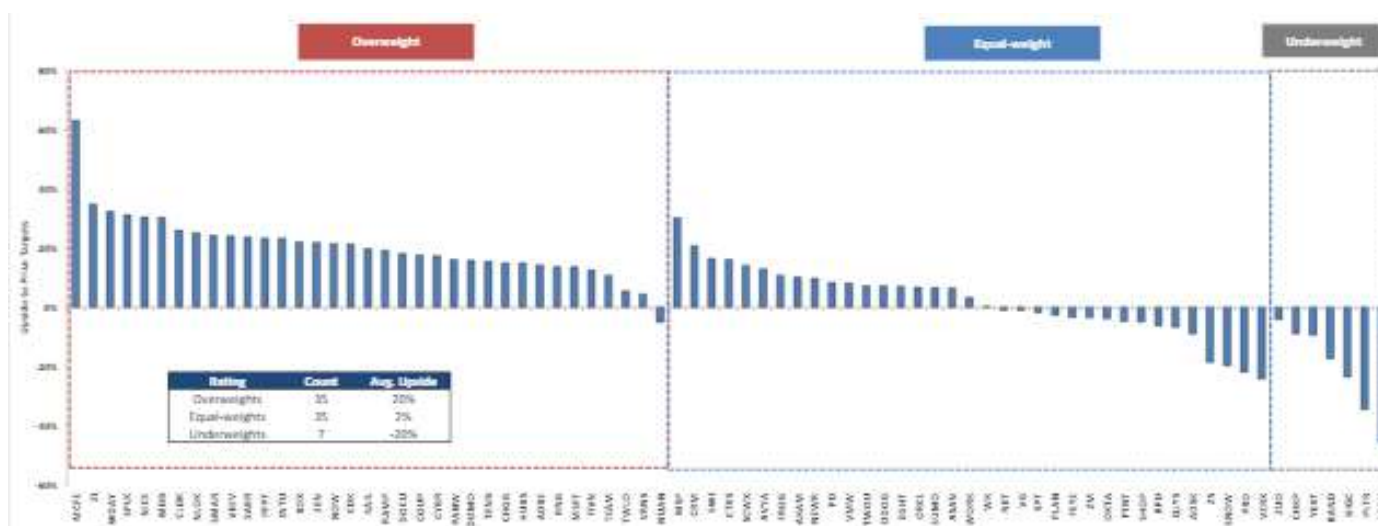


December 21, 2020

Morgan Stanley Software

2021 Software Outlook — Approaching with a Scalpel



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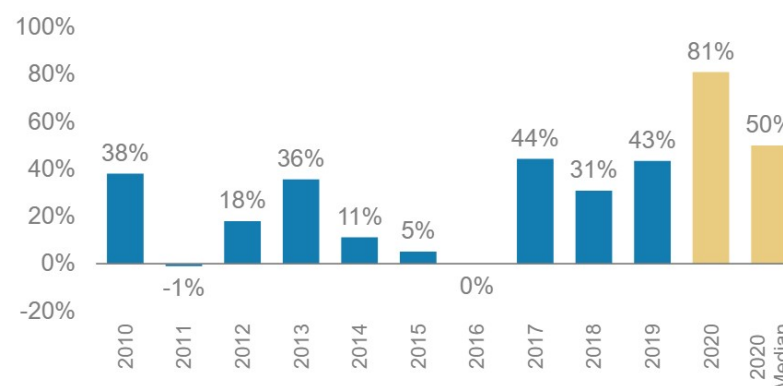
View On The Market

Software Spending into 2021

Software at All-time Highs — How Did We Get Here?

- **Strong Secular Stories Remain**
(and Covid Crisis a Likely Catalyst Medium Term)
- **Lower Interest Rates Positive for Long Duration Assets**
- **Largely Recurring Revenue Models Muted Demand Impacts**
- **Safe Haven from Regulatory, Trade and Political Concerns**
- **Software Balance Sheets Remain Strong**

Average Annual Stock Performance



EV/ NTM Sales (Total Software Group)



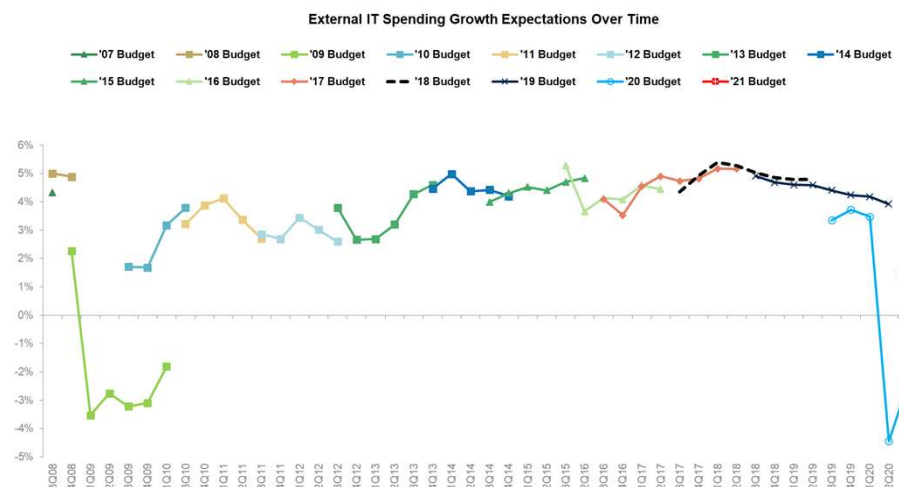
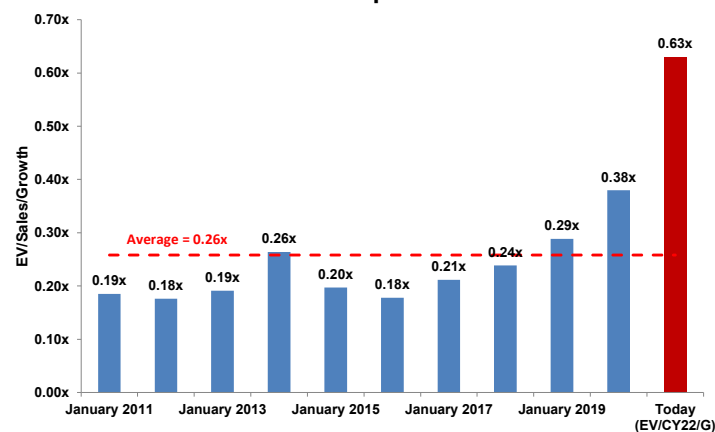
View On The Market

Software Spending into 2021

Software at All-time Highs — Where Do We Go Now?

Risks in Software:

- Return to Growth in 2021 IT Budgets, but Expecting a Slow Recovery
- Lagging Effects of the Subscription Model
- Rising Interest Rates Creates Risks for High Multiples
- Better Cyclical Rebound in Other Sectors

**SaaS Group Historical EV/Sales/Growth Multiple**

View On The Market

What to Own into 2021

Picking from the Top of the CIO Priority List

- **Public Cloud Adoption:** MSFT surveys as the main IT wallet share gainer with the move to Public Cloud. DDOG and MDB two additional plays.
- **Workflow Automation:** NOW has successfully expanded their purview to now automate workflows across the enterprise.
- **Secure Access:** The crisis likely accelerates the shift towards Cloud-based Secure Access and Zero Trust Architectures. PANW more affordable than ZS.

2021 CIO Priorities – Projects w/ Largest Spend Increases

1. Cloud Computing
2. Digital Transformation
3. Artificial Intelligence / Machine Learning
4. DW/BI/Analytics
5. CRM Applications

View On The Market

What to Own into 2021

Cyclical Rebound Plays in Software

- **Intuit (INTU), OW, PT=\$455:** ~65% of revenue is derived from the Small Business segment (and now Credit Karma. After seeing significant macro impacts in 2020, management gave a conservative view into the year ahead, which along with an increased focus on higher value solutions should drive solid positive EPS revision as Intuit paves a path back to 20%+ earnings growth
- **Smartsheet (SMAR), OW PT = \$90:** Heading into 2021 (FY22), there is ample room for existing customers to return to prior spending patterns, as pent up usage demand from the pandemic begins to settle in. As NRR starts to pick up through 2021, we see potential for the company to accelerate billings growth, which would push the stock toward our \$90 base case –we see a very strong risk/reward in the stock with a 2.5x bull/bear risk/reward skew
- **Proofpoint (PFPT), OW, PT=\$141:** With a predominantly seat-based pricing model and ~20% revenue exposure to negatively impacted verticals (eg. Retail/Hospitality), Proofpoint has experienced more meaningful Covid-related headwinds relative to security peers. Heading into 2021, we expect renewal rates to gradually improve with overall macro, driving upside to consensus topline estimates. As a leading share gainer in its core email protection market and expanding TAM from an emerging solutions portfolio, we forecast ~30% FCF growth over the next few years, which is underpriced at ~23X CY22 FCF.

View On The Market

What to Own into 2021

Work From Home Beneficiaries – Where Can Momentum Sustain?

Breaking the Dam

- **Docusign (DOCU), OW, PT=\$280:** With physical signatures increasingly difficult in a socially distanced world, Digital Signatures are becoming the standard for any contracts going forward. Between the limited penetration of digital signatures today (we see a \$25B TAM for eSignatures) and a pricing methodology which leaves significant value until contract renewal, we see a better durability of growth than consensus currently prices in the stock.
- **ZoomInfo (ZI), OW, PT=\$55:** In the absence of traditional lead generation (conferences, steak dinners, etc...), B2B sales organization had to rely on more data driven methodologies for lead generation and pipeline development. Given the effectiveness and efficiency of these techniques, it unlikely businesses reverse course post-Covid. Rather, we see ZoomInfo benefiting from a ramping shift towards B2B Sales 2.0.
- **Twilio (TWLO), OW, PT = \$375:** As in-person communications fell by the wayside in 2020, Twilio stepped to the forefront, enabling organizations to have communication continuity with customers (whether for retail, public service, elections – to name a few use cases). We expect these digital engagements to scale as ecommerce adoption continues, and sophistication of analysis to grow (with recent acquisition of Segment). Expect company to continue growing 30%+ organically into 2021 as new use cases expand and travel / hospitality markets return.

View On The Market

What to Own into 2021

Work From Home Beneficiaries – Where Can Momentum Sustain? (cont'd)

Breaking the Dam

- **Five9 (FIVN), OW, PT = \$190:** Similar to TWLO, Five9 was a beneficiary of the need for more remote communications with customers. As companies look to compete with ecommerce leaders, they need to invest in omnichannel contact center investments, which FIVN (and NICE) are leaders in. We believe expansion of partnerships and prioritization of digital transformation initiatives will help sustain 30% growth for FIVN in 2021.
- **MongoDB (MDB), Upgrade to OW, \$439 PT.** With MongoDB's cloud database Atlas set to be the majority of revenue in CY21 and an accelerated pace of customer acquisition in CY20, we see an equation for durable 30%+ growth emerging as the shift to the cloud accelerates in CY21, supported by 20%+ customer base growth with near 120% net-expansion from the existing base.
- **NICE (NICE), Upgrade to OW, \$334 PT.** With only ~19% of contact center agent seats currently in the cloud and the current pandemic highlighting the need for flexibility and agility, we see NICE garnering a significant share of the enterprise seats that are projected to move to the cloud in the coming years, supporting a 20% cloud revenue CAGR through CY23. Our SoTP analysis highlights significant untapped value in this cloud business, moving us to OW shares into CY21.

View On The Market

What to Own into 2021

Work From Home Beneficiaries – Where Can Momentum Sustain?

Really Tough Comps

- **E-commerce – GMV growth normalizes into CY21:** With the near shut down of physical retail in the first half of 2020, e-commerce gained an estimated 600 bps of share of overall US retail spending (versus an average annual gain of 140 bps in the prior 5 years), driving 94% gross merchandize value (GMV) YTD growth for SHOP and 70% PSR growth for BIGC year-to-date. As physical retail continues to re-open in 2021, we see GMV growth returning to a more normalized levels for these vendors, leaving the BIGC (UW, PT=\$55) multiple looking at risk at 25X EV/CY22 sales
- **Enabling VPNs Leaves Firewalls Under Pressure:** Enterprises scrambling to enable upwards of 80% of their employees to work from home, often had to add significant firewall capacity to enable workers to utilize Virtual Private Networks (VPNs) that terminated at the firewall. As a relatively heavily penetrated market, this largely represented a pull forward of future demand for vendors like FTNT (EW, PT=\$127) and CHKP (UW, PT=\$110) who benefited from the elevated product spend in CY20.
- **Video Conferencing – Zoom Fatigue Setting In:** In the work from home environment, video conferencing became the defacto stand-in for in person meetings and ZM (EW, PT=\$400) the leading technology for video conferences. The breadth and depth of penetration of video conference technologies appears very high, and while additional monetization opportunities exist, growth likely decelerates significantly into 2021. We forecast ZM revenues decelerating from 315% in CY20 to 35% in CY21 and 13% in CY22. Potential for upside as hybrid work models persist and more reasonable valuation keep us EW, but 2020 momentum that took the stock to above \$500 will be tough to sustain.

View On The Market

What to Own into 2021

Proving Out the Multiple – Better Growth Prospects vs a Reasonable Multiple

GARP – The Sweet Spot for CY21

- **Adobe (ADBE), OW, PT=\$560:** A better digital marketing spending environment should sustain the solid momentum in the core Digital Media segment and a rebound in Digital Experience in the year ahead, proving management's initial targets conservative. Additionally, a focus on improving efficiency within the Digital Experience segment should enable additional operating margin gains in FY21, driving positive EPS revisions and proving the current P/E multiple of 35X CY22 EPS durable.
- **Microsoft (MSFT), OW, PT=\$249:** After clearing the tough compares in the first half of their FY21, the high priority of Cloud Computing and Microsoft's leading positioning for that theme pave a clear road ahead to double digit revenue growth and a mid-teens total return from MSFT over the next several years. At 26X CY22 P/E this durable EPS growth looks relatively underpriced versus the broader market.
- **SailPoint (SAIL), OW, PT=\$63:** An increasingly cloud-based and distributed workforce is shifting security demand towards Identity Management, where SailPoint is one of the leading beneficiaries. Accelerating share gains against legacy competitors (IBM, CA, ORCL), a revamped go-to market and transition to a recurring SaaS model drives durable 30%+ ARR growth over the next few years, with significant room for multiple expansion as SAIL trades at a >50% discount to SaaS security peers.

View On The Market

What to Own into 2021

Proving Out the Multiple – Better Growth Prospects vs a Reasonable Multiple

Growth – Stronger for Longer

- **ServiceNow (NOW), OW, PT=\$662:** Sustained investment during the pandemic ahead of an expanded market opportunity (now captures workflows across IT, customer service, HR delivery and broader workflow automation) positions NOW well for sustainable 25%+ subscription revenue growth. Underlying this growth profile are premier software unit economics, supporting >40% steady-state margins. The prospect of durable 30%+ FCF growth through CY23 should prove the current valuation attractive.
- **Atlassian (TEAM), OW, PT=\$270:** A \$24 billion TAM, well addressable by the current solution portfolio, an advanced Cloud Platform better enabling penetration into that TAM, and a long-term investment philosophy sets up Atlassian for durable growth to \$5 billion in revenue and beyond. We see a conservative forecast ahead with a strong potential for upward revisions near-term, and a path to durable 30%+ FCF growth in FY23 and beyond longer-term.
- **Veeva (VEEV), OW, PT = \$332:** Veeva presents investors with a unique combination of ~20% revenue growth with ~40% EBIT margins, routinely showcasing some of the best unit economics in all of SaaS. Potential COVID tailwinds within the Commercial Cloud Engage and Vault Sites pieces of the portfolio in 2021. With many near-term and long-term opportunities on the horizon, we remain OW.
- **RingCentral (RNG), OW, PT = \$420:** RingCentral has been a consistent 33% subscription growth company for multiple years now. As AVYA, Atos, Alcatel, AT&T partnerships ramp, we think this growth can accelerate and sustain 30%+ subscription growth levels for multiple years, helping the stock to continue to outperform.

