Nils Weddig



Balchem Corporation

NasdaqGs:BCPC Sector: Materials

BUY

Price Target: \$76.90

Key Statistics as of 4/30/2015

Market Price: \$52.42 Industry: Chemicals Market Cap: \$1.67 B 52-Week Range: \$48.89-69.92

Beta: 0.91

Thesis Points:

Positive industry outlook despite analyst's negative sentiment

Analyst:

- Diversification of product mix through recent acquisition of SensoryEffects
- Overreaction to negative news reports drove down stock price, leading to current undervaluation

Company Description:

Balchem Corporation was founded in 1967 and is headquartered in New Hampton, New York. The company is in the business of developing, manufacturing and marketing specialty performance ingredients as well as products for the food, nutrition, medical and pharmaceutical industries in the United States and internationally. They are one of the largest ingredient suppliers in the food and beverage industry. The company primarily operates in three segments: SensoryEffects, Animal Nutrition & Health and Specialty Products. Through the Sensory Effects product segment Balchem is producing creamer systems, powdered fats, dairy replacers, nutritional beverage bases, beverage, juice, dairy and ice cream bases, chocolate systems, ready-to-eat cereals, grain based snacks, cereal based ingredients and microencapsulation solutions for applications that include food, pharmaceutical and nutritional ingredients. The Animal Nutrition & Health segment provides products, primarily choline chloride, which enhances health and milk production in ruminant animals. Choline chloride is being used in poultry, pet and swine industries. The Specialty Products segment offers ethylene oxide that is being used in the health care industry. Additional products include single use canisters with ethylene oxide for the purpose of sterilizing re-usable medical devices.





Thesis

Balchem Corporation is one of the largest ingredient suppliers in the food and beverage industry. In the past years the company focused on sales growth and margin improvements. Balchem is heavily investing into diversifying their product portfolio through recent acquisitions and continuous investments into the development of new technologies. The restructuring of the management team will provide a basis for future growth of the company. News reports in recent months have impacted Balchem Corporation's stock price negatively and led to a share price decline of 15.35% in the past three months. There is no sufficient justification of this price decline evident and the company continuous to provide revenue and EBITDA growth while keeping operating costs stable. The company is prepared well for the future and will benefit further from manufacturing products in a growing industry. Currently, Balchem Corporation is trading at a discount of 35%-50% taking into consideration the historical two-year average of their trading multiples in comparison to its competitors.

A BUY of Balchem Corporation (BCPC) is therefore recommended with a one-year target price of \$76.90. Currently trading at \$52.42, it has an upside potential of 46.70%.

Industry Outlook

Balchem Corporation is primarily providing products for the dairy, food and beverage, and fracking sector. The outlook for the upcoming quarters and years is generally speaking very positive.

The dairy sector has the most promising outlook, with milk production expected to reach record highs in 2015. The milk production is forecasted to reach 211 billion pounds in 2015, a 2.7% increase from 2014 levels. Milk producers are expected to gradually increase the number of cows per crop and their output is expected to increase at greater levels than trend rates. The increase in milk supplies will be driven by an overall improving economy as well as lower dairy prices. Stagnating growth in U.S. demand will be offset by Russia's repeal of their one-year ban on imports implemented in August 2014 at the start of the Ukraine crisis. The current growth in dairy cow inventories is at the highest level in nearly ten years. The elimination of the European Union quota on dairy products will further boost milk production in 2015.

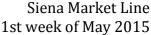
Additionally, the decrease in production costs improves margins for producers in the dairy sector. Crop prices have been decreasing significantly in 2014 with positive outlooks for 2015.

Choline chloride is one of Balchem's primary products in the company's product mix. The global choline chloride market is expected to reach 596 kilo tons by 2019, an expected growth at a CAGR of 5.6% from 2014 to 2019. The Asia-Pacific market has dominated this sector in recent years and is expected to continue to grow at a CAGR of 6.4% from 2014 to 2019, remaining the major market in the following years. Choline chloride will be the fastest growing segment within the poultry feed market with a CAGR of 5.7% until 2019 due to the rising consumption of poultry meat in the global market. Asia-Pacific and Europe have accounted for more than 65% of the global choline chloride market value in 2013.

