



# SECURITY MARKET FLASH REPORT

North America's Most Active Information Security M&A Advisory Firm

APRIL 2019

AGC's Information Security Team  
*Maria Lewis Kussmal, Co-Founder, Partner*  
*Eric Davis, Partner*  
*Russ Workman, Partner*  
*Ben Howe, Co-Founder, CEO*



# The AGC Partners Security Team

## Boston

**Maria Lewis Kussmaul**  
*Co-Founder, Partner*

**Russ Workman**  
*Partner*

**Eric Davis**  
*Partner*

**Ben Howe**  
*CEO, Co-Founder Partner*

## Silicon Valley

**Joe Dews**  
*Partner*

**Greg Roth**  
*Partner*

## London

**Sean Tucker**  
*Principal*

**Maria Lewis Kussmaul**  
*Co-Founding Partner*



- Maria is a co-founder of AGC Partners and is a Partner in the Investment Banking Group leading the firm's IT Security practice
- In over 30 years as a sell-side equity analyst, venture capitalist and investment banker, Maria has advised on 100s of telecom equipment, networking, internet and security transactions
- Maria's early Wall Street career spanned three firms – Smith Barney, Shearson Lehman and Cowen & Co., culminating as global head of Cowen's Data Networks & Internet investment banking activities
- Previously, she was named to the Institutional Investor All-American Research Team for 13 consecutive years
- Maria holds a B.A. in Economics from Rutgers University, an M.B.A. from The Wharton School of Business and a Chartered Financial Analyst designation

**Russ Workman**  
*Partner*



- Russ is a Partner in the Investment Banking Group at AGC Partners focused on IT Security and Defense Technologies
- Before joining AGC, Russ spent time in the technology banking group at Jefferies & Co. and has advised on more than 50 completed strategic advisory and capital raising assignments
- Before banking, Russ was a US Air Force Officer managing the acquisition of intelligence and information warfare systems for the Intelligence Community, and performed cyber vulnerability assessments of Air Force electronic systems
- Russ holds an M.B.A. in Finance and Accounting from the Wharton School of Business, an M.S. in Operations Research from Northeastern University, and a B.S. in Operations Research from the US Air Force Academy

**Eric Davis**  
*Partner*



- Eric is a Partner in the Investment Banking Group at AGC Partners. He has over 20 years of experience in the financial services industry focusing on acquisition financing, capital raising, and early-stage equity investing
- Prior to joining AGC as a Principal, Eric was a Vice President in Citigroup's TMT and Infrastructure & Energy Finance groups
- He also previously worked as a Vice President of Project Finance and Investments at eleQtra, Inc., an emerging markets infrastructure development and investment fund
- Eric holds a M.A.L.D. with a concentration in International Business from the Fletcher School at Tufts University and a B.A. in Political Science from Middlebury College

**Ben Howe**  
*Co-Founder, CEO*



- Ben is a co-founder and the CEO of AGC Partners
- In over 30 years as an investment banker, Ben has completed more than 350 transactions
- Prior to AGC, he served as Head of Technology Investment Banking for the East Coast and Europe at Montgomery Securities, and as Managing Director, Head of M&A and Executive Committee Member at SG Cowen Securities
- Ben started his investment banking career in New York City with First Boston and Smith Barney
- He serves as Chairman of Excel Academy, which has four charter schools in East Boston, and served on the board of Portsmouth Abbey and the advisory board of Trinity College
- Ben holds a B.A. in Economics from Trinity College and an M.S. in Accounting from The Stern School of Business at NYU

# Will Cloud Giants of Today Become Cyber Disruptors of Tomorrow?

At RSA last month, a number of the big cloud service providers made high-profile product announcements. Can this be just coincidence or is it the start of CSPs evolving to dominate the cyber world? Given the increasing costs associated with a security breach, both companies and investors alike continue to invest heavily in the segment. Notably, 213 funding rounds raised a record \$4.7 billion in 2018, and with an additional 59 rounds so far this year, the trend shows little sign of slowing. Another 140 seed and early-stage companies were set in motion over the last 15 months, adding to an existing base of 2,500 private security companies. The universe keeps expanding in large part due to a growing TAM, up 9% at last check per Gartner, and also due to compelling stand-alone technologies taking on new security threats. We call this “augmentation through fragmentation,” a theme we’ll explore in future reports.

While the bottom of the cyber ecosystem is filling up, consolidation and exit opportunities are alive and well at the top. 154 M&A transactions were completed in 2018, with disclosed values exceeded \$16.5 billion. Another \$25 billion in value was transferred to the public markets by way of IPOs, providing an important source of liquidity for security investors.

Which begs the question: who will be the lead consolidators and disruptors going forward? It’s often assumed that the disruptors of tomorrow will come from the ranks of newly funded companies or pure-play security incumbents. However, the conspicuous announcements by Google and Microsoft at RSA raise the prospect that CSPs may be the ones pushing the envelope.

Chronicle, Google’s new cyber arm, caused a stir with the unveiling of its cloud-based Backstory. Similar to a SIEM, it collects a company’s security-related log data, yet with the ability to handle greater volume through strategic automation. In what might otherwise take 12 hours, Chronicle claims to take one second to search 50 petabytes of security-related log data. This data can be pulled from third party security vendor partners, on premise, and from cloud environments -- an implicit bet on hybrid and multi-cloud. Although a majority of enterprises have moved to the cloud, only half are deployed in the public cloud or in a multi-cloud mode.<sup>1</sup> According to Gartner, more than 70% of enterprises will implement a multi-cloud strategy by the end of this year. That would certainly be a quantum leap, and provide a huge opportunity for CSPs more broadly in security.

Microsoft joined Chronicle by announcing its own cloud-native SIEM tool at RSA, Azure Sentinel. Like Backstory, it monitors security in rival cloud environments as well as its own, while connecting with other security vendor partners. It also taps into machine learning algorithms and ease-of-use core competencies that are Microsoft hallmarks.

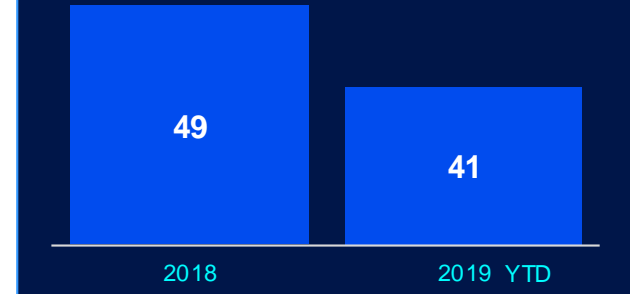
By partnering with other security vendors, Google and Microsoft are hoping to sell more cloud services and push the pace of hybrid and multi-cloud adoption. Ironically, that will keep these massive players in check for now. That said, the more product breakthroughs they conjure up on their own by leveraging decades of experience handling massive web traffic and providing security for their own cloud infrastructures, the more they will look like disruptors of the future.

