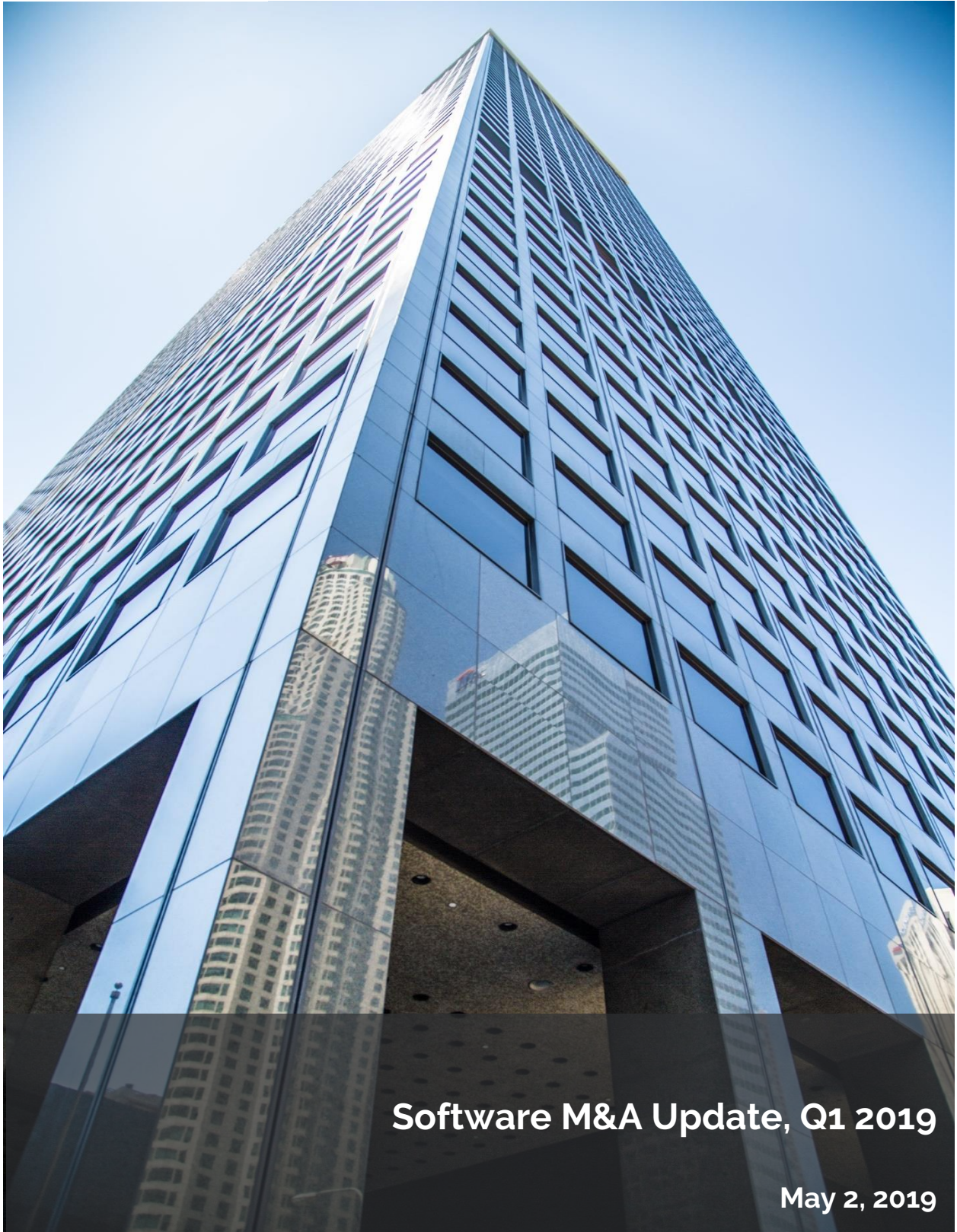




Solganick & Co.

**Software
Investment Banking + M&A Advisory**



Software M&A Update, Q1 2019

May 2, 2019

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Software M&A Highlights

Global, U.S., and Software M&A Activity Q1, 2019

Worldwide

Q1 2019 kicked off on a high note with Bristol-Myers Squibb announcing a whopping **\$96.8bn** offer for US-based Celgene Corp just three days into the new year. However, global M&A has dropped by 17 percent in Q1 2019.

During Q1, global M&A volume reached **\$1.01 tn** with **7,470 deals**, representing a decrease of 13.8% and 22.1% in volume and deal count, respectively when compared to Q1 2018.

M&A valuations have also seen a gradual decline with the median EV/EBITDA multiples globally falling to the lowest level since 2012, at **12.01x**. This decline can result in another wave of M&A deal making in the next few months.

