

STRATASYS
CLIENT REPORT
SONTAG SOLUTIONS



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EXECUTIVE SUMMARY

Stratasys is one of the global leaders in the 3D printing industry. Stratasys has the most installed 3D printers in the world at over 120,000 additive manufacturing machines which accounts for 55% of the industrials units and 35% of the desktop units on the market. Stratasys brought on Sontag Solutions to help them best capitalize on the exponentially growing disruption industry that is the additive manufacturing market. Despite revenue going up almost 55% from 2013 to 2014, Stratasys hit quite the stumble in the final quarter of 2014 when their stock plummeted 30% after their preliminary 2014 and projected 2015 revenues came out. Sontag Solutions has developed a set of actionable steps for your consideration.

Sontag Solutions is recommending that Stratasys drive global adoption of their desktop systems, continue to invest heavily into research and development and develop a new process for how to better evaluate other companies that Stratasys is looking to acquire. Stratasys needs to better use its appropriate distribution channels to push their newly acquired desktop printers to markets that have not yet been introduced to 3D printing such as small and medium-sized business and smaller organizations that are heavily dependent on quick and accurate designs. Stratasys is uniquely capable to doing this due to its extensive online Thingiverse community, which can be used to expedite this adoption process. Secondly, Stratasys must continue to discover new technologies and advancements in the 3D printing market in order to bring costs down and increase production times. Lastly, Stratasys must be more careful about which companies they choose to acquire, how much they pay for these companies, and how they integrate the

new company into their existing operations.

COMPANY BACKGROUND

Stratasys Ltd, is one of the industry leaders in the manufacturing of 3D printers and 3D production systems. Stratasys clients use their technologically advanced products for in-house rapid prototyping and other 3D printing solutions. Stratasys supplies 3D printers and production systems for a variety of industries such as aerospace, automotive, consumer electronics, dental, industrial, jewelry and many more.¹ Stratasys offers a wide variety of products that range from affordable desktop 3D printers to large, complicated 3D production systems. Stratasys is a disruptive business that is rapidly changing the way products are manufactured and the number of people who can be involved in the process.

Stratasys was one of the very first players in the 3D printing space. S. Scott Crump and his wife Lisa Crump founded Stratasys in 1988. In 1989, Crump patented his Fused Deposition Modeling (FDM) technology, which allows Stratasys' the capability to take computer designs and turn them into physical objects. The FDM technology uses a fast-moving robotic arm, an extruding head and a variety of different materials to produce these computer aided designs (CAD) into real life. FDM was just the first type of additive manufacturing technologies that Stratasys used to produce 3D objects. Stratasys today uses other additive manufacturing techniques such as PolyJet and WDM (wax deposition modeling) to produce the most technologically advanced prototyping and manufacturing objects on the market.

¹ 20-F Form

In 1992, Stratasys sold its first product, the 3D Modeler, which was a large rapid producing printer that was meant for a bigger corporate company's such as General Motors and 3M. Knowing that in order to become successful in this heavy machinery industry a significant amount of capital would need to be raised, Stratasys decided to go public in October 1994. The company earned about \$5.7 million with their IPO by selling 1.38 million shares of common stock at \$5 per share. In 1995, Stratasys and IBM co-developed the first RP machine that was under \$100,000, which was called the Genisys. In 1997, Stratasys received approval for the Food and Drug Administration to enter into the medical field by using its brand new MedModeler system, which produced anatomical parts from MRI and CT scans. In 2000, Stratasys introduced Prodigy, a product that Both of these advancements were serious investments for Stratasys that paid off, but more importantly it shows that this company has always been dedicated to being one step ahead of the market and be an industry leader in R&D.

In 2002, Stratasys made the 3D printing market more accessible by launching a product called Dimension. Dimension opened up the 3D printing world to a variety of new customers (i.e. small businesses and high schools) by offering a product that was affordable, small and easy to use. Stratasys' R&D investments continued to pay off throughout the early 2000s. Over the first four years of the new decade, they launched three brand new products that drastically improved their sales and stock prices. Net income during this time almost doubled from \$3.1 million to slightly less \$6.2 million. Stratasys' focus on the low-end market allowed it to become the market leader in the RP

industry. Stratasys products account for almost half of all RP systems in use. This was the first time that Stratasys accounted for the largest installed base of RP systems worldwide.

