January 24, 2014

Everything 3D Systems Does Not Want You To Know About Their Business

Price Target = $56 Immediately … Longer Term, Much Lower

If you owned 3D Systems (NYSE:DDD) over the last year, congratulations, you did well. Obviously, when we wrote about DDD last year, we underestimated the amount of media hype and market momentum, as well as the unwavering bull market stampede of 2013. But during the past year, the 3D printing story has changed in decisive ways. Investors need to reassess this investment based on current operational results and the competitive landscape.

It was just one week ago that Citron pointed out to the investment community how the bear thesis on BBRY was flawed. In contrast, this piece illustrates how the bull thesis on DDD is flawed beyond all measure.

> Note: This is **not** a commentary about 3D printing or the additive manufacturing industry. It is a simple eye-opening report on how the numbers do not and **can never** make sense for this market darling. The bottom line is, if you really want investment exposure to this space, Citron suggests you consider Stratasys (NYSE:SSYS), or maybe even H-P.

Citron will present an irrefutable financial model that explains how unsupportable DDD's current stock price is, to any analyst, CFO, or shareholder.

After **missing estimates two quarters in a row,** DDD launched in November, blowing past all the analyst target prices. Instead of cautionary notes, some analysts blindly "chased the tape", issuing target raise notes. But now the tone has changed.

As 3D Systems prepares to report next month, management is already guiding expectations down toward another similar quarter of marginal profits and weak explanations. Management has just stated publicly:

> "I want to repeat what I said in connection with the third quarter earnings call that we had and subsequently and actually expand on it that we're absolutely willing to tolerate **temporary earnings compression and even a slight margin compression** during this period of substantially accelerated growth rate and market share expansion.
>
> *-- Avi Reichental, CEO of 3D Systems*
>
> *-- Needham Investment Conference, January 2014*

http://www.3Dsystems.com/files/downloads/3D-Systems-DDD-Needham-Conference-2014.pdf

With the stock still priced for exponential growth, Citron exposes the real 3D Systems.

The 3D Systems Avi does not want to talk about

A Pile of Sticks Does Not Make a Tree

If you own DDD shares, it shouldn't surprise to you that the company is a rollup of dozens of acquisitions. Many of these synergize poorly, and most were **bought for 2x revenues, while DDD is now selling for over 20x revenues.** None of these companies control transformative technologies; the IP landscape for 3D printing is highly fragmented and not dominated by any company. In fact, 3D Systems' share is about 20%, while one third of the company's revenue is generated by service bureaus (3D printing's version of Kinkos) – typically low-margin business with low barriers to entry.

We must give Mr. Reichental credit for doing a wonderful job as a pitchman for 3D printing, employing exaggerated and sweeping generalities, invoking every hot buzzword in the culture. But these broad truisms do not and will not benefit 3D Systems as a company. His pitchman persona is more like that of a classic illusionist, who distracts the audience's attention while the trick is actually being played on you.

Note that despite management's obvious stream of hype, there are three topics the magician **<u>never</u>** brings up, because anything he'd say would be an obvious lie.

1) **<u>Never</u>** claims superior technology
2) **<u>Never</u>** discusses competition in a realistic way. The illusion really breaks down if this topic comes up.
3) **<u>Never</u>** acknowledges that 3D Systems' consumer initiative is failing miserably. More on this below.

With Avi as the frontman for 3D Systems, he wants you to think that he is the true expert in the industry. Citron introduces the real expert of the 3D printing Industry.

Do You Know More Than Terry Wohlers?

Citron is as much an admirer of additive manufacturing as any other market observer. But it is foolish to attempt to evaluate the **<u>real</u>** business prospects of this industry without considering the great work of the highest-credibility pro in this space – Terry Wohlers, whose work we will cite to in detail in this report

All sell side research, and even 3D Systems itself, relies on Wohlers' in-depth analysis of the entire additive manufacturing industry.

Terry Wohlers writes the Wohlers Report (http://wohlersassociates.com/3D-printing.html) More than just the Bible of 3D printing, it is the New Testament as well as the Old Testament. For the last 27 years, Wohlers has been the single, universally recognized go-to expert on the entire competitive landscape of the 3D printing industry. Note that the facts and estimates in the Wohlers annual report are not just his opinions; rather Terry Wohlers compiles [the input of 31 system manufacturers and 74 service providers] in assembling his 2013 report. We can't think of another industry where a single source has such a compelling handle on the entire scope of industry trends.

