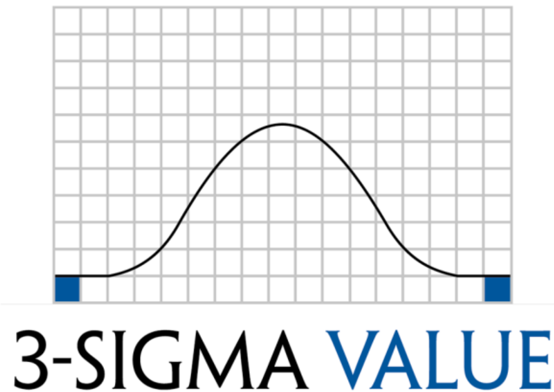

The Down Round

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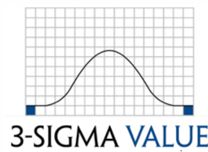

The Down Round

In the first episode of season 2 of the droll HBO show "Silicon Valley", the protagonist CEO of a compression software start-up called Pied Piper is advised to accept less money at a lower valuation than what is being offered by leading venture capital firms. Normally, in the public market, investors and management seek the highest possible valuation. Anything less isn't capitalistic. However, in the private market, value maximization (and profit maximization) is a secondary pursuit, secondary to ***momentum***. Pied Piper accepts a $10 million investment at a $50 million valuation instead of $20 million at $100 million because the larger amount obscenely over-values a company still operating out of someone's house. While obscene over-valuation is a virtue in the public markets where shares can be readily sold, in the private market it is a vice that can lead to an unwelcome and potentially devastating "**down round**".

Psychologically, a down round is demoralizing for employees with under-water stock options and for investors who face dilution. Operationally, it becomes much harder to hire and retain talent. And financially, a down round signals distress. Companies forced to accept a down round typically share the same fundamental characteristics:

1. Down rounders are losing money and more importantly burning cash. The companies we focus on in this analysis will run out of cash in all operating scenarios except the upside cases.

2. Down rounders sell a rapidly commoditized product under attack by larger deep-pocketed technology vendors. Reliance on first mover advantage is ephemeral at best.

3. Down rounders are led by jargon-laced CEOs who own a relatively small amount of stock due to dilution.

Since the start of 2014, seven technology[1] companies (four in 2014, three in the first half of 2015) sold shares in their IPOs at discounts to the valuations they obtained in previous rounds of private financing. The recent proliferation of so-called "unicorns" – venture-backed companies

[1] Excludes China, bio/medical technology, micro-caps.

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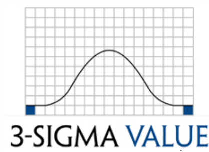

valued at greater than $1 billion – is the dot com bubble redux. This is neither a new paradigm nor a soundpost of healthy innovation.

	7 Down Rounders - 1/1/14 through 6/30/15										Revenue				EBITDA				Free Cash Flow			
	Company Name	IPO Date	IPO Price	Price at end of 1st day	Price as of 6/26/2015	Shares Out	Market Cap	Debt	Cash	Enterprise Value	2014	2015	2016	2017	2014	2015	2016	2017	2014	2015	2016	2017
1	**Zendesk (ZEN)**	**5/14/2014**	9.00	13.43	23.65	85.9	2,031.5	6.2	316.6	1,721.2	127.0	193.5	272.8	379.3	-20.3	-10.7	11.2	24.8	-50.0	-50.7	-55.7	-60.7
	Sept 2012 - Charles River, Benchmark, Matrix Partners @ $10.48.			49.2%	162.8%						13.6x	8.9x	6.3x	4.5x	NM	NM	NM	69.4x	Cash Balance:	278.6	222.9	162.2
2	**Globant S.A. (GLOB)**	**7/17/2014**	10.00	11.25	30.75	31.9	979.9	1.3	62.2	919.0	200.0	248.0	297.0	350.0	29.0	33.0	45.0	53.0	18.0	23.0	23.0	23.0
	Dec 2012 - WPP @ $12.22.			12.5%	207.5%						4.6x	3.7x	3.1x	2.6x	31.7x	27.8x	20.4x	17.3x	Cash Balance:	79.4	102.4	125.4
3	**New Relic (NEWR)**	**12/11/2014**	23.00	34.45	35.32	47.4	1,673.4	0.0	200.8	1,472.6	63.2	110.4	157.5	204.6	-28.7	-28.1	-41.5	-26.7	-50.7	-50.1	-55.1	-55.1
	April 2014 - BlackRock and Passport @ $28.93			49.8%	53.6%						23.3x	13.3x	9.3x	7.2x	NM	NM	NM	NM	Cash Balance:	163.2	108.1	53.0
4	**Hortonworks (HDP)**	**12/11/2014**	16.00	26.38	26.20	47.0	1,230.9	0.0	166.0	1,064.9	46.0	91.8	140.7	217.5	-121.8	-171.7	-164.6	-149.4	-115.5	-109.4	-36.8	-66.9
	March 2014 - BlackRock and Passport @ $24.38.			64.9%	63.8%						23.1x	11.6x	7.6x	4.9x	NM	NM	NM	NM	Cash Balance:	83.9	47.1	**-19.8**
5	**Box (BOX)**	**1/22/2015**	14.00	23.23	19.10	142.9	2,730.0	40.0	284.0	2,486.0	216.4	290.7	372.4	446.9	-140.1	-155.7	-147.3	-124.5	-144.7	-206.0	-82.0	-47.7
	Sept 2014 - Coatue and TPG @ $20.00.			65.9%	36.4%						11.5x	8.6x	6.7x	5.6x	NM	NM	NM	NM	Cash Balance:	129.4	47.5	**-0.2**
6	**Apigee (APIC)**	**4/23/2015**	17.00	16.70	10.46	29.3	306.5	4.4	105.2	205.6	52.7	67.1	71.2	82.2	-56.6	-45.6	-36.9	-34.4	-52.5	-38.5	-32.6	-27.3
	April/May 2014 - Norwest, Third Point, Bay Partners @ $22.12.			-1.8%	-38.5%						3.9x	3.1x	2.9x	2.5x	NM	NM	NM	NM	Cash Balance:	76.4	43.8	**16.4**
7	**Xactly (XTLY)**	**6/25/2015**	8.00	8.70	8.70	27.7	241.1	27.4	63.0	205.4	47.2	61.1	74.0	90.0	-8.5	-12.0	-12.0	-9.0	-10.6	-15.1	-15.0	-12.0
	Nov 2014 - gaggle of firms @ $9.83.			8.7%	8.7%						4.3x	3.4x	2.8x	2.3x	NM	NM	NM	NM	Cash Balance:	51.7	36.7	24.7

