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Software as a Service

Looking at Both Sides of the Coin: Business Model Elements That Insulate and Exacerbate

Earlier this week, we took a refreshed look at our forward estimates across our coverage universe and made downward revisions to account for increased risk from the spread of coronavirus (Revising Estimates Across Our Coverage Universe and Providing a Risk Framework). However, the precise nature and duration of the economic impact is still largely unknown. Even for SaaS businesses with high levels of recurring revenue, visibility has been diminished for the next few quarters. The economic impact from COVID-19 is going to vary company by company based on what software is being sold, how it is being sold, who it is being sold to, and several other company-specific factors.

In this note, we take a balanced look at the business models across our coverage universe and highlight the specific aspects of each business that will be most negatively impacted in this environment ("exacerbating factors") along with factors that are likely to provide some insulation to the business ("insulating factors"). Where appropriate, we try to highlight product specific factors in addition to broader items like the go-to-market model and the customer base. In our view, it is important to consider both sides of the coin to not only try to assess the near-term financial impact, but also to evaluate the path and time to recovery on the other side of COVID-19.

We expect companies that focus on large enterprises like Appian, Salesforce, and ServiceNow to see a near-term slowdown in incremental ARR booked (both from new customers and from cross-sell of new products), but with a quick snap-back once we are in a normal environment and IT departments can focus on digital transformation projects again. Long-term risk with these companies is relatively low.

We believe communication/collaboration companies (Atlassian, Smartsheet, and Slack) are most insulated in this environment as they generally help teams work better together while not being physically together. Demand here should see some increase, especially at the top of funnel. We see a possibility of this playing out in three phases as it becomes clearer to people that working from home is going to last longer than expected: 1) video communication (the most obvious; we have seen this play out already with Zoom [ZM $121.93; Outperform]); 2) written communication (something more continuous and uninterrupted than email, like Slack); and 3) project management (not explicitly work from home, but it helps; tracking who is working on what and when). Atlassian in particular has a very durable business model and is our port in the storm pick with its low-price points and frictionless go-to-market model.

For front-office/marketing technology vendors, like HubSpot, LivePerson, Sprout Social, and Zendesk, the impact is more company specific. SMB exposure here is generally greater than other areas in our coverage, especially for HubSpot, which poses a higher risk of customer churn. Company-specific commentary is included on the following pages.

Company	Ticker	Price	Stock Rating
Appian Corporation	APPN (NASDAQ)	$34.93	Outperform
salesforce.com, inc.	CRM (NYSE)	$134.32	Outperform
HubSpot, Inc.	HUBS (NYSE)	$116.86	Outperform
LivePerson, Inc.	LPSN (NASDAQ)	$20.77	Outperform
ServiceNow, Inc.	NOW (NYSE)	$259.00	Outperform
Smartsheet Inc.	SMAR (NYSE)	$39.34	Outperform
Sprout Social, Inc.	SPT (NASDAQ)	$13.00	Outperform
Atlassian Corporation Plc	TEAM (NASDAQ)	$129.01	Outperform
Slack Technologies, Inc.	WORK (NYSE)	$24.26	Outperform
Zendesk, Inc.	ZEN (NYSE)	$58.94	Outperform

				CY21 EV/Rev		
Stock	**2/19 - 4/2**	**YTD**	**Price**	**19-Feb**	**2-Apr**	**Change**
APPN	(43.7%)	(8.6%)	$34.93	12.9x	7.4x	(5.5x)
HUBS	(41.1%)	(26.3%)	$116.86	8.4x	4.9x	(3.5x)
LPSN	(36.4%)	(43.9%)	$20.77	5.6x	3.7x	(1.9x)
SPT	(36.3%)	(19.0%)	$13.00	5.5x	3.4x	(2.1x)
ZEN	(34.5%)	(23.1%)	$58.94	7.7x	5.2x	(2.6x)
CRM	(30.4%)	(17.4%)	$134.32	6.9x	4.9x	(2.1x)
NOW	(27.6%)	(8.3%)	$259.00	11.7x	8.6x	(3.1x)
SMAR	(21.8%)	(12.4%)	$39.34	11.9x	9.1x	(2.8x)
TEAM	(15.2%)	7.2%	$129.01	16.4x	14.1x	(2.3x)
WORK	(11.8%)	7.9%	$24.26	14.1x	12.4x	(1.7x)
Median	**(32.4%)**	**(14.9%)**		**10.1x**	**6.3x**	**(3.8x)**
NASDAQ	**(23.7%)**	**(16.6%)**				
Fast Growth Median	**(30.5%)**	**(15.2%)**		**11.7x**	**8.1x**	**(3.6x)**

Sources: FactSet and William Blair Equity Research

Appian (APPN)

APPN	
Exacerbating Factors	**Insulating Factors**
- High risk of new deals getting pushed/delayed given very involved go-to-market motion and product sophistication. - Long sales cycles **(~12-18 months)** and high price points. - Heavier implementations that are likely to be paused, especially for customers looking to deploy on-premise (cloud more insulated). - Professional services revenue **(~40% of revenue)** has less insulation and is lumpier than subscription revenue.	- Structured workflows, automation, and digital workflows likely to be a bigger focus for enterprises on the other side of COVID-19. - Enterprise customer base and low SMB exposure. - Deals likely only delayed, not cancelled altogether. Potential for big snap-back post-COVID-19. - Sticky customers **(high 90s renewal rate)**. - Existing customers likely to continue building new applications on Appian platform.

Appian is likely to face some near-term challenges given a pause in large enterprise implementations. However, we believe low-code development and digitization of workflows is likely to be a priority for businesses once IT projects resume. Customers are not at high risk of churning given their enterprise nature, which means that Appian will not have to rebuild its customer base on the other side of COVID-19. Therefore, we believe Appian will see a snap back to strong growth.

Stock thoughts and valuation: Shares trade at 7.4 times our revised 2021 revenue estimates compared with the fast-growth-SaaS peer group median of 8.1 times. Given the company's large professional services business (about 40% of revenue), it is more appropriate to value the business using a sum-of-the-parts methodology. If we apply a 3.0 times multiple to our 2021 professional services revenue estimate, this implies a 9.7 times multiple on our software revenue estimate. We remain long-term buyers of Appian given the long adoption curve ahead for low-code and Appian's favorable position in the market. Given the company's heavy professional services mix and expensive valuation, we would not be surprised to see some unevenness in the stock near term. We believe an attractive entry point will present itself in the near future. We maintain our Outperform rating.

Salesforce (CRM)

CRM	
Exacerbating Factors	**Insulating Factors**
- New enterprise sales are likely to be on hold given economic uncertainty, long sales cycles, and heavy implementations. - On the expansion front, cross-sell of new products will be more difficult given implementation and training requirements. This accounts for about **half of expansion growth.**	- Customer base is heavily large enterprise oriented, resulting in low risk of churn. - Snap back expected post-COVID as customers put SaaS/cloud and digital transformation at the forefront. - Growth is largely driven by expansions **(75%)**, not net new customers **(25%)**.

For a company of scale such as Salesforce that sells to large enterprises, this analysis is fairly simple. Long-term risk is relatively low, but a near-term slowdown should be expected given the go-to-market model, implementation, and deal sizes. However, deals that are put on hold now should get completed post-COVID and a longer-term benefit is also likely given that Salesforce is a cornerstone of driving digital transformations, which is only likely to accelerate post-COVID. Salesforce is relatively safe at these level with a potential for a snapback once we are in a normal environment.

Stock thoughts and valuation: Salesforce trades at 24.7 times our calendar 2021 free cash flow estimate, roughly in line with the large-cap software peer group median of 24.8 times. Given Salesforce's dominant positioning in the market as the leader in CRM and digital transformation, we believe a premium is appropriate. We continue to like the stock as the fundamentals of the business remain solid and we fully expect the demand environment to come back in strong force on the other side of COVID-19. We have a positive outlook on the company's ability to meet its fiscal 2024 target of $35 billion in revenue, essentially doubling the company from current levels.

HubSpot (HUBS)

HUBS	
Exacerbating Factors	**Insulating Factors**
- Very high SMB exposure and high churn **(high teens)**, even in a normal environment. - Customers are at higher risk of going out of business, not just pushing deals out later in the year. - Marketing budgets likely to be under pressure given their discretionary nature. - High dependence on new customers as a growth driver.	- Business is driven by inside sales model. - Expansion of freemium model and Starter edition subscription tiers offers lower priced products and has potential to generate more top of funnel activity. - Marketing Hub **(~80% of revenue)** pricing scales with number of contacts in contact list, not seats. - Multi-product customers **(~40% of total customers)** generally at lower risk of churn.

Near-term risk for HubSpot is elevated given the difficult operating environment for SMBs. These customers are at higher risk of churn, not just from cutting discretionary spending, but from going out of business altogether. This could require HubSpot to rebuild its customer base to some extent, resulting in a potentially longer road to recovery.