Sponsor M&A exits are also seeing an increase in Q1 2019 with a high volume of \$106.8bn as compared to \$77.6bn during the same time period last year.

United States

US-targeted M&A reached a total volume of **\$537.6bn across 2,158 deals**. Healthcare has been the largest contributor to US M&A deals (33.9% market share) followed by Technology with 24.5% market share.

Despite fears of market correction, there has been an increase in mega deals with **deal value over \$10bn** in Q1 2019. The key drivers for this trend mostly include (a) the fear from being disrupted by tech giants such as Amazon and Google, (b) cheap debt and (c) strategic motivation for growth.

However, **the number of deals has fallen** significantly from last year signaling fears of impending economic slowdown.

Software

The M&A value for software in Q1, 2019 was **\$73.75 bn** and the number of deals closed were **552**. **Software** accounted for **43%** of the **total M&A transactions in Q1 2019** compared to 36% of all transactions last year during the same period.

The median deal size in the Software industry was **\$87 mn** in Q1, 2019. The broader software industry M&A's upward trend continued in Q1 2019. In particular, the SaaS M&A market boomed, reaching an all-time quarterly record of 277 deals. SaaS valuations for Q1 '19 remained high at a multiple of **4.5x EV/Revenue**

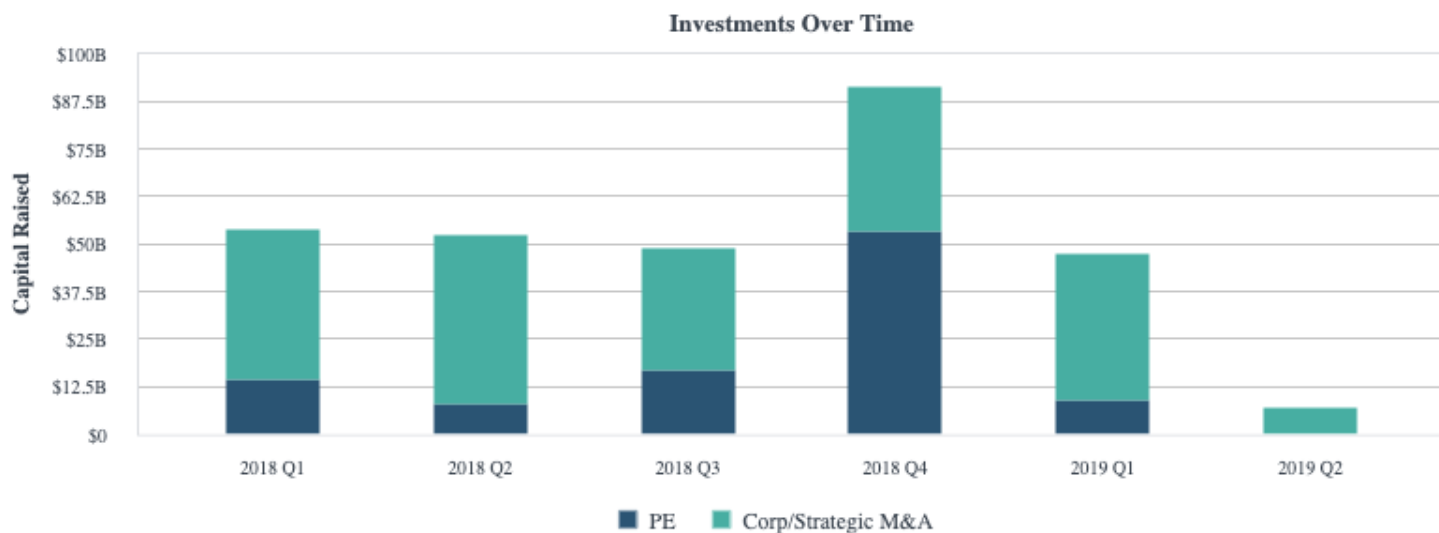
About a third of transactions in Q1 2019 had a revenue multiple greater than **6.0x EV/Revenue**. Highest median revenue multiple of **5.3x EV/Revenue** was posted by targets with revenue of \$50-\$100M, while targets with revenue of \$100M or greater posted the second highest revenue multiple of **5.0x EV/Revenue**.

Private Equity buyers remain an active acquirer of SaaS companies. The most active software buyers were **Vista Equity Partners, Insight Venture Partners, TA Associates, Providence Equity Partners, Thoma Bravo, Genstar Capital, Accel-KKR, and HG**.