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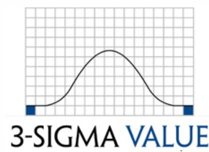

The critical factors in analyzing and valuing these down rounders are, as follows:

1. **Rate of cash burn** – 3 of the 7 down rounders are distinguished by the speed at which they are burning through their cash. By the end of 2017, **Apigee (APIC)**, **Box (BOX)**, and **Hortonworks (HDP)** will require highly dilutive capital raises.

2. **Quality of technology** – as discussed in detail later in this report, we utilize three operating metrics that, taken together, measure the quality of technology sold; they are: Gross Margin (GM), cumulative R&D, and Operating Margin (OM).

3. **M&A/take-out risk** – is the offsetting factor, skewing risk/reward. **New Relic (NEWR)** is burning substantial cash, ~$50 million per year, but with a high gross margin (~80%) pure-SaaS-based solution for Application Performance Monitoring (APM) that competes against legacy incumbents: IBM (IBM), CA (CA), Compuware (CPWR), BMC Software (private equity) & H-P (HPQ), New Relic is a likely take-out target for whichever company is falling behind. Moreover, New Relic's CEO is legendary developer Lew Cirne[2], who sold his previous application management company, Wily Technology, to CA (CA) in 2006 for $375 million cash.

   Zendesk (ZEN) is also burning around $50 million per year. ZEN sells a pure-SaaS-based customer service platform, primarily to SMBs, that generates a solid 70%+ gross margin In addition to salesforce.com's service cloud Desk.com, which is the dominant CRM platform, Zendesk competes with RightNow/Siebel (ORCL), Parature (MSFT), Kana (VRNT), and SAP (SAP). ERP vendors are also encroaching on CRM as enterprise functionality consolidates – these include ServiceNow (NOW), BMC and H-P. With so many deep-pocketed competitors, it appears Zendesk is fighting a losing battle. However, similar to New Relic, it is more likely that Zendesk will be acquired.

Which leads us to three software vendors – they are **Apigee (APIC)**, **Box (BOX)**, and **Hortonworks (HDP)** – who lose money and burn cash. All three sell commodity-type software "platforms". And all three are unlikely to be acquired, except at material discounts to today's down round valuations.

[2] New Relic is an anagram of Lew Cirne.

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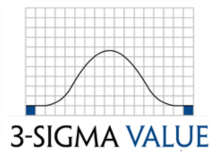

Down Rounder #1: Apigee Corporation (APIC)

APIC Capitalization as of 4/30/15	
Price at April 23, 2015 IPO	**$17.00**
Price at end of 1st day	**$16.70**
Price as of June 10, 2015	**$13.80**
FD Shares Outstanding	29.3
Market Capitalization	**404.4**
Debt	4.4
Cash	105.2
Enterprise Value (EV)	**303.5**
EV / Revenue - FY 2015E	4.6x
EV / Revenue - FY 2016E	4.5x
EV / Revenue - FY 2017E	3.9x

Apigee (APIC) was founded in 2004 and sells a platform for managing APIs (application program interface) called apigee edge (represents 95%+ of revenue). Recently, APIC added analytics – the product is called apigee insights. Together, these two products represent a minute improvement over what was available in API management a decade ago. API adoption is saturated – Twitter (TWTR) reported that the Twitter API has 10x the traffic of the Twitter website. Ebay (EBAY) says the vast majority of its marketplace listings are added via API.

In its road show presentation, Apigee CEO Chet Kapoor touts the same customer app that he touted three years earlier in a July 24, 2012 article in Business Insider, *"Apigee's tech helped Walgreens roll out an app that lets people print photos directly from their iPhone and Android phones. Walgreens then turned around and offered APIs so that other apps could use the QuickPrint service. Sites like GroupShot, Kicksend, Pic Stitch, Pinweel, and StillShot signed on to let their customers print pics at Walgreens."*

With zen-like serenity and chesty confidence, Chet Kapoor is a guru out of central casting. Heavy on jargon and nebulous in explaining the unique value of his platform, he was classic in an August 1, 2013 interview on programmableweb.com:

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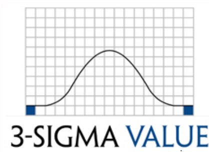

Q: To ask a question that investor Warren Buffett uses, what's your moat? What protects you from the competition?

A: The only moat any company ever has is momentum. It is very hard to compete against the power of momentum. That is by far our biggest moat.

If indeed CEO Chet Kapoor is to be believed then his company is moribund. He acquiesced to a down round because he had to. Billings are decelerating rapidly and will turn negative in the second half of 2015. Momentum is arrested. The moat is draining.