Stock thoughts and valuation: Using our calendar 2021 estimates, HubSpot trades at 4.9 times on an enterprise-value-to-revenue basis, below the fast-growth SaaS group median of 8.1 times.

LivePerson (LPSN)

LPSN	
Exacerbating Factors	**Insulating Factors**
- In-person marketing events have historically been a driver of new customers to LivePerson. - Roughly **25% exposure** to retail vertical. - Professional services **(14% of revenue)** and consumer revenue **(8% of revenue)** at higher risk and than recurring business revenue. - Long sales cycles **(~9 months)**, large landing ACVs, and heavily involved go-to-market motion.	- Potential for short-term spike in messaging volumes from customer inquiries, cancellations, etc. - Telcos and financial services verticals account for **~45% of revenue** (essential businesses). - Enterprise customer base should provide stability. Average contract length is **2 years**. - Focus on digital customer service channels likely to increase post COVID.

Implementations and new customers are likely to be paused in the near term, but the customer base is secure and at low risk of churn given the company's enterprise focus. We see disruption being high in the near term, but believe there could be a snapback in demand from companies embracing digital customer service channels like messaging post-COVID-19, especially in industries that have witnessed extremely high call volumes amid recent uncertainty.

Stock thoughts and valuation: Using our calendar 2021 estimates, LivePerson trades at 3.7 times on an enterprise-value-to-revenue basis, a significant discount to the fast-growth group median of 8.1 times. With shares down more than 40% since February 19 and trading at a large discount to peers, we are not changing our rating at this time. We continue to believe that LivePerson is well positioned to capture share in business to consumer messaging, which we believe will become the primary method of communication between brands and consumers.

ServiceNow (NOW)

NOW	
Exacerbating Factors	**Insulating Factors**
- New enterprise sales are likely to be on hold given economic uncertainty, long sales cycles, and heavy implementations. - Near-term cross-sell of new products likely to be muted (HR, Finance, etc.). - Expansion of partner ecosystem likely delayed.	- Snap back expected post-COVID as customers put SaaS/cloud and digital transformation at the forefront. - Customer base is highly skewed towards large enterprise, resulting in low risk of churn. - **High-90s** renewal rate.

For a company at scale such as ServiceNow that sells to large enterprises, this analysis is fairly simple. Long-term risk here is relatively low, but a near-term slowdown should be expected given the go-to-market model, implementation, and deal sizes. Deals that are put on hold now should get completed post-COVID. A longer-term benefit is also likely given that ServiceNow is a cornerstone of driving digital transformations, which is only likely to accelerate post-COVID. ServiceNow is relatively safe at these level with a potential for a snapback once we are in a normal environment.

Stock thoughts and valuation: Using our updated estimates, shares trade at 29.8 times our calendar 2021 free cash flow estimate, compared with the peer group median of 22.0 times. Given ServiceNow's positioning in the enterprise market and its growth rate, which is meaningfully higher than its peers, we believe a premium is warranted.

Smartsheet (SMAR)

SMAR	
Exacerbating Factors	**Insulating Factors**
- Accelerators and capabilities-based solutions **(12% of ARR)** are higher cost and generally require interaction with salesforce to purchase. - About **10% of revenue** is professional services and at higher risk given non-recurring elements and tendency to be on-site. - Short-term potential for churn from a pause in specific projects (construction, store openings, event management, etc.).	- Collaboration tools likely to see increased demand with distributed workforces and more people working from home. - Hospitality, airlines, and retail verticals are **less than 4% of ARR.** - **90% of quota-carrying reps** are inside-based. - Field reps generally only deal with large organizations that already have meaningful spend with Smartsheet. - Sticky customer base **(churn is below 8%).** - **75% of revenue** comes from customers that spend $5K or more annually **(~9K customers, or ~11% of domain customers)**.

We view Smartsheet as one of the more insulated companies in our coverage and having a durable business model. Existing customers drive a large portion of the company's growth and collaboration/project management tools have the potential to benefit in this period where teams are working remotely. Smartsheet has moved upmarket over the past several years and has meaningfully improved its churn rates to be sub-8%.

Stock thoughts and valuation: Smartsheet trades at an enterprise-value-to-revenue multiple of 9.1 times our calendar 2021 estimates compared with the fast growth peer group median of 8.1 times. We think Smartsheet is a solid long-term investment due to its large TAM, sustainable growth profile, low churn rates, and its moat over competitors. In our view, the company should continue to outgrow its peers as it advances on its $1 billion revenue goal over the next few years.

Sprout Social (SPT)

SPT	
Exacerbating Factors	**Insulating Factors**
- Listening module **(8.5% of total ARR)** and other add-on modules are higher cost and typically a more involved sale. - Marketing budgets likely to be under pressure given discretionary nature. Sprout typically lands in marketing. - Contracts tend to be monthly **(~2/3 monthly and 1/3 annual).** - Exposure to SMB and midmarket customers, though less than HubSpot. Vertical exposure includes direct-to-consumer brands, media, entertainment, and hospitality.	- Light touch, inside sales model **(30-40 day sales cycles).** - Core platform is quick and easy to implement. - Social media engagement is increasing amid coronavirus spread as people spend more time at home. - Recently built out expansion sales team to focus more on growing existing customer ACVs.

While Sprout has some exposure to small businesses, its customer base is fairly diverse and included several large enterprises. Marketing budgets are likely to be under pressure, but consumer engagement on social media has actually increased as people retreat to their homes amid the spread of coronavirus. This could result in brands wanting to connect with consumers more through these channels and scaling their social media strategies. For Sprout, we worry most about sales of the Listening module near term, which tends to be higher cost than the core platform, but would expect a snapback in demand once we return to a normal environment.

Stock thoughts and valuation: Sprout is trading at 3.4 times our 2021 revenue estimates, a meaningful discount to the fast growth peer group, which is trading at 8.1 times 2021 revenue. Given Sprout's positioning in this market and where we are in the product cycle for social media management and listening, we believe Sprout has many years of strong growth ahead. As Sprout continues to execute on its growth strategy, we believe there is plenty of room for multiple expansion for this 30%-plus organic growth company.

Atlassian (TEAM)

TEAM	
Exacerbating Factors	**Insulating Factors**
- Channel partners **(contribute roughly 1/3 of revenue)** traditionally go to client sites for installation, configuration, and training. - Perpetual licenses and on-prem business likely to see a slowdown (though some of this could be mitigated as customers embrace Atlassian's cloud offerings). - Large scale agile transformations likely to be put on hold. - **75% of cloud revenue** is driven from monthly contracts.	- Very low-friction purchasing process. Essentially all sales are done through the website. - Low price points insulate TEAM from budget cuts and potentially drive new customers seeking lower priced solutions. - Enterprise customer base provides stability. - Developers and IT teams are less likely to face layoffs. - Collaboration tools likely to see increased demand with distributed workforces and more people working from home. - Substantial portion of growth comes from existing customers.

Atlassian is one of the most durable businesses in our coverage (our port in the storm pick) and one we believe has generally low risk, even in this environment. Its insulating factors far outweigh its risk factors in this environment. Being in the collaboration space, the argument can be that Atlassian is likely to see some benefit as more people work from home. The stock has held up relatively well and if there is another significant pullback, Atlassian would be one of the first stocks we would look to buy.

Stock thoughts and valuation: Atlassian trades at 45.6 times our calendar 2021 free cash flow estimate, compared with the fast-growth SaaS group median of 82.4 times (and 14.1 times 2021 revenue, compared with peers at 8.1 times). While shares are not inexpensive, we believe a high-quality company of Atlassian's caliber with its efficient distribution model and low-price, high-value products deserves a premium multiple. We believe the company is making the right investments in good markets, which should drive upside to the stock over the next 12 months as the benefits of these investments are realized.

Slack (WORK)

WORK	
Exacerbating Factors	**Insulating Factors**
- Slack has shifted to be more enterprise focused over the years. Potential for disruption here as these are more involved sales and may be delayed due to travel restrictions. - Some customers may opt for Microsoft Teams out of convenience given difficulty of new vendor approvals at this time (if they are an Office 365 customer). - Cost differential between Slack and Teams (which is free for Office 365 customers) becomes more front-and-center given macro uncertainty.	- Seeing increased demand with new customers as workforces become distributed and more people work from home. - Near-term usage spike could drive increased conversions from free users **(50% of Slack's 12 million DAUs)** as paywalls are hit. - Enterprise customer base provides stability **(47% of revenue from customers that spend $100K or more)**. - Implementation is generally fast and easy, though Enterprise Grid can take months to set-up and implement. - Move to channel-based communication likely to accelerate post-COVID-19, especially at enterprise level.