View On The Market

What to Own into 2021

Penalty Box – Where is sentiment set to turn?

Out of the Penalty Box

- **Domo (DOMO), Upgrade to OW, \$70 PT:** After consecutive years of uneven execution and slowing growth exacerbated by investor concerns on the magnitude of cash burn, Domo has responded to the current pandemic with a sense of urgency taking critical actions to get to a cash flow positive position. Even more impressive is that Domo has meaningfully accelerated billings growth despite a reduction in sales capacity – a signal that the business has reached a key inflection point. As a result, Domo is emerging as a standout in the \$20+ billion business intelligence market at a time when a number of competitors are experiencing slower growth - a position that looks under appreciated at 6.8x CY22 sales.
- **PagerDuty (PD, EW, PT=\$50):** 3Q21 results highlighted a turnaround in key indicators, particularly the inflection in net expansion which has been falling quarterly for the past two years. The turnaround highlights a resonating value proposition as customer move to a more digital operating model combined with improved go-to-market under new leadership and streamlined pricing. If these trends sustain, a path back to 30%+ growth emerge which would make current valuation of ~13x CY22e sales compelling.
- **Nuance Communications (NUAN, OW, PT=\$41):** Nuance has undergone a comprehensive rationalization of its product portfolio over the past two years. Out of this process emerges a leaner, more focused organization that is better suited to grow into its most defensible opportunities. As a result of more focused investment, an ongoing cloud transition that carries highly attractive unit economics with significant revenue uplift potential and an upcoming product cycle with Dragon Ambient Experience (DAX), we see the potential for further upside into CY21.

View On The Market

What to Own into 2021

Penalty Box – Where is sentiment set to turn? (*cont'd*)

Out of the Penalty Box

- **Palo Alto Networks (PANW, OW, PT=\$375):** More consistent execution and improved disclosure should give investors more confidence in the durability of firewall growth and the efficacy of the M&A driving a rapid expansion of Palo Alto Networks' NextGen Cloud Security portfolio. At 20X EV/CY22 FCF, the potential for durable 25%+ FCF growth is well underpriced in the shares.
- **Workiva (WK) - Upgrade to EW from UW:** Workiva's management has executed very well on their \$16B TAM opportunity, by making strong product improvements and building out a bigger partner ecosystem, which was supported by our recent round of diligence checks. With higher conviction in durability of growth and margin improvements, we upgrade to EW, as we see an opportunity for continuing beat/raise results with natural margin leverage as prior investments in S&M and R&D scale. As momentum continues to build, we upgrade WK to EW from UW and increase our PT to \$82. Our new \$82 PT implies 8.9x EV/CY22 sales or 0.57x growth-adjusted, which is also inline with SaaS group median of 0.57x.

View On The Market

What to Own into 2021

Penalty Box – Where is sentiment stuck in the mud?

Into the Penalty Box

- **Salesforce (CRM, EW, PT=\$275):** M&A in and of itself isn't bad. However deal prices with limited potential of achieving a decent return on investment, done immediately after management publicly declares no M&A is imminent and accompanied by the departure of a respected CFO (to be replaced by an executive with no finance experience) is likely to erode investor confidence. While we still see a solid growth opportunity ahead of Salesforce and upside to our \$275 price target, the current crisis in confidence likely extends the timeframe to closing that valuation gap.
- **Palantir (PLTR, UW, PT=\$17):** With key investment debates around lack of investment, limited commercial customer expansion and lack of transparency into the fundamentals left unresolved, the current valuation premium versus the broader software group appear unsustainable. While institutional investors tend to lean negatively on PLTR, retail excitement has buoyed the share price. However, a significant expansion of float come February 2021 likely tests the durability of that support.

View On The Market

Supporting Materials

Demand

Macro Outlook Stabilizing

Real GDP %Y	Annual			
	2019	2020E	2021E	2022E
Global	3.1	-3.4	6.4	4.4
G10	1.7	-5.4	5.1	3.9
US	2.3	-3.5	5.9	4.1
Euro Area	1.3	-7.2	5.0	3.9
Japan	0.7	-5.2	2.4	2.4
UK	1.4	-11.4	5.3	5.5
Canada	1.6	-5.6	5.9	3.4
Norway	2.4	-3.8	2.7	3.6
Sweden	1.2	-3.2	2.5	3.5
Australia	1.8	-2.8	3.7	3.5
EM	4.1	-1.8	7.4	4.7
AXJ	5.2	-0.7	8.5	5.2
LatAm	0.6	-7.0	5.0	2.9

Source: IMF, Morgan Stanley Research forecasts

Note: Global and regional aggregates for GDP growth are GDP-weighted averages, using PPP weights.

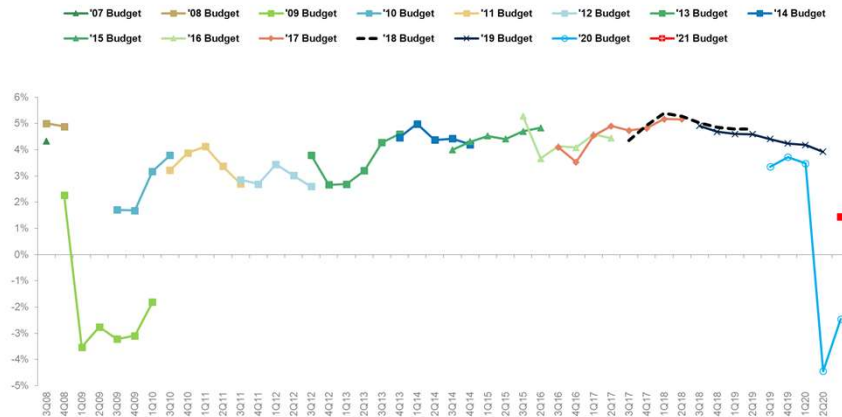


Source: Company Data, **Morgan Stanley Estimates

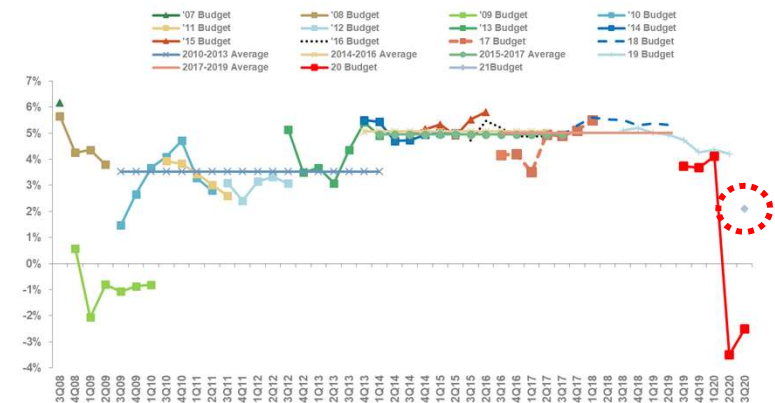
Demand

CIOs See a Return to Growth In '21

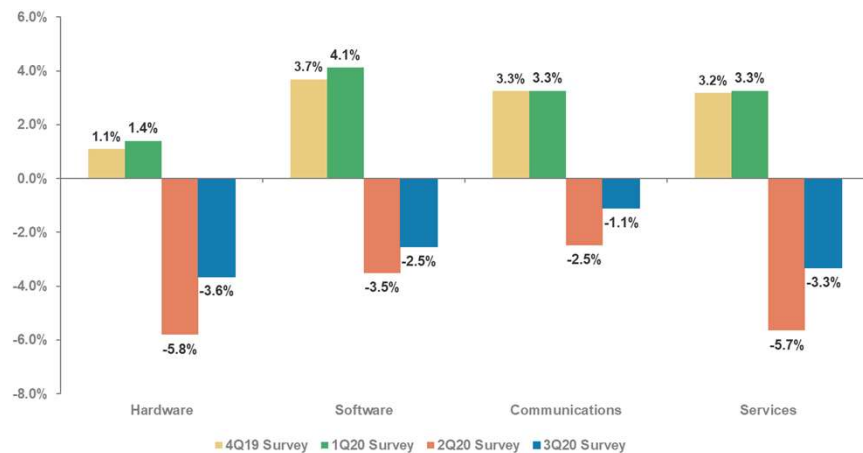
External IT Spending Growth Expectations Over Time



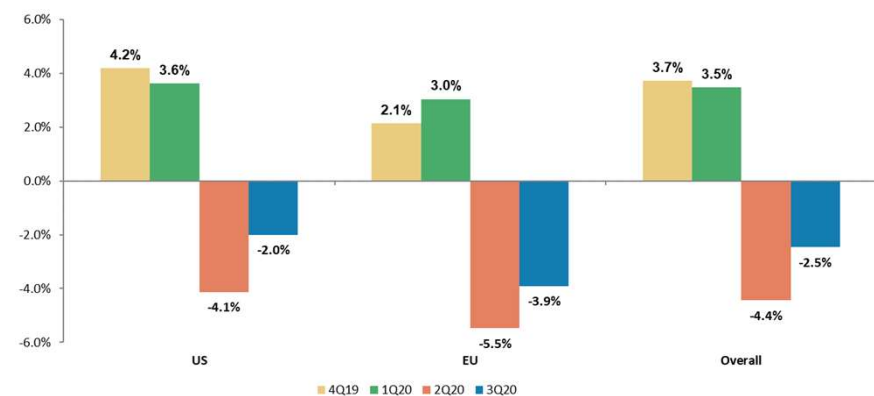
Software Spending Growth Expectations Over Time



2020 External IT Spending Growth Expectations by Sector

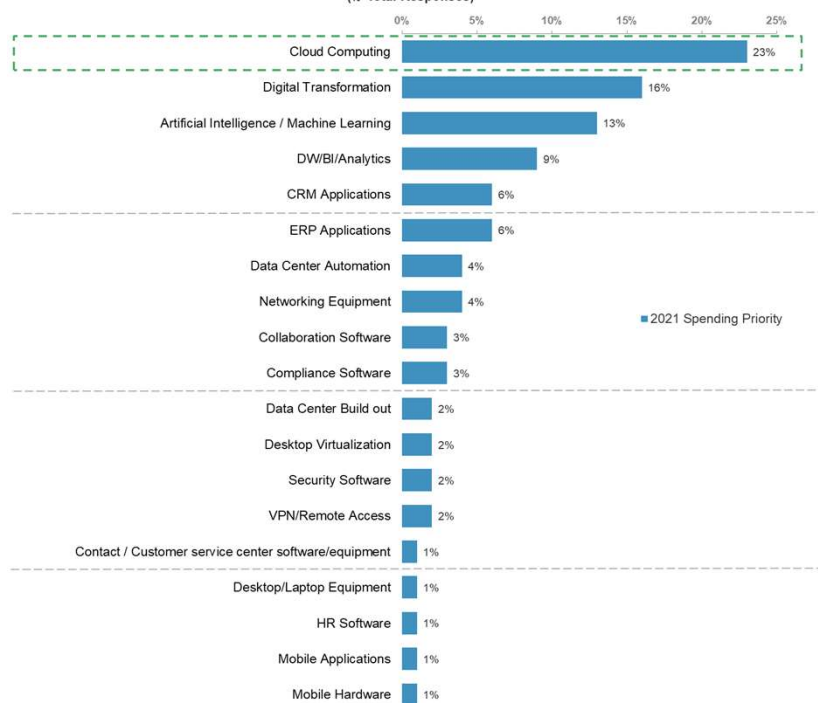


2020 External IT Spending Growth Expectations by Region

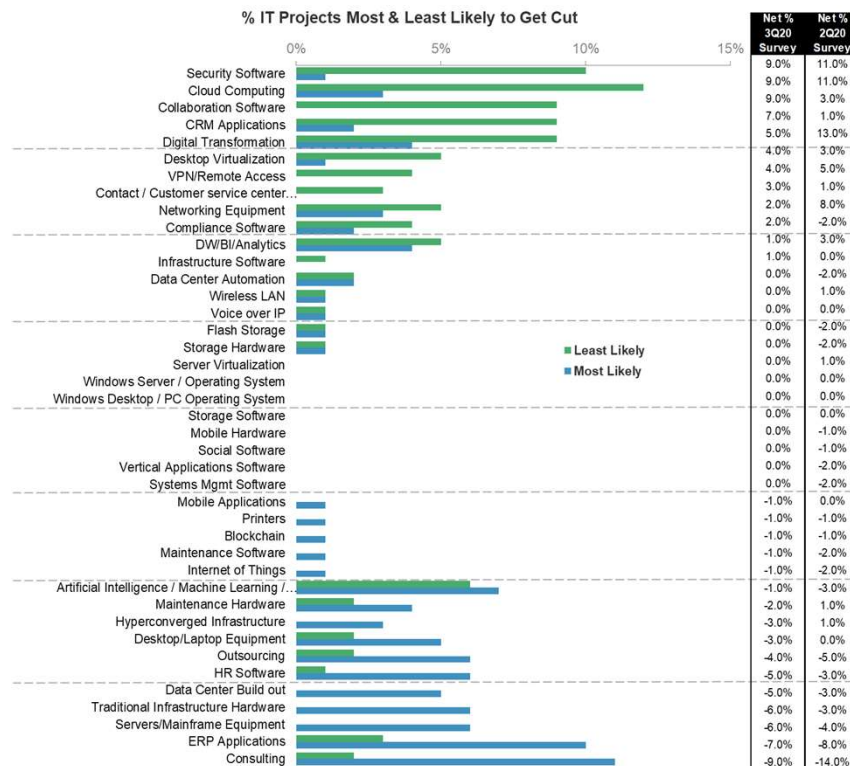


Demand

Software Dominates CIOs' Priorities

Projects with Largest Spend Increase in 2021
(% Total Responses)

% IT Projects Most & Least Likely to Get Cut

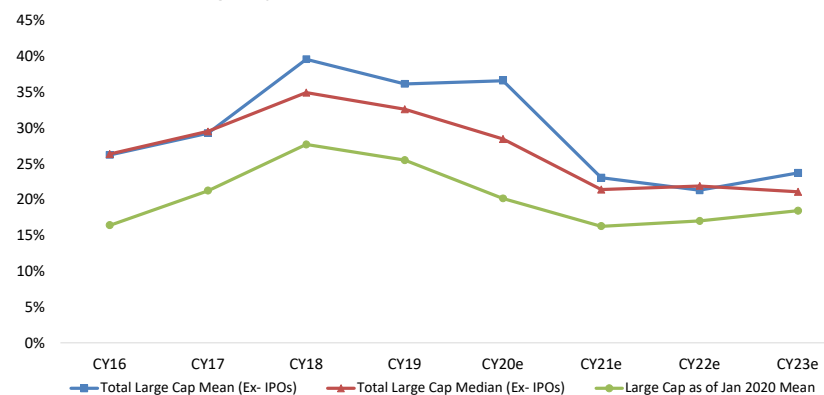


Expectations

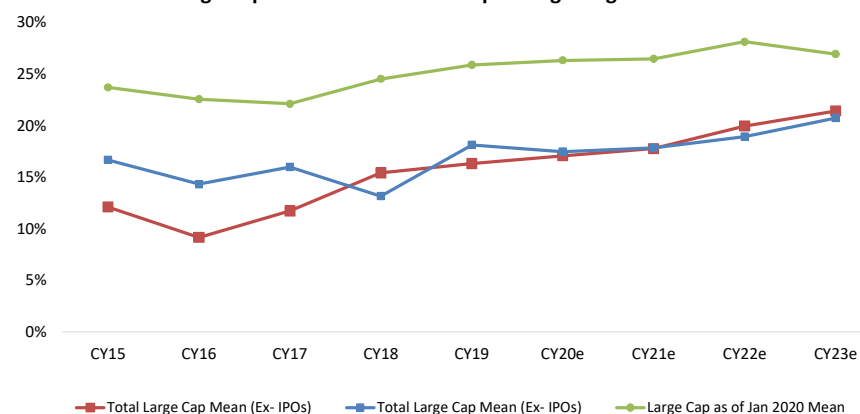
- Consensus appropriately forecasts decelerating revenue growth in our coverage universe followed by modest recovery: 21% median growth in CY21 versus 29% in CY20...
- ...However relatively flat margin expectations for CY21 may prove aggressive given the dynamics of subscription models
- Longer-term software margins should continue on the upward trend