Source: Pitchbook, Financial Times, Dealogic, Business Review, SEG

M&A Activity in Q1 2019

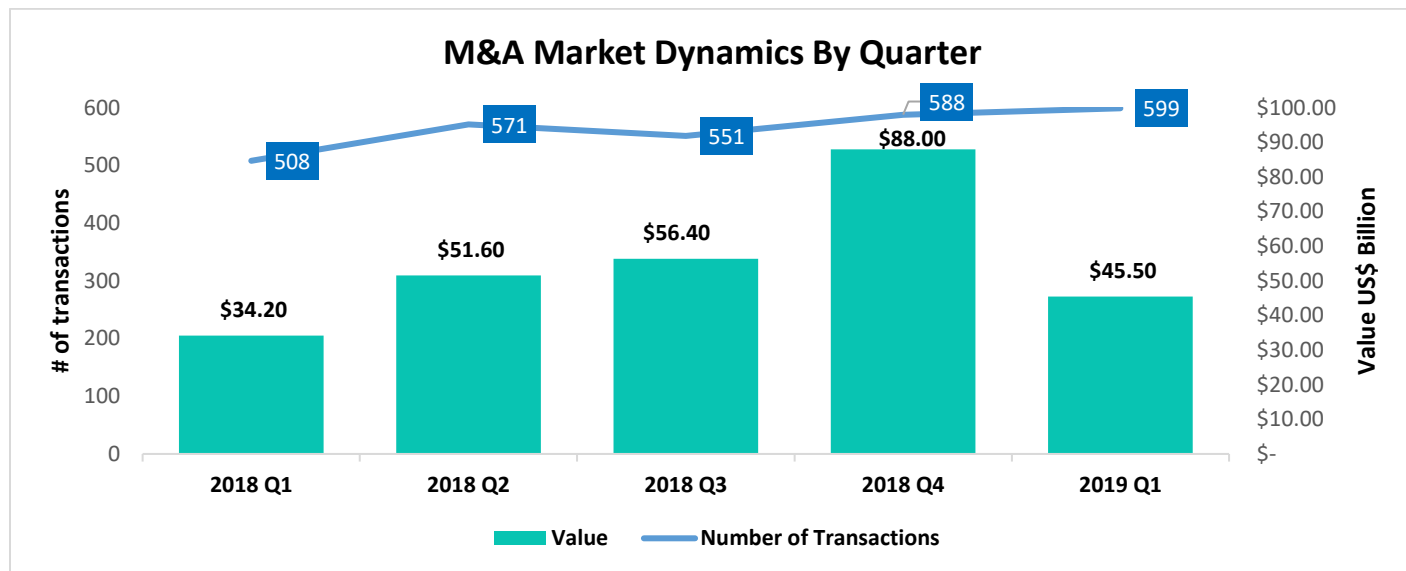
Global M&A Deal Value - Quarterly Comparison



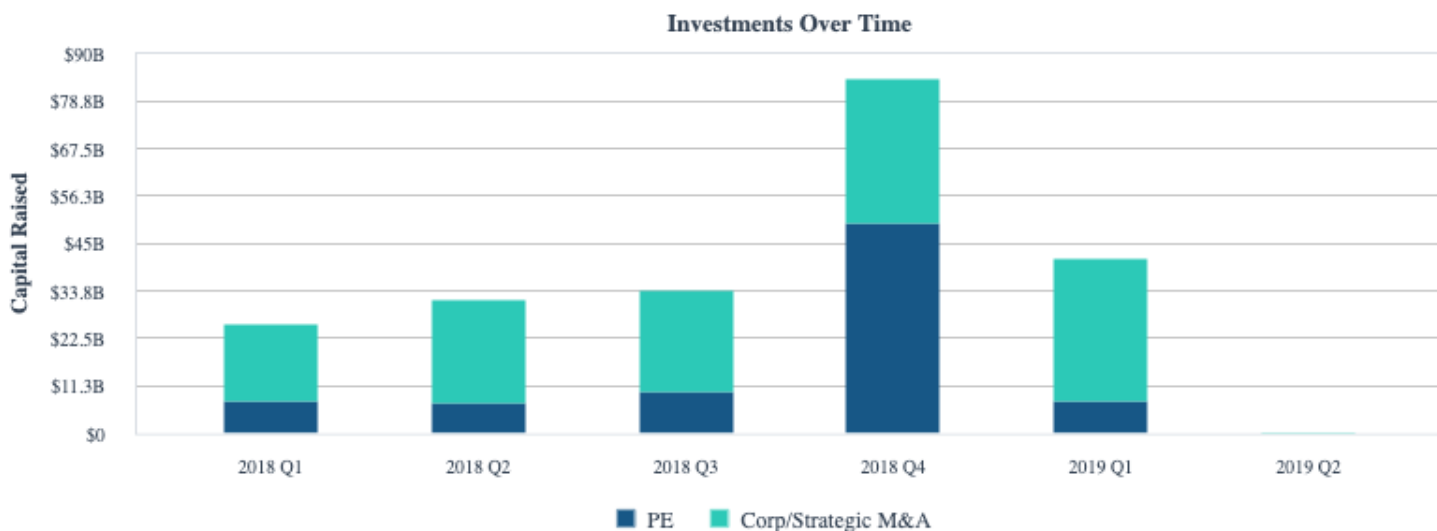
Global M&A deal value has faced a slight downturn in terms of the amount of capital-raised through Q1 2019. Q4 2018 saw a much higher amount of capital raised as a few really big deals such as Broadcom's acquisition of CA Technologies were completed in Q4 2018.

