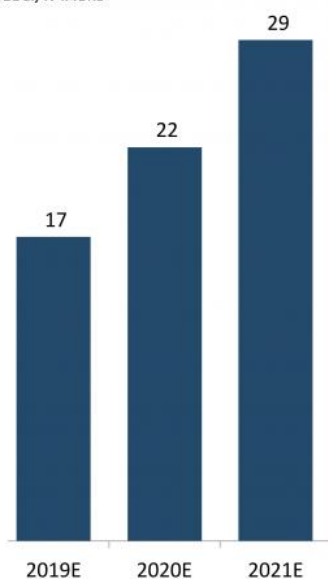
Early this month, on March 12, CEVA announced that it had closed a deal with DJI. It detailed that DJI, the world's largest drone manufacturer, would now use CEVA's platforms and proprietary AI to "enable on-device artificial intelligence, advanced computer vision and long-

Drones \$500-1000 price segment US sales

data courtesy of Skylogic Research



Estimated Consumer Drone Shipments
Global, Millions



range communication capabilities." This deal is a massive win for the company as it not only generate revenue for this year but for years to come thanks to the recurring nature of licensing deals. Another benefit of this deal with DJI is that DJI is the leader in a market that is expected to experience dramatic growth over the next several years.

The two figures to the left show empirically what I am describing. The first shows DJI's domination, far outselling its competition with 72% of the market while no other individual firm holds more than 14%. The second figure below it projects drone sales in millions of units over the 3 years. Growth from 17 million this year to 29 million just two years from now represents a growth of 30% year over year. Assuming an average price of \$750 and that DJI keeps 72% of the market they will see about \$15B in revenue in 2021 and CEVA will receive a portion of every one of those dollars coming in. The details of the licensing deal have not been made available to the public but it is safe to assume that the portion of the billions DJI will be making with certainly grow CEVA which reported a meager revenue of just under \$78M in 2018.

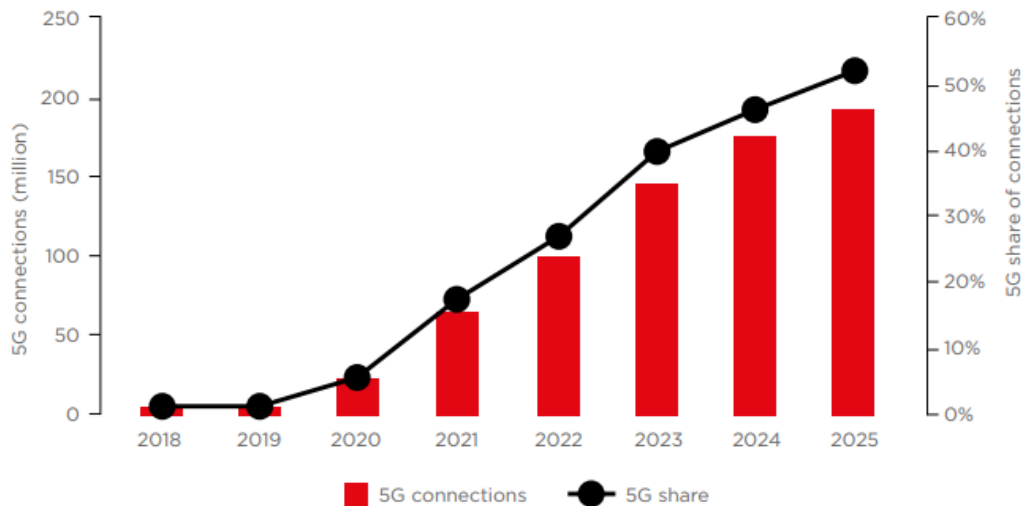
Section 2: Other Revenue Sources

One of the keys to success for CEVA, as established above, will be its ability to generate revenue as it has control over its costs. The single largest expense for CEVA in 2018 and all other past years was its research and development expense. This cost is well within the control of the company and should remain relatively fixed so generating more revenue is the way to generate proportionally larger profits. Above the emphasis was put on the drone business however, CEVA already has many customers that are about to increase their spending dramatically thanks to the emergence of 5G. In a statement in the Q4 2018 earnings call CEVA CEO Gideon Wertheizer said, “At our Investor and Analyst Day last month, we disclosed that we have 4 royalty paying customers today and additionally 60 customers are actively designing new chips, which we expect to gradually roll out for production over the coming years. We believe that this customer base will approximately double our annual royalty revenue in 2022.” The CEO also commented, “We continued to strengthen our customer base with 49 license agreements signed in total, of which 16 were with first-time customers. A steady growth in licensees in diversified markets is the key driver for new royalty streams, in addition to incremental revenues from existing royalty sources.” These actions are precisely what CEVA needs to be doing in order to continue to create value. By creating these different sources of recurring revenue, they are ensuring cash flow for years to come. Of course, these are already priced into the stock but what is not priced in is the potential deals that will be cut once companies start manufacturing hardware that requires 5G capable chips and platforms, CEVA’s specialty.

