Analogic Corporation

NasdaqGS:ALOG

Analyst: Coralie Cornern
Sector: Healthcare

BUY

Price Target: $88.50

Key Statistics as of 12/11/2015

Market Price:	$82.19
Industry:	Medical Laboratories & Research
Market Cap:	$1.04M
52-Week Range:	$73.55-$92.31
Beta:	0.6

Thesis Points:

- Strong financial position, 100% equity composition
- Growing revenues with operating margin expansion
- Over reaction to preliminary FQ1 results

Company Description:

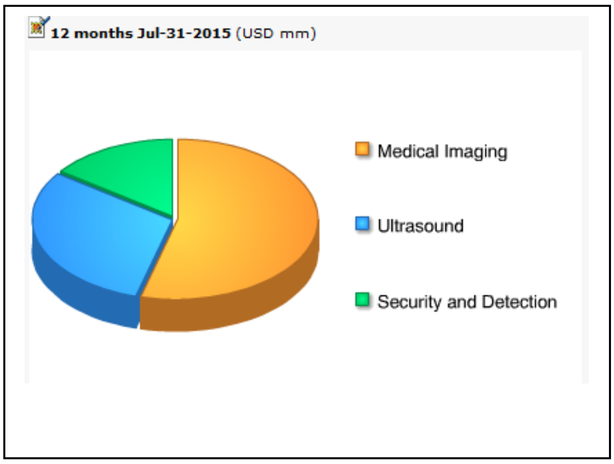
Analogic Corporation designs, manufactures, and commercializes leading-edge real-time guidance, diagnostic imaging and threat detection technologies. The company operates and reports along three business segments: Ultrasound, Medical Imaging, and Security Technology. The Ultrasound business is a market leader in ultrasound guidance systems for the urology and surgery markets and is expanding into point of care areas such as anesthesia and emergency medicine. The firm sells its ultrasound products through a direct sales force in North America and Europe, as well as through a network of distributors to clinical practitioners throughout the world. The Medical Imaging segment provides critical enabling medical imaging systems and subsystems for computed tomography (CT), magnetic resonance imaging (MRI) and high-resolution digital mammography systems. Analogic Corporation's Medical Imaging products are primarily sold through longstanding relationships with multinational medical OEMs and new entrants in emerging markets. The Security Technology segment designs and manufactures automated threat detection systems for aviation baggage inspection applications utilizing advanced CT technology. Security products are sold primarily through multinational OEM partners. The company was founded in 1967 and is headquartered just north of Boston in Peabody, Massachusetts.

Thesis

Analogic Corporation is a Medical Laboratories and research company, which holds a very strong and diversified portfolio of products. They operates in three different segments, Medical Imaging, Ultrasound and Security and Detection.
The company is in a very strong financial position. They do not carry any long term debt and their strategy of margin expansion is already being successful. The company manages to grow sales year on year while expanding net operating margin and generating cash flow, therefore creating value. The preliminary FQ1 results announcement made the stock price drop on November 18th, which created a new opportunity to buy the undervalued stock. Management recently announced Analogic would repurchase $5 million worth of stocks which further show the stock undervaluation.
A buy of Analogic Corporation is therefore recommended with a one-year target price of $88.50. Currently trading at $82.19, it has an upside potential of 8.15%.

Products

Analogic Corporation operates in three different segments: Medical Imaging, Ultrasound and Security and detection.
Analogic Corp. is a leader in the design and manufacture of CT (computed tomography) systems and sub systems. The company also produces magnetic resonance imaging (MRI) as well as 2D and 3D mammography detectors. The CT portfolio includes X-ray converters that convert x-ray energy into CT signals, and DMS (detectors that permits to recreate the 3D images), as well as full integrated CT systems.
The firm also manufactures ultrasound used in the urology, surgery and point of care markets. The ultrasound segment also include some sub systems such as ultrasound probes. The last segment is Security and Detection. This segment manufactures airport checked baggage screening systems as well as DNA analysis systems. Those systems are sold to two main OEM customers, L-3 Communications and Smiths Detection and installed in airports across the United States and the rest of the world. Medical imaging accounts for 54% of revenue, Ultrasound for 31% and Security and Detection for 15% as per shown in the below graph.



Analog Corporation announced on November 30th the release of its newest ultrasound system, the bk5000. The system will be used by surgeons during operations, and will enable them to get anatomical details needed during the procedure without any user intervention.
Analogic Corporation is currently selling about 40% of its product in the US, while the rest of the revenues come from Japan, Germany, the Netherlands (each of them about 11%) and the remaining proportion from other locations including most of the European countries, North Africa, Latin-America, Southeast Asia and Oceania. The company is willing to further expand in China, and announced in September this year the installation of more than 50 CT platforms all over China.