Slack has already reported a spike in both usage and paid customers over the past few weeks as users look to utilize more than just email and phone calls while working remotely (Paid Customer Adds Accelerate and Usage Increases Among Increased Demand in Work-From-Home Era). Slack improves communication within and between teams, which is critical in a work-from-home environment. We see both a short-term and long-term benefit for Slack here. Not surprisingly, risk factors are largely related to Microsoft Teams (MSFT $155.26; Outperform).

Stock thoughts and valuation: Shares are trading at 12.4 times our calendar 2021 revenue estimates, at a premium to the fast growth peer group, which is trading at 8.1 times. We believe a premium is warranted given the faster growth rate relative to the peer group and believe there is further potential for upside to our estimates given the increased interest in Slack in the work-from-home environment. We continue to be bullish on Slack's long-term opportunity and competitive positioning in the market.

Zendesk (ZEN)

ZEN	
Exacerbating Factors	**Insulating Factors**
- New deals with 100+ agents generally require in-person interaction, which could get pushed out. - Higher exposure to travel, hospitality, and retail verticals. Direct-to-consumer retail brands in particular may be adversely impacted as consumer propensity to spend decreases. - International exposure is higher, **comprising 48% of revenue**. - Despite move upmarket, SMB exposure is still high.	- Move upmarket over the past few years provides more insulation from customer churn **(43% of customers have 100+ agents)**. - Growth is skewed toward expansions with existing customers vs. new customer acquisition. - Customers have increasingly committed to multi-year contracts, reducing churn risk **(LT RPO growth was 132% in 4Q19)**. - Self-service and inside sales still drive large portion of revenue. - Products are easy to understand and implementations are quick and simple (don't require heavy professional services).

For Zendesk, we worry most about the company's industry exposure to retail, in particular direct-to-consumer retail brands. These businesses tend to be younger and less capitalized than legacy businesses, resulting in higher risk of these companies shutting down amid the uncertainty. The company's move upmarket and increasing presence with legacy customers should offset some of this and may even accelerate the move to enterprise (especially with newer products). Ultimately, we would expect investment in customer service to return strongly post-COVID, making Zendesk a good bounce back candidate.

Stock thoughts and valuation: Zendesk trades at about 5.2 times our 2021 revenue estimates compared with the fast-growth SaaS median of 8.1 times. While some challenges exist near term given the company's exposure to high-risk industries, we believe its move upmarket and focus on the platform position Zendesk well for long-term growth and provide a stickier customer base with higher lifetime value.

APPN: Appian Valuation Snapshot - Stock Price: $34.93

Risks

Rate of market adoption: Low-code is generally still a newer concept and many companies still opt for manual software development over a low-code environment. The rate of adoption and general market awareness for low-code platforms is still low and uncertain.

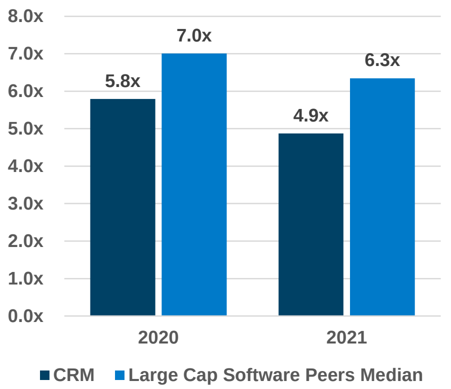
ASC 606: A portion of Appian's subscription revenue is on-premise, requiring up-front revenue recognition under new accounting guidelines. This limits visibility into the business compared to ASC 605 and makes forecasting more difficult.

Competition: Appian competes with Pega and other larger cloud providers like Salesforce and ServiceNow in the platform market.

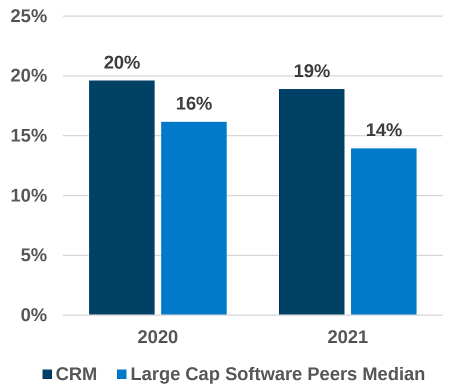
Note: all data is calendar years.
Sources: William Blair estimates and FactSet.

CRM: Salesforce Valuation Snapshot - Stock Price: $134.32

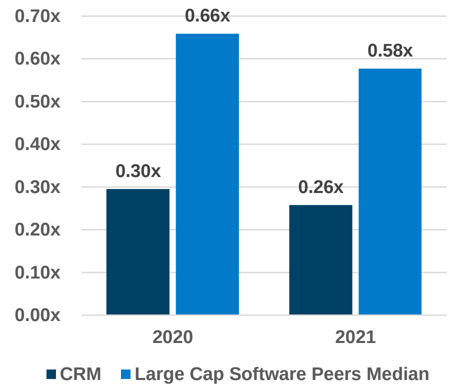
EV/Revenue



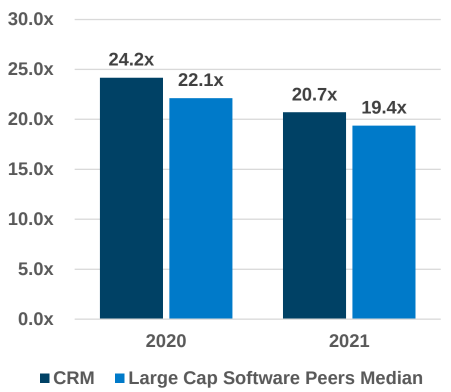
Revenue Growth



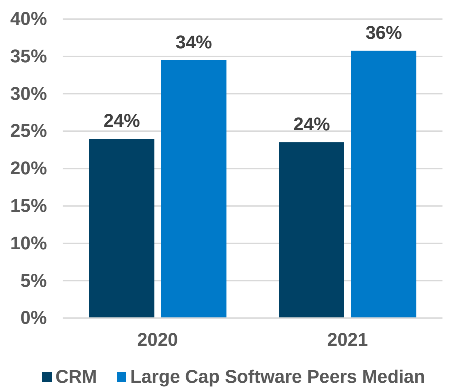
EV/Revenue/Growth



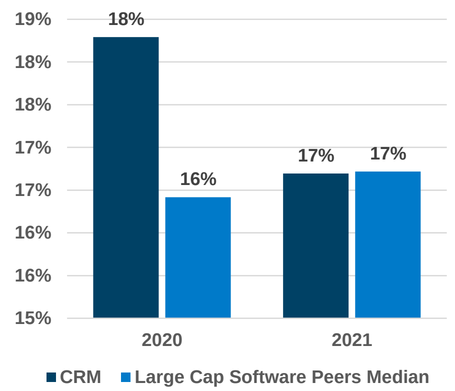
EV/EBITDA



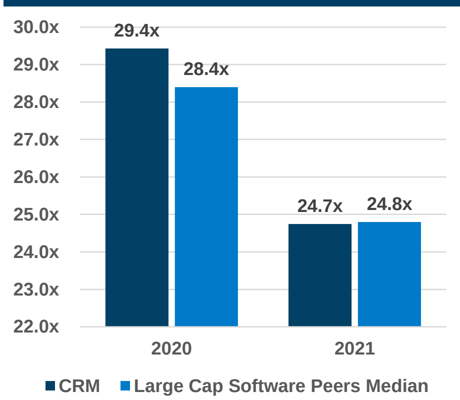
EBITDA Margin



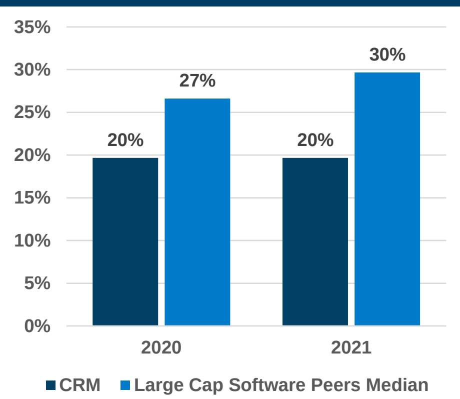
EBITDA Growth



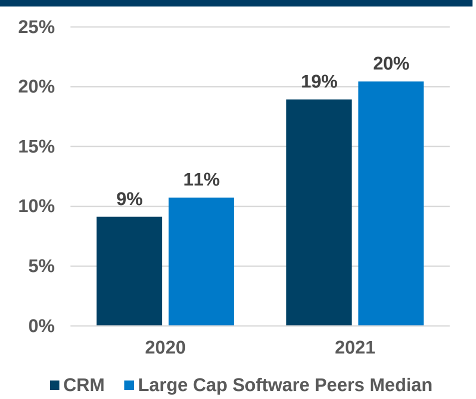
EV/FCF



FCF Margin



FCF Growth



Risks

Competition: While Salesforce is the market leader in CRM, there are other well-capitalized firms that are competing with Salesforce, like Oracle and Microsoft. In addition, there are several up-and-coming vendors that are going after the SMB market.

