

Clouded Judgement 11.10.23 - OpenAI Updates + Datadog Gives the All-Clear?



JAMIN BALL

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Every week I'll provide updates on the latest trends in cloud software companies. Follow along to stay up to date!

OpenAI Updates

OpenAI had their big developer day this week, and I wanted to call out two key announcements (and trends): increasing context windows and decreasing costs.

When I think about the monetization of AI (and which “layers” monetize first) I’ve always thought it would follow the below order, with each layer lagging the one that comes before it.

1. Raw silicon (chips like Nvidia bought in large quantities to build out infra to service upcoming demand).
2. Model providers (OpenAI, Anthropic, etc as companies start building out AI).

3. Hyperscalers (AWS, Azure, GCP as companies look for cloud GPUs who aren't building out their own data centers)
4. Infra (Data layer, orchestration, monitoring, ops, etc)
5. Durable Applications

We've clearly well underway of the first 3 layers monetizing. Just starting the fourth layer, with the fifth layer showing up in some pockets, but not really widespread monetization (and I should clarify - scalable monetization). The caveat is important - I've heard of a well known company that had an offshore team handling lots of manual customer work (ie responses). And this "product" had a ~50% gross margin. When they started using large language models from OpenAI, the gross margin on the same product went to -100%! (yes, that's negative 100%). While the product was "monetizing" I wouldn't count it as scalable monetization.

We haven't quite yet cracked AI used in production in widespread fashion. There are many limiters here - data security and compliance are big ones. But even more important right now is cost. At the end of the day, these large language models are quite expensive! And as a vendor using them, you can either pass through the costs to your end customer (to maintain your gross margins), or eat the costs and lower your gross margins (because the customer isn't willing to pay the incremental cost for incremental functionality brought about by AI), and hope the model providers lower their costs in the future. It seems like every company has been experimenting. Saying things like "just build out all the AI functionality now and then we'll evaluate if customers will pay for it." Now that we're getting through this initial wave of experimentation and AI buildout, there's quite a bit of sticker shock when the OpenAI bills come due! People are looking to build in model portability to enable them to switch to lower cost models (or open source).

This brings me back to the initial point - the two announcements from OpenAI I want to highlight here.

1. Context length: Context window of GPT 4 Turbo went from 8k tokens to 128k tokens (think of this as ~300 pages of text worth of input). This means what you can put into a prompt just went up dramatically
2. Costs decreasing: GPT 4 Turbo is 3x cheaper for input tokens (think of this as roughly the length of the prompt) and 2x cheaper for output tokens. This equates to \$0.01 per 1k input tokens, and \$0.03 per 1k output tokens. On a blended basis, GPT 4 Turbo is roughly 2.5-3x cheaper than GPT 4.

The cost decrease is very meaningful - it's lowers the barrier to experiment with AI, and also lowers the barrier for these AI functionalities to be pushed into production (because vendors don't have to increase price nearly as much). Also - [As Moin pointed out on Twitter / X](#), as context windows increase the need for task / domain-specific models (or fine-tuned models) decreases. [The counter argument to this](#) is will we be able to find enough high quality long context training data. Either way - it's clear these models are becoming cheaper and more effective, which is an exciting future for AI! I think we're about to see an explosion of *good business model* AI applications in the near future. 2024 will be the year of AI applications!

Datadog Gives Software the All Clear?

This week software stocks shot up on Tuesday, largely a result of Datadog's quarterly earnings. Datadog in particular was up ~30%. So what happened? They made a number of comments about optimizations easing up, and the worst being behind us. Here are some quotes:

- “It looks like we've hit an inflection point. It looks like there's a lot less overhang now in terms of what needs to be optimized or could be optimized by customers. It looks like also optimization is less intense and less widespread across the customer base.”
- “We had a very healthy start to Q4 in October...the trends we see in early Q4 are stronger than they've been for the past year.”
- “As we look at our overall customer activity, we continue to see customers optimizing but with less impact than we experienced in Q2, contributing to our usage growth with existing customers improving in Q3 relative to Q2.”
- “As a reminder, last quarter, we discussed a cohort of customers who began optimizing about a year ago and we said that they appear to stabilize their users growth at the end of Q2. That trend has held for the past several months with that cohorts usage remaining stable throughout Q3.”

Datadog was one of the first companies to really highlight an improving macro environment. And even more important, they called out a great month of October (first month of Q4 for them). So how do we contrast their positive commentary, with largely neutral commentary from the rest of the software universe? Most likely Datadog is seeing trends more unique to their own business. As the market puts a greater emphasis on bundled platforms today vs point solutions, they appear to be an incremental winner of market share. Best of breed platforms (with more of a usage based model) will recover first (in terms of revenue growth recovery). Datadog appears to be in that bucket and recovering first. This doesn't mean the rest of the software universe will follow suite. There will be many “pretenders” who never recover and find themselves bundled into oblivion. However, the positive commentary from Datadog is the first sign that we're

starting to turn a corner. So while the rest of the software universe may not be at that corner today, we're starting to see the light at the end of the tunnel.

Quarterly Reports Summary

	Reported Revenue			Next Quarter Rev		
	Actual	Consensus	Δ	Guidance	Consensus	Δ
On24	\$39.2M	\$38.0M	3.2%	\$37.3M	\$35.4M	5.4%
Squarespace	\$257.1M	\$251.8M	2.1%	\$262.5M	\$256.0M	2.5%
Jamf	\$142.6M	\$140.0M	1.9%	\$148.5M	\$149.1M	(0.4%)
Kaltura	\$43.5M	\$43.1M	1.0%	\$41.6M	\$42.2M	(1.4%)
CS Disco	\$34.9M	\$34.1M	2.3%	\$35.0M	\$38.8M	(9.8%)
2U	\$229.7M	\$223.4M	2.8%	NA	\$300.0M	NA
Olo	\$57.8M	\$56.3M	2.7%	\$58.8M	\$56.9M	3.3%
Alteryx	\$232.0M	\$210.3M	10.3%	\$337.0M	\$337.8M	(0.2%)
RingCentral	\$558.2M	\$554.0M	0.8%	\$570.0M	\$570.0M	0.0%
Klaviyo	\$175.8M	\$167.4M	5.0%	\$196.0M	\$195.1M	0.5%
Datadog	\$547.5M	\$523.2M	4.6%	\$566.0M	\$541.0M	4.6%
Amplitude	\$70.6M	\$70.0M	0.9%	\$71.6M	\$70.3M	1.8%
Hubspot	\$557.6M	\$533.0M	4.6%	\$557.0M	\$555.8M	0.2%
BigCommerce	\$78.0M	\$78.0M	0.1%	\$81.8M	\$82.0M	(0.2%)
Twilio	\$1033.6M	\$986.9M	4.7%	\$1035.0M	\$1029.0M	0.6%
Wix.com	\$393.8M	\$389.7M	1.0%	\$402.5M	\$399.2M	0.8%