Porter's Five Forces

The bargaining power of suppliers can be classified as relatively low. Most of the products are manufactured using internally designed components. Moreover, the elements that Analogic Corporation need to buy from third parties are available from more than one source, which makes it fairly easy to switch supplier.

The bargaining power of customers is medium. Analogic's customers often require special customization for their product, so it is unlikely that those customers, especially in the healthcare sector switch to different producers. A risk though exist in the security segment, especially today, where if one of the company's products is found to be malfunctioning, resulting in breach of airport security, it could lead customers to completely stop their relationship with Analogic and in a drop in stock price.

The intensity of existing rivalry is medium. There are not many existing competitors in the medical imaging segment, and Analogic Corporation's products are customized for the need of customers. The downside is that the company's products carry a higher price compared to similar products manufactured by competitors.

The threat of substitutes is low as customers cannot easily find other products that would meet their need. It impossible for customers to find similar systems or sub systems, either in security, medical imaging or ultrasound that could be used as substitutes in CT, MRI or airports baggage security systems.

The threat of new competitors is low. The barriers to entry are high. Analogic is already selling its products worldwide and own patents on its technologies. The technologies Analogic Corporation created and is now manufacturing are advanced and the learning curve and capital needed is high.

Growth strategy and initiatives

While pursuing its strategy of expanding ultrasound and medical imaging in China, Analogic Corporations is willing to change its product mix to focus on Security and Detection segment, as it is the segment that generate the best operating profit. Currently, the operating margin for this segment is 17% (up 6 percentage point from the same period last year). The operating margin
could have been even higher but has been offset by two percentage points due to late shipment of some DNA testing systems in the last quarter of 2015 that were not recognized as revenue. To support its strategy and the increasing demand in this fast growing market, the company announced it will transfer some production facilities to Shanghai. By transferring a small part of the Medical imaging segment production to Shanghai, the company is expecting saving of approximately $4 million in fiscal 2016, and $9 million in fiscal 2017. These projected savings enabled Analogic to invest in
Research and Development targeting the Security and Detection segment.

Concerning the strategy in the US, Analogic Corporation is expecting to generate revenue from the FBI and law enforcement side of the US government by selling Rapid DNA systems. The Opportunity for rapid DNA revenue growth is huge. Indeed, a conventional DNA analysis takes at the minimum several days, and can take up to weeks depending on the systems, and on the expertise of the people analyzing the profiles. Analogic's rapid DNA systems can create a DNA profile in about 84 minutes, without the need of highly skilled employees. The FBI would use those systems for testing and fingerprinting but the system need to be tested and approved first. Jim Green, the company CEO said he was expecting the end of the testing cycle in the next calendar year. The approval of the product should lead to state government and even foreign countries to purchase the rapid DNA system.

Analogic corporation is also aiming at growing its market share in Europe and middle East as well as in the Asia Pacific area as a whole. While the demand is steady in North America, Europe and Middle East benefit from an increasing momentum.

Financials and Valuation

FY 2015 has been profitable for Analogic Corporation. The company managed to grow revenues 4% compared to FY 2014, or 6% on a constant currency basis. This 6% increase was driven by a growth in Ultrasounds and Security and Detection segment. Those two segments yield better margin and therefore enable the firm to expand its operating margin. By improving the product mix, management is committed to expand the margin and was successful at doing it. The first quarter of fiscal 2016 was slightly weaker in terms of sales that last year first quarter, but still, Analogic managed to increase operating margin almost in each segment (Medical imaging, Security and Detection) although sales were decreasing. Analogic Corporation operating margin is currently at 8%, better than six out of seven of Analogic direct competitors.

ALOG managed to increase its cash balance to $124 million by the end of FY 2015, which results in the company having more cash than its total liabilities of $97 million the same year. Having such a great amount of cash on hand shows the company has healthy financials and that it can sustain itself in case of any unpredictable event that could harm the company. The last earnings call happened on the 8th of December and the CFO mentioned that the operating cash flow went up to $131 million, and that $5 million were allocated to stock repurchase, creating value for the shareholders but also showing that management believe in the current undervaluation of ALOG.

Analogic Corporation, as opposed to the entire competition, does not currently carry any long term debt, and therefore no financial risk. A company composed of one hundred percent equity is very attractive, especially when the company is managing its cash so well.

On November 18th, Analogic released a statement and lowered its guidance for Q1 2016. The news caused a 12% drop in stock price, which further compound the undervaluation.