Experts from the energy sector expect a slowdown in the fracking industry due to the drop in oil prices. They claim that oil prices need to be at a level around \$90 in order for U.S. fracking to be profitable. However, among others Jim Burkhard, the head of oil market research at HIS, a highly respected petroleum industry research firm, states that this only applies to 20% of all fracking fields in the U.S. 80% of petroleum produced through fracking will still be profitable at the \$50 level since many producers have become significantly more efficient in designing and operating their fracking wells. This is made possible by a new technology called super fracking which pumps larger amounts of sand into the wells while fracturing the oil shale and therefore increasing productivity. In fact, productivity has risen from 400 barrels a day to a maximum of 600 barrels a day, lowering the break-even point. Recently, oil prices have exceeded the \$50 level and are expected to keep rising or at least staying at the current level of \$56. Therefore, a slowdown of Balchem Corporation's fracking product segment is unlikely.

Product Mix and Diversification

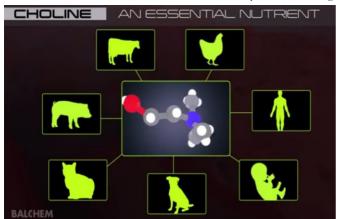
Balchem Corporation operates three domestic subsidiaries which the company owns fully: Performance Chemicals and Ingredients Company, known as SensoryEffects, which Balchem acquired in May 2014, Ingredients, Inc. and Aberco, Inc. In addition, Balchem operates two wholly-owned European subsidiaries: Balchem BV, a dutch company and Balchem Italia Srl, an Italian company.





SensoryEffects operates as a supplier of customized food and ingredients systems. The company is a leader in powder, solid and liquid flavor systems, creamer and specialty powder, cereal based products and other ingredients food and beverage delivery systems. In addition, the company provides microencapsulation solutions to multiple applications of food, nutritional and pharmaceutical ingredients to improve the performance of nutritional applications as well as enhance the shelf-life of baked, refrigerated and frozen dough as well as processed meats, confections, seasoning blends and nutritional supplements. The company also markets choline for wellness applications. SensoryEffects offers a wide range of products and continuously services the beverage, cereal, baby & toddler, frozen dessert and nutritional systems market with innovative and optimized product offerings. They function as a strategic supply partner to Balchem Corporation to provide maximum growth opportunities through innovative new products. Overall, the acquisition of SensoryEffects has contributed and will further continue to contribute to Balchem Corporation's product mix. The acquisition enables Balchem to offer additional products and penetrate different markets.

Balchem's Animal Nutrition & Health segment provides nutritional products through microencapsulation and chelation technologies in combination with the production of choline chloride. Choline chloride, which is also known as Vitamin B4, is being offered as a healthy feed additive for the growth of animals such as swine, ruminants and poultry. The product prevents excessive accumulation of fat in the animal's liver by metabolizing



fats. In addition it improves the health of the animals and boosts their milk production while improving the nutritional levels by delivering necessary nutrient supplements. Belcham's chelation technology, known as the KEYSHURE® line of products leads to enhanced nutrient absorption for the targeted animals and is being marketed globally. Additionally, parts of the choline

chloride can be used in the process of hydraulic fracturing of shale wells and the demand from the energy sector for this product is growing. Drilling and stimulation in shale wells causes problems due to clay swelling. This swelling can cause higher drilling costs and a decrease in production rates. In the current environment of low oil prices, companies seek ways to reduce production costs. Balchem's chloride is increasingly used in the process of fracking because it prevents the swelling of clay as a temporary clay stabilizer. Choline chloride offers an effective and more environmental friendly alternative compared to other clay stabilizing products raising the competitive advantage of Balchem Corporation in this sector. Additionally, the company plans to utilize choline in the pharmaceutical delivery development. Balchem started to work with CureMark, a licensee of Balchem's top choline technology. CureMark is utilizing the product for their new drug that has completed Phase III clinicals with the FDA and is in the process of getting Balchem's product approved to be used in their drug to treat autism. Once the drug will be approved, it will significantly boost Balchem Corporation's revenues in this sector.

Lastly, the company's Specialty Products segment operates under ARC Specialty Products. The company produces ethylene oxide and sells the product as a sterile gas which is being used in the health care industry. The gas is being utilized to sterilize a variety of medical devices due to its ability of treating hard and soft surfaces, metals, tubing, composites and different types of plastic while avoiding to negatively affect the device. The 100% ethylene oxide is being delivered to Balchem's customers, primarily contract sterilizers and medical device manufacturers, in uniquely developed and designed reusable steel drums that comply with safety standards outlined by the U.S. Environmental Protection Agency. The stainless steel drums and production facilities are a major part of the company's capital investment.

Porter's Five Forces

The bargaining power of suppliers can be classified as relatively low. Balchem Corporation has very reliable sources in their supply chain considering normal market situations. However, since the company's primary raw materials are derived from minerals, petrochemicals and commodities, they can be subject to price fluctuations caused by market movements. The overall bargaining power is reduced by a recently launched joint production venture with Taminco Corporation in 2014. The joint venture will produce choline chloride, one of Balchem's



major products. The production unit will use the most advanced technology in order to generate advantages of scale and produce high quality products at a very competitive cost.