Growth Expected to Slow in '21

Large Cap Software Consensus Revenue Estimates YoY

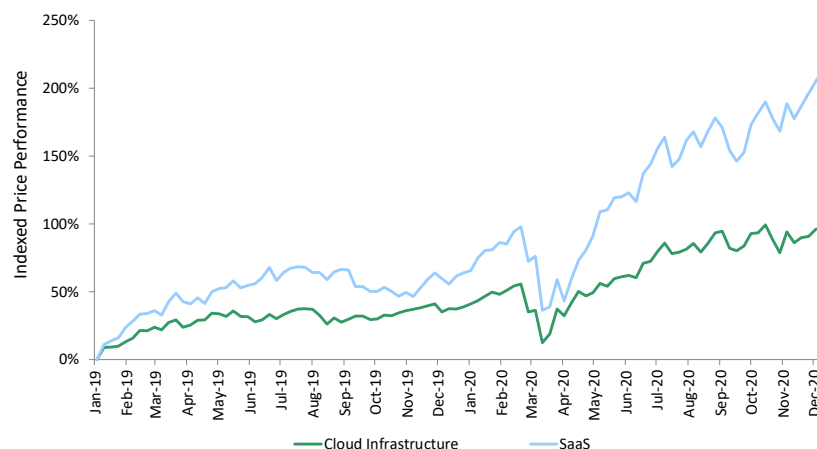
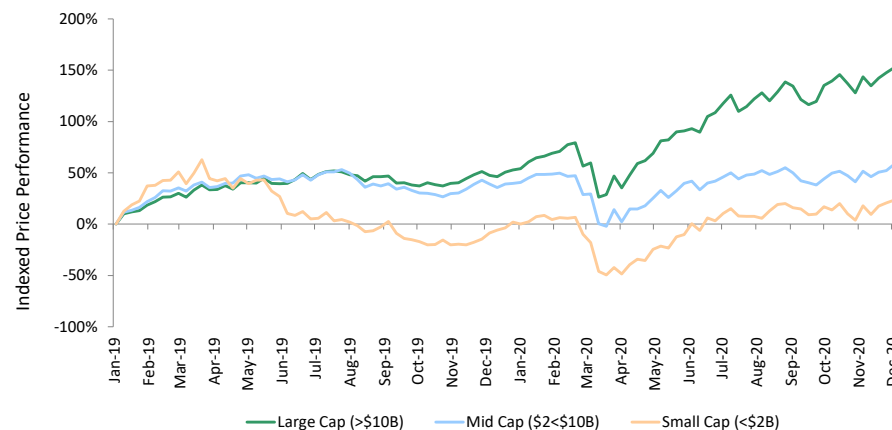
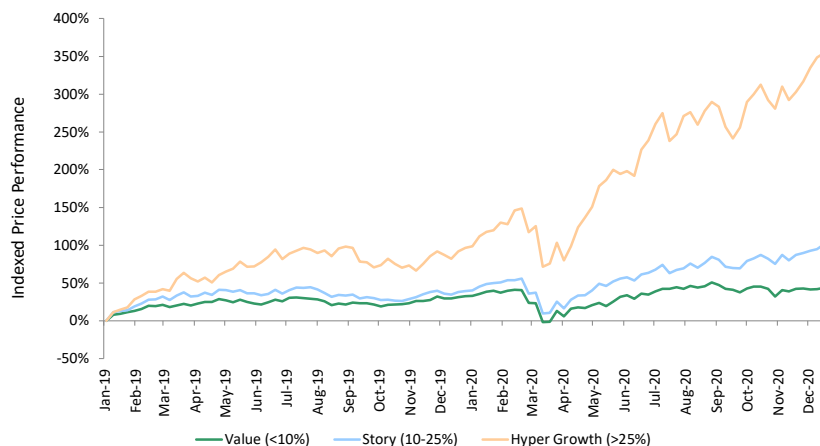


Large Cap Software Consensus Operating Margin Estimates



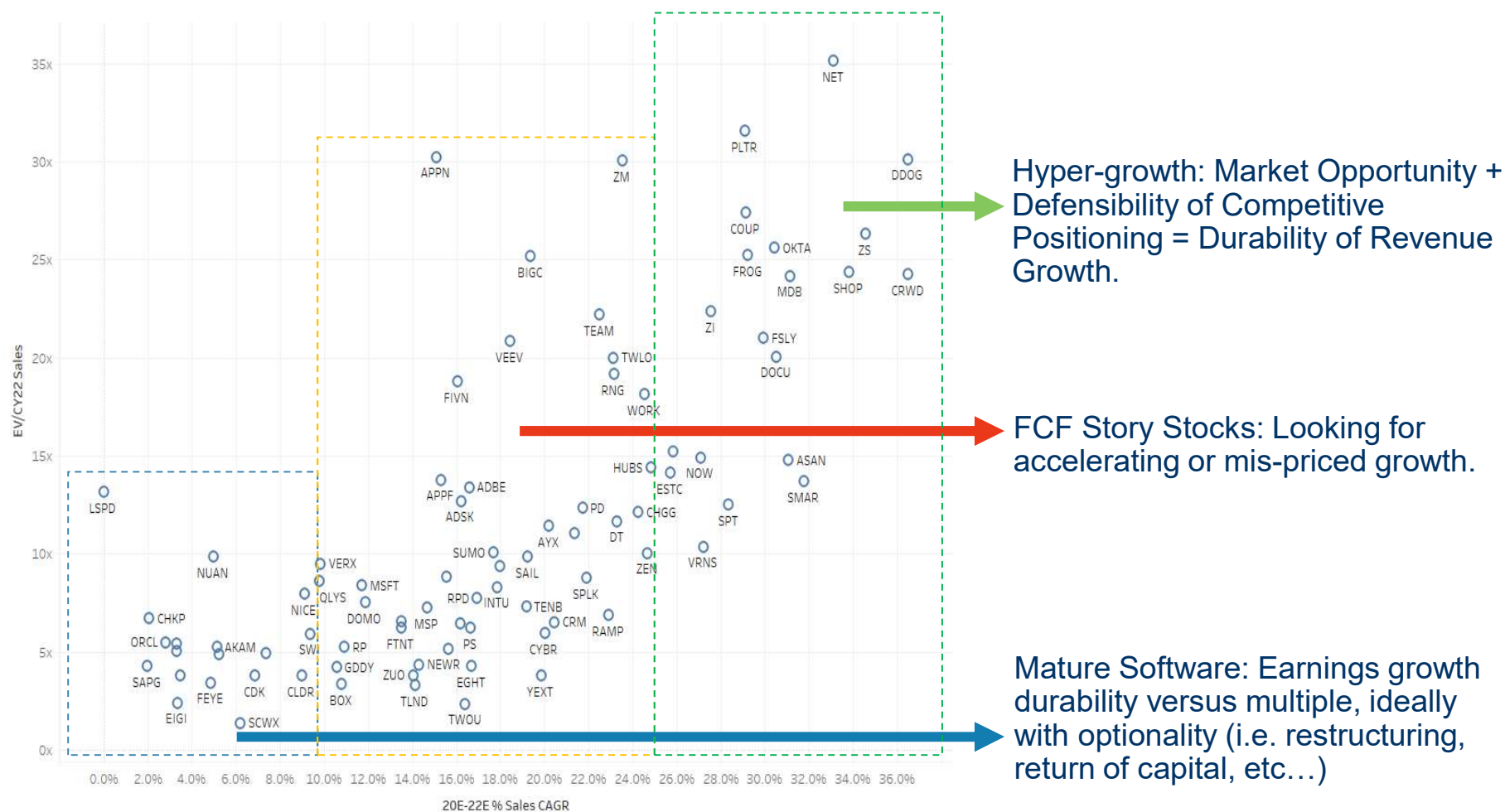
Expectations

Strong 2020 Stock Performance



Valuation

Not a One Size Fits All Space

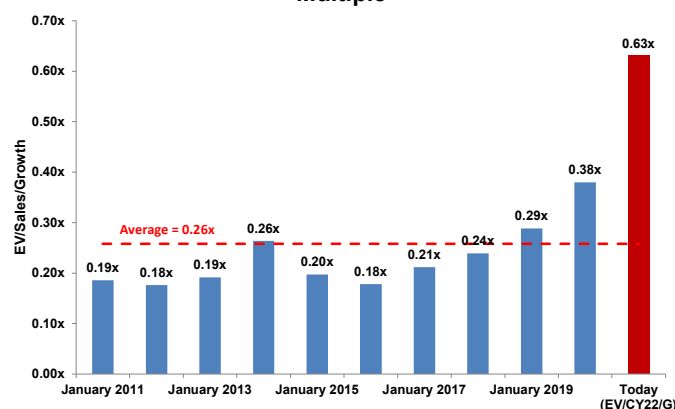
Different Frameworks for Different Parts of the Growth Curve

Valuation

Hyper-growth Looks Expensive

Average >20% Growth software EV/Sales multiple is **125% higher than the 5-yr average**

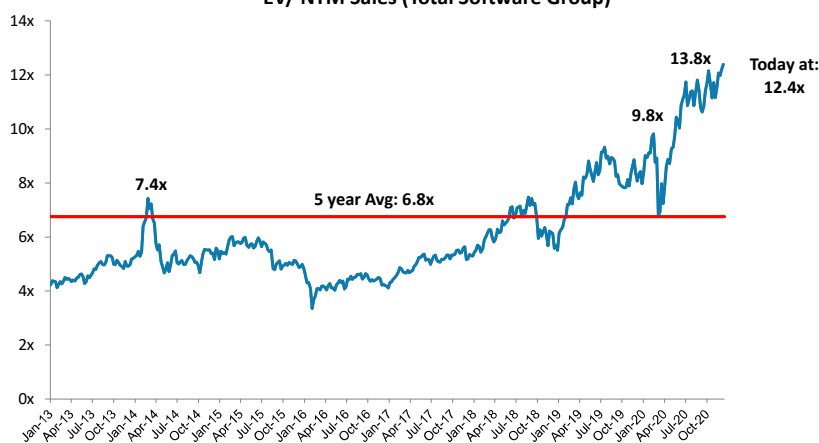
SaaS Group Historical EV/Sales/Growth Multiple



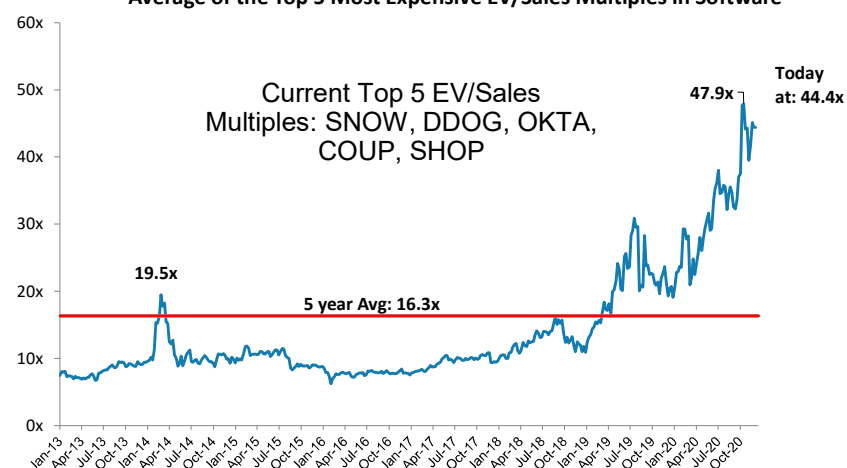
EV/ NTM Sales (CAGR >20%)



EV/ NTM Sales (Total Software Group)



Average of the Top 5 Most Expensive EV/Sales Multiples in Software



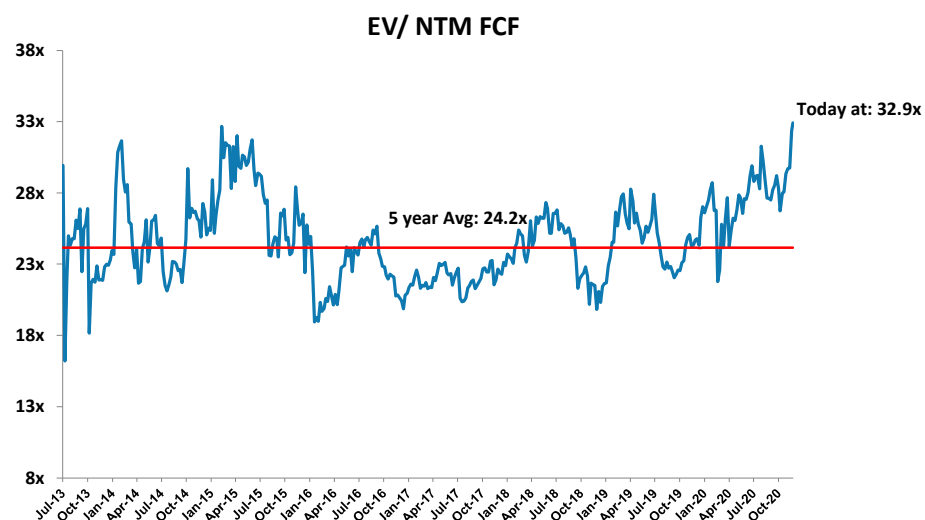
Source: Morgan Stanley Research, Thomson Reuters.

Note: Other than 'Top 5 EV Sales Multiples', charts exclude recent IPOs and tickers not in our index at the beginning of 2020.