The first quarter of FY 2016 has seen very slight decrease in sales, mainly due to unfavorable currency rates as the dollars has been strengthening and the euro weakening. Nevertheless the company manage to generate strong operating leverage with consistent cash generation and operating margin expansion.

The valuation of Analogic Corporation is based on a proforma that values the company with a discounted cash flow model and focus on the company's return on Equity. A summary of the outputs of the valuation is attached to this report and can be found on the last page. When valuing Analogic Corporation, a slow decay growth rate has been utilized to determine the speed of reversion toward long term stability. The intrinsic value of the firm is quite sensitive to the risk premium. A 2% premium has been added to the United States' risk premium of 5.5%. The premium has been added mainly due to the fact that the company is selling in China (the large majority of sales are generated from the US and Europe though). The operating margin has been set to decrease a slight 1%, as the firm will probably maintain its margin expansion strategy.

Following the proforma assumptions ALOG's intrinsic value is $90.6 with a one year target price of $88.50, which represent an 8.15% upside potential.

Summary

Analogic Corporation is a business focused on growth. The company has a strong balance sheet, a robust product pipeline and an experienced management team enabling revenue growth and operating margin expansion together with consistent cash flows. Analogic Corporation appears to be the 'best in class' in terms of product portfolio but also in terms of financial health and efficiency, which makes it a good investment opportunity.

Sources:

- Analogical Corporation 10-K
- Capital IQ
- Bloomberg

SIENAcollege

Siena Market Line
3rd week of December 2015

CENTER FOR GLOBAL FINANCIAL STUDIES

Analogic Corporation	ALOG	Analyst	Current Price	Intrinsic Value	Target Value	Divident Yield	1-y Return: 8.15%	NEUTRAL
		Coralie Cornern	$82.19	$90.60	$88.50	0%		

General Info	
Sector	Healthcare
Industry	Healthcare Equipment and Supplies
Last Guidance	December 8, 2015
Next earnings date	March 9, 2016
Market Data	
Enterprise value	$889.39
Market Capitalization	$1,019.89
Daily volume	0.08
Shares outstanding	12.41
Diluted shares outstanding	12.62
% shares held by institutions	106.42%
% shares held by insiders	1.11%
Short interest	7.48%
Days to cover short interest	9.07
52 week high	$92.31
52-week low	$75.47
5y Beta	0.93
6-month volatility	28.50%

Peers	Market Cap.
Newport Corp.	$606.43
AngioDynamics Inc.	$437.18
Greatbatch, Inc.	$1,741.75
Universal Electronics Inc.	$724.52
Key Tronic Corp.	$81.62
Sparton Corp.	$186.03
Ducommun Inc.	$172.23

Current Capital Structure	
Total debt/Common Equity (LTM)	0.02
Cost of Borrowing (LTM)	0.00%
Estimated Cost of new Borrowing	2.63%
Altman's Z	9.23
Estimated Debt Rating	AAA
Current levered Beta	-0.06
LTM WACC	6.72%

Management

Professional	Title	Comp. FY2013	Comp. FY2014	Comp. FY2015
Green, James	Chief Executive Officer, President and Directo	$4,268,956	$2,604,653	$3,055,142
Ryan, James	Senior Vice President and General Manager of	$0	$0	$886,996
Fry, John	Senior Vice President, General Counsel and S	$1,095,970	$930,862	$1,115,022
Faltas, Mervat	Senior Vice President and General Manager of	$899,562	$833,115	$1,019,568
Bourque, Michael	Vice President and Corporate Controller	$0	$0	$395,979
Frost, Mark	Chief Financial Officer, Senior Vice President a	$0	$0	$0

Past Earning Surprises

	Revenue	EBITDA	Norm. EPS	Standard Error of "Surprise"
Last Quarter	-0.04%	0.00%	0.00%	0.01%
Last Quarter-1	2.69%	11.38%	3.23%	2.81%
Last Quarter -2	0.57%	-3.91%	8.08%	3.50%
Last Quarter -3	-2.65%	21.16%	22.73%	8.21%
Last Quarter -4	-0.29%	30.65%	75.00%	21.85%
Standard error	0.9%	6.4%	13.9%	5.29%
Standard Error of Revenues prediction	0.9%			
Imputed Standard Error of Op. Cost prediction	6.4%			
Imputed Standard Error of Non Op. Cost predictio	12.3%			

Industry Outlook (Porter's Five Forces)

Bargaining Power of Suppliers (75th Percentile), Bargaining Power of Customers (71th Percentile), Intensity of Existing Rivalry (67th Percentile), Threat of Substitutes (100th Percentile), Threat of New Competition (83th Percentile), and Overall (90th Percentile).

