

## December 22, 2020

## Key Takeaway

**Software Delivers Massive Outperformance, But Public Market Software Valuations Are Rich.** The IGV has outperformed the S&P 500 by 43% in 2020 driven by multiple appreciation and secular tailwinds favoring the space during the pandemic. (Chart 1). **However, the IGV trades at ~2x rel. prem. on a NTM P/E basis relative to the S&P 500. This level is roughly 3 st. devs. away from the mean relative NTM P/E valuation from '01 to '20 (Chart 2).** Certain VC investors in the private market like Joe Lonsdale, PLTR co-founder, sounded the alarm in late Oct. noting public vals. seem higher than private vals. in software. We believe the higher multiples make sense since behaviors have shifted permanently towards a digital economy and WFA environments. As such, we believe multiples will remain elevated in '21. **We believe the next leg of growth should come from fundamentals. Our checks indicate fundamentals are strong for the space.**

**Rising Tide Lifts All Boats, Including Large, Mid & Small Names.** Overall avg. multiples for the entire software space have expanded 67% in 2020 compared to 26% in 2019 and 7% in 2018. Large cap multiples have expanded 67%, mid cap multiples expanded 73%, and small cap expanded 50% (Charts 3-6). **We expect the next leg of growth to come from fundamentals.**

**Infra and Security Outperform Apps in 2020.** In 2018, apps was ahead of infra and security trading at 6.8x NTM revs. vs. 5.7x for infra and 5.8x for Security. High growth IPOs such as CRWD, NET, and DDOG have changed that. In 2020, Security is ahead of both apps and infra trading at 16.9x NTM revs. vs. 14.8x for infra and 11.3x for apps (Chart 7).

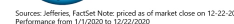
**What Do Four High Growth Stocks Tell Us?** We decided to analyze four high growth stocks within our coverage: DDOG, TEAM, NET, and CRWD. All have handily beat the IGV. DDOG's stock appreciated 194% and the multiple expanded by 105%. TEAM's stock appreciated 105% and the multiple expanded by 78%. NET's stock appreciated 407% and the multiple expanded by 288%. CRWD's stock appreciated 351% and the multiple expanded by 201% (Charts 8-11). **Bottom line, these are the best fundamental stories within our coverage and they have all outperformed in 2020.**

### Top Picks:

Large Cap: MSFT, ADBE, CRM, INTU

Mid Cap: SPLK, PLTR, PANW

Small Cap: VRNS, SAIL, ASAN



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^Prior trading day closing price unless otherwise noted.

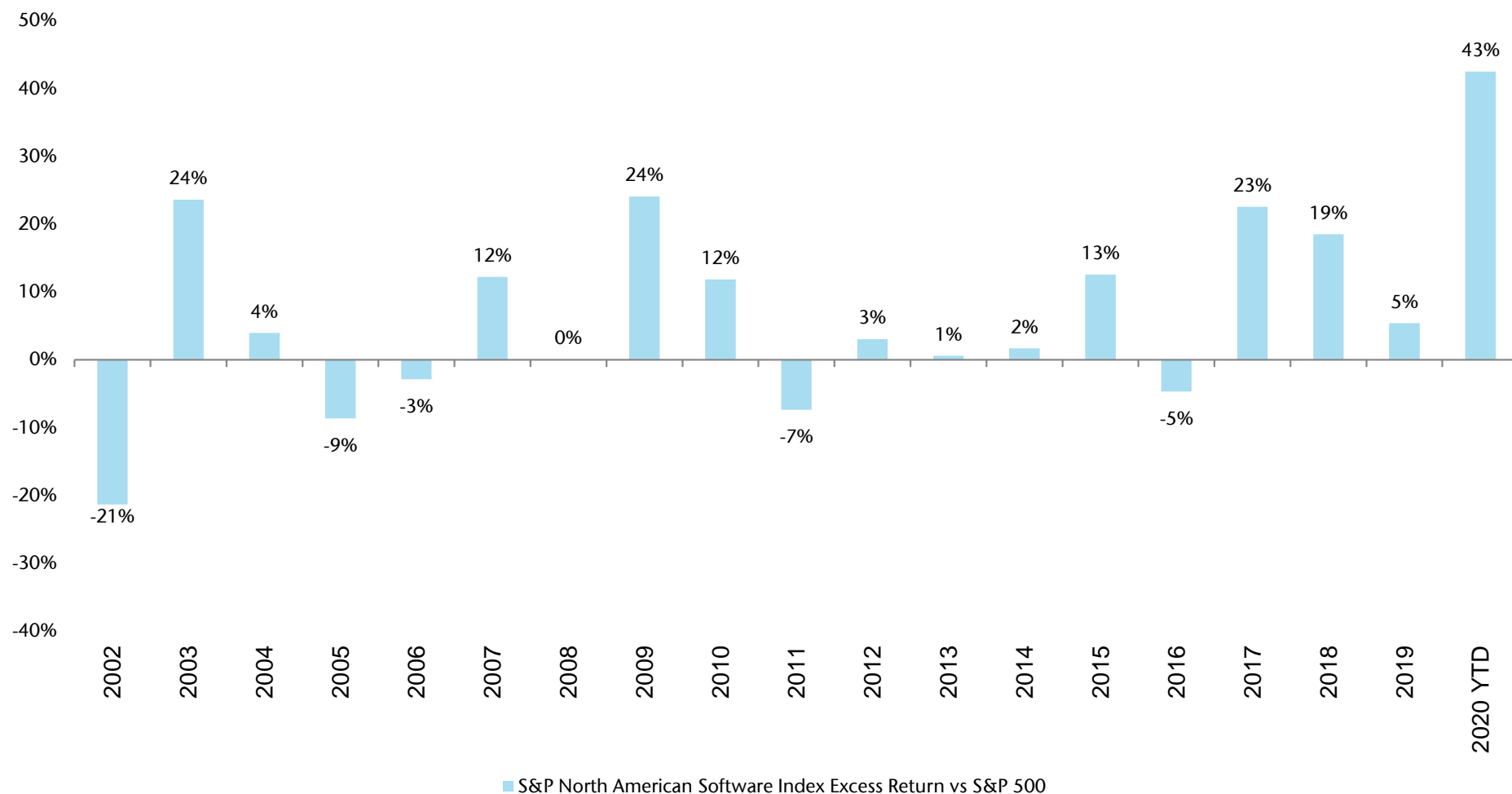


See below for Alien Charts and Comp Sheets from the start of this yr. and today.

# Jefferies

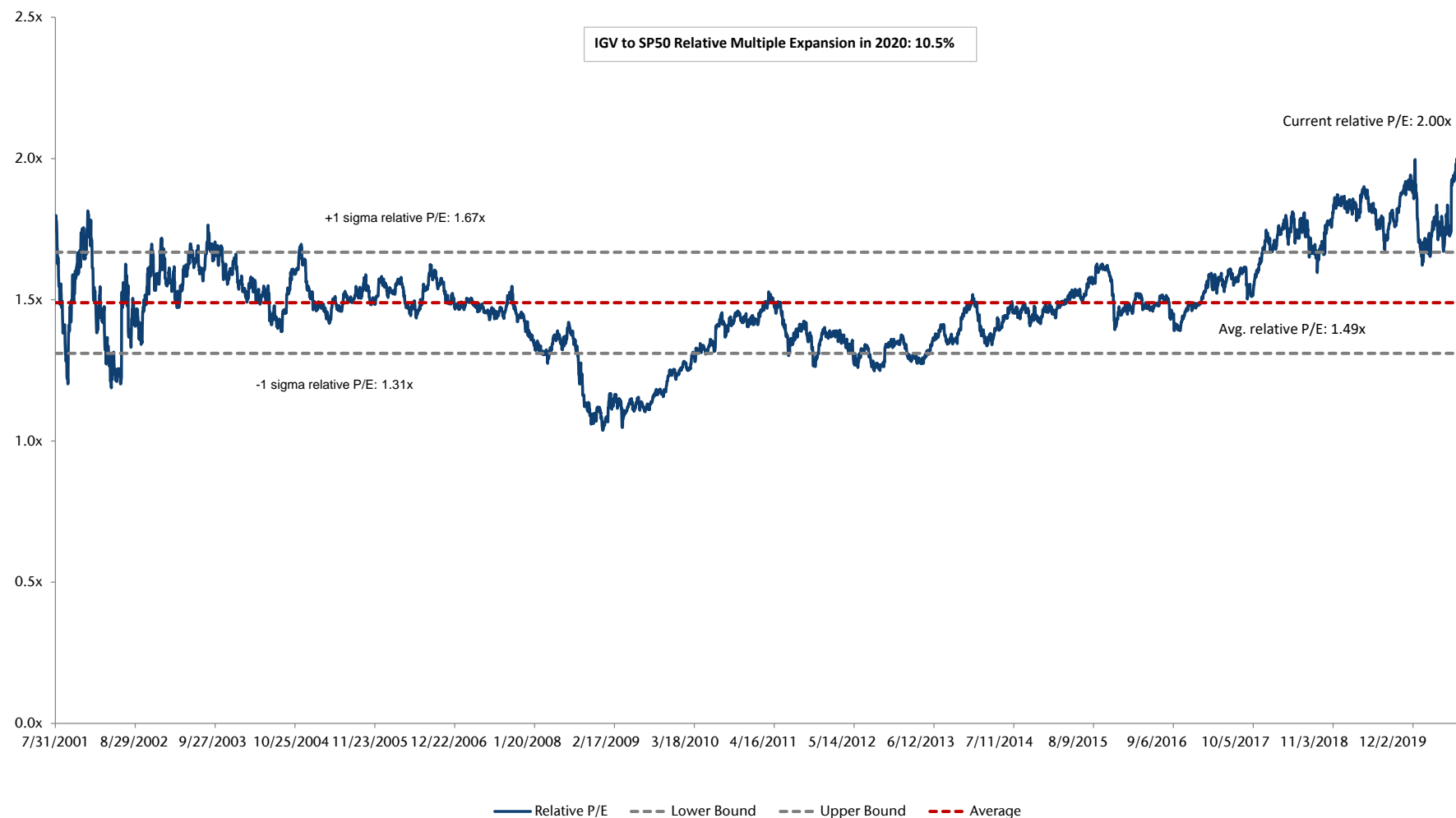
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Chart 1 - IGV Outperformance Relative to S&P 500