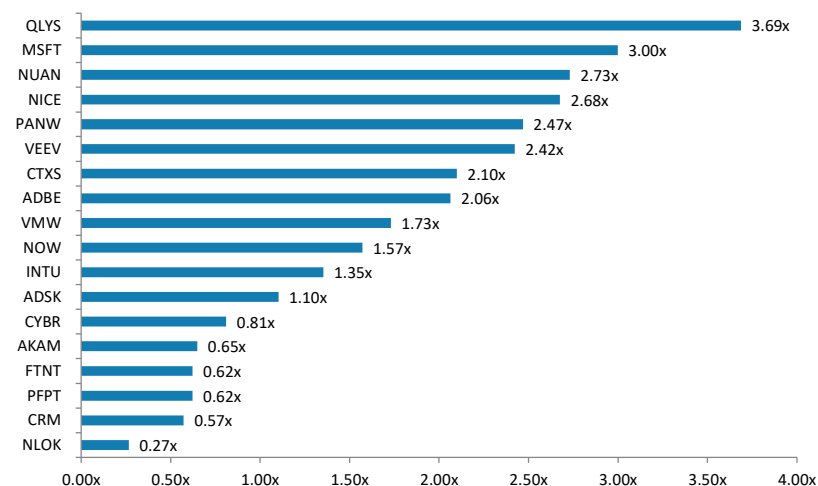
Valuation

EV/FCF Multiples More Attractive

Average software EV/FCF multiple is **36% above the 5-yr average**



EV/FCF/Growth ('20-'22e)



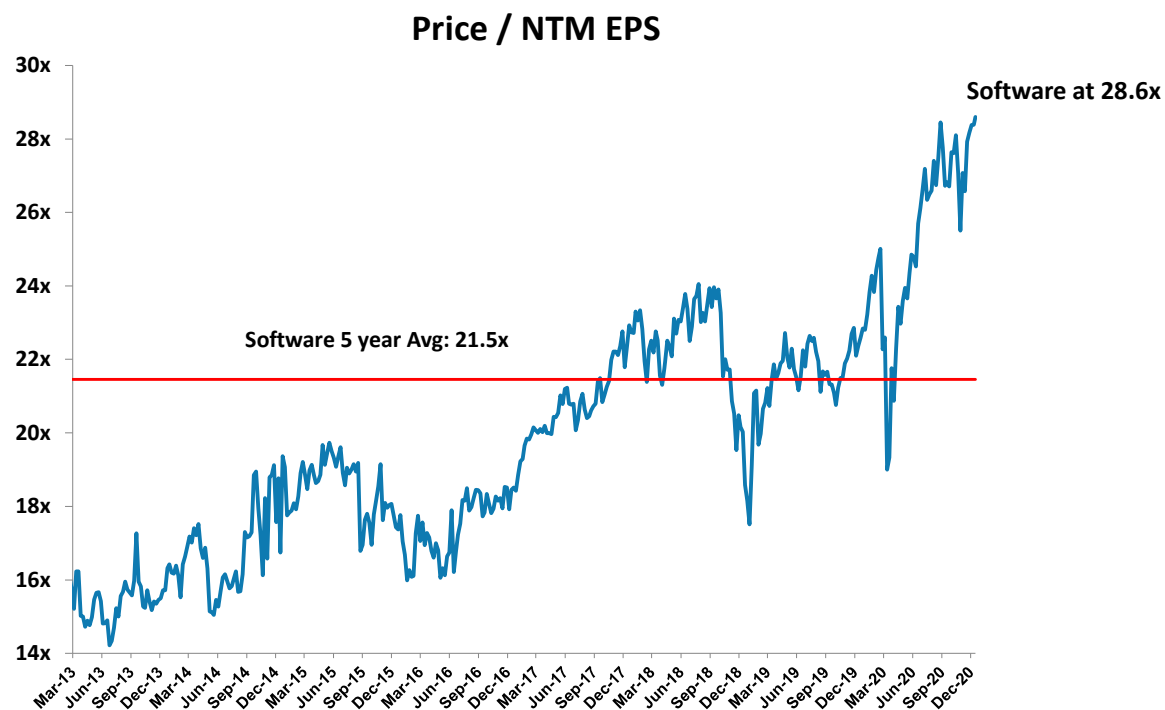
Source: Morgan Stanley Research, Thomson Reuters.

Note: Charts exclude recent IPOs and tickers not in our index at the beginning of 2020.

Valuation

Harder to Find 'Value' Stocks

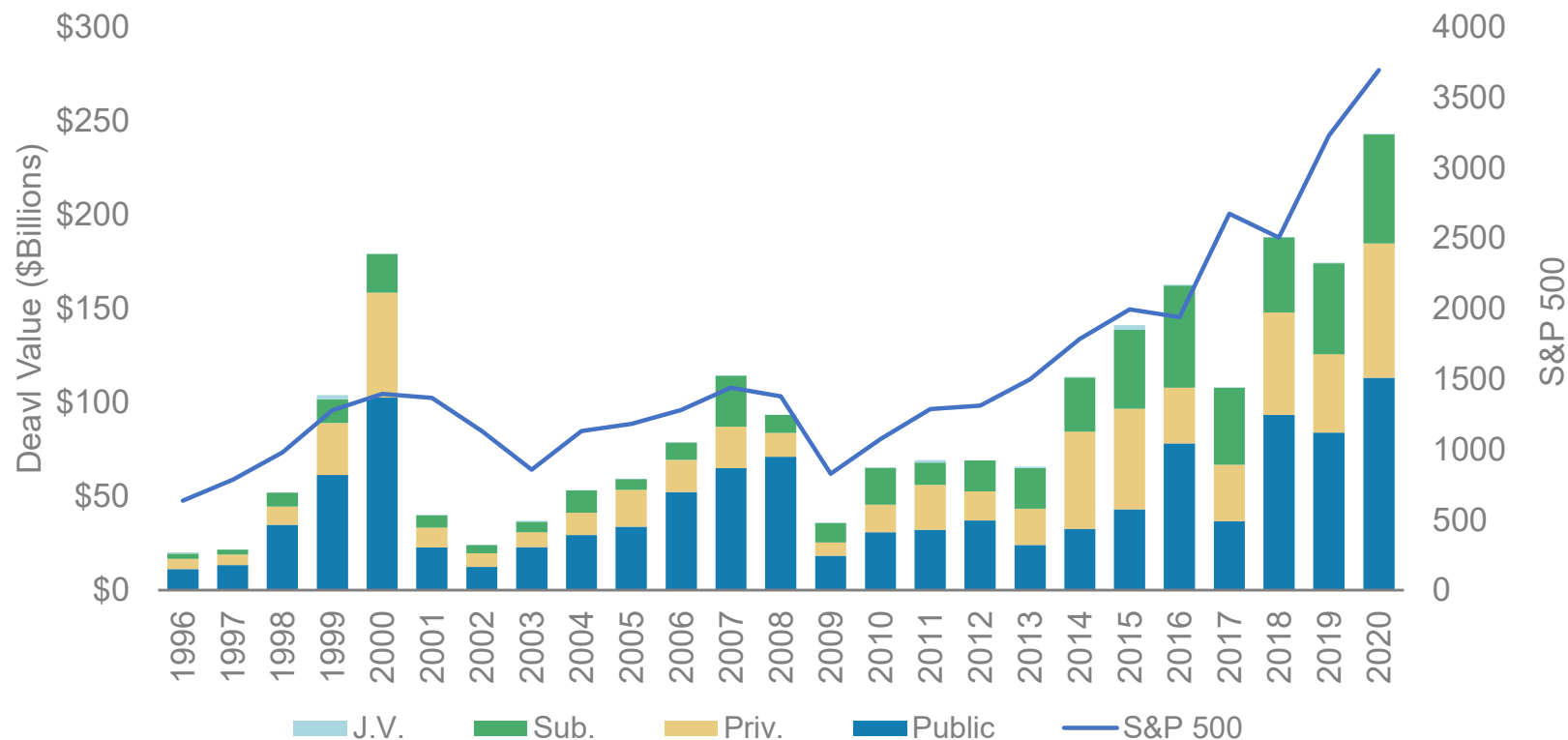
Average software P/E multiple is **33% higher than the 5-yr average**



Valuation

M&A Sustains Robust Levels

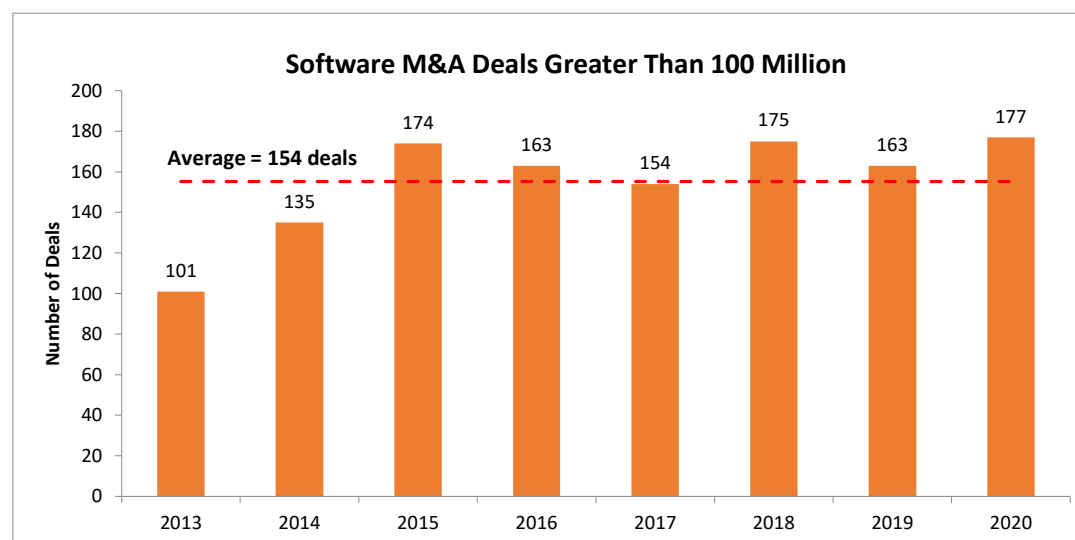
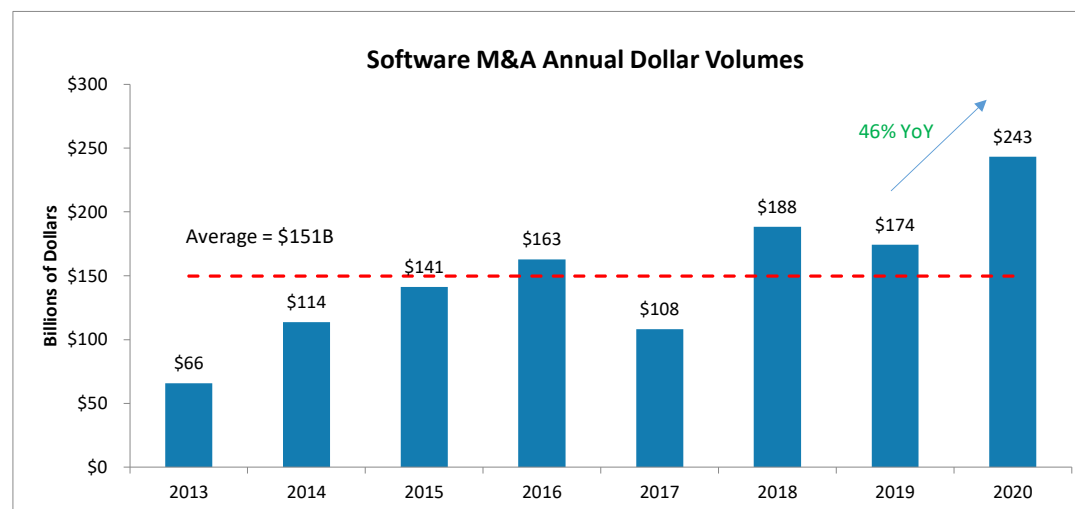
2020 Software M&A — Dollar Volumes Coming in Well Above 2019 Levels



Valuation

M&A Sustains Robust Levels

- On a dollar value basis, the 2020 software M&A total volume of \$243 billion was 46% above 2019 level at \$174 billion
- There were 177 software M&A deals greater than 100 million deal size in 2020, above 2019 level at 163 and largely inline with 2018 level at 175.

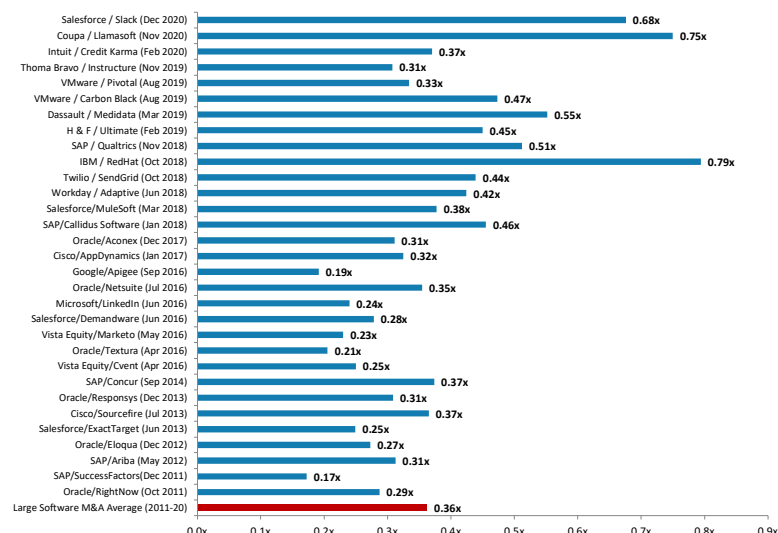


Valuation

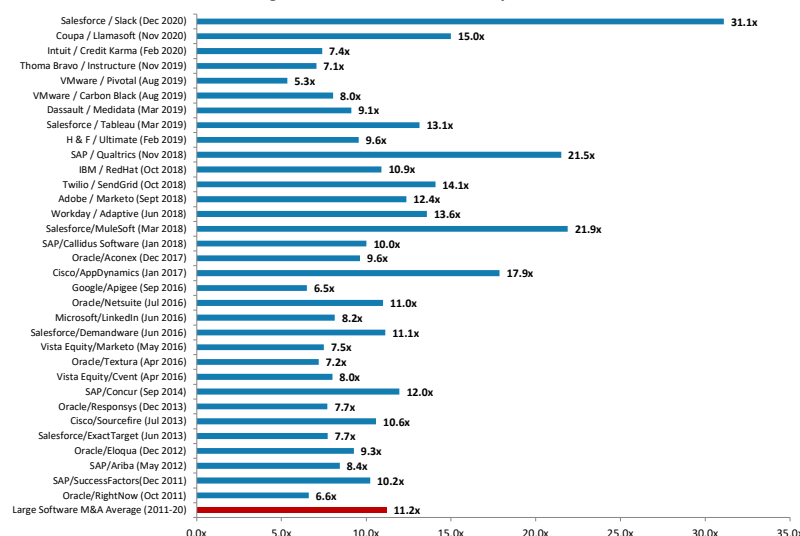
- Some of the highest EV/TTM revenue multiples, or highest growth-adjusted multiples, have been in the past two years, including Salesforce's December 2020 purchase of Slack and Coupa's November 2020 purchase of Llamasoft.

And Robust M&A Multiples

Highest EV/TTM Revenue Multiples for Software M&A



Highest EV/TTM Revenue Multiples for Software M&A



Software Themes for 2021

Living in a Post-Covid World

As the world recovers from the 2020 Pandemic, decision makers likely look back on what worked well during the crisis and what didn't work well to inform prioritization of new project initiatives for 2021 and beyond. The following technologies likely see increased priority in the years ahead, in our view:

Public Cloud Adoption

Cloud computing jumped to the number one priority for 2021, as the crisis highlighted key advantages of utilizing Public Cloud, likely spurring mainstream enterprises to accelerate their shift away from on-premise.

Key Stocks: *DDOG, MDB, MSFT*

Workflow Automation

Business processes automated in digital systems (software) worked well during the crisis, workflows still done manually (paper, email, etc.) did not withstand the disruption well. Low code/no code platforms, RPA, task management, Business Process Automation tools all work towards the aim of automating a broader set of business processes for the enterprise.

Key Stocks: *APPN, ASAN, CRM/WORK, MSFT, NOW*

Secure Access

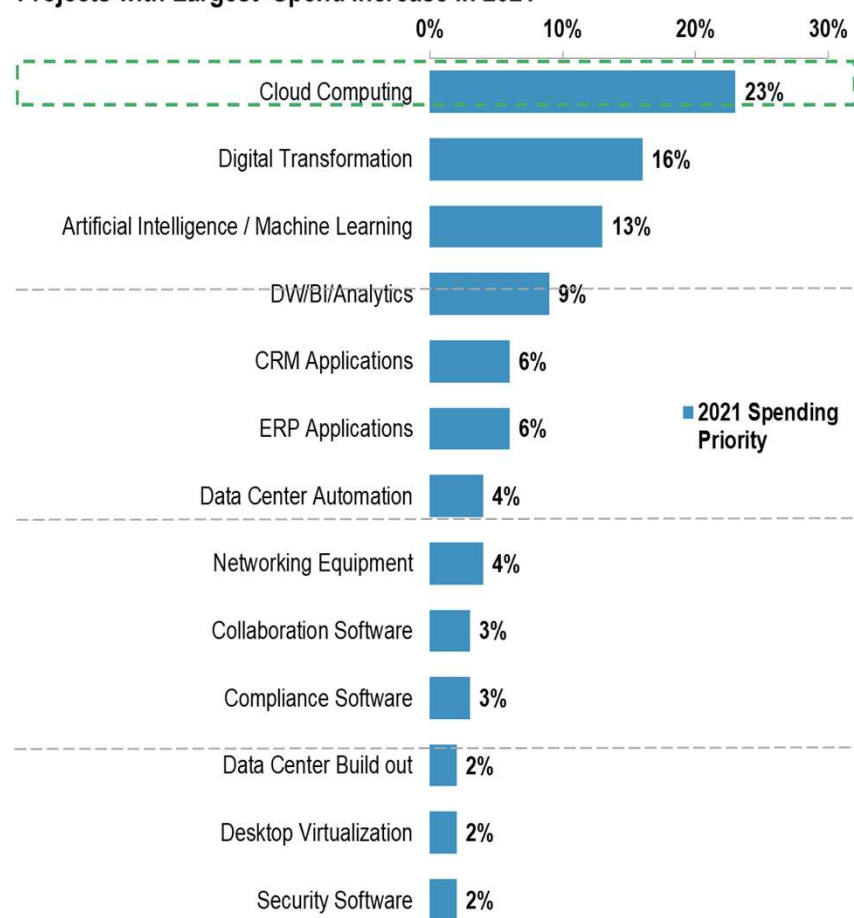
With enterprises shifting from 20% to upwards of 80% remote, the frailties of traditional remote access solutions became clear. The crisis likely accelerates the shift towards Cloud-based Secure Access and Zero Trust Architectures.