Integration/M&A: Salesforce is dependent on inorganic revenue to drive growth and will likely continue to make large acquisitions in the future. There is a risk that integration of these acquisitions does not go according to plan and results in adverse business impacts.

Margin expansion: Increased investment in the market opportunity could result in limited margin expansion.

Note: all data is calendar years.
Sources: William Blair estimates and FactSet.

HUBS: HubSpot Valuation Snapshot - Stock Price: $116.86

Risks

Competition: The market for customer service and front office software solutions is highly competitive. There are several up and coming marketing technology vendors at the lower end of the market that are chasing growth and could move upmarket and challenge HubSpot.

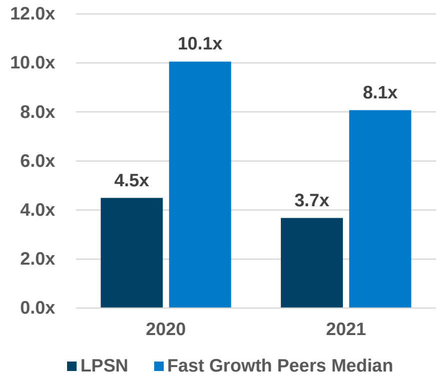
SMB Exposure: HubSpot's customer base is primarily composed of small and midsize businesses, where churn is inherently higher due to higher rates of business failure. In an economic downturn, HubSpot is likely to see elevated churn compared to more enterprise-focused companies.

Increased M&A: HubSpot has indicated that it intends to increase its M&A activity over the coming years. M&A is a new motion for the company and failure to properly integrate acquisitions could be harmful to growth and the company's culture.

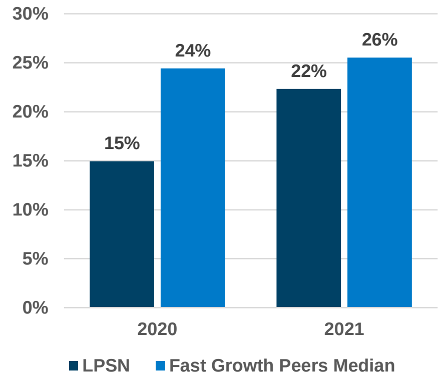
Note: all data is calendar years.
Sources: William Blair estimates and FactSet.

LPSN: LivePerson Valuation Snapshot - Stock Price: $20.77

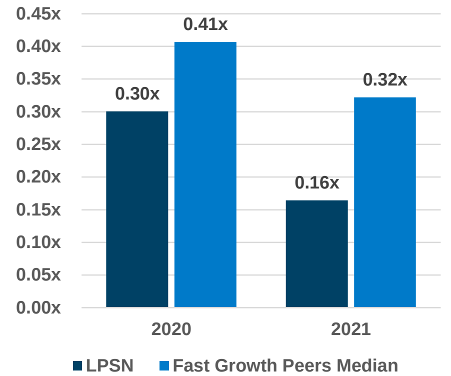
EV/Revenue



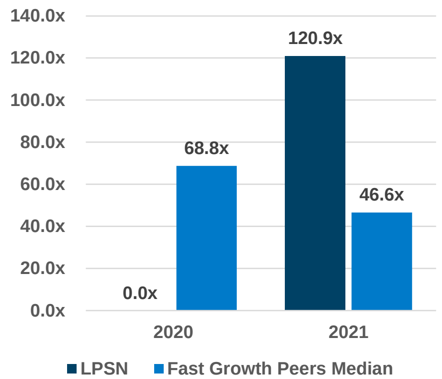
Revenue Growth



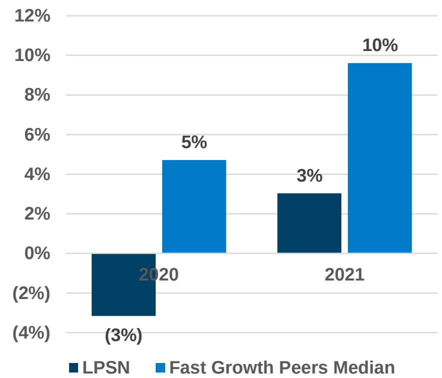
EV/Revenue/Growth



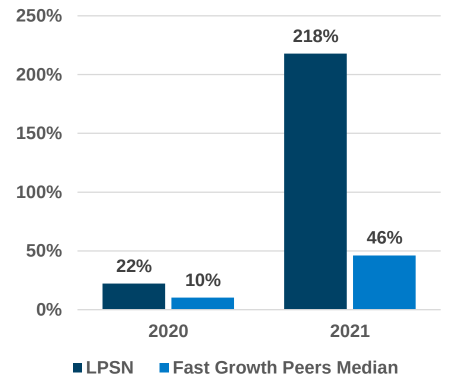
EV/EBITDA



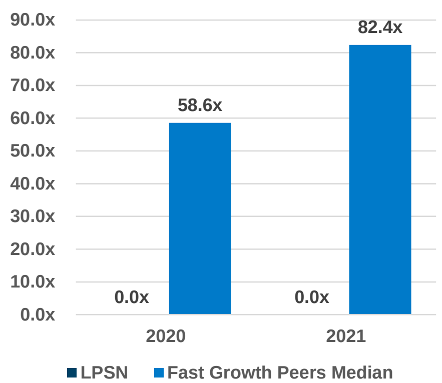
EBITDA Margin



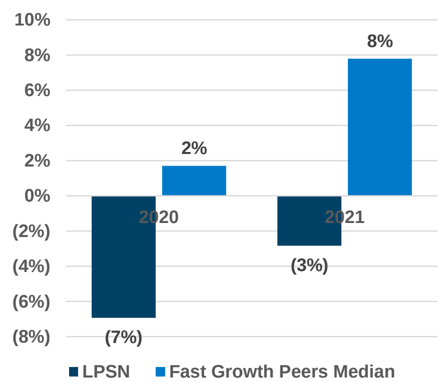
EBITDA Growth



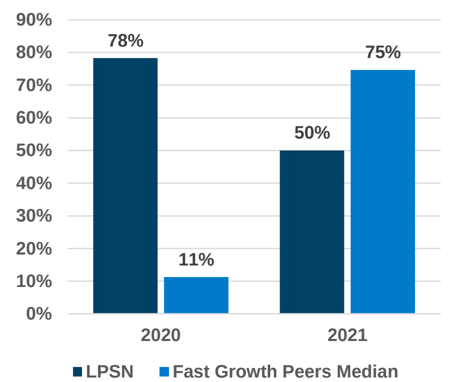
EV/FCF



FCF Margin



FCF Growth



Risks

Competition from CRM suite vendors: LivePerson competes in the broader CRM market and there is risk that the company is disintermediated by larger vendors that subsume messaging into a broader CRM/front-office platform.

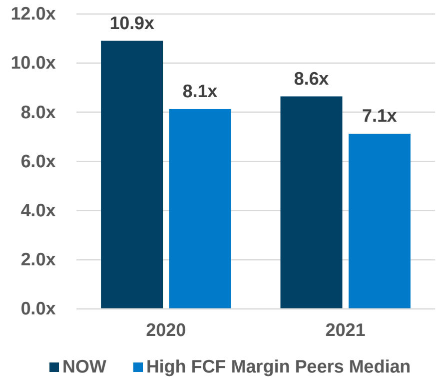
Execution: The company has dramatically ramped up hiring efforts in its sales-and-marketing and R&D functions. With a large number of new employees coming on board in a short time, there is a possibility of business disruption which could impact financial results.

Margins: Management has chosen to reinvest in the business to help drive long-term growth. There is risk that the company continues to invest aggressively in the business and pushes out margin expansion, which could result in an adverse reaction to the stock.

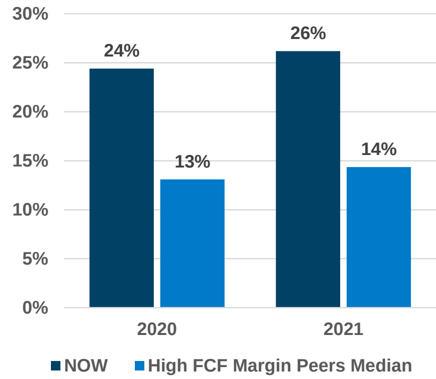
Note: all data is calendar years.
Sources: William Blair estimates and FactSet.