## Security Market Flash Report – 1Q19 in Review

- 41 M&A deals were announced this quarter, of which 15 had disclosed values for a total of \$3.5B (median size of \$157M). This compares to 49 M&A deals in 1Q18 (\$77M median size).
- The acquisitions of LGS Innovations by CACI International for \$750M, Webroot by Carbonite for \$619M, and Demisto by Palo Alto Networks for \$560M, were the top M&A deals of the quarter with disclosed values.
- 59 financing transactions were completed with \$1.3B in total capital raised (median amount raised of \$15.8M). This compares to 62 financings and \$898M in capital raised for the same period, 2018 (\$12M median).
- Cloudflare's \$150M Series E, OneLogin's \$100M Series D, and Keyfactor's \$77M growth round were the top financing deals of the quarter.
- 48% of total financing deals were Early Stage (Seed to Series A) The median raise for these early rounds was \$8M.
- The most active sectors this quarter were Cloud Security (11), Identity & Access Management (10), and Threat Intelligence (9).
- The quarter also featured the industry's biggest gathering of the year, the RSA US Conference in San Francisco, kicked off by AGC's very own InfoSec conference, our 15th edition.
- AGC advised on four security deals in the first quarter, including the announced sale of WhiteHat Security to NTT Security

### M&A Transactions

#### Q1 Transaction Count



### Private Placements

#### Q1 Transaction Count

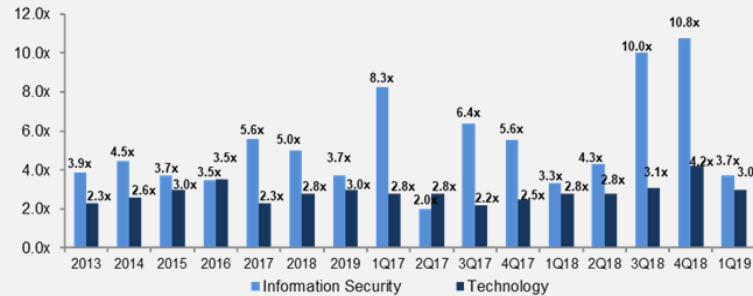


# Pulse of the Security Market – Key Metrics

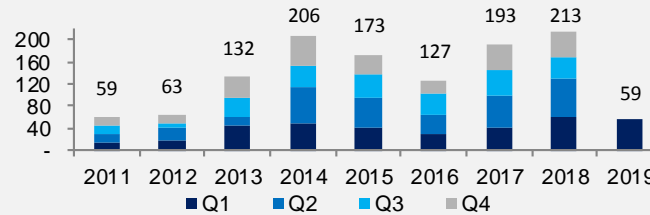
## Notable Late Stage Financings

Date	Target	Amount
Jun. 2018	CROWDSTRIKE	\$200 M
Oct. 2018	TANIUM	\$200 M
Nov. 2018	netskope	\$169 M
Mar. 2019	CLOUDFLARE	\$150 M
Jun. 2017	illumio	\$125 M
Jun. 2018	CYLANCE	\$120 M
Nov. 2018	VENAFI	\$100 M
Nov. 2018	onelogin	\$100 M
May 2018	HashiCorp	\$100 M

## Median Valuations – M&A



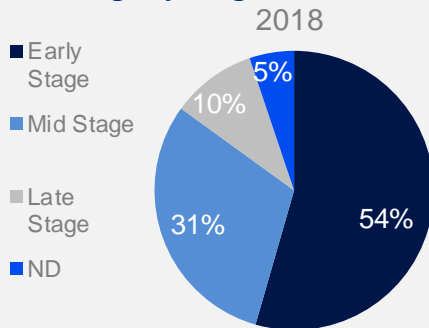
## Historical Volume Financings



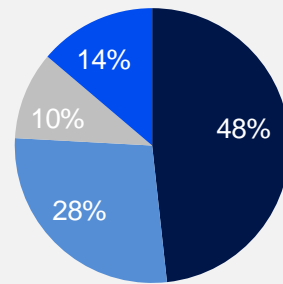
## Notable M&A by Valuation Tranche

	Target	EV	EV/Rev
Iconic Exit	DEMISTO	\$560 M	46.7x
	DUO	\$2,350 M	18.8x
	CYLANCE	\$1,400 M	10.8x
Market Value Exit	IMPERVA	\$2,100 M	6.1x
	VERACODE	\$950 M	4.3x
	Centrify	\$500 M	3.3x
	WEBROOT	\$619 M	2.9x
	BRADFORD NETWORKS	\$17 M	1.7x
Consolidation	Vaultive	\$19 M	ND

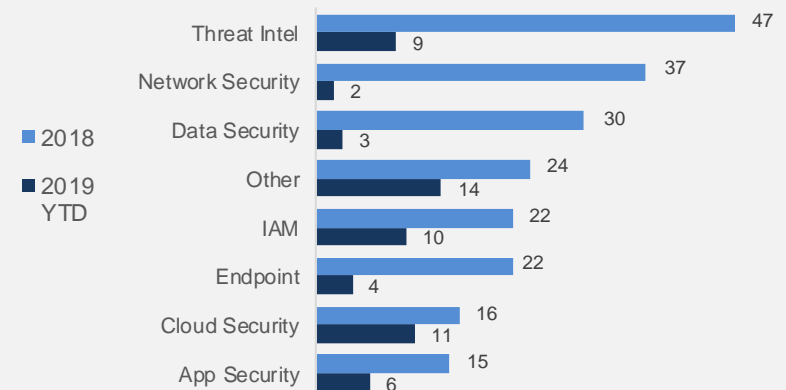
## Financings By Stage





## 2019 YTD




















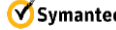








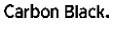

## Financing Activity Sector Count



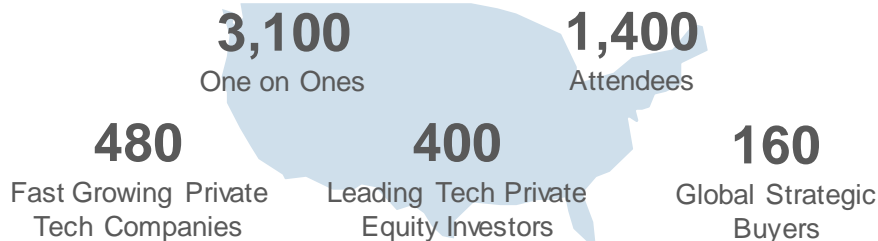
# Key Themes From the 2019 RSA Conference

- 1 Zero Trust: The Key to Cloud Security**
  - Multi-factor authentication, continuous authentication, and network microsegmentation were featured as ways to prevent the exfiltration of sensitive data in an environment where no device or entity can be trusted
- 2 Renewed Focus on MSSPs**
  - Increased budgets for 3<sup>rd</sup> party MSSPs have prompted cloud providers, hardware / software vendors, VARs, & other non-traditional security service providers to increase their services offerings, leaving enterprises with more choices and increased confusion; Managed Detection and Response (MDR) also continuing to gain traction
- 3 Endpoint Gets a True Up**
  - If anything, the cloud intensifies the need for endpoint security. New cloud projects will revisit and take stock of legacy protection strategies
  - Browser Isolation and Content Disarm & Reconstruction were among those that garnered stronger interest this year
- 4 User Identity Merges with User Privacy**
  - Due in large part to GDPR, user identity, data privacy and consent are no longer separate concepts in a security context
  - The EU is too large to exist as a carve-out. Enterprises will overlay the same principles, whether required or not, to maintain a uniform regulatory approach
- 5 NSA to the Rescue**
  - DDoS was not the big headline it was in 2018 post the record-setting memcached attacks, but the NSA filled the void
  - Ghidra, a previously classified project, was released to a packed crowd. The toolkit allows reverse-engineering of malware to better understand hacker code
- 6 Innovation Sandbox**
  -  **AXONIUS** (Asset Management): Visibility & policy enforcement for an enterprise's assets and users
  -  (Homomorphic Encryption): Collaboration platform for encrypted data