The bargaining power of buyers on the other hand is rather moderate. Customers have many alternatives due to the large number of competitors in the food and dairy ingredient industry. However, Balchem Corporation is one of the market leaders and tries to continuously improve their products and introduces regularly new innovative products to the market while keeping prices low. Under current market conditions the company does not have to fear a loss in customer numbers.

The threat of new entrants is low. Balchem Corporation currently holds 16 patents in the United States and internationally that will maintain the company's competitiveness and protect their products and technologies. It will be difficult for new companies to enter the market and compete with existing well established companies like Balchem Corporation. New entrants will face issues when trying to produce at Balchem's current cost levels and compete with existing price levels.

The threat of substitute products is relatively high in some of Balchem's segments. The animal nutrition and health ingredient industry is highly price competitive. In addition, the specialty product segment experiences competition through substitute products such as sterilizing technologies and products. Nevertheless, Balchem Corporation's market share is continuously growing, limiting the impact of substitute products on the company's business activities.

Management

Balchem Corporation is managed by an experienced management team and run by CEO Theodore Harris.

Mr. Harris has been elected CEO of Balchem Corporation this month and succeeded former CEO Dino Rossi. Mr. Rossi has been with the company for 20 years, holding positions like CFO, CEO and President. He will remain board chairman and work closely with the new CEO, Theodore Harris. Mr. Rossi transformed Balchem Corporation from a small U.S. firm to a billion dollar multinational corporation. Keeping him on board will be advantageous to the company in order to have a smooth transition to the new company leadership. Before joining Balchem Corporation, the new CEO Mr. Harris

served as senior vice president and president of Performance Materials of Ashland (NYSE:ASH). During his tenure of 11 years, he implemented multiple strategic initiatives including several acquisitions and joint ventures. In addition, he was in charge of the company's global supply chain of more than 100 manufacturing facilities. Mr. Harris also worked for 12 years in several senior level roles at FMC Corporation, a research company focusing on the chemical industry. He followed the industry closely, gained many insights and developed expertise in the business.

Combining both, Mr. Rossi's know-how and insights into the company and Mr. Harris' new inputs and knowledge of the industry will be essential for improving Balchem Corporation. It also builds a basis for future growth of the company. The entire management team has been with the company for over 10 years and contributed to the growth of the company. In addition, every officer of Balchem's senior management team has held various positions in different divisions at the company and worked their way up to the senior management level. This proves that the management team knows the company inside-out, which is crucial for future growth.

The compensation of the entire management team is approximately 45% below the average compensation of peer companies and part of their compensations are via

Company	Salaries paid	Stock Awards	Total Compensation
Balchem Corporation	1.8	0.7	4.4
Aceto Corp	2	2.7	6.6
KMG Chemicals Inc	1.6	3.1	5.8
LSB Industries Inc	2.5	0	3.5
Hawkins Inc	1.3	0.9	3.1
Sensient Technologies Corp	2.7	6	21
Average Difference (%)	-11%	-72%	-45%

*Data in millions of USD as of FY 2014

stock awards and options.

This clarifies that the company management and shareholders of the company have the same interest of increasing the value of the firm and returning value to the shareholders since a large part of their compensation is coming from stock returns.



Financials

Balchem Corporation has positioned itself among industry leaders and experienced large growth in the past years.

The company has been profitable for more than 20 years with most recent net income of \$52.8 million. Net income increased from 2013 to 2014 by 17.59%. In the same period, Balchem was able to steadily increase their free cash flow with the most recent increase of 54% in FY2014. Operating expenses increased from \$31.8 million in 2013 to \$61.4 million in 2014. The increase is primarily due to the acquisition of SensoryEffects which has higher SG&A and Marketing expenses. In effect, Balchem's Selling, General and Administrative expenses increased by \$29 million in 2014. Marketing expenses contributed an increase of \$19.9 million. Both leading to lower margins for the year.

The company's Gross Margin has been stable around 30% in the past years but decreasing slightly to 26% in 2014 due to the acquisition of SensoryEffects and the indicated increase in operating expenses correlating to the acquisition. However, the acquisition also lead to a large growth in revenue of 60% due to SensoryEffects dominant market position and broad product mix. EBITDA grew by 48% throughout the year but is expected to outgrow revenue in FY2015. In addition, Balchem is in the process of adding new products to the market for the upcoming year which will improve the company's margins in the long-run. Capital expenditures in FY2014 grew by 61% and are expected to grow in 2015. The company is currently in the process of diversifying their product portfolio and improves their competitiveness. FY 2015 will lead to an increase in capital expenditure of approximately \$40 million. This investment will be for the launch of new projects, including the construction of a cogeneration plant in Italy. The facility will provide Balchem with a new technology that is in line with the SensoryEffects product mix and enable the company to enter the agglomeration business.

