



Solganick & Co.

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

Software M&A Update, H1 2018

August 3, 2018

Table of Contents

M&A Market Brief	3
Global, U.S., and Software M&A Activity H1 2018	3
Software M&A Activity in H1 2018	4
Global M&A Deal Value - Quarterly Comparison	4
United States M&A Deal Value – Quarterly Comparison	5
Global Software Transactions – 2016 to 2018 Value and Volume Comparison by Quarter	6
Growth of Software Transactions by Market Segment	7
Software M&A Volume and Value, 2008-2018E	8
Software M&A Multiples, Last 3 Years (as of June, 2018)	9
Software M&A Deal Volume % by Industry Vertical, Q2 2018	10
Outlook for 2018	11
Notable Software M&A Transactions, Q2 2018	12
Notable Software M&A Transactions, Q2 2018 – Cont'd	13
Publicly Traded Software Firms, Valuation Table	14
M&A Spotlight	17
Microsoft Acquired GitHub for \$6.5 Billion	17
Adobe Acquired Magento for \$1.68 Billion	18
Nokia acquired SpaceTime Insight	19
PE Buyout Spotlight	20
KKR Acquired BMC for \$8.3 Billion	20
About Solganick & Co.	21

About Solganick & Co.

Solganick & Co. is an independent investment banking and M&A advisory firm focused exclusively on the global Software, IT Services, and Digital Media industry sectors. We cover the software sector comprehensively including enterprise, cloud, SaaS, FinTech, artificial intelligence, and cybersecurity. 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.

Sources for our research and data include: Dealogic, ValueWalk, PwC, Company Websites, SEC Filings, MergerMarket, Berkery Noyes, Deloitte, Fortune, 451 Research, medium.com, CNBC, Yahoo Finance, and others.

M&A Market Brief

Global, U.S., and Software M&A Activity H1 2018

Worldwide

The **global M&A value** in Q2 2018 totaled **US\$1.01tn**, an 9.1 % growth from Q1 2018. became the most active quarter since Q4 2016 (US\$ 1.03tn) by value, breaching the US\$ 1tn mark for only the fourth quarter since the crisis.

Only **38.2%** of the global M&A value was generated by cross-border activity – almost a **six percentage-point** drop compared to H1 2017.

More than **\$2.5 trillion in mergers were announced** during the first half of the year, as fears of Silicon Valley's growing ambitions helped drive a record run of deal-making.

Six of the largest ten deals in H1 2018 were domestic deals, including T-Mobile's US\$ 58.9bn takeover of Sprint, announced in late May.

Almost **three-quarters** of the global value has targeted the US and Europe this year, up from **64.9%** in H1 2017.

Europe now accounts for just under a third of the global value up from 22.4% in YTD 2017. Asia has seen its global share dip from 27% in YTD 2017 to 19.1% this year for deal announcements.

United States

In H1 2018, **US M&A deal value rose by 15.9% to US\$ 807.9bn** from US\$ 697.1bn recorded in H2 2017 and by 31.1% from US\$ 616.3bn recorded in H1 2017. However, **total deal count fell by 247 transactions** compared to H2 2017 (2,840) and by 293 transactions compared to H1 2017 (2,886).

The **average value for disclosed deals** in the first half of the year jumped **51.4%** to **US\$ 736.7m** from US\$ 486.5m in H1 2017, and 24.8% from US\$ 590.2m in H2 2017.

There are **11 mega-deals** (>US\$ 10billion) in H1 2018, five more than in H1 2017 where six mega-deals took place.

The value of the largest US deal of Q2 2018, T-Mobile acquisition of Sprint, at US\$ 58.9 billion.

The total value of technology deals is US\$ 178.5bn has increased compared to H1 2017 value (US\$ 111.8bn).

73% of software M&A targets (sellers) and 80% of buyers were based in North America.

Software

Total software transaction volume in 1st Half 2018 declined by three percent over 2nd Half 2017, from 1,084 to 1,056.

Total **transaction value** in 1st Half 2018 **rose by 46 percent** over 2nd Half 2017, from \$57.88 billion to **\$84.43 billion**.

The **median revenue multiple** for SaaS based software firms is 4.5x for Q2 2018 versus 4.7x for the same period last year, Q2 2017. The median EBITDA multiple decreased during this timeframe, from 13.7x to **11.4x**.

The largest deal in 1st Half 2018 was KKR's announced acquisition of BMC Software for \$8.5 billion..

Transactions from 1st Half 2016 to 1st Half 2018 with enterprise values above \$160 million received a **median revenue multiple of 4.0x**, whereas those in the \$20-160 million range garnered a median revenue multiple of 2.7x and those in the \$10-\$20 million range had a median revenue multiple of 2.0x.