**7 Cloud Computing Giants: Building Platforms that Leverage Internal Data Sets to Disrupt Cybersecurity Market**

Company	AI, Cloud-Native SIEM Offering	Select Strategic Partnerships
 	<b>Backstory / Uppercase by Chronicle:</b> Security telemetry storage with threat detection capabilities	 <b>FORTINET</b>  <b>avast</b>  <b>paloalto</b>
	<b>GuardDuty:</b> Threat detection for AWS accounts and workloads	  <b>Check Point</b> <b>BROCADE</b>  <b>proofpoint</b>
	<b>Azure Sentinel:</b> Threat detection platform that aggregates data from users, apps, servers, & devices running on-prem / in-cloud	 <b>RAPID7</b> <b>SOPHOS</b>  <b>Pingidentity</b>  <b>splunk</b>
		    <b>TREND MICRO</b>  <b>Symantec</b>
		   <b>AVG</b>  <b>Symantec</b>  <b>avast</b>  <b>accenture</b>
		 <b>McAfee</b>  <b>TREND MICRO</b>  <b>Carbon Black</b>  <b>COMODO</b>

# AGC Partners 15<sup>th</sup> Annual West Coast Information Security Conference



### Keynote Speakers

## Industry Panel Topics & Participants

### Threat Intelligence

### Machine Identities & IOT

### Cloud Security

### Next Gen SIEM & SOC

### Battle of the Brands

### Cyber Security Capital Markets

### Zero Trust

### Digital Transformation

### IT/OT Convergence

## Featured Transaction: Palo Alto Acquires Demisto for \$560M

Date	Value	Trailing 12 Months		Forward 12 Months		Total Invested Capital	Top Investor(s)
		Revenue	EV/Revenue	Revenue	EV/Revenue		
2/19/2019	\$560.0M	\$12.0M	47x	\$42.0M	13x	\$69.0M	Accel, Greylock, ClearSky

### DEMISTO

#### Company Description:

Demisto is a leading Security Orchestration, Automation, and Response (SOAR) platform that helps security teams accelerate incident response, standardize and scale processes, and learn from each incident while working together.

#### Core Sector:

Security Incident Response

#### Core Products:

- Security Orchestration
- Incident Management
- Interactive Investigation
- Machine Learning
- Indicator Repository

#### Headquarters:

Cupertino, California

#### Deal Significance:

This is the 3rd largest deal of the quarter, and at 47x trailing revenues (13x forward) the highest multiple. It's also the 5<sup>th</sup> security deal by highly acquisitive Palo Alto in just two years, joining RedLock, Secdo, Evident.io, and LightCyber.

#### Deal Rationale:

*"Palo Alto Networks continues its path toward building the next-generation security operations center (SOC)...The next-generation SOC will be driven by analytic engines fed by data from multiple security and operations firms. Demisto's automation tools should help Palo Alto extend its Application Framework with multi-vendor extensions to address the need for more intelligent decisions and alert processing. – 451 Research*

*"The addition of Demisto's orchestration and automation technologies will accelerate Palo Alto Networks' Application Framework strategy and serve as a critical step forward in the company's aim to deliver immediate threat prevention and response for security teams. Demisto's automated playbooks have helped reduce alerts that require human review by as much as 95 percent, allowing security teams to focus on the most complex threats." – Palo Alto Networks*

*"The Demisto acquisition helps bolster the broader security platform of Palo Alto Networks, which can collect data from >60K customers through its various sensors (Firewall, Endpoint, Analytics and Cloud apps), as well as third party apps on the Application Framework, and then use Demisto's best of breed orchestration capabilities to help deliver immediate threat prevention...[This creates increased] overlap with Splunk, which acquired its orchestration/automation tool, Phantom, early last year...[Management has reaffirmed] its close partnership with Splunk since it's a widely used tool among Palo Alto Networks customers today." – Wall Street Research*

Street Research



#### Acquirer Description:

Palo Alto Networks is a global cyber security leader serving 60,000 customers in 150+ countries. Its security operating platform safeguards the digital transformation through continuous innovation and embracing the latest breakthroughs in security, automation, and analytics.

#### Core Sector:

Security Ops, Incident Response, Analytics

#### Market Cap:

\$22.8B (NYSE: PAWN)

#### Key Stats:

FY18 Revenue: \$2.3B (+29%)

#### Headquarters:

Santa Clara, CA



## Featured Transaction: OneLogin Raises \$100M

Date	Raise	Round	Valuation	Total Employees		Total Invested Capital	Lead Investor(s)
				Current	1 Yr Change		
1/10/2019	\$100M	Series D	ND	274	46%	\$175.2M	Greenspring, Silver Lake



### Company Description:

OneLogin, the leader in Unified Access Management, connects people with technology through a simple and secure login, empowering organizations to access the world™. The OneLogin Unified Access Management (UAM) platform is the key to unlocking the apps, devices, and data that drive productivity and facilitate collaboration.

### Core Sector:

Identity Access Management

### Core Product:

- Cloud Identity and Access Management

### Deal Significance:

This is the 2<sup>nd</sup> largest private placement in the quarter and the 56<sup>th</sup> super round of \$100M or more in the security segment.

### Deal Rationale:

*“Not every startup manages to reach — or exceed — \$100 million in financing. Those that do join an exclusive group of fundraisers and can enjoy a massive vote of confidence from the venture capitalists and angels who help put them there... It’s very much justified: it has more than tripled its annual recurring revenue (ACR) over the past three years. – Venture Beat*

*“OneLogin will use the capital to accelerate adoption of its new products, such as Multi-Factor Authentication (MFA), and to serve enterprises in the new Unified Access Management (UAM) category it has pioneered. UAM enables a cohesive approach to managing access for both SaaS and on-premise application environments, as well as extending Access Management to networks and devices using cloud infrastructure. The funds will also be used to increase OneLogin’s North American and European footprints.” – OneLogin*

*“The identity access management company was founded in 2009 and has watched while companies like Ping Identity, Duo Security and Okta had tidy exits. But as CEOs are fond of pointing out, the total addressable market is large and where investors see a chance, they take it... [This round] would appear to give OneLogin some runway to grow large enough to find a way to exit.” – TechCrunch*

*“OneLogin, Inc. will use the proceeds to accelerate adoption of its new products, such as Multi-Factor Authentication, invest in the differential technological approaches, serve enterprises in the new Unified Access Management, support personnel, increase its North American and European footprints, acquire the engineering talent capable of supporting investments around blockchain, and help enterprises manage access and identity.” – S&P Capital IQ*



### Investor Description:

Greenspring Associates is an established investor in enterprise software companies. It manages over \$8.7 billion in committed funds in a variety of specialized venture strategies.