Top 10 EV / NTM Revenue Multiples

Company	EV / NTM Rev	EV / 2024 Rev	EV / NTM FCF	NTM Rev Growth	Gross Margin	Operating Margin	FCF Margin	% in Top 10 Multiple LTM
1 Snowflake	15.5x	13.4x	55x	27%	66%	(41%)	25%	100%
2 MongoDB	14.6x	12.9x	133x	17%	74%	(18%)	3%	67%
3 Palantir	14.5x	13.9x	58x	19%	80%	2%	22%	47%
4 Cloudflare	13.4x	12.6x	153x	28%	76%	(16%)	8%	100%
5 Datadog	13.1x	12.4x	52x	19%	80%	(5%)	25%	99%
6 CrowdStrike	12.5x	11.1x	37x	31%	74%	(6%)	30%	31%
7 Adobe	12.3x	11.9x	30x	12%	88%	34%	40%	26%
8 ServiceNow	12.2x	11.6x	38x	21%	79%	8%	28%	70%
9 Samsara	11.8x	10.5x	393x	31%	72%	(34%)	(3%)	72%
10 Zscaler	11.8x	10.5x	48x	27%	78%	(14%)	21%	36%
Average	13.2x	12.1x	100x	23%	77%	(9%)	20%	65%
Median	12.8x	12.2x	54x	24%	77%	(10%)	23%	69%
Overall Median	5.0x	4.8x	33.7x	15%	75%	(16%)	8%	

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Top 10 Weekly Share Price Movement

Company		7 Day Share Price Δ	30 Day Share Price Δ	YTD Share Price Δ	Current Market Cap (\$MM)
1	Datadog	26%	9%	36%	\$32,931
2	Alteryx	19%	(2%)	(29%)	\$2,597
3	Digital Ocean	15%	1%	(4%)	\$2,108
4	Couchbase	13%	(5%)	22%	\$759
5	MongoDB	11%	2%	86%	\$26,063
6	Sprout Social	11%	(7%)	(16%)	\$2,642
7	Qualys	10%	3%	50%	\$6,179
8	Cloudflare	10%	(5%)	38%	\$20,878
9	Snowflake	10%	(4%)	9%	\$51,549
10	Dynatrace	8%	1%	29%	\$14,528
Average		13%	(1%)	22%	\$16,023
Median		11%	(1%)	25%	\$10,354

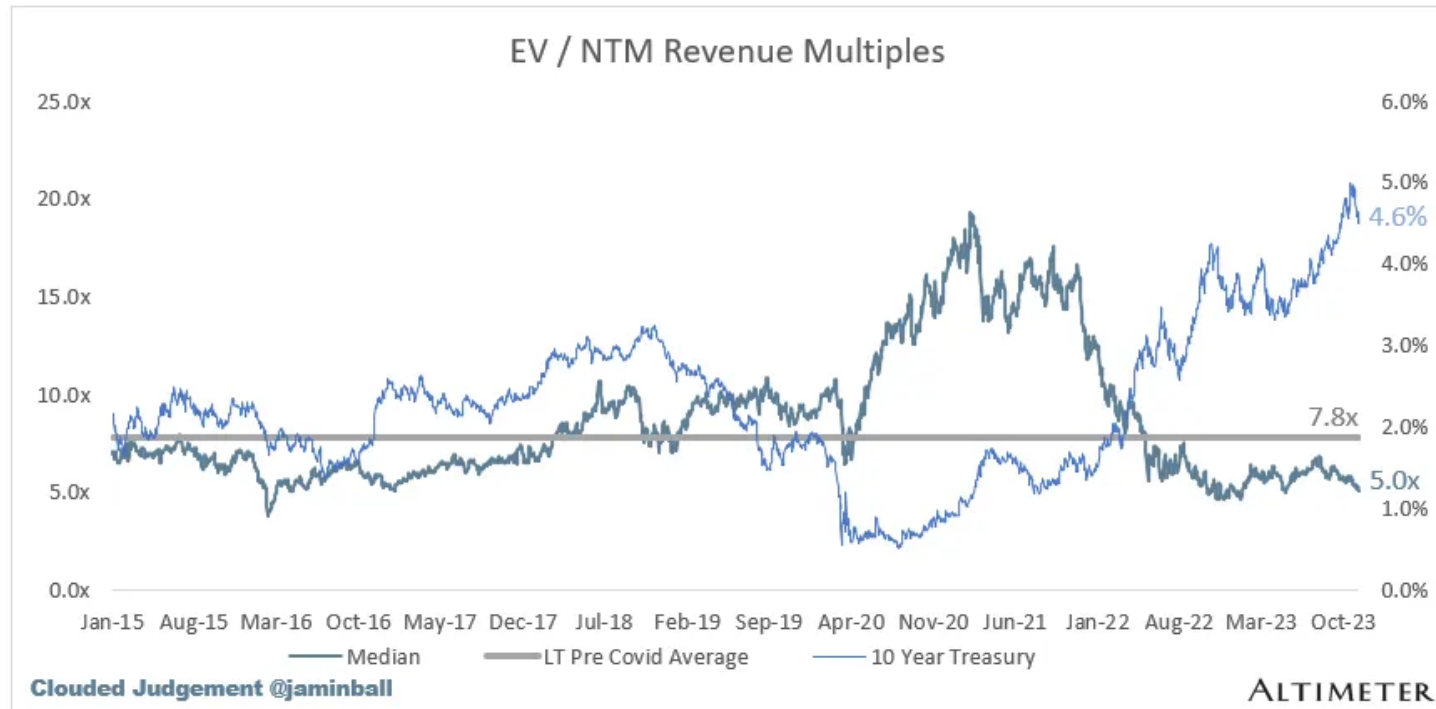
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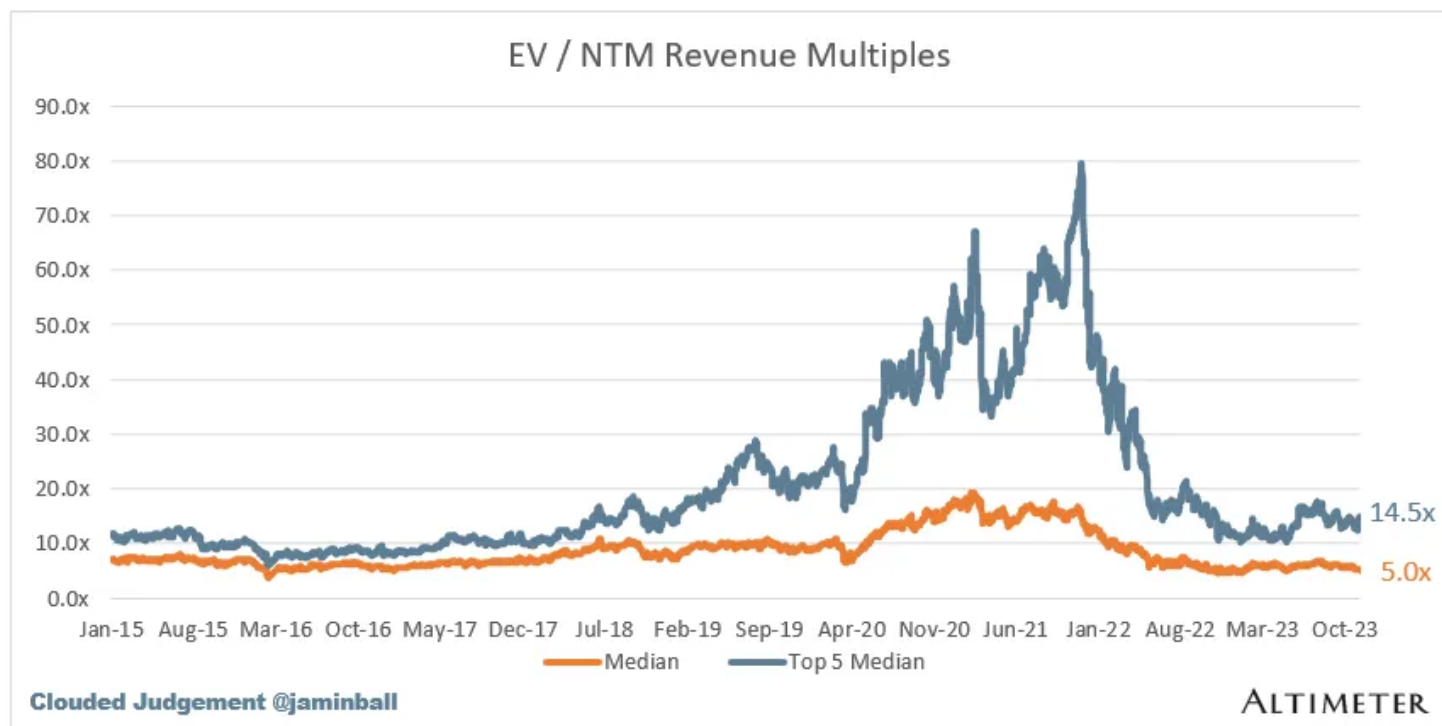
Update on Multiples

