

SAAS

INDUSTRY UPDATE | Q4 2019



NOTABLE & QUOTABLE

"At this point, cloud adoption is mainstream. The expectations of the outcomes associated with cloud investments therefore are also higher. Adoption of next-generation solutions are almost always 'cloud-enhanced' solutions, meaning they build on the strengths of a cloud platform to deliver digital business capabilities." – **Sid Nga, Gartner Vice President of Research**

"Volume of data is important, but it is more important to be able to add new analytics use cases quickly and then be able to support and manage hundreds or even thousands of those use cases as your business evolves." – **Todd Goldman, Infoworks Vice President of Marketing**

"As organizations use AI and data to stay relevant to their buyers in real-time, they need automation to ensure they are being fully adaptive to meet those needs." – **Steve Gershik, InRiver CMO**

"The data and technology that helps brand marketers resolve an individual's identity and create a more relevant experience for the customer will have the greatest impact on the industry." – **Aimee Irwin, Experian Vice President of Strategy**

GROWTH

Product-led growth is a strategy that uses product value to pursue growth and expansion in a market. The driving principle behind product-led growth: have a product users can't live without. The traditional approach to SaaS growth involves building a product, then hiring a sales team to sell the product, but in [this piece](#) Patrick Campbell describes the operative principles behind product-led growth and why a bottoms-up approach is effective.

UX

When designing for the web, product managers can analyze usage data and compare different interfaces in A/B tests. This is sometimes called "data-driven design", but it can also be thought of as data-informed design — the designer is still driving, not the data. In [this write-up](#), Kerry Rodden at GV Library walks us through the HEART framework and the goals-signals metrics process to optimize your product's UX and maximize user satisfaction.

OUTLOOK

2020 market expectations remain steady, bolstered by intense industry competition, consolidation across technology verticals, and an abundance of deployable capital. In [this collaboration](#) between several senior professionals at OpenView Venture Partners, the firm's leadership details eight challenging, thought-provoking predictions about technology trends to guide strategy in 2020.

Technology Team Contacts

Zane Tarence | Managing Director
 ztarence@foundersib.com

Chris Weingartner | Director
 cweingartner@foundersib.com

Brad Johnson | Vice President
 bjohnson@foundersib.com

Billy Pritchard | Vice President
 bpritchard@foundersib.com

William Short | Associate
 wshort@foundersib.com

Matt Stanford | Analyst
 mstanford@foundersib.com

Rebecca Askew | Practice Group Manager
 raskew@foundersib.com

Upcoming Events

Founders @ SaaS

March 10th – 12th

San Jose McEnery Convention Center

Booth 1339

[Meet Us There](#)

Table of Contents

| | |
|----------------------------|-------|
| Market Quotes & Insights | 1 |
| 2019 Silicon Y'all Recap | 2 |
| Recent Transactions | 3 |
| Valuation & Growth Metrics | 4-6 |
| Operating Statistics | 7-8 |
| Balance Sheet Metrics | 9-10 |
| SaaS Index Key | 11-13 |

BANK DEBT AND MIDDLE MARKET TECHNOLOGY FIRMS



John Hoesley & Josh Roberts – Innovation Banking, Sterling National Bank

Early- and mid-stage technology firms face trade-offs in raising equity. The need for growth capital vs. dilution. Money today vs. potentially higher valuations later. Self-governance vs. ceding some strategic and operational control. In the technology sector, change is the only constant – management teams and capital structures must be adaptable while balancing the cost of capital with adequate liquidity to fund investments in research and development, sales and marketing and the firm's infrastructure.

Many founders' focus on equity alternatives stems from the misunderstanding that bank debt is only available for investor-backed firms, or that founder-owned companies can only access high-cost, non-bank options. Unlike holiday M&Ms®, less- or non-dilutive bank debt alternatives do exist for mid-market technology firms...but there are considerations founders should undertake before pursuing it.

- **The choice of a banking partner is critical.** Founders often work with larger, less-focused financial institutions – they've 'always banked there' but now find their bank doesn't understand their business. Among tech-focused banking practices, overly aggressive lending to quickly build market share can foster a pullback if even a small set of borrowers experience difficulty. Or knee-jerk reactions to inevitable speed bumps in a firm's path leave founders wondering whether they'll have access to debt capital, usually, it seems, when opportunities are most abundant.

All bank lenders are regulated; there are limits to what they can, and should, provide. But banks underwriting primarily to business risk (whether investors are involved or not) develop a better understanding of firms' unique opportunities and challenges. Armed with that knowledge, these banks are better able to respond to changes impacting the firm. More important, knowledge of the business and its economics and broader market trends should result in a banking partner able to identify opportunities and anticipate challenges.

Finally, firms should challenge banks' experiences in their sectors and with their business models. Comfort should extend in both directions.

- **Various types of bank debt for firms at different stages.** Within the bank debt market, lenders should match solutions with borrowers' stages and cash flow burn/generation profile (again, within their regulatory and internal frameworks). Potential solutions include:
 - **Venture debt.** For early-stage firms, venture debt typically follows and extends the lives of equity rounds by adding debt equal to 25-50% of the raise. Warrants come and go in this segment but the debt typically includes a 12-24 month interest-only period that allows firms to continue investing by deferring principal amortization.
 - **Asset-based lending.** Mid-stage firms with service-intensive models may explore asset-based financing to support working capital requirements. With advance rates typically up to 90% of eligible A/R and 50% of eligible inventory, firms can leverage the existing asset base to provide required working capital.
 - **Recurring revenue-based solutions.** For mid-stage technology firms with subscription or highly-repeatable revenue, recurring revenue-based revolvers, based on multiples of monthly recurring revenue ranging from three to twenty-four times, depending on the firm's size, provide growth working capital to support investment in the business. As growth continues, the structure yields additional availability based on higher levels of recurring revenue.
 - **Traditional leveraged lending.** Finally, late-stage firms with positive EBITDA may explore traditional leveraged solutions for organic investment, acquisitions and management or leveraged buyouts.

Importantly, there are rarely 'one size fits all' solutions. Firms should look for banking partners offering credit solutions across businesses' stages of development, who can grow with the company. Bank debt typically includes financial and other covenants; while commonly set with reasonable cushions to forecasted performance, firms must be comfortable with the constraints covenants impose.
















- **Timing considerations.** The timing of bank debt availability is often misunderstood. Founders often assume bank debt is not available to firms burning cash, or absent significant asset bases or investor support. However, by understanding the firm's business model – and that growth investments often consume excess cash but drive enterprise value – experienced specialty lenders may underwrite to firms with cash burn profiles.

Whether firms have historically borrowed, management must be comfortable the business can support proposed debt – so the business continues to drive the balance sheet, not the other way around.