In more recent news, Stratasys has made a number of large acquisitions. In 2011, Stratasys, Inc. and Object Ltd., another global leader in the 3D printing market, merged to form the new company called Stratasys Ltd. which had a combined market capitalization of approximately 3.0 billion². Since Object, Ltd. was based out of Rehovot, Israel prior to the merger, the new joint company decided to have two corporate offices, one is Israel and the other in Minneapolis. Then in 2013, Stratasys, Ltd. acquired a company that was a global leader in desktop 3D printing called Makerbot. Lastly, combined three different companies, RedEye, Solid Concepts and Harvest Technologies to for Stratasys Direct Manufacturing. Stratasys Direct Manufacturing is a service business and is one of the largest AM parts service providers of the world.

FINANCIAL ANALYSIS

Income Statements (all numbers in thousands)

	Year Ended December 31,				
	2014	2013	2012	2011	2010
Statement of Operations Data:					
Net sales	\$ 750,129	\$ 484,403	\$ 215,244	\$155,894	\$117,844
Gross profit	362,394	226,173	109,911	82,404	56,086
Research and development expense	82,270	52,310	19,659	14,360	9,755
Selling, general and administrative expense	351,993	202,040	73,130	39,038	32,863
Goodwill impairment	102,470	—	—	—	—
Change in fair value of obligations in connection with acquisitions	(26,150)	754	—	—	—
Operating income (loss)	(148,189)	(28,931)	17,122	29,006	13,468
Net income (loss)	(119,470)	(26,907)	8,823	20,626	9,370
Net income (loss) attributable to Stratasys	(119,420)	(26,954)	8,491	20,626	9,370

² <http://investors.stratasys.com/releasedetail.cfm?ReleaseID=724378>

Ltd.					
Net income (loss) per basic share	(2.39)	(0.64)	0.39	0.98	0.46
Net income (loss) per basic share attributable to Stratasys Ltd.	(2.39)	(0.64)	0.37	0.98	0.46
Weighted average basic shares outstanding	50,019	42,079	22,812	21,133	20,579
Net income (loss) per diluted share	(2.39)	(0.68)	0.37	0.95	0.44
Net income (loss) per diluted share attributable to Stratasys Ltd.	(2.39)	(0.68)	0.36	0.95	0.44
Weighted average diluted shares outstanding	50,019	42,099	23,776	21,653	21,130

As you can see from the income statement above, Stratasys has seen steadily increasing revenues year after year. The large jump in revenues from 2012 to 2013 and 2013 to 2014 can both partly be attributed to Stratasys acquiring two very large companies during these times. In the middle of 2012, Stratasys and Object, Ltd. merged and formally went under the name Stratasys, Ltd. Object and Stratasys were both tow of the top five largest 3D printing companies when they merged. At the end of 2013, Stratasys purchased MakerBot which at the time was the largest manufacture of desktop printers in the world. As you can see from the Goodwill charge in 2014, Stratasys had to write down that they overpaid for MakerBot by slightly over \$100 million and was one of the main reasons where the 2014 fiscal year did not hit target numbers. Lastly, note the large amount of R&D that Stratasys invests in their company year after year. Stratasys sets the industry standard in this and is one of the few main reasons they are at the forefront of the 3D printing industry.

Balance Statements (all numbers in thousands)

Period Ending		Dec 31, 2014	Dec 31, 2013	Dec 31, 2012
Assets				
Current Assets				
	Cash And Cash Equivalents	442,141	414,088	133,826
	Short Term Investments	8,170	6,696	5,134
	Net Receivables	176,503	115,701	69,646

	Inventory	123,385	88,406	67,995
	Other Current Assets	46,429	227,238	46,677
Total Current Assets		796,628	852,129	323,278
Long Term Investments		14,822	11,219	7,872
Property Plant and Equipment		157,036	91,005	62,070
Goodwill		1,323,502	1,195,891	822,475
Intangible Assets		597,903	622,330	510,372
Accumulated Amortization		-	-	-
Other Assets		9,216	9,647	5,446
Deferred Long Term Asset Charges		-	-	-
Total Assets		2,899,107	2,782,221	1,731,513
Liabilities				
Current Liabilities				
	Accounts Payable	183,286	192,585	74,281
	Short/Current Long Term Debt	50,000	-	-
	Other Current Liabilities	73,115	48,060	18,068
Total Current Liabilities		250,566	134,744	92,349
Long Term Debt		-	-	-
Other Liabilities		51,552	38,474	9,134
Deferred Long Term Liability Charges		5,946	3,315	57,874
Minority Interest		469	-	496
Negative Goodwill		-	-	-
Total Liabilities		364,368	282,434	159,853
Stockholders' Equity				
Misc Stocks Options Warrants		3,969	-	-
Redeemable Preferred Stock		-	-	-
Preferred Stock		-	-	-
Common Stock		139	133	101
Retained Earnings		(33,871)	85,549	112,503
Treasury Stock		-	-	-
Capital Surplus		2,568,149	2,412,197	1,459,294
Other Stockholder Equity		(3,647)	1,908	(238)
Total Stockholder Equity		2,530,770	2,499,787	1,571,660
Net Tangible Assets		609,365	681,566	238,813