Apigee (APIC) - Equity Financing History
Nov 2011 - Series E Preferred Stock @ $4.40
July 2012 & Feb 2013 - Series F Preferred Stock @ $11.62
July 2013 - Series G Preferred Stock @ $16.91
April/May 2014 - Series H Preferred Stock @ $22.12 (Norwest Venture Partners, Bay Partners, Third Point Partners)
April 2015 - IPO @ 17.00, traded down on first day of trading to close at $16.70

API management capabilities are commoditized in the same vein as Enterprise Service Bus (ESB) in the SOA market. This is middleware re-polished and re-named. The legacy vendors have already built or acquired directly competitive API management solutions including CA (acquired Layer7), Intel (acquired Mashery), Microsoft (acquired Apiphany), IBM (acquired CastIron), Informatica (acquired StrikeIron), Dell (acquired Boomi), Oracle, Software AG, and TIBCO. There is nothing unique about Apigee’s solution. The proof is in the financials.

In a cloud-enabled world in which companies can deliver software and services without having to buy servers and load software and build a physical infrastructure, it has become more difficult for the securities markets to discriminate between those companies that develop and own valuable intellectual property (IP) and those that sell a commoditized product.

We utilize three operating metrics that, taken together, measure the quality of technology sold:

1. **Gross Margin (GM)** shows how much technology content is in each sale. A lower gross margin means the vendor is paying someone else, generally in the form of a license or royalty. The most efficient software companies that develop all of their technology in-house

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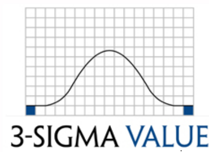

report gross margins near 90%. On the other end of the spectrum, vendors that license or pay royalties on technology developed elsewhere report gross margins closer to 60%.

2. **Cumulative R&D** shows the value of the underlying intellectual property (IP). While plenty of companies waste money developing technologies that don't work or aren't wanted, if a company hasn't spent enough money on research and development (R&D) then how can it purport to own a valuable piece of technology?

3. **Operating Margin (OM)** shows how efficiently a company is managed. Technology is scalable and the cost of technology deflationary due to innovation and Moore's Law. R&D expenses tend to be relatively consistent over time while operating leverage is earned in sales and marketing (S&M), and general and administrative (G&A) to a lesser extent

It doesn't matter whether a technology company builds or buys its intellectual property as long as both forms of expenditure are accounted for properly and consistently when comparing earnings quality and growth. Unfortunately, the widespread acceptance of non-GAAP financial reporting obfuscates the true relative earnings power of companies across the technology spectrum. Some companies report non-GAAP earnings when there are GAAP losses. When a CFO or CEO talks of "margins" without qualifying it as "non-GAAP" he/she is being disingenuous because when non-GAAP earnings diverge from GAAP earnings, expenses are being excluded (or more accurately, hidden).

Non-GAAP numbers typically exclude stock compensation, acquisition related costs, amortization of acquired intangible assets, costs associated with IP collaboration agreements, and other non-cash and cash expenses. These are recurring costs for an acquisitive firm.

Ultimately, cash is what matters, not earnings[3]. Normally, a software company with a ratable revenue recognition model will report cash flow well in excess of earnings. Because revenues are reported with a significant delay relative to cash collections under GAAP accounting, operating and net income will also generally lag cash flow from operations (CFFO, on the cash flow statement). Therefore, a decline in cash flow generally indicates a problem in a software company's strategy despite potential earnings growth that is more cosmetic (and backward-looking) than indicative.

[3] 3-Sigma Value employs discounted cash flow (DCF) methodology sanity-checked by an earnings analysis when valuing software companies.

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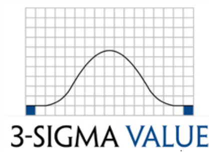

Following is a summary of the significant assumptions underlying 3-Sigma Value's scenario analysis:

1. **Billings** (new customers, net of churn + upsell of customers above the amount of renewal) is a leading indicator of growth, while revenue is a lagging indicator.

Billings growth is decelerating in the second half of 2015, leading directly to revenue deceleration. In fact, sequential billings growth was negative in APIC's first quarter as a public company (fiscal third quarter ended 4/30/15), and will be negative on a year over year basis in the quarter ending 7/30/15. Unless there is a snap back in billings at the end of the year, revenue won't reach the $100 million level expected by analysts (MS, JPM) in FY 2016.

Billings deceleration undermines the consensus view that Apigee is a growth stock. Apigee is not Facebook with a billion individual customers. It had 186 enterprise customers as of the end of fiscal third quarter ended 4/30/15. API management is an intensely competitive market, one that will restrict the ability of Apigee to become a dominant vendor. Instead, Apigee will be a niche provider that is roughly breakeven on an operating basis. The best case scenario for Apigee is obviously a take-out.

2. **Professional Services Attach Rate** – the mix of subscriptions versus services impacts gross margin as services is a lower margin business at 20.4% (in the quarter ended 4/30/15) compared to 63.5% on subscriptions. The mix of professional services should decline in connection with two shifts: the shift from license to subscription; and the shift from direct sales to the partner channel who handles implementation.

4. **Gross Margins** – subscription gross margin of 63.5% is low by software standards, suggesting a lack of IP in the products being sold. Services GM has hovered around 20% for the past several quarters.

5. **Operating Expenses (R&D, S&M, G&A)** – Management is increasing expenses in all categories in anticipation of the rapid growth it is expecting. Total operating expenses in fiscal year 2015 approaching $90 million dwarfs revenue guidance of $68 million. Operating expenses as a % of revenue will exceed 100% in 2016 and 2017.

6. **No taxes** because no profits.