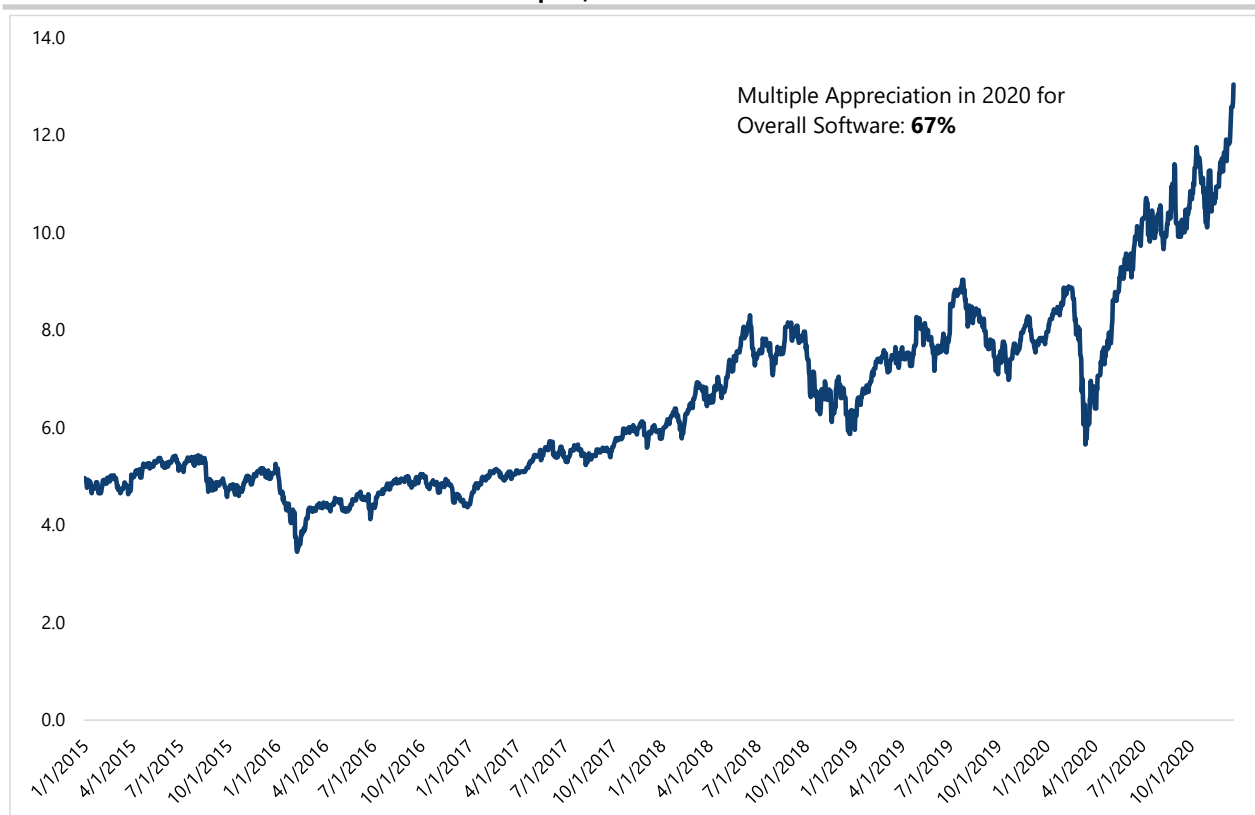
Source: Jefferies, FactSet; Priced as of market close on 12/22/20.

Chart 2 - IGV to S&P 500 Relative P/E from 2001 to 2020



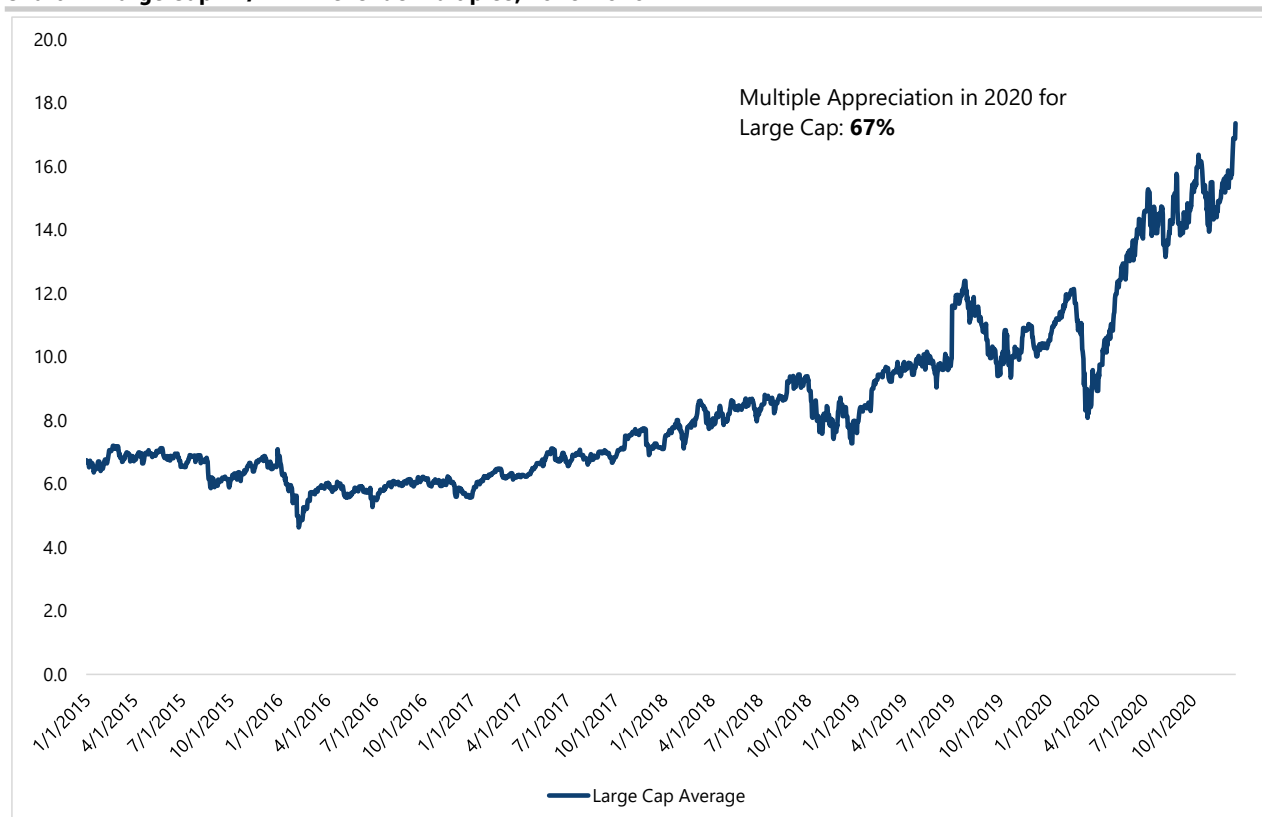
Source: Jefferies, FactSet; Priced as of 12/22/2020

Chart 3 - Overall Software EV/NTM Revenue Multiples, 2015-2020



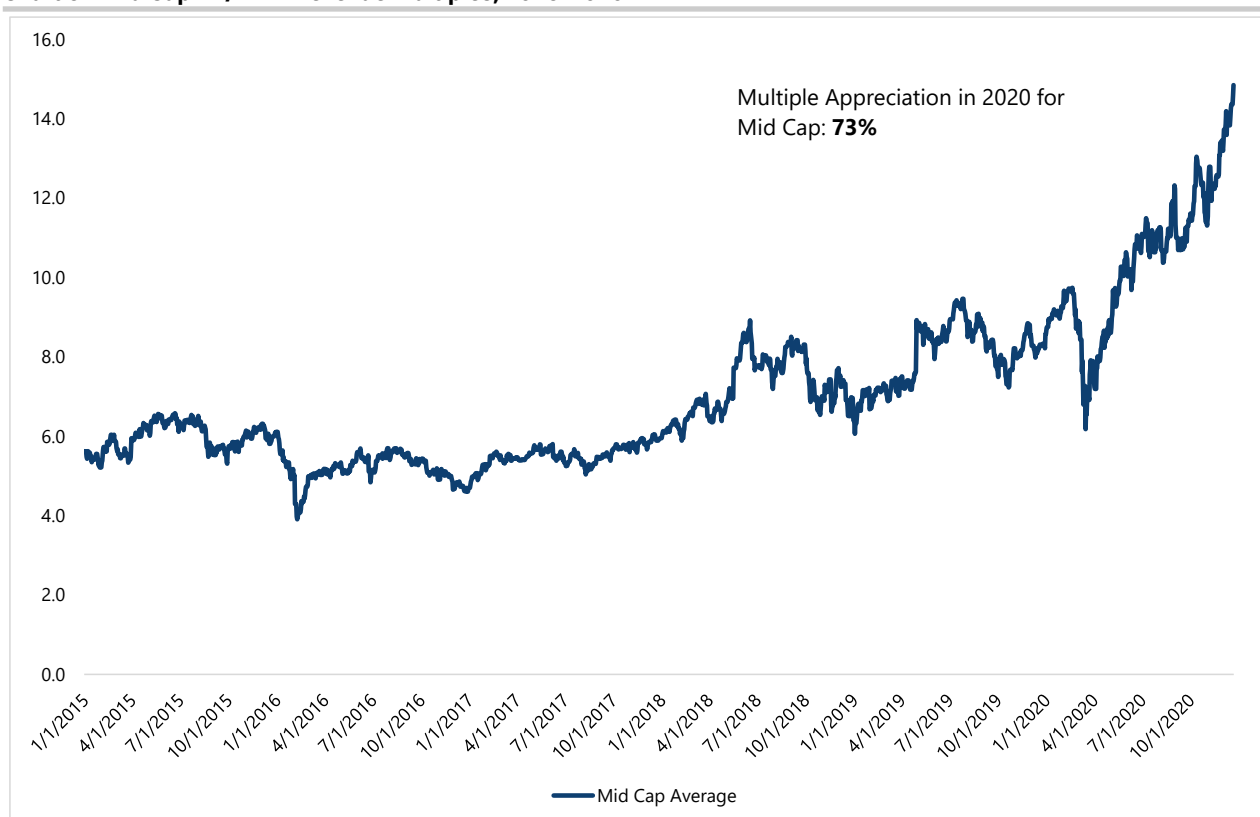
Source: Jefferies, FactSet; Priced as of market close on December 22, 2020. Includes an average of all companies in the large, mid, and small caps below.

