

DECISIONPOINT

QUARTERLY VIEWPOINT:

For the Quarter Ended December 31, 2018 and the Latest Twelve Months

Q4 | 18

1. Market Leader for Mid-Market Technology M&A	3
2. Software	
I. Software as a Service (SaaS)	4
II. Internet Software & Services	5
III. Enterprise Software	6
IV. Business Intelligence Software	7
V. Infrastructure Software	8
3. Services	
I. IT Services	9
II. Hosted Services	10
III. IT Outsourcing	11
IV. IT Staffing	12
V. Value Added Resellers	13

Market Leader for Mid-Market Technology M&A:

This Quarterly ViewPoint covers trends, public valuation multiples and relevant M&A activity for the software and services sectors. To illustrate general capital market and M&A trends within these sectors, DecisionPoint has selected a group of representative public comparables and transactions. This data is provided for informational purposes only. All data represents publicly available information.

DecisionPoint is a unique leader in M&A advisory services for middle-market technology companies and their venture capital investors in the software, services, and healthcare IT sectors.



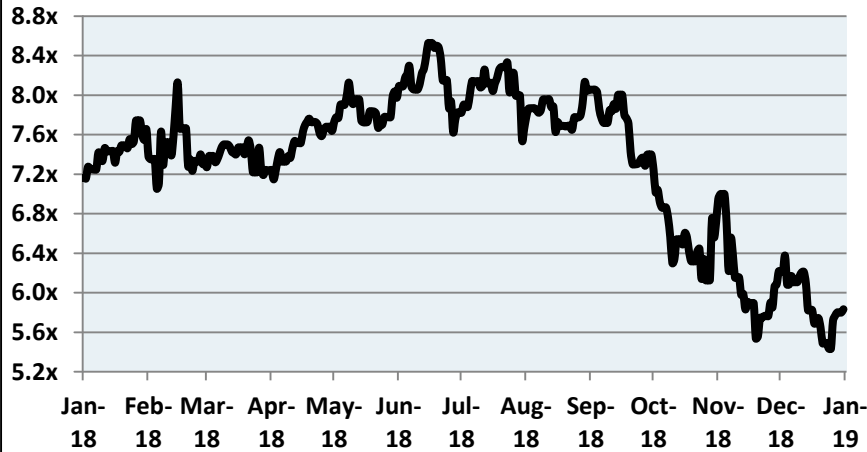
The information in this Quarterly ViewPoint was prepared by DecisionPoint Advisors, LLC ("DecisionPoint"). DecisionPoint has issued the material contained within this report for informational purposes only. The material contained within this report is not and should not be construed as an offer to sell or solicitation of an offer to purchase or subscribe for any investment. Information presented was obtained from various sources that are believed to be reliable. DecisionPoint makes no guarantees, representations or warranties and accepts no responsibility or liability as to the accuracy or completeness of the information provided. Opinions, estimates, and analyses in this report do not necessarily reflect the opinions of DecisionPoint and are subject to change without notice. DecisionPoint has no obligation to update, modify, or amend this report or to otherwise notify a reader thereof in the event that any matter stated herein changes or subsequently becomes inaccurate.

Software: Software as a Service (SaaS)

HIGHLIGHTS, VALUATION METRICS, AND RECENT M&A ACTIVITY

MARKET PERFORMANCE

DP SaaS Index EV/Revenue Multiple
Latest Twelve Months



VALUATION METRICS

Company	Stock Price 12/31/18	Market Cap.	Enterprise Value (\$M)	EV/ LTM Revenue	EV / LTM EBITDA
Salesforce	\$136.97	\$104,932.4	\$105,723.1	8.5x	62.1x
Workday	\$159.68	\$34,240.0	\$34,418.9	13.2x	NM
Red Hat	\$175.64	\$32,915.4	\$29,798.2	9.4x	49.2x
ServiceNow	\$178.05	\$31,391.0	\$31,112.9	12.7x	NM
Ultimate Software	\$244.87	\$7,667.0	\$7,528.3	6.9x	60.8x
Athenahealth	\$131.93	\$5,428.9	\$5,387.3	4.1x	17.4x
LogMeIn	\$81.57	\$4,325.9	\$4,208.8	3.6x	11.5x
RealPage	\$48.19	\$4,274.4	\$4,843.2	5.8x	30.8x
Medidata Solutions	\$67.42	\$4,097.0	\$4,016.4	6.6x	41.6x
Cornerstone OnDemand	\$50.43	\$2,922.6	\$2,852.8	5.4x	NM
Ellie Mae	\$62.83	\$2,248.3	\$1,916.8	4.0x	21.5x
Ebix	\$42.56	\$1,346.6	\$1,873.2	4.0x	12.2x
LivePerson	\$18.86	\$1,098.5	\$1,129.7	4.7x	NM
Median:	\$81.57	\$4,325.9	\$4,843.2	5.8x	30.8x

SECTOR HIGHLIGHTS

- The median SaaS index was trading at 5.8x revenue (based on Enterprise Value) at the closing of Q4.
- SaaS M&A activity grew to record levels in 2018 with total deal amount of \$82b, more than double any other year in history, across 942 acquisitions, up from 776 in 2017. Large acquisitions were rampant in 2018 as acquirers completed 21 \$1b+ SaaS acquisitions including SAP's \$8b acquisition of Qualtrics and Microsoft's \$7.5b acquisition of GitHub.
- BlackBerry's acquisition announcement to buy SaaS cybersecurity provider Cylance for \$1.4b in November has continued its pivot from hardware to enterprise software. BlackBerry plans to combine Cylance, which uses AI to proactively detect and prevent threats on devices, with its endpoint management tools to become a one-stop shop in the device protection market.
- Overview Partners predicts that 2019 will be the year that SaaS companies switch from focusing on investments in lead generation to investments in coherent brands that resonate with customers. As companies evaluate how best to deliver UX, brand image is increasingly being interwoven in websites and software platforms with companies focusing on consistency and simplicity.
- Gartner projects the SaaS market to reach \$85b in 2019, growing by 17.3%. The growth is driven by enterprise acceptance of SaaS as the preferred delivery model and SaaS users demanding purpose-built offerings that deliver specific outcomes.