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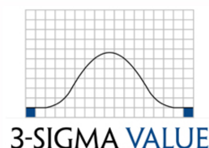

Apigee (APIC) Financial Summary - Base Case: Scenario 1						
FYE July 31,	2012	2013	2014	2015	2016	2017
Deferred Revenue	17,140	17,124	28,188	33,552	36,560	42,249
as a % of Revenue	62.1%	39.7%	53.5%	50.0%	51.3%	51.3%
Change in Deferred Revenue	9,094	-16	11,064	5,364	3,009	5,688
Billings (Revenue + Change in Deferred Revenue)	36,701	43,136	63,768	80,093	94,648	111,847
% Growth		*17.5%*	*47.8%*	*25.6%*	*18.2%*	*18.2%*
Revenue:						
License	9,452	13,917	11,411	20,547	23,041	25,850
% Growth		*47.2%*	*-18.0%*	*80.1%*	*12.1%*	*12.2%*
Subscription & Support	7,308	15,243	20,237	30,252	36,072	42,627
% Growth		*108.6%*	*32.8%*	*49.5%*	*19.2%*	*18.2%*
as a % of License Revenue		*109.5%*	*177.3%*	*147.2%*	*156.6%*	*164.9%*
Total Product Revenue	16,760	29,160	31,648	50,799	59,113	68,477
% Growth		*74.0%*	*8.5%*	*60.5%*	*16.4%*	*15.8%*
Professional Services	10,847	13,992	21,054	16,275	12,129	13,718
as a % of Product Revenue	*64.7%*	*48.0%*	*66.5%*	*32.0%*	*20.5%*	*20.0%*
Total Revenue	27,607	43,152	52,702	67,074	71,242	82,195
% Growth		*56.3%*	*22.1%*	*27.3%*	*6.2%*	*15.4%*
Cost of Revenue:						
License	157	108	366	507	522	585
% of Revenue	*1.7%*	*0.8%*	*3.2%*	*2.5%*	*2.3%*	*2.3%*
Subscription & Support	3,484	9,286	11,911	11,174	10,951	12,788
% of Revenue	*47.7%*	*60.9%*	*58.9%*	*36.9%*	*30.4%*	*30.0%*
Professional Services	8,352	12,435	15,431	12,890	9,653	10,917
% of Revenue	*77.0%*	*88.9%*	*73.3%*	*79.2%*	*79.6%*	*79.6%*
Total Cost of Revenue	11,993	21,829	27,708	24,571	21,125	24,290
Gross Profit:						
License	9,295	13,809	11,045	20,040	22,519	25,265
% Margin	*98.3%*	*99.2%*	*96.8%*	*97.5%*	*97.7%*	*97.7%*
Subscription & Support	3,824	5,957	8,326	19,078	25,121	29,839
% Margin	*52.3%*	*39.1%*	*41.1%*	*63.1%*	*69.6%*	*70.0%*
Professional Services	2,495	1,557	5,623	3,385	2,476	2,801
% Margin	*23.0%*	*11.1%*	*26.7%*	*20.8%*	*20.4%*	*20.4%*
Total Gross Profit	15,614	21,323	24,994	42,503	50,116	57,904
% Margin	*56.6%*	*49.4%*	*47.4%*	*63.4%*	*70.3%*	*70.4%*
Operating Expenses:						
R&D	10,922	16,848	22,273	29,952	34,500	38,500
% of Revenue	*39.6%*	*39.0%*	*42.3%*	*44.7%*	*48.4%*	*46.8%*
S&M	9,801	23,812	47,029	46,973	41,459	42,744
% of Revenue	*35.5%*	*55.2%*	*89.2%*	*70.0%*	*58.2%*	*52.0%*
G&A	4,033	5,885	14,415	13,577	13,575	13,599
% of Revenue	*14.6%*	*13.6%*	*27.4%*	*20.2%*	*19.1%*	*16.5%*
Total Operating Expenses	24,756	46,545	83,717	90,501	89,534	94,843
EBIT	-9,142	-25,222	-58,723	-47,998	-39,418	-36,939
% Margin	*-33%*	*-58%*	*-111%*	*-72%*	*-55%*	*-45%*
Other Income (Expenses)	1,228	-376	-1,678	-383	0	0
PTI	-7,914	-25,598	-60,401	-48,381	-39,418	-36,939
Taxes	-367	-273	-392	63	0	0
Rate	4.6%	1.1%	0.6%	-0.1%	0.0%	0.0%
Net	-8,281	-25,871	-60,793	-48,318	-39,418	-36,939
D&A	307	1,187	2,104	2,410	2,469	2,566
EBITDA	-8,835	-24,035	-56,619	-45,588	-36,949	-34,373
NOPAT (EBIT)	-9,142	-25,222	-58,723	-47,998	-39,418	-36,939
D&A	307	1,187	2,104	2,410	2,469	2,566
Stock Comp	181	408	2,726	3,091	3,288	3,288
Change in A/R	-2,369	-2,466	-9,671	273	0	0
Change in Prepaids	-869	6,947	-1,173	38	0	0
Change in A/P	939	-576	1,034	-1,429	0	0
Change in Accrueds	960	-7,859	2,694	1,078	0	0
Deferred Revenue	9,094	-16	11,064	5,364	3,009	5,688
Capex	-1,015	-587	-2,539	-1,320	-1,940	-1,940
UFCF	-1,914	-28,184	-52,484	-38,494	-32,592	-27,337

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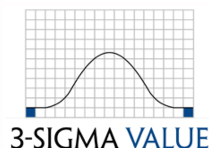

7. **Terminal Value Multiple** – based on comparable M&A transactions.

Valuation multiples paid in M&A are usually all over the place, largely based on the quality of the IP and strategic rationale for the acquisition. However, in the case of systems and data management software, multiples of revenue paid are consistently in the low single digit range.