Chart 4 - Large Cap EV/NTM Revenue Multiples, 2015-2020



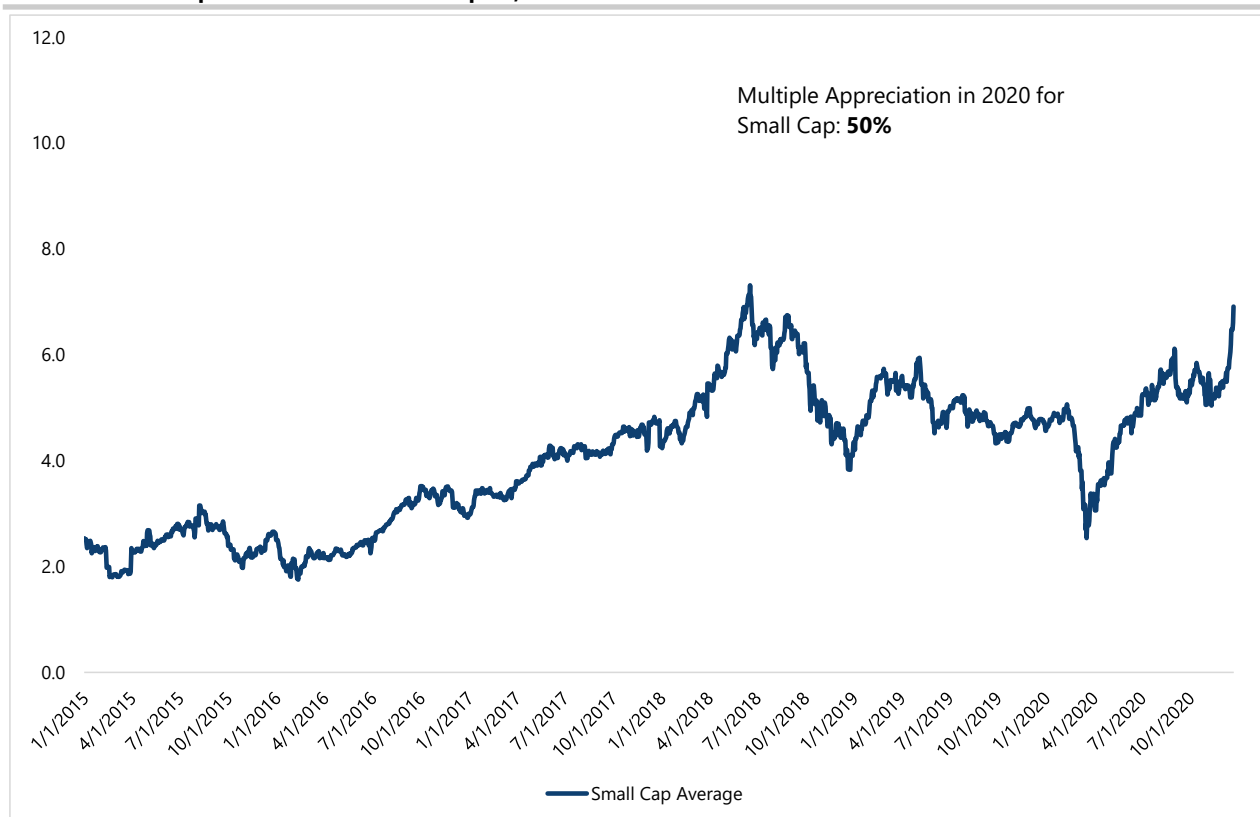
Source: Jefferies, FactSet; Priced as of market close on December 22, 2020. Large Cap: MSFT, CRM, ADBE, TEAM, VMW, ORCL, DDOG, CRWD, NOW, ADSK, INTU, WDAY, and PANW

Chart 5 - Mid Cap EV/NTM Revenue Multiples, 2015-2020



Source: Jefferies, FactSet; Priced as of market close on December 22, 2020. Mid Cap: SPLK, CHKP, CTXS, NET, ESTC, DT, DBX, PLAN, SMAR, SWI, HUBS, ZEN, and NICE.

Chart 6 - Small Cap EV/NTM Revenue Multiples, 2015-2020



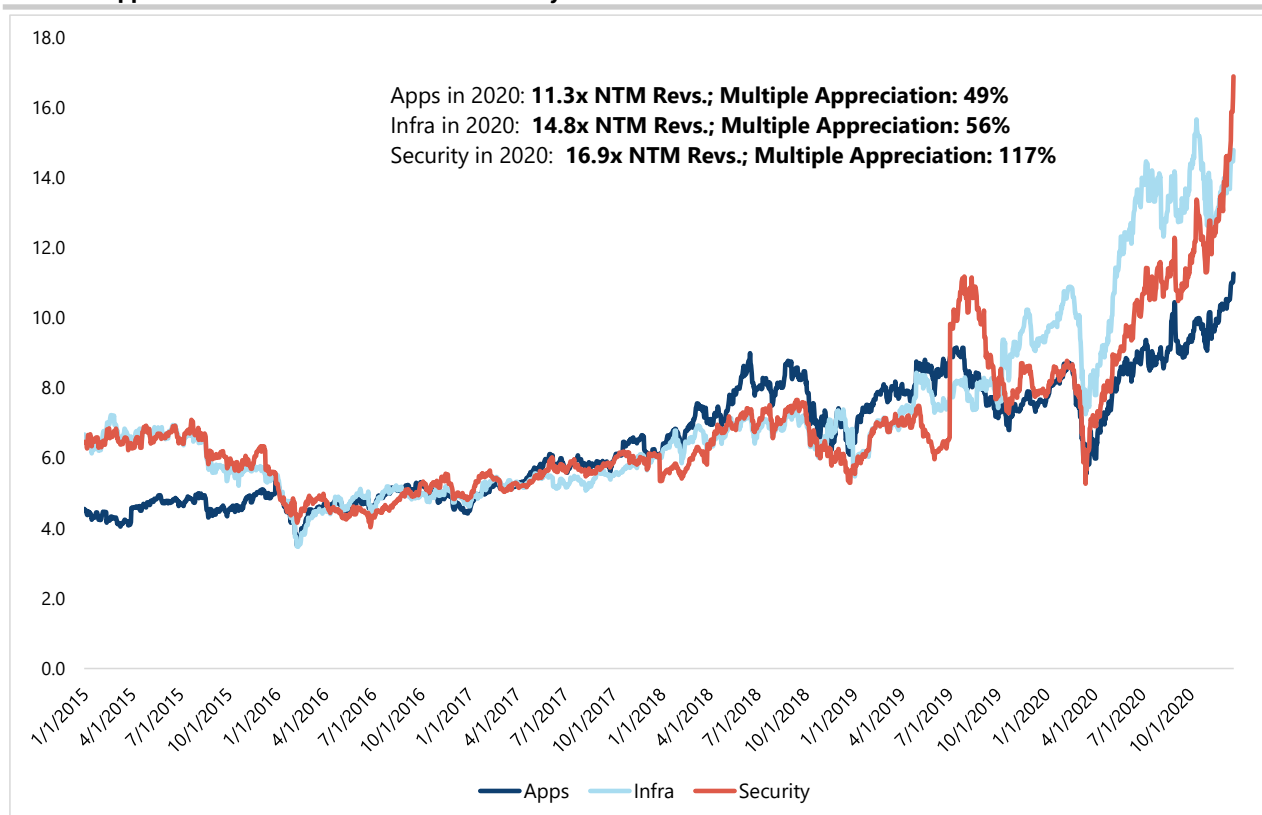
Source: Jefferies, FactSet; Priced as of market close on December 22, 2020. Small Cap: VRNS, SAIL, MIME, TWOU, ZUO, UPLD, TUFN, BOX, VG, and LPSN.



# Jefferies

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Chart 7 - Applications vs. Infrastructure vs. Security Valuations 2015-2020



Source: Jefferies, FactSet; Priced as of December 22, 2020.