Source: Pitchbook

United States M&A Deal Value – Quarterly Comparison



Software Deal activity improved 18% and value increased by 33% on a year-on-year comparison but the volume saw only a 2% increase from the previous quarter. Two of the industry's top ten largest deals year-to-date occurred in the human capital management (HCM) sector: Hellman & Friedman acquired Ultimate Software Group, a provider of cloud-based HCM solutions, for \$10.8 billion. Morgan Stanley announced acquisition of Solium Capital for \$744 million.



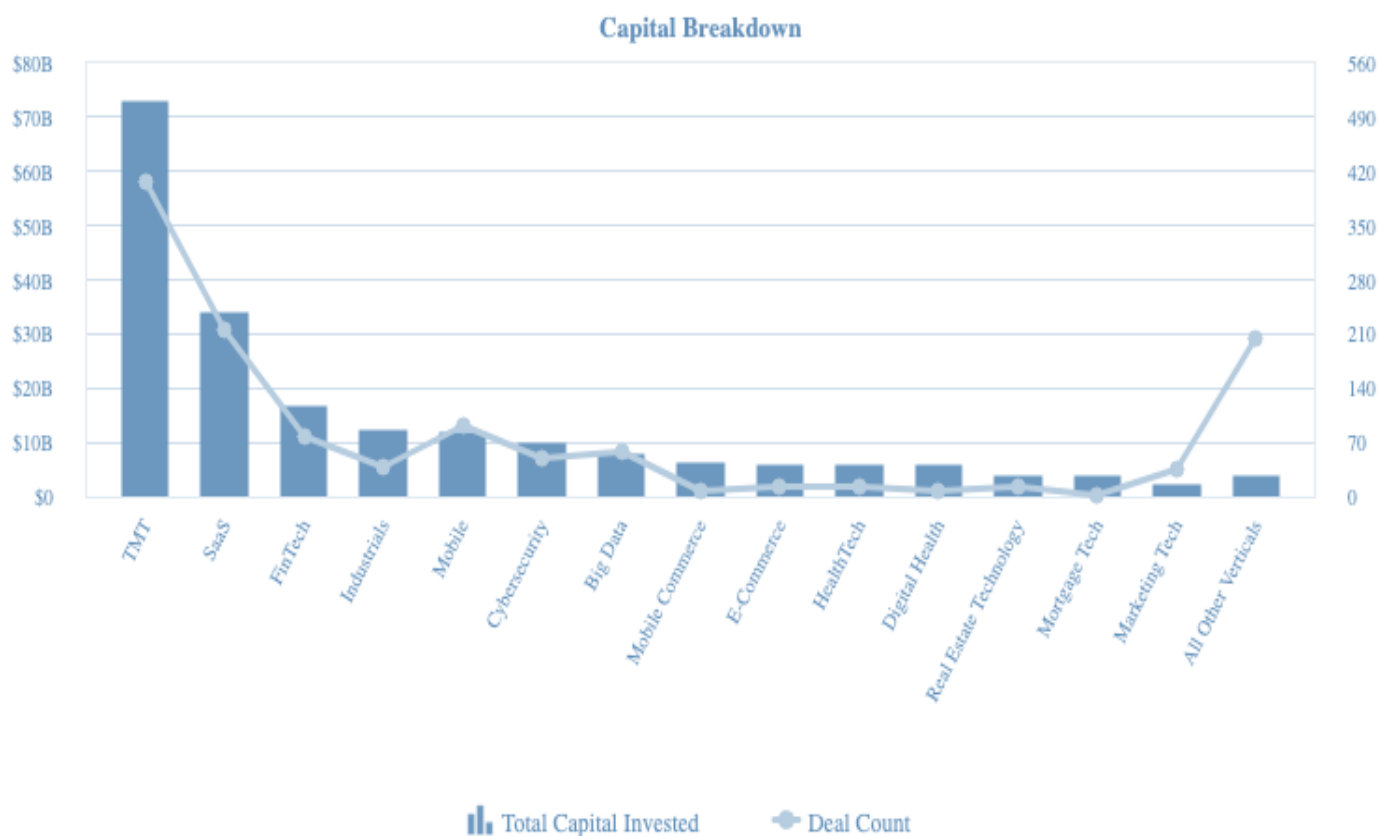
Trends globally closely reflected in the US M&A Trends in Software as most the larger M&A Software deals took place in the US. Investments from Private Equity firms showed great promise in the last quarter: **Bain Capital and KKR bought out BMC Software in a \$8.3 Billion deal** size.