In their report on 3D printing (which you will have to order for yourself), Wohlers stated investors were a bit overenthusiastic about stock price of 3D Systems – at the time the stock price was $30. As the price escalated throughout the year he later stated:

> "I thought it was over-valued then (earlier this year) … and now it (the stock price) keeps going up …"
>
> *-- Terry Wohlers*
> *-- Comment about 3D Systems Stock Price*

http://www.forbes.com/sites/rakeshsharma/2013/12/31/an-interesting-and-frightening-situation-terry-wohlers-assessment-of-the-year-in-3D-printing/

This is not coming from a stock market analyst. It comes from the premier expert in the industry.

So What Does Mr. Wohlers Know that Avi Does Not Want You To Know? … Read On

3D Systems' Ugly Little Secret Exposed: Their Consumer Product Sucks

A year ago, in early 2013, the primary illusion Avi Reichental was peddling was that the consumer market for low cost 3D printers was about to explode. When we first covered DDD, we were warned that once the exciting new low-cost consumer product was released, it would quickly become the new "must have" item. Now it's a year later. What happened?

The low-cost consumer 3D printer market has become a complete bust. Wohler's accurately predicted earlier this year that the retail 3D printer market would flop.

> "However, a significant number of machines bought by hobbyists are also sitting idle. They generally print out a part or two and forget about it."
>
> *-- Terry Wohlers*
> *-- Comment about Consumer 3D Printers*

http://www.forbes.com/sites/rakeshsharma/2013/09/12/what-works-and-what-doesnt-in-3D-printing-a-talk-with-terry-wohlers/

This opinion is validated by operational results: DDD's material sales continue to decline over the last 6 quarters. So much for the razor/blade model.

Avi doesn't want you to know that not only has the product sold poorly, but its few consumer-class customers do not even like the product. The reality is the company has become a non-consumer friendly business.

Citron was considering posting links from 3D Systems own website to suggest readers see for themselves how utterly ridiculous their "mancave" and "3D family" videos are.
http://www.3dsystems.com/mancave-3d-systems
But instead of us editorializing, we will defer to online reviews.

While 3D's consumer product, Cubify has been offered for sale all year at Amazon.com, there are only **10** reviews – and they're not favorable ones either:

Amazon Reviews for Consumer 3D Printers:

Brand	Owner	Reviews	Ratings	5-Star	1-Star	Ratio 5/1's
Cubify	3D Systems	10	2.6	2	4	0.50
Makerbot	Stratasys	48	3.8	25	9	2.77

http://www.amazon.com/Cubify-Cube-Printer-Generation-SILVER/dp/B00B6RCLKI/ref=sr_1_2?ie=UTF8&qid=1389919242&sr=8-2&keywords=cubify

Compare these to the **48** Makerbot reviews (from Stratasys):
http://www.amazon.com/MakerBot-Replicator-Desktop-3D-Printer/dp/B00BFZOVGI/ref=sr_1_2?ie=UTF8&qid=1389921569&sr=8-2&keywords=makerbot

The same gripes we read on Amazon spilled over to the "Cubify Sucks" Facebook Page. There are actually more 'likes' for Cubify Sucks than reviews for Cubify on Amazon.
https://www.facebook.com/Dontbuycubify?ref=stream
But when consumers reject the product, they can't even return it. Far more consumer unfriendly than their competition, from 3D we read:

> **"What's the return policy?**
>
> "We don't provide refunds on Cube printers once they're shipped. If you encounter any issues with your printer, we are happy to repair it for free during the warranty period."

Both Stratasys's Makerbot and Formlabs offer at least some form of returns for consumer products ... but not 3D.

The Competition They Really Do Not Want You To Know About

If by some chance 3D Systems was just ahead of its time, and consumer-class 3D printers are about to erupt into the popular culture, there are numerous comparable printers and hundreds of off-price offerings coming from Asia and at much lower price points than Cubify. This trend was obvious to everyone at CES, and discussed in detail in

Wohlers' interviews with Forbes. 3D Systems has never discussed a plan to combat off-price competition – heck, why ruin a good story?