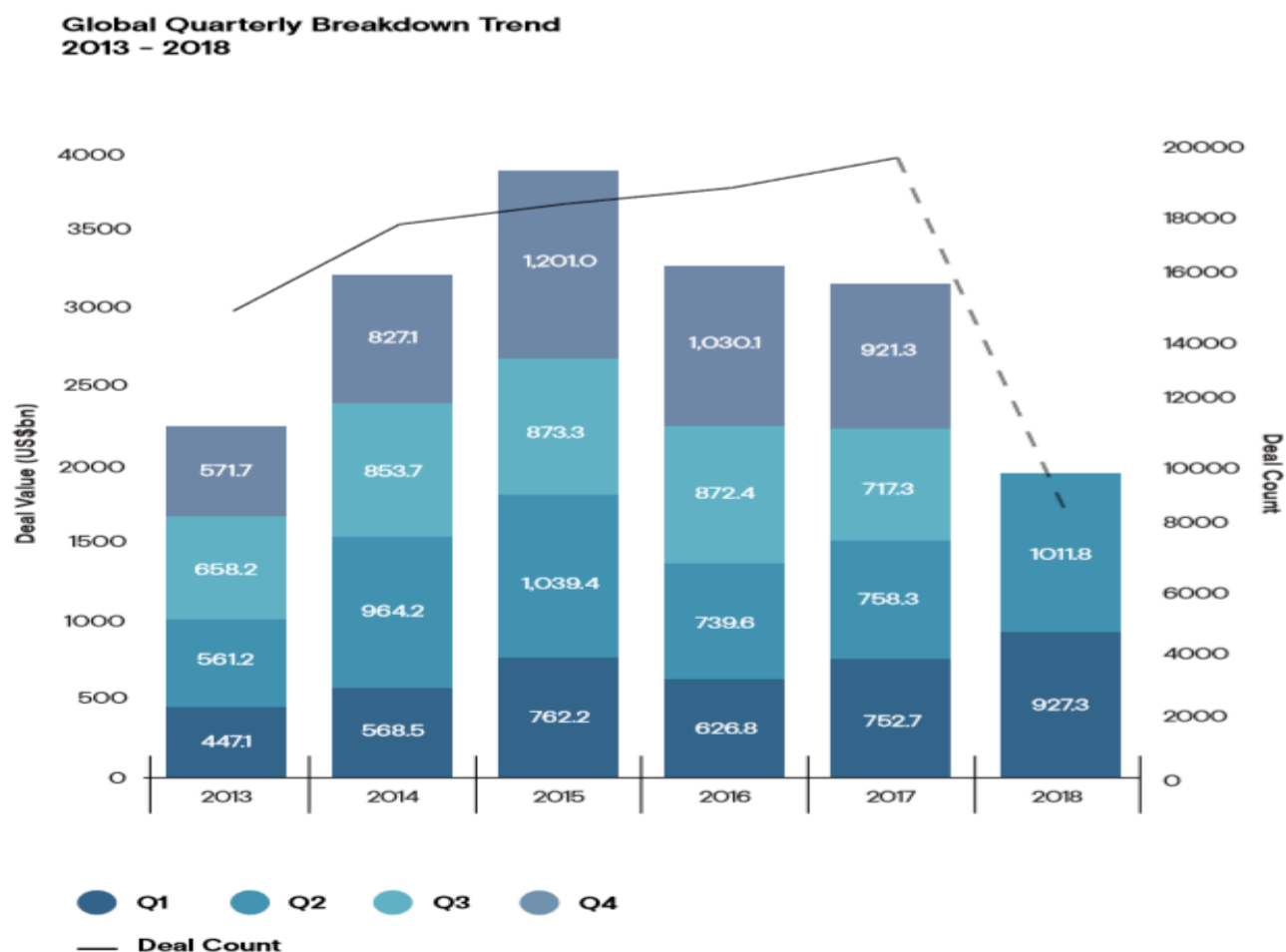
Median EV/Revenue Multiple: 4.5x

Median EV/EBITDA Multiple: 13.4x

Software M&A Activity in H1 2018

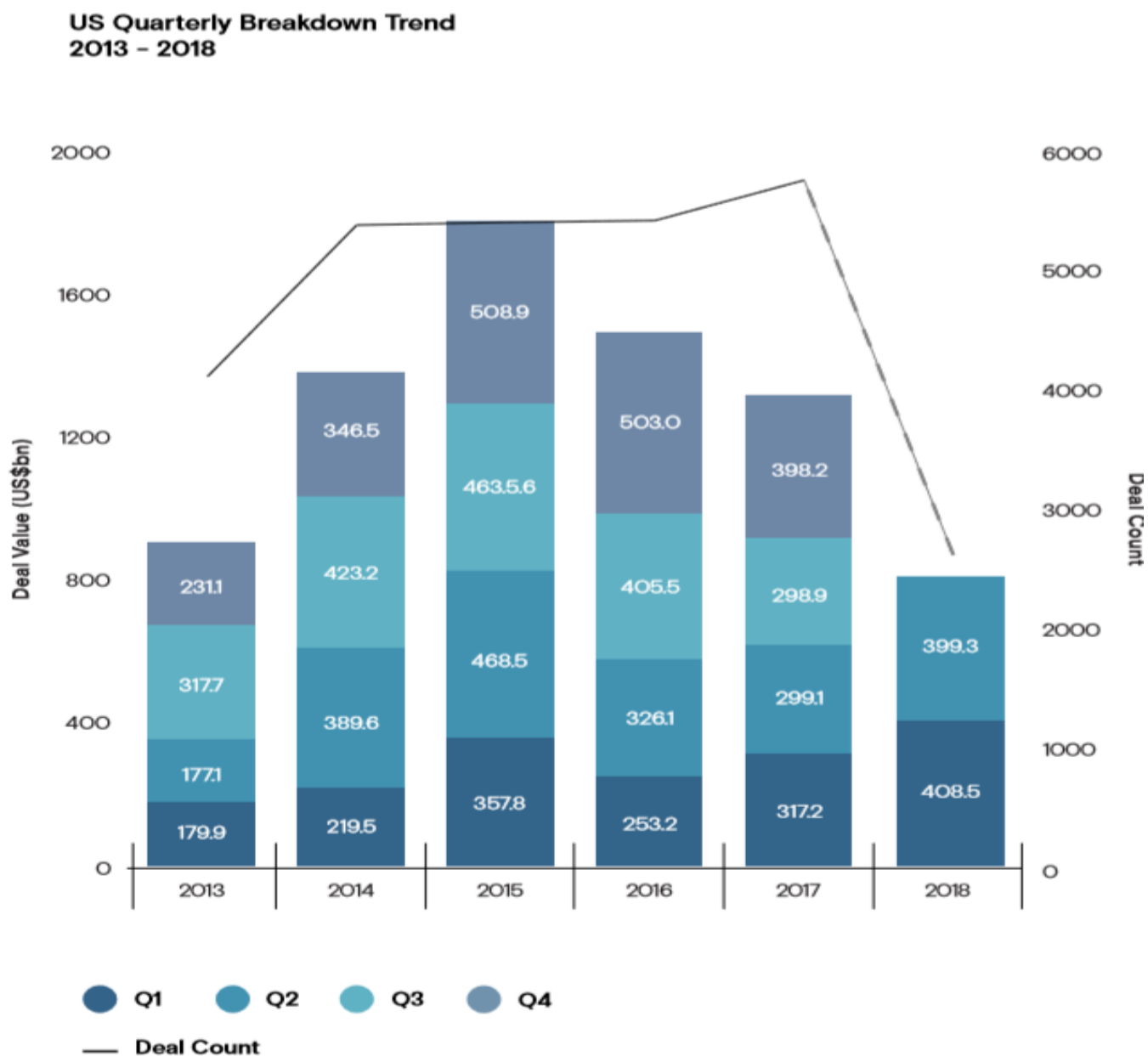
Within the software arena, **M&A deal activity rose 25 percent** in the first half of 2018, and the total value of those software deals skyrocketed 181 percent, according to JEGI's research.