NOW: ServiceNow Valuation Snapshot - Stock Price: $259

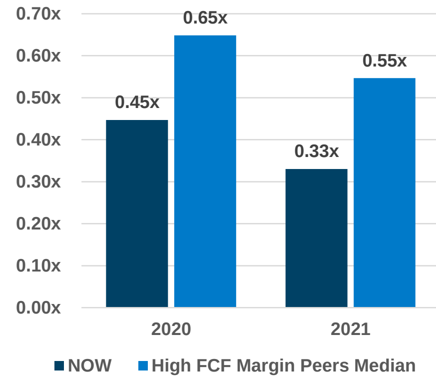
EV/Revenue



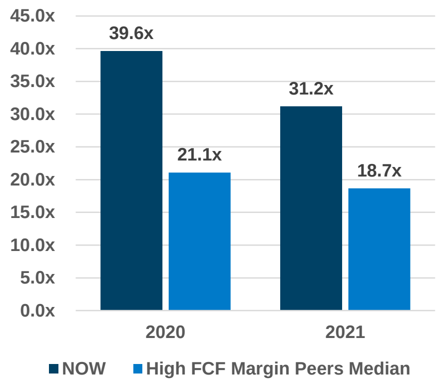
Revenue Growth



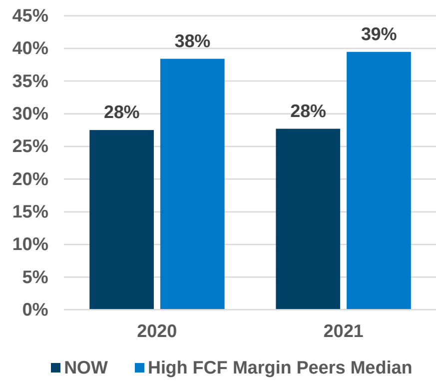
EV/Revenue/Growth



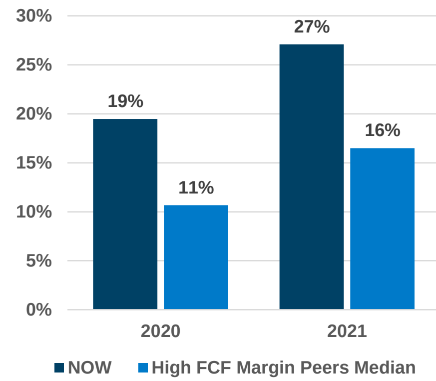
EV/EBITDA



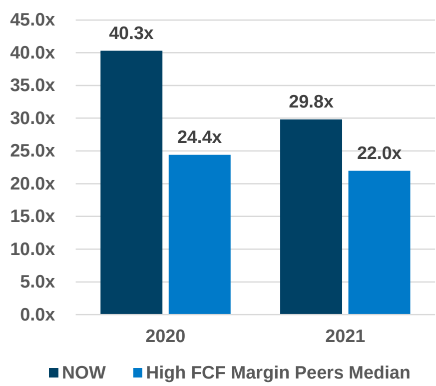
EBITDA Margin



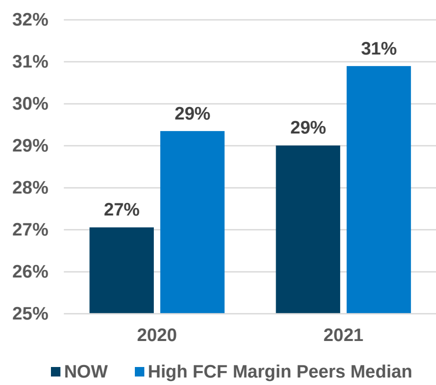
EBITDA Growth



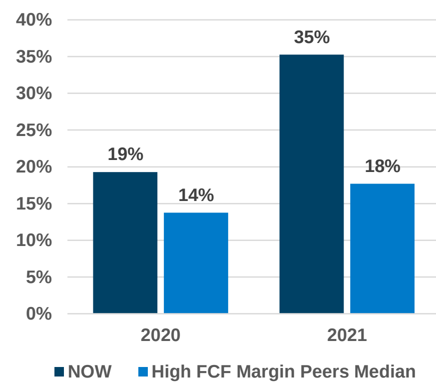
EV/FCF



FCF Margin



FCF Growth



Risks

Lumpy Billings: Billings can be lumpy and are increasingly becoming back half and fourth-quarter weighted. This could cause volatility in the stock in quarters where billings appear light.

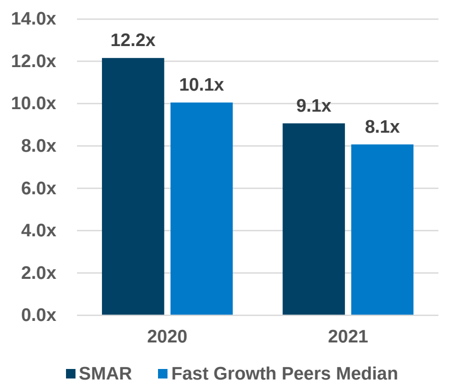
Competition: Emerging areas of growth for ServiceNow (such as CSM, ITOM, financial, DevOps) are more competitive than the core ITSM market and are markets where ServiceNow has not yet established dominance.

Turnover: The company has recently experienced notable executive turnover, with several members of the team leaving to join Snowflake. If more employees leave to join Snowflake, ServiceNow could experience disruption in its operations.

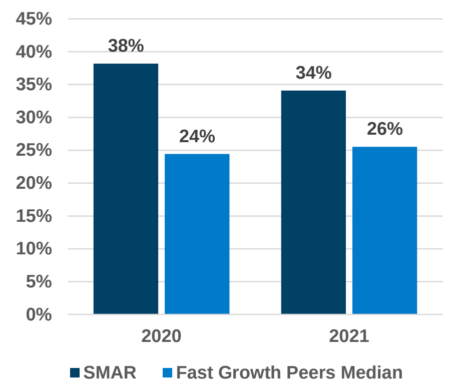
Note: all data is calendar years.
Sources: William Blair estimates and FactSet.