"Don't You Get it Citron?
It is not about the Consumer, the Real Business is Industrial !!!"…

What 3D Systems Does Not Want You To Know about Their Metal 3D Printing Business

3D Systems would have you believe they invented the prototyping and specialty on-demand manufacturing sector, and they are on the cutting edge of 3D metal printing. We focus on metal printing because it is on everyone's mind – it's "the sizzle" in 3D printing – and Avi has been misleadingly spinning the illusion of his company printing metal jet engine parts for years.

In reality, industrial 3D printing and prototyping have been a mainstream niche for over 25 years, as a small, slow-growth (i.e. single-digit) slice of the manufacturing/industrial sector. But with technology evolving in direct metal processing (DMLS), the highest growth rates projected forward are in this specialty.

3D Systems first and principal entry into metal additive manufacturing comes by virtue of their acquisition of Phenix Systems, a third tier player whose track record shows zero growth over the last four years. Four years of operating history for Phenix Systems is here: http://investing.businessweek.com/research/stocks/financials/financials.asp?ticker=ALPHX:FP

In Phenix, we see:

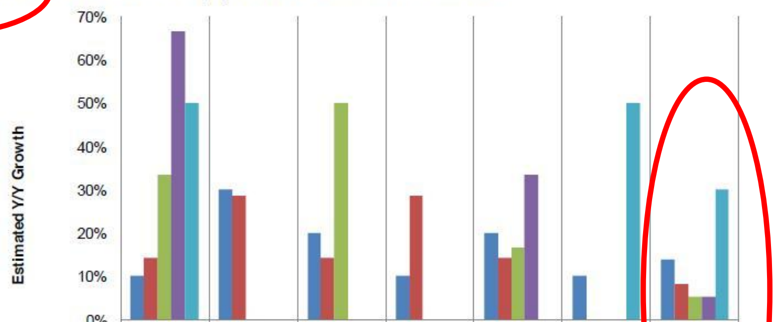
- Tiny Revenues: Less than $10 million USD for each of the last 4 years
- Negative Revenue Growth
- Increasing Operating Losses
- Purchased by 3D Systems for appx. 2x revenues

So 3D Systems bought Phenix for less than $20 million in June 2013, and now they are suddenly poised to change the world?

Here are comparative graphs from Piper Jaffray's industrial survey of the 3D printing competitive landscape. This doesn't look good for 3D Systems. The survey reveals **only** their DMLS product line indicates the potential for exceptional growth in 2014. Note how much better Stratasys looks by comparison. This looks to us like the portrait of upcoming market share loss:

Exhibit 3

3D SYSTEMS SPECIFIC Q4 PRINTER GROWTH

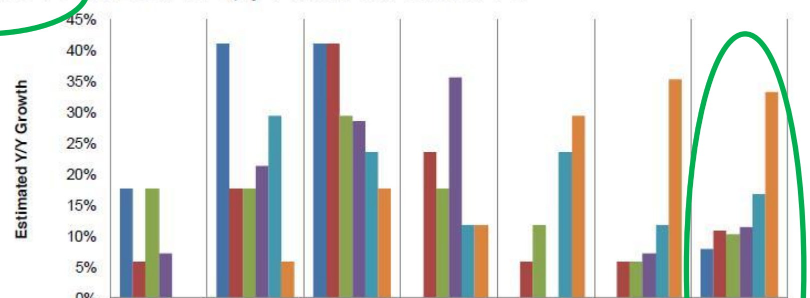


	Down 1-10%	Flat	Up 1-10%	Up 11-20%	Up 21-30%	Up 30%+	Cumulative
ProJet 3500 Series	10%	30%	20%	10%	20%	10%	14%
Projet 360-860 PB	14%	29%	14%	29%	14%	0%	8%
iPro and ProX 950	33%	0%	50%	0%	17%	0%	5%
sPro and ProX 500	67%	0%	0%	0%	33%	0%	5%
DMLS Systems	50%	0%	0%	0%	0%	50%	30%

Source: PJC Research, Q4 3D Printing VAR Survey, N= 28

Exhibit 4

STRATASYS SPECIFIC Q4 PRINTER GROWTH



	Down 1-10%	Flat	Up 1-10%	Up 11-20%	Up 21-30%	Up 30%+	Cumulative
Mojo	18%	41%	41%	0%	0%	0%	8%
uPrint	6%	18%	41%	24%	6%	6%	11%
Dimension	18%	18%	29%	18%	12%	6%	10%
Eden	7%	21%	29%	36%	0%	7%	11%
Connex	0%	29%	24%	12%	24%	12%	17%
Fortus	0%	6%	18%	12%	29%	35%	33%

Source: PJC Research, Q4 3D Printing VAR Survey, N= 99

With the Phenix systems acquisition as of mid-2013, DDD finally has their own metal 3D printer, but now let's consider how **insignificant** that branch of their business actually is.