Software accounted for 43% of the total M&A transactions in Q1 2019 compared to 36% of all transactions last year during the same period. A number of large software transactions during the quarter stood out not just for their size (**SAP's \$8 billion and 20x revenue buyout of Qualtrics**, a customer experience analytics software developer) but also for the after effects in their markets.

More consolidation is expected in the coming quarters and private equity firms are looking to establish more platforms through LBO/MBO using the enormous dry powder they currently have.

Software M&A Activity in Q1 2019

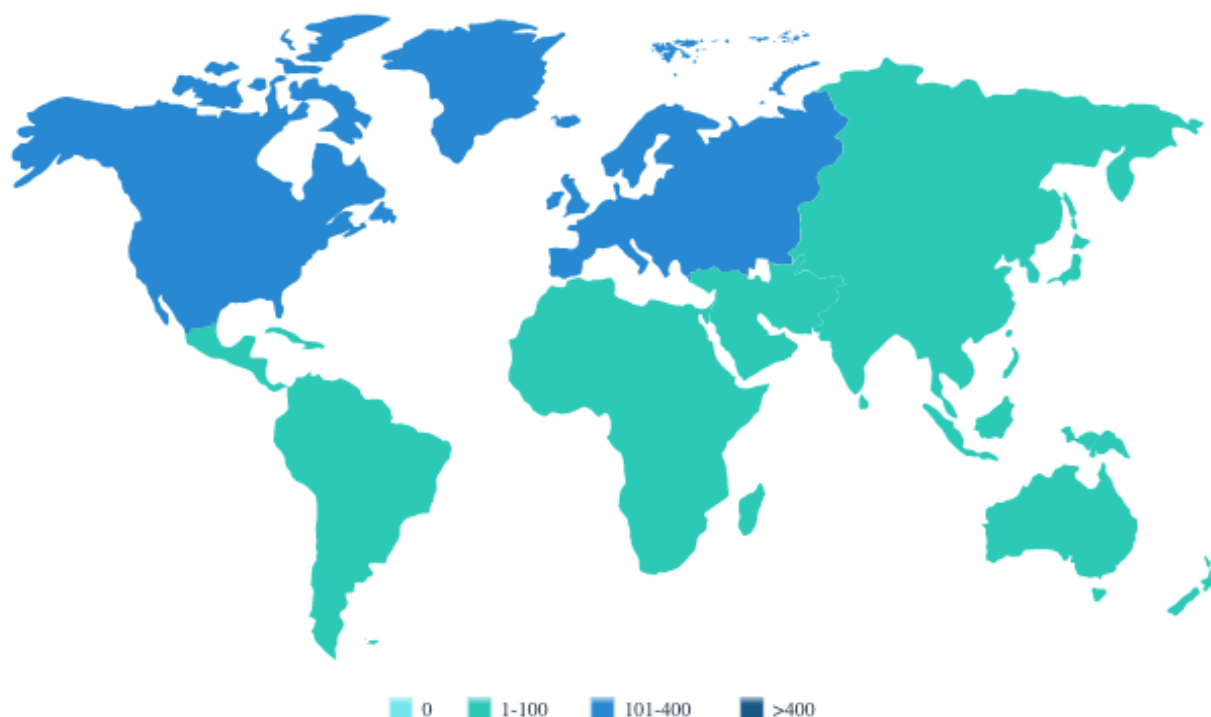
Global Software M&A By Type



As of Q1 2019, the highest number of M&A deals took place in SaaS. Even the amounts of capital raised were mirrored by the number of deals. New areas that have been attracting capital in the software space include Mortgage and Marketing Technology. These have replaced FoodTech and Restaurant Technology, both of which attracted significant amounts of capital through 2018.

Source: Pitchbook, JEGI, Berkery Noyes

Global Software Transactions – Breakdown by Geography



The concentration of deals shifted away from Asia while the number of deals completed in Asia, on an average, was at 118 per quarter in 2018. **Only 72 deals were completed YTD as of April 23, 2019.** This is a result of an overall reduction in M&A activity around the world and also, a reduction in concentration of deals in Asia. The number of deals in Europe and North America also reduced compared to the 2018 quarterly average. Some of this was caused by the current trade wars between China and the U.S., and the Brexit mess.