### Investment Focus:

Enterprise Software



Silver Lake is the global leader in technology investing, with about \$45.5 billion in combined assets under management. Silver Lake Waterman offers flexible growth capital to later-stage private companies in the technology, technology-enabled and related growth industries

## Not All Exits Are Created Equal

### Iconic Exit

































- Category-leading, high-value exits which garner sensational attention upon disclosure
- A particular subset of security buyers pay this kind of price, selectively

### “Market Value Exit”

- Could be a public buyer, investor backed private, or PE acquirer
- More numerous, also often publicized

### Consolidation

- Purchased as a feature for a larger platform or as an acqui-hire
- Often raised money at high valuation, competed in noisy, crowded security subsectors, and achieved minimal revenue traction

Date	Target	Acquirer	EV	LTM Rev	EV/LTM Rev
Feb 2019	 DEMISTO	 paloalto networks	\$560M	\$12M	46.7x
Aug 2018	 CYLANCE	 BlackBerry	\$1,400M	\$130M	10.8x
Mar 2018	 DUO	 CISCO	\$2,350M	\$125M	18.8x
Feb 2018	 Phantom	 splunk	\$350M	\$8M	43.8x
Jan 2018	 ThreatMetrix	 RELX Group	\$820M	\$70M	11.7x
Feb 2019	 WEBROOT	 CARBONITE	\$619M	\$215M	2.9x
Nov 2018	 VERACODE	 THOMABRAVO	\$950M	\$220M	4.3x
Oct 2018	 IMPERVA	 THOMABRAVO	\$2,100M	\$344M	6.1x
Sept 2018	 BeyondTrust	 BOMGAR	\$750M	\$110M	6.8x
Jul 2018	 Centrify	 THOMABRAVO	\$500M	\$150M	3.3x
Feb 2018	 COFENSE	 PAMPLONA CAPITAL MANAGEMENT	\$400M	\$55M	7.3x
Jun 2018	 BRADFORD NETWORKS	 FORTINET	\$17M	\$10M	1.7x
May 2018	 BRACKET COMPUTING	 vmware	ND	ND	ND
Mar 2018	 8 SECURITY	 vmware	\$15M	\$3M	4.6x
Mar 2018	 Vaultive	 CYBERARK	\$19M	ND	ND
Jan 2018	 SKYPORT SYSTEMS	 CISCO	ND	ND	ND













## Notable Late Stage Funding and Supercharged Early Rounds

(\$ in Millions)

Date	Target	Lead Investor (s)	Check	Round	Valuation	
Jun. 2018	 CROWDSTRIKE	  GENERAL ATLANTIC  ACCEL PARTNERS	\$200	E	\$3,000	} Late Stage Funding
Oct. 2018	 TANIUM™	WELLINGTON MANAGEMENT®  IVP	200	PE	ND	
Nov. 2018	 netskope	 ACCEL PARTNERS  Lightspeed	169	F	ND	
Jun. 2017	 CLOUDFLARE™	 FRANKLIN TEMPLETON INVESTMENTS	150	E	3,200	
Mar 2019	 illumio	J.P.Morgan	125	D	1,180	
Jun. 2018	 CYLANCE	 Blackstone	120	E	1,000+	
Date	Target	Lead Investor (s)	Check	Round	Valuation	
Jul 2018	 EXIGER	 CARRICK 	\$80	A	ND	} Super-Charged Early Rounds
Apr 2018	 IronNet Cybersecurity	 CS CAPITAL  KLEINER PERKINS  FORGEPOINT CAPITAL	78	B	ND	
Jun 2018	 CLAROTY	TEMASEK	60	B	ND	
Jan 2019	 TESSIAN	SEQUOIA  ACCEL PARTNERS	42	B	ND	
Apr 2018	 SAVIYNT	 CARRICK 	40	A	ND	

## Many of the Recent Top Information Security M&A Deals are PE-Led

(\$ in Millions)

Date	Target	Acquirer	EV	LTM Rev	EV / LTM Rev
Feb 2018	 CSRA	GENERAL DYNAMICS	\$9,600M	\$5,064M	1.9x
May 2018	 bmc	KKR	\$8,400M	\$2,200M	3.8x
Dec 2017	 gemalto <small>security to be free</small>	THALES	\$6,614M	\$3,567M	1.9x
Sep 2016	 McAfee®	TPG	\$4,200M	ND	ND
Dec 2016	 OPTIV	KKR	\$2,418M	\$943M	2.6x
Aug 2018	 DUO	 CISCO	\$2,350	\$125M	18.8x
Nov 2016	 LifeLock®	 Symantec	\$2,300	\$650M	3.5x
Oct 2018	IMPERVA®	THOMA BRAVO	\$2,100	\$344M	6.1x
Nov. 2017	 Barracuda	THOMA BRAVO	\$1,474	\$367M	4.0x
Nov 2018	 CYLANCE	 BlackBerry	\$1,400	\$130M	10.8x

 Indicates PE-Led Deal

# Private Equity Platform Plays

*Fueled by the leadership opportunity, growing spend rates, and confidence in their ability to identify attractive platform-enhancing tuck-ins, PE firms look to build the next-generation of winners*



Resolution1 combined with Fidelis provides one of the most compelling offerings in the TDR and incident-response automation spaces for a comprehensive advanced threat defense solution



Ping Identity's acquisitions of UnboundID and Elastic Beam have extended the platform's leadership by adding multi-factor authentication, single sign-on, secure access, and machine learning analytics capabilities, creating a leading solution in the Identity market



The WatchGuard Technologies platform is a global leader in network security, providing best-in-class Unified Threat Management, Next Generation Firewall, secure Wi-Fi, and network intelligence products and services



The StackPath platform provides an integrated response to a fragmented problem that has been created by too many individual, bolt-on security solutions through a frictionless and scalable security platform



The acquisition of the Veris Group by Coalfire offers an established global leader in cyber risk advisory, compliance assessments and technical testing an increased technical knowledge base to deliver deeper insights to customers



Through the acquisition of FortyCloud, Immediate Insight, and Lumeta, Firemon is taking the path to establishing a comprehensive portfolio around its firewall management expertise



Bomgar's platform offers a comprehensive solution for enabling privileged and remote access, while defending organizations from constant and evolving threats



With the acquisition of Imperva and Veracode, Thoma Bravo is well-positioned to be the pre-eminent cybersecurity services provider within the enterprise Application Security market



The acquisitions of Rogue Wave and Perfecto provide Performce's software portfolio with additional capabilities for enterprise DevOps teams to achieve continuous testing at scale across web, mobile and IoT applications



Given McAfee's leading global market position, loyal customer base, and trusted technology, TPG saw this as an opportunity to invest in a highly-strategic platform that is growing consistently and addressing significant and evolving market demand

# Select Security Buyer Universe

## Enterprise / Network / Endpoint

A collection of logos for companies in the Enterprise / Network / Endpoint space, including: A10, ABSOLUTE, BlackBerry, Kaspersky, ArcSight, aruba, AVIRA, Juniper, clearswift, FICO, gemalto, paloalto, corero, EMC, RSA, BELDEN, Fortinet, FireEye, Imperva, Sophos, MobileIron, Guidance, Qualys, Neheiah Security, Panda, Cylance, Rapid7, SonicWall, Proofpoint, Blue Coat, McAfee, Radware, Tanium, Synchronoss, Trend Micro, Varonis, Carbon Black, Fidelis, AlienVault, StackPath, SS8, Hillstone Networks, NetFortris, Endgame, Kemp Technologies, Netsurion, SolarWinds, Heat Software, Riverbed, LandDesk, LogRhythm, WatchGuard, Webroot, Lookout, ForeScout, and CrowdStrike.