Key Stocks: *AKAM, NET, PANW, ZS*

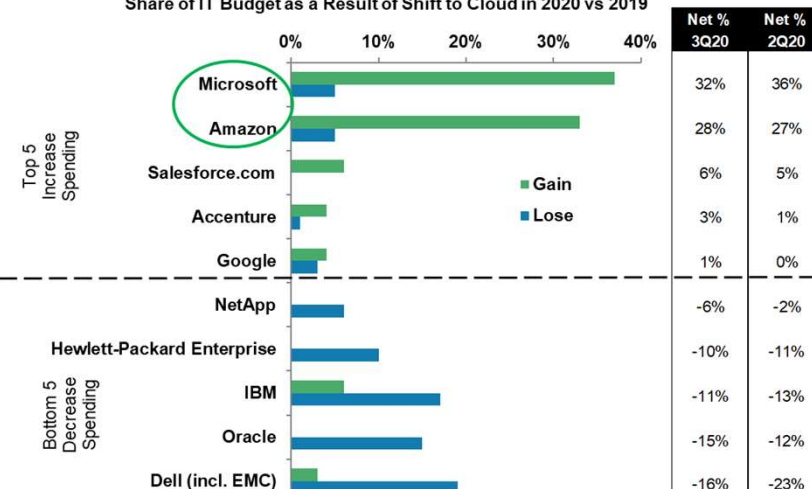
Living in a Post-Covid World – Public Cloud Adoption

- Cloud Returns to Forefront of CIO Priorities, With MSFT Expected to Gain Most Wallet Share

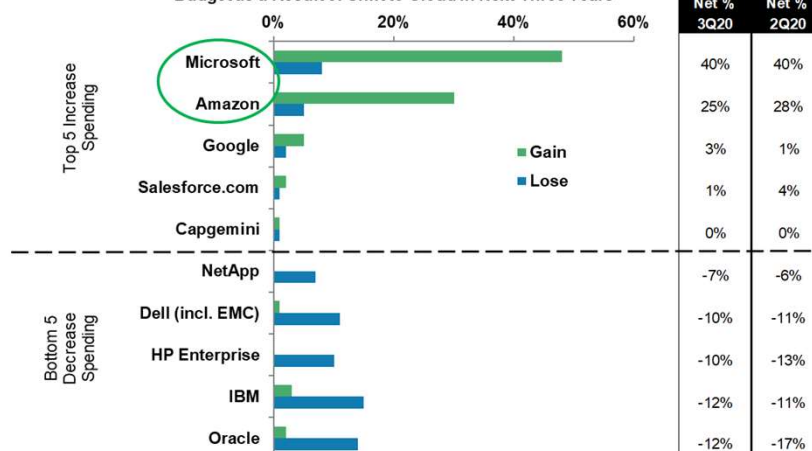
Projects with Largest Spend Increase in 2021



% of Responses Expecting Vendor with Largest Gain or Loss of Incremental Share of IT Budget as a Result of Shift to Cloud in 2020 vs 2019



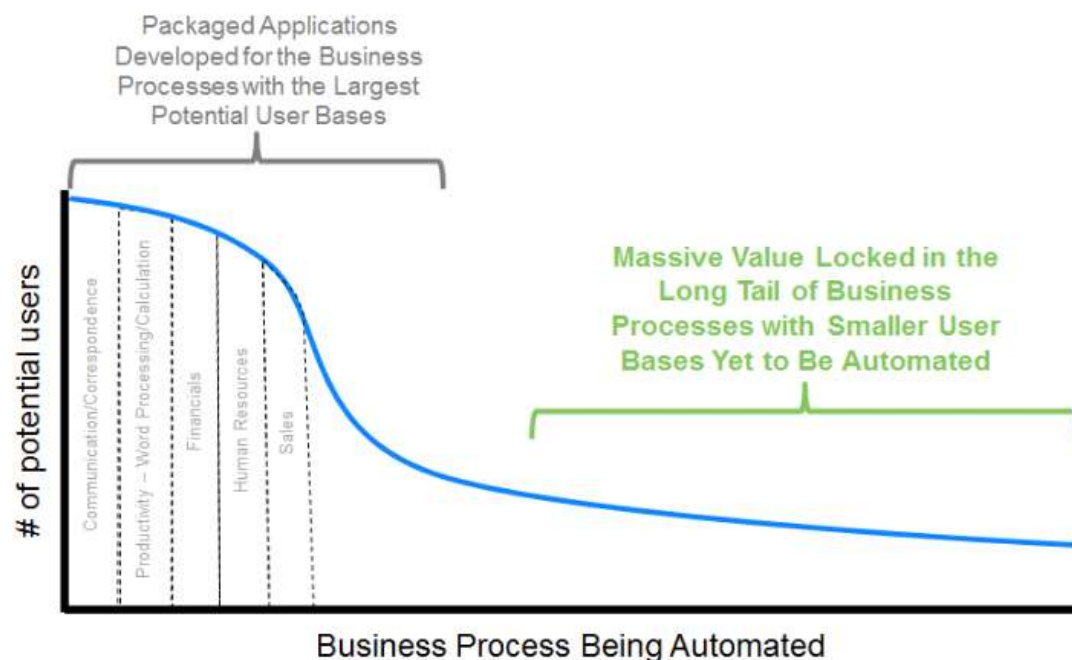
Budget as a Result of Shift to Cloud in Next Three Years



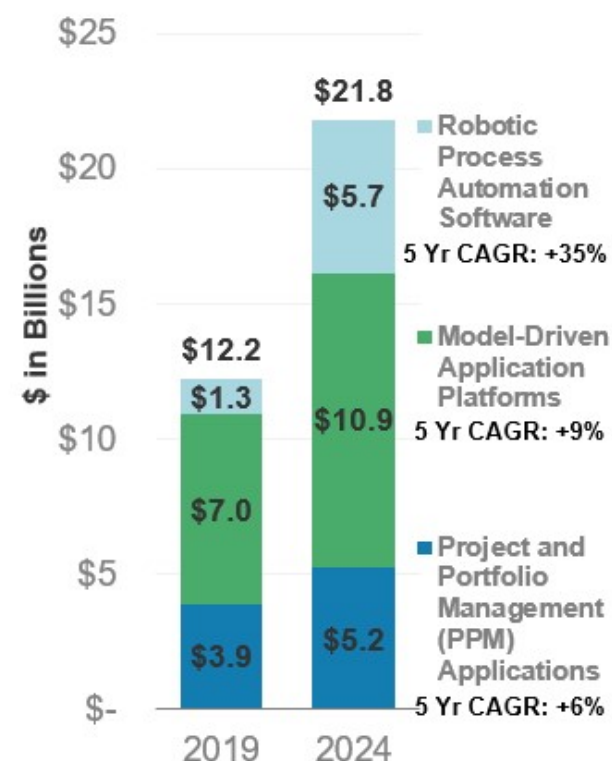
Living in a Post-Covid World – Workflow Automation

Unlocking Value through Automation & Productivity

- Automating processes to leverage employee time and effort to increase efficiency and accuracy in daily tasks, in an in-person or remote working world
- Enabling the citizen developer with low-code / no-code technology to automate the long-tail of business processes not served by pre-packaged software
- Introducing Artificial Intelligence and Machine Learning into daily workflows without needing to code



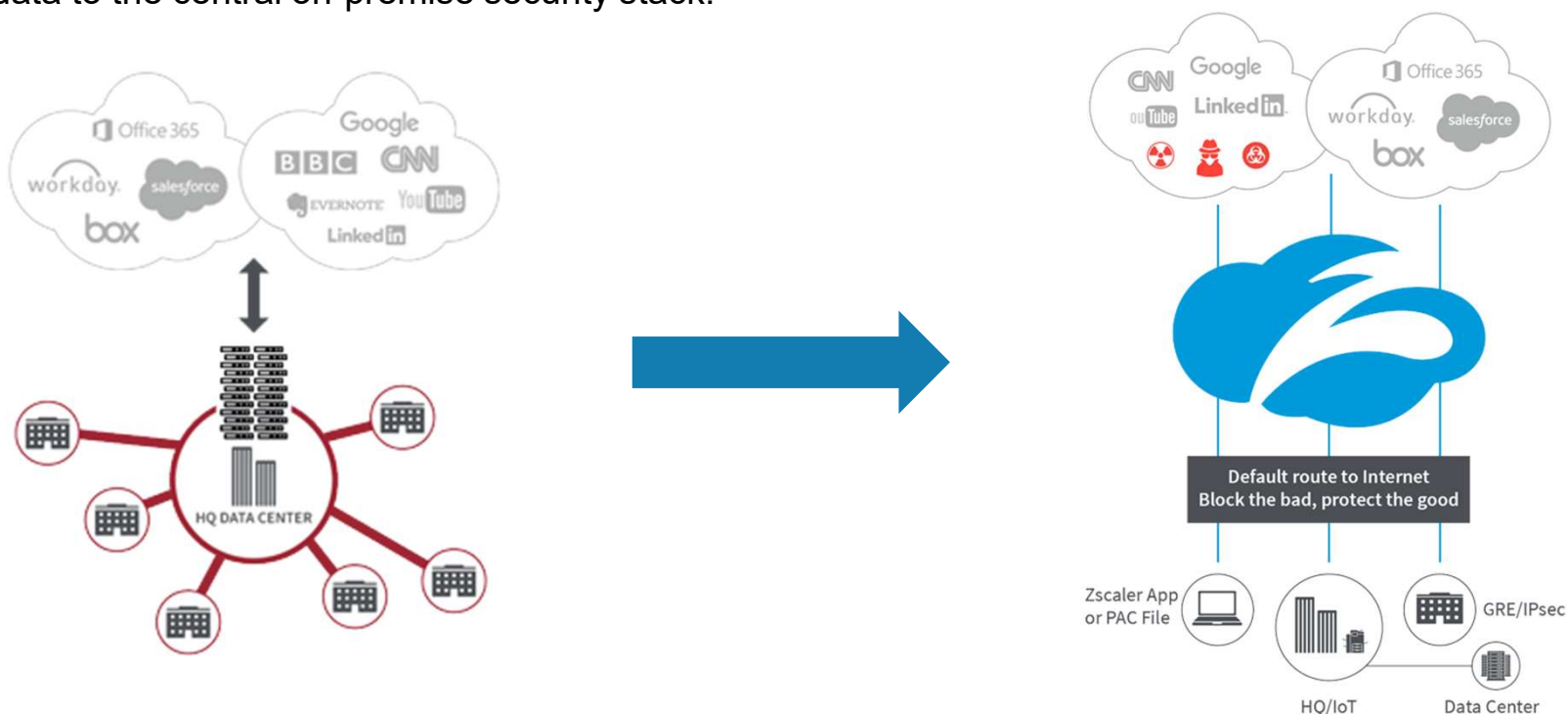
Workflow Automation: Overall 5 Yr CAGR: +12%



Living in a Post-Covid World – Secure Access

Secure Remote Access - The VPN Alternative

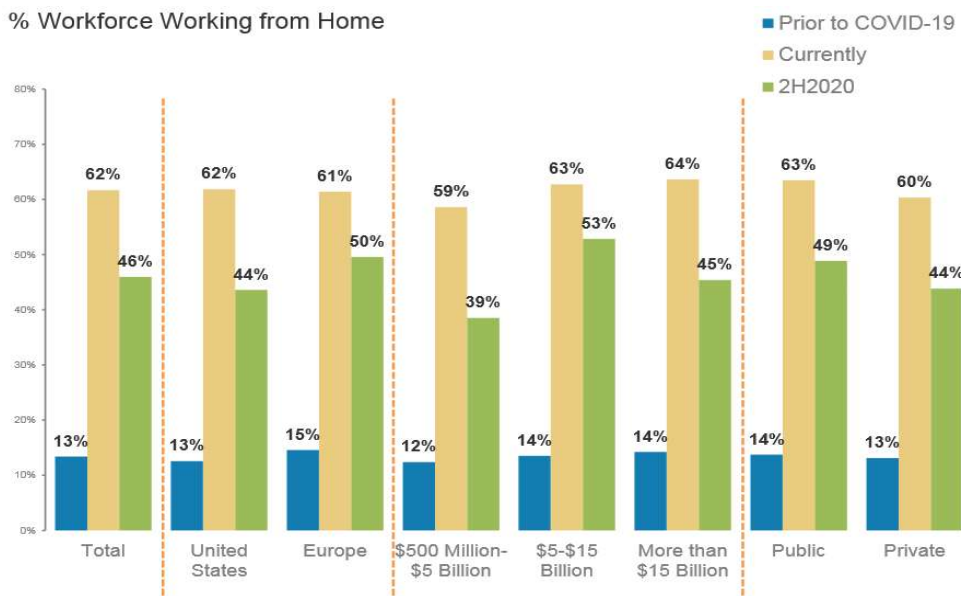
- Unlike traditional VPNs, these technologies enable secure remote access to applications directly without providing wide access to entire network segments, which reduces the security risk, cost and drives a better user experience.
- Secure remote access solutions also help reduce network congestion with a reduction in backhauling data to the central on-premise security stack.



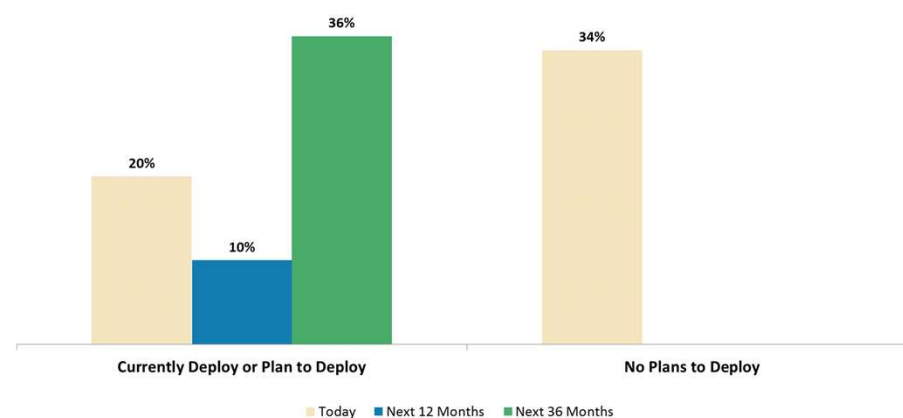
Living in a Post-Covid World – Secure Access

- Enterprises quickly shifted from ~20% to 80%+ of employees working remotely revealing pain points in existing remote solutions like VPNs.
- This crisis is likely to accelerate a shift towards next-generation Cloud-based Secure Access and Zero Trust Architectures, making traditional network-based security less effective.
- Beneficiaries Include: **Cloudflare, Zscaler and Palo Alto Networks** (Prisma Access).

% Workforce Working from Home



Does your organization currently deploy a “Zero-Trust” strategy in its security architecture?