Source: Pitchbook

Notable Software M&A Transactions, Q1 2019 (Sorted by Enterprise Value)

Date Announced	Target	Acquirer	Sector	Enterprise Value (\$M)
02/04/2019	 Ultimate SOFTWARE People first.	 CPP INVESTMENT BOARD	HR, SaaS	\$11,000
01/23/2019	 qualtrics	 SAP	SaaS, Experience Survey Software	\$8,000
02/08/2019	 dun & bradstreet	 BLACK KNIGHT	SaaS, Fintech	\$6,900
01/10/2019	 APPTIO	 VISTA EQUITY PARTNERS	SaaS, AI, Cost Mgmt Software	\$1,940
02/15/2019	 MINDBODY UNIVERSAL BUSINESS MANAGEMENT	 VISTA EQUITY PARTNERS	SaaS, Gym Software	\$1,900
03/06/2019	 turnitin	 advance.net	Edtech, SaaS	\$1,700

02/25/2019			Mobile, SaaS	\$1,500
02/21/2019			AI, Machine Learning, Big Data	\$1,500
03/25/2019			FinTech, SaaS	\$1,300
03/05/2019			SaaS, Travel Expense Mgmt	\$1,000
02/27/2019			SaaS, Marketing Tech	\$1,000
01/13/2019			SaaS, App Creation Software	\$1,000
01/01/2019			Cyber Security, Mobile, SaaS	\$950
02/11/2019			FinTech, SaaS	\$843.83

03/11/2019			SaaS, Cyber Security	\$670
02/07/2019			Cyber Security, SaaS	\$618.50
02/21/2019			SaaS, Big Data	\$560
01/09/2019			SaaS, Big Data	\$500
03/04/2019			AI, Machine Learning, Big Data	\$405

Source: MergerMarket, Company Websites, Solganick & Co. Analysis, Mergr, Public Company Filings, TechCrunch, Crunchbase

Publicly Traded Software Firms, Valuation Table

Stock prices as of 04/05/2018

Enterprise Software	Stock Price (as of 04/05)	Market Cap (\$USD Billions)	Enterprise Value (EV)/Revenue	EV/EBITDA
Microsoft Corporation [MSFT]	\$119.73	\$919.13	7.36	17.59
Oracle Corporation [ORCL]	\$53.97	\$184.45	5.06	12.34
Pegasystems Inc. [PEGA]	\$67.18	\$5.06	5.68	612.56
SAP SE [SAP]	\$114.64	\$136.93	NA	NA
Average (Mean)			6.03	214.16

Banking and Financial Software	Stock Price (as of 04/05)	Market Cap (\$USD Billions)	EV/Revenue	EV/EBITDA
CoreLogic, Inc. [CLGX]	\$38.59	\$3.09	2.67	12.25
NCR Corp. [NCRI]	\$28.95	\$3.44	1.09	8.54
International Business Machines Corp. [IBM]	\$143.28	\$ 127.5	2.03	9.69
Fidelity National Information [FIS]	\$113.39	\$36.64	5.36	18.94
Fiserv, Inc. [FISV]	\$89.86	\$35.19	7.05	21.62
Jack Henry & Associates [JKHY]	\$141.95	\$10.96	6.88	22.36
SS&C [SSNC]	\$63.64	\$16.04	7.01	21.81
Average (Mean)			4.58	16.46

CRM	Stock Price (as of 04/05)	Market Cap (\$USD mm)	EV/Revenue	EV/EBITDA
Microsoft Corporation [MSFT]	\$119.73	\$919.13	7.36	17.59
Oracle Corporation [ORCL]	\$53.97	\$184.45	5.06	12.34
Salesforce.com, Inc. [CRM]	\$158.56	\$122.25	9.13	79.56
SAP SE [SAP]	\$114.64	\$136.93	NA	NA
Average (Mean)			7.18	36.49

Security Software	Stock Price (as of 04/05)	Market Cap (\$USD mm)	EV/Revenue	EV/EBITDA
Check Point Software [CHKP]	\$123.97	\$19.73	9.45	19.44
FireEye Inc. [FEYE]	\$16.71	\$3.34	3.76	NA
Fortinet, Inc. [FTNT]	\$84.11	\$14.35	6.99	43.94
Progress Software Corporation [PRGS]	\$45.11	\$2.01	5.15	15.24
Symantec Corp. [SYMC]	\$22.99	\$14.70	3.62	17.30
Average (Mean)			5.79	23.98