## Virtualization / Systems Mgmt

A collection of logos for companies in the Virtualization / Systems Mgmt space, including: Alcatel-Lucent, Arris, Gigamon, Sybase, Dyn, Commvault, Attachmate, Citrix, Micro Focus, Loglogic, Redhat, Ixia, Netscout, Infoblox, CA Technologies, HES Security Systems, TIBCO, Netsuite, Software AG, Pulse Secure, Splunk, Good, and SolarWinds.

## Consulting / Outsourced Services

A collection of logos for companies in the Consulting / Outsourced Services space, including: Accenture, Stroz Friedberg, Atos, Booz | Allen | Hamilton, Capgemini, CSC, Cognizant, CompuCom, Deloitte, Cyberpoint, HCL, CSRA, Optiv, ICF, KPMG, Infossys, EY, SRA, Denim Group, NTT Group, Wipro, NCCGroup, Redhawk, TATA, and Unisys.

## Tech Titans

A collection of logos for major technology companies, including: Amazon, Google, SAP, Oracle, Adobe, HP, IBM, Cisco, and Microsoft.

## Internet / Cloud Security

A collection of logos for companies in the Internet / Cloud Security space, including: Akamai, Box, LifeLock, Check Point, CipherCloud, Cloudflare, Dropbox, GoDaddy, Cyren, Eset, and Armor.

## Government / Defense

A collection of logos for companies in the Government / Defense space, including: BAE Systems, Northrop Grumman, Cobham, Harris Exelis, Veracode, Cramer, Sotera, Thales, Keyw, Leidos, Raytheon, ManTech, NCI Security, Verint, Novetta, QinetiQ, CACI, TASC, and Serco.

## Critical Infrastructure

A collection of logos for companies in the Critical Infrastructure space, including: 3M, ARM, Great Bay, ABB, Eaton, GE, Synopsys, Emerson, ViaSat, Honeywell, Landis+Gyr, Hyundai, Siemens, Itron, Mitsubishi Electric, Toshiba, Schneider Electric, Danaher, and Westinghouse.

## Data Center / Cloud Services

A collection of logos for companies in the Data Center / Cloud Services space, including: Salesforce, DataPipe, Level(3), Rackspace, Secure 24, CenturyLink, Neustar, Digital Fortress, and Hortonworks.

## Telecommunications

A collection of logos for telecommunications companies, including: Deutsche Telekom, Rogers, Telus, and EarthLink.

## IAM / Authentication

A collection of logos for companies in the IAM / Authentication space, including: BeyondTrust, Centrify, Lieberman Software, Bomgar, Entrust Datacard, Covisint, Impriova, Cyberark, BellID, Giesecke & Devrient, Oberthur Technologies, Identiv, LogMeIn, Vasco, Micro Focus, Vanderbilt, HID, Simeio, PingIdentity, Okta, and SailPoint.

## Financial Services / Anti-Fraud

A collection of logos for companies in the Financial Services / Anti-Fraud space, including: Equifax, Experian, Nice, Fidelity, FirstData, TeleSign, Salient, PayPal, and Fiserv.

## MSSPs

A collection of logos for Managed Security Service Providers (MSSPs), including: Accumuli Security, AhnLab, AT&T, Opentext, ANX, Fujitsu, Alert Logic, CenturyLink, Continuum, BT, Coverity, Debold, Esentire, VeriSign, NRI Secure Technologies, Orange Business Services, and Internap.

## Financial Technology

A collection of logos for companies in the Financial Technology space, including: NCR, NEC, FIS, and Sungard.

## Data Security / Encryption

A collection of logos for companies in the Data Security / Encryption space, including: Information Builders, Qaction, Clearswift, Talend, Cloudera, TIBCO, SAS, PKWARE, Stealthbits, Digital Guardian, and Informatica.

## Threat Intel. / Risk Mgmt. / Vuln.

A collection of logos for companies in the Threat Intel. / Risk Mgmt. / Vuln. space, including: Core Security, Fidelis, Haystack, and Looking Glass.

## Application Security

A collection of logos for companies in the Application Security space, including: Arxan, Cigital, BMC, Compuware, WhiteHat Security, and Vencore.

## Telecommunications Equipment

A collection of logos for telecommunications equipment companies, including: Brocade, Ericsson, Nokia, Viavi, Macom, Sony, Samsung, Motorola, and Qualcomm.

# Security M&A Activity: Broad Tech Acquirers

Year	Acquirer 1	Acquirer 2	Acquirer 3	Acquirer 4	Acquirer 5	Acquirer 6	Acquirer 7	Acquirer 8	Acquirer 9	
2019		Singularity							janrain	
2018		Duo SKYPORT SYSTEMS	ZENEDGE SMART CYBERSECURITY	[:] SourceClear	VictorOps Phantom			8 SECURITY BRACKET COMPUTED	Kitopass	
2017	AGLES3	observable networks		VERACODE	signalsense	HEXADITE	BITIUM	Aptelligent	BLACKDUCK Cigital	nominum SOASTA
2016	Resilient IRIS	CloudLock	Dyn palerra	Mobile System 7				ARKIN	codiscope WinterLogic	CYBERFEND SOHA
2015		embrane Lancop proweb Pentaho Computer Security OpenDNS		Xceedium IDMLOGIC	metafor Caspida	secure islands ADALLOM			gdbana Quotium protecode codenomicon Elliptic	BlOXX xerocole octoshape
2014	LIGHTHOUSE SECURITY GROUP CrossIdeas	NEOHAPSIS ThreatGRID		entropy		InMage AORATO	dropcam divide spider.io SlekLogin IMPERMIUM	airwatch	coverity	
2013	FIBERLINK Trusteer	SOURCEfire COSE	BitzerMobile							PROLEXIC CDOs Attacks End Here.
	IBM	CISCO	ORACLE	BROADCOM ca technologies	splunk	Microsoft	Google	vmware	SYNOPSYS	Akamai