The strong performance of the dollar impacted the company due to their business in Europe. It led to foreign exchange costs of \$1.4 million. The company's balance sheet continues to strengthen through stable growth of their cash flows. The company closed last quarter with a cash balance of \$50 million after using up some of their cash in the Sensory Effects acquisition. Cash and cash equivalents currently represent 6% of the

company's total assets. Balchem Corporation has been very conservative in the past regarding debt issuance. However, after being debt free in 2013, the company issued 332.5 million in 2014 in order to acquire SensoryEffects.

Balchem Corporation has been very consistent in turning its inventory into cash in the past 10 years. The company improved its cash conversion cycle from a median 58.53 days in the past 10 years to currently 56.09 days. The decrease in the cash conversion cycle is primarily due to the company's improvement of days of sales outstanding. The company was able to decrease days of sales outstanding from a 10 year median of 43.33 days to 37.54 days in 2014. Days of inventory outstanding remained unchanged at 34.62 days. Comparing these metrics to the company's peers clarifies the efficiency of Balchem Corporation's operations:

	В	CPC	Peers			
Metric	Metric Last		Last	10y Med.		
Days of Inventory						
Outstanding	34.62	34.63	61.74	61.91		
Days of Sales	27.54	42.22	20.57	44.22		
Outstanding	37.54	43.33	39.56	41.33		
Days of Payable						
Outstanding	16.07	19.57	38.85	38.59		
Cash Conversion	56.09	58.53	62.45	63.54		

*All data in days

Balchem turns over its inventory quicker than its competitors. Its peers' days of inventory outstanding are 27 days longer. Days of sales outstanding is in the same range and only differs by two days. Balchem Corporation can improve regarding its days of payable outstanding. A longer period is desirable. The table above demonstrates that Balchem pays for its inventory too quickly in comparison to its competitors. Overall, Balchem has a cash conversion cycle that is six days shorter than its peers'.



Why The Market Is Wrong Overreaction to pessimistic news reports

Since December, Balchem Corporation's stock price declined by 23% and currently trades at a share price of \$52.63. During that period the company has reported positive earnings and demonstrated organic growth of the company. Therefore, the selloff and stock price decline can solely be linked to negative news reports about the company that have been published in recent months.

A report from Off Wall Street rated Balchem Corporation as a 'Sell' and predicted a price decline of more than 20% to \$42 per share. The report stated that a large portion of Balchem's revenue comes from the hydro fracking sector which they expect to keep declining due to the low energy prices. Secondly, the analysts don't expect the recent acquisition of SensoryEffects to add value to the firm since it is underperforming. The report led to a 14.7% share price decline and the stock has yet to recover from that drop. Extensive research proves that both claims have to be revoked.

The break-down of revenue below demonstrates that only 10% of the company's revenue comes from specialty products, including products supplied to the fracking industry. Therefore, Balchem Corporation would not be significantly affected by a slowdown in the fracking

In N	fillions of USD except Per Share	FY 2013	g	FY 2014	8
12	Months Ending	2013-12-31		2014-12-31	
d	■ Revenue	337.2	100.0	541.4	100.0
<u>ell</u>	Animal Nutrition and Health	238.5	70.7	281.2	51.9
11	Food, Pharma and Nutrition	47.6	14.1	206.1	38.1
<u>ini</u>	Specialty Products	51.1	15.2	54.1	10.0

industry as suggested by the Off Wall Street report. In addition, as indicated in the industry outlook, the fracking industry is still booming and companies in the industry are continuing to make profits and will continue expanding even at an oil price level of \$50. It is true that the drilling sector is experiencing a slowdown. However, Balchem's products are not being utilized in the process of drilling new wells. Choline chloride is being used in the fracking process when pumping gas and oil. The oil production keeps increasing annually and continues to create expansion possibilities for Balchem Corporation. At a low oil price many fracking companies try to reduce their operating costs. An efficient and affordable way is to include Balchem's choline chloride in the fracking process. The company has a dominant market share in

this sector with current market penetration of 40%. In addition, Balchem is benefiting from declining petrochemical prices that lead to a reduction in raw material costs. During the last quarter Balchem reported positive results about their fracking product segment. Industrial sales grew by \$11.5 million, an increase of 65% compared to one year ago. This improvement comes primarily from a volume increase of choline chloride sales, especially in the fracking sector. The company remains confident regarding their competitiveness in this sector and sees opportunities for growth and possibilities of gaining additional market share in the fracking industry. Earnings for the segment increased by 39.5% to a total of \$11.5 million.