MERGERS & ACQUISITIONS (SAMPLE DEALS)

Announced Date	Acquirer Name	Target Name	Enterprise Value (\$m)
2018-12-24	Vista Equity Partners	MINDBODY	1,900.0
2018-12-20	Autodesk	BuildingConnected	275.0
2018-12-12	Temenos	Avoka	245.0
2018-12-10	Experian	Compuscan	261.8
2018-11-28	Marlin Equity Partners	SHIFT	70.0
2018-11-20	Autodesk	PlanGrid	875.0
2018-11-16	BlackBerry	Cylance	1,400.0
2018-11-05	ResMed	MatrixCare	750.0
2018-11-05	Thoma Bravo	Veracode Software [Broadcom]	950.0
2018-10-31	OpenText	Liaison Technologies	310.0
2018-10-17	E. W. Scripps	Triton Digital	150.0
2018-10-15	Twilio	SendGrid	1,738.5

Software: Internet Software and Services

HIGHLIGHTS, VALUATION METRICS, AND RECENT M&A ACTIVITY

MARKET PERFORMANCE

DP Internet Software & Services Index EV/Revenue Multiple
Latest Twelve Months



VALUATION METRICS

Company	Stock Price 12/31/18	Market Cap.	Enterprise Value (EV)	EV/ LTM Revenue	EV / LTM EBITDA
Amazon.com	\$1,501.97	\$749,483.0	\$729,335.2	3.3x	28.7x
Alphabet	\$1,044.96	\$735,786.9	\$621,035.2	4.8x	15.6x
Facebook	\$131.09	\$385,240.7	\$335,518.8	6.5x	11.9x
Netflix	\$267.66	\$120,581.1	\$121,991.6	8.2x	NM
Booking Holdings	\$1,871.60	\$91,340.6	\$81,371.7	5.8x	14.4x
eBay	\$28.07	\$28,140.2	\$31,395.6	3.1x	10.4x
Twitter	\$28.74	\$21,960.7	\$18,629.6	6.5x	23.4x
Expedia Group	\$112.65	\$17,353.5	\$18,691.0	1.7x	11.7x
IAC	\$183.04	\$15,204.9	\$16,202.2	3.9x	19.1x
Snap	\$5.51	\$6,992.5	\$5,720.6	5.3x	NM
Cimpress	\$103.42	\$3,294.8	\$4,248.4	1.6x	16.3x
Pandora Media	\$8.09	\$2,084.8	\$2,563.4	1.7x	NM
Groupon	\$3.20	\$1,832.1	\$1,487.0	0.5x	10.9x
Median:	\$112.65	\$21,960.7	\$18,691.0	3.9x	15.0x

SECTOR HIGHLIGHTS

- The median Internet Software and Services index was trading at 3.9x revenue (based on Enterprise Value) at the closing of Q4.
- Internet Software and Services M&A activity largely remained flat in 2018 with deal amount dropping slightly from \$6.3b in 2017 to \$5.5b in 2018 and deal volume dropping from 100 in 2017 to 94 in 2018.
- Uber and Lyft allegedly filed for an IPO on the same day near the end of Q4 as they race one another for a public debut. Uber’s potential IPO is expected to be one of the most anticipated tech stock debuts ever with rumored valuations in the \$120 billion range. These IPOs could begin a wave of IPOs by other tech companies, which have stayed private for years due to the ample availability of private capital.
- On November 8th, Disney revealed its new streaming service, Disney + to the public. Disney stock jumped 3% after the announcement, at one point reaching its highest price in nearly three years. In order to compete in an increasingly crowded streaming market, Netflix spent \$8b developing content in 2018 which it hopes to use to mitigate the damage when it loses Disney content on the platform.
- Capital One’s acquisition of Wikibuy in November continues a trend where big banks have been snapping up fintech firms to better serve customer demand for digital products. The acquisition is the second in the space for Capital One and should enable it to better compete with competitors like JP Morgan and Citigroup.

MERGERS & ACQUISITIONS (SAMPLE DEALS)

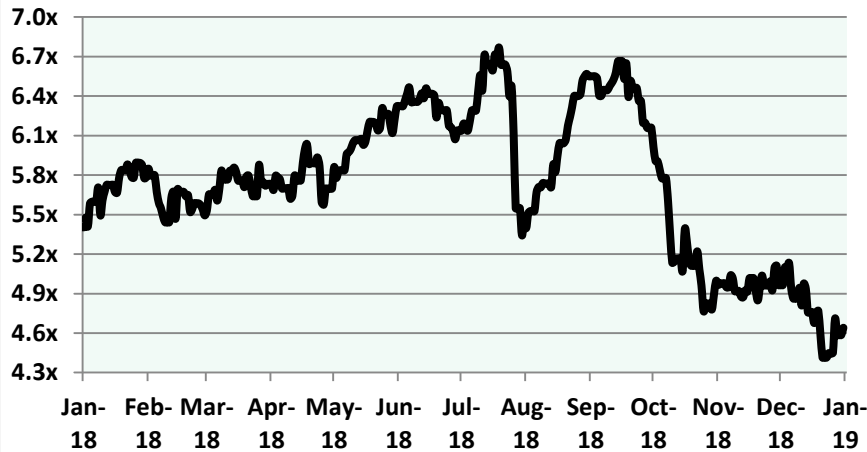
Announced Date	Acquirer Name	Target Name	Enterprise Value (\$m)
2018-12-21	Takeaway	Delivery Hero	1,059.8
2018-12-19	Black Ridge	Ourgame International	118.0
2018-12-12	Farfetch	Stadium Goods	250.0
2018-12-12	Waitr	Bite Squad	321.3
2018-11-28	KAR Auction Services	CarsOnTheWeb	103.2
2018-11-27	Forrester Research	SiriusDecisions	245.0
2018-11-04	Webjet	Destinations of the World	173.0
2018-10-31	William Hill	Mr Green & Co.	308.5
2018-10-29	Parship Elite	eHarmony	74.1
2018-10-11	Angi Homeservices	Handy	163.1
2018-10-04	LendingTree	QuoteWizard	300.0