Source: Morgan Stanley Research. Survey of Chief Security Officers, n=61

Source: Morgan Stanley Research, AlphaWise, Morgan Stanley CFO, COO Survey, n=152, Morgan Stanley CIO Survey. n=100

Software Themes for 2021

Revisiting Suites vs. Best of Breed

We see software vendors continuing to expand into adjacent markets in 2021, given the value of integrated workflows / unified data sets and enterprises' growing desire to do more with less.

Key Consolidators: ADBE, CRM, MSFT, PANW, SPLK, TEAM & VMW

Living in the Shadow of Giants

As more workloads and data move to public cloud environments, independent software companies are pursuing new business strategies and investing aggressively in products to keep customers from migrating to competitive solutions provided by public cloud vendors.

Key Stocks: MDB, FIVN, ZM, EGHT, CLDR, DDOG, NEWR, WORK

SaaS 2.0

A new class of SaaS vendors is coming of age, built on top of the big Public Cloud vendors (AWS, GCP, Azure), these vendors utilize the public Cloud more fully than prior generation vendors, innovate faster, are more data/developer driven.

Key Stocks: CRM, COUP, HUBS, MSFT, NOW, TWLO, WDAY, ZEN

Rise of B2B Payments

Multiple vendors across software (e-commerce platforms, accounting platforms, expense mgmt players, vertical software vendors) are looking to attach a payments angle to their story, which of these have real gravity to them to attract and hold a significant payments story?

Key Stocks: BIGC, CDK, COUP, INTU, LSPD, SHOP

Software Themes for 2021

B2B Emerging into Selling 2.0

When Covid forced businesses to sell differently – no in-person meetings, no steak dinners, no conferences – many companies found new and more efficient routes to market with increasing use of data, digital technologies and try before you buy pricing models. Will this mark the beginning of Selling 2.0?

Key Stocks: CRM, HUBS, MSFT, ZEN, ZI, ZOU

Is Corporate Travel Permanently Impaired?

Corporate travel budgets were slashed to near zero during the Covid crisis, but most companies we speak to don't see corporate travel rebounding anywhere close to prior levels in 2021, even if we have a vaccine. Will corporate travel ever return to prior levels?

Key Stocks: PROS, SABR

Does Covid Mark the End for Firewalls?

The distribution of data, users, processes during the Covid crisis pushes security further away from defense in depth (where Firewall's are the key control component) towards Zero Trust Architectures. Does this spell the end of Firewalls or just a demotion in priority?

Key Stocks: CHKP, FTNT, NET, OKTA, PANW, ZS

Time to Go Back to School?

Education paradigms have changed considerably due to Covid, with online education taking priority for both consumers and businesses. As the economy (and schools) open up as we get through the pandemic, how much of education will remain online?

Key Stocks: CHGG, 2U

2021 Software Themes: **Revisiting Suites vs. Best of Breed**

Continued Rise of Suites...

- As software vendors gain a disproportionate share in their core markets, we'll continue to see moves into adjacent markets. Increased value in consolidated workflows and data sets push vendors to offer suites of functionality in areas such as Digital Marketing, Performance Monitoring / Log Analytics and Security.
- Key Consolidators: ADBE, CRM, MSFT, PANW, SPLK, TEAM & VMW

... But Still Room for Best of Breed...

- Rising predominance of APIs, cloud-delivery models and a rapid pace of innovation leaves room for best of breed vendors to thrive as well
- Top Best of Breed Vendors: COUP, DOCU, MDB, OKTA, PLAN, PD, RAMP, TENB

... Some Best of Breed Vendors Now Pursuing Their Own Suite/Consolidation Strategies

- Security: PANW, PFPT, VMW
- Monitoring: DDOG (Infrastructure)/ SPLK (Logs) / NEWR (APM) / ESTC (Logs)/ DT (APM)
- DevOps Tools: MSFT, TEAM

2021 Software Themes: **Living in the Shadow of Giants**

Can Software Companies Grow In The Shadow Of Public Cloud Giants?

Infrastructure

Aggressive investments in multiple product markets by AMZN / MSFT/ GOOG pose a serious threat to the 3rd party infrastructure ecosystem. However, the impact is uneven with some better positioned to compete and sustain growth vs. others who face a more uncertain outlook.

Key Stocks: ORCL, TEAM, MDB, NEWR, DDOG, CLDR, SWI

Collaborative Applications

Microsoft's ability to leverage its vast installed base (~270M O365 commercial subscribers) by bundling Teams will likely limit Slack's ability to expand within enterprises, however joint go-to-market with Salesforce.com may partially offset.

Key Stocks: MSFT, WORK

Unified Communications

Efforts in space from Software/Cloud giants (MSFT, GOOG, AMZN) heating up as market approaches nearly \$80bn opportunity by 2022, expanding significantly post Covid. Limiting force incumbency, focus on communications from pure-plays and lengthy replacement cycles.

Key Stocks: RNG, EGHT, ZM, FIVN, VG

Security

We see 3rd party vendors accruing the lion's share of opportunities in the cloud as they offer broad visibility across multiple platforms, rich domain expertise and risk mitigation to avoid lock-in.

Key Stocks: PANW, FTNT and SPLK

2021 Software Themes: Living in the Shadow of Giants

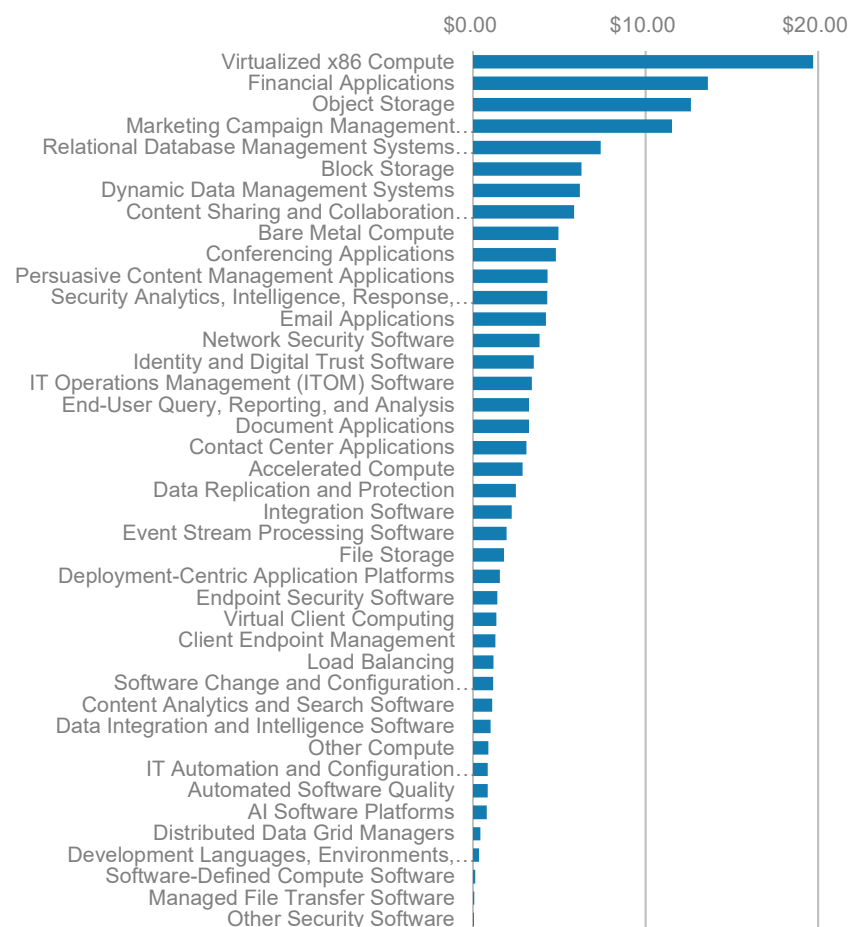
Why are Public Cloud Providers a Threat?

- Best-in-class Cloud Delivery Capabilities
- Flexible, Elastic Consumption Models
- Deep Integration Across Services
- Substantial R&D Budgets; Rapid Pace of Innovation
- Strong Relationships with C-Suite Decision Makers
- Ability to Package Open Source Technology Into Easy-to-Consume Cloud Services

Factors in Favor of a 3rd Party Software Ecosystem

- Customer Concerns on Cloud Vendor Lock-in
- Adoption of Hybrid / Multi-Cloud Models Creates Need for SW That Works in Any Environment
- Focused R&D on Select Products Yields Best-of-Breed Capabilities
- Broad Visibility Across Platforms
- Better Positioned to Cultivate Open Source Community and Drive Product Roadmaps

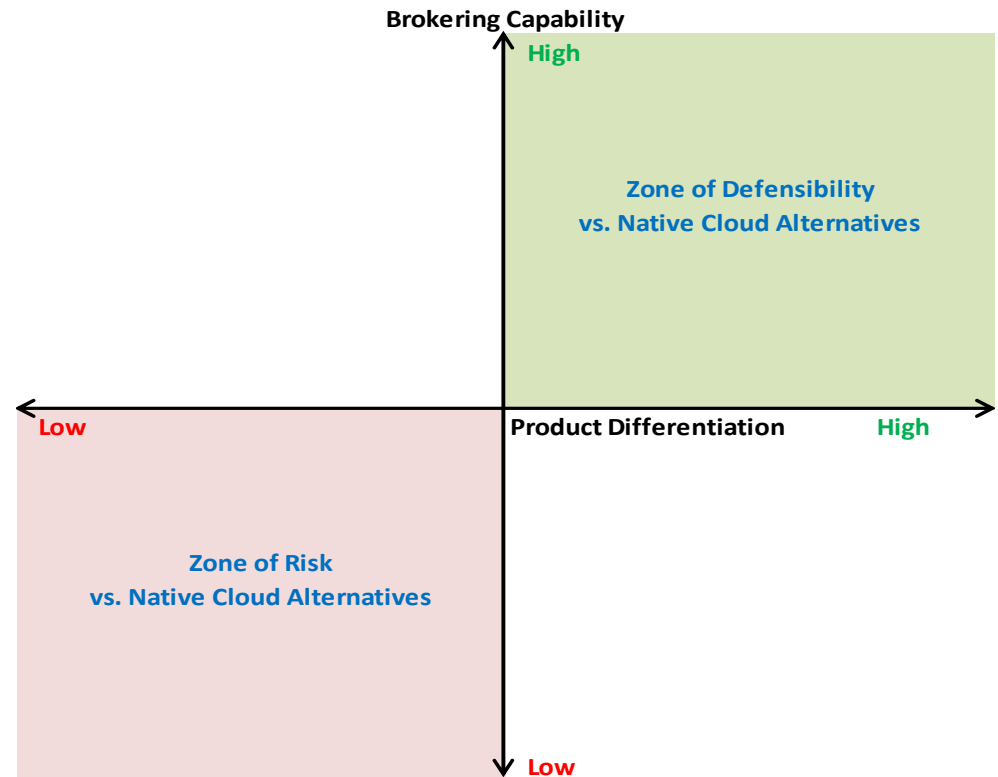
Market Revenue for AWS Product Markets Tracked by IDC (\$B)



2021 Software Themes: Living in the Shadow of Giants

In Search of a Framework to Assess Competitive Positioning vs. Public Cloud Giants...

- The move to multi-cloud and concerns about lock-in are often not sufficient to insulate firms from the threat of public cloud competition.
- An important consideration is to what extent the vendor provides a capability that is best consumed independent of the infra. environment?
- For example, we see Monitoring & Security as Capabilities that are Best Deployed Independent of the Choice of Public Cloud Provider(s).



2021 Software Themes: Living in the Shadow of Giants

Key Factors to Consider When Assessing Risk...

- **License Model:** Proprietary (Most Defensible) vs. Restrictive Open Source (AGPL, SSPL) vs. Apache Open Source (Most at Risk).
- **Size of User Base:** firms with large, devoted user bases are less likely to flee so long as product innovation remains high.
- **Delivery Model:** SaaS models offers the ability to innovate more quickly and keep pace with changes in the market while License/Maintenance models are more prone to disruption.
- **Role as Broker of Functionality:** Vendors that broker a key capability or set of capabilities where value is seen as independent of the customers infrastructure environment are better positioned.
- **Ease of Deployment & Operations:** Software capabilities that are overly complex to run and operate are at higher risk of public cloud disruption if cloud providers can make a “good enough” service that is easy to consume.

2021 Software Themes: Living in the Shadow of Giants – Infrastructure

Who Are the Main Players in the Market?

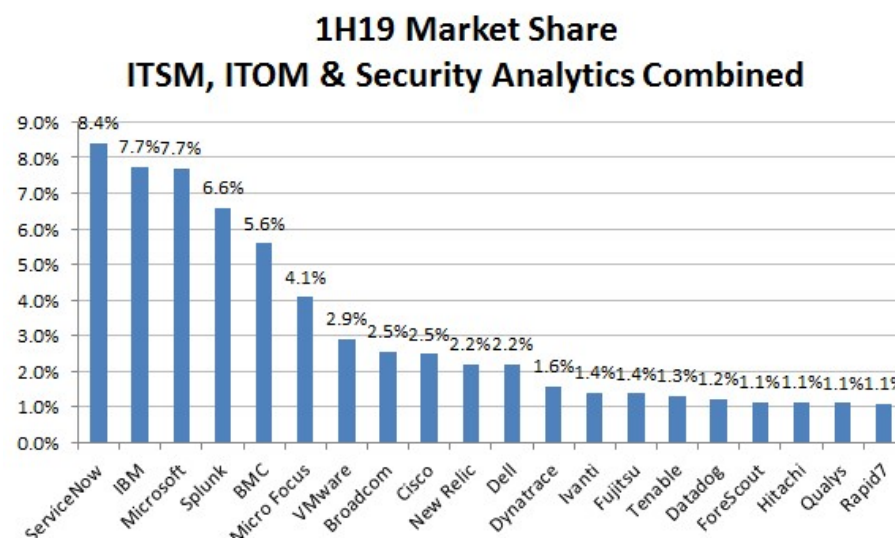
- Giants: Amazon AWS, Microsoft Azure, Google Cloud Platform, Alibaba
- 3rd Party Vendors: Oracle, Atlassian, MongoDB, New Relic, Splunk, Datadog, New Relic, Cloudera

What is the Key Debate?

- Can 3rd party software vendors sustain growth in customers and maintain pricing as public cloud providers introduce competitive alternatives?

MS View:

- We think the best positioned companies have many of the following characteristics: 1) SaaS based deployment models, 2) offer a service that is relatively simple to deploy and operate, 3) use proprietary or highly restrictive open source licensing models, 4) have large and devoted user bases and 5) offer capabilities that are seen as spanning across or are independent of the infrastructure environment.
- Companies fitting the above criteria and thus better positioned to address the threat of public cloud competition, in our view, include **Atlassian, MongoDB, Datadog and New Relic**.
- Companies operating pure, open source licensing models offering technology that requires highly complex deployments are at a greater risk, in our view. **Cloudera** fits into this category but a renewed initiative to penetrate cloud environments with the Cloudera Data platform may stem share losses.