Besides a very pessimistic outlook for Balchem's fracking product segment, analysts underestimate the impact of the Sensory Effects acquisition. Analysts' negative sentiment towards the SensoryEffects acquisition was caused by the company's lower than expected margins that caused Balchem Corporation's overall company margins to decrease. However, SensoryEffects low margins were primarily due to seasonality in the flavor and inclusion sector that accounts for a large share of SensoryEffects' product segments. The company's frozen dessert segment experienced a weak year, primarily due to unfavorable weather and high milk prices that affected the company's sales. In addition, the acquisition increased costs due to charges to P&L for inventory, material and aging inventory, all of which are one time effects and won't affect the company in the upcoming quarters.

Overall, SensoryEffects has already added value to Balchem Corporation's operations and increased sales from \$60 million to \$72 million, leading to an increase in earnings of \$5 million. The company's legacy powder business experienced revenue growth of 15%. The cereal business increased by 20% while the flavor and inclusion segment declined by 17%. Taking into consideration that the seasonality caused that decline and is not expected to affect the business in the upcoming quarters, demonstrates that the SensoryEffects acquisition will contribute essential growth to Balchem Corporation. SensoryEffects is continuously developingnew products and is expected to introduce several new products to the market in 2015. Therefore, the company expects stronger than industry growth in the upcoming year. Industry growth is expected to be between 3%-10%. Balchem Corporation reported record net sales and income during the past quarter primarily due to the acquisition of SensoryEffects.Net sales increased to \$162.7 million resulting in a net income for the quarter of \$19 million.



Fourth quarter sales were 99% greater than in the previous year's fourth quarter. Excluding SensoryEffects business segment, revenue increased by 24.7%. These numbers demonstrate the significant impact SensoryEffects has on Balchem Corporation's overall earnings and clarify the positive effect of the acquisition. In addition to the pessimistic news reports about the SensoryEffects acquisition and the fracking sector that affected Balchem Corporation's stock price significantly, Recognia's report on March 31st 2015 caused Balchem's stock price to decline even further. Recognia is an analytics firm that follows the stock market trying to detect stock movement patterns. The firm detected a "Symmetrical ContinuationTriangle (Bearish)" chart that identified a pattern on Balchem Corporation's stock price performance, indicating a bearish signal and an expected target price in the near future between \$46-\$48. This news report published on Bloomberg additionally drove down the company's stock price contributing to the current undervaluation of Balchem Corporation.

Valuation

The valuation of Balchem Corporation is based on a proforma that values the company with a discounted cash flow model and focus on the company's return on invested capital. A summary of the outputs of the valuation is attached to this report and can be found on the last page.

When valuing Balchem Corporation a conservative approach has been utilized. The revenue growth rates for FY 2015 and FY 2016 are analysts' median estimates of 18.7% and 11.5% respectively. In the following years revenue growth has been set to decline year-over-year to reach a revenue growth for the long-term of 4% which is a conservative approach, assuming revenue growth to follow long-term GDP growth.

Historically, the company's operating expenses as a percentage of revenue have been at 76%, increasing to 78% in the most recent period due to acquisitions. The company plans to continue with their current strategy of acquiring target firms that they identify of being value adding. Therefore, the assumption of increasing operating costs up to a long-term ratio of 80% has been used when valuing Balchem Corporation. This ratio is in line with an operating expense as a percentage of revenue of 81% for their peers.

The table below is an analysis of Balchem Corporation's multiples in comparison to its competitors. The term being analyzed is the past two years. Historically, Balchem

has traded at a premium of 50%-100% compared to its competitors. Currently, this ranges between 20%-60%. Especially their P/E ratio has decreased significantly by 50% compared to competitors in the past two years. This further demonstrates that Balchem is currently trading at a premium.

Curr	ent	vs 2Yr Ave	rage Histor	ical Pre	mium	
Metric		Current	Hist Avg	Diff	# SD	3M Trend
Current Price						
1) NTM P/E	DP.	37%	86%	-50%	-2.6	m
2) NTM EV/EBITDA	EQ.	42%	87%	-45%	-1.7	S
3) NTM EV/EBIT	EQ.	N.A.	N.A.	N.A.	N.A.	
4) NTM EV/Rev	₽.	66%	104%	-38%	-1.4	~
5) LF P/BV	₽.	24%	55%	-32%	-2.1	~~

All assumptions utilized in the valuation are very conservative. Nevertheless, an upside potential of 46.70% with a one year target of \$76.90 are expected.