SMAR: Smartsheet Valuation Snapshot - Stock Price: $39.34

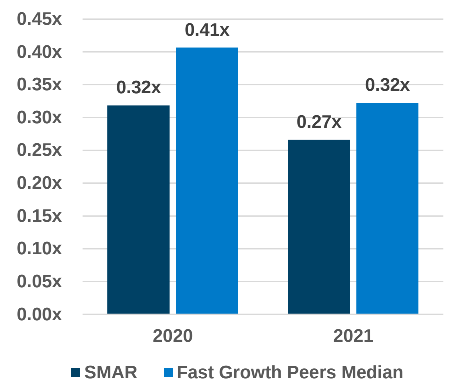
EV/Revenue



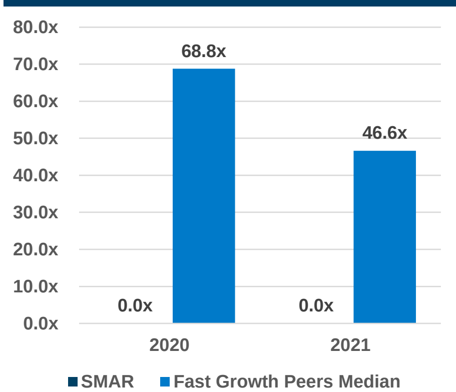
Revenue Growth



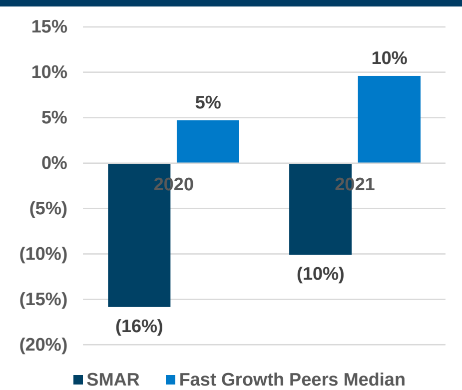
EV/Revenue/Growth



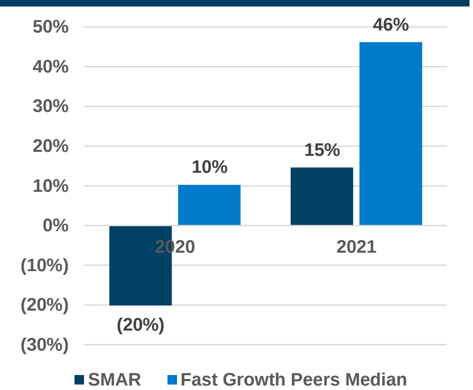
EV/EBITDA



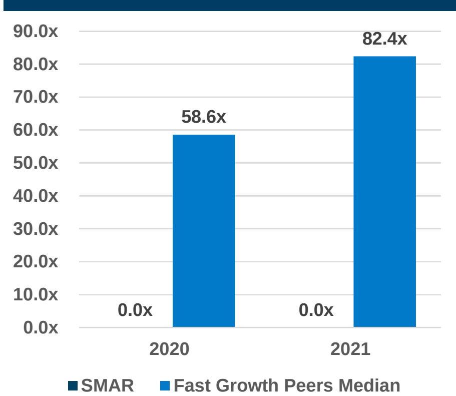
EBITDA Margin



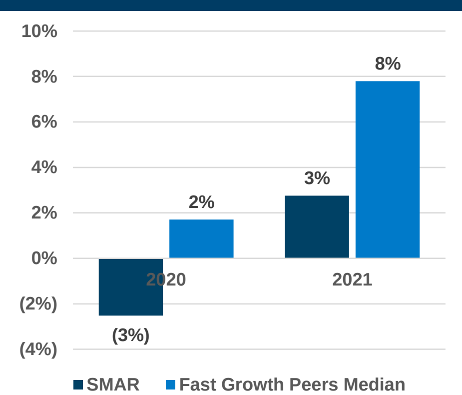
EBITDA Growth



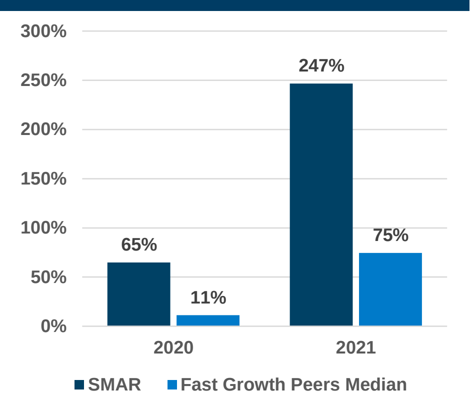
EV/FCF



FCF Margin



FCF Growth



Risks

Competition: The market for collaboration tools is highly competitive and includes both established vendors like Microsoft and up-and-coming vendors like Asana and Wrike.

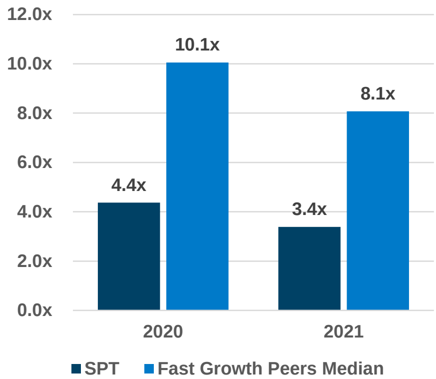
Sales Execution: Smartsheet is partially relying on enterprise businesses to drive revenue growth. Sales cycles in the large enterprise segment can be unpredictable and significant delays can adversely impact revenue growth.

Lack of profitability: Smartsheet is an emerging and fast growing business, but is yet to generate a profit. If investor sentiment shifts away from growth oriented loss-making companies, the stock can be adversely impacted.

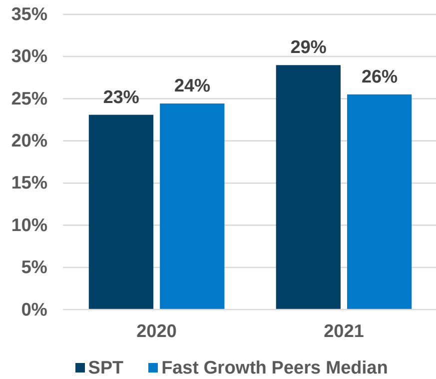
Note: all data is calendar years.
Sources: William Blair estimates and FactSet.

SPT: Sprout Social Valuation Snapshot - Stock Price: $13

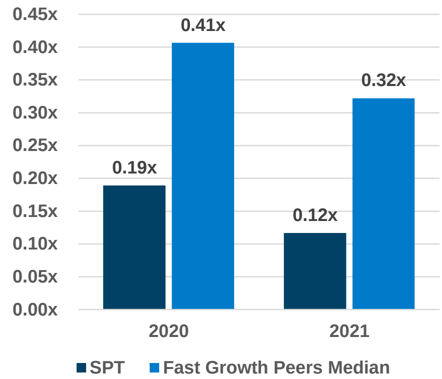
EV/Revenue



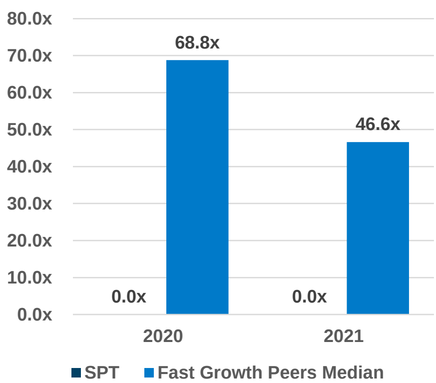
Revenue Growth



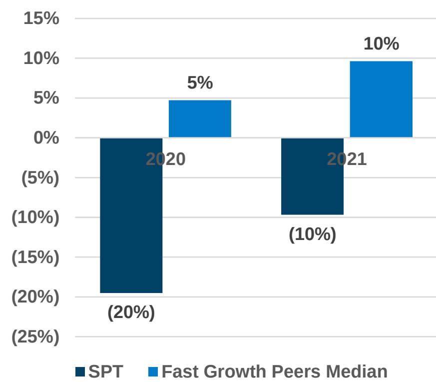
EV/Revenue/Growth



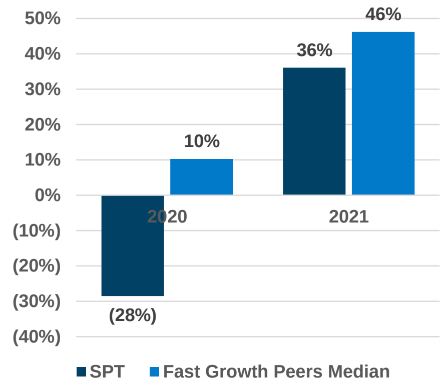
EV/EBITDA



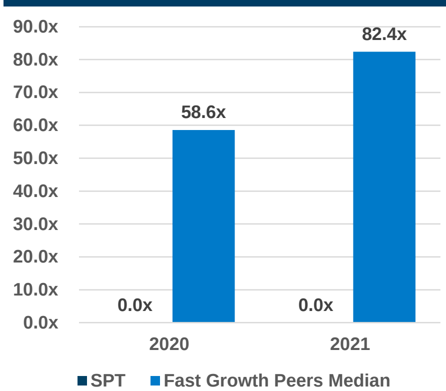
EBITDA Margin



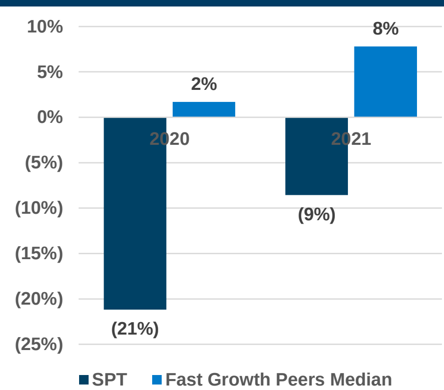
EBITDA Growth



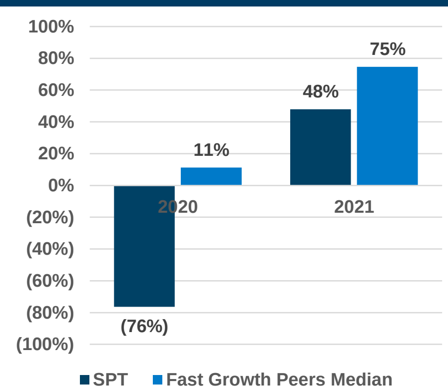
EV/FCF



FCF Margin



FCF Growth



Risks

Competition: There are several vendors aiming to take share and grow in the social media management market. This includes specialized social media vendors like Hootsuite, Sprinklr, and Khoros (formerly Lithium and Spredfast), and larger vendors like Salesforce.

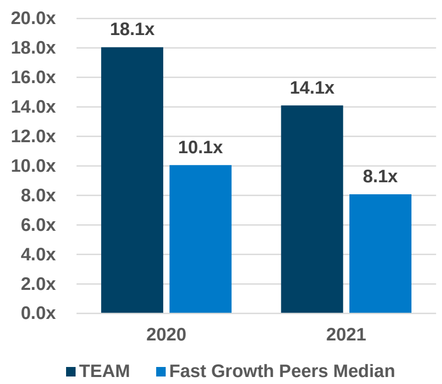
Partner Relationship Dependency: Sprout is dependent on data from its social media partners (Twitter, Facebook, etc.) to drive its offerings. A meaningful change in these relationships may adversely impact Sprout's products and cause harm to the company's competitive advantage.

Exposure to SMB Segment: Sprout Social has meaningful exposure to small and midsize businesses with fewer than 50 employees. These companies are generally at a higher risk of failing and going out of business, especially in an economic downturn.

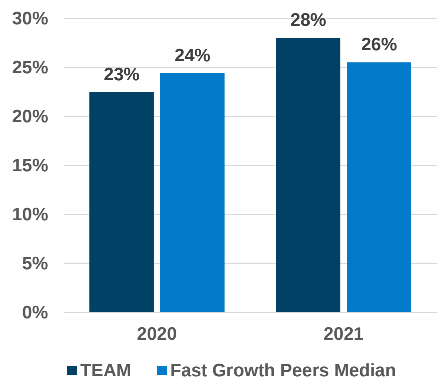
Note: all data is calendar years.
Sources: William Blair estimates and FactSet.