Debt often can be a non-dilutive, low-cost way to drive additional growth but it can negatively impact operating flexibility if there are covenant compliance issues. As a result, having a banker that truly understands the business, with a history of working with founders and investors to devise solutions that work for all parties, is critically important.

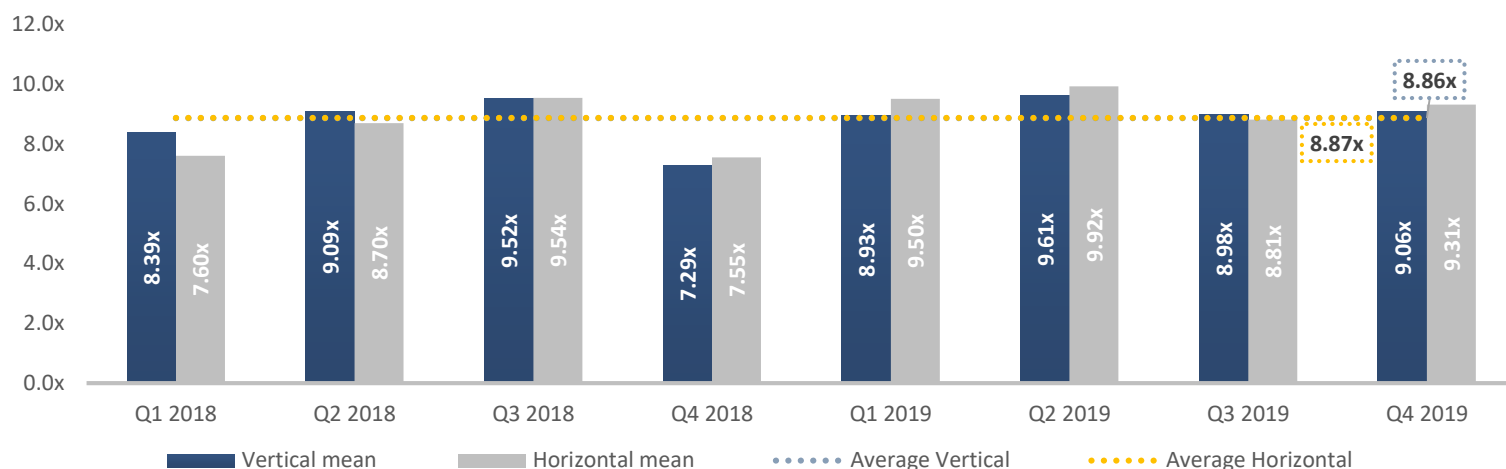
John Hoesley (312.909.7904; jhoesley@snb.com) and Josh Roberts (630.777.5777; jroberts@snb.com) co-founded the Innovation Banking Group for Sterling National Bank, where they provide senior debt and banking solutions to founder-owned and investor-backed mid-market technology firms across the U.S. Previously, they co-founded the U.S. Innovation Banking group for CIBC Bank USA after prior positions in corporate finance, corporate and investment banking, venture capital and mezzanine debt focused on the technology, media and telecom and life sciences sectors.

RECENT TRANSACTIONS

| Announced Date | Target | Buyer | Purchase Price | LTM Revenue | LTM EBITDA | Enterprise Value / LTM Revenue | Enterprise Value / LTM EBITDA |
|----------------|--|---|----------------|-------------|------------|--------------------------------|-------------------------------|
| 12/19/2019 |  telaria |  rubicon PROJECT | \$376 | \$68 | (\$10) | 5.5x | N/A |
| 12/19/2019 |  SH=PE |  f5 | \$1,028 | \$60 | N/A | 17.1x | N/A |
| 12/17/2019 |  LogMeIn |  FP FRANCISCO PARTNERS | \$4,558 | \$1,248 | \$353 | 3.7x | 12.9x |
| 12/4/2019 |  VERINT |  Apax PARTNERS | N/A | \$1,295 | \$206 | N/A | N/A |
| 12/4/2019 |  INSTRUCTURE |  THOMABRAVO | \$1,952 | \$258 | (\$55) | 7.6x | N/A |
| 11/25/2019 |  Aporeto |  paloalto NETWORKS | \$150 | - | N/A | N/A | N/A |
| 11/11/2019 |  CARBONITE | OPENTEXT™ | \$1,396 | \$405 | \$53 | 3.4x | 26.3x |
| 11/6/2019 |  Buildium® |  REALPAGE | \$580 | \$50 | (\$1) | 11.6x | N/A |
| 11/4/2019 |  scout [™] |  workday. | \$540 | - | N/A | N/A | N/A |
| 11/3/2019 |  observe it |  proofpoint. | \$225 | - | N/A | N/A | N/A |
| 10/23/2019 |  Onshape |  ptc® | \$470 | - | N/A | N/A | N/A |
| 10/22/2019 |  sessionm |  mastercard | \$215 | - | N/A | N/A | N/A |
| 10/21/2019 |  dataxu. |  Roku™ | \$149 | \$143 | (\$17) | 1.0x | N/A |
| 10/14/2019 |  SOPHOS |  THOMABRAVO | \$3,121 | \$727 | \$91 | 4.3x | 34.4x |