SaaS businesses are generally valued on a multiple of their revenue - in most cases the projected revenue for the next 12 months. Revenue multiples are a shorthand valuation framework. Given most software companies are not profitable, or not generating meaningful FCF, it's the only metric to compare the entire industry against. Even a DCF is riddled with long term assumptions. The promise of SaaS is that growth in the early years leads to profits in the mature years. Multiples shown below are calculated by taking the Enterprise Value (market cap + debt - cash) / NTM revenue.

Overall Stats:

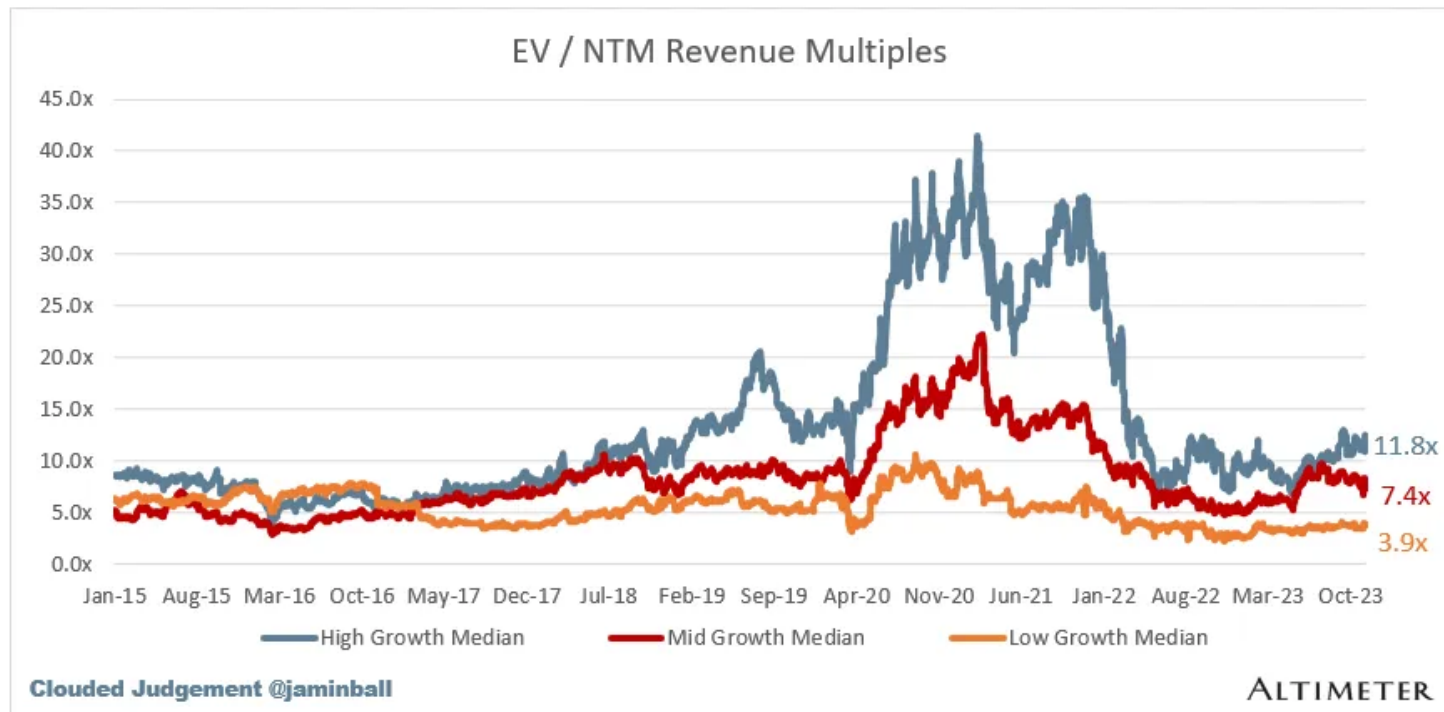
- Overall Median: 5.0x
- Top 5 Median: 14.5x
- 10Y: 4.6%

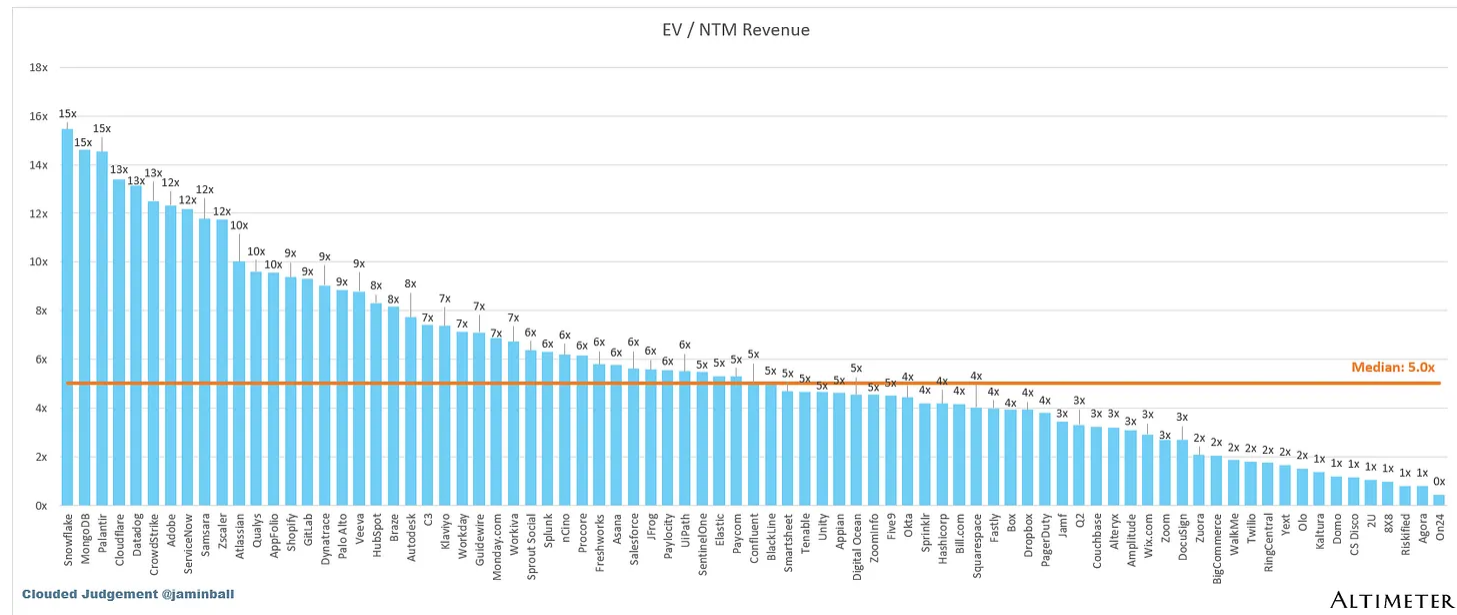




Bucketed by Growth. In the buckets below I consider high growth >30% projected NTM growth, mid growth 15%-30% and low growth <15%