Citron points readers to the first week in January, when 3D Systems was introducing "Will I Am" as their "Chief Creative Officer". Like any skilled illusionist, Avi was distracting the audience, while a serious competitor was making the magic.

Meanwhile, during the same week, Mitsubishi was introducing a highly advanced metal laser sintering hybrid machine: http://www.industrial-lasers.com/articles/2014/01/mitsubishi-moves-into-laser-additive-manufacturing-with-matsuura-partnership.html

Whose turf is Mitsubishi invading?
Based upon the limited information out at this point, it seems that Mitsubishi's main publicly traded competition will likely be **Arcam and 3-D Systems**, and, perhaps to a lesser degree ExOne.

-- Mitsubishi Entering North American 3-D Printing Market with World's Only Hybrid 3-D Printer
--Motley Fool

http://www.fool.com/investing/general/2014/01/04/mitsubishi-entering-north-american-3-d-printing-ma.aspx

Mitsubishi? We didn't even know they were playing! Similarly, on the industrial front going forward, we are about to witness H-P and Epson both entering the industrial space.
http://www.engadget.com/2014/01/09/epson-3D-printer-ces-2014/
http://www.wired.com/wiredenterprise/2013/12/hp_printer/

If all of that wasn't enough, Wohlers discusses China currently making huge research investments in the 3D printing competitive landscape.
http://www.usatoday.com/story/money/business/2013/12/01/china-advances-3D-printing-manufacturing/3675057/

Within the metal printing specialty, 3D Systems has no basis to claim they can grow their market share from here. Trying to fight Mitsubishi, H-P, Epson, and China on R&D, with Phenix Systems, is truly bringing a pea shooter to a gun fight. DDD is now positioned as the 8th or 10th largest metal 3D Printer manufacturer. In fact, DDD's Phenix division is **smaller** than: (This is not an exclusive list; there are probably even more by now)

- EOS
- Arcam
- EXONE
- Renishaw
- Realizer
- Concept Laser
- SLM

… all **before** we even begin to factor in Mitsubishi, Epson, H-P, and China, Inc.

Yes, there were big headlines in November that GE was planning to "print" jet engine nozzles, but they already own $150 million of EOS machines. Phenix Systems? Just looking, thanks …

Enough About The Business: Let's Analyze the Stock

It is obvious that the cult around 3D printing is more about the stock than it is about the underlying technology. Citron is appalled when we hear people compare 3D Systems to Tesla, when in reality the only thing they have in common is a high momentum stock.

With Tesla, a cult gathered around their **product**, and the enthusiasm spilled over into the **stock**. In DDD, it's the other way around: there is a cult around the stock, but it has **not** spilled over into the product. We have assembled a chart to illustrate why DDD is the anti-Tesla: the only thing they have in common is momentum. Yet these stocks could not be more different; we suggest investors need to understand the difference.

	Tesla	**3D Systems**
Big move in the stock	Stock appreciated only **after** widespread acceptance plus accolades for their hot new Model S.	Stock appreciates on media articles. Company does not have a single paradigm-changing product that is #1 in its category among users.
Product wins in the market	Model S won awards and has a loyal customer base	Reviews place them in 2^{nd} and 3^{rd} tier in most competitive sectors.
Demand for products	Can't manufacture enough units to keep up with demand	Cannot find or demonstrate demand for consumer products
IP barrier to entry	Proprietary and unique IP, actually licensed to their competitors	Does not control barrier to entry at any strategic point of transformative technology; major wave of patent expiration in 2014
Competitive Landscape	Doing well amidst handful of well-funded, capable competitors	At the consumer end, competes with off-price manufacturers, including China. In industrial sector, competes adequately to poorly with highly regarded industrial competitors in most product sectors
Recent high-profile hire	Hired former Apple Executive (Doug Field) to lead design / development of new vehicle	Hires Will.I.Am as Chief Creative Director
CEO track record	Tesla CEO Elon Musk, like him or not, has produced a disruptive product that forces the entire auto industry to rethink transportation	CEO has spent years hyping without notable execution or accomplishment in the marketplace, other than acquisitions.