TEAM: Atlassian Valuation Snapshot - Stock Price: $129.01

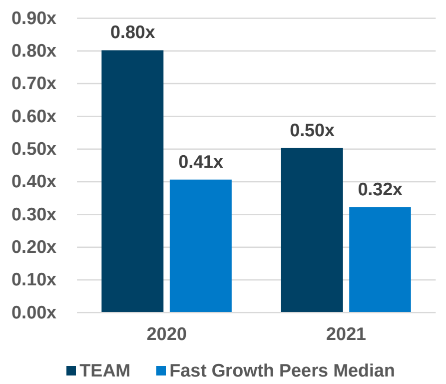
EV/Revenue



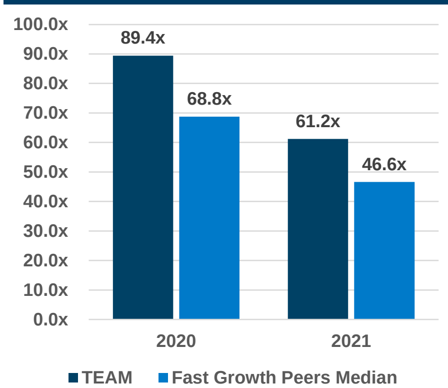
Revenue Growth



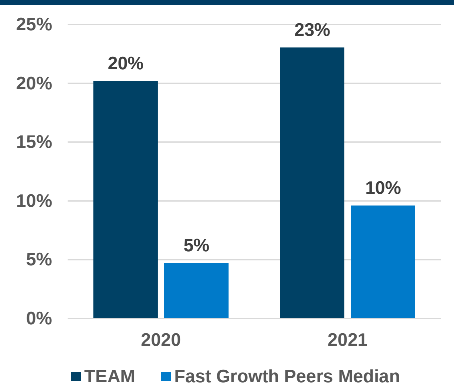
EV/Revenue/Growth



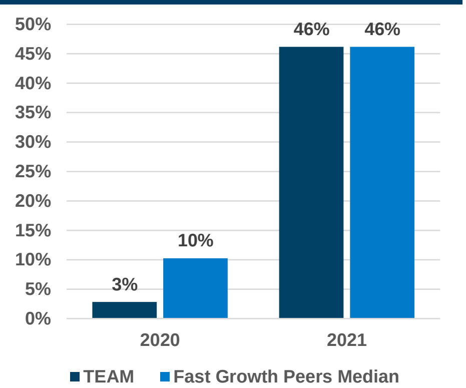
EV/EBITDA



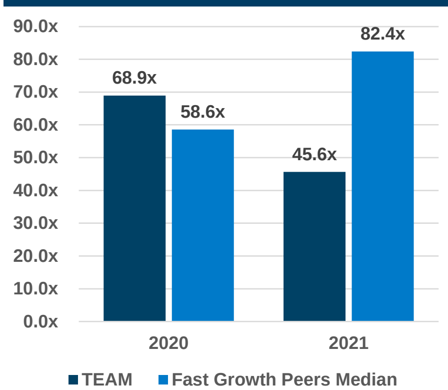
EBITDA Margin



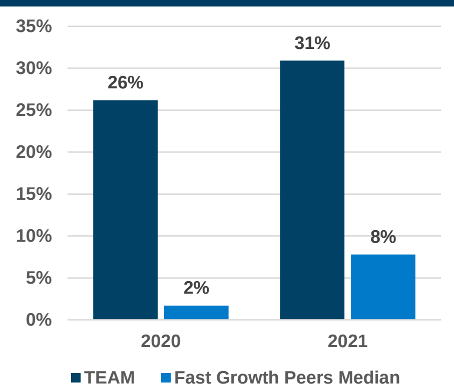
EBITDA Growth



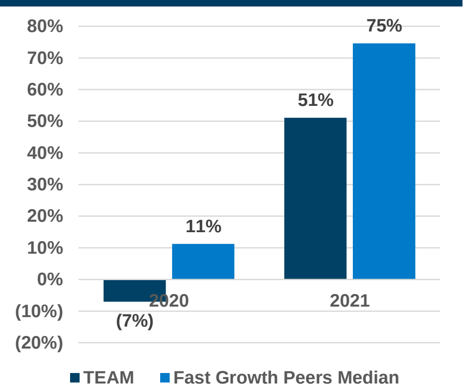
EV/FCF



FCF Margin



FCF Growth



Risks

Pricing changes: Atlassian raises prices on its offerings on an annual basis. This could result in lower customer satisfaction, thereby increasing churn. In addition, the pricing changes result in volatility in the company's billings.

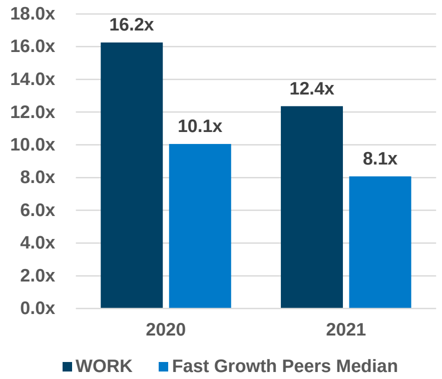
Low Barriers to Entry: Some of Atlassian's products are typically not extremely difficult to replicate and new entrants could develop competing products without a huge capital investment.

Inability to Continue Viral Sales Model: Atlassian operates without a quota-carrying salesforce, and instead relies on its viral sales model to acquire new customers and expand with existing customers. As the company moves upmarket, it may need to invest in a traditional sales team.

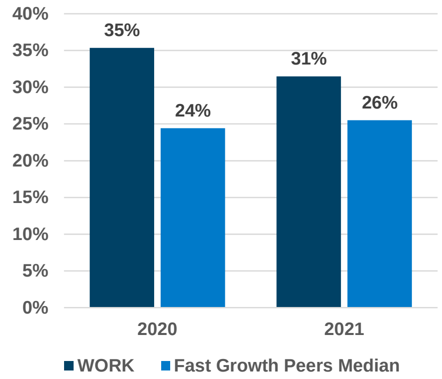
Note: all data is calendar years.
Sources: William Blair estimates and FactSet.