Summary

The recent decline in stock price caused by negative news reports led Balchem Corporation's stock to be undervalued. It proves to be a good investment opportunity since the company has a healthy balance sheet and capital available in order to further invest into the company and promote organic growth. The company plans to continue to manage their working capital while yielding profitable investment opportunities for growth. In the short-term the new company management will focus on integrating SensoryEffects further into the company operations while continuing their successful strategy of exploring additional opportunities for acquisitions and joint ventures.

Sources:

- Balchem Corporation, 10-K
- Balchem Corporation, Investor Presentations
- United States Department of Agriculture, Dairy Market Outlook
- Capital IQ
- Bloomberg
- SEC
- http://www.balchem.com/



		CENTER FO	OR GLOBAL FI	INANCIAL ST	UDIES			
Balchem Corp.	ВСРС	Analyst Nils Weddig	Current Price \$52.95	Intrinsic Value \$68.77	Target Value \$76.90	Divident Yield 1%	Target Return	BULLISH
Ge	meral Info	Peers	Market Cap.	φυο.//	\$70.90	Management	40.7070	
Sector	Materials	Aœto Corp.	\$566.46	Professional	Title	Comp. FY2012	Comp. FY2013	Comp. FY2014
Industry	Chemicals	Terra Nitrogen Company, L.P.	\$2,542.56	Rossi, Dino	Chairman	\$1,624,361	\$1,749,299	\$2,188,674
Last Guidance	May-05-2014	KMG Chemicals Inc.	\$361.76	Backus, William	Chief Financial Officer, Chief Accou	\$372,502	\$462,619	\$605,932
Next earnings date	5/5/2015	LSB Industries Inc.	\$1,017.57	Fitzpatrick, Francis	Vice President of Administration a		\$665,384	\$666,646
M:	arket Data	Hawkins Inc.	\$431.23	Houston, Matthew	General Counsel and Secretary	\$347,694	\$358,684	\$416,743
Enterprise value	\$1,954.38	Rentech Nitrogen Partners, L.P.	\$593.03	Ludwig, David	Vice President and General Manage	\$622,765	\$528,307	\$530,994
Market Capitalization	\$1,672.17	Koninklijke Wessanen N.V.	\$577.39	Smith, Eric	Vice President of Marketing, Sales,	\$0	\$0	\$0
Daily volume	0.04	CVR Partners, LP	\$991.55		Histori	ical Median Performance		
Shares outstanding	31.09	Taminco Corporation			ВСРС	Peers	Industry	All U.S. firms
Diluted shares outstanding	31.17	Sensient Technologies Corporation	\$3,201.56	Growth	21.7%	1.5%	6.6%	7.4%
% shares held by institutions	86.24%	Current Capit		ROIC	28.1%	10.6%	15.9%	14.3%
*								
% shares held by insiders	1.40%	Total debt/market cap	19.88%	NOPLAT Margin	14.0%	10.7%	8.1%	10.4%
Short interest	3.90%	Cost of Borrowing	1.41%	Revenue/Invested Capital	2.01	0.99	1.97	1.37
Days to cover short interest	7.38	Interest Coverage	3.8x	Exœss Cash/Rev.	15.6%	9.2%	13.5%	12.9%
52 week high	\$69.92	Altman Z	3.76	Total Cash /Rev.	15.6%	9.2%	12.3%	15.2%
52-week low	\$48.89	Debt Rating	BAA	Unlevered Beta	0.81	1.15	1.13	0.95
5y Beta	0.91	Levered Beta	1.28	TEV/REV	3.0x	1.8x	1.5x	2.5x
6-month volatility	32.23%	WACC (based on market value weights)	8.34%	TEV/EBITA	13.3x	19.0x	11.3x	13.1x