What happens When a "Roll-Up" can no Longer Roll Up?

Over the past 3 years, 3D Systems has acquired over 40 companies, and has become a 2/20 type scheme. No, not the hedge fund 2/20, but rather a roll up strategy of acquiring a company for 2x revs, while promoting their stock, which is trading for 20x revenues. God Bless America!

So when does it end? The music stops when you can't acquire any more. As DDD has enjoyed its stock appreciation over the past year, the furious demand in the sector has **simply taken all significant potential acquisition targets off the table** – they have now become too powerfully incented to file their own IPO's. Why would a Voxijet sell to DDD for $60 mil (2x revenues) when they can go public, and be blessed with a market cap of

$400 million? This obstacle facing 3D Systems was identified, however gently (read between the lines), in a recent Canaccord note which explained:

> "Next year, in our view, promises to be a year when growing investment choices allow investors to explore different business models and do some additional work on understanding the space. This will be fueled by IPOs and broader sell-side coverage that will increasingly bring in European players (the leaders in metal) and pure-play service bureaus (presently the public service bureaus are captive within DDD and SSYS)."
>
> -- *Canaccord research note on DDD*

http://blogs.barrons.com/techtraderdaily/2013/12/30/3D-systems-stratasys-complexity-is-next-says-canaccord-ipos-metals-and-services-in-2014/

This phenomenon is already unfolding. Consider DDD's last four acquisitions:
(Skipping the Xerox acquisition, in which all they acquired was the right to pay a development team – if Xerox had been able to spin out this R&D team into a public company, they surely would have done so. Only one problem: no source of revenue…none at all.)

1) September 10, 2013 – 3D Systems Acquires The Sugar Lab

While this might sound futuristic, the Sugar Lab is nothing more than a husband and wife team working out of an apartment in East Los Angeles. They didn't acquire a company – they acquired a relationship.

2) Dec 4, 2013 – 3D Systems Acquires Figulo Corporation

http://www.marketwatch.com/story/3D-systems-acquires-figulo-corporation-2013-12-04
This appears to be nothing more than a little shop that prints ceramics. According to reliable sources, their annual revs were a miniscule $230K:
http://www.manta.com/c/mx315nb/figulo-corporation

3) Dec 13, 2013 – 3D Systems Acquires Village Plastics

http://finance.yahoo.com/news/3D-systems-acquires-village-plastics-161612578.html

Village Plastics is nothing more than a plastic filament manufacturer/distributor running out of a small shop in Ohio, with annual revenues appx. $500K.

http://goo.gl/maps/bQXTu

Meanwhile, there are over 150 commoditized plastic filament materials suppliers, listed here: http://reprap.org/wiki/Printing_Material_Suppliers

4) January 3, 2014 – 3D Systems Acquires Gentle Giant Studios

http://www.3Dsystems.com/press-releases/3D-systems-acquires-gentle-giant-studios

Here they are simply acquiring revenue with no synergies to their mainline business. Gentle Giant makes 3D molds for movies and is in the business of 3D printing collectibles:

http://www.gentlegiantltd.com/Star_Wars_Collectibles_s/1.htm

Great, so now along with the Justin Bieber Vibrator you can now get your custom Star Wars sex toys. It is just so ridiculous that we are discussing a $10 billion dollar company here.

It is Citron's opinion that the window of opportunity for making even marginally strategic acquisitions is closed. 3D Systems' last four buys have been pathetic. Meanwhile, the supply of legitimate acquisition targets has now been completely picked over.

Sharpen Your Pencils:
What is 3D Systems REALLY Worth?