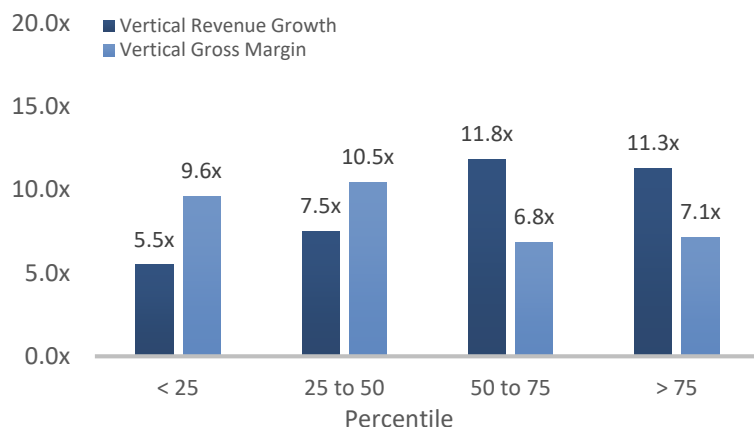
METRICS OVERVIEW

Public Vertical & Horizontal EV/LTM Revenue Multiples

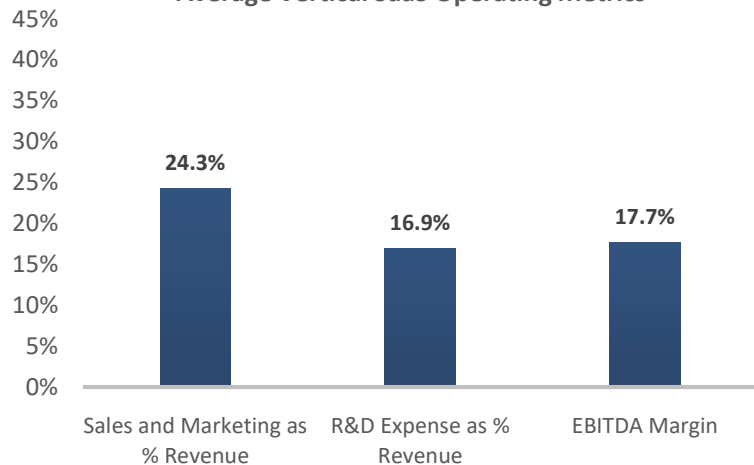


Public Vertical

Percentile Revenue Growth and Margin and EV / LTM Revenue

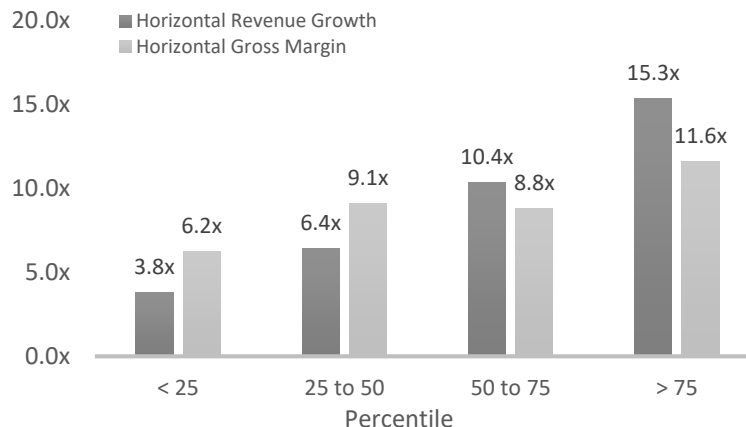


Average Vertical SaaS Operating Metrics

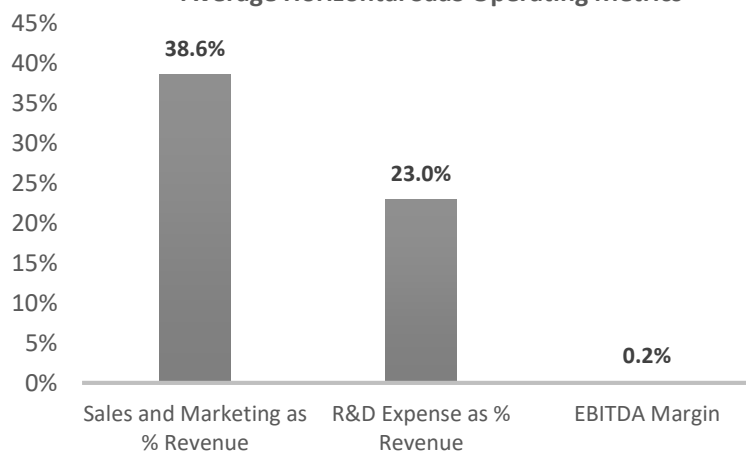


Public Horizontal

Percentile Revenue Growth and Margin and EV/LTM Revenue



Average Horizontal SaaS Operating Metrics



VALUATION & GROWTH METRICS

FA SaaS Index - Valuation & Growth - As of Q4 2019

(In millions)

| Ticker | Company Name | LTM Revenue | YoY Growth | LTM EBITDA | Enterprise Value / | |
|--------------------------------|-------------------------------|-------------|------------|------------|--------------------|------------|
| | | | | | LTM Revenue | LTM EBITDA |
| Vertical SaaS Companies | | | | | | |
| TWOU | 2U, Inc. | \$ 574.7 | 39.6% | \$ (106.5) | 3.2x | NM |
| APPF | AppFolio, Inc. | \$ 239.0 | 25.8% | \$ 17.8 | 15.8x | 176.0x |
| BKI | Black Knight, Inc. | \$ 1,177.2 | 5.7% | \$ 531.2 | 9.6x | 31.8x |
| BLKB | Blackbaud, Inc. | \$ 900.4 | 6.1% | \$ 118.6 | 5.0x | 33.1x |
| EBIX | Ebix, Inc. | \$ 570.8 | 14.7% | \$ 158.8 | 3.0x | 9.2x |
| FDS | FactSet Research Systems Inc. | \$ 1,450.4 | 5.7% | \$ 511.3 | 7.3x | 20.8x |
| INOV | Inovalon Holdings, Inc. | \$ 605.2 | 14.7% | \$ 164.9 | 6.4x | 22.0x |
| INST | Instructure, Inc. | \$ 258.5 | 23.4% | \$ (65.8) | 7.2x | NM |
| MDSO | Medidata Solutions, Inc. | \$ 684.6 | 7.7% | \$ 78.1 | - | - |
| MCO | Moody's Corporation | \$ 4,829.0 | 8.7% | \$ 2,270.9 | 10.7x | 21.8x |
| QTWO | Q2 Holdings, Inc. | \$ 295.8 | 22.7% | \$ (30.5) | 12.6x | NM |
| RP | RealPage, Inc. | \$ 960.3 | 10.5% | \$ 163.0 | 5.7x | 31.4x |
| SPSC | SPS Commerce, Inc. | \$ 279.1 | 12.4% | \$ 54.8 | 6.4x | 31.5x |
| TEMN | Temenos AG | \$ 972.0 | 15.6% | \$ 366.0 | 13.1x | 42.0x |
| TYL | Tyler Technologies, Inc. | \$ 1,086.4 | 16.2% | \$ 202.4 | 11.1x | 56.8x |
| VEEV | Veeva Systems Inc. | \$ 1,024.9 | 25.6% | \$ 309.1 | 19.0x | 61.9x |
| | Min | \$ 239.0 | 5.7% | \$ (106.5) | - | 9.2x |
| | Median | \$ 792.5 | 14.7% | \$ 160.9 | 7.3x | 31.7x |
| | Mean | \$ 994.3 | 15.9% | \$ 296.5 | 8.5x | 44.9x |
| | Max | \$ 4,829.0 | 39.6% | \$ 2,270.9 | 19.0x | 176.0x |

