



# Cybersecurity Quarterly Update

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TECHNOLOGY

Q3 2022



Houlihan Lokey

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# Global Cybersecurity Team

Houlihan Lokey's global Cybersecurity team combines an extensive network of relationships across the cybersecurity ecosystem and deep domain expertise with significant experience advising on M&A and capital-raising transactions.

## U.S. Cyber Team



**Keith Skirbe**  
Managing Director  
Co-Head of U.S. Cyber  
San Francisco



**Bobby Wolfe**  
Director  
Co-Head of U.S. Cyber  
Miami



**Rob Louv**  
Chairman of U.S.  
Technology  
San Francisco



**Cooper Byrne**  
Vice President  
New York



**Brian Ferreira**  
Associate  
New York

## Capital Markets



**Sean Fitzgerald**  
Managing Director  
New York



**Chris Hastings**  
Managing Director  
New York



**Chris Hebble**  
Managing Director  
Los Angeles

## Global Cyber Reach



**Mark Smith**  
Head of U.K. Cyber  
Manchester



**Malte Abrams**  
Co-Head of DACH Cyber  
Frankfurt



**Raiko Stelten**  
Co-Head of DACH Cyber  
Frankfurt



**Ido Zakai**  
Head of Tech, Israel  
Tel Aviv



**Raymond Fröjd**  
Head of Software, Nordics  
Stockholm



**Sara Napolitano**  
Head of Cyber, France  
Paris



**Hisashi Yoshimura**  
Head of Tech, Japan  
Tokyo



**Sameer Jindal**  
Head of Tech, India  
Mumbai

## Financial Sponsors

**19** Senior Bankers Covering  
**~1,400** Investors

## Transaction Advisory



**Stephen Lee**  
Tech and Cyber Due Diligence  
Chicago

# Our Tech M&A Team Is No. 1 Globally With Unparalleled Reach

## North America

- Atlanta
- Boston**
- Chicago
- Dallas
- Houston
- Los Angeles**
- Miami**
- Minneapolis
- New York**
- San Francisco**
- Washington, D.C.

## Europe and Middle East

- Amsterdam
- Dubai
- Frankfurt**
- London**
- Madrid
- Manchester**
- Milan**
- Munich
- Paris
- Stockholm**
- Tel Aviv**
- Zurich

## Asia-Pacific

- Beijing
- Fukuoka
- Gurugram
- Ho Chi Minh City
- Hong Kong SAR
- Mumbai**
- Nagoya
- Osaka
- Shanghai
- Singapore
- Sydney
- Tokyo**

**2021 Investment Banking Rankings – All Global Technology Transactions**

Rank	Advisor	Deals
1	Houlihan Lokey	124
2	Goldman Sachs	114
3	JP Morgan	91
4	Morgan Stanley	87
5	William Blair	67

Source: Refinitiv. Excludes accounting firms and brokers.

**13**  
LOCATIONS  
WORLDWIDE

**200+**  
TECHNOLOGY  
BANKERS

**40+**  
MANAGING  
DIRECTORS

**250+**  
TECHNOLOGY  
DEALS IN CY '21

**Local Technology team**

# Houlihan Lokey

Houlihan Lokey is a leading global investment bank with expertise in mergers and acquisitions, capital markets, financial restructuring, and financial and valuation advisory.

## Key Facts and Figures



**35**

LOCATIONS  
WORLDWIDE

**~2,000**

TOTAL FINANCIAL  
PROFESSIONALS<sup>(2)</sup>

**306**

MANAGING  
DIRECTORS<sup>(1)</sup>

**2,000+**

CLIENTS SERVED ANNUALLY

**\$6B**

MARKET  
CAPITALIZATION<sup>(2)</sup>

**\$2.3B**

REVENUE<sup>(3)</sup>

## Our Services



Corporate Finance

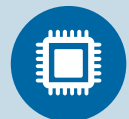


Financial  
Restructuring



Financial and  
Valuation Advisory

## Our Coverage Areas



Technology



Business Services



Consumer, Food,  
and Retail



Energy



Financial Services



Healthcare



Industrials



Real Estate, Lodging,  
and Leisure



Financial Sponsors  
Coverage



Equity Capital  
Markets



Debt Advisory

(1) As of September 30, 2022; excludes corporate MDs.

(2) As of November 2022.

(3) LTM ended September 30, 2022.

# Houlihan Lokey

Houlihan Lokey is the trusted advisor to more top decision-makers than any other independent global investment bank.