Software: Enterprise Software

HIGHLIGHTS, VALUATION METRICS, AND RECENT M&A ACTIVITY

MARKET PERFORMANCE

DP Enterprise Software Index EV/Revenue Multiple
Latest Twelve Months



VALUATION METRICS

Company	Stock Price 12/31/18	Market Cap.	Enterprise Value (EV)	EV / LTM Revenue	EV / LTM EBITDA
Microsoft	\$101.57	\$790,798.6	\$720,023.5	6.3x	13.8x
Oracle	\$45.15	\$182,880.1	\$171,169.7	4.3x	10.4x
SAP	\$99.44	\$118,755.6	\$116,411.9	4.1x	15.1x
IBM	\$113.67	\$104,830.3	\$135,862.6	1.7x	8.3x
Dassault Systemes	\$118.62	\$30,827.3	\$28,723.4	7.2x	24.1x
Autodesk	\$128.61	\$28,133.4	\$28,676.3	12.0x	NM
Constellation Software	\$641.59	\$13,596.5	\$13,539.4	4.6x	19.4x
Ansys	\$142.94	\$12,324.6	\$11,214.7	9.5x	24.4x
PTC	\$82.90	\$9,795.3	\$10,195.7	8.2x	NM
Amdocs	\$58.58	\$8,355.8	\$7,700.3	1.9x	12.2x
Tyler Technologies	\$185.82	\$7,443.1	\$6,942.3	7.6x	31.7x
Blackbaud	\$62.90	\$3,023.8	\$3,454.9	4.1x	24.9x
Manhattan Associates	\$42.37	\$2,849.4	\$2,676.2	4.8x	17.4x
Verint Systems	\$42.31	\$2,765.5	\$3,148.1	2.6x	15.7x
Stratasys	\$18.01	\$965.8	\$649.6	1.0x	12.6x
Median:	\$99.44	\$12,324.6	\$11,214.7	4.6x	15.7x

SECTOR HIGHLIGHTS

- The median Enterprise Software index was trading at 4.6x revenue (based on Enterprise Value) at the closing of Q4.
- Enterprise software M&A surged in 2018 with \$70b in deal amount across 802 transactions, up from \$28b across 666 transactions in 2017. Vertically-focused M&A was responsible for much of the growth with large healthcare acquisitions leading the way including Veritas Capital's \$5.5b acquisition of Athenahealth and Roche's \$1.9b acquisition of Flatiron Health.
- InformationWeek predicts that 2019 will be the year that cloud becomes the norm for laggard enterprises that have resisted the shift. While on-premise infrastructure is less expensive for organizations with completely level workloads, it is no longer practical for organizations that have peaks throughout the day, such as those that have implemented machine learning initiatives. For these organizations, cost savings will drive the transition, overpowering cloud concerns due to security.
- In order to more efficiently implement IoT initiatives, 451 Research found that enterprises have begun sharing budget responsibility for IoT projects. As organizations are starting to track and notice the positive ROI benefits of deployed IoT, budget and funding of IoT initiatives has become less of a concern.
- According to 451 Research, customer journey software could be the next industry primed for M&A activity in 2019. Following Adobe's acquisition of Marketo, broad suite providers in the marketing technology sector are looking for niche players to fill the gaps in their portfolios with a focus on analytics and visualization companies that plug into CRM and marketing automation systems.

MERGERS & ACQUISITIONS (SAMPLE DEALS)

Announced Date	Acquirer Name	Target Name	Enterprise Value (\$m)
2018-12-10	Siris Capital / Elliott Management	Travelport	4,400.0
2018-11-26	Marchex	Callcap	35.0
2018-11-14	Sabre	Farelogix	360.0
2018-11-12	Veritas Capital / Elliott Management	Athenahealth	5,700.0
2018-11-11	SAP	Qualtrics	8,000.0
2018-11-05	Quorum	DealerMine	10.7
2018-10-22	QinetiQ	Inzpire	30.7
2018-10-17	OptimizeRx	CareSpeak Communications	5.5
2018-10-16	Smartspace Software	SwipedOn	7.1
2018-10-15	Veritas Capital	Cambium Learning	685.2
2018-10-01	Saba Software	Lumesse	100.0

Software: Business Intelligence Software

HIGHLIGHTS, VALUATION METRICS, AND RECENT M&A ACTIVITY

MARKET PERFORMANCE

DP BI Software Index EV/Revenue Multiple
Latest Twelve Months



VALUATION METRICS

Company	Stock Price 12/31/18	Market Cap.	Enterprise Value (\$M)	EV/ LTM Revenue	EV / LTM EBITDA
Tableau Software	\$120.00	\$9,799.8	\$9,071.4	8.5x	NM
Elastic	\$71.48	\$4,358.4	\$4,754.7	22.5x	NM
Pegasystems	\$47.83	\$3,811.5	\$3,558.3	4.2x	NM
Alteryx	\$59.47	\$3,587.3	\$3,493.3	19.2x	NM
Cloudera	\$11.06	\$1,635.3	\$1,308.2	3.0x	NM
MicroStrategy	\$127.75	\$1,468.9	\$765.8	1.5x	24.3x
PROS Holdings	\$31.40	\$1,041.2	\$1,106.7	5.8x	NM
Domo	\$19.63	\$517.0	\$409.1	3.1x	NM
Median:	\$53.65	\$2,611.3	\$2,400.8	5.0x	24.3x