“If DDD were to trade at the same forward multiple as SSYS, DDD’s stock price would be $49.00. ”

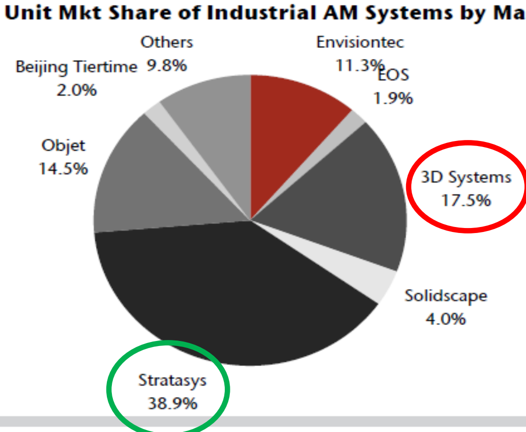
Comparing DDD and SSYS Enterprise Values:

	SSYS	DDD
Revenues	669.2	671.8
Market Share of 3D Industry (installed base – See Wohlers chart below)	**38.9%**	**17.5%**
Total Enterprise Value	5,366.5	9,473.3
Multiple of Sales	8.0x	14.1x

(*) Based on 2014 consensus estimates, per Bloomberg

OK, so DDD has a better stock symbol and a more promotional CEO than Stratasys, but it lacks a category-dominating product in **any** industrial sector, and its consumer product Cubify is clearly inferior to Stratasys’ Makerbot.

Exhibit 24: 2012 Unit Mkt Share of Industrial AM Systems by Manufacturers



Source: Jefferies LLC, Wohlers Associates, Inc.

Note that SSYS controls far more of the overall market than DDD, on an installed systems basis, according to Wohlers. And they’re surveying out far better for 2014 than DDD. (see p. 6) But even if we overlooked these unfavorable comparisons and granted DDD **equivalent** Enterprise Value to Stratasys, what would the DDD stock price be?

Apply SSYS Enterprise Value to DDD	5,366.5
DDD’s Net Cash	322.4
DDD Market Cap	5,688.9
Shares Outstanding (millions)	102.78
DDD Indicated Share Price	**$55.40**

OK, so we get $55 per share value for DDD … **right now**, and that is only **if** all things were created equal. But they're **not equal** … not even close. Stratasys is a much better business, both in the mainline industrial sectors and facing the consumer.

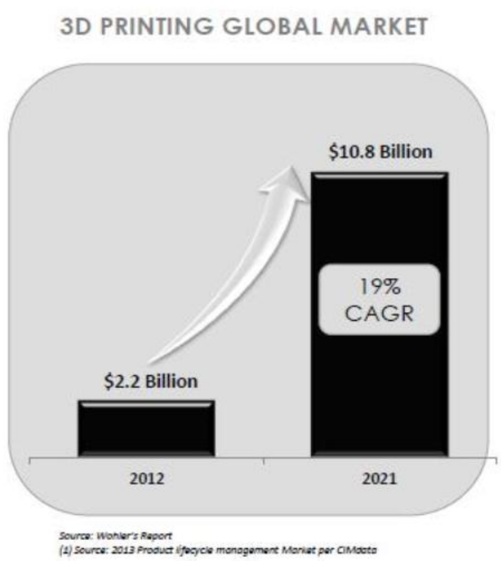
Stratasys lags behind 3D Systems in a couple of key areas. They have not ventured into Star Wars figurines, dolls, decorative cakes, or candy. The idea of valuing 3D Systems in line with Stratysys was suggested this week by Credit Suisse when they noted:

> **"The vast valuation gap does not appear justified."**
> *-- Credit Suisse DDD downgrade, SSYS upgrade, January 21, 2014*

We believe a Stratysys comparison provides a credible Near-Term Target … What about Longer Term?

This is a simple financial model that shows how utterly ludicrous DDD's current stock price has become.

This chart was presented by 3D Systems just **this week**, in their presentation at the Needham Conference. DDD uses Wohler's 2021 estimated market size of $10.8 billion as a key reference point for their own revenue projections:



So let's pretend 3D Systems is able to accomplish the **impossible**:
Maintaining their 20% market share of the industry, (they only have 17.5% in the above chart, but we will round up), fighting off all competition from the likes of HP, Mitsubishi,

Epson, waves of startups and IPO's as well as the Chinese competitors, despite its token R&D spend.

Then they would generate revenues of $2 billion in 2021.