Global M&A Deal Value - Quarterly Comparison



Source: MergerMarket 2018

United States M&A Deal Value – Quarterly Comparison



Source: MergerMarket 2018

Global Software Transactions – 2016 to 2018 Value and Volume Comparison by Quarter

M&A Market Dynamics By Half Year

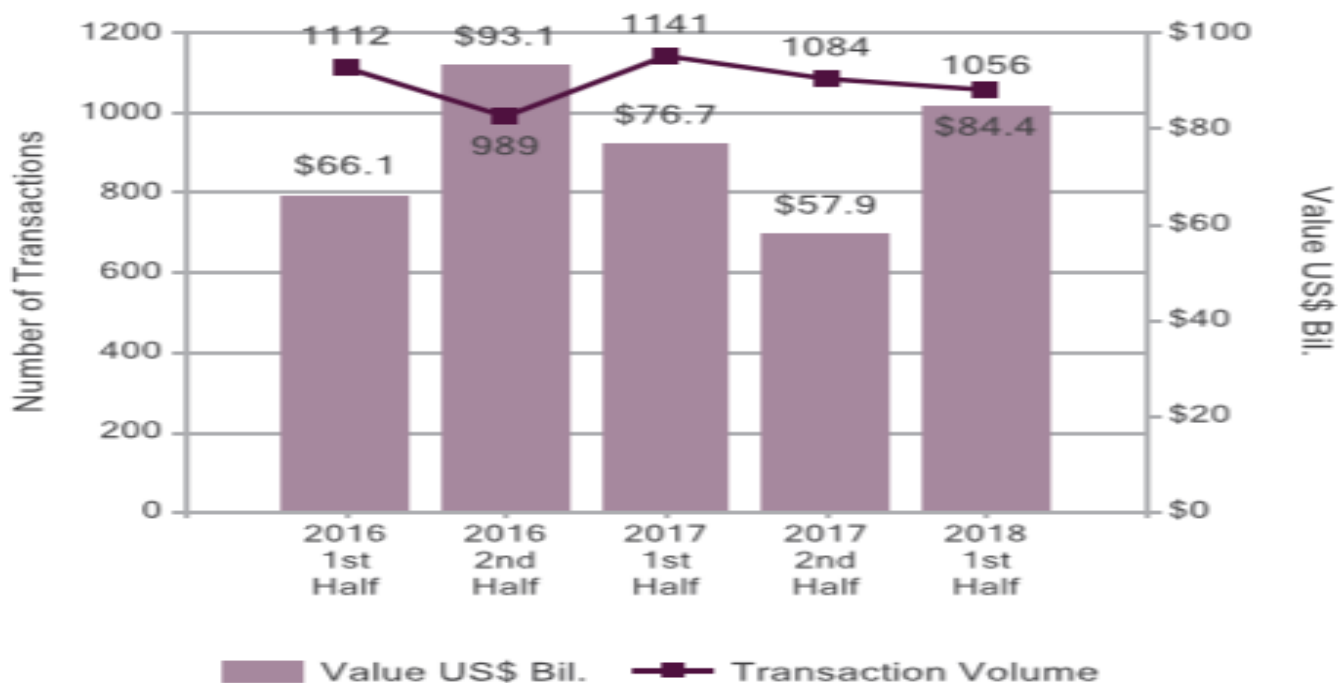


Figure 1. 2016-2018 value and volume comparison.

Source: Berkery Noyes

Total transaction volume in 1st Half 2018 declined by three percent over 2nd Half 2017, from 1,084 to 1,056. **Total transaction value in 1st Half 2018 rose by 46 percent** over 2nd Half 2017, from \$57.88 billion to \$84.43 billion.

M&A Transaction Value Increased While Transaction Volume Decreased in H1 2018.