Software - NEC	Stock Price (as of 04/05)	Market Cap (\$USD mm)	EV/Revenue	EV/EBITDA
CommVault Systems, Inc. [CVLT]	\$63.00	\$ 2.89	3.42	54.32
PTC Inc. [PTC]	\$94.16	\$ 11.17	9.27	72.02
Splunk Inc. [SPLK]	\$128.7	\$ 19.31	9.90	NA
Average (Mean)			7.53	63.17

HR/HCM Software	Stock Price (as of 04/05)	Market Cap (\$USD mm)	EV/Revenue	EV/EBITDA
Cornerstone OnDemand [CSOD]	\$54.08	\$ 3.2	5.97	242.61
Workday Inc. [WDAY]	\$186.29	\$ 41.36	14.39	NA
Average (Mean)			10.18	NA

Business Intelligence & Analytics	Stock Price (as of 04/05)	Market Cap (\$USD mm)	EV/Revenue	EV/EBITDA
Teradata Corporation [TDC]	\$43.80	\$5.15	2.26	39.84
MicroStrategy Inc. [MSTR]	\$ 146.52	\$1.51	1.90	182.16
Average (Mean)			2.08	111

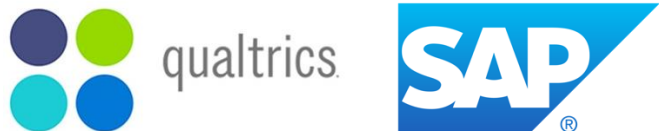
Source: Yahoo Finance

Notes:

Average EV/EBITDA are calculated excluding the companies with negative EV/EBITDA

Enterprise Value (EV) = market value of common stock + market value of preferred equity + market value of debt + minority interest - cash and investments.

M&A Spotlight: SAP Acquires Qualtrics for \$8 Billion



WALLDORF, Germany — SAP SE (NYSE: SAP) announced that it has completed its previously announced acquisition of Qualtrics International Inc. for USD \$8B.

Qualtrics is the global pioneer of the experience management (XM) software category that enables organizations to thrive in today's experience economy. The combination accelerates the new XM category by combining Qualtrics' experience data with operational data from SAP software to power the economy. SAP and Qualtrics will offer businesses the means to deliver exceptional customer, employee, product and brand experiences.

Ryan Smith will continue to lead Qualtrics, which will retain its current leadership, personnel, branding and company culture and operate as an entity within the Cloud Business Group at SAP. Qualtrics will continue to maintain dual headquarters in Provo, Utah, and Seattle, Washington.

Experience data (X-data) focuses on obtaining and tapping the value of outside-in customer, employee, product and brand feedback. Combining Qualtrics' experience data and insights with unparalleled operational data (O-data) from SAP software will enable customers to manage supply chains, networks, employees and core processes better. Together, SAP and Qualtrics will deliver a unique end-to-end experience and operational management system to power the economy.

By tapping into SAP's more than 413,000 customers and global sales force of around 15,000, Qualtrics will be able to scale rapidly around the world. SAP has a strong track record of accelerating the growth of the innovative companies it acquires, as exemplified by the rapid success of SAP's recent acquisitions.

Source: <https://news.sap.com/2018/11/sap-to-acquire-qualtrics-experience-management/>

M&A Spotlight: Cloudera acquires Hortonworks for \$5.2 Billion



PALO ALTO, Calif., January 3, 2019 — **Cloudera, Inc.** (NYSE: CLDR), the enterprise data cloud company, today announced completion of its merger with **Hortonworks, Inc.** Cloudera will deliver the first enterprise data cloud - unlocking the power of any data, running in any cloud from the Edge to AI, on a 100% open-source data platform. An enterprise data cloud supports both hybrid and multi-cloud deployments, providing enterprises with the flexibility to perform machine learning and analytics with their data, their way, with no lock-in.

"Today, we start an exciting new chapter for Cloudera as we become the leading enterprise data cloud provider," said Tom Reilly, chief executive officer of Cloudera. "This combined team and technology portfolio establish the new Cloudera as a clear market leader with the scale and resources to drive continued innovation and growth. We will provide customers a comprehensive solution-set to bring the right data analytics to data anywhere the enterprise needs to work, from the Edge to AI, with the industry's first Enterprise Data Cloud."

In addition, leading independent research firm Forrester noted^[1] that, "this merger will raise the bar on innovation in the big data space, especially in supporting an end-to-end big data strategy in a hybrid and multi-cloud environment. We believe that it's a win-win situation for customers, partners, and the vendors."

Cloudera will continue to trade on the New York Stock Exchange under the symbol "CLDR." Hortonworks stockholders received 1.305 common shares of Cloudera for each share of Hortonworks stock owned.