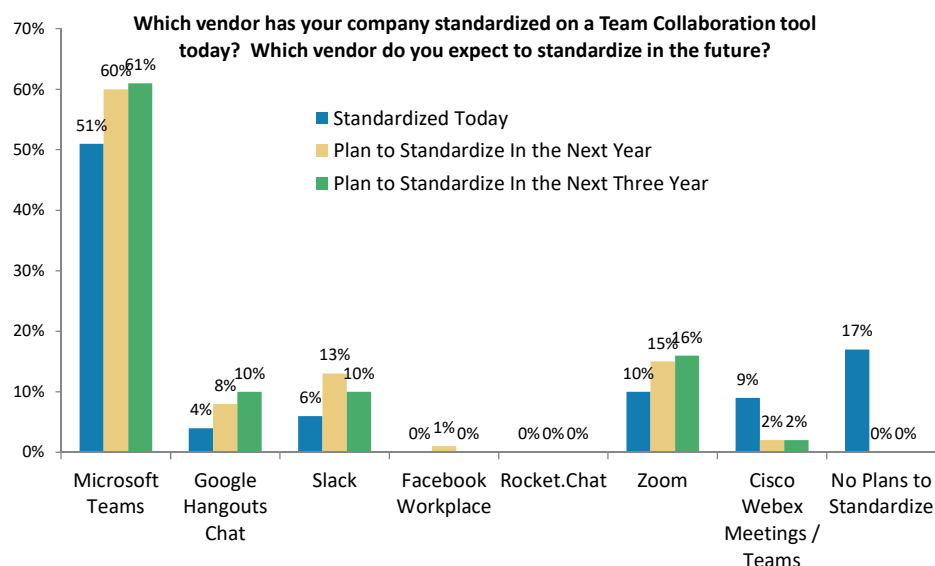
2021 Software Themes: Living in the Shadow of Giants – Collaboration

Who Are the Main Players in the Market?

- Giants: Microsoft (O365 / Teams), Google (G Suite / Hangouts)
- Core Standalone Competitors: Slack

What is the Key Debate?

- To what extent will Microsoft's ability to leverage its vast installed base (~270 million commercial O365 subscribers) by bundling Teams limit Slack's ability to expand within enterprises?



MS View:

- While Slack is a leader in team collaboration, Microsoft has made swift progress to defend its turf on information workers' desktops. Competition from Microsoft likely limits Slack's realizable TAM, but we look for go-to-market synergies with Salesforce for signs of improving execution.
- Microsoft Teams goes to market with a compelling solution bundled for free into Office 365, making it an easier sell to enterprises with an existing O365 footprint. Enterprise traction for Teams is driven by tight integration with Microsoft products and best-in-class security, compliance and admin controls.
- Slack offers an easy to deploy, open platform with >500K custom apps integrations, strong customer support & success advocates and growing network effects w/ 'Shared Channels', extending collaboration outside an enterprise into partners, customers & consultants. Recent acquisition by CRM improves go-to-market and distribution capabilities, and potential for new integrated product offerings.

2021 Software Themes: **Living in the Shadow of Giants – Communications**

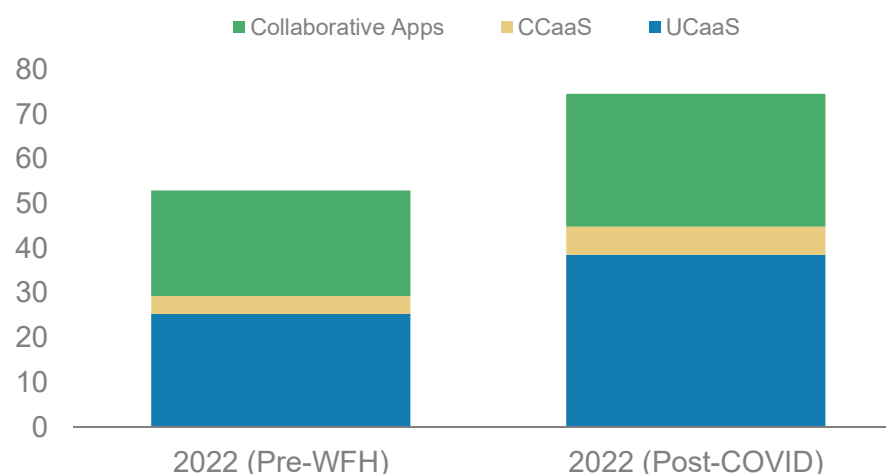
Who Are the Main Players in the Market?

- Giants: Microsoft, Amazon, Google, Cisco
- Core Standalone Competitors: Zoom, RingCentral, 8x8, Five9, Vonage

What is the Key Debate?

- Is there enough room in this market for multiple players to win? Will looming Giants heat competitive pressure or can core standalone victors emerge as next-gen Giants.

UC Market TAM (\$bns)



MS View:

- Proven executors in RNG, FIVN, and ZM have a long growth path ahead if Giants remain hesitant to invest fully in next-gen products. We think businesses are increasingly looking for ways to better engage with customers and a preference for best-of-breed solutions has enabled standalone winners to succeed.
- Challenged stories in EGHT, VG, and AVYA present attractive valuation opportunities if able to heal self-inflicted wounds. The success of best-of-breed vendors in UC has enabled a clear view into execution mishaps of competitors in the market, with these vendors being penalized for lack of upfront transparency. We think the market will need to see more proof to award and drive re-rating.
- Strategic activity is likely to increase. Larger software competitors can quickly become more relevant in this heating market through strategic activity vs. a re-architecting of existing platforms, but both options present significant undertakings.

2021 Software Themes: Living in the Shadow of Giants – Security

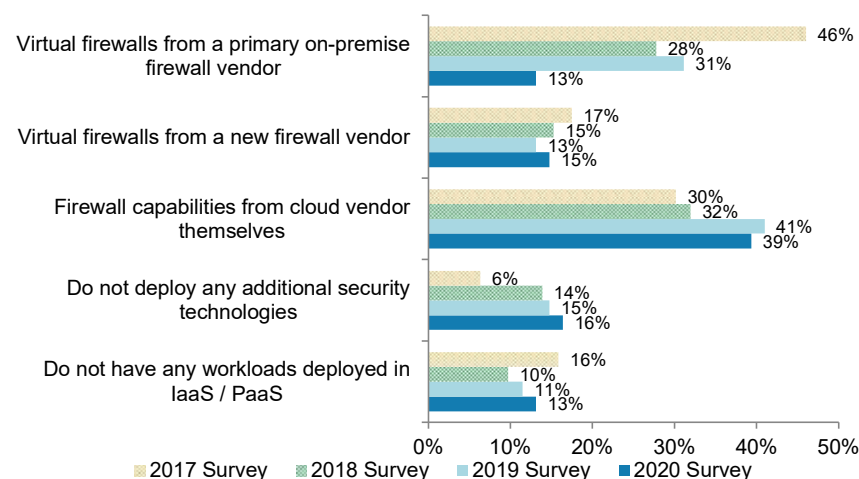
Who Are the Main Players in the Market?

- Giants: Microsoft, Amazon, Google
- Core Standalone Competitors: Palo Alto Networks, Fortinet, Splunk, amongst others

What is the Key Debate?

- Does the cloud necessitate a different architectural approach than the current security state? Will the public cloud vendors become more competitive to 3rd party security vendors as more workloads shift into the cloud?

What firewall technologies do you use specifically to secure Infrastructure / Platform as a Service (IaaS / PaaS) workloads?



MS View:

- Rising cloud adoption creates more distributed computing environments and larger risk footprint — driving security towards “Zero Trust” architectures focusing on securing identities, data and apps versus relying solely on securing the network. This also drives the adoption of solutions providing visibility and control of cloud applications and security delivered via cloud-based models.
- 3rd party vendors positioned to accrue the lion’s share of these opportunities in the cloud, as they offer enterprises 3 value propositions public cloud vendors can’t: 1) broad visibility across multiple platforms, a requirement for effective security; 2) rich security domain expertise; and 3) risk mitigation to avoid vendor lock-in and keep security separate from infrastructure.
- There is room for multiple winners, with the cloud vendors (most notably Microsoft) garnering dollars in security analytics, identity management and email security, but mostly in the mid market / SMB markets.

2021 Software Themes: Emergence of SaaS 2.0

Who Are the Main Players in the Market?

- SaaS 1.0: CRM, NOW, WDAY
- SaaS 2.0: HUBS, MSFT, TWLO, ZEN

What is the Key Debate?

- A new class of SaaS vendors is coming of age, these vendors utilize the Public Cloud more fully than prior generation vendors, innovate faster, are more data/developer driven. Will SaaS 2.0 present a new competitive wave on the horizon?

Characteristics of SaaS 2.0 versus SaaS 1.0				
	Architecture	Pricing	GTM	End Customer
SaaS 1.0	Multi-tenant	Seat-based	Direct Sales	Business User
SaaS 2.0	Built to Leverage Scaling	Usage-based	Product-Driven Sales Model	BU Plus Developer

Benefits of SaaS 2.0 versus SaaS 1.0				
	Architecture	Pricing	GTM	End Customer
SaaS 1.0	Lower Costs	Higher-barrier to entry	High-Touch	One-size-fits-all
SaaS 2.0	...Plus Broader Functionality & TAM	Lower-barrier; faster ramp	Low-touch, greater efficiency	Customization; faster time to market

MS View: We see 4 key dimensions driving differentiation for SaaS 2.0 vendors:

- 1) Architecture** – building natively *for* the Public Cloud utilities allows for a broader set of capabilities (horizontal scaling, compute on demand, etc.) and new solutions vs. 1.0 solutions just built *in* the Cloud
- 2) Pricing** – matching to the dynamics of the Clouds where they are built, SaaS 2.0 models utilize consumption and/or usage-based pricing models to low barriers to entry and better match value to price
- 3) Distribution** – Product-led distribution models enable the vendor to scale sales intensity as the opportunity evolves, enabling a more efficient go-to-market strategy
- 4) Customer Focus** – SaaS 2.0 vendors often expand their purview to better include developers into their user base, making for a more extensible solution

2021 Software Themes: Rise of B2B Payments

Why Are We Talking About Software and Payments?

- As commerce continues to evolve (shift to online, displacement of legacy systems, omnichannel, B2B), many software vendors have well-positioned themselves to better enable companies and merchants on the back of this secular trend. What's important, however, is the commingling of software and payments solutions, such that the stickier and more compelling software products eventually beget more transactional volumes, and hence payments revenue.
- **Key Players: SHOP, BIGC, COUP, INTU, LSPD, CDK**

How Are Investors Treating Payments Within Software Models?

- In today's environment, we think payments is largely considered as a recurring revenue stream, deserving of the traditional software multiple. We see this reflected most prominently in Shopify's valuation at 24x CY22 EV/Sales, ~0.7x growth-adjusted (vs SaaS group at 15x/0.63x), despite Shopify Payments constituting ~44% of total revenue. While valuation certainly reflects other factors as well, enthusiasm for the payments angle has contributed to the current multiples for BIGC and COUP at 25x/27x EV/CY22 Sales, respectively.

How Should We Treat Gross vs Net Recognition Models?

- Within our space, SHOP and LSPD are the only ones recognizing payments revenue on a gross recognition basis. The others (COUP, BIGC, and INTU) take more of a revenue share, in exchange for much higher contribution margins. While becoming a merchant of record affords the company better economics capture along the value chain, investors should also be aware of the implications on the long-term margin profile when companies shift to a gross recognition model.

2021 Software Themes: B2B Emerging into Selling 2.0

Who Are the Main Players in the Market?

- CRM, HUBS, MSFT, ZEN, ZI, ZUO

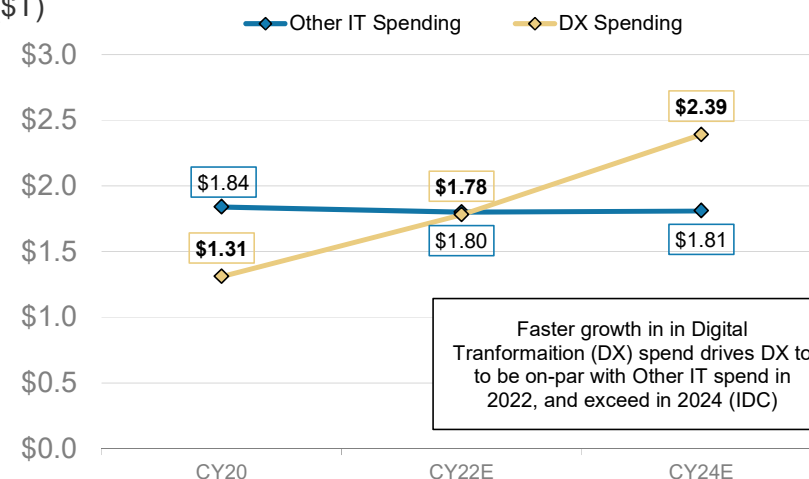
What is the Key Debate?

- Is this the beginning of 'Selling 2.0' as businesses increase reliance on software after Covid forced them to sell differently in the absence of in-person meetings and conferences?

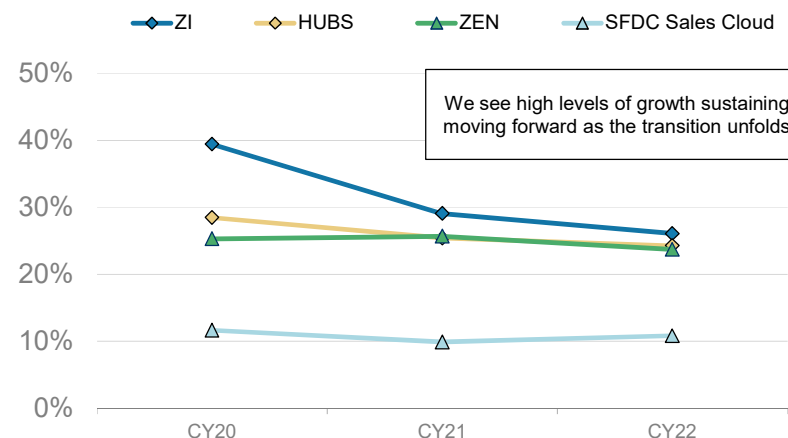
MS View:

- We see the digital transformation of B2B selling accelerating in 2021, marking the beginning of 'Selling 2.0'.
- We expect the benefits of new and more efficient routes to market that leverage 1) greater use of data, 2) digital technologies and 3) try-before-you-buy pricing models will last well beyond the direct impacts of Covid.

Worldwide Digital Transformation Spending vs Other (\$T)



Revenue Growth (YoY %)



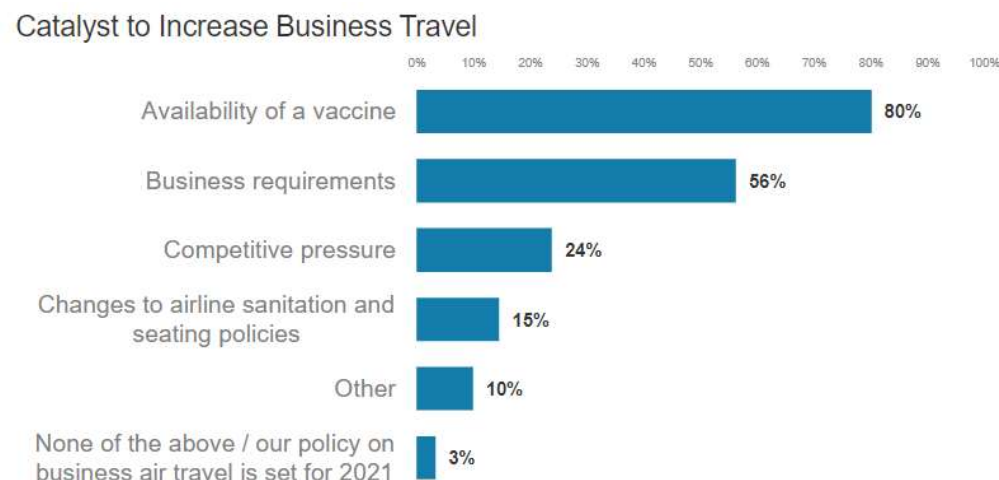
2021 Software Themes: Is Corporate Travel Permanently Impaired?

Who Are the Main Players in the Market?

- PROS: Provider of AI-powered solutions for pricing and selling optimization within the digital economy
- SABR: GDS and IT solutions provider for airline and hospitality industries

What is the Key Debate?

- Corporate travel budgets were slashed to near zero during the Covid crisis, but most companies we speak to don't see corporate travel rebounding anywhere close to prior levels in 2021, even if we have a vaccine. Will corporate travel ever return to prior levels?