## Corporate Finance

- No. 1 Global M&A Advisor
- Leading Capital Markets Advisor Raising More Than \$100 Billion in Past Five Years

### 2021 Investment Banking Rankings All Global Transactions

Rank	Advisor	Deals
1	<b>Houlihan Lokey</b>	<b>549</b>
2	Goldman Sachs	511
3	JP Morgan	508

Source: Refinitiv.  
Excludes accounting firms and brokers.



## Financial Restructuring

- No. 1 Global Restructuring Advisor
- \$3.0 Trillion of Aggregate Transaction Value Completed

### 2021 Global Distressed Debt & Bankruptcy Restructuring Rankings

Rank	Advisor	Deals
1	<b>Houlihan Lokey</b>	<b>63</b>
2	Rothschild	38
3	Moelis	34

Source: Refinitiv.



## Financial and Valuation Advisory

- No. 1 Global M&A Fairness Opinion Advisor
- 1,000+ Annual Valuation Engagements

### 2002 to 2021 Global M&A Fairness Opinion Advisory Rankings

Rank	Advisor	Deals
1	<b>Houlihan Lokey</b>	<b>952</b>
2	JP Morgan	890
3	Duff & Phelps, A Kroll Business	882

Source: Refinitiv.  
Announced or completed transactions.



## Financial Sponsors Coverage

- No. 1 Global Advisor to Private Equity Firms
- 1,000+ Sponsors Covered Globally

### 2021 Most Active Global Investment Banks to Private Equity Firms

Rank	Advisor	Deals
1	<b>Houlihan Lokey</b>	<b>323</b>
2	Deloitte	218
3	William Blair	183

Source: PitchBook.

# How Houlihan Lokey Can Help

Our firm is extremely well equipped to help our clients navigate uncertain times. We respond quickly to challenging situations and are constantly helping clients to analyze, structure, negotiate, and execute the best possible solutions from both a strategic and a financial perspective.

## What We Offer

1  **Corporate Finance**

- Mergers and Acquisitions
- Capital Markets
- Private Funds Advisory
- Board Advisory Services

We are widely recognized as a leading M&A advisor to the mid-cap and have long-standing relationships with capital providers, including commercial banks and other senior credit providers, insurance funds, asset managers, and mezzanine fund investors. Few other investment banks maintain the breadth of relationships and capital markets intelligence that we do.

2  **Financial Restructuring**

- Company Advisory
- Special Situations
- Distressed M&A
- Liability Management
- Creditor Advisory

We have the largest restructuring practice of any global investment bank. Since 1988, we have advised on more than 1,500 restructuring transactions (with aggregate debt claims in excess of \$3.0 trillion). We served as an advisor in 12 of the largest 15 bankruptcies from 2000 to 2021.

3  **Financial and Valuation Advisory**

- Portfolio Valuation and Fund Advisory
- Transaction Opinions
- Corporate Valuation Advisory Services
- Transaction Advisory Services
- Real Estate Valuation and Advisory
- Dispute Resolution Consulting

Over nearly four decades, we have established ourselves as one of the largest financial and valuation advisory firms. Our transaction expertise and leadership in the field of valuation help inspire confidence in the financial executives, boards of directors, special committees, investors, and business owners we serve.

## Why We're Different



No. 1 for U.S. and Tech M&A



Significant Experience With Financing Markets



Senior-Level Commitment and Dedication



Deep, Industry-Specific Expertise



Superior Work Product/Technical Abilities



Creativity, Imagination, Tenacity, and Positivity



# Recent Case Study: Xalient



## Client Profile

Xalient is a U.K.-based provider of cybersecurity and network services and solutions to enterprise-level customers in the U.K., Europe, and North America.

Its offering encompasses highly sophisticated, cutting-edge SD-WAN and security technologies and consultancy, supported by a full managed service capability and proprietary software. The business routinely displaces large system integrators and telecoms peers with its agile approach, reputation for thought leadership, and strategic IT knowledge.

## Our Role

Houlihan Lokey acted as exclusive financial advisor to the shareholders of Xalient in securing private equity investment to help the founder and management team further accelerate international growth, expand the product and service portfolio, and scale its distinctive market proposition.

The transaction highlights Houlihan Lokey’s strong credentials in the cybersecurity services sector.

## Transaction Snapshot

In 2022, the shareholders launched a process to explore potential partners to assist in the next phase of Xalient’s growth.