Horizontal SaaS Companies

| | | | | | | |
|------|-----------------------------|-------------|--------|------------|-------|--------|
| EGHT | 8x8, Inc. | \$ 418.5 | 23.8% | \$ (123.8) | 5.0x | NM |
| ADBE | Adobe Inc. | \$ 11,171.3 | 23.7% | \$ 3,833.9 | 14.2x | 41.2x |
| ALRM | Alarm.com Holdings, Inc. | \$ 473.3 | 12.6% | \$ 75.8 | 4.3x | 24.9x |
| AMBR | Amber Road, Inc. | \$ 86.2 | 1.2% | \$ (6.6) | - | - |
| TEAM | Atlassian Corporation Plc | \$ 1,416.0 | 36.5% | \$ 10.7 | 22.0x | NM |
| BNFT | Benefitfocus, Inc. | \$ 283.3 | 9.5% | \$ (19.6) | 3.1x | NM |
| BL | BlackLine, Inc. | \$ 289.0 | 26.9% | \$ (7.0) | 9.9x | NM |
| BOX | Box, Inc. | \$ 676.4 | 16.3% | \$ (78.8) | 4.0x | NM |
| BCOV | Brightcove Inc. | \$ 177.7 | 7.8% | \$ (2.3) | 1.9x | 95.7x |
| CARB | Carbonite, Inc. | \$ 6.1 | 7.5% | \$ 2.7 | 2.1x | 4.7x |
| CSLT | Castlight Health, Inc. | \$ 149.0 | (4.8%) | \$ (30.0) | 1.1x | NM |
| ECOM | ChannelAdvisor Corporation | \$ 130.0 | (1.0%) | \$ 10.6 | 1.7x | 20.8x |
| CTXS | Citrix Systems, Inc. | \$ 3,010.6 | 1.2% | \$ 697.7 | 5.0x | 18.8x |
| CSOD | Cornerstone OnDemand, Inc. | \$ 565.2 | 5.1% | \$ 17.1 | 6.3x | 137.0x |
| COUP | Coupa Software Incorporated | \$ 353.2 | 47.6% | \$ (47.9) | 26.2x | NM |
| DOCU | DocuSign, Inc. | \$ 898.8 | 38.3% | \$ (167.7) | 14.8x | NM |
| EGAN | eGain Corporation | \$ 69.2 | 6.8% | \$ 6.3 | 3.1x | 32.8x |
| EVBG | Everbridge, Inc. | \$ 185.6 | 26.2% | \$ (36.7) | 13.8x | NM |
| FIVN | Five9, Inc. | \$ 308.1 | 19.6% | \$ 19.6 | 12.7x | 167.3x |
| HUBS | HubSpot, Inc. | \$ 674.9 | 31.6% | \$ (29.3) | 10.1x | NM |
| INTU | Intuit Inc. | \$ 6,933.0 | 13.1% | \$ 2,078.0 | 9.6x | 32.1x |
| KXS | Kinaxis Inc. | \$ 173.5 | 15.1% | \$ 29.8 | 10.3x | 51.7x |
| LPSN | LivePerson, Inc. | \$ 291.6 | 16.7% | \$ (66.3) | 8.4x | NM |

VALUATION & GROWTH METRICS, CONT'D

| Ticker | Company Name | LTM Revenue | YoY Growth | LTM EBITDA | Enterprise Value / | |
|----------------------------------|-----------------------------------|-------------|------------|------------|--------------------|------------|
| | | | | | LTM Revenue | LTM EBITDA |
| Horizontal SaaS Companies | | | | | | |
| LOGM | LogMeIn, Inc. | \$ 1,260.4 | 4.7% | \$ 318.9 | 3.5x | 12.4x |
| MIME | Mimecast Limited | \$ 404.9 | 25.9% | \$ 29.7 | 7.1x | 55.1x |
| MOBL | MobileIron, Inc. | \$ 205.2 | 6.2% | \$ (41.1) | 2.3x | NM |
| MODN | Model N, Inc. | \$ 144.5 | (4.0%) | \$ (8.0) | 8.1x | NM |
| NEWR | New Relic, Inc. | \$ 572.0 | 28.4% | \$ (38.0) | 6.6x | NM |
| PAYC | Paycom Software, Inc. | \$ 737.7 | 30.3% | \$ 249.4 | 21.9x | 62.5x |
| PCTY | Paylocity Holding Corporation | \$ 519.0 | 24.2% | \$ 76.1 | 13.0x | 85.0x |
| PEGA | Pegasystems Inc. | \$ 911.4 | 2.2% | \$ (113.5) | 7.0x | NM |
| PFPT | Proofpoint, Inc. | \$ 888.2 | 23.9% | \$ (24.6) | 7.4x | NM |
| QLYS | Qualys, Inc. | \$ 321.6 | 15.3% | \$ 105.9 | 9.6x | 29.2x |
| RNG | RingCentral, Inc. | \$ 902.9 | 34.0% | \$ 8.5 | 17.1x | NM |
| CRM | salesforce.com, inc. | \$ 15,850.0 | 26.4% | \$ 2,333.0 | 9.1x | 48.3x |
| SCWX | SecureWorks Corp. | \$ 541.5 | 6.4% | \$ (7.7) | 2.3x | NM |
| NOW | ServiceNow, Inc. | \$ 3,460.4 | 32.6% | \$ 294.9 | 16.4x | 185.6x |
| SHOP | Shopify Inc. | \$ 1,578.2 | 47.0% | \$ (113.0) | 30.7x | NM |
| SMAR | Smartsheet Inc. | \$ 244.5 | 54.2% | \$ (74.3) | 19.5x | NM |
| ULTI | The Ultimate Software Group, Inc. | \$ 1,198.8 | 5.1% | \$ 117.0 | - | - |
| UPLD | Upland Software, Inc. | \$ 201.8 | 34.6% | \$ 48.3 | 5.6x | 22.6x |
| VRNS | Varonis Systems, Inc. | \$ 254.2 | (6.0%) | \$ (69.7) | 8.6x | NM |
| WIX | Wix.com Ltd. | \$ 720.7 | 19.4% | \$ (50.6) | 8.2x | NM |
| WDAY | Workday, Inc. | \$ 3,439.5 | 31.5% | \$ (190.6) | 10.8x | NM |
| WK | Workiva Inc. | \$ 282.1 | 15.4% | \$ (25.7) | 6.3x | NM |
| YEXT | Yext, Inc. | \$ 281.2 | 32.3% | \$ (97.4) | 5.4x | NM |
| ZEN | Zendesk, Inc. | \$ 816.4 | 36.4% | \$ (121.4) | 11.5x | NM |
| ZIXI | Zix Corporation | \$ 141.5 | 100.8% | \$ 22.5 | 4.6x | 24.4x |
| ZUO | Zuora, Inc. | \$ 269.2 | 21.6% | \$ (77.1) | 5.4x | NM |
| | Min | \$ 6.1 | (6.0%) | \$ (190.6) | - | 4.7x |
| | Median | \$ 418.5 | 19.6% | \$ (7.0) | 7.4x | 37.0x |
| | Mean | \$ 1,324.2 | 21.0% | \$ 177.9 | 8.9x | 57.6x |
| | Max | \$ 15,850.0 | 100.8% | \$ 3,833.9 | 30.7x | 185.6x |