# Security M&A Activity: Pure Play Security Acquirers





# Public Valuation Metrics

## PUBLIC SECURITY COMPANY METRICS

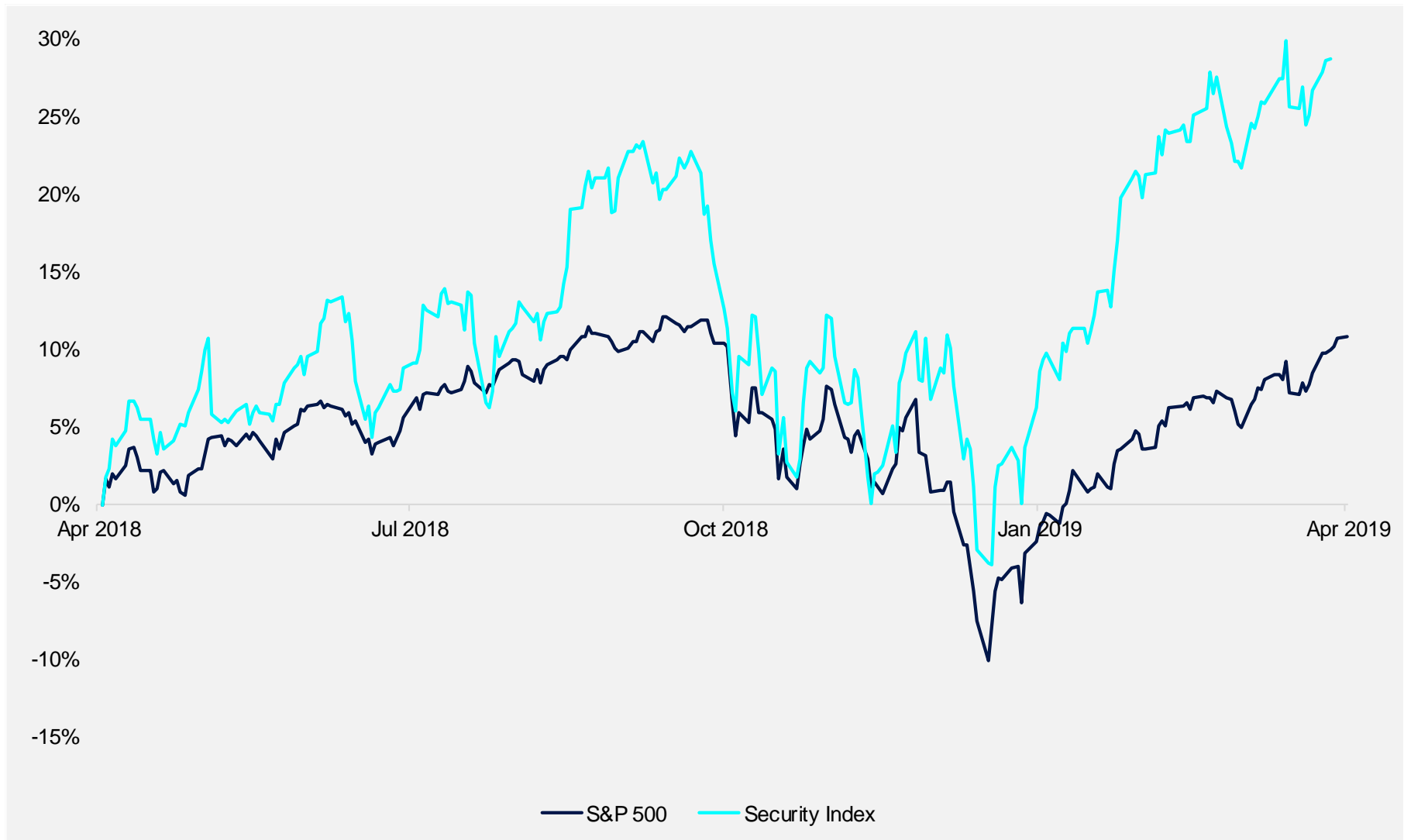
(\$ in millions)

Company	Enterprise Value <sup>(a) (b)</sup>	Market Data				Operating Data <sup>(c)</sup>							
		EV / Revenue		EV / EBITDA		Revenue		EBITDA		Revenue Growth		LQ Gross	LQ Adj.
		TTM	2018A	TTM	2018A	TTM	2018A	TTM	2018A	18A/17A	19E/18A	Margin	Op. Margin <sup>(d)</sup>
<b>Security IPOs since 4Q'11</b>													
Palo Alto Networks	\$21,250	8.8x	8.3x	NM	31.2x	\$2,427	\$2,564	\$24	\$681	6%	22%	72%	1%
Splunk	18,393	11.5x	10.6x	NM	74.6x	1,602	1,743	(255)	247	9%	27%	85%	4%
Okta	9,543	26.2x	24.4x	NM	NM	364	392	(115)	(39)	8%	36%	73%	(24%)
Proofpoint	6,420	9.7x	9.0x	NM	59.2x	661	711	(39)	108	8%	23%	73%	(11%)
Zscaler	7,540	35.3x	32.1x	NM	NM	214	235	(17)	5	10%	43%	79%	(5%)
FireEye	3,203	4.1x	3.9x	NM	27.9x	791	830	(128)	115	5%	7%	68%	(17%)
Qualys	2,918	10.9x	10.5x	38.5x	26.2x	268	279	76	111	4%	6%	76%	15%
Tenable	2,817	11.4x	10.6x	NM	NM	246	265	(59)	(46)	8%	29%	84%	(26%)
Cyber-Ark Software	3,926	12.5x	11.9x	94.5x	44.3x	315	330	42	89	5%	15%	88%	25%
SailPoint	2,377	10.0x	9.8x	NM	77.8x	238	242	20	31	1%	23%	81%	16%
Mimecast	2,788	9.3x	8.7x	NM	64.6x	301	319	20	43	6%	26%	73%	2%
Sophos	2,185	3.2x	3.2x	55.9x	25.0x	693	691	39	87	(0%)	25%	79%	4%
Varonis	1,684	6.5x	6.2x	NM	NM	258	270	(22)	10	5%	11%	92%	5%
Rapid7	2,354	10.1x	9.7x	NM	NM	233	242	(45)	(15)	4%	27%	72%	(15%)
SecureWorks	1,320	2.6x	2.5x	NM	NM	509	521	(30)	12	2%	9%	53%	(8%)
Carbon Black	823	4.1x	3.9x	NM	NM	199	208	(61)	(50)	5%	16%	78%	(34%)
ForeScout	1,747	6.4x	6.0x	NM	NM	272	291	(93)	(19)	7%	27%	79%	(17%)
MobileIron	464	2.5x	2.4x	NM	NM	185	194	(41)	1	5%	9%	80%	(14%)
<b>Broad Solution Providers</b>													
Check Point Software	\$17,706	9.3x	9.3x	18.7x	17.3x	\$1,897	\$1,909	\$947	\$1,025	1%	5%	89%	48%
Symantec	17,961	3.8x	3.8x	18.6x	8.4x	4,750	4,761	966	2,144	0%	3%	78%	18%
Trend Micro	5,227	4.0x	3.6x	11.6x	10.8x	1,321	1,446	449	483	9%	3%	78%	20%
<b>Enabling / Policy Enforcment</b>													
Verisign	\$23,234	19.3x	19.1x	29.1x	26.7x	1,203	\$1,215	\$799	\$871	1%	1%	84%	63%
VASCO Data Security	644	3.2x	3.1x	NM	37.8x	202	207	3	17	3%	13%	65%	6%
Zix	351	5.1x	5.0x	24.6x	17.7x	69	70	14	20	2%	136%	78%	11%
Absolute Software	246	2.6x	2.6x	29.6x	19.7x	95	96	8	12	1%	4%	87%	10%
<b>Defensive Solutions</b>													
Fortinet	\$13,039	7.6x	7.3x	53.2x	29.3x	\$1,711	\$1,791	\$245	\$445	5%	17%	75%	17%
F5 Networks	8,846	4.1x	4.0x	13.4x	10.4x	2,161	2,186	661	850	1%	2%	84%	29%
Radware	886	3.9x	3.8x	86.7x	29.5x	229	234	10	30	2%	9%	83%	10%
<b>MEDIAN</b>	<b>\$2,868</b>	<b>7.1x</b>	<b>6.2x</b>	<b>29.3x</b>	<b>28.6x</b>	<b>\$308</b>	<b>\$319</b>	<b>\$9</b>	<b>\$37</b>	<b>5%</b>	<b>16%</b>	<b>79%</b>	<b>5%</b>





























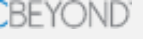










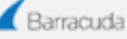





### Notes

- (a) Based on closing stock prices on April 8, 2019  
 (b) Calculated as Equity Value plus total debt, minority interest (at book value unless otherwise noted) and preferred stock, less cash & equivalents  
 (c) Projections represent Wall Street & Yahoo Finance estimates  
 (d) Adjusted operating margin excludes extraordinary and non-recurring items