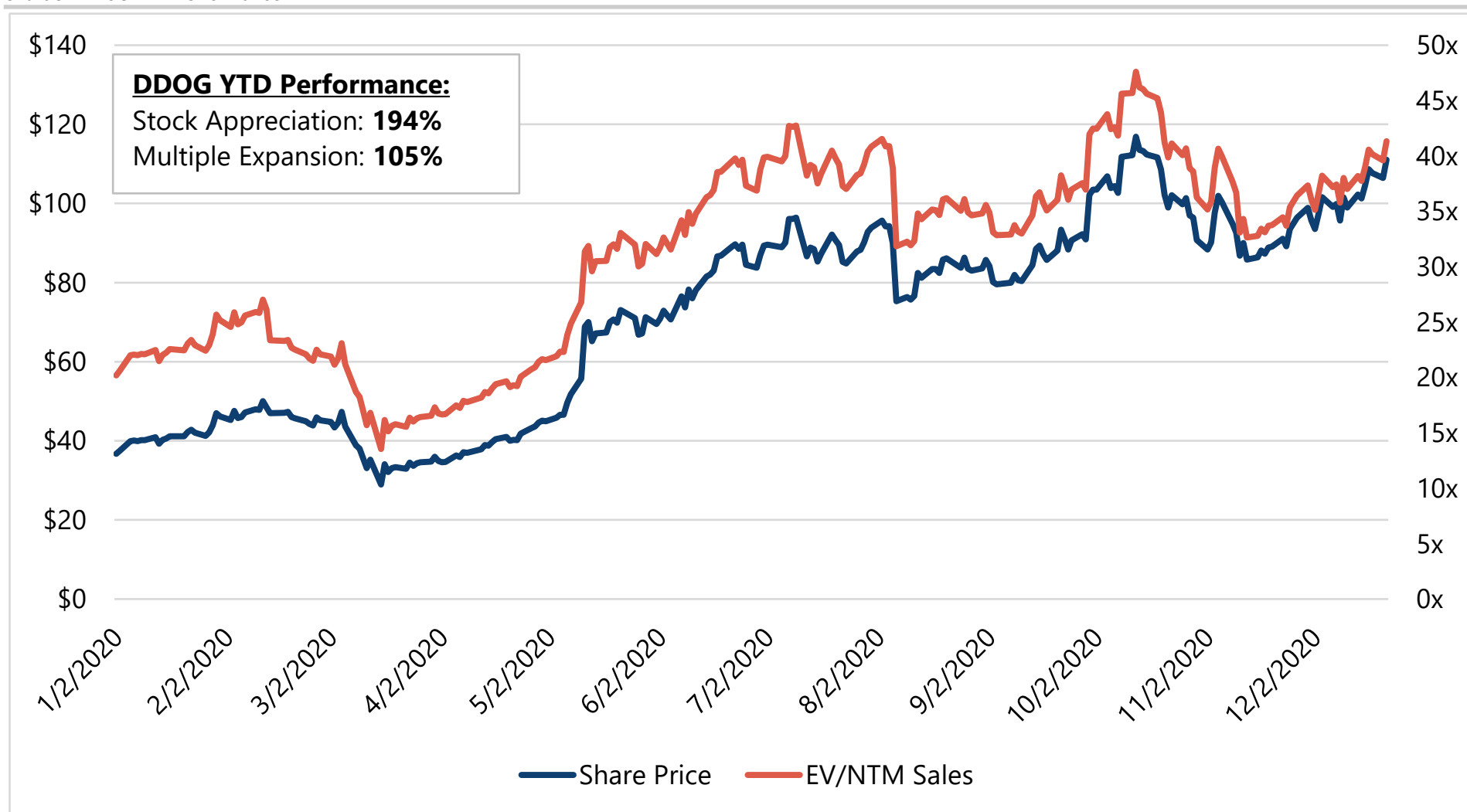
Apps: CRM, ADBE, TEAM, INTU, WDAY, ADSK, DBX, PLAN, SMAR, HUBS, ZEN, NICE, TWOU, ZUO, UPLD, BOX, VG, LPSN.  
 Infra: VMW, DDOG, ORCL, NOW, SPLK, CTXS, ESTC, DT, SWI. Security: MSFT, PANW, CRWD, CHKP, NET, VRNS, SAIL, MIME, TUFN.

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Chart 8 - DDOG YTD Performance



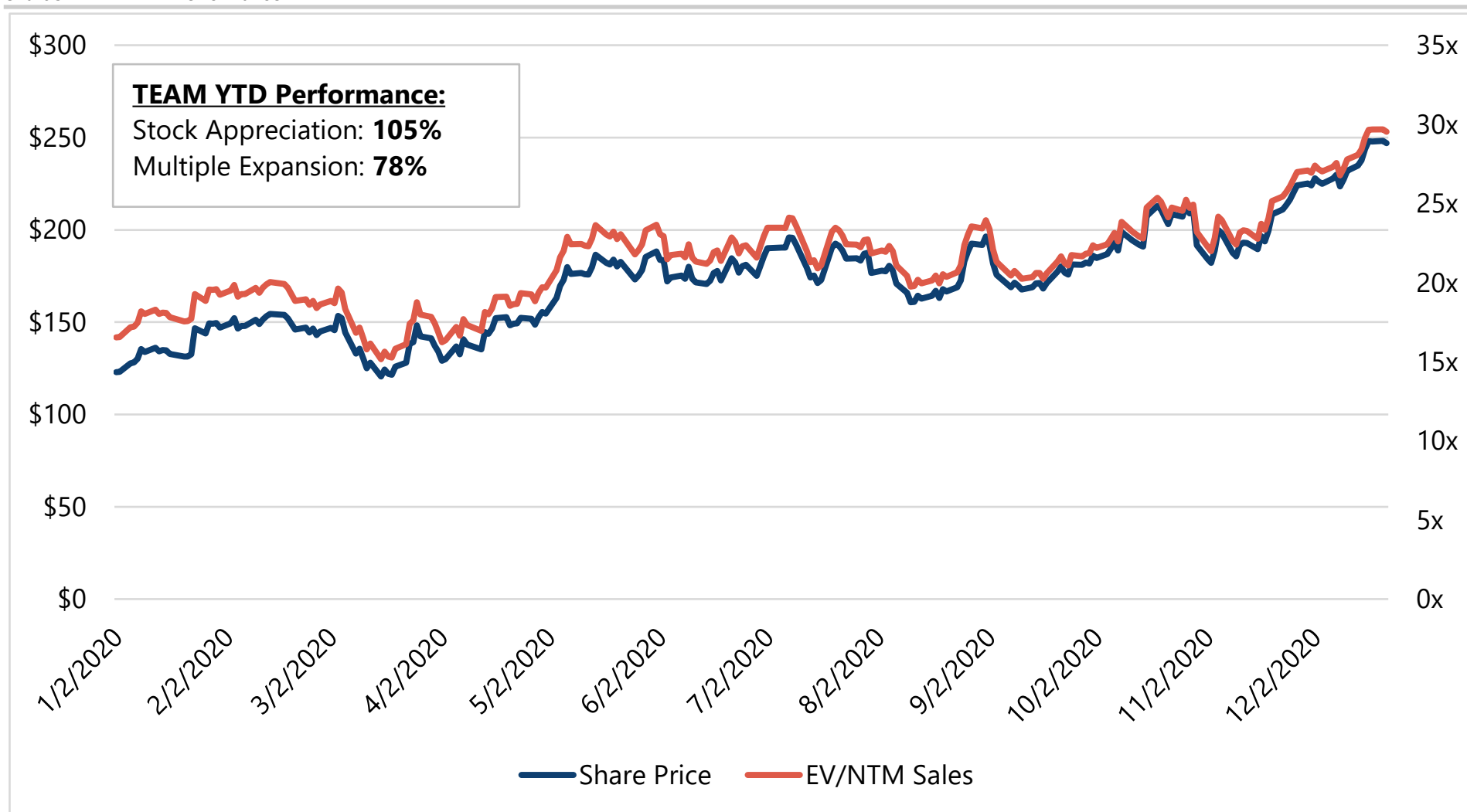
Source: Jefferies, FactSet; Priced as of market close on 12/22/2020

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Chart 9 - TEAM YTD Performance



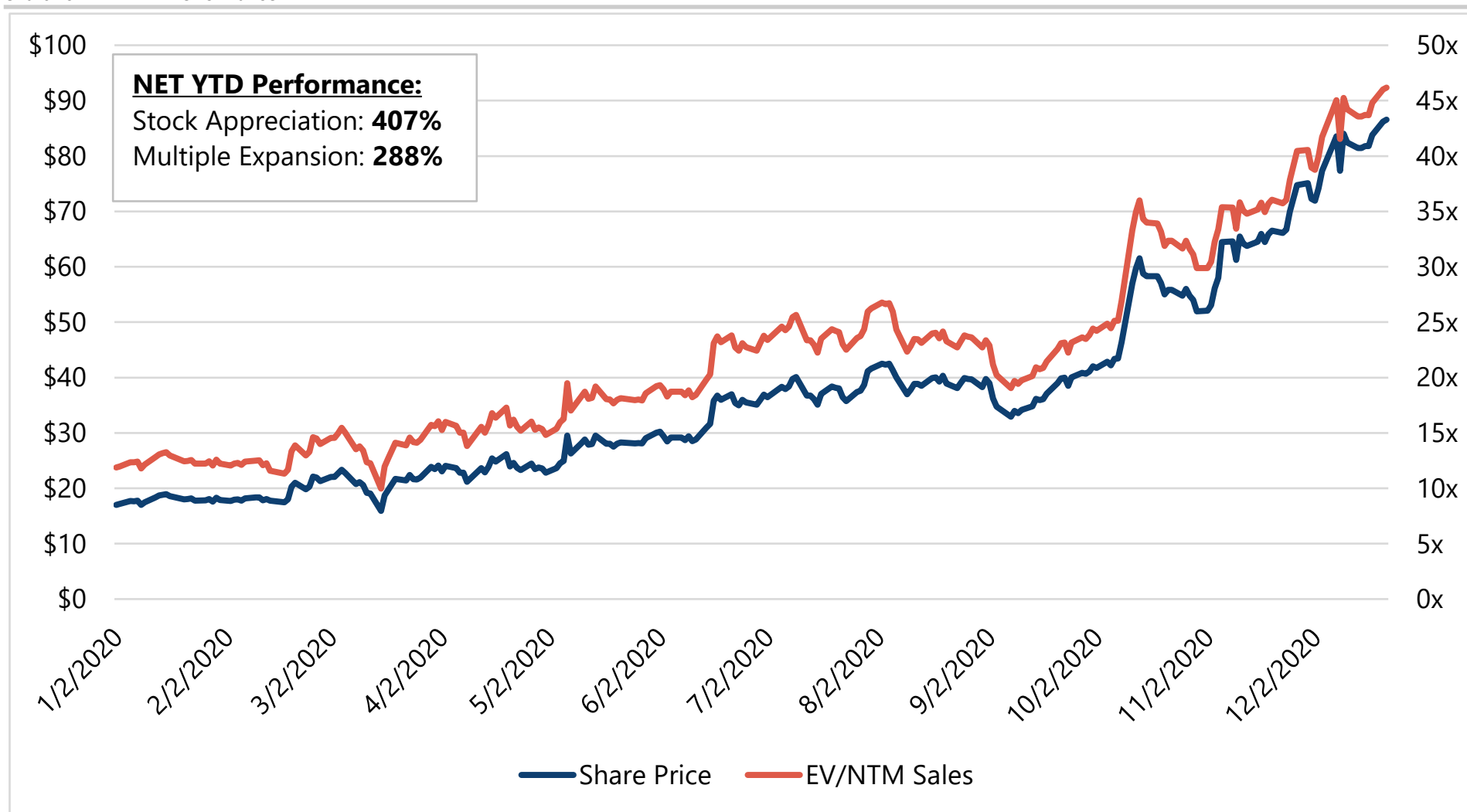
Source: Jefferies, FactSet; Priced as of market close on 12/22/2020