SECTOR HIGHLIGHTS

- The median Business Intelligence Software index was trading at 5.0x revenue (based on Enterprise Value) at the closing of Q4.
- BI Software deal amount increased dramatically from \$1.7b in 2017 to \$5.2b in 2018 driven by Workday's \$1.55b acquisition of Adaptive Insights and BC Partners' \$1.4b acquisition of NAVEX. In contract, deal volume decreased in 2018 with acquirers conducting 87 acquisitions in the space, compared to 94 in 2017.
- According to 451 Research, the separation of computing and storage capabilities is a trend that will continue into 2019. The continuation of these core trends includes the use of hybrid cloud and on-premises infrastructure, as well as multi-region distributed data management. 451 Research also predicts an acceleration in the adoption of abstracted data architecture, generating value from investments in both on-premises and cloud storage.
- By 2022, IDC projects the market for artificial intelligence, machine learning and big data to grow to approximately \$160 billion. However, it is expected that many organizations will not have the data literacy skills needed to extract business value and actionable insights from their data, and demand is constantly increasing for better solutions that can easily deploy big data analytics.
- In October, Emerson announced its intent to acquire Intelligent Platforms, a division of General Electric. The move is part of a wider initiative by GE to divest its non-core assets including a planned spin-off of GE Healthcare. The transaction will enable Intelligent Platforms to better pursue its growth strategy, while allowing GE Power to reinvest in its own energy technology opportunities.

MERGERS & ACQUISITIONS (SAMPLE DEALS)

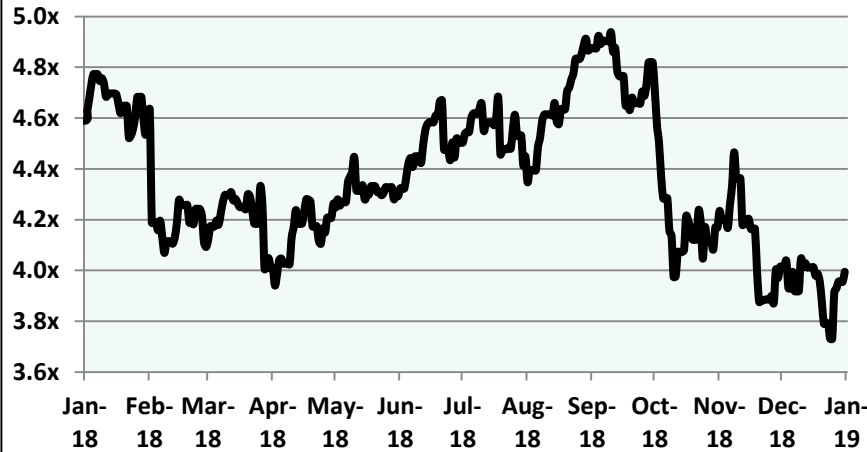
Announced Date	Acquirer Name	Target Name	Enterprise Value (\$m)
2018-12-20	Tektronix	Initial State Technologies	
2018-12-11	Vista Equity Partners	7Park Data	
2018-12-10	Coupa Software	Hiperos	95.0
2018-12-10	Tyler Technologies	SceneDoc	
2018-12-03	Verisk Analytics	Moore Stephens	87.0
2018-11-29	Routematch	2g Transit Solutions	
2018-11-06	Premier	Stanson Health	51.5
2018-11-05	Altair Engineering	Datawatch	176.0
2018-10-12	RealPage	Rentlytics	57.0
2018-10-09	Frontier Capital	PriceSpider	

Software: Infrastructure Software

HIGHLIGHTS, VALUATION METRICS, AND RECENT M&A ACTIVITY

MARKET PERFORMANCE

DP Infrastructure Software Index EV/Revenue Multiple
Latest Twelve Months



VALUATION METRICS

Company	Stock Price 12/31/18	Market Cap.	Enterprise Value (\$M)	EV/ LTM Revenue	EV / LTM EBITDA
Red Hat	\$175.64	\$32,915.4	\$29,798.2	9.4x	49.2x
Check Point Software	\$102.65	\$16,544.6	\$14,554.7	7.7x	15.4x
Citrix Systems	\$102.46	\$15,177.5	\$14,131.3	4.8x	16.7x
Symantec	\$18.90	\$12,763.6	\$14,674.8	3.1x	10.5x
F5 Networks	\$162.03	\$10,048.0	\$8,784.0	4.1x	13.2x
Trend Micro	\$54.10	\$7,545.9	\$6,050.9	4.2x	13.1x
CommVault Systems	\$59.09	\$2,682.3	\$2,251.1	3.2x	NM
Progress Software	\$35.49	\$1,661.9	\$1,573.3	3.9x	11.7x
Radware	\$22.71	\$1,066.8	\$915.1	4.0x	NM
Magic Software	\$7.65	\$349.6	\$318.3	1.1x	7.9x
Allot Communications	\$6.07	\$203.9	\$125.1	1.4x	NM
Median:	\$54.10	\$7,545.9	\$6,050.9	4.0x	13.2x

SECTOR HIGHLIGHTS

- The median Infrastructure Software index was trading at 4.0x revenue (based on Enterprise Value) at the closing of Q4.
- Infrastructure Software M&A activity in 2018 was defined by blockbuster transactions totaling \$94b in deal value, more than 5.8x any other year on record. According to 451 Research, since the dot-com crash, just eight infrastructure management companies have sold for more than \$5bn and five of them were sold in 2018. The dominance of AWS and Azure in the cloud market have served as catalysts for M&A activity with vendors hoping to leverage large acquisitions to better compete with the industry giants.
- IBM's acquisition of Red Hat for \$33b, if completed, will be the largest ever acquisition of a software company. IBM hopes the acquisition, valued at 10.8x TTM revenue, will enable it to reverse its topline decline and reposition itself as a growth company. The move will also position IBM as the largest hybrid cloud provider and offer differentiation against AWS, Google Cloud and Azure through deep integration with other public cloud providers.
- In 2018, AWS focused on investing in the development of its consulting and technology partners, which grew by two times overall revenue in 2018. As the cloud market matures, AWS has sought to capitalize on the appetite of cloud services by mainstream enterprises that have already built relationships with systems integrators and to satisfy the demand from enterprises for customized solutions.