OPERATING STATISTICS

FA SaaS Index - Operating Statistics - As of Q4 2019

| Ticker | Company Name | COGS As a % of Revenue | Gross Margin | SG&A As a % of Revenue | R&D Expense As a % of Revenue | Sales & Marketing As a % of Revenue | EBITDA Margin |
|----------------------------------|-------------------------------|---------------------------|-----------------|---------------------------|----------------------------------|--|------------------|
| Vertical SaaS Companies | | | | | | | |
| TWOU | 2U, Inc. | 28.2% | 71.8% | 82.4% | 20.1% | 59.6% | (18.5%) |
| APPF | AppFolio, Inc. | 39.4% | 60.6% | 33.2% | 20.0% | 19.5% | 7.4% |
| BKI | Black Knight, Inc. | 54.9% | 45.1% | N/A | N/A | N/A | 45.1% |
| BLKB | Blackbaud, Inc. | 46.5% | 53.5% | 37.5% | 11.8% | 24.9% | 13.2% |
| EBIX | Ebix, Inc. | 34.1% | 65.9% | 30.3% | 8.3% | 3.3% | 27.8% |
| FDS | FactSet Research Systems Inc. | 45.6% | 54.4% | 23.3% | 14.8% | N/A | 35.3% |
| INOV | Inovalon Holdings, Inc. | 26.0% | 74.0% | 41.5% | 5.3% | 9.6% | 27.2% |
| INST | Instructure, Inc. | 32.0% | 68.0% | 69.4% | 32.3% | 47.0% | (25.5%) |
| MDSO | Medidata Solutions, Inc. | 26.4% | 73.6% | 41.9% | 26.2% | 24.2% | 11.4% |
| MCO | Moody's Corporation | 28.7% | 71.3% | 24.2% | N/A | N/A | 47.0% |
| QTWO | Q2 Holdings, Inc. | 51.8% | 48.2% | 38.9% | 27.0% | 20.6% | (10.3%) |
| RP | RealPage, Inc. | 38.8% | 61.2% | 31.5% | 17.6% | 19.6% | 17.0% |
| SPSC | SPS Commerce, Inc. | 33.0% | 67.0% | 41.1% | 10.1% | 25.1% | 19.6% |
| TEMN | Temenos AG | 44.1% | 55.9% | 31.7% | N/A | 21.4% | 37.7% |
| TYL | Tyler Technologies, Inc. | 52.4% | 47.6% | 23.7% | 7.5% | N/A | 18.6% |
| VEEV | Veeva Systems Inc. | 26.7% | 73.3% | 26.4% | 18.7% | 16.5% | 30.2% |
| | Min | 26.0% | 45.1% | 23.3% | 5.3% | 3.3% | (25.5%) |
| | Median | 36.4% | 63.6% | 33.2% | 17.6% | 21.0% | 19.1% |
| | Mean | 38.0% | 62.0% | 38.5% | 16.9% | 24.3% | 17.7% |
| | Max | 54.9% | 74.0% | 82.4% | 32.3% | 59.6% | 47.0% |
| Horizontal SaaS Companies | | | | | | | |
| EGHT | 8x8, Inc. | 42.6% | 57.4% | 72.9% | 18.1% | 53.5% | (29.6%) |
| ADBE | Adobe Inc. | 15.0% | 85.0% | 36.9% | 17.3% | 29.0% | 34.3% |
| ALRM | Alarm.com Holdings, Inc. | 35.9% | 64.1% | 24.1% | 24.0% | 12.6% | 16.0% |
| AMBR | Amber Road, Inc. | 43.6% | 56.4% | 50.9% | 18.8% | 26.2% | (7.6%) |
| TEAM | Atlassian Corporation Plc | 17.2% | 82.8% | 37.0% | 49.8% | 20.1% | 0.8% |
| BNFT | Benefitfocus, Inc. | 48.2% | 51.8% | 44.9% | 21.0% | 28.1% | (6.9%) |
| BL | BlackLine, Inc. | 20.4% | 79.6% | 74.5% | 16.5% | 55.0% | (2.4%) |
| BOX | Box, Inc. | 30.5% | 69.5% | 61.4% | 27.8% | 46.7% | (11.7%) |
| BCOV | Brightcove Inc. | 41.0% | 59.0% | 45.6% | 19.1% | 32.9% | (1.3%) |
| CARB | Carbonite, Inc. | 36.5% | 63.5% | 28.0% | N/A | N/A | 44.0% |
| CSLT | Castlight Health, Inc. | 38.6% | 61.4% | 44.6% | 40.2% | 26.5% | (20.1%) |
| ECOM | ChannelAdvisor Corporation | 22.1% | 77.9% | 59.3% | 15.4% | 40.4% | 8.2% |
| CTXS | Citrix Systems, Inc. | 13.7% | 86.3% | 48.3% | 18.3% | 37.6% | 23.2% |
| CSOD | Cornerstone OnDemand, Inc. | 25.8% | 74.2% | 55.2% | 22.7% | 39.5% | 3.0% |
| COUP | Coupa Software Incorporated | 35.1% | 64.9% | 59.4% | 25.4% | 40.0% | (13.6%) |
| DOCU | DocuSign, Inc. | 24.9% | 75.1% | 78.8% | 19.9% | 62.1% | (18.7%) |
| EGAN | eGain Corporation | 31.3% | 68.7% | 38.4% | 22.1% | 26.7% | 9.1% |
| EVBG | Everbridge, Inc. | 31.5% | 68.5% | 67.1% | 30.1% | 44.3% | (19.8%) |
| FIVN | Five9, Inc. | 40.5% | 59.5% | 43.8% | 13.5% | 28.8% | 6.4% |
| HUBS | HubSpot, Inc. | 19.3% | 80.7% | 64.2% | 25.2% | 50.5% | (4.3%) |
| INTU | Intuit Inc. | 17.1% | 82.9% | 37.1% | 18.7% | 28.3% | 30.0% |
| KXS | Kinaxis Inc. | 29.6% | 70.4% | 38.1% | 18.3% | 23.5% | 17.2% |
| LPSN | LivePerson, Inc. | 27.0% | 73.0% | 73.3% | 28.2% | 53.8% | (22.7%) |
| LOGM | LogMeIn, Inc. | 25.6% | 74.4% | 46.8% | 15.4% | 35.1% | 25.3% |
| MIME | Mimecast Limited | 25.9% | 74.1% | 55.9% | 18.6% | 40.3% | 7.3% |