Now we wave our magic wand, and grant them an over-the-rainbow 20% net income margin – the same as Apple and Google – and 4x the margin of Hewlett Packard (impossible we know, but we are playing make believe here) – they would generate roughly $400 million in net income. That's if we also grant them a **permanent tax amnesty** because of their awesomeness. Let's fantasize no stock dilution either, and assume they have the same share count as today. That would yield $3.67 EPS in 2021.

Feeling very magnanimous, we only discount that figure back to today at 6%, and we will grant them a 20x multiple – twice that of Hewlett Packard. Then our stock price today would be: **$46 a share**.

This easy-to-understand model demonstrates how utterly ridiculous the share price of DDD has become.

Realistically, what will happen if they will lose any market share to competition? They will be forced to dilute the stock to make increasingly desperate acquisitions. The stock will eventually collapse to single digits and eventually become like Commodore Computers. Remember them? They definitely had indisputable "first mover advantage" in home computers. But they couldn't keep up with competition, and ended up in bankruptcy. http://en.wikipedia.org/wiki/Commodore_International

What Do The Analysts Have to Say About This?

Citron observes that a runaway stock is close to getting to its top when the analysts' work completely detaches from reality.

Most analysts who have been covering the stock have gotten to the point where they just can't push their targets any higher. Both JPM and Piper, who have actively covered DDD for over a year, are maintaining their price targets in the **mid 60's**. Credit Suisse just this week noted the unjustified disparity between SSYS and DDD, but inexplicably couldn't bear to touch on their own $90 target.

But we would rather dedicate this section to the one analyst with the undisputed highest price target on 3D Systems: Sherri Scribner of Deutsche Bank, who might have given us the single most stupid comment ever spoken live on CNBC.

Please, please, if it's the only thing you do this year, listen to the first 30 seconds of this CNBC video: It is the most awesome video you will ever see on 3D printing.

"The idea is to take the consumer piece of this business to get people interested in it, get people using it and eventually they'll buy the bigger industrial printers for real products."
-- Deutsche Bank Senior Research Analyst Sherri Scribner,
-- CNBC, January 7, 2014

http://video.cnbc.com/gallery/?play=1&video=3000233620

What?? I liked my Cubify so much, that I decided to spend $700,000 on an industrial printer for my garage?

Does this make any sense at all? Remember, industrial additive manufacturing mature industry with a 25-year historical timeline. It's not like the legitimate manufacturing / prototype engineers across the land are suddenly going to have an epiphany that 3D Printers are useful for niche applications, because they played with a home unit that can print a coaster. Poor Terry Wohlers – he would have a cow if he saw this.

"I thought my pickup truck was cool, so I bought an 18-wheeler …"
-- Huh?

Tell me More … Tell me More … Will they put up a Fight? A Quick Review of the Short Interest in DDD

Earlier in the year, when Citron discussed 3D Systems, there was a short interest of 26 million: that was before their follow-on offering, which added appx. 7.1 million shares to the outstanding and float, and when the stock was 1/3rd today's price. As the table below indicates, in the fall the shorts capitulated in the name, and as of last NASDAQ update, the short interest in DDD is at its lowest point in over 15 months.

Settlement Date	Short Interest	Avg Daily Share Volume	Days To Cover
12/31/2013	**14,698,231**	4,426,138	3.3
12/13/2013	16,167,592	4,620,573	3.5
11/29/2013	16,550,240	7,050,133	2.3
11/15/2013	19,735,807	5,828,144	3.4
10/31/2013	26,282,293	3,812,103	6.9
10/15/2013	**27,644,389**	3,535,632	7.8

http://www.nasdaq.com/symbol/ddd/short-interest

All this while the underlying story has actually gotten progressively weaker. Citron believes the recent outsized run-up in the stock was caused by short sellers running for cover before Euromold, CES, and earnings … who would want to stand in the way of an over promotional-company in the face of those near-term catalysts? Those events have now all come and gone. Citron thinks a lower short interest clears the path to a more reasonable valuation.