MERGERS & ACQUISITIONS (SAMPLE DEALS)

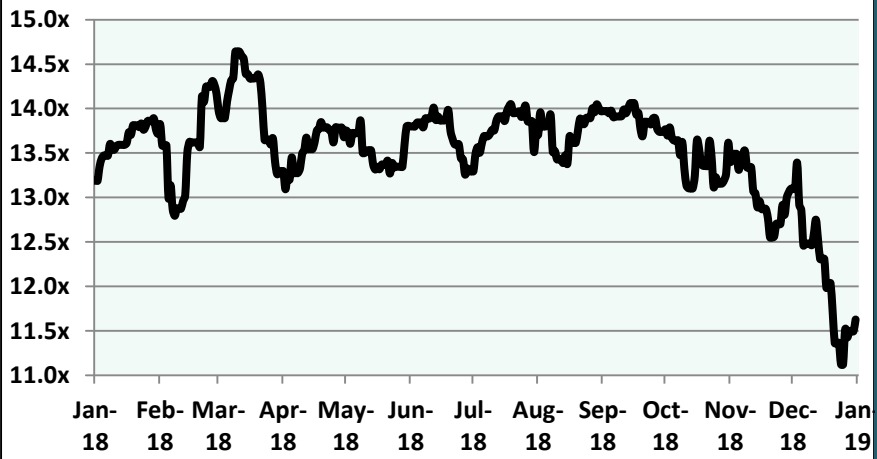
Announced Date	Acquirer Name	Target Name	Enterprise Value (\$m)
2018-12-27	Visa	Earthport	251.6
2018-12-19	SPS Commerce	CovalentWorks	23.0
2018-12-06	HCL	IBM (certain software assets)	1,775.0
2018-11-15	Citrix	Sapho	200.0
2018-11-11	Vista Equity Partners	Apptio	1,940.0
2018-11-07	Virtu Financial	ITG	1,000.0
2018-11-06	VMware	Heptio	550.0
2018-11-01	AMETEK	Telular	525.0
2018-10-28	IBM	Red Hat	33,435.0
2018-10-09	MongoDB	mLab	68.0
2018-10-08	Bain Capital	Rocket Software	2,000.0
2018-10-08	Perforce Software	Perfecto Mobile	180.0

Services: IT Services

HIGHLIGHTS, VALUATION METRICS, AND RECENT M&A ACTIVITY

MARKET PERFORMANCE

DP IT Services Index EV/EBITDA Multiple
Latest Twelve Months



VALUATION METRICS

Company	Stock Price 12/31/18	Market Cap.	Enterprise Value (\$M)	EV/ LTM Revenue	EV / LTM EBITDA
Accenture	\$141.01	\$92,244.0	\$90,009.3	2.1x	13.3x
Capgemini	\$99.29	\$17,133.6	\$19,098.2	1.2x	11.0x
DXC Technology	\$53.17	\$15,357.9	\$19,477.6	0.9x	4.7x
NTT Data	\$10.92	\$15,314.9	\$18,860.4	1.0x	7.1x
CDW	\$81.05	\$12,512.1	\$15,120.6	0.9x	12.3x
Atos	\$81.77	\$8,617.8	\$9,000.8	0.6x	5.4x
Booz Allen	\$45.07	\$6,542.8	\$7,859.6	1.2x	12.8x
CACI International	\$144.03	\$3,644.0	\$4,599.8	1.0x	10.3x
ManTech International	\$52.30	\$2,078.9	\$2,062.9	1.1x	12.9x
ICF	\$64.78	\$1,248.5	\$1,447.6	1.1x	13.3x
Perficient	\$22.26	\$754.3	\$812.7	1.6x	16.4x
The Hackett Group	\$16.01	\$515.0	\$470.9	1.6x	10.9x
Median:	\$58.98	\$7,580.3	\$8,430.2	1.1x	11.6x

SECTOR HIGHLIGHTS

- The median IT Services index was trading at 11.6x EBITDA (based on Enterprise Value) at the closing of Q4.
- While IT Services deal amount dropped from \$13b in 2017 to \$8b in 2018 due to less \$1b+ deals, deal volume remained strong with acquirers conducting 281 acquisitions in the space, compared to 280 in 2017.
- 451 Research projects that IT Services M&A will surge in 2019 as large IT services vendors seek to develop specialization around new technologies such as advanced analytics, IoT and artificial intelligence. As enterprises continue to undergo digital transformation, consolidation activity is expected around specialist SIs that have expertise in large software offerings such as Salesforce and Microsoft.
- CVC Capital Partners' \$1.8b acquisition of ConvergeOne in November at a 21.2x EBITDA multiple marks the third buy-out for the company since 2007. The deal demonstrates a growing trend in technology M&A where PE-backed companies are being sold to other PE shops. In recent years, the average age of portfolio companies has climbed, growing from 12 years in 2010 to 16 years in 2018.
- Accenture recently announced that 62% of its revenue is derived from digital, cloud, and security-related services, showcasing that its bet on digital services has paid off. In order to help efficiently deliver digital transformations, the company released its digital platform, myConcerto, for Oracle in October and has additional plans to release Microsoft and Salesforce environments. Other large vendors are striving to replicate Accenture's success with digital services, including Capgemini which currently generates 45% of revenue from digital and cloud services.