Proforma Assumptions

Convergence Assumptions

All base year ratios linearly converge towards the Sub-industry ratios over an explicit period of 10 years

General Assumptions	
Money market rate (as of today)	0.49%
Risk-Free rate (long term estimate)	2.98%
Annual increase (decrease) in interest rates	0.1%
Marginal Tax Rate	37.5%
Country Risk Premium	7.5%

Forecast Year	Revenue Growth Forecast	Revenue ($) Forecast
LTM		$536.92
FY2016	1.9%	$547.23
FY2017	6.3%	$581.67
FY2018	5.9%	$616.14
FY2019	5.6%	$650.40
FY2020	5.2%	$684.19
FY2021	4.8%	$717.23
FY2022	4.5%	$749.24
FY2023	4.1%	$779.94
FY2024	3.7%	$809.04
FY2025	3.4%	$836.27
Continuing Period	3.0%	$861.36

Items' Forecast Assumptions

	Base year (LTM)	Convergence period (Sub-industry)	Adjustment per year
Operating Cash/Rev.	0.00%	0.00%	0.0%
NWV/Rev.	36.42%	20.67%	-1.6%
NPPE/Rev.	19.61%	19.30%	0.0%
Dpr/NPPE	13.68%	21.30%	0.8%
NET MARGIN	11.03%	7.20%	-0.4%
Op. Exp./Rev.	86.11%	85.00%	-0.1%
SBC/Rev.	2.00%	1.64%	0.0%
Rent Exp./Rev.	0.43%	0.91%	0.0%
R&D/Rev.	13.73%	8.00%	-0.6%
E&D/Rev.	0.00%	0.00%	0.0%
SG&A/Rev.	20.87%	30.78%	1.0%
ROE	8%	14.06%	0.61%
P/E	18.40x	11.22x	-0.72x
P/BV	1.37x	1.58x	0.02x
Debt/Equity	2%	64%	6.2%
Unlevered beta	-0.06	0.77	0.08
Dividends/REV	1%	3%	0.2%

Other Assumptions

Tobin's Q	80%
Excess cash reinvestment	Money market rate
Other claims on the firm's assets	$0.00
Capitalization	
100% of all rent expenses are capitalized and amortized 'straightline' over 10 years	
100% of all R&D expenses are capitalized and amortized 'straightline' over 10 years	
E&P expenses are not capitalized	
SG&A expenses are not capitalized	
Valuation Focus	
DCF Valuation	100%
Relative valuation	0%
Distress Valuation	0%
Monte Carlo Simulation Assumptions	
Revenue Growth deviation	Normal (0%, 1%)
Operating expense deviation	Normal (0%, 1%)
Continuing Period growth	Triangular (7.275%, 7.5%, 7.725%)
Country risk premium	Triangular (2.91%, 3%, 3.09%)
Intrinsic value σ(ε)	$0.30
1-year target price σ(ε)	$0.30

Valuation

Forecast Year	ROE	Ke	Common Equity	Implied Equity Value	Other Claims on Assets and Dilution Costs	Shares Outstanding	Price per Share
LTM	8.0%	2.6%	$793.41	$1,256.98	$28.83	12.41	$90.85
FY2016	8.5%	3.3%	$815.06	$1,252.69	$27.63	12.41	$88.64
FY2017	8.7%	4.0%	$852.24	$1,268.89	$26.84	12.41	$87.42
FY2018	8.7%	4.7%	$887.43	$1,289.66	$25.76	12.41	$86.58
FY2019	8.7%	5.5%	$920.80	$1,316.00	$24.24	12.41	$86.12
FY2020	8.7%	6.2%	$952.34	$1,348.81	$22.09	12.41	$86.09
FY2021	8.7%	6.9%	$981.93	$1,389.07	$15.97	12.41	$86.66
FY2022	8.7%	7.7%	$1,009.41	$1,437.95	$16.35	12.41	$87.45
FY2023	8.6%	8.4%	$1,034.61	$1,496.88	$16.66	12.41	$88.78
FY2024	8.6%	9.2%	$1,057.35	$1,567.63	$0.00	12.41	$90.75
FY2025	8.6%	9.9%	$1,077.50	$1,652.45	$0.00	12.41	$95.03
Continuing Period	14.1%	10.0%	$950.00				

Monte Carlo Simulation Results

The 3σ(ε)-adjusted intrinsic value is $90.6; the 3σ(ε)-adjusted target price is $88.5; and the analysts' median target price is $95.33

Sensitivity Analysis

Revenue growth variations account for 95.9% of total variance
Risk premium's variations account for 2.5% of total variance
Operating expenses' variations account for 1.4% of total variance
Continuing period growth variations account for 0.2% of total variance