	Past Earning Sur			PE (normalized and diluted EPS)		20.8x	22.0x	23.5x
	Revenue	EBITDA	Norm. EPS	P/BV	3.8x	3.5x	2.3x	2.2x
Last Quarter	6.3%	-7.3%	9.8%		Non-GAAP Adju	stments in estimates com	nputations	
Last Quarter-1	-2.6%	-9.7%	-2.0%	Operating Leases Capitalization	100%	Straightline		10 years
Last Quarter -2	-0.8%	18.9%	-4.3%	R&D Exp. Capitalization	100%	Straightline		10 years
Last Quarter -3	-4.4%	-17.5%	-13.5%	Expl./Drilling Exp. Capitalization	n 0%	N/A		N/A
Last Quarter -4	-7.5%	-6.1%	-2.8%	SG&A Capitalization	0%	N/A		N/A
Proform	na Assumptions	_			Forecast			
		Period	Rev. Growth	Adj. Op. Cost/Rev	Invested Capital	NOPLAT Margin	ROIC	WACC
Money market rate as of today	0.52%	LTM	60.6%	78.2%	\$710.92	13%	9.7%	8.3%
Annual increase (decrease) in interest rates	0.1%	NTM	18.0%	78.4%	\$764.57	13%	12.0%	8.7%
Yield Spread accelaration	1.2	NTM+1	11.0%	78.5%	\$826.84	13%	12.0%	8.8%
Marginal Tax Rate	37.5%	NTM+2	5.3%	78.7%	\$904.94	13%	11.3%	8.9%
Risk-Free rate	2.8%	NTM+3	500.0%	78.9%	\$1,491.83	14%	67.0%	9.0%
Tobin's Q	0.80	NTM+4	4.5%	79.1%	\$1,535.57	13%	42.1%	9.1%
Op. Cash/Rev.	0%	NTM+5	4.2%	79.3%	\$1,578.80	13%	42.2%	9.2%
Growth in PPE	NPPE Growth follows Revenue Growth	NTM+6	4.0%	79.5%	\$1,622.09	13%	42.3%	9.3%
Long term Growth	4.0%	NTM+7	3.8%	79.6%	\$1,665.42	13%	42.4%	9.4%
Base Year Unlevered Beta	is equal to 1.13	NTM+8	3.6%	79.8%	\$1,708.96	13%	42.4%	9.5%
Long term Unlevered Beta	1.13	Continuing Period	3.5%	80.0%	\$1,131.93	10%	10.0%	9.6%
-		Valuation					g Model	
Period	Invested Capital x (ROIC-WACC)	Total Debt	Other non-interest bearing claims	Shares Outstanding	DCF (Weight = 80%)	Relative (Weight = 20%)	Distress (Weight = 0%)	Weighted Average Price Per Shar
LTM	\$0.00	\$332.50	\$7.27	31.09	\$79.24	\$31.23	\$75.90	\$69.64
NTM	\$23.24	\$332.50	-\$8.10	31.09	\$87.27	\$40.71	\$83.70	\$77.96
NTM+1	\$24.43	\$332.50	-\$9.69	31.09	\$94.61	\$45.29	\$91.00	\$84.75
NTM+2		\$332.50	\$5.50	31.09	\$107.77	\$46.06	\$98.71	\$95.43
	\$20.19			31.09	0.05.4.4	\$356.63	\$122.05	\$171.44
NTM+3	\$20.19 \$525.11	\$332.50	\$89.98	31.09	\$125.14	\$330.03	Q122.00	
NTM+3 NTM+4			\$89.98 -\$375.74	31.09	\$125.14 \$130.96	\$385.04	\$127.14	\$181.77
	\$525.11	\$332.50			_			\$181.77 \$191.78
NTM+4	\$525.11 \$492.09	\$332.50 \$332.50	-\$375.74	31.09	\$130.96	\$385.04	\$127.14	
NTM+4 NTM+5	\$525.11 \$492.09 \$507.03	\$332.50 \$332.50 \$332.50	-\$375.74 -\$860.95	31.09 31.09	\$130.96 \$136.38	\$385.04 \$413.38	\$127.14 \$133.26	\$191.78
NTM+4 NTM+5 NTM+6	\$525.11 \$492.09 \$507.03 \$521.45	\$332.50 \$332.50 \$332.50 \$332.50	-\$375.74 -\$860.95 -\$1,372.66	31.09 31.09 31.09	\$130.96 \$136.38 \$141.27	\$385.04 \$413.38 \$442.16	\$127.14 \$133.26 \$138.77	\$191.78 \$201.45
NTM+4 NTM+5 NTM+6 NTM+7	\$525.11 \$492.09 \$507.03 \$521.45 \$535.16	\$332.50 \$332.50 \$332.50 \$332.50 \$332.50	-\$375.74 -\$860.95 -\$1,372.66 -\$1,894.67	31.09 31.09 31.09 31.09	\$130.96 \$136.38 \$141.27 \$144.87	\$385.04 \$413.38 \$442.16 \$470.81	\$127.14 \$133.26 \$138.77 \$143.06	\$191.78 \$201.45 \$210.05