MERGERS & ACQUISITIONS (SAMPLE DEALS)

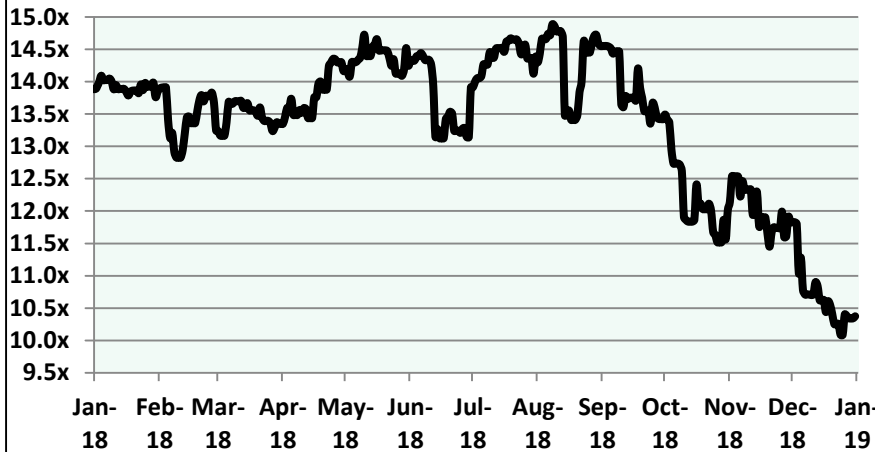
Announced Date	Acquirer Name	Target Name	Enterprise Value (\$m)
2018-12-27	NEC	KMD	1,220.8
2018-12-04	Converge Technology Solutions	Lighthouse Computer Services	15.0
2018-11-11	AGC Networks	Black Box	16.5
2018-11-08	Allstate	PlumChoice	30.0
2018-11-06	CVC	ConvergeOne	1,800.0
2018-11-05	Accenture	Intrigo Systems	
2018-10-29	NTT DATA	Sierra-Cedar	
2018-10-09	MAXIMUS	GDIT (citizen-engagement centers assets)	400.0
2018-10-08	Logicalis	CNI	
2018-10-04	SoftwareONE	ISI Expert	
2018-10-01	Computacenter	FusionStorm	70.0
2018-10-01	ConvergeOne	AdvanTel Networks	16.7

Services: Hosted Services

HIGHLIGHTS, VALUATION METRICS, AND RECENT M&A ACTIVITY

MARKET PERFORMANCE

DP Hosted Services Index EV/EBITDA Multiple
Latest Twelve Months



VALUATION METRICS

Company	Stock Price 12/31/18	Market Cap.	Enterprise Value (\$M)	EV/ LTM Revenue	EV / LTM EBITDA
Equinix	\$352.56	\$28,131.1	\$38,811.2	7.8x	18.4x
Interxion	\$54.16	\$3,885.6	\$5,046.4	7.8x	19.2x
SAIC	\$63.70	\$2,763.0	\$3,542.8	0.8x	10.9x
Presidio	\$13.05	\$1,252.5	\$1,849.3	0.7x	10.4x
Cancom	\$32.78	\$1,171.4	\$1,059.8	0.9x	9.5x
ePlus	\$71.17	\$978.9	\$965.0	0.7x	9.7x
NCC Group	\$2.22	\$621.3	\$654.9	2.1x	13.9x
iomart	\$4.19	\$458.7	\$496.9	3.6x	9.7x
Sify Technologies	\$1.49	\$226.7	\$314.9	1.0x	6.7x
Redcentric	\$0.96	\$146.5	\$173.3	1.3x	7.5x
Maintel Holdings	\$5.90	\$85.3	\$117.6	0.6x	18.6x
Median:	\$9.48	\$800.1	\$810.0	1.0x	10.4x

SECTOR HIGHLIGHTS

- The median Hosted Services index was trading at 10.4x EBITDA (based on Enterprise Value) at the closing of Q4.
- Hosted Services M&A clocked its 4th consecutive year of \$10b+ in deal value in 2018, grossing \$10.7b across 122 deals. However, despite the high deal value, Hosted Services M&A decreased across the board in 2018, due to a pullback among the largest hosting providers as they focused on integration of prior deals. 451 Research expects large buyers to return to heavier spending in 2019, fueled by the increasing need for infrastructure to support workloads in the cloud.
- According to 451 Research, the managed services sector has become increasingly competitive in recent years as verticals such as telcos and VARs have converged on the space. In order to succeed in 2019, MSPs will need to establish specialization and credentials that stand out to both prospective customers and the platform vendors with which they partner. Increasingly essential among these capabilities is the ability to address the security requirements of clients and their workloads from end-to-end.
- A sizable opportunity exists for MSPs that are able to differentiate their offerings with cloud performance and cost optimization. As enterprises undergo migration to the public cloud, they must determine how to trade-off cloud performance and cost optimization. A recent 451 Research article noted that MSPs can help solve these issues by developing optimization-as-a-service offerings that manage infrastructure tiers for different workloads.

MERGERS & ACQUISITIONS (SAMPLE DEALS)

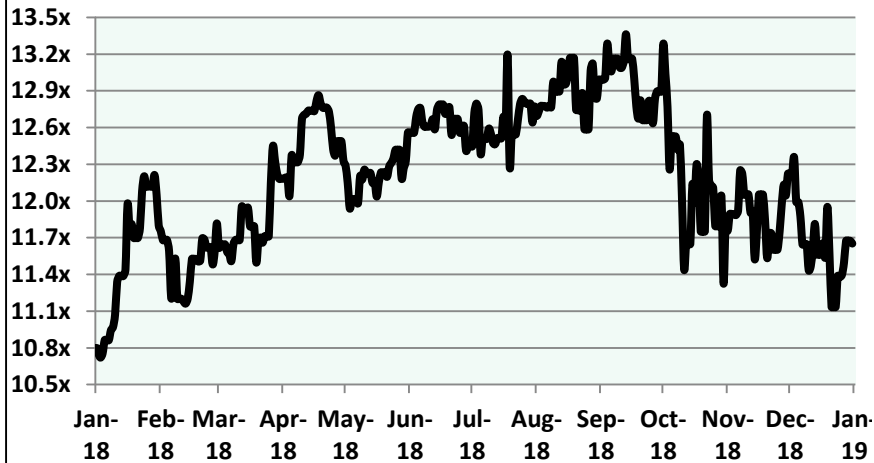
Announced Date	Acquirer Name	Target Name	Enterprise Value (\$m)
2018-12-20	Cologix	COLO-D	
2018-12-18	Vantage Data Centers	4Degrees	193.4
2018-12-11	CareWorx	Fully Managed Technology	
2018-12-11	ConvergeOne	Venture Technologies	
2018-12-10	Prosegur	Cipher	
2018-12-05	ConnectWise	Sienna Group	
2018-12-05	Ntiva	Lore Systems (commercial MSP and hosting business)	
2018-11-26	Alithya	TELUS (Managed Web Services)	
2018-10-23	Claranet	Quinfox	
2018-10-23	eSentire	Versive	
2018-10-16	QualTek	Recovery Logistics	