# Security Sector Stock Performance



# Security IPO and Take Private Activity

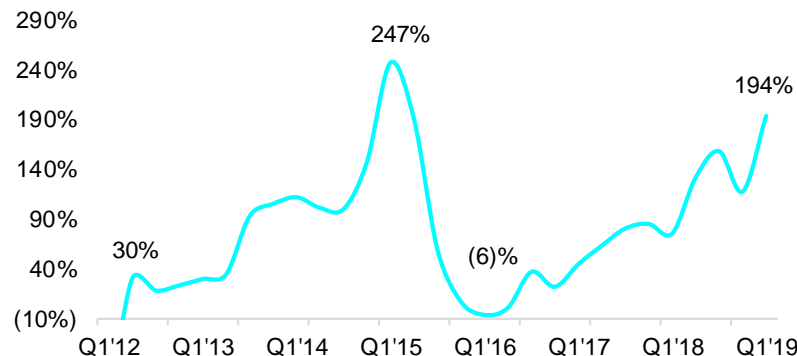
	2011	2012	2013	2014	2015	2016	2017	2018
Security IPOs		     	 	  	  		  	     
Security Take-Private M&A's	 		 	 	 	    	     	 

# Momentum of Security IPO Market

## Security IPO Performance

Company	Amount offered (\$mm)	Total Shares Offered (%Total)	Aftermarket Performance
1. FireEye	\$304	13%	(16%)
2. Tenable	\$250	12%	40%
3. Splunk	\$213	15%	663%
4. Palo Alto Networks	\$197	9%	469%
5. Zscaler	\$192	10%	297%
6. Okta	\$187	12%	416%
7. SailPoint	\$172	27%	130%
8. Carbon Black	\$152	12%	(27%)
9. Sophos	\$125	35%	21%
10. ForeScout	\$116	17%	88%
11. SecureWorks	\$112	10%	27%
12. Varonis	\$106	21%	179%
13. Rapid7	\$103	18%	218%
14. MobileIron	\$100	15%	(41%)
15. CyberArk Software	\$86	18%	631%
16. Imperva	\$86	23%	(100%)
17. Qualys	\$80	25%	578%
18. Mimecast	\$83	15%	356%
19. Proofpoint	\$67	21%	824%
<b>Median</b>	<b>\$116</b>	<b>15%</b>	<b>179%</b>

## Median Aftermarket Performance Since '12



## SECURITY IPOs SINCE 4Q'11

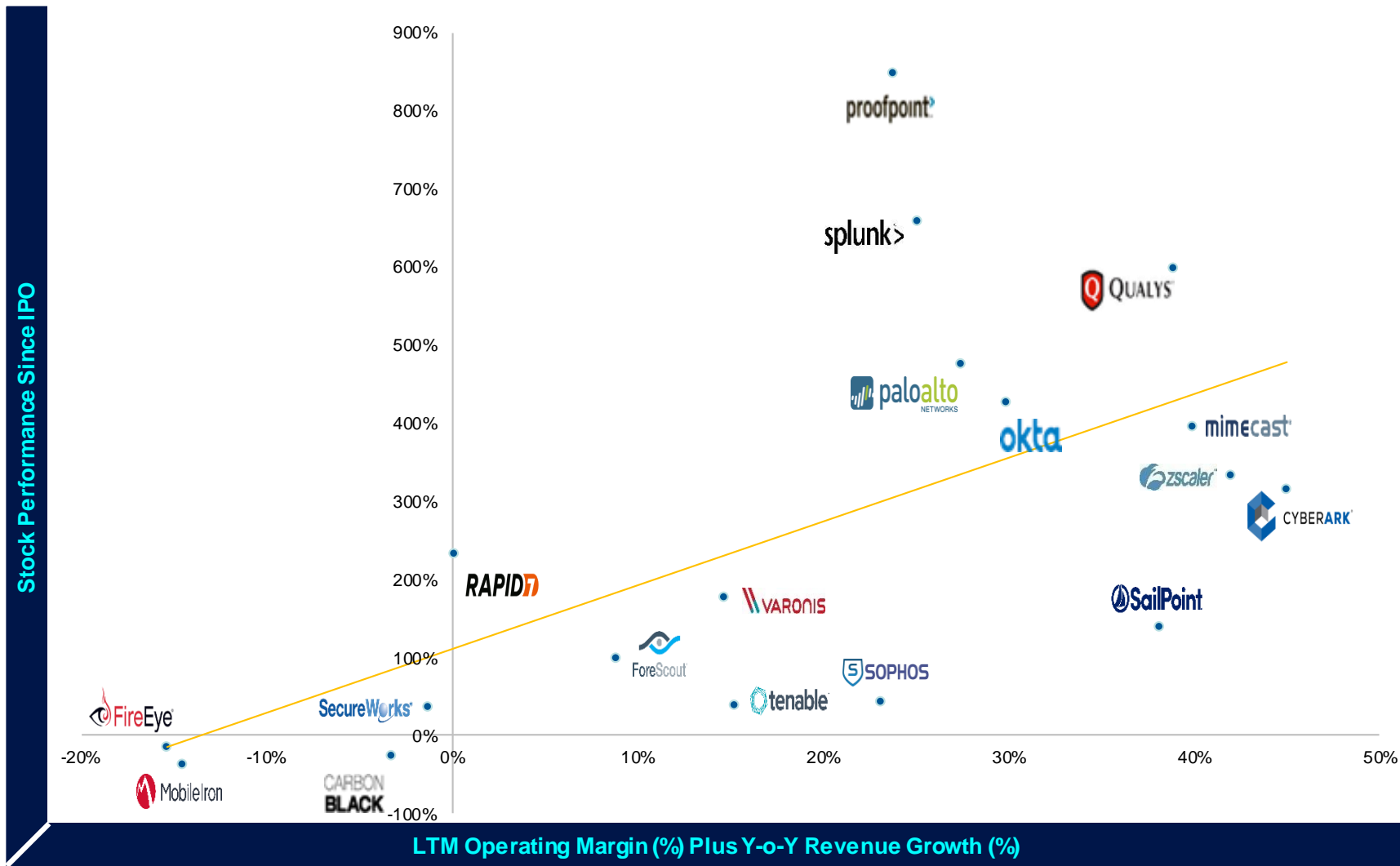
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Zscaler	7,540	35.3x	32.1x	NM	ND	214	235	(17)	5	NM	43%	79%	(5%)
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MobileIron	464	2.5x	2.4x	NM	NM	185	194	(41)	1	11%	9%	80%	(14%)
<b>MEDIAN</b>	<b>\$2,802</b>	<b>9.5x</b>	<b>8.9x</b>	<b>55.9x</b>	<b>77.2x</b>	<b>\$287</b>	<b>\$305</b>	<b>(\$34)</b>	<b>\$21</b>	<b>55%</b>	<b>23%</b>	<b>79%</b>	<b>(6%)</b>

### Notes

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# Growth and Profitability Drive Stock Performance





## About AGC Partners

**Note:** This document is intended to serve as an informative article only in order to further discussion, analysis and independent verification. This document is based upon sources believed to be reliable, however, we do not guarantee the sources' accuracy. Unless otherwise indicated, AGC does not believe that the information contained herein is sufficient to serve as the basis of an investment decision. There can be no assurance that these statements, estimates or forecasts will be attained and actual results may be materially different. This is not a solicitation of an offer of any kind. To learn more about the company/companies that is/are the subject of this commentary, contact one of persons named herein who can give you additional information.