Houlihan Lokey managed a narrow private equity process involving a full suite of vendor-led due diligence (financial, commercial, and technology), with Volpi selected as the preferred party in September 2022 and the transaction signing shortly thereafter.

# Recent Case Study: Thrive Operations



a portfolio company of



HoldCo PIK Notes

Acquisition Financing

Exclusive Placement Agent

## Client Profile

Thrive Operations, LLC (Thrive) is a leading provider of outsourced cybersecurity and managed IT services to mid-market clients. The company offers a comprehensive suite of next-generation solutions with a strong focus on cybersecurity, managed cloud, managed infrastructure, help desk, network services, and disaster recovery. The company has a strong presence in the financial services, insurance, healthcare life sciences, and education end markets.

Thrive has executed a focused M&A strategy predicated upon adding complementary capabilities and expanding geographic scale to grow its customer base. The company had successfully acquired and integrated seven businesses in 14 months and had two additional targets under LOI. Given that the prior acquisitions were funded through a combination of incremental senior debt and cash equity, the sponsor was interested in pursuing alternative debt financing solutions to help fund the near-term M&A targets.



## Our Role

Houlihan Lokey's Capital Markets Group served as exclusive placement agent for the financing, assisting the company in marketing, arranging, structuring, and negotiating the financing to support the acquisition.

## Transaction Snapshot

This financing highlights Houlihan Lokey's ability to deliver favorable outcomes for clients to support acquisition financing transactions. Houlihan Lokey fulfilled the client's key objectives, including (i) placing a fixed-rate, all-PIK piece of paper despite rising interest rates and unfavorable market conditions, (ii) maximizing the quantum of capital raised to support the company's aggressive acquisition strategy and reduce the required sponsor equity contribution, and (iii) running a limited and efficient diligence process to minimize management's involvement while they executed on the M&A strategy.

# Deep Cyber Experience Across the Ecosystem

 <p>accelerate your business</p> <p>has received investment from</p>  <p>Sellside Advisor</p>	 <p>a portfolio company of</p>  <p>HoldCo PIK Notes Acquisition Financing</p> <p>Exclusive Placement Agent</p>	 <p>has been acquired by</p>  <p>Sellside Advisor</p>	 <p>has received a growth equity investment of \$70,000,000 from</p>  <p>Financial Advisor</p>	 <p>has made a strategic investment in</p>  <p>Buyside Advisor</p>	 <p>has received a strategic growth investment from</p>  <p>Sellside Advisor*</p>	 <p>has been acquired by</p>  <p>Sellside Advisor*</p>
 <p>has invested in</p>  <p>Financing Advisor*</p>	 <p>has received an investment from</p>  <p>Sellside Advisor*</p>	 <p>has sold a majority stake to</p>  <p>Sellside Advisor*</p>	 <p>has received an equity investment from</p>  <p>Financial Advisor</p>	 <p>has entered into a partnership with</p>  <p>Sellside Advisor*</p>	 <p>has invested in</p>  <p>Buyside Advisor*</p>	 <p>has sold a minority stake to</p>  <p>Sellside Advisor*</p>
 <p>structured equity investment led by</p>  <p>Financing Advisor*</p>	 <p>has been acquired by</p>  <p>Sellside Advisor</p>	 <p>has sold a majority stake in</p>  <p>to</p>  <p>Sellside Advisor*</p>	 <p>has acquired</p>  <p>Buyside Advisor</p>	<p>Acquisition Financing</p>  <p>has acquired</p>  <p>Financing Advisor*</p>	 <p>has sold substantially all its assets, pursuant to Section 363 of the U.S. Bankruptcy Code, to</p>  <p>Company Advisor</p>	 <p>has been acquired by</p>  <p>Sellside Advisor*</p>
 <p>has been acquired by</p>  <p>Sellside Advisor*</p>	 <p>has been acquired by</p>  <p>MADISON DEARBORN PARTNERS, LLC</p> <p>Sellside Advisor</p>	 <p>a portfolio company of</p>  <p>Financial Advisor</p>	 <p>has been acquired by</p>  <p>Sellside Advisor*</p>	 <p>has been acquired by</p>  <p>Sellside Advisor*</p>	 <p>has been recapitalized in partnership with</p>  <p>Sellside Advisor</p>	 <p>has been acquired by</p>  <p>Sellside Advisor*</p>

Selected transactions were executed by Houlihan Lokey professionals while at other firms acquired by Houlihan Lokey or by professionals from a Houlihan Lokey joint venture company. Tombstones included herein represent transactions closed from 2010 forward.