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Chart 10 - NET YTD Performance

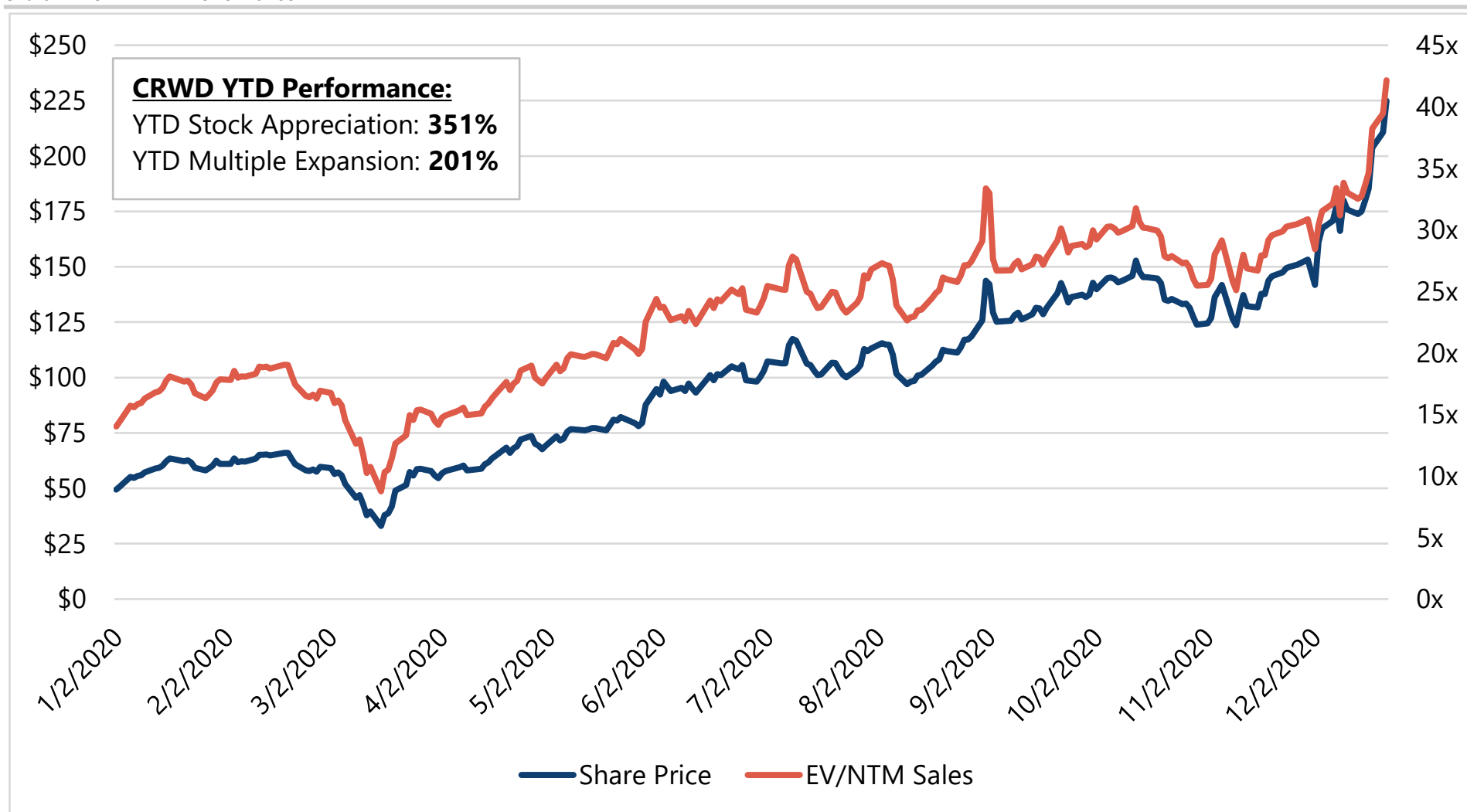


Source: Jefferies, FactSet; Priced as of market close on 12/22/2020

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Chart 11 - CRWD YTD Performance



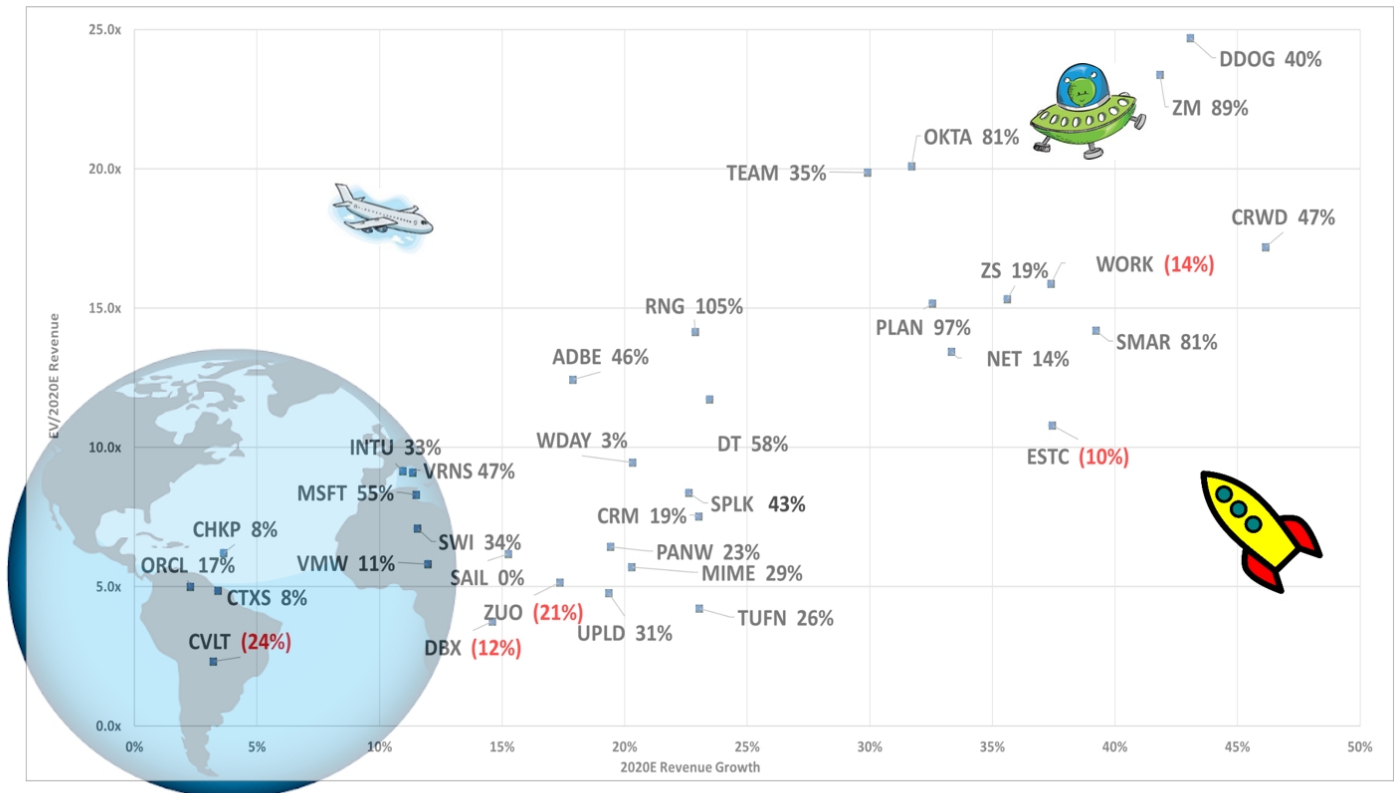
Source: Jefferies, FactSet; Priced as of market close on 12/22/2020

Chart 12 - 2020 Software IPO Multiple Expansion

Company 2020 IPOs	Ticker	Price			Market Cap (millions)		EV/2022E Rev			2022E Rev. Growth		
		12/22/2020	IPO Date	% Change	12/22/2020	IPO Date	12/22/2020	Post IPO	% Change	12/22/2020	Post IPO	% Change
Snowflake	SNOW	\$341.16	\$120.00	184.3%	123,841	43,560	66.8x	22.6x	195.4%	63.9%	62.8%	1.1%
Palantir	PLTR	\$28.04	\$7.25	286.8%	60,944	15,758	33.5x	8.0x	316.7%	25.9%	26.0%	-0.1%
Unity Software	U	\$172.29	\$52.00	231.3%	25,715	7,761	19.7x	5.1x	285.7%	27.9%	28.1%	-0.2%
Bentley Systems	BSY	\$38.86	\$22.00	76.6%	11,644	6,592	12.9x	7.6x	69.6%	8.1%	8.3%	-0.2%
Asana	ASAN	\$30.36	\$21.00	44.6%	6,445	4,458	15.9x	11.3x	40.1%	29.4%	28.7%	0.7%
Duck Creek	DCT	\$45.72	\$27.00	69.3%	5,982	3,532	19.4x	11.2x	73.5%	17.5%	17.9%	-0.4%
Vertex	VERX	\$36.46	\$19.00	91.9%	5,327	2,776	11.2x	5.7x	96.0%	13.4%	13.4%	0.0%
Datto	MSP	\$30.24	\$27.00	12.0%	5,053	4,512	7.3x	6.6x	11.6%	16.6%	16.7%	-0.1%
Sumo Logic	SUMO	\$33.64	\$22.00	52.9%	4,239	2,772	13.4x	8.6x	56.8%	21.1%	20.4%	0.7%
Jamf	JAMF	\$34.34	\$26.00	32.1%	3,887	2,943	9.8x	7.7x	27.8%	20.2%	21.2%	-0.9%
BigCommerce	BIGC	\$72.19	\$24.00	200.8%	3,563	1,185	16.0x	5.1x	212.3%	21.5%	22.2%	-0.7%
Jfrog	FROG	\$67.52	\$44.00	53.5%	2,533	1,651	7.7x	4.3x	79.6%	29.9%	29.9%	-0.1%
Telos	TLS	\$28.90	\$17.00	70.0%	1,870	1,100	5.2x	3.3x	60.7%	41.2%	41.2%	0.0%
<b>Average</b>				<b>101.8%</b>	<b>20,080</b>	<b>7,585</b>	<b>18.4x</b>	<b>8.2x</b>	<b>117.4%</b>	<b>25.9%</b>	<b>25.9%</b>	<b>0.0%</b>
<b>Median</b>				<b>69.7%</b>	<b>5,327</b>	<b>3,532</b>	<b>13.4x</b>	<b>7.6x</b>	<b>73.5%</b>	<b>21.5%</b>	<b>22.2%</b>	<b>-0.1%</b>
<b>SPX Return YTD</b>		SP50		<b>14.1%</b>								
<b>IGV Return YTD</b>		IGV		<b>56.7%</b>								
<b>Nasdaq Return YTD</b>		COMP		<b>42.7%</b>								