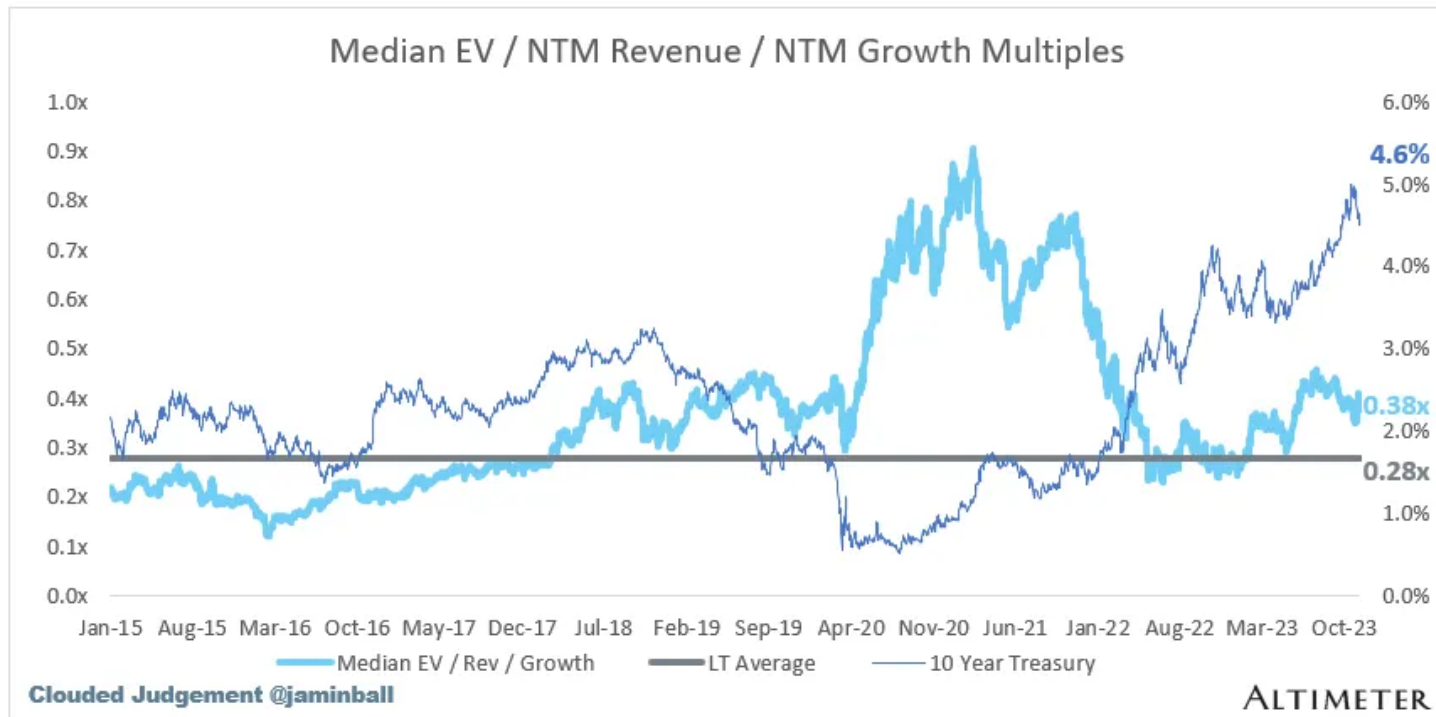
- High Growth Median: 11.8x
- Mid Growth Median: 7.4x
- Low Growth Median: 3.9x