Services: IT Outsourcing

HIGHLIGHTS, VALUATION METRICS, AND RECENT M&A ACTIVITY

MARKET PERFORMANCE

DP IT Outsourcing Index EV/EBITDA Multiple
Latest Twelve Months



VALUATION METRICS

Company	Stock Price 12/31/2018	Market Cap.	Enterprise Value (\$M)	EV/ LTM Revenue	EV / LTM EBITDA
Tata Consultancy	\$27.06	\$103,342.2	\$96,302.1	4.8x	16.1x
Automatic Data	\$131.12	\$57,958.3	\$57,907.6	4.3x	21.6x
Cognizant Technology	\$63.48	\$37,246.9	\$32,717.7	2.1x	10.7x
Wipro	\$4.72	\$21,667.2	\$18,313.8	2.2x	11.7x
Infosys	\$9.42	\$20,214.2	\$37,454.0	3.3x	13.0x
CGI Group	\$61.31	\$17,708.6	\$18,062.7	2.0x	11.9x
Synthomer	\$4.54	\$1,552.2	\$1,826.1	0.9x	7.1x
CSG International	\$31.77	\$1,046.8	\$1,220.2	1.5x	7.8x
Unisys	\$11.63	\$785.8	\$759.5	0.3x	2.1x
Median:	\$ 27.06	\$ 20,214.18	\$18,313.83	2.1x	11.7x

SECTOR HIGHLIGHTS

- The median IT Outsourcing index was trading at 11.7x EBITDA (based on Enterprise Value) at the closing of Q4.
- 451 Research recorded \$42b in deal volume across 323 deals in the IT outsourcing sector in 2018, marking the highest deal volume since 2007. As the industry continues to experience decelerating growth and converging services, experts foresee high M&A activity continuing as service providers seek to preserve market share and to be eminent in emerging technologies.
- CIO predicts that the days of low-cost commodity services are waning as IT organizations seek strategic partnerships with IT outsourcing providers. As companies increasingly seek digital transformation, IT outsourcing providers are adopting as-a-service models and assisting in extensive re-platforming exercises. To better meet enterprises needs, IT outsourcing providers have begun building onshore capabilities to facilitate a more tactile service delivery approach.
- TCS, which was sued by an ex-employee for favoring Indian visa-ready workers for US positions, was cleared by a jury for anti-American biases in November. TCS attorneys successfully argued that the company terminated US employees due to unwillingness to move to new locations. The verdict serves as a major victory for the Indian outsourcing industry which depends on Indian engineering labor.
- Infosys has successfully transitioned to a digital services company in recent years, focusing on automation and AI, building out its EdgeVerve platform and growing digital revenue, which now accounts for 31% of total revenue.

MERGERS & ACQUISITIONS (SAMPLE DEALS)

Announced Date	Acquirer Name	Target Name	Enterprise Value (\$m)
2018-12-21	Glowpoint	SharedLABS	15.8
2018-12-18	Grand Canyon Education	Orbis Education Services	362.5
2018-12-11	Mid Europa Partners	intive	113.8
2018-12-11	Wipro	Syfte	
2018-11-26	Paychex	Oasis Outsourcing	1,200.0
2018-11-09	SMTC Corporation	MC Assembly	65.0
2018-11-08	Mphasis	Stelligent	25.0
2018-11-08	Twilio	Core Network Dynamics	11.1
2018-11-01	TCS	W12 Studios	
2018-10-22	SYKES	Symphony Ventures	69.0
2018-10-10	Celestica	Impakt Holdings	329.0
2018-10-04	Cognizant	Softvision	550.0

Services: IT Staffing

HIGHLIGHTS, VALUATION METRICS, AND RECENT M&A ACTIVITY

MARKET PERFORMANCE

DP IT Staffing Index EV/EBITDA Multiple

Latest Twelve Months



VALUATION METRICS

Company	Stock Price 12/31/18	Market Cap.	Enterprise Value (\$M)	EV / LTM Revenue	EV / LTM EBITDA
Robert Half International	\$57.20	\$7,013.4	\$6,587.3	1.2x	10.5x
ManpowerGroup	\$64.80	\$4,302.7	\$4,487.5	0.2x	5.1x
ASGN	\$54.50	\$2,886.2	\$3,973.3	1.3x	11.9x
Kforce	\$30.92	\$783.9	\$886.5	0.6x	10.8x
Mastech Digital	\$6.30	\$70.0	\$109.3	0.6x	7.3x
Computer Task Group	\$4.08	\$60.1	\$50.9	0.1x	6.4x
RCM Technologies	\$3.10	\$38.0	\$63.2	0.3x	27.1x
Median:	\$30.92	\$783.9	\$886.5	0.6x	10.5x

SECTOR HIGHLIGHTS

- The median IT Staffing index was trading at 13.6x EBITDA (based on Enterprise Value) at the closing of Q3.
- IT Staffing deal amount doubled from \$262m in 2017 to \$525m in 2018, largely due to the \$400m acquisition of CEB by Exponent Private Equity. Deal volume also increased with acquirers conducting 25 acquisitions in the space, compared to 20 in 2017.
- Tech Recruiter Mondo Reports that 60% of IT security professionals are looking to leave their current job. The top reasons for leaving include lack of growth opportunities and low job satisfaction. To better retain IT security experts, organizations must focus on delivering benefits such as work-life balance, taking security concerns seriously, and increasing sponsorship of certifications and courses.
- According to SIA, global staffing revenue is expected to grow by 6% in 2019. Seven of the 17 largest markets are expected to grow by double digits in 2019, with none expected to decline. While growth in the US and UK has slowed in recent years, Asian countries are continuing to experience high growth, including Japan which expects 10% growth in 2019.
- In November, Stone Point Capital acquired Eliassen Group, a leading provider of strategic consulting and talent solutions and the 14th largest staffing agency in the US. In order to drive growth, Stone Point plans to leverage M&A in the IT staffing and consulting space as a growth driver, signaling a potential roll-up in the industry over 2019.