Growth of Software Transactions by Market Segment

Transactions By Market Segment By Half Year

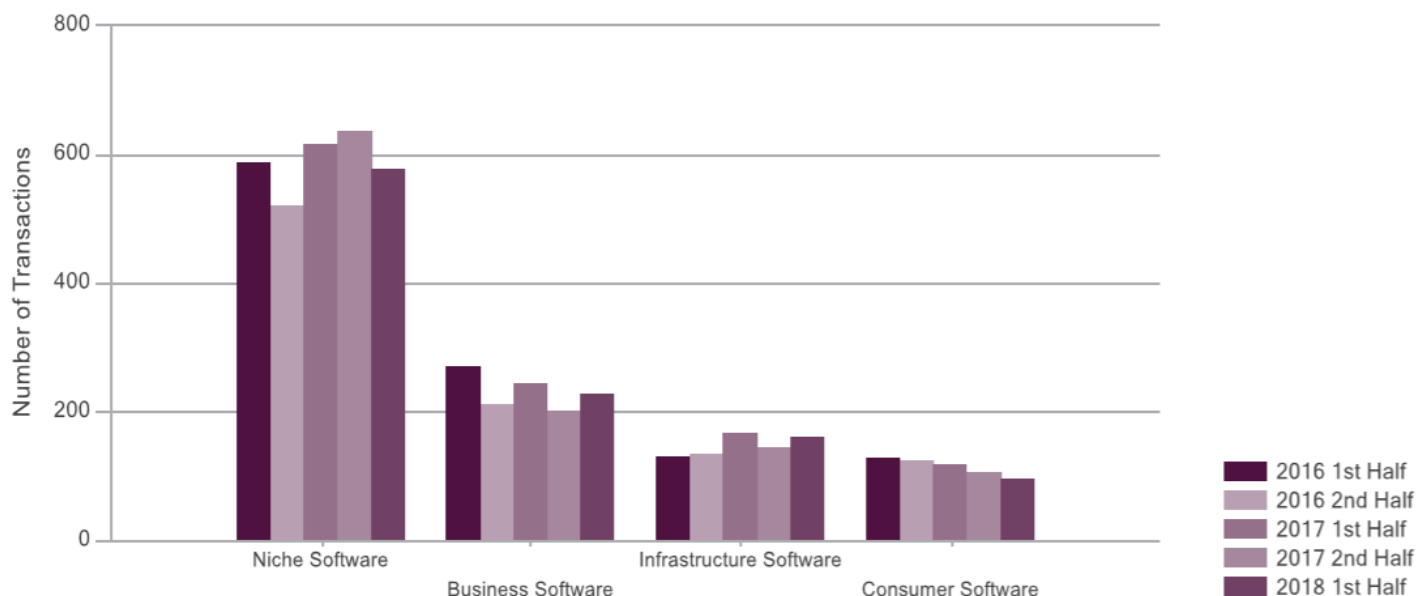
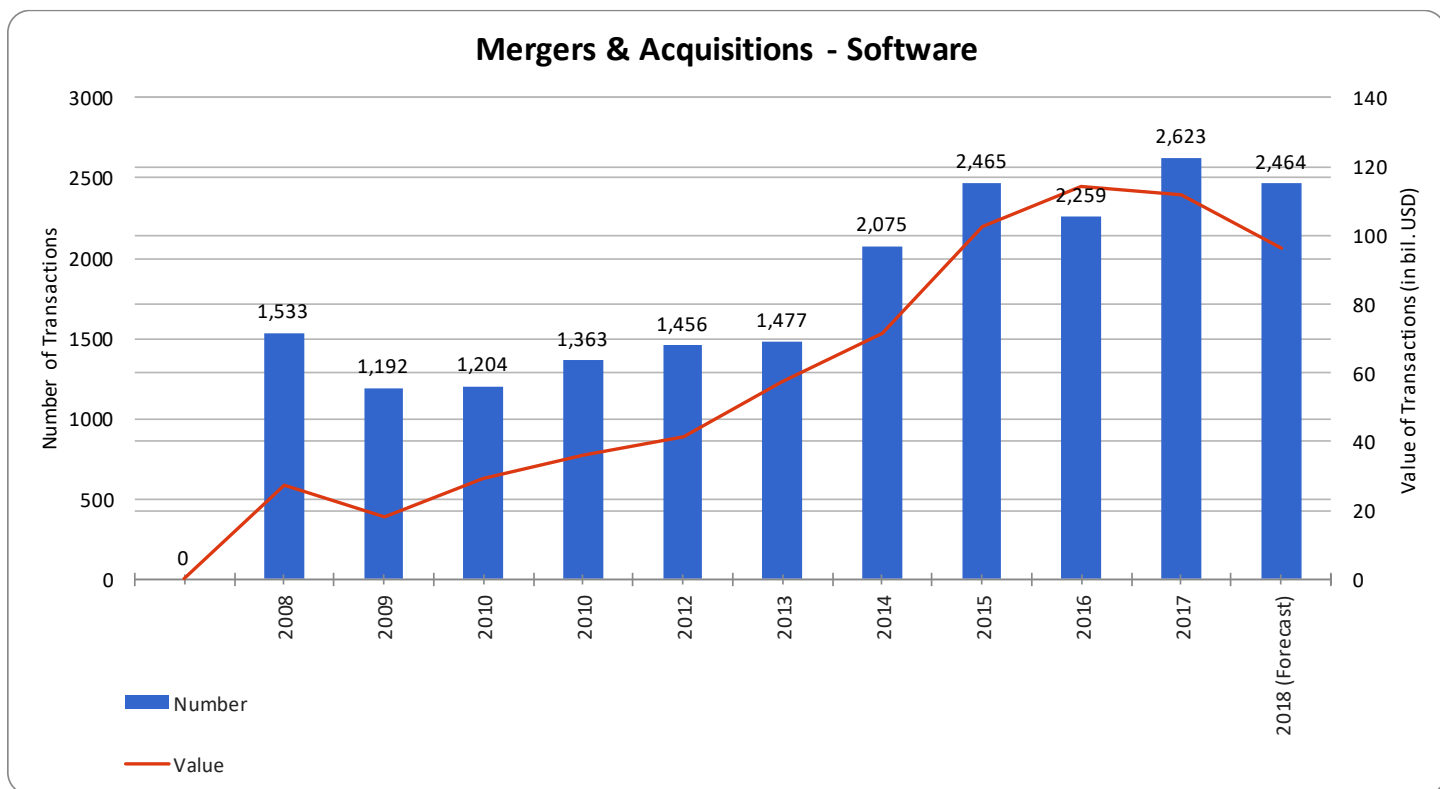


Figure 9. Presents transaction volume by target segment within the Software Industry from January 1, 2016 through June 30, 2018.