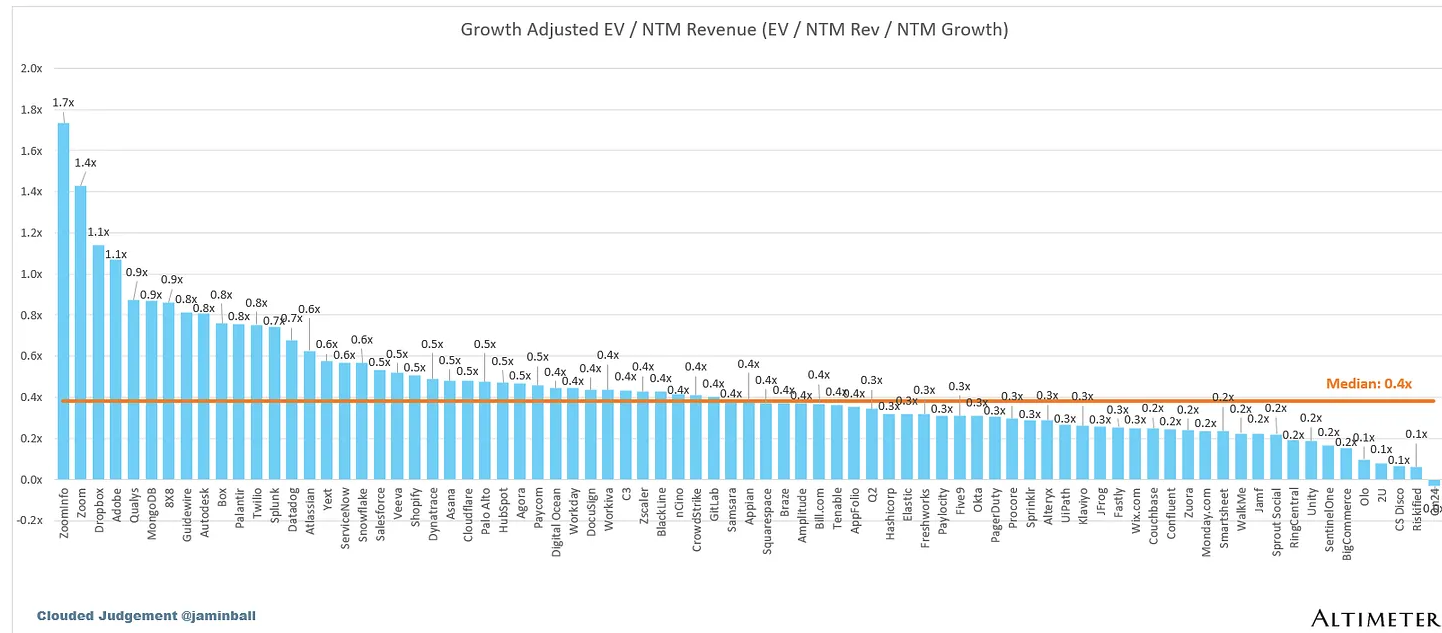




EV / NTM Rev / NTM Growth

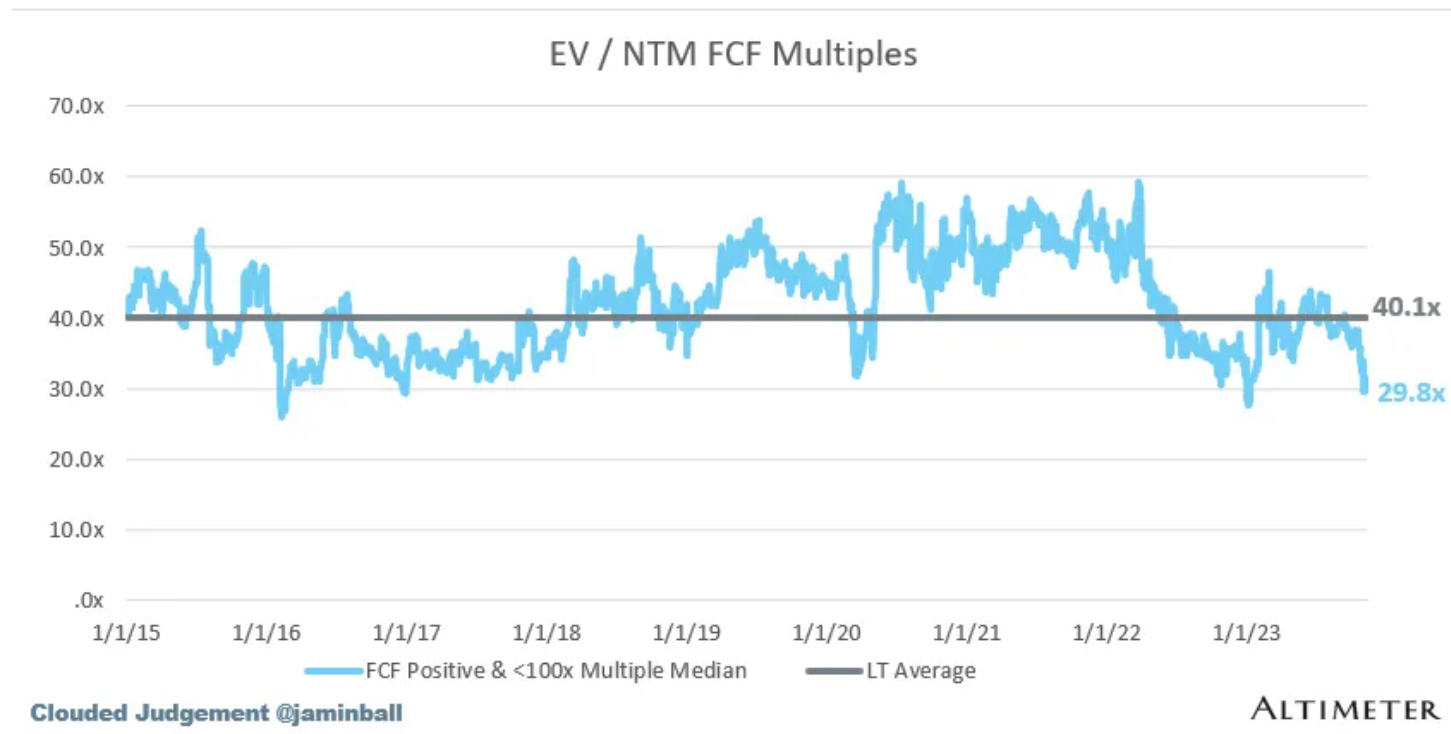
The below chart shows the EV / NTM revenue multiple divided by NTM consensus growth expectations. So a company trading at 20x NTM revenue that is projected to grow 100% would be trading at 0.2x. The goal of this graph is to show how relatively cheap / expensive each stock is relative to their growth expectations



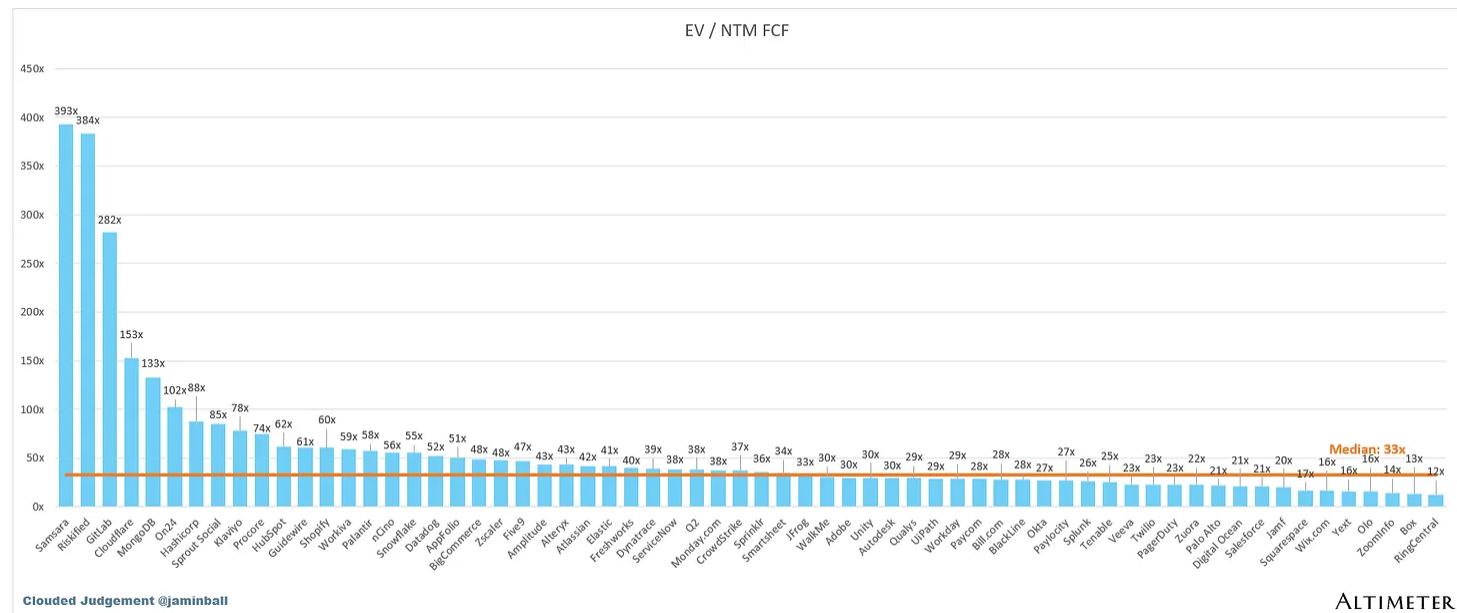


EV / NTM FCF

The line chart shows the median of all companies with a FCF multiple >0x and <100x. I created this subset to show companies where FCF is a relevant valuation metric.