MERGERS & ACQUISITIONS (SAMPLE DEALS)

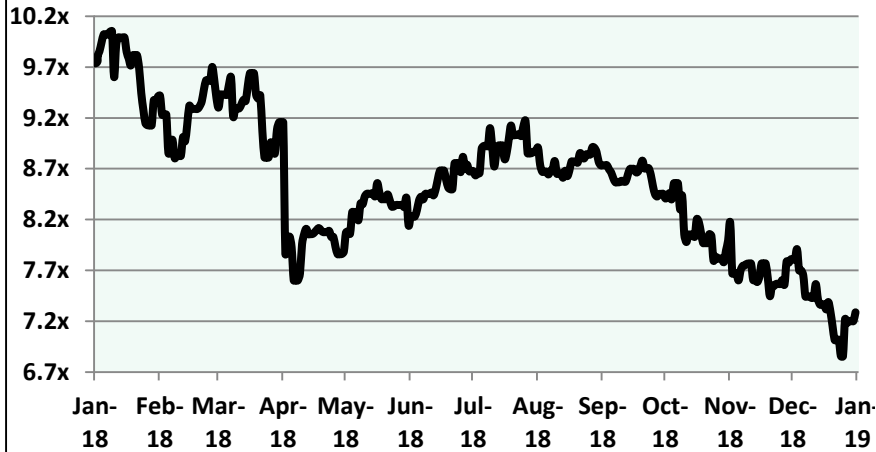
Announced Date	Acquirer Name	Target Name	Enterprise Value (\$m)
2018-12-20	Quad-C Management	S.i. Systems	
2018-12-18	CSI	JDC Group	
2018-12-13	Motion Recruitment Partners	MDI Group	
2018-12-10	Addison Group	Mondo Group	
2018-11-07	ThreeBridge Solutions	BlueLine Associates	
2018-11-05	Stone Point Capital	Eliassen Group	

Services: Value Added Resellers

HIGHLIGHTS, VALUATION METRICS, AND RECENT M&A ACTIVITY

MARKET PERFORMANCE

DP VAR Index EV/EBITDA Multiple
Latest Twelve Months



VALUATION METRICS

Company	Stock Price 12/31/18	Market Cap.	Enterprise Value (\$M)	EV/ LTM Revenue	EV / LTM EBITDA
Arrow Electronics	\$68.95	\$6,128.5	\$9,096.6	0.3x	7.3x
Synnex	\$80.84	\$3,214.5	\$5,713.7	0.3x	8.1x
TechData	\$81.81	\$3,154.3	\$3,818.4	0.1x	6.1x
Insight Enterprises	\$40.75	\$1,470.1	\$1,603.4	0.2x	6.2x
ALSO Holding	\$113.15	\$1,451.5	\$1,652.4	0.2x	9.6x
PC Connection	\$29.73	\$799.4	\$692.4	0.3x	7.3x
PCM	\$17.61	\$217.6	\$373.6	0.2x	8.4x
Median:	\$68.95	\$1,470.1	\$1,652.4	0.2x	7.3x

SECTOR HIGHLIGHTS

- The median VAR index was trading at 8.4x EBITDA (based on Enterprise Value) at the closing of Q3.
- HNA is reportedly in discussions with Apollo Global to sell technology distributor Ingram Micro for \$7.5b. The rationale for the move stems from pressure from the Chinese government for HNA to decrease its debt burden, which ballooned to \$87b in late 2017, by divesting non-core assets. Apollo has honed in on IT services in recent years, acquiring Presidio in 2015 and Rackspace in 2016.
- CONTEXT's ChannelWatch report determined that resellers are buying up to 30% of their stock from online retailers. As new services such as Amazon Business aim to displace the role of technology distributors, it has become critical for distributors to focus on providing value-added services and investing in infrastructure to support the needs of customers. CONTEXT predicts that large distributors may turn to M&A to acquire scale, particularly in APAC and LATAM.
- Cisco has continued to focus on enabling its VAR partner channel by building out a Partner Sales Acceleration program and setting up centers of excellence connecting Cisco sales account managers with VAR partners. In addition, Cisco has built out a partner business transformation framework encouraging partners to develop secure application-centric flexibility for customers, re-skill for software-defined infrastructure, and monetize the complete software lifecycle.
- In 2019, D&H Distributing foresees significant customer demand for everything-as-a-service from technology distributors and VARs. As companies continue to strive to solve all IT needs with one vendor, resellers will need to deliver hosted services that address all the requirements of users across platforms.

MERGERS & ACQUISITIONS (SAMPLE DEALS)

Announced Date	Acquirer Name	Target Name	Enterprise Value (\$m)
2018-12-06	Sonata Software	Scalable Data Systems	
2018-11-26	Atar Capital	Microcel	
2018-11-21	ALSO	DISS	
2018-11-13	SnapAV	Volutone	
2018-11-09	Solid State	Pacer Technologies	4.9
2018-10-22	babble cloud	Arden Group	
2018-10-17	Infinigate	acmeo	
2018-10-09	SoftwareONE	COMPAREX	

Our team of professionals brings a unique combination of technological, financial, and operational experience to our clients and their transactions. With backgrounds and deal experience spanning Wall Street investment banks, multi-billion dollar corporations, and high growth start-ups, we have an exceptional understanding of how to successfully achieve our clients' strategic initiatives.



DecisionPoint

3420 Toringdon Way
Suite 350

Charlotte, NC 28277

Phone: 704.248.1111

Fax: 704.248.1121

www.decisionpointint.com

Research Inquiries Can Be Directed To:

Chase Thompson

Associate

cthompson@decisionpointint.com

704.750.1006

Wilson Hope

Analyst

whope@decisionpointint.com

704.448.3671