# AGC's Security Transactions: 28 Deals Since 2016

2019

Has completed a \$23M Series A financing from  
**ABSCapital**  
 March 2019

Undisclosed  
 has divested Select Business Units to  
 Undisclosed  
 March 2019

has agreed to be acquired by  
**NTT Security**  
 March 2019

has divested **CORE SECURITY** in a sale to **helpsystems**  
 January 2019

2018

has completed a \$77M Growth Equity Financing with **INSIGHT VENTURE PARTNERS**  
 December 2018

has been acquired by **EZShield** Identity Crisis Protection™  
 a portfolio company of **WICKS**  
 August 2018

has been acquired by **FIREMQN**  
 a portfolio company of **INSIGHT VENTURE PARTNERS**  
 June 2018

Has acquired **IECT** Atalla Hardware Security Module  
 a business line of **MICRO FOCUS**  
 March 2018

sold to **RSA**  
 a company of **DELL**  
 April 2018

has been financed by **CARRICK** Investing more than capital  
 April 2018

sold to **BOMGAR**  
 a portfolio company of **THOMA BRAVO**  
 January 2018

a subsidiary of **aurionpro**  
 sold to **KPMG**  
 January 2018

2017

has been financed by **The Blackstone Group**  
 December 2017

has been acquired by **Booz | Allen | Hamilton**  
 October 2017

has been financed by **RUNWAY**  
**Glidepath Partners**  
 August 2017

has been acquired by **NETSCOUT**  
 July 2017

2016

has been acquired by **COALFIRE**  
 a portfolio company of **THE CARLYLE GROUP**  
 December 2016

has been acquired by **ROHDE & SCHWARZ**  
 December 2016

has divested **BLUVECTOR** in a sale to **LLR Partners**  
 December 2016

has been acquired by **ARXAN**  
 December 2016

has been acquired by **PROVIDENCE EQUITY**  
 September 2016

has divested **HawkEye iG** in a sale to **WatchGuard**  
 June 2016

has divested **HawkEye iG** in a sale to **Ignite**  
 May 2016

has been acquired by **ca technologies**  
 April 2016

has been acquired by **amazon**  
 April 2016

has been acquired by **ALERT LOGIC**  
 April 2016

has been acquired by **Infoblox**  
 February 2016

has been acquired by **FireEye**  
 January 2016

# AGC's Market Leading Security Practice: 106 Deals Since Inception





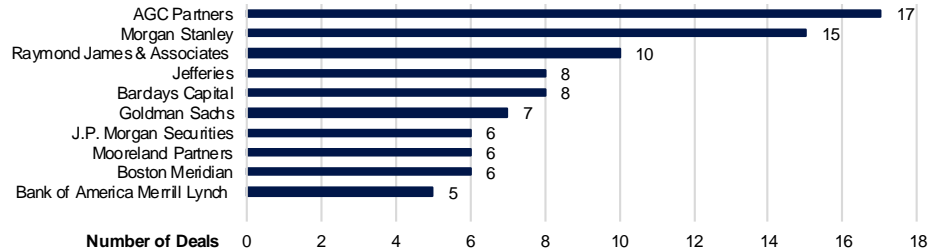
# AGC's Market Leading Security Practice: 106 Deals Since Inception



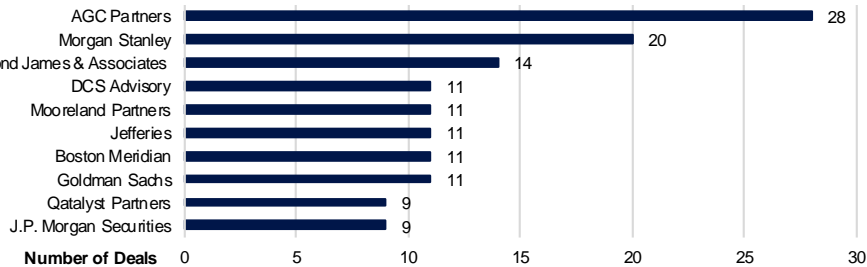
# AGC Ranked Top Tech Boutique: 364 Deals Done Since Inception

## Top Security Bank over the Last Decade

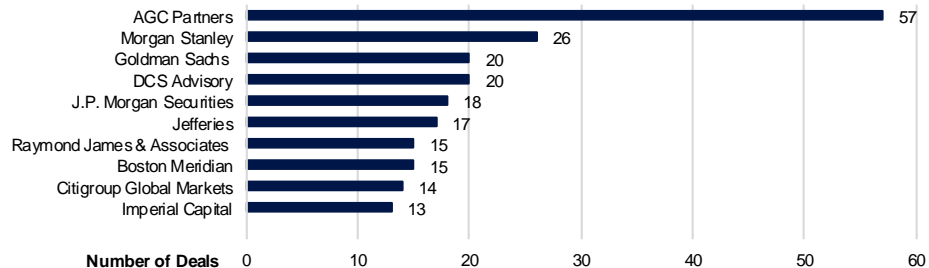
2016 - 2018



2013 - 2018



2008 - 2018



Source: 451 Research. M&A transactions only; sell-side advisory roles only.

## AGC's Strong Track Record with the Largest Acquirers

Buyer	AGC Transactions / Relationship
<b>Raytheon</b>	Sold Foreground Security to Raytheon
<b>ca technologies</b>	Sold Xceedium and Mobile System 7 to CA Technologies
<b>Akamai</b>	Sold Prolexic to Akamai
<b>CISCO</b>	Sold CXO and ExtendMedia to Cisco
<b>DELL</b>	Sold Boomi and SilverBack Technologies to Dell
<b>RSA</b> <b>EMC<sup>2</sup></b>	Sold Asankya, Configuresoft, Authentica and Bus-Tech to EMC; Advised RSA on Cyota and Passmark acquisitions
<b>Google</b>	Sold reCAPTCHA to Google
<b>FireEye</b>	Sold nPulse to FireEye Sold iSIGHT Partners to FireEye
<b>Twitter</b>	Sold Dasient to Twitter
<b>IBM</b>	Sold Bow Street and Ounce Labs to IBM
<b>NTT</b>	Sold Solutionary to NTT
<b>ORACLE</b>	Sold LogFire, Empirix and Secerno to Oracle
<b>intel</b>	Sold Neocleus to Intel
<b>McAfee</b>	Sold Internetsafety.com to McAfee
<b>Symantec</b>	Sold WholeSecurity and BindView to Symantec
<b>TREND MICRO</b>	Sold Third Brigade to Trend Micro
<b>vmware</b>	Sold TriCipher to VMware

# Security Market Experts – Thought Piece Leadership

*Utilizing in-depth domain expertise, AGC Partners regularly publishes sector “Thought Pieces” covering key trends in information security and other tech sectors*

## 2014 - 2019 Published Security Thought Pieces

- Industrial Analytics and ICS Cybersecurity
- Cyber Risk Insurance
- Security Orchestration & Automation
- Connected Car Security
- Next-Gen Security Endpoint Security
- Critical Infrastructure Cyber Security Market Overview