WORK: Slack Valuation Snapshot - Stock Price: $24.26

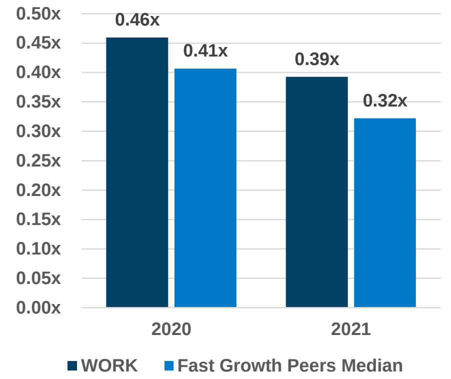
EV/Revenue



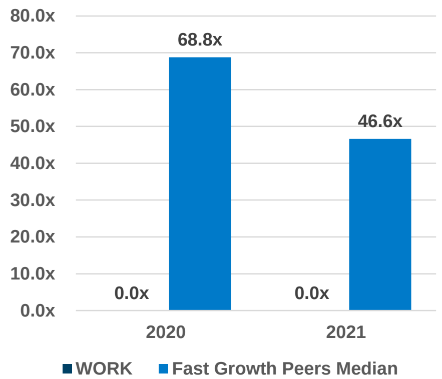
Revenue Growth



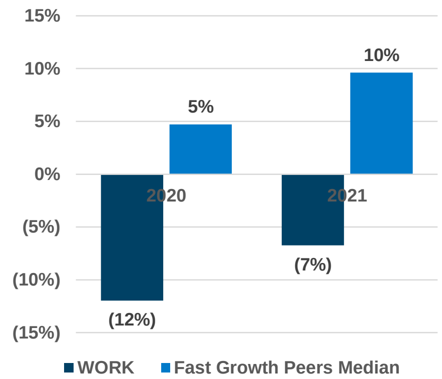
EV/Revenue/Growth



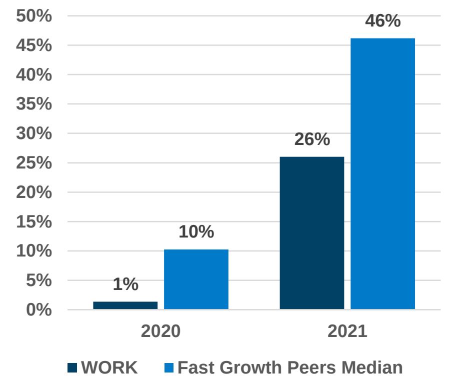
EV/EBITDA



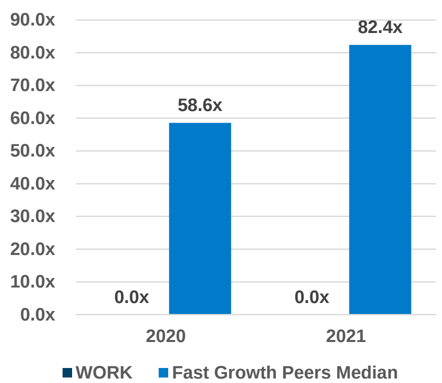
EBITDA Margin



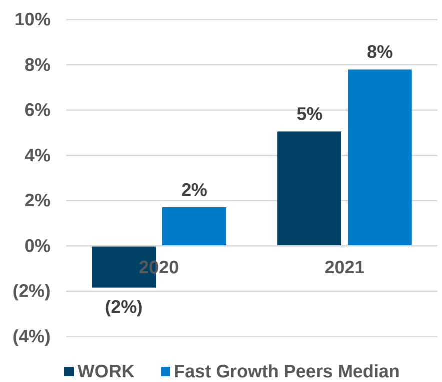
EBITDA Growth



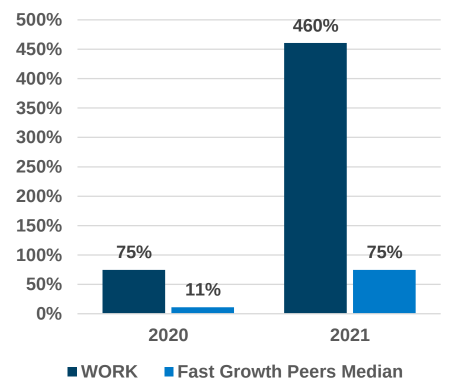
EV/FCF



FCF Margin



FCF Growth



Risks

Competition: The market for chat-based collaboration tools is highly competitive and Slack is directly competing with Microsoft, a well-capitalized company with deep relationships in the enterprise market.

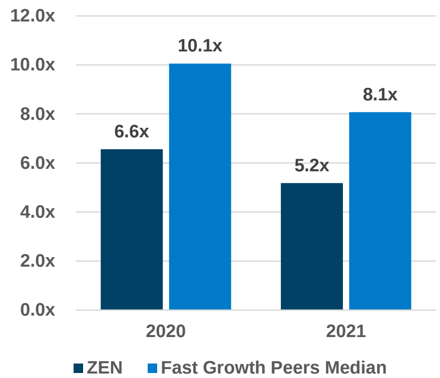
Customer Concentration: Although no single customer accounts for more than 10% of Slack's annual revenue, a large portion of its revenue is generated from less than 1% of customers that are above $100,000 in ARR.

Lack of profitability: Slack is an emerging and fast growing business, but is yet to generate a profit. If investor sentiment shifts away from growth oriented loss-making companies, the stock can be adversely impacted.

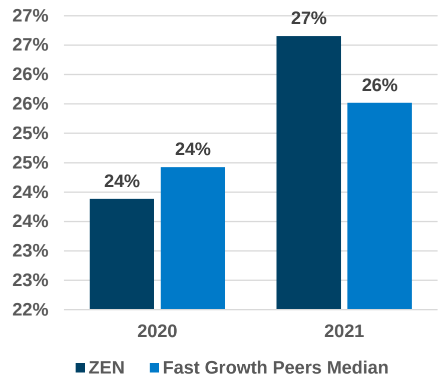
Note: all data is calendar years.
Sources: William Blair estimates and FactSet.

ZEN: Zendesk Valuation Snapshot - Stock Price: $58.94

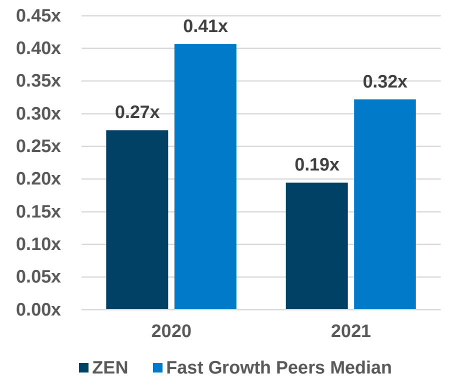
EV/Revenue



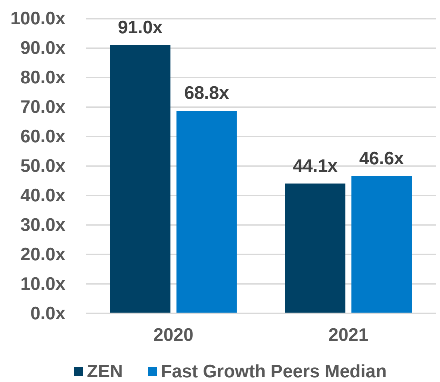
Revenue Growth



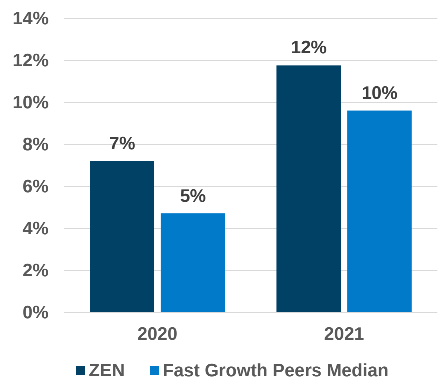
EV/Revenue/Growth



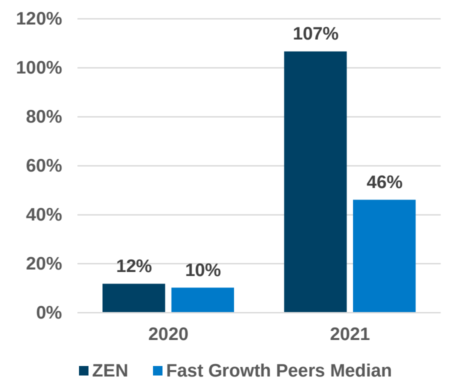
EV/EBITDA



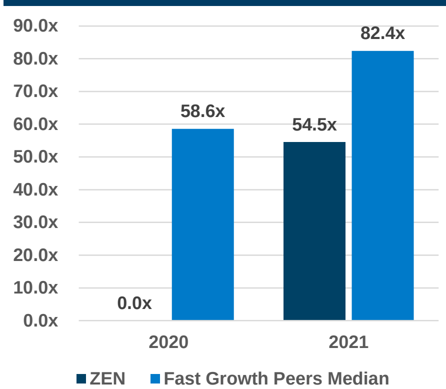
EBITDA Margin



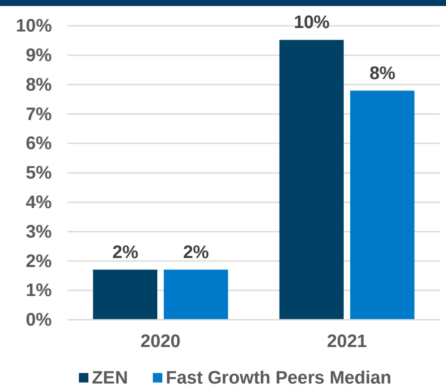
EBITDA Growth



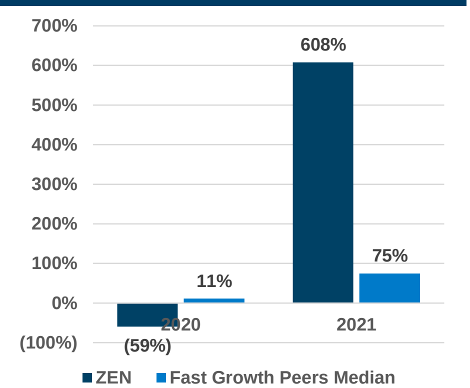
EV/FCF



FCF Margin



FCF Growth



Risks

Competition: The market for customer service and front office software solutions is highly competitive and as Zendesk moves further upmarket, it is likely to more frequently encounter larger rivals like Salesforce and ServiceNow, both of whom are chasing growth.

Sales Execution: Zendesk is partially relying on its enterprise businesses to drive revenue growth. Sales cycles in the large enterprise segment can be unpredictable and significant delays in closing deals can adversely impact revenue growth.

International Exposure: A large percentage of Zendesk's revenue comes from the international markets and any economic slowdown in these regions is likely to result in slower decision making from customers, which could be a headwind to growth.

Note: All data is calendar years.
Sources: William Blair estimates and FactSet.

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DOW JONES: 20943.50
S&P 500: 2470.50
NASDAQ: 7360.58

Additional information is available upon request.

Current Rating Distribution (as of April 3, 2020):

Coverage Universe	**Percent**	**Inv. Banking Relationships ***	**Percent**
Outperform (Buy)	71	Outperform (Buy)	22
Market Perform (Hold)	28	Market Perform (Hold)	9
Underperform (Sell)	1	Underperform (Sell)	0

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