Source: CapitalIQ

OPERATING STATISTICS, CONT'D

| Ticker | Company Name | COGS <i>As a % of Revenue</i> | Gross Margin | SG&A <i>As a % of Revenue</i> | R&D Expense <i>As a % of Revenue</i> | Sales & Marketing <i>As a % of Revenue</i> | EBITDA Margin |
|----------------------------------|-----------------------------------|----------------------------------|-----------------|----------------------------------|---|---|------------------|
| Horizontal SaaS Companies | | | | | | | |
| MOBL | MobileIron, Inc. | 20.5% | 79.5% | 62.4% | 38.8% | 47.5% | (20.0%) |
| MODN | Model N, Inc. | 45.6% | 54.4% | 42.8% | 21.5% | 23.4% | (5.5%) |
| NEWR | New Relic, Inc. | 16.9% | 83.1% | 71.4% | 25.1% | 55.4% | (6.6%) |
| PAYC | Paycom Software, Inc. | 12.1% | 87.9% | 41.6% | 9.9% | 24.3% | 33.8% |
| PCTY | Paylocity Holding Corporation | 32.3% | 67.7% | 45.8% | 14.0% | 25.8% | 14.7% |
| PEGA | Pegasystems Inc. | 34.0% | 66.0% | 58.3% | 22.5% | 52.1% | (12.5%) |
| PFPT | Proofpoint, Inc. | 26.6% | 73.4% | 59.3% | 25.9% | 46.9% | (2.8%) |
| QLYS | Qualys, Inc. | 21.6% | 78.4% | 34.7% | 21.2% | 22.0% | 32.9% |
| RNG | RingCentral, Inc. | 25.6% | 74.4% | 62.7% | 15.1% | 47.5% | 0.9% |
| CRM | salesforce.com, inc. | 25.0% | 75.0% | 55.1% | 16.3% | 45.6% | 14.7% |
| SCWX | SecureWorks Corp. | 46.0% | 54.0% | 46.0% | 17.2% | 28.2% | (1.4%) |
| NOW | ServiceNow, Inc. | 23.0% | 77.0% | 54.1% | 21.6% | 44.3% | 8.5% |
| SHOP | Shopify Inc. | 45.1% | 54.9% | 40.9% | 23.0% | 29.7% | (7.2%) |
| SMAR | Smartsheet Inc. | 19.2% | 80.8% | 82.0% | 34.9% | 63.4% | (30.4%) |
| ULTI | The Ultimate Software Group, Inc. | 38.1% | 61.9% | 37.5% | 19.4% | 25.0% | 9.8% |
| UPLD | Upland Software, Inc. | 31.3% | 68.7% | 35.9% | 13.2% | 14.7% | 23.9% |
| VRNS | Varonis Systems, Inc. | 13.7% | 86.3% | 83.4% | 31.8% | 66.1% | (27.4%) |
| WIX | Wix.com Ltd. | 24.2% | 75.8% | 51.7% | 33.1% | 40.8% | (7.0%) |
| WDAY | Workday, Inc. | 29.5% | 70.5% | 41.0% | 42.6% | 31.7% | (5.5%) |
| WK | Workiva Inc. | 28.1% | 71.9% | 51.3% | 31.0% | 38.8% | (9.1%) |
| YEXT | Yext, Inc. | 25.5% | 74.5% | 95.9% | 15.9% | 71.7% | (34.6%) |
| ZEN | Zendesk, Inc. | 28.7% | 71.3% | 64.7% | 25.4% | 48.6% | (14.9%) |
| ZIXI | Zix Corporation | 40.2% | 59.8% | 43.7% | 12.5% | N/A | 15.9% |
| ZUO | Zuora, Inc. | 49.0% | 51.0% | 57.4% | 25.9% | 41.1% | (28.7%) |
| Min | | 12.1% | 51.0% | 24.1% | 9.9% | 12.6% | (34.6%) |
| Median | | 28.1% | 71.9% | 51.3% | 21.4% | 39.5% | (2.4%) |
| Mean | | 29.4% | 70.6% | 53.2% | 23.0% | 38.6% | 0.2% |
| Max | | 49.0% | 87.9% | 95.9% | 49.8% | 71.7% | 44.0% |