NTM+4 NTM+5 NTM+6 NTM+7 NTM+8	\$525.11 \$492.09 \$507.03 \$521.45 \$535.16 \$548.02 \$90.82	\$332.50 \$332.50 \$332.50 \$332.50 \$332.50	-\$375.74 -\$860.95 -\$1,372.66 -\$1,894.67 -\$2,437.45	31.09 31.09 31.09 31.09 31.09	\$130.96 \$136.38 \$141.27 \$144.87	\$385.04 \$413.38 \$442.16 \$470.81 \$499.58	\$127.14 \$133.26 \$138.77 \$143.06	\$191.78 \$201.45 \$210.05 \$217.31
NTM+4 NTM+5 NTM+6 NTM+7 NTM+8	\$525.11 \$492.09 \$507.03 \$521.45 \$335.16 \$548.02	\$332.50 \$332.50 \$332.50 \$332.50 \$332.50 \$332.50	-\$375.74 -\$860.95 -\$1,372.66 -\$1,894.67 -\$2,437.45	31.09 31.09 31.09 31.09	\$130.96 \$136.38 \$141.27 \$144.87	\$385.04 \$413.38 \$442.16 \$470.81 \$499.58	\$127.14 \$133.26 \$138.77 \$143.06 \$146.27	\$191.78 \$201.45 \$210.05 \$217.31
NTM+4 NTM+5 NTM+6 NTM+7 NTM+8	\$525.11 \$492.09 \$507.03 \$521.45 \$535.16 \$548.02 \$90.82	\$332.50 \$332.50 \$332.50 \$332.50 \$332.50 \$332.50 \$302.50	-\$375.74 -\$860.95 -\$1,372.66 -\$1,894.67 -\$2,437.45	31.09 31.09 31.09 31.09 31.09	\$130.96 \$136.38 \$141.27 \$144.87 \$146.74	\$385.04 \$413.38 \$442.16 \$470.81 \$499.58	\$127.14 \$133.26 \$138.77 \$143.06 \$146.27	\$191.78 \$201.45 \$210.05 \$217.31
NTM+4 NTM+5 NTM+6 NTM+7 NTM+8 Continuing Value	\$525.11 \$492.09 \$507.03 \$521.45 \$535.16 \$548.02 \$90.82	\$332.50 \$332.50 \$332.50 \$332.50 \$332.50 \$332.50 Monte Carlo Simulation Assump Stdev	-\$375.74 -\$860.95 -\$1,372.66 -\$1,894.67 -\$2,437.45 tions Min N/A	31.09 31.09 31.09 31.09 31.09 Max N/A	\$130.96 \$136.38 \$141.27 \$144.87 \$146.74	\$385.04 \$413.38 \$442.16 \$470.81 \$499.58	\$127.14 \$133.26 \$138.77 \$143.06 \$146.27 Monte Carlo Simulatio Intrinsic Value	\$191.78 \$201.45 \$210.05 \$217.31 n Results
NTM+4 NTM+5 NTM+6 NTM+7 NTM+8 Continuing Value Revenue Variation Op. Costs Variation	\$525.11 \$492.09 \$507.03 \$521.45 \$535.16 \$548.02 \$90.82 Base 0	\$332.50 \$332.50 \$332.50 \$332.50 \$332.50 \$332.50 Monte Carlo Simulation Assump Stdev 10%	-\$375.74 -\$860.95 -\$1,372.66 -\$1,894.67 -\$2,437.45	31.09 31.09 31.09 31.09 31.09	\$130.96 \$136.38 \$141.27 \$144.87 \$146.74 Distribution Normal Normal	\$385.04 \$413.38 \$442.16 \$470.81 \$499.58 Mean est. $\sigma(\mathbf{e})$	\$127.14 \$133.26 \$138.77 \$143.06 \$146.27 Monte Carlo Simulatio Intrinsic Value \$69.64	\$191.78 \$201.45 \$210.05 \$217.31 n Results 1y-Target \$77.96
NTM+4 NTM+5 NTM+6 NTM+7 NTM+8 Continuing Value	\$525.11 \$492.09 \$507.03 \$521.45 \$3535.16 \$548.02 \$90.82 Base 0	\$332.50 \$332.50 \$332.50 \$332.50 \$332.50 \$332.50 Monte Carlo Simulation Assumption Stidev 10%	-\$375.74 -\$860.95 -\$1,372.66 -\$1,894.67 -\$2,437.45 tions Min N/A N/A	31.09 31.09 31.09 31.09 31.09 Max N/A N/A	\$130.96 \$136.38 \$141.27 \$144.87 \$146.74 Distribution Normal	\$385.04 \$413.38 \$442.16 \$470.81 \$499.58	\$127.14 \$133.26 \$138.77 \$143.06 \$146.27 Monte Carlo Simulatio Intrinsic Value \$69.64 \$0.29	\$191.78 \$201.45 \$210.05 \$217.31 n Results 1y-Target \$77.96 \$0.32