Source: Berkery Noyes

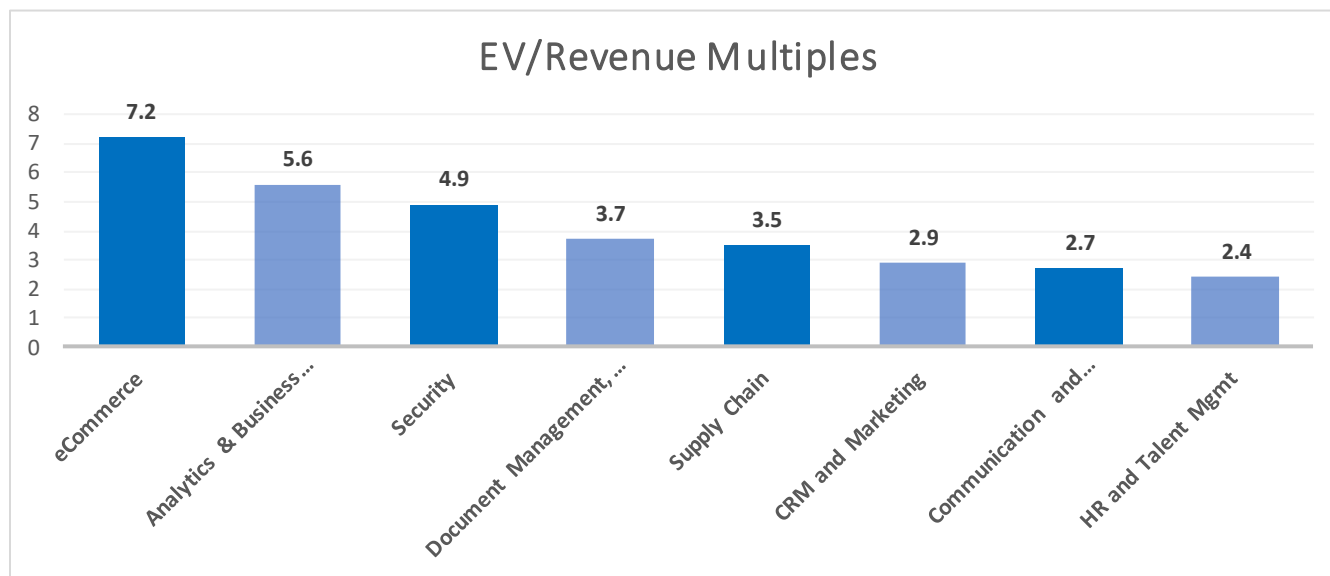
The “Niche Software” segment, which is targeted to specific vertical markets, accounts for four-fifths of software deals announced in the United States for Q2 2018. Both the Business and Infrastructure segments saw notable increases in volume during the first half year of 2018. Business volume gained 13 percent, from 201 to 228 transactions. Infrastructure volume rose 11 percent, from 143 to 159 transactions.

Software M&A Volume and Value, 2008-2018E



Source: Institute for Mergers, Acquisitions and Alliances

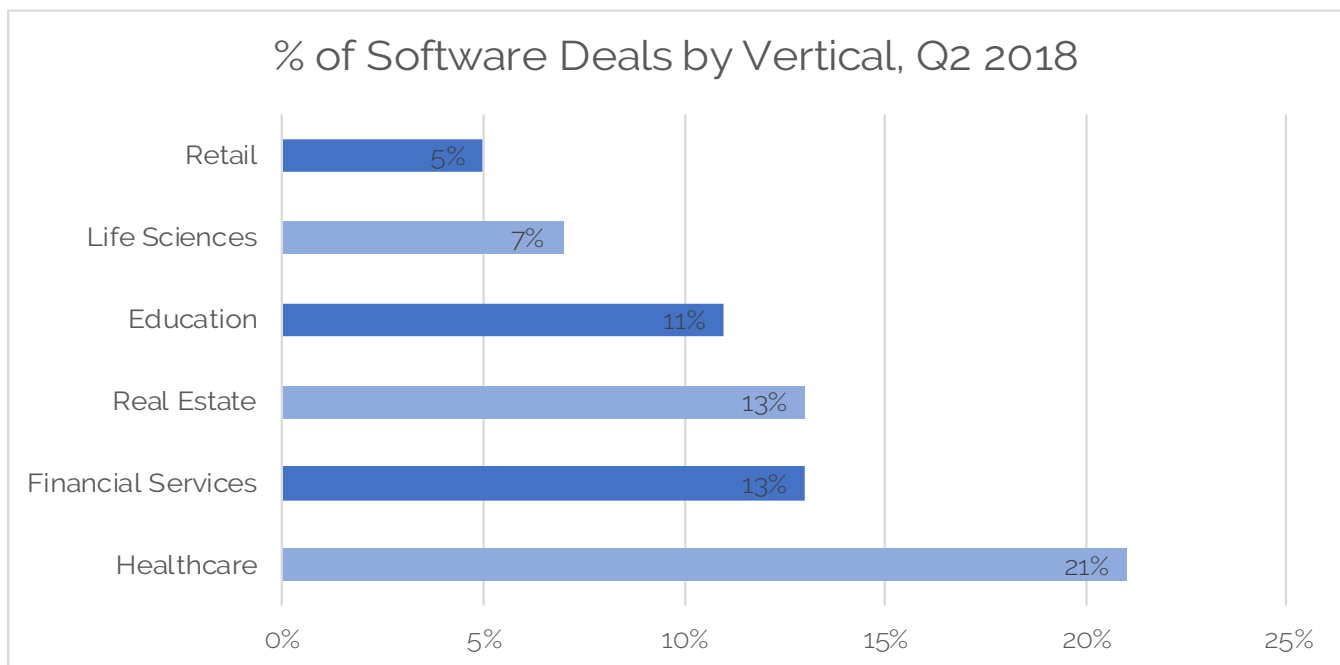
Software M&A Multiples, Last 3 Years (as of June, 2018)



eCommerce software and SaaS outpaced all other software product sectors in terms of median EV/Revenue multiples for the last 3 years coming in at a median of 7.2x EV/Revenue.