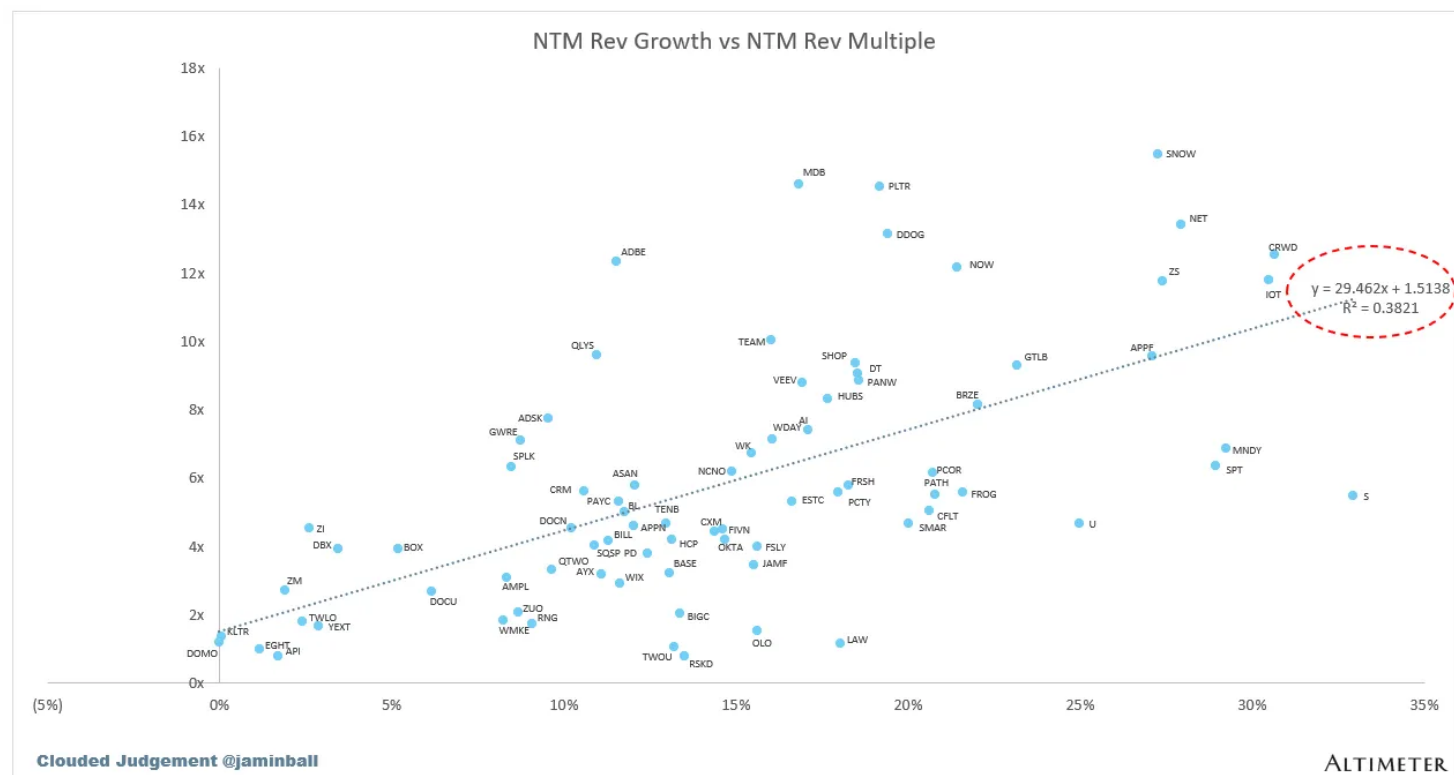


Companies with negative NTM FCF are not listed on the chart



Scatter Plot of EV / NTM Rev Multiple vs NTM Rev Growth

How correlated is growth to valuation multiple?



Operating Metrics

- Median NTM growth rate: 15%
- Median LTM growth rate: 21%
- Median Gross Margin: 75%
- Median Operating Margin (18%)
- Median FCF Margin: 8%
- Median Net Retention: 114%

- Median CAC Payback: 35 months
- Median S&M % Revenue: 42%
- Median R&D % Revenue: 26%
- Median G&A % Revenue: 17%

Comps Output

Rule of 40 shows rev growth + FCF margin (both LTM and NTM for growth + margins). FCF calculated as Cash Flow from Operations - Capital Expenditures

GM Adjusted Payback is calculated as: $(\text{Previous Q S\&M}) / (\text{Net New ARR in Q} \times \text{Gross Margin}) \times 12$. It shows the number of months it takes for a SaaS business to payback their fully burdened CAC on a gross profit basis. Most public companies don't report net new ARR, so I'm taking an implied ARR metric (quarterly subscription revenue $\times 4$). Net new ARR is simply the ARR of the current quarter, minus the ARR of the previous quarter. Companies that do not disclose subscription rev have been left out of the analysis and are listed as NA.