Section 3: The possibilities of 5G

As 5G comes closer and closer to reality and a new level of connectivity never before experienced becomes mainstream there will be a tremendous need for platforms and chips that can handle the mass amount of data associated with 5G. CEVA has already produced their own proprietary technology that serves this purpose. This is key because of the massive growth that is projected in this field. The graph below shows the projected share of connections 5G will

5G mobile connections excluding cellular IoT

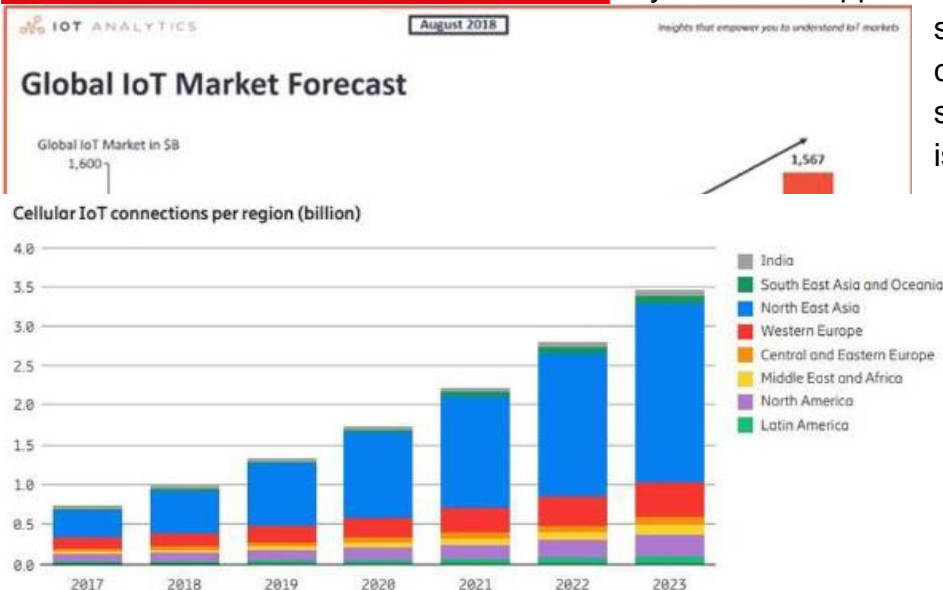


acquire in the coming years. This level of growth will not only give CEVA a large amount of clients and sales but will also disrupt the industry and pressure firms that did not prepare for this level of revolution.

Section 4: The Internet of Things (IoT)

Perhaps the centerpiece of the fifth generation of the internet is the so-called internet of things (IoT). This name denotes the idea of a network of smart devices all interconnected on one cloud based platform. We have seen manifestations of this today with things like smart security systems and appliances that link with the user's

smartphone. These capabilities, however, are just scratching the surface of what is possible. In the chart below, found in a GSMA publication, shows the full capacity of what the IoT could become. In the future, we could see armies of autonomous vehicles communicating with other cars, the road itself, and even the city at large to completely revolutionize the



way we think about transportation. The entire urban landscape can and will change as technology allows for the level of bandwidth required for this level of communication. The improvements would be wide reaching as the chart below shows, even supply chains and the entire healthcare industry would see massive efficiencies. CEVA sees these changes coming in the market and has already developed products to suit them. The CEVA-XC323 vector DSP architecture is specifically designed to meet the performance, energy, and size requirements of IoT technologies. CEVAV-Dragonfly NB2 offers the same for a different set of IoT tech. The point being that as hardware producers begin building a 5G future they will need, in many cases, to use the architectures that CEVA has already brought to market. This means CEVA will see dramatic revenue growth as they amass market share. The level of growth that is possible in this paradigm shift is one that mimics the genesis of the first computers. The two figures on the previous page found in a Forbes article show the rapid growth that experts expect to see in the internet of things. Clearly, this level of growth at a macro level will trickle down and benefit the firms that were prepared for the paradigm shift.