Deals include **Square's acquisition of Weebly for 7.2x** EV/Revenue and **Adobe's acquisition of Magento for 11.2x** EV/Revenue.

Software M&A Deal Volume % by Industry Vertical, Q2 2018



Healthcare software and SaaS announced the greatest number of M&A transactions, at 21%, in Q2 2018, followed by the financial services and real estate verticals, tied at 13%.

Outlook for 2018

Potential trade wars and tariffs proposed by the U.S. administration can potentially threaten M&A activity both in the U.S. and especially cross-border. Cross-border M&A has slowed for H1 2018 and may continue to slow further as trade wars and tariffs increase.

M&A activities started strong in the first half of 2018 and are expected to stay active throughout the remainder of the year. The economy presents a favorable condition for M&A activities, as general economic conditions remain strong heading into the second half of the year.

The increase in corporate purchasing power due to an extended period of strong earnings has enabled strategic buyers to pay more for acquisitions. The S&P 500 EV-to-EBITDA ratio is currently at 13.0x, compared to 8.6x just five years ago. Over the same time period, EBITDA per share for the S&P 500 increased by over 22%, reaching \$61.0 in Q1 2018. The expanding valuations in public markets coupled with strong corporate earnings have created a buoying effect on market transaction multiples.

For the remainder of 2018, we expect deal volume in the software sector to continue to be strong, yet slightly down from its peak in 2017.

Notable Software M&A Transactions, Q2 2018

Date	Target	Acquirer(s)	Description of Target	Deal Value (M)
6/29/2018	Kisensum	ChargePoint	Kisensum provides software that enables the integration and management of energy storage to support the grid.	
6/26/2018	Wind River	TPG Capital	Wind River delivers software for intelligent connected systems with technology in nearly 2 billion products	
6/26/2018	Zemax Software	EQT	ZEMAX provides optical engineers and designers with software to help with lens design, illumination, laser beam propagation.	
6/24/2018	DeepUI	WalkMe	DeepUI is a company in stealth mode that has developed a patented machine learning technology to understand any business software at the graphical user interface (GUI) level, without the need for an application programming interface (API).	
6/21/2018	MDC Partners	Anju Software	MDC Partners provides business intelligence solutions for clinical trial optimization, medical expert identification, and competitive intelligence.	
6/21/2018	Bonsai AI	Microsoft	Bonsai is an AI platform that empowers developers to build, teach and use intelligent systems. Its platform simplifies the programming of control and optimization.	
6/20/2018	Colppy	Nubox	Nubox provides cloud-based solutions to help small businesses and accountants organize their financial management functions in one seamless, easy-to-use platform.	
6/19/2018	Cube26	Paytm	Cube26 develops technology that allows devices to recognize users, interpret human gestures and understand their emotions.	
6/19/2018	Connecto	Leanplum	Connecto builds tools with powerful targeting rules to help marketers/product managers communicate better with their visitors.	
6/19/2018	VictorOps	Splunk	VictorOps is a real-time incident management platform that tackles the incident lifecycle and sticks with client needs through resolution.	120
6/15/2018	TrendMiner Software	Software AG	TrendMiner delivers discovery, diagnostic and predictive analytics with real-time monitoring tools for the process industry.	

Notable Software M&A Transactions, Q2 2018 – Cont'd

Date	Target	Acquirer(s)	Description of Target	Deal Value (M)
6/12/2018	SHYFT Analytics	Medidata	Trinity is the leader in cloud-based data, analytics and mobile solutions for the global life sciences industry.	195
6/11/2018	Adaptive Insights, Inc.	Workday	Adaptive Insights provides Business Planning Cloud that enables functional and company-wide business planning and built-in analytics at very large scale.	1,550
6/5/2018	Power Plan	Roper Technologies, Inc	PowerPlan provides asset accounting, tax and budgeting solutions for asset-centric businesses.	1,100
6/4/2018	GitHub Inc.	Microsoft Corp.	GitHub is a web-based Git repository hosting service offering distributed revision control and source code management functionality of Git.	7,500
5/19/2018	Voicebox Technologies	Nuance Communications	Voicebox Technologies is a leader in conversational AI development that enables customers to build secure ASR, NLU, and TTS apps.	82
4/12/2018	A LA Mode Software	CoreLogic	A LA Mode solves digital supply chain and data gathering problems by providing workflow software.	
4/12/2018	Delighted	Qualtrics	Delighted provides Net Promoter System® that enables enterprises to gather real feedback from their customers quickly.	
4/10/2018	SourceClear	CA Technologies	SourceClear is a developer tools company that uses data-science and machine-learning to allow developers to build secure and reliable software.	120
4/9/2018	VeriFone	Francisco Partners	VeriFone designs, markets, and services electronic payment solutions for consumers, merchants, and financial institutions.	3,400
4/6/2018	Priori Data	appScatter	Priori Data is an app store intelligence tool for mobile startups needed to outperform competitions.	195