Source: Jefferies, FactSet; Priced as of market close on 12/22/20

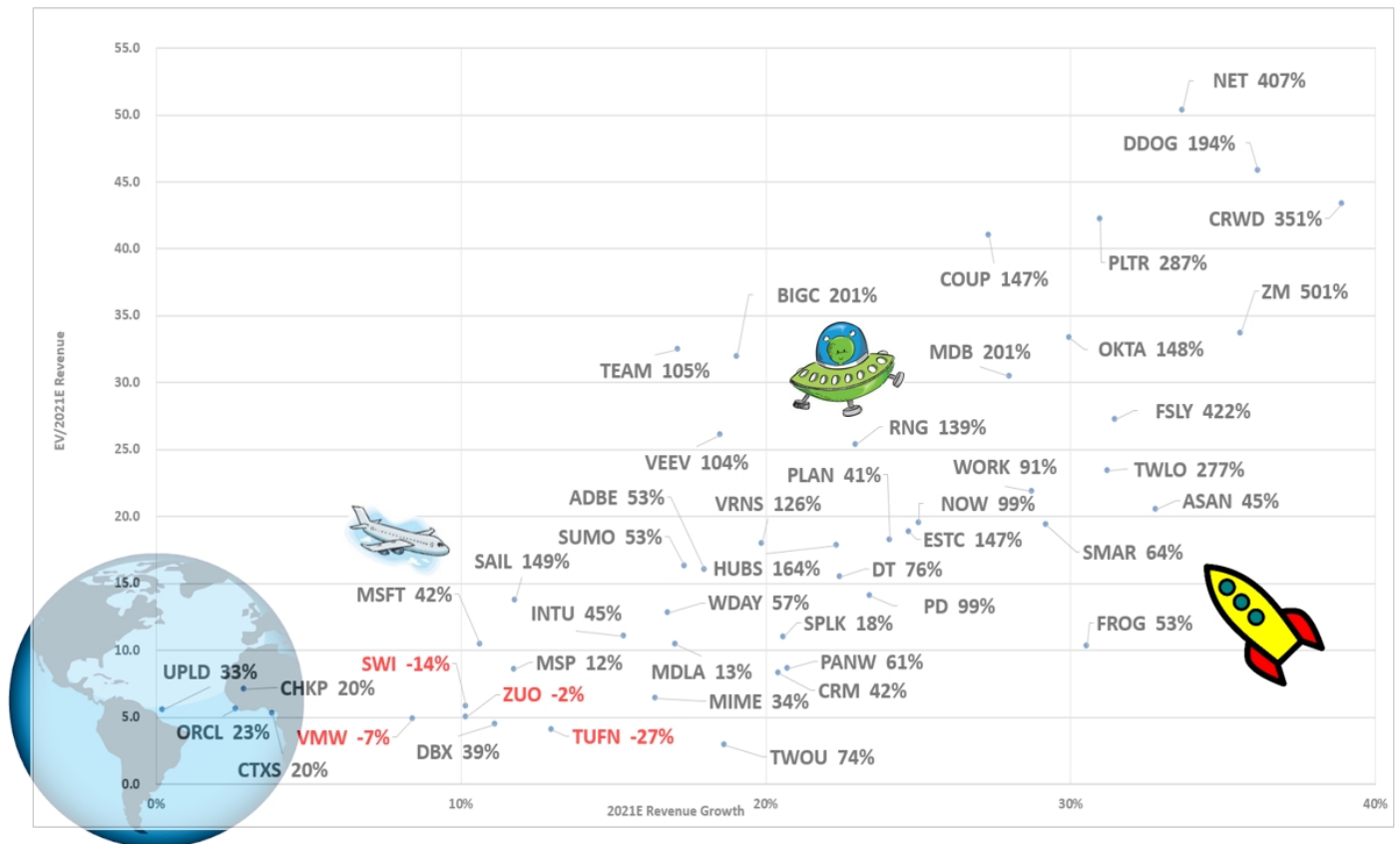
## EV/2020E Revenue Multiples vs 2020E Revenue Growth with Stock Performance in 2019



Source: Jefferies, FactSet Note: priced as of market close on 01-08-20.

Performance from 1/1/2019 to 12/31/2019; Note: Appreciation for IPOs is based on the offer price.

## EV/2021E Revenue Multiples vs 2021E Revenue Growth with Stock Performance in 2020 YTD



Sources: Jefferies, FactSet Note: priced as of market close on 12-22-20.  
Performance from 1/1/2020 to 12/22/2020