MS View:

- Based on MS's primary AlphaWise data, the latest MS Corporate Travel Survey looks for 34%/22% of FY21/FY22 demand shifted to virtual. However, that data was based on responses from October prior to the positive vaccine news, and vaccine availability was cited as the number one catalyst to increase travel. This suggests a strong corporate travel recovery in the years to come...
- ...but we still expect some portion of corporate travel to be permanently impaired. Over time, overall headcount and business growth would allow corporate travel to eventually surpass 2019 levels, even with some travel permanently replaced by virtual.

2021 Software Themes: Is COVID the end of Firewalls? Not Quite.

Who Are the Main Players in the Market?

- CHKP, FTNT, NET, OKTA, PANW, ZS

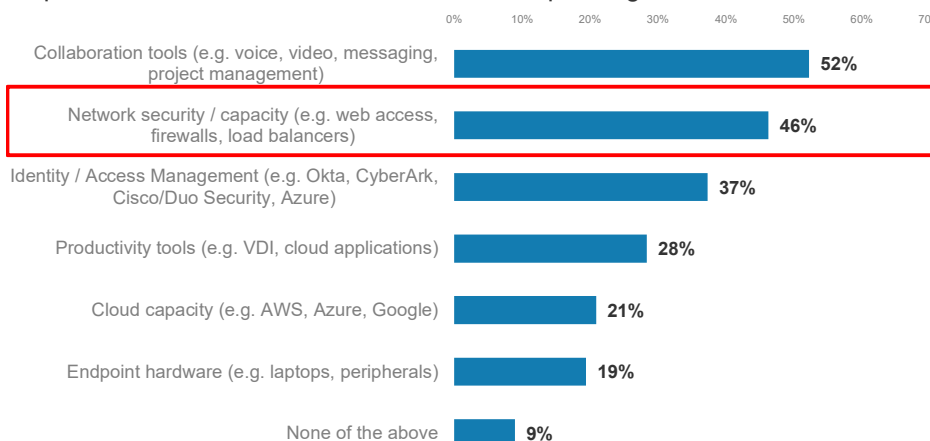
What is the Key Debate?

- The distribution of data, users, processes during the Covid crisis pushes security further away from defense in depth (where Firewall's are the key control component) towards Zero Trust Architectures. Does this spell the end of Firewalls or just a demotion in priority?

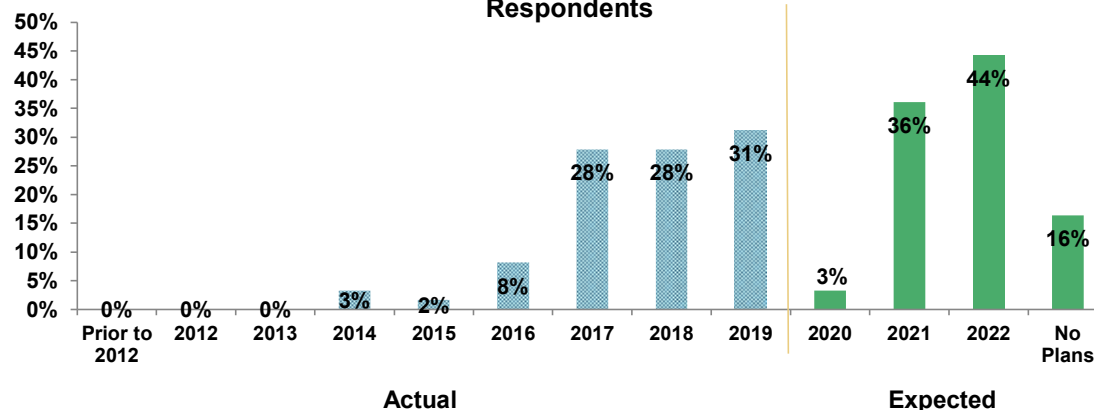
MS View

- Demand for core firewall capabilities is likely to slow, but not fall off a cliff.
- Our May CSO survey shows majority of respondents plan a firewall refresh in 2021 or 2022.
- Firewalls will remain a key part of the security stack as CIOs/CSOs are more likely to add layers of security vs. rip/replace.

Expected Permanent Increase in External IT Spending



Year of Last Firewall Refresh / Plans for Next Firewall Refresh, % of Respondents



2021 Software Themes: Time to Go Back to School?

Who Are the Main Players in the Market?

- Chegg: digital learning platform offering subscription study services direct to students
- 2U: partners w/ universities to offer online degrees, short courses and boot camps

What is the Key Debate?

- Education paradigms have changed considerably due to Covid, w/ online ed taking priority for both consumers and businesses. As the economy (and schools) open up as we get through the pandemic, how much of education will remain online?

MS View:

- We see Chegg and 2U's differing business models and offerings representative of the bifurcation in results companies will see post-Covid, depending on product use cases, business models, and company specific market dynamics. Some may benefit from lasting secular shifts in demand, and others will face really tough comps following the short-term uptick in Covid related demand.
- CHGG: The shift to virtual ed acted as a catalyst for Chegg's key growth drivers – we think Covid has helped catapult Chegg forward, into new markets, with new investment plans and operating strategies that unlock a larger global demand opportunity, supporting ~30% services growth in 2021.
- TWOU: 2U has enjoyed an acceleration in enrollments given online program offerings; we see this setup much more challenged post-Covid, as 2U's revenue is based on enrollments, which will likely revert to normal levels post-Covid, resulting in a deceleration vs. tough comps this academic year.

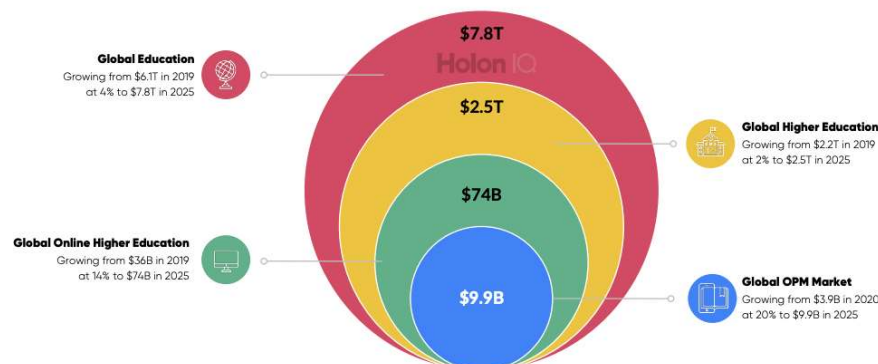
GLOBAL OPM AND ACADEMIC PPP MARKET

HolonIQ

\$2.2T Global Higher Education Market

Higher Education is an enormous global market at \$2.2T growing to \$2.5T by 2025. Online Degree focused Higher Education makes up less than 2% of that total. Although expected to double by 2025 to \$74B, it will still only make up 3% of Higher Education spend.

Total Global, Online Higher Education and OPM Market 2025, USD



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Within the last 12 months, Morgan Stanley has received compensation for investment banking services from 2u Inc, Amadeus IT Holdings S.A., Appian Corp, Asana Inc, Atlassian Corporation PLC, Atos SA, Autodesk, BigCommerce Holdings, Inc., Box Inc, Capgemini, Chegg Inc, Citrix Systems Inc, Datadog, Inc., Datto Holding Corp., Five9 Inc, HubSpot, Inc., JFrog Ltd., McAfee Corp, Microsoft, MongoDB Inc, NICE Ltd., Okta, Inc., PagerDuty, Inc., Palantir Technologies Inc., Palo Alto Networks Inc, Pluralsight Inc., PROS Holdings Inc, RingCentral Inc, Sabre Corp, Salesforce.com, ServiceNow Inc, Slack Technologies, Inc., Snowflake Inc., Splunk Inc, Sprout Social Inc, Sumo Logic Inc, Tenable Holdings Inc, Twilio Inc, Vertex Inc., VMware Inc, Workday Inc, Zendesk, Inc, ZoomInfo Technologies Inc, Zscaler Inc.

Disclosure Section

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Disclosure Section

STOCK RATING CATEGORY	COVERAGE UNIVERSE		INVESTMENT BANKING CLIENTS (IBC)			OTHER MATERIAL INVESTMENT SERVICES CLIENTS (MISC)	
	COUNT	% OF TOTAL	COUNT	% OF TOTAL IBC	% OF RATING CATEGORY	COUNT	% OF TOTAL OTHER MISC
Overweight/Buy	1404	41%	372	46%	26%	620	41%
Equal-weight/Hold	1448	43%	346	43%	24%	666	44%
Not-Rated/Hold	5	0%	1	0%	20%	4	0%
Underweight/Sell	536	16%	85	11%	16%	219	15%
TOTAL	3,393		804			1509	

Data include common stock and ADRs currently assigned ratings. Investment Banking Clients are companies from whom Morgan Stanley received investment banking compensation in the last 12 months. Due to rounding off of decimals, the percentages provided in the "% of total" column may not add up to exactly 100 percent.

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Overweight (O). The stock's total return is expected to exceed the average total return of the analyst's industry (or industry team's) coverage universe, on a risk-adjusted basis, over the next 12-18 months.

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Not-Rated (NR). Currently the analyst does not have adequate conviction about the stock's total return relative to the average total return of the analyst's industry (or industry team's) coverage universe, on a risk-adjusted basis, over the next 12-18 months.

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Unless otherwise specified, the time frame for price targets included in Morgan Stanley Research is 12 to 18 months.

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Attractive (A): The analyst expects the performance of his or her industry coverage universe over the next 12-18 months to be attractive vs. the relevant broad market benchmark, as indicated below.

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Industry Coverage: Software

INDUSTRY COVERAGE: Software

COMPANY (TICKER)	RATING (AS OF)	PRICE* (12/18/2020)
Hamza Fodderwala		
CyberArk Software Ltd (CYBR.O)	O (10/01/2020)	\$145.08
FireEye Inc (FEYE.O)	E (10/28/2020)	\$19.23
McAfee Corp (MCFE.O)	O (11/16/2020)	\$17.17
Proofpoint Inc (PFPT.O)	O (08/19/2020)	\$131.11
Qualys Inc (QLYS.O)	E (10/10/2017)	\$124.54
Rapid7 Inc (RPD.O)	E (08/11/2015)	\$84.55
SailPoint Technologies Holdings Inc (SAIL.N)	O (10/01/2020)	\$55.57
Secureworks Corp (SCWX.O)	E (09/09/2020)	\$14.25
Tenable Holdings Inc (TENB.O)	O (01/15/2019)	\$51.85
Varonis Systems, Inc. (VRNS.O)	O (10/27/2020)	\$161.17
Josh Baer, CFA		
2u Inc (TWOU.O)	E (11/24/2020)	\$38.97
Box Inc (BOX.N)	O (08/04/2020)	\$18.95
CDK Global Inc (CDK.O)	O (06/08/2020)	\$50.97
Chegg Inc (CHGG.N)	O (11/25/2019)	\$87.50
Pluralsight Inc. (PS.O)	++	\$20.54
Sabre Corp (SABR.O)	O (12/17/2020)	\$11.50
Keith Weiss, CFA		
Adobe Inc. (ADBE.O)	O (04/29/2019)	\$502.95
Akamai Technologies, Inc. (AKAM.O)	E (04/29/2020)	\$107.08
Atlassian Corporation PLC (TEAM.O)	O (01/13/2020)	\$247.78
Autodesk (ADSK.O)	E (01/15/2019)	\$305.00
Check Point Software Technologies Ltd. (CHKP.O)	U (01/13/2020)	\$122.25
Cloudflare Inc (NET.N)	E (06/18/2020)	\$83.81
Fortinet Inc. (FTNT.O)	E (04/10/2018)	\$145.85
Intuit (INTU.O)	O (10/05/2020)	\$380.11
Microsoft (MSFT.O)	O (01/13/2016)	\$218.59
NortonLifeLock Inc (NLOK.O)	O (03/25/2020)	\$21.24
Okta, Inc. (OKTA.O)	E (02/04/2019)	\$271.81
Oracle Corporation (ORCL.N)	E (01/15/2019)	\$65.06
Palantir Technologies Inc. (PLTR.N)	U (12/02/2020)	\$25.97
Palo Alto Networks Inc (PANW.N)	O (10/10/2017)	\$355.53
Salesforce.com (CRM.N)	E (11/12/2020)	\$227.43
ServiceNow Inc (NOW.N)	O (11/12/2020)	\$565.43
Shopify Inc (SHOP.N)	E (10/05/2020)	\$1,170.96
Slack Technologies, Inc. (WORK.N)	E (12/09/2020)	\$42.79
Snowflake Inc. (SNOW.N)	E (10/12/2020)	\$334.25
Splunk Inc (SPLK.O)	O (11/18/2019)	\$165.89
VMware Inc (VMW.N)	E (01/15/2019)	\$140.14
Workday Inc (WDAY.O)	O (04/14/2020)	\$241.39
Zscaler Inc (ZS.O)	E (06/18/2020)	\$195.88

Meta A Marshall

8x8 Inc (EGHT.N)	E (01/13/2020)	\$31.50
Five9 Inc (FIVN.O)	O (12/17/2020)	\$176.60
RingCentral Inc (RNG.N)	O (12/17/2020)	\$387.83
Twilio Inc (TWLO.N)	O (09/19/2019)	\$365.03
Vonage Holdings Corp (VG.O)	E (08/18/2020)	\$13.44
Zoom Video Communications Inc (ZM.O)	E (05/13/2019)	\$406.01

Sanjit K Singh

Appian Corp (APPN.O)	U (04/14/2020)	\$155.90
Citrix Systems Inc (CTXS.O)	E (10/23/2020)	\$132.65
Cloudera Inc (CLDR.N)	O (06/03/2020)	\$12.68
Datadog, Inc. (DDOG.O)	E (10/14/2019)	\$107.72
Datto Holding Corp. (MSP.N)	E (11/16/2020)	\$28.08
Domo Inc (DOMO.O)	O (12/17/2020)	\$66.26
IFrog Ltd. (FROG.O)	E (10/12/2020)	\$68.90
MongoDB Inc (MDB.O)	O (12/17/2020)	\$376.87
New Relic Inc (NEWR.N)	E (04/14/2020)	\$69.24
NICE Ltd. (NICE.O)	O (12/17/2020)	\$273.55
Nuance Communications Inc. (NUAN.O)	O (01/13/2020)	\$43.31
PagerDuty, Inc. (PD.N)	E (05/06/2019)	\$45.21
Solarwinds Corp (SW.N)	E (11/13/2018)	\$14.18
Sumo Logic Inc (SUMO.O)	E (10/12/2020)	\$30.50

Stan Zlotzky, CFA

Anaplan Inc (PLAN.N)	E (11/06/2018)	\$70.49
Asana Inc (ASAN.N)	E (10/26/2020)	\$30.34
BigCommerce Holdings, Inc. (BIGC.O)	U (08/31/2020)	\$70.58
Coupa Software Inc (COUP.O)	O (04/14/2020)	\$366.90
DocuSign Inc (DOCU.O)	O (10/05/2020)	\$241.00
HubSpot, Inc. (HUBS.N)	O (03/25/2020)	\$404.55
Liveramp Holdings Inc (RAMP.N)	O (07/15/2019)	\$70.04
PROS Holdings Inc (PRON)	E (02/18/2020)	\$49.03
Smartsheet Inc (SMAR.N)	O (05/22/2018)	\$72.25
Sprout Social Inc (SPT.O)	E (11/17/2020)	\$53.00
Veeva Systems Inc (VEEV.N)	O (01/13/2020)	\$275.71
Vertex Inc. (VERX.O)	E (08/24/2020)	\$34.31
Workiva Inc (WK.N)	E (12/17/2020)	\$88.52
Yext Inc (YEXT.N)	U (01/15/2019)	\$15.93
Zendesk, Inc (ZEN.N)	O (09/10/2015)	\$140.27
ZoomInfo Technologies Inc (ZLO)	O (11/18/2020)	\$42.85
Zuora Inc (ZUON)	U (04/14/2020)	\$12.71

Stock Ratings are subject to change. Please see latest research for each company.

* Historical prices are not split adjusted.

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