Source: Index.co

Publicly Traded Software Firms, Valuation Table

Enterprise Software	Stock Price (as of 7/5)	Market Cap (\$USD mm)	Enterprise Value (EV)/Revenue	EV/EBITDA
Microsoft Corporation [MSFT]	\$99.76	\$766,476	7.2	20.4
Oracle Corporation [ORCL]	\$45.45	\$180,784	4.2	10.3
Pegasystems Inc. [PEGA]	\$56.00	\$4,400	4.9	NA
Red Hat, Inc. [RHT]	\$135.56	\$24,044	9.3	47.7
SAP SE [SAP]	\$116.45	\$139,607	5.0	18.7
Average (Mean)			6.1	24.3

Banking and Financial Software	Stock Price (as of 7/5)	Market Cap (\$USD mm)	EV/Revenue	EV/EBITDA
CA Technologies Inc. [CA]	\$36.47	\$ 15,334	3.2	10.9
CoreLogic, Inc. [CLGX]	\$52.56	\$ 4,291	3.1	14.6
NCR Corp. [NCRI]	\$30.50	\$3,608	1.0	7.0
International Business Machines Corp. [IBM]	\$141.43	\$ 129,828	2.0	9.7
Fidelity National Information [FIS]	\$107.54	\$35,597	4.9	17.2
Fiserv, Inc. [FISV]	\$75.03	\$30,720	6.0	19.1
Jack Henry & Associates [JKHY]	\$132.61	\$10,250	6.8	21.7
SS&C [SSNC]	\$53.02	\$12,624	7.4	19.8
Average (Mean)			4.3	15.0

CRM	Stock Price (as of 7/5)	Market Cap (\$USD mm)	EV/Revenue	EV/EBITDA
Microsoft Corporation [MSFT]	\$99.76	\$766,476	7.2	20.4
Oracle Corporation [ORCL]	\$45.45	\$180,784	4.2	10.3
Salesforce.com, Inc. [CRM]	\$139.77	\$103,837	8.7	92.8
SAP SE [SAP]	\$116.45	\$139,607	5.0	18.7
Average (Mean)			6.3	35.6

Security Software	Stock Price (as of 7/5)	Market Cap (\$USD mm)	EV/Revenue	EV/EBITDA
CA Technologies Inc. [CA]	\$36.47	\$15,334	3.2	10.9
Check Point Software [CHKP]	\$99.97	\$15,899	7.5	14.8
FireEye Inc. [FEYE]	\$15.70	\$2,961	3.7	NA
Fortinet, Inc. [FTNT]	\$64.33	\$10,814	5.9	47.4
Imperva, Inc. [IMPV]	\$48.55	\$10,814	4.0	NA
Progress Software Corporation [PRGS]	\$38.41	\$ 1,746	4.3	11.9
Red Hat, Inc. [RHT]	\$135.56	\$24,040	9.3	47.7
Symantec Corp. [SYMC]	\$21.15	\$13,150	3.2	13.1
Average (Mean)			5.1	24.3

Software - NEC	Stock Price (as of 7/5)	Market Cap (\$USD mm)	EV/Revenue	EV/EBITDA
CA Technologies Inc. [CA]	\$36.47	\$15,334	3.2	10.9
CommVault Systems, Inc. [CVLT]	\$68.25	\$ 3,104	3.6	246.6
PTC Inc. [PTC]	\$94.75	\$ 10,961	8.4	84.8
Splunk Inc. [SPLK]	\$98.98	\$ 14,352	12.0	NA
Average (Mean)			6.8	114.1

HR/HCM Software	Stock Price (as of 7/5)	Market Cap (\$USD mm)	EV/Revenue	EV/EBITDA
Cornerstone OnDemand [CSOD]	\$48.71	\$ 2,810	5.3	NA
Workday Inc. [WDAY]	\$126.39	\$ 27,190	10.7	NA
Average (Mean)			8.0	NA
Business Intelligence & Analytics	Stock Price (as of 7/5)	Market Cap (\$USD mm)	EV/Revenue	EV/EBITDA
Teradata Corporation [TDC]	\$41.31	\$5,011	2.2	35.2
MicroStrategy Inc. [MSTR]	\$ 134.05	\$1,534	1.6	13.5
Average (Mean)			1.9	24.4

Source: Yahoo Finance

Average EV/EBITDA are calculated excluding the companies with negative EV/EBITDA
Stock prices as of 7/5/2018.

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



Microsoft Acquired GitHub for \$6.5 Billion

Microsoft (NYSE: MSFT), the global leader in developing and marketing software, services, and hardware, and GitHub, the world's leading software development platform where more than 28 million developers learn, have reached an agreement under which Microsoft will acquire GitHub for \$7.5 billion in Microsoft stock on June 4th, 2018.

GitHub will retain its developer-first ethos and will operate independently to provide an open platform for all developers in all industries. Developers will continue to be able to use the programming languages, tools and operating systems of their choice for their projects — and will still be able to deploy their code to any operating system, any cloud and any device.

GitHub's main revenue source today is paid accounts, which allows for private repositories and a number of other features that enterprises need, with pricing ranging from \$7 per user per month to \$21/user/month. Those building public and open source projects can use it for free.

Upon closing, Microsoft expects GitHub's financials to be reported as part of the Intelligent Cloud segment. Microsoft expects the acquisition will be accretive to operating income in fiscal year 2020 on a non-GAAP basis, and to have minimal dilution of less than 1 percent to earnings per share in fiscal years 2019 and 2020 on a non-GAAP basis, based on the expected close time frame. Non-GAAP excludes expected impact of purchase accounting adjustments, as well as integration and transaction-related expenses. An incremental share buyback, beyond Microsoft's recent historical quarterly pace, is expected to offset stock consideration paid within six months after closing. Microsoft will use a portion of the remaining ~\$30 billion of its current share repurchase authorization for the purchase.