M&A Comps - Systems & Data Management Software					
Target	Acquirer	Date	Valuation	Revenue	EBITDA
Informatica (INFA)	Permira, CPPIB	Apr-15	5,300	4.6x	25.5x
Tibco Software (TIBX)	Vista Equity	Sep-14	4,300	4.0x	18.0x
Compuware (CPWR)	Thoma Bravo	Sep-14	2,500	3.4x	22.5x
BMC Software (BMC)	Bain and G. Gate	May-13	6,900	3.1x	9.6x
Quest Software (QSFT)	Dell	Mar-12	2,400	2.6x	8.6x
Novell (NOVL)	Attachmate	Nov-10	2,200	1.2x	NM
Average				**3.1x**	**16.8x**

In an Upside Case operating scenario in which Apigee is acquired, we believe the multiple will depend on the timing, strategic value, and wherewithal of the acquirer. This results in a broad range of valuations between 1.2x and 4.6x revenue.

Without EBIT, EBITDA, or FCF for the foreseeable future (through FY17), a DCF and/or P/E-based analysis is meaningless, and therefore we apply a no-profit revenue-based methodology, summarized below.

APIC Valuation Summary				
FY 2017	LIVE	Upside	Base	Downside
Revenue	82,195	106,939	82,195	67,178
No Profit Multiple Range		3.1x	2.2x	1.2x
Enterprise Value		336,626	178,685	80,614
Cash at FYE17		97,162	30,504	-13,047
Equity Value		433,788	209,188	67,567
per Share		**$14.80**	**$7.14**	**$2.31**
Weightings		20.0%	60.0%	20.0%
Probability-Weighted Target Price	**$7.71**	2.96	4.28	0.46
% Upside (Downside)	**-44.2%**			

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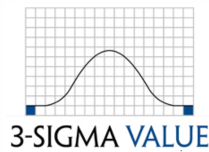

Down Rounder #2: Box, Inc. (BOX)

BOX Capitalization as of 4/30/15	
Price at January 23, 2015 IPO	**$14.00**
Price at end of 1st day	**$23.23**
Price as of June 11, 2015	**$18.29**
FD Shares Outstanding (incl. anti-dilutive)	142.9
Market Capitalization	**2,614.2**
Debt ($50M revolver due 8/16, LIBOR+3.0% = 3.3%)	40.0
Capital Leases	3.3
Cash (less $25m restricted cash associated with letter of credit)	284.0
Enterprise Value (EV)	**2,373.6**
EV / Revenue - FYE 1/31/2015A	11.0x
EV / Revenue - FYE 2016E	8.2x
EV / Revenue - FYE 2017E	6.4x
EV / Revenue - FYE 2018E	5.3x

BOX raised 9 rounds of equity dating back to 2006 when Draper Fisher Jurvetson paid $1.5 million for 5.23 million shares ($0.29 per share). More recently, in October 2013, a consortium of investors invested $100 million for 5.55 million shares ($18.00 per share), and in July 2014, TPG and Coatue Management invested $150 million for 7.5M shares ($20.00 per share). At the IPO price of $14.00, some private equity investors were down 30% on their investment[4].

What is Box?

Box is a cloud-based mobile-optimized storage and collaboration platform that looks good, earns high gross margin (78.2% in fiscal year ended 1/31/15), and represents substantial cumulative R&D going back ten years to 2005. However, since it was founded, Box's core product has become commoditized. Growth is slowing dramatically and valuation peaked in July 2014 when it sold shares in a private round at $20.00.

[4] Excludes downside protection in the form of extra shares issued at a discount, a financing caveat know as ratcheting.

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Cloud-based storage and collaboration platforms are proliferating at a rapid rate. The size of the opportunity is tens of billions and the competition is coming from all directions. Besides pure-play vendors like Box (BOX) and DropBox (private), nearly all of the large-cap technology vendors sell enterprise collaboration software:

Google Drive (GOOG),

Amazon WorkDocs f.k.a. Zocalo (AMZN),

Microsoft Office 365, SharePoint, and OneDrive for Business (MSFT),

Citrix ShareFile (CTXS),

EMC Syncplicity (EMC) – dumped in July 2015 to investment firm Skyview Capital,

Apple (AAPL), IBM (IBM), et al.

Pricing is being driven down by the fierce competition. 15GB of free storage is being offered to new customers, while amounts above that are typically charged on a per user per month basis. $15 per user per month will buy unlimited storage. Between $0 and $15 there are different levels offered by the different vendors. Box's "Select a Plan" pricing and Dropbox's "Choose your plan" are nearly identical in form and substance – the websites are carbon-copies. This is clearly a commodity offering.

In all likelihood, storage pricing will be driven down to zero (or near zero) and the commodity nature of storage renders it a natural loss leader. Long-term, the pure-plays Box and Dropbox cannot compete against the incumbency. In contrast, Microsoft, with its Office 365 platform, gives customers a holistic package that includes all of Office 365's programs, an email service, and content management like Box has. There's no real reason to pay Box $15 per month to do something that Microsoft can do, and much more, for even less money. In theory, Box could attempt to compete by lowering prices, but that would squeeze already negative profit margins.

According to its IPO prospectus, BOX has 44k+ paying organizations, and 32M+ registered users from 275k+ supported organizations. Fiscal year 2016 (ended 1/31/16) revenue guidance is $286 million to $290 million, representing growth of 33% (at the midpoint) over the $216 million generated in fiscal year 2015.