Stratasys' shows a large amount of cash assets on hand with a total of \$442 million on the balance sheet. Stratasys was able to almost triple its total assets after the merger of Object, Ltd in late 2012, going from over \$300 million in current assets to over \$850

million in current assets. While having a large amount of assets on hand it is impressive that Stratasy's is able to keep its total liabilities so low at only \$364 million compared to its total assets of \$2.9 billion. Even though total assets did not increase very much at all from 2013 to 2014 due to the lack luster performance of MakerBot, Stratasy's is still primed to make other key acquisitions in the market that can significantly help increase their market share in the company without going into major debt.

Cash Flows (all numbers in thousands)

Period Ending	Dec 31, 2014	Dec 31, 2013	Dec 31, 2012
Net Income	(119,420)	(26,954)	8,491
Operating Activities, Cash Flows Provided By or Used In			
Depreciation	109,429	92,436	19,497
Adjustments To Net Income	77,878	1,227	(10,229)
Changes In Accounts Receivables	(46,717)	(32,763)	(19,635)
Changes In Liabilities	46,123	30,450	22,199
Changes In Inventories	(39,370)	(27,102)	(7,724)
Changes In Other Operating Activities	(14,057)	(5,312)	(11,437)
Total Cash Flow From Operating Activities	13,816	32,029	1,494
Investing Activities, Cash Flows Provided By or Used In			
Capital Expenditures	(60,497)	(33,276)	(12,057)
Investments	(2,133)	-	44,960
Other Cash flows from Investing Activities	35,191	(193,475)	48,615
Total Cash Flows From Investing Activities	(27,439)	(226,751)	81,518
Financing Activities, Cash Flows Provided By or Used In			
Dividends Paid	-	-	-
Sale Purchase of Stock	5,736	475,323	15,297
Net Borrowings	50,000	-	-
Other Cash Flows from Financing Activities	(10,795)	(3,225)	-
Total Cash Flows From Financing Activities	44,941	474,915	30,489
Effect Of Exchange Rate Changes	(3,265)	69	233
Change In Cash and Cash Equivalets	28,053	280,262	113,734

Looking at Stratasys' cash flow statements, the last two years the company has lost money. Even though it is in the red, Stratasys is setting itself up to make a long term play. They merged and acquired with two of the world's leading 3D printing companies and that will not come without its price. The key to this market is getting the most amount of units installed because most of the money is made in the consumables that your existing customers must purchase. Even though Stratasys is currently taking a loss, it is strong enough to weather the storm and come out significantly on top a couple of years down the line.

COMPETITIVE ANALYSIS (FIVE FORCES)

Selected Valuation Metrics	Stratasys, Ltd.
Internal Rivalry	High
Buyer Power	Moderate and Decreasing
Supplier Power	Moderate
Threat of New Entrants	Moderate
Threat of Substitutes	Low

Internal Rivalry

Stratasys competes in a competitive industry. Any company that makes machines that can produce models, prototypes, other 3D objects and end-use parts (this includes companies that make the materials or provide the services for this industry), are considered competitors of Stratasys. Stratasys has five main competitors in this market and the threat of another player emerging is always prevalent. Stratasys' chief competitors to date are 3D Systems Corporation, EOS GmbH, Affinia, Materialise and Leapfrog. Of these five, the company that is most similar to Stratasys is 3D Systems Corporation.

3D Systems and Stratasys both compete in the same spaces (large-frame 3D printers, desktop 3D printers and parts / services sector) are the two largest players in the 3D printing industry. Looking across the board, both companies have similar market caps and the same expected growth for the future. There is not a discernable difference in quality of products between these two companies. Both are highly rated and use the most advanced technology that exists. Customer loyalty is high for both of these companies, especially in the desktop printer space. Buying a 3D printer is a large investment and one that is not quickly or easily switched out for another company's product.