The Consumer Electronic Show: 3D Systems 'Jump the Shark' Moment

This presentation at CES with Avi Reichental and Will.I.Am honestly competes with the stupidest statement ever uttered on CNBC. This has got to be the most ridiculous marketing vision ever spun to hype a stock to investors:

"Now, with this partnership, the idea of a band touring and right next to the merch booth is a 3D printer, not just printing stuff that was designed yesterday, but capturing the audience, and printing the audience for sale because you were there, that's amazing! Think about making an object out of everyone who was there in the building that day, and actually printing the building that day! All the things that change my world drastically … "

-- Will.I.Am at Consumer Electronics Show,
-- Las Vegas, January 9, 2014

http://www.youtube.com/watch?feature=player_detailpage&v=DOVbJ_NOeXM#t=299 (from 5:00 min)

And this was not just a joke. We read further:

> "By contrast, will.i.am insisted that his is a real and authentic position at the company, not one just for show. Reichental said that he offered the position to the singer after having a series of informal conversations and brainstorming sessions in which they bandied about ideas. "
>
> *-- SiliconBeat*
>
> *-- San Jose Mercury News*

http://www.siliconbeat.com/2014/01/09/ces-fist-bumping-with-will-i-am/

Conclusion

Yes, we have an excessively promotional CEO, right down to the black turtlenecks. But Avi's fashion statement could be easily forgiven if he was blazing a trail to build a valuable company engineered to compete in a highly competitive, highly fragmented industry. While Avi spins word pictures of revolutionizing manufacturing, medical care, biotech, entertainment, nutrition, and even education (and "politics" by "democratizing" manufacturing … whatever that means…), the real 3D Systems is extremely vulnerable to being eclipsed and marginalized in an increasingly challenging competitive landscape.

Citron would not have revisited this stock without evidence of significant changes appearing in the fundamental thesis. Further, we believe the consequences to the stock are far more imminent now, as the cracks DDD's story gain higher visibility.

The growing shortage of legitimate rollup targets is just one of their problems. We've studied accounting critiques detailing how they torque their acquisition accounting to manipulate reported organic growth, and we've interviewed their sales channel to verify it. For those reasons, we find 3D's organic growth numbers neither credible nor sustainable. The company responds by acquiring a hodge-podge of distractions, seemingly intended to impress an increasingly naïve investor base.

We find the feedback of how management treats employees equally telling: http://www.glassdoor.com/Reviews/3D-Systems-Reviews-E2061.htm

While we would rather avoid commenting on market timing, and focus our thoughts on the company's underlying fundamentals, 2014 looks to us to be a painful year for DDD shareholders. There are way too many points to discuss in this one report; we could have written 100 pages and still have more to say. Citron will stay on top of this story.

But once the halo wears off, people will see the naked emperor. This is a company destined to fail on a long term basis. It is not as much their fault, as the natural forces of the competitive landscape and the changing world we live in.

Under the sheets, 3D Systems is unavoidably a modestly-growing industrial supply company providing machines for industrial prototyping and dental implants. But it is stitched to a low-margin service bureau business. Needless to say, when the service bureaus are being compelled to buy inferior technology from their parent company, the music will stop soon enough.

By no means was this piece meant to be disrespectful to Avi. He has done the best he can with what he has. His flamboyant showmanship has benefited shareholders, but smoke and mirrors only gets a company so far. So whether or not they sign a deal tomorrow with Taco Bell to 3D-print my take out order, investors will soon have to take note of the real 3D Systems – its lunch is inevitably going to get eaten by the big boys.

Cautious Investing to All

Post Script

For giggles, a couple of thoughts left on the editing room floor:

Below, 3D Systems tries to pitch consumers on the concept of 3D printing their own customized toys and dolls. You must watch a few minutes to realize how stupid it really is:

http://www.youtube.com/watch?v=QjLS9QpjRfM

A $10 billion company trying to convince consumers that a "must have" item is a device to print your own doll?   3D Systems has a larger market cap than Hasbro, and that is despite Hasbro having a competing 3D printer. Here's a photo of it:

Then there's this video clip from "The Big Bang Theory". Rarely have we seen an entire short case summed up in a single sitcom clip.
http://www.youtube.com/watch?v=tsz9GUZv1IA

So Is That All There Is?

Consider that only **about 1/3 of 3D Systems' revenue** is from sales of printing systems (32.7%). Materials generates 24.8%, while service bureau revenue generates 30.8%. The balance (11.8%) is from software and consumer odds and ends.

While materials and service bureaus both currently provide loft for 3D's topline number, there are serious problems with both these components of 3D's revenue mix, and it is impossible to sustain high multiples for either of these business sectors. Citron could write another 15 pages on the trouble ahead.