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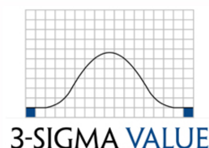

Box (BOX) Financial Summary - Base Case: Scenario 1						
	FYE January 31,					
	2013	2014	2015	2016	2017	2018
Billings:						
Deferred Revenue, beginning of period	13,139	40,099	90,072	120,057	83,526	140,934
Change in Deferred Revenue	26,960	49,973	29,969	44,819	57,408	68,889
Deferred Revenue, end of period	40,099	90,072	120,041	164,876	140,934	209,823
Billings (revenue + chg in deferred)	85,757	174,165	246,409	335,548	429,795	515,754
% Change - YOY		103.1%	41.5%	36.2%	28.1%	20.0%
Revenue	58,797	124,192	216,440	**290,729**	372,388	446,865
% Change - YOY		111.2%	74.3%	34.3%	28.1%	20.0%
				FY16 Guidance = 286M to 290M		
COGS	14,280	25,974	47,273	75,995	97,340	116,808
Gross Profit	44,517	98,218	169,167	214,734	275,047	330,057
% Margin	75.7%	79.1%	78.2%	73.9%	73.9%	73.9%
				Guidance = drifting down		
Operating Expenses:						
R&D	28,996	45,967	66,402	98,536	102,536	106,536
% of Revenue	49.3%	37.0%	30.7%	33.9%	27.5%	23.8%
S&M	99,221	171,188	207,749	247,404	296,885	326,573
% of Revenue	168.8%	137.8%	96.0%	85.1%	79.7%	73.1%
G&A	25,429	39,843	61,672	61,888	61,888	61,888
% of Revenue	43.2%	32.1%	28.5%	21.3%	16.6%	13.8%
Total Operating Expenses	153,646	256,998	335,823	407,828	461,309	494,997
Operating Income (EBIT)	-109,129	-158,780	-166,656	-193,094	-186,261	-164,940
% Margin	-185.6%	-127.9%	-77.0%	-66.4%	-50.0%	-36.9%
D&A	8,616	17,867	26,603	37,416	38,916	40,416
EBITDA	-100,513	-140,913	-140,053	-155,678	-147,345	-124,524
Stock-based Comp	7,536	11,749	31,929	43,112	40,000	40,000
Adjusted EBITDA	-92,977	-129,164	-108,124	-112,566	-107,345	-84,524
NOPAT (EBIT, no taxes)	-109,129	-158,780	-166,656	-193,094	-186,261	-164,940
+ D&A	8,616	17,867	26,603	37,416	38,916	40,416
+ Stock-based Comp	7,536	11,749	31,929	43,112	40,000	40,000
+ Increase in Deferred Revenue	26,930	49,973	14,144	-36,531	57,408	68,889
- Increase in Working Capital	-21,653	-22,400	-9,019	-14,888	0	0
- Capex	-19,499	-24,424	-39,685	-40,000	-30,000	-30,000
Unlevered Free Cash Flow	-107,199	-126,015	-142,685	-203,985	-79,937	-45,634
- Interest Expense		-3,705	-2,009	-2,056	-2,056	-2,056
Free Cash Flow	**-107,199**	**-129,720**	**-144,694**	**-206,041**	**-81,993**	**-47,690**

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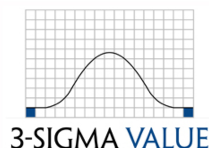

The key assumptions underlying 3-Sigma Value's analysis of Box are similar to the assumptions underlying the Apigee analysis; they are: (1) Billings; (2) Gross margin; (3) Operating expenses (R&D, S&M, G&A); (4) No taxes because no profits; (5) Capital expenditures; and (6) Terminal value multiple based on comparable M&A transactions.

In the Base Case operating scenarios, we adhere to Box management's fiscal year 2016 guidance for billings growth and gross margin – "drifting down", and extrapolate from there. For operating expenses we follow guidance as well: S&M headcount is growing at a faster rate in FY 2016 then in FY 2015; and the Company is increasing quota carrying reps by "20-something percent in FY16". (Range = 10-30% S&M growth). R&D is increasing around $1 million per quarter, while G&A remains flattish. Finally, capex is and will remain elevated as Box finishes off building its dream headquarters for $35 million net cash costs for tenant improvements over the course of FY 2016[5]. Maintenance capex ~$5 million per quarter with no incremental spending in the Upside Cases.

In all scenarios, BOX burns cash for the foreseeable future, and never reaches EBITDA breakeven. As a result, a DCF and/or P/E-based analysis is meaningless, and therefore we apply a no-profit revenue-based methodology.

BOX Valuation Summary				
FY 2018	LIVE	Upside	Base	Downside
Revenue	446,865	597,798	446,865	368,211
No Profit Multiple Range		3.1x	2.2x	1.2x
Enterprise Value		1,881,778	971,451	441,853
Cash at FYE18		175,776	-5,838	-160,742
Equity Value		2,057,554	965,613	281,111
per Share		$14.40	$6.76	$1.97
Weightings		20.0%	60.0%	20.0%
Probability-Weighted Target Price	**$7.33**	2.88	4.05	0.39
% Upside (Downside)	**-59.9%**			

[5] $25 million of restricted cash is set aside associated with a letter of credit.