BALANCE SHEET METRICS

FA SaaS Index - Balance Sheet Metrics - As of Q4 2019

| Ticker | Company Name | Return on Assets | Return on Equity | Current Ratio | Days Sales Outstanding | Days Payable Outstanding | Liabilities/Assets | Debt/Equity |
|----------------------------------|-------------------------------|------------------|------------------|---------------|------------------------|--------------------------|--------------------|-------------|
| Vertical SaaS Companies | | | | | | | | |
| TWOU | 2U, Inc. | (11.1%) | (33.2%) | 1.7x | 21.0 | 93.1 | 40.1% | 45.1% |
| APPF | AppFolio, Inc. | 3.6% | 29.5% | 1.5x | 10.3 | 5.1 | 46.4% | 57.7% |
| BKI | Black Knight, Inc. | 4.8% | 5.9% | 1.0x | 57.1 | 37.4 | 52.1% | 81.3% |
| BLKB | Blackbaud, Inc. | 1.1% | 3.1% | 0.7x | 35.6 | 35.9 | 80.1% | 141.8% |
| EBIX | Ebix, Inc. | 6.0% | 13.6% | 1.5x | 101.9 | 213.1 | 63.7% | 132.3% |
| FDS | FactSet Research Systems Inc. | 18.0% | 58.8% | 2.6x | 38.4 | 40.8 | 60.7% | 121.5% |
| INOV | Inovalon Holdings, Inc. | 1.8% | (1.2%) | 2.3x | 71.6 | 72.1 | 65.3% | 157.5% |
| INST | Instructure, Inc. | (16.7%) | (58.3%) | 1.0x | 53.8 | 39.8 | 60.1% | 33.0% |
| MDSO | Medidata Solutions, Inc. | 2.2% | 7.2% | 2.6x | 89.4 | 17.3 | 35.5% | 30.1% |
| MCO | Moody's Corporation | 13.1% | 192.1% | 1.9x | N/A | N/A | 91.9% | 740.7% |
| Q TWO | Q2 Holdings, Inc. | (4.3%) | (24.8%) | 5.9x | 30.1 | 19.7 | 60.9% | 119.8% |
| RP | RealPage, Inc. | 2.6% | 4.0% | 0.8x | 46.7 | 30.9 | 49.9% | 64.2% |
| SPSC | SPS Commerce, Inc. | 5.8% | 10.0% | 4.2x | 38.6 | 17.2 | 20.7% | 6.7% |
| TEMN | Temenos AG | 7.4% | 48.7% | 0.8x | 112.6 | 108.2 | 80.8% | 263.9% |
| TYL | Tyler Technologies, Inc. | 4.9% | 10.0% | 1.3x | 113.1 | 31.1 | 26.2% | 1.4% |
| VEEV | Veeva Systems Inc. | 10.9% | 22.7% | 5.4x | 45.9 | 13.9 | 18.0% | 1.8% |
| Min | | (16.7%) | (58.3%) | 0.7x | 10.3 | 5.1 | 18.0% | 1.4% |
| Median | | 4.2% | 8.6% | 1.6x | 46.7 | 35.9 | 56.1% | 72.7% |
| Mean | | 3.1% | 18.0% | 2.2x | 57.7 | 51.7 | 53.3% | 124.9% |
| Max | | 18.0% | 192.1% | 5.9x | 113.1 | 213.1 | 91.9% | 740.7% |
| Horizontal SaaS Companies | | | | | | | | |
| EGHT | 8x8, Inc. | (17.0%) | (67.3%) | 2.5x | 30.6 | 80.5 | 70.0% | 172.2% |
| ADBE | Adobe Inc. | 10.3% | 29.7% | 0.8x | 46.4 | 43.1 | 49.3% | 39.3% |
| ALRM | Alarm.com Holdings, Inc. | 8.0% | 16.1% | 4.7x | 46.4 | 43.3 | 32.9% | 31.5% |
| AMBR | Amber Road, Inc. | (5.9%) | (39.7%) | 0.6x | 63.2 | 24.4 | 72.7% | 101.3% |
| TEAM | Atlassian Corporation Plc | (0.5%) | (28.8%) | 1.0x | 27.2 | 47.1 | 74.5% | 129.3% |
| BNFT | Benefitfocus, Inc. | (8.8%) | N/A | 2.5x | 49.2 | 20.6 | 108.2% | -1040.0% |
| BL | BlackLine, Inc. | (2.3%) | (8.8%) | 3.5x | 112.2 | 33.6 | 60.2% | 99.1% |
| BOX | Box, Inc. | (11.9%) | (575.8%) | 0.8x | 57.8 | 26.2 | 97.5% | 2048.8% |
| BCOV | Brightcove Inc. | (2.9%) | (24.3%) | 0.8x | 57.0 | 40.6 | 56.1% | 21.7% |
| CARB | Carbonite, Inc. | 4.1% | 8.6% | 5.7x | 68.9 | 16.5 | 10.7% | N/A |
| CSLT | Castlight Health, Inc. | (8.7%) | (17.3%) | 1.8x | 80.5 | 55.4 | 26.9% | 11.2% |
| ECOM | ChannelAdvisor Corporation | 2.3% | 3.7% | 2.3x | 64.0 | 12.7 | 32.2% | 15.4% |
| CTXS | Citrix Systems, Inc. | 7.5% | 98.2% | 0.8x | 85.4 | 71.8 | 80.9% | 119.3% |
| CSOD | Cornerstone OnDemand, Inc. | 0.4% | (18.0%) | 1.5x | 63.9 | 22.7 | 84.9% | 286.2% |
| COUP | Coupa Software Incorporated | (3.9%) | (21.6%) | 2.1x | 67.3 | 10.4 | 69.6% | 167.7% |
| DOCU | DocuSign, Inc. | N/A | N/A | 1.5x | 65.0 | 41.7 | 68.1% | 110.2% |
| EGAN | eGain Corporation | 5.6% | 34.5% | 1.4x | 80.2 | 31.6 | 63.3% | 13.7% |
| EVBG | Everbridge, Inc. | (7.7%) | (37.8%) | 1.8x | 87.4 | 40.5 | 56.0% | 54.0% |
| FIVN | Five9, Inc. | 1.1% | (1.1%) | 6.1x | 33.6 | 16.5 | 60.8% | 124.6% |
| HUBS | HubSpot, Inc. | (2.4%) | (12.0%) | 3.4x | 45.9 | 29.0 | 58.6% | 93.6% |
| INTU | Intuit Inc. | 21.1% | 49.3% | 1.8x | 4.8 | 73.8 | 41.2% | 21.3% |
| KXS | Kinaxis Inc. | 5.3% | 9.4% | 3.3x | 78.2 | 32.6 | 29.5% | 4.8% |
| LPSN | LivePerson, Inc. | (13.2%) | (60.2%) | 1.8x | 83.6 | 48.7 | 71.0% | 133.6% |
| LOGM | LogMeIn, Inc. | 0.8% | (0.5%) | 0.5x | 30.2 | 49.4 | 28.9% | 11.2% |
| MIME | Mimecast Limited | (0.2%) | (3.5%) | 1.1x | 65.2 | 34.9 | 68.6% | 107.3% |