	Valuation		Rev Multiple			FCF Multiple			Rev Growth		LTM	Gross	Operating	FCF Margin			Rule of 40				LTM Operating Expenses % Rev				Net	GM Adj.	Share Price Performance			
	Market Cap	EV	LTM	NTM	2024	LTM	NTM		LTM	NTM	Revenue	Margin	Margin	LTM	NTM	LTM	NTM	S&M	R&D	G&A	SBC	Expansion	Payback	Current	% Week	% 30 Days	YTD			
Snowflake	\$51,549	\$48,105	19.7x	15.5x	13.4x	77x	55x	49%	27%		\$2,444	66%	(41%)	25%	26%	75%	53%	52%	43%	13%	43%	142%	29 Months	\$156	10%	(4%)	9%			
MongoDB	\$26,063	\$25,265	17.1x	14.6x	12.9x	551x	133x	37%	17%		\$1,487	74%	(18%)	3%	10%	40%	27%	50%	31%	11%	28%	120%	13 Months	\$365	11%	2%	86%			
Palantir	\$39,755	\$36,790	17.3x	14.5x	13.9x	78x	58x	16%	19%		\$2,125	80%	2%	22%	25%	38%	44%	35%	18%	26%	22%	NA	NA	\$18	2%	3%	185%			
Cloudflare	\$20,878	\$20,723	17.1x	13.4x	12.6x	202x	153x	35%	28%		\$1,209	76%	(16%)	8%	9%	44%	37%	47%	28%	17%	21%	116%	21 Months	\$62	10%	(5%)	38%			
Datadog	\$32,931	\$31,477	15.7x	13.1x	12.4x	64x	52x	31%	19%		\$2,008	80%	(5%)	25%	25%	56%	44%	30%	46%	9%	23%	120%	14 Months	\$100	26%	9%	36%			
CrowdStrike	\$45,551	\$43,206	16.4x	12.5x	11.1x	54x	37x	44%	31%		\$2,642	74%	(6%)	30%	31%	74%	62%	40%	27%	13%	22%	120%	23 Months	\$191	4%	4%	81%			
Adobe	\$263,045	\$259,625	13.7x	12.3x	11.9x	34x	30x	10%	12%		\$18,886	88%	34%	40%	41%	50%	53%	28%	18%	7%	9%	NA	NA	\$578	3%	8%	72%			
ServiceNow	\$127,051	\$125,244	14.8x	12.2x	11.6x	53x	38x	22%	21%		\$8,474	79%	8%	28%	32%	51%	53%	37%	24%	10%	18%	NA	24 Months	\$620	3%	11%	60%			
Samsara	\$12,603	\$11,985	15.4x	11.8x	10.5x	NM	393x	46%	31%		\$780	72%	(34%)	(3%)	3%	43%	33%	55%	29%	23%	26%	115%	26 Months	\$24	4%	(6%)	90%			
Zscaler	\$25,122	\$24,232	15.0x	11.8x	10.5x	73x	48x	48%	27%		\$1,617	78%	(14%)	21%	23%	69%	51%	45%	22%	6%	28%	121%	25 Months	\$171	7%	(1%)	53%			
Atlassian	\$44,087	\$43,123	11.6x	10.0x	9.6x	46x	42x	24%	16%		\$3,705	82%	(9%)	25%	24%	49%	40%	22%	53%	16%	27%	NA	5 Months	\$171	(6%)	(17%)	33%			
Qualys	\$6,179	\$5,750	10.6x	9.6x	9.3x	24x	20x	15%	11%		\$541	80%	28%	45%	33%	61%	43%	20%	20%	11%	12%	NA	NA	\$168	10%	3%	50%			
AppFolio	\$7,110	\$6,963	12.2x	9.6x	9.1x	331x	51x	29%	27%		\$573	60%	(8%)	4%	19%	33%	46%	20%	26%	17%	10%	NA	8 Months	\$199	6%	3%	89%			
Shopify	\$77,608	\$73,812	11.1x	9.4x	8.9x	135x	60x	27%	18%		\$6,651	49%	(8%)	8%	15%	35%	34%	18%	28%	9%	10%	NA	NA	\$60	1%	10%	74%			
GitLab	\$6,694	\$5,755	11.5x	9.3x	8.1x	NM	282x	51%	23%		\$502	89%	(43%)	(0%)	3%	51%	26%	68%	37%	27%	29%	124%	27 Months	\$43	4%	(9%)	(5%)			
Dynatrace	\$14,528	\$13,903	10.7x	9.0x	8.7x	42x	39x	25%	19%		\$1,297	81%	9%	25%	23%	50%	42%	38%	20%	12%	14%	114%	37 Months	\$49	8%	1%	29%			
Palo Alto	\$75,401	\$72,234	10.5x	8.8x	8.1x	27x	21x	25%	19%		\$6,893	72%	6%	38%	40%	63%	58%	37%	23%	6%	16%	NA	NA	\$243	(3%)	(6%)	74%			
Veeva	\$26,765	\$22,955	10.3x	8.8x	8.1x	23x	23x	12%	17%		\$2,232	71%	18%	44%	37%	55%	54%	17%	26%	11%	17%	NA	7 Months	\$167	(12%)	(22%)	3%			
HubSpot	\$20,893	\$20,164	9.8x	8.3x	7.9x	95x	62x	26%	18%		\$2,058	83%	(6%)	11%	13%	37%	31%	50%	27%	11%	19%	103%	34 Months	\$415	(2%)	(11%)	44%			
Braze	\$4,487	\$4,067	10.0x	8.2x	7.3x	NM	NM	37%	22%		\$409	68%	(37%)	(7%)	(3%)	30%	19%	55%	27%	23%	21%	120%	20 Months	\$45	5%	(4%)	66%			
Autodesk	\$43,753	\$44,126	8.5x	7.7x	7.3x	20x	30x	10%	10%		\$5,212	90%	19%	42%	25%	52%	35%	34%	26%	11%	13%	105%	NA	\$206	3%	(4%)	10%			
C3	\$3,080	\$2,376	8.7x	7.4x	6.8x	NM	NM	3%	17%		\$274	64%	(100%)	(51%)	(17%)	(48%)	0%	67%	75%	28%	77%	NA	62 Months	\$26	(4%)	(2%)	133%			
Klaviyo	\$6,449	\$6,067	9.5x	7.4x	7.0x	125x	78x	57%	28%		\$585	75%	(4%)	8%	9%	65%	37%	42%	22%	15%	NA	119%	25 Months	\$25	(18%)	(26%)	(17%)			
Workday	\$59,068	\$55,658	8.3x	7.1x	6.6x	36x	29x	18%	16%		\$6,716	74%	(1%)	23%	24%	41%	40%	30%	36%	10%	21%	NA	22 Months	\$225	6%	2%	35%			
Guidewire	\$7,341	\$6,991	7.7x	7.1x	6.7x	333x	61x	11%	9%		\$905	51%	(17%)	2%	11%	14%	20%	21%	28%	19%	16%	NA	NA	\$90	(0%)	(2%)	43%			
Monday.com	\$6,471	\$5,551	8.9x	6.9x	6.1x	43x	38x	52%	29%		\$625	89%	(12%)	21%	17%	73%	46%	63%	23%	14%	16%	110%	27 Months	\$136	6%	(9%)	11%			
Workiva	\$4,702	\$4,709	7.8x	6.7x	6.4x	111x	59x	18%	15%		\$607	75%	(16%)	7%	11%	25%	27%	45%	28%	18%	16%	112%	43 Months	\$87	(0%)	(14%)	4%			
Sprout Social	\$2,642	\$2,540	8.2x	6.4x	6.0x	218x	85x	30%	29%		\$310	77%	(21%)	4%	8%	34%	36%	50%	24%	24%	20%	NA	56 Months	\$47	11%	(7%)	(16%)			
Spunk	\$24,699	\$26,321	6.8x	6.3x	6.0x	33x	26x	26%	8%		\$3,843	79%	(1%)	21%	23%	47%	32%	43%	25%	11%	20%	116%	7 Months	\$147	(0%)	0%	70%			
nCino	\$3,199	\$3,168	7.1x	6.2x	5.7x	559x	56x	31%	15%		\$445	59%	(15%)	1%	11%	33%	26%	29%	27%	18%	11%	NA	60 Months	\$28	(2%)	(5%)	7%			
Procore	\$7,175	\$6,633	7.4x	6.2x	5.9x	223x	74x	34%	21%		\$892	81%	(28%)	3%	8%	38%	29%	55%	34%	21%	20%	NA	24 Months	\$50	(1%)	(27%)	6%			
Freshworks	\$5,035	\$3,901	6.8x	5.8x	5.6x	73x	40x	21%	18%		\$569	82%	(33%)	9%	15%	30%	33%	63%	24%	28%	38%	106%	37 Months	\$17	(7%)	(9%)	16%			