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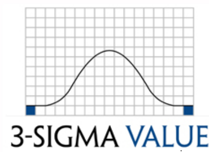

Down Rounder #3: Hortonworks (HDP)

HDP Capitalization as of 3/31/15	
Price at December 11, 2014 IPO	**$16.00**
Price at end of 1st day	**$26.38**
Price as of June 26, 2015	**$26.20**
FD Shares Outstanding	47.0
Market Capitalization	**1,230.9**
Debt	0.0
Cash	166.0
Enterprise Value (EV)	**1,064.9**
EV / Revenue - FY 2015E	11.6x
EV / Revenue - FY 2016E	7.6x
EV / Revenue - FY 2017E	4.9x

In 2004, Google (GOOG) published a white paper on a new technology it developed to manage the distribution of data across commodity servers. MapReduce would obviate the need for expensive hardware and render data analysis more efficient. By 2006, Hadoop 1.0 (MapReduce technology) was available through the open-source Apache Software Foundation. In 2008, Cloudera (private) was first to market with a commercial Hadoop solution for enterprises, leading many to anoint it as the Red Hat (RHT)[6] of Hadoop. Two competitors followed – MapR (private) in 2009, and Hortonworks (HDP) in 2011.

Akin to the development of the open source operating system (Linux) market, the open source data storage and analysis (Hadoop) market will ultimately be dominated by one commercial provider. Open source vendors don't own the underlying IP and generate revenue mainly through subscription fees paid for technical support. Subscription fees cover telephone, patches and security updates, bug fixes, and other updates. Margins are thin. Pricing is competitive. Hortonworks may be the first of the three Hadoop vendors to go public but ironically it is the weakest.

[6] Red Hat (RHT) is the market leader in open source operating system Linux, a market share gainer against proprietary operating systems Unix and Windows.

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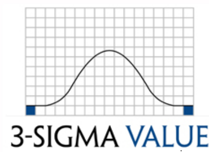

Cloudera is to open source data storage and analysis as Red Hat is to open source operating systems. Cloudera dominates the all-important financial services vertical. Its platform is easier to use, more secure, and its administration functionality is superior. Cloudera has been winning against Hortonworks, forcing Hortonworks to recently change its go-to-market strategy. Rather than focusing on direct sales, Hortonworks is implementing a partnership model in which it signs distribution agreements with technology vendors – including Microsoft (MSFT)[7], Pivotal (jv between EMC and VMW), IBM (IBM), Teradata (TDC), and Splunk (SPLK). By climbing on the back of market leaders, Hortonworks hopes it can survive as second fiddle.

The key assumptions underlying 3-Sigma Value's analysis of Hortonworks are as follows:

1. **New Customers, net** – Hortonworks is signing around 100 customers per quarter. We use this level as the baseline in our Downside Case operating scenarios. In the Base Case scenarios, new customer growth is tied to the change in sales and marketing (S&M) expense. The assumption is that sales productivity remains relatively constant. Upside is an extrapolation.

2. **Billings per Customer** – embedded in billings is the number of nodes per customer. A node is a connection point in a communication network, and Hortonworks typically charges by the node. The list price for Enterprise is $2,500 and $4,000 for Enterprise Plus. In comparison, Cloudera charges $4,000 to $7,000 per node depending on scale and the level of support. The lower price point generates an inferior economic model.

   Billings at existing clients increase as more nodes are added to their deployments. Offsetting this is the fact that billings at new clients are smaller than average as they typically start with fewer nodes. As a result, we assume billings per customer revolve around LQA skewing to the downside in line with industry price deflation.

3. **The Lag Between Billings and Revenue** – because Hortonworks sells no IP (it gives it away) and only sells support services, accounting rules require revenue recognition ratably over the course of the contract. We utilize rolling LTM (latest twelve months) support

[7] Microsoft (MSFT) is Hortonwork's largest OEM partnership, contributing $2.5 million per quarter ($10 million per year) fixed. Microsoft turns around and sells HDInsight, its own Hadoop package, built on Hortonworks Data Platform (HDP), on its cloud computing platform, Azure.

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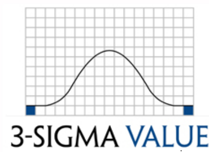

subscription revenue as a % of rolling LTM Billings to estimate the relationship between billings and revenue.

4. **Professional Services as a % of Support Subscription Revenue** – declining in connection with subscription renewals (tied to new customers as a % of total customers). Also declining as sales shift to the partner channel who handles implementation.

5. **Gross Margins** – subscription gross margin of 81.2% (Q1 2015) is solid. Services GM turned positive in Q1 2015 for the first time, registering at 3.1%. Going forward we assume professional services GM reaches 20% in the Upside Case operating scenarios (Base Case = LQA).

6. **Operating Expenses (R&D, S&M, G&A)** – Management is increasing expenses in all categories in anticipation of rapid growth. Total operating expenses in 2015 exceeding $220 million more than doubles revenue guidance of $94 million to $97 million (billings guidance = $153 million to $159 million). Operating expenses as a % of revenue will exceed 100% in 2016 and 2017.

7. **No taxes** because no profits.

8. **Terminal Value Multiple** – based on comparable M&A transactions.

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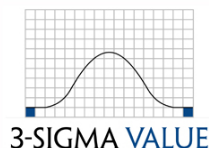