BALANCE SHEET METRICS, CONT'D

| Ticker | Company Name | Return on Assets | Return on Equity | Current Ratio | Days Sales Outstanding | Days Payable Outstanding | Liabilities/Assets | Debt/Equity |
|----------------------------------|-----------------------------------|------------------|------------------|---------------|------------------------|--------------------------|--------------------|-------------|
| Horizontal SaaS Companies | | | | | | | | |
| MOBL | MobileIron, Inc. | (13.2%) | (108.4%) | 1.3x | 106.5 | 15.0 | 83.1% | 43.8% |
| MODN | Model N, Inc. | (5.3%) | (32.1%) | 1.3x | 74.1 | 16.1 | 65.9% | 85.6% |
| NEWR | New Relic, Inc. | (4.2%) | (22.7%) | 3.0x | 68.0 | 50.5 | 67.6% | 130.5% |
| PAYC | Paycom Software, Inc. | 7.1% | 41.9% | 1.1x | 3.1 | 23.1 | 78.8% | 11.6% |
| PCTY | Paylocity Holding Corporation | 1.8% | 19.8% | 1.1x | 3.2 | 7.8 | 85.7% | 25.5% |
| PEGA | Pegasystems Inc. | (8.6%) | (15.6%) | 1.3x | 148.7 | 20.0 | 45.3% | 12.7% |
| PFPT | Proofpoint, Inc. | (3.7%) | (23.6%) | 1.6x | 95.5 | 28.1 | 74.7% | 136.0% |
| QLYS | Qualys, Inc. | 7.4% | 18.6% | 1.8x | 87.3 | 16.9 | 42.7% | 13.4% |
| RNG | RingCentral, Inc. | (1.6%) | (10.1%) | 1.9x | 50.1 | N/A | 48.6% | 55.7% |
| CRM | salesforce.com, inc. | 1.1% | 3.1% | 1.1x | 58.4 | 134.7 | 33.4% | 19.5% |
| SCWX | SecureWorks Corp. | (3.0%) | (5.5%) | 1.1x | 85.0 | 32.0 | 35.2% | 4.5% |
| NOW | ServiceNow, Inc. | 0.5% | 38.7% | 1.0x | 74.4 | 19.2 | 64.7% | 53.1% |
| SHOP | Shopify Inc. | (3.1%) | (4.9%) | 8.7x | 7.5 | 38.9 | 13.6% | 5.0% |
| SMAR | Smartsheet Inc. | (10.1%) | (22.7%) | 3.1x | 49.6 | 27.5 | 32.0% | 12.3% |
| ULTI | The Ultimate Software Group, Inc. | 1.9% | 8.4% | 1.0x | 67.0 | 13.1 | 69.6% | 11.5% |
| UPLD | Upland Software, Inc. | 2.2% | (15.4%) | 1.6x | 64.0 | 21.8 | 68.1% | 159.3% |
| VRNS | Varonis Systems, Inc. | (15.7%) | (72.0%) | 1.3x | 113.6 | 18.9 | 70.6% | 69.8% |
| WIX | Wix.com Ltd. | (4.4%) | (42.4%) | 2.0x | 7.8 | 92.3 | 80.8% | 205.8% |
| WDAY | Workday, Inc. | (5.1%) | (22.0%) | 1.2x | 58.4 | 11.6 | 62.3% | 66.9% |
| WK | Workiva Inc. | (4.5%) | (136.8%) | 2.6x | 54.5 | 22.9 | 88.8% | 453.5% |
| YEXT | Yext, Inc. | (19.5%) | (74.9%) | 2.0x | 47.6 | 37.3 | 56.3% | 55.8% |
| ZEN | Zendesk, Inc. | (7.0%) | (38.8%) | 1.4x | 47.6 | 43.0 | 69.8% | 128.6% |
| ZIXI | Zix Corporation | 1.3% | (2.3%) | 0.3x | 17.2 | 42.1 | 63.7% | 128.8% |
| ZUO | Zuora, Inc. | N/A | N/A | 1.8x | 78.4 | 6.1 | 49.4% | 6.9% |
| Min | | (19.5%) | (575.8%) | 0.3x | 3.1 | 6.1 | 10.7% | (1040.0%) |
| Median | | (2.4%) | (13.7%) | 1.6x | 63.9 | 30.3 | 63.7% | 55.7% |
| Mean | | (2.2%) | (25.8%) | 2.0x | 60.4 | 35.1 | 59.7% | 99.5% |
| Max | | 21.1% | 98.2% | 8.7x | 148.7 | 134.7 | 108.2% | 2048.8% |

FOUNDERS TECHNOLOGY TRANSACTIONS

| | | | | | | |
|--|--|--|---|--|--|--|
| Has been recapitalized by Financial Advisor | Has been acquired by Sell-Side Advisor | Has been acquired by Sell-Side Advisor | Has been acquired by Sell-Side Advisor | Has been recapitalized by Financial Advisor | Has been acquired by Sell-Side Advisor | Has been acquired by Sell-Side Advisor |
| Has been recapitalized by Financial Advisor | Has been recapitalized by Financial Advisor | Has been recapitalized by Financial Advisor | Has been acquired by Sell-Side Advisor | Has been acquired by Financial Advisor | Has been acquired by Sell-Side Advisor | Has been acquired by Sell-Side Advisor |
| Has been acquired by Sell-Side Advisor | Has been recapitalized by Financial Advisor | Have been acquired by Sell-Side Advisor | Has been acquired by Sell-Side Advisor | Has been recapitalized by Financial Advisor | Has been recapitalized by Financial Advisor | Has been acquired by Sell-Side Advisor |
| Has been acquired by Sell-Side Advisor | Has been acquired by Sell-Side Advisor | Has been recapitalized by Financial Advisor | Has been acquired by Sell-Side Advisor | Has been acquired by Sell-Side Advisor | Has been acquired by Sell-Side Advisor | Has been acquired by Sell-Side Advisor |
| Has been acquired by A subsidiary of Sell-Side Advisor | Has been recapitalized by Financial Advisor | Has been acquired by Sell-Side Advisor | Has been acquired by Sell-Side Advisor | Has secured growth capital from Strategic Advisor | Has been acquired by Sell-Side Advisor | Has been acquired by Sell-Side Advisor |
| Has been recapitalized by Sell-Side Advisor | Has been acquired by Sell-Side Advisor | Has secured growth funding from Financial Advisor | Has been acquired by Sell-Side Advisor | Has been acquired by Sell-Side Advisor | Has been acquired by Sell-Side Advisor | Has been acquired by Financial Advisor |
| Has been acquired by Sell-Side Advisor | Has been acquired by Sell-Side Advisor | Has been acquired by Sell-Side Advisor | Has been acquired by Sell-Side Advisor | Has been acquired by Sell-Side Advisor | Has been acquired by Sell-Side Advisor | Has been acquired by Sell-Side Advisor |
| Has been acquired by Sell-Side Advisor | Has been acquired by Sell-Side Advisor | Has been acquired by Sell-Side Advisor | Has been acquired by Sell-Side Advisor | Has been acquired by Sell-Side Advisor | Has been acquired by Sell-Side Advisor | Has been recapitalized by Financial Advisor |



FOUNDERS ADVISORS

VALUE | LIQUIDITY | GROWTH

Technology Team Contacts

Zane Tarence
Managing Director / Partner
ztarence@foundersib.com

Chris Weingartner
Director
cweingartner@foundersib.com

Brad Johnson
Vice President
bjohnson@foundersib.com

Billy Pritchard
Vice President
bpritchard@foundersib.com

William Short
Associate
wshort@foundersib.com

Matt Stanford
Analyst
mstanford@foundersib.com

Rebecca Askew
Practice Group Manager
raskew@foundersib.com

FOUNDERS ADVISORS is a merger, acquisition & strategic advisory firm serving middle-market companies. Founders' focus is on SaaS, software, internet, digital media, industrials, oil and gas, business services, consumer, and healthcare companies located nationwide. Founders' skilled professionals, proven expertise and process-based solutions help companies access growth capital, make acquisitions, and/or prepare for and execute liquidity events to achieve specific financial goals.



In order to provide securities-related services discussed herein, certain principals of Founders are licensed with M&A Securities Group, Inc. or Founders M&A Advisory, LLC, both members FINRA & SIPC. Founders M&A Advisory is a wholly owned subsidiary of Founders. M&A Securities Group and Founders are not affiliated entities. For more information, visit www.foundersib.com.