Source: <https://techcrunch.com/2018/06/04/microsoft-has-acquired-github-for-7-5b-in-microsoft-stock/>



Adobe Acquired Magento for \$1.68 Billion

Adobe (Nasdaq: ADBE) announced it has entered into a definitive agreement to acquire Magento Commerce, a market-leading commerce platform, for \$1.68 billion, subject to customary purchase price adjustments on May 31, 2018.

The purchase gives Adobe a missing e-commerce platform piece that works in B2B and B2C contexts and should fit nicely in the company's Experience Cloud. It should also help Adobe compete with Salesforce, which offers its own marketing, sales, and service offerings in the cloud and which bought Demandware for more than \$2 billion in 2016 to provide a similar set of functionality.

Magento brings Adobe Experience Cloud digital commerce enablement and order orchestration for both physical and digital goods across a range of industries, including consumer packaged goods, retail, wholesale, manufacturing and the public sector. The Magento Platform is built on proven, scalable technology supported by a vibrant community of more than 300,000 developers. The Magento partner ecosystem provides thousands of pre-built extensions, including payment, shipping, tax, and logistics. This level of flexibility gives businesses the ability to quickly ramp and iterate their commerce capabilities for their unique business needs.

This isn't the first time the company has been acquired. Magento was founded in 2008 and purchased by eBay in 2011 in a deal reported to be just \$180 million. The company went private again in 2015 with help from Permira Funds, which sources say paid around \$200 million.

Resource: <http://news.adobe.com/press-release/corporate/adobe-acquire-magento-commerce>
<https://techcrunch.com/2018/05/21/adobe-to-acquire-magento-for-1-6-b/>



Nokia acquired SpaceTime Insight

Nokia announced on May 7th that it has acquired software maker SpaceTime Insight, which industrial customers use to manage millions of devices and assets across their networks, marking the equipment supplier's latest push to expand beyond telecoms.

SpaceTime Insight provides machine learning-powered analytics and IoT applications for some of the world's largest transportation, energy and utilities organizations, including Entergy, FedEx, NextEra Energy, Singapore Power and Union Pacific Railroad. Its machine learning models and other advanced analytics, designed specifically for asset-intensive industries, predict asset health with a high degree of accuracy and optimize related operations. As a result, SpaceTime Insight's applications help customers reduce cost and risk, increase operational efficiencies, reduce service outages and more.

The acquisition supports Nokia's software strategy by bringing SpaceTime Insight's sales expertise and proven track record in IoT application development, machine learning and data science to the Nokia Software IoT product unit. It will strengthen Nokia's IoT software portfolio and IoT analytics capabilities, and accelerate the development of Nokia's IoT offerings to deliver high-value IoT applications and services to new and existing customers.

The addition of SpaceTime Insight will also broaden the company's ability to deliver new, advanced applications for key vertical markets, including energy, logistics, transportation, and utilities.

Resource: https://www.nokia.com/en_int/news/releases/2018/05/07/nokia-acquires-spacetime-insight-to-expand-its-iot-software-portfolio-and-accelerate-vertical-application-development

<https://www.reuters.com/article/us-spacetime-m-a-nokia/nokia-acquires-u-s-software-supplier-spacetime-insight-idUSKBN180JA>

PE Buyout Spotlight



KKR Acquired BMC for \$8.3 Billion

Private equity group KKR has agreed to buy US enterprise software company BMC from a consortium of rivals including Bain Capital and Golden Gate Capital for \$8.3bn, according to two people with knowledge of the deal.

Houston-based BMC builds various types of software solutions for businesses looking to manage and streamline their information. Since going private in September 2013, the company has invested hundreds of millions of dollars in research, development, and product delivery initiatives, according to the statement. BMC has more than \$5 billion in debt outstanding, according to data compiled by Bloomberg.

BMC earns about half of its operating profits and free cash flow from its mainframe business, according to Moody's. Analysts with the New York-based credit rating agency warned late last year that the mainframe business had "limited growth prospects." The company has shifted its research and development budget towards faster-growing parts of its business. It has launched new products to help businesses manage cloud computing expenses as well as migrate technology to the cloud. Both Moody's and S&P Global have assigned the company junk ratings and raised red flags over the high debt levels it sustained from its 2013 leveraged buyout.

KKR said its takeover of BMC was expected to close in the third quarter of 2018, subject to regulatory approvals. Financing for the transaction has also been agreed and approved.

Resource: <https://www.ft.com/content/160556ba-633b-11e8-90c2-9563a0613e56>
<https://www.bloomberg.com/news/articles/2018-05-29/kkr-to-buy-bmc-software-from-bain-group-golden-gate-capital>

About Solganick & Co.

Solganick & Co., Inc. is an independent investment banking and M&A advisory firm focused exclusively on the global software, IT services, healthcare IT, and digital media industry sectors. 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.

Please contact us for information regarding this report or to inquire about an M&A transaction.



Solganick & Co., Inc.
811 W. 7th Street, Ste 1200, Los Angeles, CA 90017
+1 (310) 684-3130

Aaron Solganick, CEO
aaron@solganick.com

Rachael Fang, Vice President
rfang@solganick.com

John Mascarenas, Managing Director
jmascarenas@solganick.com

Yuchen Zhang, Analyst
yzhang@solganick.com

Frank Grant, Managing Director
fgrant@solganick.com

Sergio Rivera Vazquez, Managing Director
srivera@solganick.com

Sam Sheedban, Vice President
sam@solganick.com

Alex Khoras, Director of Business Development
Akhoras@solganick.com

Follow Us on Twitter: [@Solganickco](https://twitter.com/Solganickco)