Section 5: A Target for Acquisition

All the above analysis shows that a macro level CEVA is uniquely positioned to benefit from the advances in technology that are coming in the next few years. Additionally, at a firm level CEVA shows some promise especially when analyzing its balance sheet. The firm has significant cash holdings. CEVA has a market capitalization of approximately \$590 million and it holds \$145.9 million in cash, cash equivalents, and short-term investments. It furthers the case for a strong balance sheet by holding no long-term debt. Furthermore, it has a very small portion of short-term liabilities. All of the above facts validate that CEVA is a very liquid company and highly attractive as an acquisition target. When looking at float it can be seen that out of 22.1m shares outstanding 21.5m shares are being actively traded. So surely, from this standpoint, the firm could be acquired but does it make business sense for those larger players in the industry to acquire CEVA? I believe that CEVA's unique structure makes it very attractive firms. CEVA, with all its proprietary technology would be perfect for a firm to acquire so that it has access to these technologies exclusively. To even better the case, CEVA has a unique business geographically, with about 80% in Asia Pacific, 12% in EMEA, and only 8% in the United States. Acquiring firms could use the acquisition of CEVA to enter into these new markets. While there have not been mentions of acquisition in the recent earnings calls I believe that it will become more likely as 5G begins to come to fruition and the strength of CEVA is realized by the market.

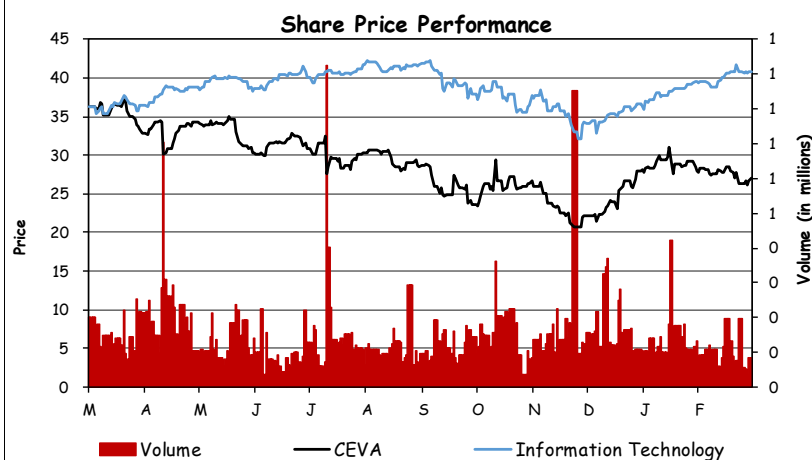
Conclusion:

CEVA is a company with a unique business model, strong balance sheet, and well positioned in an industry that is about to explode. For investors looking to get into IoT and 5G technologies CEVA is a cheap option

with massive upside in the case of cash flow growth or acquisition both of which I believe are highly likely. Overall, CEVA is a strong buy at a price of \$24.00 however; I believe that even buying at market price will offer huge return.

CENTER FOR GLOBAL FINANCIAL STUDIES

CEVA, Inc.	Symbol: CEVA
Analyst	Paul Commisso
Buy below	\$23.97
Sell above	\$33.29
Probability of Price Increase	79%
Last Price	\$26.96
Intrinsic Value	\$26.63
Target Dividends	\$0.00
Target Price	\$29.96



Description

CEVA, Inc. licenses signal processing platforms and artificial intelligence processors for semiconductor companies and original equipment manufacturers (OEMs) serving the mobile, consumer, automotive, industrial, and Internet-of-Things (IoT) markets worldwide.

Sector	Information Technology
Industry	Semiconductors and Semic
Last Guidance	December 11, 2018
Next earnings date	May 9, 2019

People

Wertheizer, Gideon, CEO & Director
 Arieli, Yaniv, CFO & Treasurer
 Ohana, Issachar, Executive Vice President of Worldwide Sales
 Bar-Niv, Erez, Chief Technology Officer
 Kingston, Richard, Vice President of Market Intelligence, Investor
 Sheier, Moshe, Vice President of Marketing

Top Competitors

Adesto Technologies Corporation	Silicon Laboratories Inc.
Pixelworks, Inc.	NVIDIA Corporation
DSP Group, Inc.	MaxLinear, Inc.
Ambarella, Inc.	QUALCOMM Incorporated
Rambus Inc.	QuickLogic Corporation

Market Statistics

Market Capitalization (mil)	\$594.85
Last Price per share	\$26.96
52 week high	\$37.65
52-week low	\$20.40
Volatility	37.75%
Daily volume (mil)	0.08
Short interest	2.21%
Days to cover short interest	3.55
Beta	2.08

CENTER FOR GLOBAL FINANCIAL STUDIES

CEVA

Friday, March 29, 2019

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Quarterly Earning Surprises (Actual Vs. Median Estimates)

Revenue	
12/31/2017	2.02%
3/31/2018	-5.42%
6/30/2018	-7.93%
9/30/2018	0.02%
12/31/2018	-2.41%
Mean (Standard Error)	-2.74% (0.99%)
EBITDA	
12/31/2017	N/A
3/31/2018	N/A
6/30/2018	-28.86%
9/30/2018	34.28%
12/31/2018	5.71%
Mean (Standard Error)	#VALUE!