Buyer Power

The number of customers in the 3D printing industry is moderate but steadily increasing. According to the Wohlers Report 2014, the 3D printing industry is on pace to over quadruple in revenue from 2013 to 2018 going from approximately \$3 billion in revenue to almost \$13 billion. This growth will occur in both the number of customers of 3D printers as well as well as the size of each customer's orders. As Stratasys' consumer base increases, the power each individual consumer simultaneously decreases. In order for this to open though, Stratasys must continue to make it's products more accessible to a wider range of customers by developing new products that expedite the production process as well as reduce the costs of their printers and adjoining materials.

While buyer power is moderate to decreasing when it comes to their sale of printers and its services, Stratasys' third revenue source, consumables sales, has fairly low buyer

power. Stratasys has made the necessary materials (plastics, metals, etc) for the printers to work propriety therefore blocking other companies from stealing customers from Stratasys once the printer is installed. This is vital because the consumable materials are a very high margin product where Stratasys obtains most of its profit. A report from Morning Star indicates that Stratasys earns 65% gross margins on all of its consumable materials. This key proprietary input essentially that Stratasys provides essentially does not allow it customer's to switch to cheaper printing materials. This coupled with the fact that once a Stratasys printer is installed, it will very unlikely that the customer will be so dissatisfied with their Stratasys product they will remove the machine and purchase another 3D printer from a different company. Thus, due to the large investment that a 3D printer is, the proprietary consumable materials and the growing customer base, Stratasys buyers are receiving less and less power in the market.

Supplier Power

Stratsys' suppliers hold a moderate amount of power in the marketplace. Even though there are a number of different suppliers that Stratasys could utilize in order to obtain its components for their systems, raw materials for their consumables and printers, and raw materials for their Stratasys Direct manufacturing service business, they choose to work with only one or a limited amount of suppliers. Their dependence on only one or a few limited partners involves a number of risks most notably: potential shortages of vital inputs, unforeseen discontinuation of a needed product, less control over lead times, quality and costs and many others. If any one of these stated risks or things go wrong in the supplier process, Stratasys would have to change one of the existing products or be willing to pay higher prices for their inputs (both undesirable outcomes).

The switching costs for Stratasys to find a new supplier is medium to high. This is because Stratasys requires all of their suppliers to be “qualified” in a number of different categories. This qualification process requires a number of evaluations that take differing amounts of time to complete. If one of their suppliers were to unexpectedly discontinue a vital raw material, it would take time and money for Stratasys to find a suitable replacement supplier. The supplier that Stratasys is most in danger of this happening to is Stratasys’ sole supplier for their printer heads for their PolyJet 3D printers, Ricoh Printing Systems Americas Inc, (Ricoh). Under Stratasys’ and Ricoh’s agreement, Stratasys is allowed to assemble, use and sell these purchased Ricoh products under their patent rights and trade secrets. However, if Ricoh were to ever discontinue these extremely valuable printer heads, Stratasys would face large losses and therefore have purchased a large amount of extra inventory just in case such an event would occur.

Threats of New Entrants

The threat of new entrants is moderate. There are a number of large companies with expansive resources that have indicated or may in the future indicate they would like to enter the additive manufacturing industry. These high profile players could enter the market through either acquisition or a partnership with a current Stratasys competitor. Stratasys has already seen some of this come to fruition. At the end of 2014, HP announced that it would shortly be entering the same target market as Stratasys. According to one of HP’s vice presidents and general managers, HP already has prototypes of their printers working today that are better than what’s currently in the marketplace. Stratasys must always be on the look out for and be ready for when a big

player who already has resources and brand name to enter the market and become an immediate player. All that said, there are still a fair amount of barriers of entry for any company but especially when you consider ones that don't have an infinite amount of resources and established credibility. Anyone trying to break into this field will need a lot of capital, strong research and development teams to produce the advanced technology, marketing and work around existing patents.

Threats of Substitutes

It has not yet to come to the point where 3D printing is used universally. Several companies are either still exclusively using mass production machines or are just starting to experiment with using additive manufacturing machines. A recent report by Tech Pro stated that 12% of businesses in a variety of industries are using 3D printers as part of their business operations. Another 19% of businesses are evaluating 3D printers with plans for implementation within the next 12 months. 29% said they are evaluating using the technology but have no plans to implement 3D systems at this time. Leaving 40% of the 624 companies that were surveyed to say that they had no plans to evaluate or implement 3D printers in their organization. The number of businesses using 3D printing will surely increase in the future but for right now there is a moderate threat for others to use other forms methods of production besides 3D printing.