Source: <https://www.cloudera.com/about/news-and-blogs/press-releases/2019-01-03-cloudera-and-hortonworks-complete-planned-merger.html>

M&A Spotlight: BlackBerry Completes Acquisition of Cylance



WATERLOO, Ont. – February 21, 2019 – BlackBerry Limited (NYSE: BB; TSX: BB) completed its previously-announced acquisition of Cylance, a privately-held artificial intelligence and cybersecurity company based in Irvine, California.

"Today BlackBerry took a giant step forward toward our goal of being the world's largest and most trusted AI-cybersecurity company," said John Chen, Executive Chairman and CEO, BlackBerry. "Securing endpoints and the data that flows between them is absolutely critical in today's hyperconnected world. By adding Cylance's technology to our arsenal of cybersecurity solutions we will help enterprises intelligently connect, protect and build secure endpoints that users can trust."

Cylance's machine learning and artificial intelligence technology is a strategic addition to BlackBerry's end-to-end secure communications portfolio. Notably, its embeddable AI technology will accelerate the development of BlackBerry Spark, the secure communications platform for the Internet of Things (IoT).

As the President of BlackBerry Cylance, Stuart McClure will continue to apply his visionary math-based approach to threat detection, prevention, and response, as well as lead the business' large team of highly-skilled engineers and data scientists that deliver trusted products and services for more than 4,000 companies around the world.

Source: <https://www.cylance.com/en-us/company/news-and-press/press-releases/blackberry-completes-acquisition-of-cylance.html>

PE Buyout Spotlight: Vista Equity Partners Completes Acquisition of Apptio for \$1.94B



Bellevue, WA, January 10, 2019 – Apptio, Inc., software that fuels the digital transformation, today announced that it has been acquired by Vista Equity Partners ("Vista"), a leading investment firm focused on software, data and technology-enabled businesses. The \$1.94 billion transaction, originally announced on November 11, 2018, was approved by Apptio's stockholders on January 8, 2019 and completed on January 10, 2019.

"More than a decade ago, we began building the next great cloud software platform to help companies make smart decisions as they plan, analyze, and optimize technology investments," said Sunny Gupta, co-founder and CEO of Apptio. "The resources and financial strength of Vista will allow Apptio to enter our next chapter of growth, maintain our commitment and passion for customers, and cement our leadership position in fueling digital transformation at hundreds of organizations of all sizes around the world."

Following the transaction, Gupta will stay on as CEO, Apptio headquarters will remain in Bellevue, WA, and Apptio will continue to operate independently as Apptio, Inc.

With the completion of the acquisition, Apptio common stock ceased trading and is no longer listed on the NASDAQ Stock Market.

Source: <https://www.apptio.com/press-release/vista-equity-partners-completes-acquisition-apptio>

PE Buyout Spotlight: Vista Equity Partners Completed a \$1B Majority Investment in Quickbase



CAMBRIDGE, Mass., Jan. 14, 2019 /PRNewswire/ -- Quick Base, the leading SaaS platform for building powerful, integrated, customized business applications, today announced it has signed a definitive agreement to receive a \$1B majority investment by Vista Equity Partners ("Vista"), a leading investment firm focused on software, data and technology-enabled businesses. Quick Base's current investor, Welsh, Carson, Anderson & Stowe ("WCAS"), will retain a significant investment in the company.

Quick Base is a market leader in the customized application building space, with more than 5,400 customers, serving businesses of all sizes across every industry. Quick Base delivers a significant return on investment for customers, empowering users with the ability to create their own solutions that can streamline processes, track and analyze real-time data and create efficiencies in their own work and their company's operations.

"At Quick Base, we are passionately pursuing a near limitless opportunity to disrupt and democratize IT and enterprise software," said Rick Willett, CEO of Quick Base. "Every day we're empowering people closest to the work to customize, automate and enhance their processes. Vista shares our vision and our passion, and we could not be more excited to partner with their team to further accelerate our growth."

Business professionals, across all functions, use Quick Base to easily and quickly build business applications with no prior database, programming or development skills required. Through a highly secure platform, Quick Base easily integrates with existing systems and has the power to also be leveraged by sophisticated software developers.

Source: <https://www.prnewswire.com/news-releases/quick-base-to-receive-majority-investment-from-vista-equity-partners-300777338.html>

About Solganick & Co.

Solganick & Co., Inc. is an independent investment banking and M&A advisory firm focused exclusively on the global software, IT services, and digital media industry sectors, including an active practice within healthcare IT and digital health. We advise buyers and sellers of companies and efficiently execute M&A transactions that help increase shareholder value. Our professionals have advised on \$20+ billion in M&A transactions to date and have current clients and relationships globally with entrepreneurs, companies and leading private equity firms within the sectors we cover.

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