	Valuation		Rev Multiple			FCF Multiple			Rev Growth			LTM	Gross	Operating	FCF Margin			Rule of 40				LTM Operating Expenses % Rev				Net	GM Adj.	Share Price Performance			
	Market Cap	EV	LTM	NTM	2024	LTM	NTM	LTM	NTM	Revenue	LTM	Margin	Margin	LTM	NTM	LTM	NTM	LTM	NTM	S&M	R&D	G&A	SBC	Expansion	Payback	Current	% Week	% 30 Days	YTD		
Asana	\$4,185	\$3,932	6.5x	5.8x	5.4x	NM	NM	30%	12%	\$607	90%	(56%)	(14%)	(4%)	16%	8%	69%	52%	24%	33%	105%	31 Months	\$19	(1%)	6%	38%					
Salesforce	\$204,340	\$205,792	6.2x	5.6x	5.3x	27x	21x	13%	11%	\$33,071	75%	13%	23%	27%	36%	37%	39%	15%	8%	9%	NA	34 Months	\$210	1%	2%	58%					
JFrog	\$2,712	\$2,234	6.8x	5.6x	5.3x	48x	33x	25%	22%	\$329	78%	(26%)	14%	17%	39%	38%	44%	41%	18%	26%	119%	32 Months	\$26	(2%)	7%	21%					
Paylocity	\$8,376	\$8,140	6.6x	5.6x	5.4x	31x	27x	34%	18%	\$1,239	69%	15%	21%	21%	55%	39%	25%	14%	15%	12%	NA	NA	\$149	(13%)	(26%)	(23%)					
UiPath	\$9,402	\$7,636	6.7x	5.5x	5.1x	45x	29x	15%	21%	\$1,148	84%	(21%)	15%	18%	30%	39%	58%	27%	20%	32%	121%	39 Months	\$17	0%	(3%)	31%					
SentinelOne	\$4,521	\$3,814	7.3x	5.5x	4.8x	NM	NM	73%	33%	\$524	68%	(79%)	(26%)	(3%)	47%	30%	70%	41%	36%	38%	115%	31 Months	\$15	1%	(10%)	5%					
Elastic	\$7,250	\$6,885	6.2x	5.3x	4.9x	86x	41x	21%	17%	\$1,113	73%	(15%)	7%	12%	28%	29%	46%	28%	13%	19%	113%	36 Months	\$74	4%	(9%)	43%					
Paycom	\$10,104	\$9,649	5.9x	5.3x	5.2x	32x	28x	26%	12%	\$1,630	84%	28%	19%	19%	45%	30%	25%	11%	17%	7%	NA	NA	\$168	3%	(39%)	(46%)					
Confluent	\$5,200	\$4,442	6.1x	5.0x	4.7x	NM	727x	36%	21%	\$732	69%	(65%)	(22%)	1%	14%	21%	69%	16%	46%	19%	46%	130%	42 Months	\$17	4%	(46%)	(24%)				
BlackLine	\$3,186	\$3,213	5.6x	5.0x	4.9x	38x	28x	15%	12%	\$574	75%	3%	15%	18%	30%	30%	44%	19%	9%	14%	105%	36 Months	\$52	2%	(6%)	(23%)					
Smartsheet	\$5,361	\$4,869	5.6x	4.7x	4.2x	55x	34x	32%	20%	\$867	79%	(18%)	10%	13%	42%	33%	56%	26%	15%	22%	121%	28 Months	\$40	2%	(8%)	1%					
Tenable	\$4,342	\$4,064	5.3x	4.7x	4.5x	34x	25x	19%	13%	\$770	77%	(8%)	16%	19%	35%	32%	50%	20%	14%	18%	NA	58 Months	\$37	5%	(17%)	(3%)					
Unity	\$9,592	\$11,044	6.1x	4.7x	4.2x	NM	30x	48%	25%	\$1,808	68%	(53%)	(7%)	15%	41%	40%	40%	59%	22%	36%	106%	NA	\$25	(3%)	(16%)	(12%)					
Appian	\$2,608	\$2,717	5.2x	4.6x	4.4x	NM	18x	18%	12%	\$526	73%	(25%)	(24%)	(6%)	(6%)	4%	47%	30%	21%	8%	117%	25 Months	\$36	(15%)	(17%)	9%					
Digital Ocean	\$2,108	\$3,383	5.0x	4.5x	4.4x	30x	21x	27%	10%	\$675	60%	2%	17%	22%	43%	32%	12%	22%	25%	14%	95%	31 Months	\$25	15%	1%	(4%)					
ZoomInfo	\$4,907	\$5,713	4.7x	4.5x	4.5x	14x	14x	20%	3%	\$1,225	85%	21%	33%	33%	53%	36%	34%	16%	13%	15%	NA	69 Months	\$13	(1%)	(27%)	(58%)					
Five9	\$4,444	\$4,539	5.2x	4.5x	4.3x	50x	47x	18%	15%	\$880	53%	(11%)	10%	10%	29%	24%	33%	18%	13%	23%	NA	64 Months	\$61	8%	(6%)	(10%)					
Okta	\$10,877	\$10,466	5.1x	4.4x	4.1x	42x	27x	29%	14%	\$2,065	72%	(31%)	12%	16%	41%	30%	52%	31%	21%	33%	115%	27 Months	\$66	(2%)	(22%)	(3%)					
Sprinkr	\$3,846	\$3,250	4.8x	4.2x	3.9x	127x	36x	21%	15%	\$674	75%	(1%)	4%	11%	25%	26%	49%	13%	14%	8%	120%	61 Months	\$14	2%	(1%)	74%					
Hashicorp	\$3,800	\$2,571	4.7x	4.2x	3.8x	NM	88x	38%	13%	\$542	81%	(54%)	(10%)	5%	28%	10%	70%	40%	25%	31%	124%	62 Months	\$20	2%	(12%)	(28%)					
Bill.com	\$5,980	\$5,245	4.6x	4.2x	4.0x	27x	28x	50%	11%	\$1,134	82%	(23%)	17%	15%	67%	26%	45%	29%	26%	27%	111%	77 Months	\$56	(37%)	(51%)	(49%)					
Squarespace	\$3,862	\$4,339	4.5x	4.0x	3.9x	22x	17x	15%	11%	\$970	82%	10%	20%	24%	35%	35%	33%	24%	14%	11%	NA	NA	\$28	(1%)	(7%)	28%					
Fastly	\$2,144	\$2,248	4.6x	4.0x	3.8x	NM	19x	16%	14%	\$468	52%	(41%)	(10%)	(5%)	8%	11%	39%	31%	23%	21%	114%	55 Months	\$16	(0%)	(0%)	100%					
Box	\$3,644	\$4,225	4.1x	3.9x	3.8x	14x	13x	8%	5%	\$1,020	75%	5%	29%	29%	38%	35%	33%	24%	13%	19%	103%	37 Months	\$25	1%	(1%)	(19%)					
Dropbox	\$9,076	\$10,028	4.1x	3.9x	3.9x	13x	11x	8%	3%	\$2,466	81%	14%	30%	35%	38%	39%	18%	39%	19%	14%	NA	72 Months	\$26	(1%)	(6%)	17%					
PagerDuty	\$1,932	\$1,730	4.3x	3.8x	3.5x	40x	23x	25%	12%	\$406	82%	(25%)	11%	16%	35%	29%	48%	34%	25%	29%	114%	37 Months	\$21	1%	(3%)	(22%)					
Janif	\$2,018	\$2,157	4.0x	3.5x	3.3x	40x	20x	19%	16%	\$540	77%	(22%)	10%	18%	30%	33%	42%	24%	20%	17%	108%	45 Months	\$16	(1%)	(7%)	(25%)					
Q2	\$1,959	\$2,214	3.6x	3.3x	3.2x	46x	38x	11%	10%	\$609	47%	(16%)	8%	9%	18%	18%	18%	23%	17%	12%	NA	360 Months	\$33	1%	2%	24%					
Coachbase	\$759	\$600	3.7x	3.2x	3.0x	NM	17x	13%	13%	\$164	86%	(47%)	(23%)	(10%)	(6%)	13%	74%	37%	23%	21%	115%	48 Months	\$16	13%	(6%)	22%					
Alexfy	\$2,597	\$3,248	3.5x	3.2x	3.0x	NM	43x	26%	11%	\$920	86%	(27%)	(7%)	7%	19%	18%	65%	25%	22%	27%	119%	77 Months	\$36	19%	(2%)	(29%)					
Amplitude	\$1,220	\$901	3.3x	3.1x	3.0x	257x	43x	22%	8%	\$270	69%	(39%)	1%	7%	23%	15%	56%	34%	21%	31%	99%	122 Months	\$10	0%	(7%)	(15%)					
Wix.com	\$4,953	\$4,922	3.3x	2.9x	2.6x	67x	16x	11%	12%	\$1,513	65%	(6%)	5%	18%	16%	29%	28%	32%	11%	15%	NA	NA	\$87	6%	(1%)	13%					
Zoom	\$18,253	\$12,310	2.8x	2.7x	2.6x	11x	9x	4%	2%	\$4,454	75%	3%	26%	30%	30%	32%	39%	19%	15%	31%	109%	50 Months	\$61	(1%)	(10%)	(10%)					

	Valuation		Rev Multiple			FCF Multiple			Rev Growth			LTM	Gross Margin	Operating Margin	FCF Margin			Rule of 40			LTM Operating Expenses % Rev				Net Expansion	GM Adj. Payback	Current	Share Price Performance																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																													
	Market Cap	EV	LTM	NTM	2024	LTM	NTM	LTM	NTM	Revenue	Margin				Margin	LTM	NTM	LTM	NTM	S&M	R&D	G&A	SBC	% 30 Months				% 74 Months	% 107%	% 106%	% 183 Months	% 99%	% 101 Months	% 56	% 7%	% 4%	% 14%	% 1%	% 7%	% 16%	% 1%	% 5%	% 7%	% 8%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%	% 1%

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Thank you for your interesting thoughts regarding the monetization layers of AI. Really inspiring!

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Good stuff as always. Your point about the reduced costs per token is interesting and hopefully allows companies to experiment with AI more in their workflows

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