**Chart 13 - Software Comp Sheet as of Jan. 2, 2020**

Jefferies Software Team			Brent Thill, bthill@jefferies.com																					
1/2/2020																								
Company Large Cap	Ticker	Rating	Price Target (\$)	Price (\$)	YTD (%)	Market Cap (\$M)	Enterprise Value (\$M)	Revenue Growth				EV/Revenue		EV/Recurring Revenue NTM	EBITDA Margin				EV/EBITDA		Price/Earnings		EV/FCF	
								2018A	2019E	2020E	2021E	2020E	2021E		2018A	2019E	2020E	2021E	2020E	2021E	2020E	2021E	2020E	2021E
Microsoft	MSFT	Buy	\$175	\$160.62	1.9%	1,238,380	1,187,718	14.1%	14.0%	11.5%	11.3%	8.5x	7.6x	14.5x	41.1%	43.4%	44.7%	45.1%	18.9x	16.9x	29.8x	26.5x	29.3x	25.5x
Oracle	ORCL	Hold	\$60	\$53.95	1.8%	179,707	203,932	-0.9%	1.1%	2.3%	3.0%	5.0x	4.8x	7.2x	46.6%	48.1%	48.2%	47.2%	10.4x	10.3x	12.7x	11.8x	15.5x	14.1x
Salesforce.com	CRM	Buy	\$195	\$166.99	2.7%	152,629	148,924	26.7%	28.0%	23.0%	19.4%	7.1x	6.0x	7.9x	22.8%	27.1%	26.2%	25.4%	27.2x	23.4x	53.8x	42.6x	34.6x	28.8x
Adobe	ADBE	Buy	\$370	\$334.43	1.4%	164,219	164,180	23.7%	23.7%	17.9%	15.8%	12.5x	10.8x	13.8x	43.4%	45.0%	46.2%	46.4%	27.0x	23.2x	34.1x	28.8x	31.6x	26.9x
Intuit	INTU	Buy	\$320	\$266.16	1.6%	70,266	68,786	16.4%	12.6%	10.9%	10.6%	9.1x	8.3x	NA	37.2%	36.7%	36.2%	36.4%	25.3x	22.7x	35.1x	31.1x	29.2x	26.3x
VMWare	VMW	Buy	\$190	\$155.64	2.5%	64,443	67,976	13.3%	12.7%	11.8%	8.9%	6.0x	5.5x	11.3x	39.6%	38.5%	36.2%	37.2%	16.6x	14.9x	22.1x	19.9x	17.4x	15.6x
Workday	WDAY	Hold	\$188	\$167.46	1.8%	40,197	39,823	31.7%	28.1%	20.3%	18.9%	9.2x	7.7x	11.2x	17.1%	19.0%	19.4%	20.0%	47.2x	38.5x	76.7x	60.1x	58.9x	44.9x
Atlassian	TEAM	Hold	\$125	\$122.88	2.1%	30,831	29,918	41.0%	38.5%	29.9%	25.9%	19.0x	15.1x	20.7x	25.9%	25.8%	24.6%	25.4%	77.5x	59.6x	121.1x	93.3x	63.5x	47.4x
Average												9.5x	8.2x	12.4x					31.3x	26.2x	48.2x	39.3x	35.0x	28.7x
Median												8.8x	7.7x	11.3x					26.1x	23.0x	34.6x	30.0x	30.4x	26.6x
Mid Cap																								
Palo Alto Networks	PANW	Buy	\$275	\$235.41	1.8%	23,565	21,681	29.0%	27.6%	19.4%	19.8%	6.3x	5.2x	7.5x	25.6%	26.9%	22.6%	23.7%	27.7x	22.1x	47.5x	37.6x	21.9x	17.0x
Splunk	SPLK	Buy	\$165	\$151.98	1.5%	23,785	23,916	41.9%	30.4%	22.6%	22.4%	8.3x	6.8x	15.2x	15.2%	16.5%	18.0%	19.5%	46.1x	34.8x	64.7x	49.7x	N/A	81.1x
Check Point	CHKP	Hold	\$115	\$112.26	1.2%	16,929	12,874	3.3%	4.0%	3.7%	3.9%	6.2x	6.0x	6.5x	54.3%	51.6%	51.4%	52.1%	12.1x	11.5x	17.4x	16.1x	11.7x	11.6x
CrowdStrike	CRWD	Hold	\$61	\$49.44	-0.9%	11,343	10,509	NA	86.9%	46.1%	29.1%	15.4x	11.9x	18.4x	N/A	N/A	N/A	7.5%	N/A	158.2x	N/A	638.4x	N/A	186.4x
Citrix	CTXS	Hold	\$105	\$111.67	0.7%	14,814	14,986	5.3%	0.9%	3.4%	5.8%	4.8x	4.6x	6.0x	38.7%	35.4%	31.9%	32.2%	15.1x	14.2x	20.4x	17.6x	16.4x	14.4x
Datadog	DDOG	Hold	\$36	\$36.70	-2.9%	12,078	11,317	96.5%	77.5%	43.1%	30.5%	22.5x	17.2x	24.2x	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Elastic	ESTC	Hold	\$85	\$65.79	2.3%	6,105	5,842	NA	53.3%	37.4%	29.8%	10.2x	7.9x	13.1x	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Dropbox	DBX	Hold	\$19	\$18.09	1.0%	7,574	6,742	25.7%	19.2%	14.6%	12.1%	3.5x	3.2x	3.7x	24.1%	22.9%	24.6%	24.7%	14.4x	12.8x	30.8x	26.7x	15.5x	12.3x
Dynatrace	DT	Hold	\$23	\$26.03	2.9%	7,028	7,171	NA	24.0%	23.5%	25.0%	10.9x	8.7x	14.5x	26.1%	27.7%	25.8%	26.1%	42.1x	33.4x	84.5x	63.3x	36.1x	28.3x
SolarWinds	SWI	Buy	\$22	\$18.85	1.6%	5,864	7,559	NA	12.9%	11.5%	10.9%	7.2x	6.5x	8.9x	48.9%	48.0%	46.1%	46.9%	15.6x	13.8x	21.2x	18.2x	21.0x	17.7x
Cloudflare	NET	Hold	\$18	\$17.03	-0.2%	5,490	4,845	42.8%	46.4%	33.3%	31.0%	12.9x	9.8x	13.8x	N/A	N/A	N/A	0.2%	N/A	4730.9x	N/A	N/A	N/A	N/A
Smartsheet	SMAR	Buy	\$52	\$45.84	2.0%	5,941	5,427	59.7%	52.0%	39.2%	36.2%	14.4x	10.6x	17.4x	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	16509.4x	208.9x
Average												10.2x	8.2x	12.4x					24.7x	559.1x	40.9x	108.5x	2376.0x	64.2x
Median												9.3x	7.3x	13.4x					15.6x	22.1x	30.8x	32.1x	21.0x	17.7x
Small Cap																								
Mimecast	MIME	Buy	\$57	\$44.23	2.0%	2,826	2,722	30.0%	24.4%	20.3%	18.0%	5.3x	4.5x	5.8x	15.9%	17.3%	19.1%	20.1%	28.0x	22.5x	65.2x	51.3x	33.4x	24.3x
Varonis	VRNS	Buy	\$95	\$78.05	0.4%	2,640	2,509	24.3%	-6.2%	11.3%	14.7%	8.9x	7.7x	10.8x	4.3%	N/A	N/A	3.5%	N/A	223.0x	N/A	4683.0x	N/A	N/A
Commvault	CVLT	Buy	\$59	\$45.20	1.3%	2,066	1,590	1.7%	-4.3%	3.2%	5.3%	2.3x	2.2x	3.3x	17.4%	15.3%	16.2%	18.1%	14.0x	11.9x	26.3x	22.7x	13.0x	11.5x
SailPoint	SAIL	Buy	\$28	\$23.89	1.2%	2,169	2,003	33.8%	14.5%	15.3%	14.8%	6.1x	5.3x	12.1x	16.9%	7.9%	10.1%	11.4%	60.1x	46.6x	109.3x	78.3x	58.1x	42.0x
Zuora	ZUO	Buy	\$22	\$14.76	3.0%	1,845	1,686	40.1%	18.1%	17.4%	19.1%	5.2x	4.3x	7.6x	N/A	N/A	N/A	0.9%	N/A	464.0x	N/A	N/A	N/A	N/A
Upland	UPLD	Buy	\$49	\$36.89	3.3%	937	1,189	53.0%	46.3%	19.3%	3.4%	4.5x	4.4x	4.8x	35.4%	37.2%	38.4%	38.8%	11.8x	11.3x	13.9x	13.4x	23.8x	21.5x
Tufin	TUFN	Buy	\$28	\$17.71	0.7%	700	577	NA	28.4%	23.1%	24.8%	4.3x	3.4x	9.8x	1.3%	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Carbonite	CARB	NC	\$0	\$22.98	0.0%	811	1,326	26.1%	59.8%	11.5%		2.5x		2.7x	25.5%	28.6%	28.2%		8.7x	#DIV/0!	10.9x	#N/A	14.9x	NA
Average												5.2x	4.6x	7.8x					28.5x	129.9x	53.7x	969.7x	32.1x	24.8x
Median												5.2x	4.4x	7.6x					21.0x	34.5x	45.8x	51.3x	28.6x	22.9x
SPX Return YTD		SP50						0.8%																
IGV Return YTD		IGV						1.8%																
Nasdaq Return YTD		COMP						1.3%																