SWOT ANALYSIS

Strengths	Weaknesses
Wide range of systems	Vendor concentration
Technological head start	Dependence on consumables
Diverse customer base	Reliance on resellers
	Significantly impacted by economic cycles

	No Specialization
Opportunities	Threats
Size of potential market	Commoditization of product
Desktop 3D printing	Competition for talent
Acquisitions	Acquisition regulation

Strengths

1. *Wide range of systems*- The Company can offer customers systems at a number of different price points, depending on the features required by the customer. Additionally, Stratasys has significant cross selling opportunities, allowing them to boost profits and maintain customer loyalty no matter the need of the client. While a specializing company may have one specific product, which is superior, customers prefer the ease of using one company for all of their 3D printing solutions.
2. *Technological head start*- Stratasys has over 550 granted or pending patents internationally. Moreover, the Company has developed a quality product that is used by various Fortune 500 companies, such as Boeing and Ford. Stratasys' head start on technology, clients, and distribution is a powerful tool in deterring possible competition from entering the industry.
3. *Diverse customer base*- Customers of Stratasys range from individuals and smaller business to large global enterprises. Additionally, Stratasys serves clients in a wide variety of industries, including, automotive, aerospace, architecture, consumer products, educational institutions, defense, medical analysis, medical systems, electronics, and heavy equipment. Therefore, the Company is effectively

hedged against downturns in individual industries and can take advantage of opportunities in a range of sectors.

4. *Market penetration-* The Company has already installed over 120,000 products. These systems will provide significant cross selling and consumable products opportunities. Moreover, Stratasys has already developed a strong global reach with 280 channel partners around the world.

Weaknesses

1. *Vendor concentration-* The Company only uses a limited number of suppliers of components and raw materials. If a vendor decides to discontinue a product or go out of business, Stratasys will face a material shortfall and high risk of depressed sales. Additionally, the Company has poor negotiating leverage with vendors, which could reduce controls over delivery schedules, manufacturing capabilities, quality, and cost.
2. *Dependence on consumables-* The primary source of recurring revenues of Stratasys is the sale of consumable products for the system. Therefore, if competitors are able to replicate the Company's consumable products and sell them at a depressed price, then Stratasys may end up in a price war and face a significant decrease in revenues. Page 16 of 20-F
3. *Reliance on resellers-* Stratasys is highly dependent on a system of resellers to distribute its product. Therefore, the resellers have strong leverage in negotiating

terms on which to sell the product. Moreover, Stratasys may be negatively impacted if the resellers poorly portray the product.

4. *Significantly impacted by economic cycles*- In poor financial conditions, distributors are often unable to secure financing to purchase 3D printers in bulk. Additionally, if a vendor becomes insolvent, Stratasys will face devastating supply issues (as noted above). This strong reaction to economic downturns was confirmed in the United States in 2008/09 and currently in Europe.
5. *No specialization*- Stratasys offers such a wide array of products that they may lose customers to competitors that focus on a superior system aimed at solving one specific problem.

Opportunities

1. *Size of potential market*- Noted above, Stratasys is involved in a wide array of industries. As 3D printing continues to evolve to become more efficient and create higher quality products, its potential industry size is uncountable. If the Company can continue to innovate with its peers, its growth opportunities are massive.
2. *Desktop 3D printing*- Desktop 3D printing systems are expected to penetrate a broad and largely untapped addressable market, targeting small design teams within large organizations, small and medium-sized businesses and individuals. This expansive new product line may provide additional cross selling

opportunities to customers, who have not previously thought of using 3D printing to solve their problems.

3. *Acquisitions*- Stratasys has the capital, management, and desire to continue growth through acquisitions. This strategy will allow the Company to absorb specific niche companies with which it could not previously compete effectively.

Threats

1. *Commoditization of product*- Stratasys is investing a tremendous amount in research and development to continue innovating and is compensated with higher margins on products. However, as more players in the industry develop and grow, Stratasys' products may become commoditized, which will significantly depress margins and profits.
2. *Competition for talent*- Stratasys must continue to innovate with its rapidly changing industry in order to survive. Therefore, attracting the best management and talent is imperative. If the Company cannot attract top talent or it becomes much more expensive due to competition, then Stratasys will not be able to compete as effectively.
3. *Acquisition regulation*- One of Stratasys' growth strategies is acquisitions. However, if the Company becomes too large, than the government may aim to prevent additional acquisitions, which will limit Stratasys to growing through only organic means.

STRATEGIC RECOMMENDATIONS