Hortownworks (HDP) Financial Summary - Base Case: Scenario 1					
FYE 12/31,	2013	2014	2015	2016	2017
Deferred Revenue	27,456	73,866	112,324	174,797	198,712
as a % of Billings		160.4%	93.5%	95.4%	73.5%
Change in Deferred Revenue		46,410	38,458	62,474	23,914
Billings (Revenue + Change in Deferred Revenue)		87,130	158,606	245,605	294,165
% Growth			*82.0%*	*54.9%*	*19.8%*
# of Subscription Customers, beginning of period		0	0	444	904
New Customers, net			444	460	474
# of Subscription Customers, end of period		0	444	904	1,377
# of Subscription Customers, average		0	222	674	1,140
Billings per Customer			714,443	364,476	257,927
% Growth				*-49.0%*	*-29.2%*
New Customers as a % of Average Customers				*68.2%*	*41.5%*
Revenue:					
Support Subscription		25,558	79,974	145,435	225,209
as a % of Last Year's Billings			*91.8%*	*91.7%*	*91.7%*
Professional Services		20,490	40,174	37,697	45,042
as a % of Subscription Revenue		*80.2%*	*50.2%*	*25.9%*	*20.0%*
Total Revenue		46,048	120,148	183,131	270,250
% Growth			*160.9%*	*52.4%*	*47.6%*
Gross Profit:					
Support Subscription		20,271	65,454	118,126	197,900
% Margin		*79.3%*	*81.8%*	*81.2%*	*81.2%*
Professional Services		-7,702	2,579	1,176	1,405
% Margin		*-37.6%*	*6.4%*	*3.1%*	*3.1%*
Total Gross Profit		12,569	68,033	119,302	199,305
% Margin		*27.3%*	*56.6%*	*65.1%*	*73.7%*
Operating Expenses:					
R&D		37,771	62,608	77,504	83,504
% of Revenue		*82.0%*	*52.1%*	*42.3%*	*30.9%*
S&M		70,695	133,684	158,503	192,052
% of Revenue		*153.5%*	*111.3%*	*86.6%*	*71.1%*
G&A		26,231	40,234	39,906	41,156
% of Revenue		*57.0%*	*33.5%*	*21.8%*	*15.2%*
Total Operating Expenses		134,697	236,526	275,913	316,712
EBIT		-122,128	-168,493	-156,611	-117,407
% Margin		*-265%*	*-140%*	*-86%*	*-43%*
Other Income (Expenses)		-4,977	398	0	0
PTI		-127,105	-168,095	-156,611	-117,407
Taxes		1,111	-194	0	0
Rate		-0.9%	0.1%	0.0%	0.0%
Net Income		-125,994	-168,289	-156,611	-117,407
D&A		292	5,128	5,707	5,707
EBITDA		-121,836	-163,366	-150,904	-111,701
NOPAT (EBIT)		-122,128	-168,493	-156,611	-117,407
D&A		292	5,128	5,707	5,707
Stock Comp		8,948	26,632	28,584	28,584
Change in A/R		-795	-8,980	0	0
Change in Prepaids		-1,099	-3,790	0	0
Change in A/P		-382	1,858	0	0
Change in Accrueds		2,331	9,167	0	0
Deferred Revenue		3,563	38,458	62,474	23,914
Capex		-6,279	-12,637	-10,000	-10,000
UFCF		-115,549	-112,658	-69,847	-69,202

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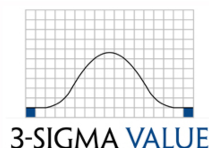

Only in an Upside Case does Hortownworks generate cash over the course of our investment time horizon of 1 to 3 years. Therefore, a DCF only applies in the Upside Cases.

Hortownworks (HDP) DCF Valuation Summry - Upside Case: Scenario 1	
2015 - 2017 DCF @ WACC	$21,041
Terminal Value @ RedHat (RHT) ~20x	$869,138
Enterprise Value	$890,179
Net Cash FYE 2017	$240,363
Equity Value	$1,130,543
per share	$24.06

Conclusion – Hortonworks burns cash and never reaches EBITDA breakeven in all but the Upside Case scenarios, and even then it's pretty thin. Thus, we apply a no-profit revenue-based methodology.

HDP Valuation Summary				
FY 2017	LIVE	Upside	Base	Downside
Revenue	270,250	398,510	270,250	184,006
Implied Multiple Range		3.1x	2.2x	1.2x
Enterprise Value		1,254,449	587,504	220,807
Cash at FYE17		248,787	-49,125	-264,247
Equity Value		1,503,236	538,378	0
per Share		$32.00	$11.46	$0.00
Weightings		20.0%	60.0%	20.0%
Probability-Weighted Target Price	**$13.28**	6.40	6.88	0.00
% Upside (Downside)	**-49.3%**			

The main risk of shorting Hortonworks is take-out risk. Microsoft could acquire Hortonworks given their OEM partnership (costing Microsoft $10 million per year); however, there would be no auction and the valuation would be full at a billion dollars.

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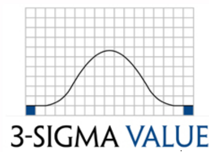

Final Thoughts

Box (BOX), Apigee (APIC), and Hortonworks (HDP) will burn through their cash over the next 2-3 years, requiring highly dilutive equity offerings. In the meantime, none of them are apt to be acquired because their core technologies are largely redundant and rapidly commoditized.

Before wrapping this analysis up, I want to emphasize the fact that we do not know anything for sure, and therefore we analyze in terms of scenarios that utilize ranges. While we strive for authenticity in the Base Case scenarios, we acknowledge the strong possibility of Upside and Downside deviation. What makes these short opportunities compelling is the relationship between the potential Upside (the Risk) and potential Downside (the Reward). Box is the best opportunity from a pure risk/reward standpoint because no reasonable scenario justifies its current inflated stock price.

Reward versus Risk

	Price as of 6/26/2015	Up Target (Risk)	Down Target (Reward)	Reward vs Risk
Apigee (APIC)	10.46	14.80	2.31	1.9x
Box (BOX)	19.10	14.40	1.97	NM
Hortonworks (HDP)	26.20	32.00	0.00	4.5x

The number of down rounders is sure to increase as the bulging backlog of unicorns seek liquidity for their investors. In connection with 3-Sigma Value's coverage of the IPO market, we continue to focus on down rounders who share the key characteristics: (1) burning cash at an alarming rate (2) sell a commoditized product (3) led by a jargon-laced management. With dozens of potential down rounders eager to cash out, shorting down rounders will be a profitable trading strategy through the bursting of this latest valuation bubble.

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