Source: Jefferies, FactSet; Priced as of market close on Jan. 2, 2020

Chart 14 - Software Comp Sheet as of Dec. 22, 2020

12/22/2020																						
Company	Ticker	Rating	Price Target (\$)	Price (\$)	YTD (%)	Market Cap (\$M)	Enterprise Value (\$M)	Revenue Growth			EV/Revenue		EV/Recurring Revenue	EBITDA Margin			EV/EBITDA		Price/Earnings		EV/FCF	
Large Cap								2020E	2021E	2022E	2021E	2022E	NTM	2020E	2021E	2022E	2021E	2022E	2021E	2022E	2021E	2022E
Microsoft	MSFT	Buy	\$260	\$223.94	43.3%	1,710,230	1,655,469	13.6%	10.6%	11.1%	10.5x	9.4x	17.1x	46.0%	46.7%	47.0%	22.4x	20.0x	33.1x	29.9x	34.3x	30.9x
Adobe	ADBE	Buy	\$600	\$504.17	52.9%	244,220	242,936	15.2%	18.0%	14.1%	16.0x	14.0x	17.3x	48.8%	49.4%	48.8%	32.4x	28.8x	44.7x	38.1x	41.4x	35.4x
Salesforce.com	CRM	Buy	\$320	\$231.17	42.1%	217,069	210,249	23.4%	20.4%	18.6%	8.3x	7.0x	9.3x	30.1%	28.5%	27.5%	29.0x	25.4x	65.9x	54.1x	40.8x	32.5x
Oracle	ORCL	Hold	\$65	\$65.15	24.8%	198,447	230,636	2.5%	2.6%	3.2%	5.6x	5.4x	7.9x	50.9%	50.6%	50.2%	11.1x	10.8x	13.9x	12.8x	18.2x	16.7x
Snowflake	SNOW	Hold	\$280	\$341.16	184.3%	123,841	119,901	118.5%	89.3%	63.8%	109.5x	66.8x	138.2x	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Intuit	INTU	Buy	\$430	\$379.97	45.9%	100,692	97,533	13.2%	15.3%	15.9%	11.0x	9.5x	N/A	37.4%	36.6%	37.3%	30.1x	25.5x	45.4x	39.1x	37.9x	31.6x
Workday	WDAY	Buy	\$260	\$257.71	56.7%	65,510	64,354	18.6%	16.8%	17.6%	12.8x	10.9x	15.1x	26.1%	23.8%	24.0%	53.7x	45.4x	89.1x	71.7x	71.8x	57.2x
Atlassian	TEAM	Hold	\$200	\$247.01	105.3%	62,617	61,331	33.4%	17.1%	17.6%	32.4x	27.6x	34.4x	25.7%	22.8%	24.4%	N/A	N/A	N/A	N/A	N/A	98.5x
Palantir	PLTR	Buy	\$18	\$28.04	286.8%	60,944	59,212	44.3%	31.1%	25.9%	42.2x	33.5x	45.2x	12.8%	18.5%	21.7%	N/A	N/A	N/A	N/A	N/A	N/A
VMWare	VMW	Hold	\$160	\$140.54	-7.4%	59,505	61,593	8.3%	8.4%	9.3%	4.9x	4.4x	8.2x	39.3%	34.6%	35.2%	14.0x	12.6x	20.1x	17.8x	15.8x	14.1x
CrowdStrike	CRWD	Hold	\$160	\$224.90	351.0%	52,762	51,702	78.4%	38.9%	31.1%	43.3x	33.0x	50.7x	11.5%	10.2%	12.2%	N/A	N/A	N/A	N/A	N/A	N/A
Datadog	DDOG	Hold	\$105	\$111.07	194.0%	36,986	36,788	62.5%	36.1%	32.8%	45.8x	34.5x	49.3x	11.2%	10.1%	12.3%	N/A	N/A	N/A	N/A	N/A	N/A
Palo Alto Networks	PANW	Buy	\$325	\$372.06	60.9%	36,350	35,379	17.5%	20.7%	17.7%	8.6x	7.3x	9.4x	23.6%	23.5%	23.6%	36.7x	30.9x	64.5x	53.9x	28.8x	23.1x
Average											27.0x	20.3x	33.5x				28.7x	24.9x	47.1x	39.7x	36.1x	37.8x
Median											12.8x	10.9x	17.2x				29.6x	25.4x	45.1x	38.6x	36.1x	31.6x
Mid Cap																						
Cloudflare	NET	Buy	\$80	\$86.56	407.4%	29,188	28,503	47.5%	33.7%	28.8%	50.4x	39.1x	53.8x	2.7%	6.0%	11.7%	N/A	N/A	N/A	N/A	N/A	N/A
Splunk	SPLK	Buy	\$240	\$177.00	18.2%	28,409	28,690	-8.2%	20.6%	27.5%	11.0x	8.6x	13.9x	N/A	3.1%	11.9%	N/A	72.7x	N/A	N/A	N/A	47.1x
Check Point	CHKP	Hold	\$130	\$133.42	20.2%	18,826	14,929	3.1%	2.9%	3.4%	7.1x	6.8x	7.4x	51.3%	50.2%	48.5%	14.0x	14.1x	19.3x	18.3x	14.0x	13.5x
Citrix	CTXS	Hold	\$140	\$132.72	20.9%	16,705	17,498	6.6%	3.8%	7.0%	5.3x	4.9x	6.0x	35.4%	33.7%	34.7%	15.6x	14.2x	20.8x	18.0x	16.8x	14.9x
Elastic	ESTC	Buy	\$150	\$159.08	147.4%	13,745	13,428	33.6%	24.7%	22.5%	18.8x	15.4x	22.6x	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Dynatrace	DT	Hold	\$39	\$44.51	75.9%	12,743	12,742	23.4%	22.4%	23.5%	15.5x	12.5x	18.1x	29.7%	28.6%	31.3%	54.0x	40.0x	72.7x	58.5x	56.4x	45.9x
Dropbox	DBX	Buy	\$28	\$24.87	38.9%	10,443	9,472	14.9%	11.1%	9.6%	4.5x	4.1x	4.6x	29.1%	31.0%	31.4%	14.4x	13.0x	24.9x	22.0x	16.5x	14.3x
Anaplan	PLAN	Hold	\$70	\$73.66	40.6%	10,357	10,060	27.7%	24.1%	25.1%	18.2x	14.6x	21.0x	N/A	N/A	2.8%	N/A	N/A	N/A	N/A	N/A	N/A
Smartsheet	SMAR	Hold	\$75	\$73.86	64.4%	9,875	9,455	39.7%	29.2%	28.5%	19.3x	15.0x	22.5x	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Asana	ASAN	Buy	\$35	\$30.36	44.6%	6,445	6,034	55.2%	32.8%	29.4%	20.5x	15.9x	22.0x	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Varonis	VRNS	Buy	\$155	\$175.73	126.1%	6,168	6,059	10.9%	19.9%	23.8%	17.9x	14.5x	20.5x	N/A	2.4%	10.7%	N/A	N/A	N/A	N/A	N/A	N/A
SailPoint	SAIL	Buy	\$55	\$58.85	149.4%	5,644	5,476	23.6%	11.8%	16.7%	13.7x	11.8x	23.5x	11.1%	5.0%	6.3%	N/A	N/A	N/A	N/A	N/A	89.3x
Datto	MSP	Hold	\$32	\$30.24	12.0%	5,053	4,899	12.0%	11.7%	16.6%	8.5x	7.3x	9.4x	28.9%	25.2%	24.8%	33.9x	29.5x	52.9x	50.3x	82.1x	68.5x
SolarWinds	SWI	Buy	\$25	\$15.89	-14.3%	5,032	6,513	9.4%	9.3%	9.4%	5.8x	5.3x	6.9x	47.8%	46.8%	47.5%	12.5x	11.2x	15.2x	13.6x	16.0x	13.0x
Average											15.5x	12.6x	18.0x				24.1x	27.8x	34.3x	30.1x	33.6x	38.3x
Median											14.6x	12.1x	19.3x				15.0x	14.2x	22.9x	20.2x	16.6x	30.4x
Small Cap																						
Sumo Logic	SUMO	Hold	\$28	\$33.64	52.9%	4,239	3,831	29.3%	17.4%	21.1%	16.3x	13.4x	17.2x	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Mimecast	MIME	Buy	\$55	\$58.20	34.2%	3,818	3,695	15.5%	16.4%	19.5%	6.4x	5.4x	7.0x	22.3%	21.7%	23.9%	29.7x	22.6x	59.3x	43.7x	36.7x	28.1x
2U	TWOU	Buy	\$50	\$41.78	74.2%	2,866	2,653	33.5%	18.6%	13.6%	2.9x	2.6x	3.0x	1.4%	3.9%	5.7%	75.3x	44.7x	N/A	N/A	N/A	N/A
Zuora	ZUO	Hold	\$13	\$14.00	-2.3%	1,845	1,674	9.5%	10.2%	13.8%	5.0x	4.4x	6.5x	0.5%	0.7%	5.6%	N/A	78.9x	N/A	N/A	N/A	N/A
Upland	UPLD	Buy	\$58	\$47.34	32.6%	1,288	1,593	28.7%	0.2%	3.6%	5.5x	5.4x	5.8x	33.8%	32.1%	33.6%	17.3x	15.9x	27.5x	24.8x	32.8x	23.6x
Tufin	TUFN	Hold	\$8	\$12.76	-27.5%	530	445	-6.3%	13.0%	15.1%	4.1x	3.5x	7.5x	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Average											6.7x	5.8x	7.8x				40.8x	40.5x	43.4x	34.2x	34.7x	25.9x
Median											5.3x	4.9x	6.7x				29.7x	33.6x	43.4x	34.2x	34.7x	25.9x
SPX Return YTD	SP50				14.1%																	
IGV Return YTD	IGV				56.7%																	
Nasdaq Return YTD	COMP				42.7%																	

Source: Jefferies, FactSet; Priced as of market close on Dec. 22, 2020

## Company Valuation/Risks

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## Investment Recommendation Record

(Article 3(1)e and Article 7 of MAR)

Recommendation Published December 22, 2020 , 21:13 ET.

Recommendation Distributed December 22, 2020 , 21:13 ET.

## Company Specific Disclosures

James Heaney owns shares in Salesforce.com Stanislav Velikov or a member of his family owns shares and RSUs in Salesforce.com

Steven DeSanctis owns shares of Microsoft Inc. common shares.

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Buy - Describes securities that we expect to provide a total return (price appreciation plus yield) of 15% or more within a 12-month period.

Hold - Describes securities that we expect to provide a total return (price appreciation plus yield) of plus 15% or minus 10% within a 12-month period.

Underperform - Describes securities that we expect to provide a total return (price appreciation plus yield) of minus 10% or less within a 12-month period.

The expected total return (price appreciation plus yield) for Buy rated securities with an average security price consistently below \$10 is 20% or more within a 12-month period as these companies are typically more volatile than the overall stock market. For Hold rated securities with an average security price consistently below \$10, the expected total return (price appreciation plus yield) is plus or minus 20% within a 12-month period. For Underperform rated securities with an average security price consistently below \$10, the expected total return (price appreciation plus yield) is minus 20% or less within a 12-month period.

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This report was prepared for general circulation and does not provide investment recommendations specific to individual investors. As such, the financial instruments discussed in this report may not be suitable for all investors and investors must make their own investment decisions based upon their specific investment objectives and financial situation utilizing their own financial advisors as they deem necessary. Past performance of the financial instruments recommended in this report should not be taken as an indication or guarantee of future results. The price, value of, and income from, any of the financial instruments mentioned in this report can rise as well as fall and may be affected by changes in economic, financial and political factors. If a financial instrument is denominated in a currency other than the investor's home currency, a change in exchange rates may adversely affect the price of, value of, or income derived from the financial instrument described in this report. In addition, investors in securities such as ADRs, whose values are affected by the currency of the underlying security, effectively assume currency risk.

## Other Companies Mentioned in This Report

- 2U, Inc. (TWOU: \$41.78, BUY)
- Adobe Inc. (ADBE: \$504.17, BUY)
- Anaplan (PLAN: \$73.66, HOLD)
- Asana, Inc. (ASAN: \$30.36, BUY)
- Atlassian Corp. (TEAM: \$247.01, HOLD)
- Check Point Software Technologies Ltd. (CHKP: \$133.42, HOLD)
- Citrix Systems, Inc. (CTXS: \$132.72, HOLD)
- Cloudflare, Inc. (NET: \$86.56, BUY)
- CrowdStrike Holdings, Inc. (CRWD: \$224.90, HOLD)
- Datadog (DDOG: \$111.07, HOLD)
- Datto, Inc. (MSP: \$30.24, HOLD)
- Dropbox, Inc. (DBX: \$24.87, BUY)
- Dynatrace, Inc. (DT: \$44.51, HOLD)
- Elastic NV (ESTC: \$159.08, BUY)
- Intuit Inc. (INTU: \$379.97, BUY)
- Microsoft Corporation (MSFT: \$223.94, BUY)
- Mimecast Limited (MIME: \$58.20, BUY)
- Oracle Corporation (ORCL: \$65.15, HOLD)
- Palantir Technologies Inc (PLTR: \$28.04, BUY)
- Palo Alto Networks (PANW: \$372.06, BUY)
- SailPoint Technologies Holdings, Inc. (SAIL: \$58.85, BUY)
- Salesforce.com (CRM: \$231.17, BUY)
- Smartsheet Inc. (SMAR: \$73.86, HOLD)
- Snowflake Inc (SNOW: \$341.16, HOLD)
- SolarWinds, Inc. (SWI: \$15.89, BUY)
- Splunk (SPLK: \$177.00, BUY)
- Sumo Logic (SUMO: \$33.64, HOLD)
- Tufin Software Technologies Ltd. (TUFN: \$12.76, HOLD)
- Upland Software, Inc. (UPLD: \$47.34, BUY)
- Varonis Systems, Inc. (VRNS: \$175.73, BUY)
- VMware, Inc. (VMW: \$140.54, HOLD)
- Workday, Inc. (WDAY: \$257.71, BUY)
- Zuora, Inc. (ZUO: \$14.00, HOLD)



Distribution of Ratings

Distribution of Ratings						
			IB Serv./Past12 Mos.		JIL Mkt Serv./Past12 Mos.	
	Count	Percent	Count	Percent	Count	Percent
BUY	1535	58.14%	140	9.12%	14	0.91%
HOLD	969	36.70%	26	2.68%	6	0.62%
UNDERPERFORM	136	5.15%	2	1.47%	1	0.74%



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