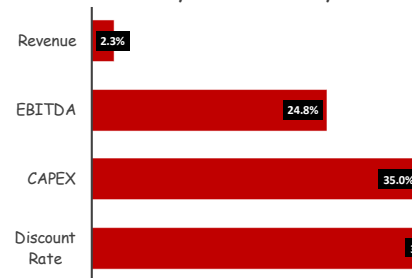
Valuation

DCF Valuation						
	Revenues	EBITDA Margin	UFCF	WACC	ROIC	Price Per Share
Base Year (Actual)	\$77.88	22%	\$32.14	14.36%	7.06%	\$16.36
year 1	\$91.89	7%	-\$1.13	14.35%	6.52%	\$17.40
year 2	\$110.68	23%	\$13.83	14.33%	9.93%	\$18.63
year 3	\$128.65	20%	\$16.02	14.32%	10.16%	\$20.01
year 4	\$141.98	0%	-\$0.59	14.31%	6.97%	\$21.57
year 5	\$155.81	2%	\$1.79	14.30%	6.96%	\$23.43
year 6	\$170.61	3%	\$4.41	14.29%	6.94%	\$25.60
year 7	\$185.71	5%	\$7.43	14.28%	6.92%	\$28.13
year 8	\$200.94	6%	\$10.75	14.28%	6.86%	\$31.03
year 9	\$216.11	8%	\$14.38	14.27%	6.74%	\$34.35
year 10	\$231.02	9%	\$18.28	14.27%	6.60%	\$38.12
year 11	\$245.46	11%	\$22.44	14.26%	6.43%	\$42.39
year 12	\$259.21	12%	\$26.81	14.26%	6.25%	\$47.19
year 13	\$272.04	14%	\$31.34	14.26%	6.08%	\$52.59
year 14	\$283.74	15%	\$35.98	14.26%	5.90%	\$58.63
year 15	\$294.09	18%	\$44.08	14.27%	5.97%	\$67.13
Continuing Period	\$302.92	18%	\$142.55	14.27%	14.27%	
Relative Valuation				Asset Based Valuation		
Multiple	EV/Rev (FW)	EV/EBITDA (FW)	P/BV (TTM)	P/E (FW)	Recovery Rate	100%
Median (Peers)	3.6x	24.7x	3.3x	28.5x	Capital	\$645.64
Base	Revenue (NTM)	EBITDA (NTM)	Book Value (LTM)	Net Income (NTM)	Intangibles	\$49.31
CEVA	\$96.42	\$10.75	\$513.78	\$31.35	Claims	\$9.72
Implied EV	\$342.97	\$265.65				
Total Net Claims	-\$123.88	-\$123.88				
Implied EQ	\$466.85	\$389.53	\$1,677.21	\$893.15		\$586.61
Valuation Summary						
Model	Intrinsic Value		Target Price		Weight	
DCF Valuation	\$16.36		\$17.40		50.00%	
EV/Rev (FW)	\$20.46		\$23.40		0.00%	
EV/EBITDA (FW)	\$17.07		\$19.52		0.00%	
P/BV (TTM)	\$73.51		\$84.05		0.00%	
P/E (FW)	\$39.14		\$44.76		50.00%	
Asset Based Valuation	\$25.71		\$29.40		0.00%	
Price per Share	\$27.75		\$31.08		100%	

Financials

Profitability	CEVA (LTM)	CEVA Historical	Peers' Median (LTM)
Return on Capital	7.1%		
Adjusted EBITDA Margin	21.8%	72.36%	55.62%
Return on Equity	4.8%		
Adjusted Net margin	31.1%		
Invested Funds	CEVA (LTM)	CEVA Historical	Peers' Median (LTM)
Cash/Capital			
NWC/Capital			
Operating Assets/Capital			
Goodwill/Capital			
Capital Structure	CEVA (LTM)	CEVA Historical	Peers' Median (LTM)
Total Debt/Market Cap.			
Reported Cost of Borrowing			6.9%
Cash Interest/Total Debt			5.4%
CGFS Credit Rating	A		B
Credit Model Rating			b+ to bb-
Probability of Default	0.12%		0.07%
Cost of Capital			
Implied Cost of Borrowing (CEVA)	4.2%		5.0%
Implied Cost of Borrowing (Peers)	5.8%	6.6%	5.8%
Cost of New Debt Estimate	6.0%		
Market Risk Premium Estimate	8.5%		
Cost of Equity Estimate	14.5%		
WACC Estimate	14.3%		

Sensitivity Attribution Analysis



Intrinsic Value Distribution--Probability (Upside)=78.5%