# 2022 Global Tech Conference | Cybersecurity Debrief

Held in New York City on October 12–13

**700+**

*Industry Leaders and Capital Providers Attended*

**~100**

*Participating Companies*

**Targeted 1x1 Meetings**

## Participating Cybersecurity Companies



Arete is the leading provider of incident response and managed services, allowing companies to take back control of their systems and restore normal operations

CEO: Joe Mann

Headquarters: U.S.  
www.areteir.com



Bridewell is an industry-leading provider of end-to-end cybersecurity services, including managed security services (MDR) and cyber consultancy

CEOs: Anthony Young, Scott Nicholson

Headquarters: U.K.  
www.bridewellconsulting.com



Index Engines is the industry-leading provider of an analytics engine designed to detect data corruption due to ransomware

CEO: Tim Williams

Headquarters: U.S.  
www.indexengines.com



NowSecure is the leading provider of automated mobile app security and privacy testing software, including professional mobile penetration testing

CEO: Alan Snyder

Headquarters: U.S.  
www.nowsecure.com



Racktop is the leading and innovative provider of Cyberstorage, a primary unstructured data solution that actively defends against ransomware and insider threats

CEO: Eric Bednash

Headquarters: U.S.  
www.racktopsystems.com



Ubisecure is a leading identity platform for customer, citizen, workforce, and organization identity and access management

CEO: Simon Wood

Headquarters: U.K.  
www.ubisecure.com

## Select Conference Attendees



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# Cybersecurity Dashboard

Momentum in the security market is expected to continue, driven by the persistent threat environment.

## Q3 '22 Public Market Environment

High-Growth	Medium-Growth	Low-Growth
<b>14.0x</b> Forward TEV/Revenue	<b>5.7x</b> Forward TEV/Revenue	<b>5.0x</b> Forward TEV/Revenue
<b>(2.1%)</b> Q3 '22 Index Performance	<b>(11.8%)</b> Q3 '22 Index Performance	<b>(8.1%)</b> Q3 '22 Index Performance

- In line with the broader market, cybersecurity companies experienced a drop in public performance

## M&A Environment

Q3 2022

**62 Deals**

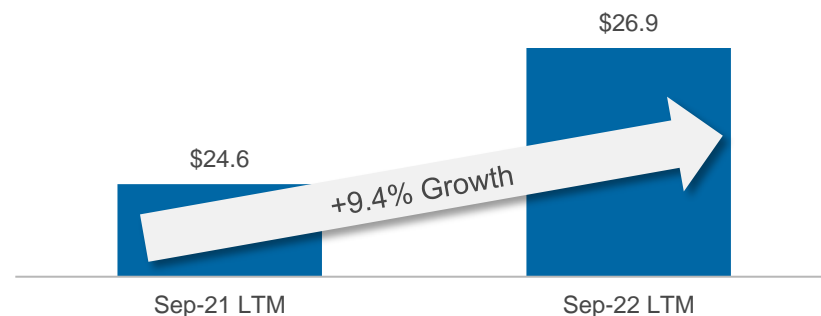
**\$8.9B in Disclosed Transaction Value**

### Notable Q3 Transactions

Acquirer	Target
newfold digital	MarkMonitor™
opentext™	MICRO FOCUS
THOMABRAVO	PingIdentity.
THALES	onewelcome

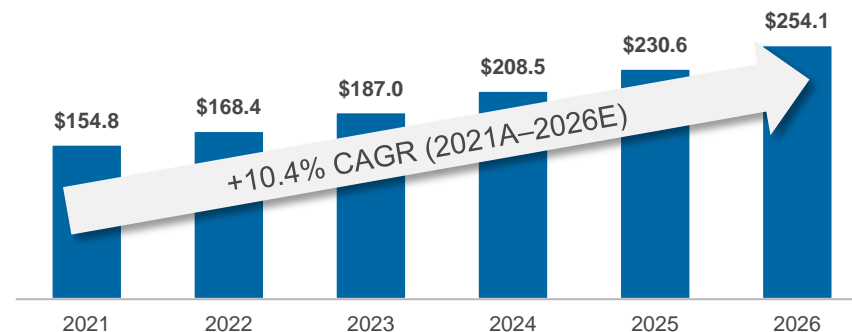
- Public listings are less attractive exit options in volatile public markets, with sponsor-to-sponsor exits and corporate acquisitions likely to be the primary exit paths

## Private Company Funding (\$B)



- Appetite for later-stage and mature cybersecurity deals remains stable

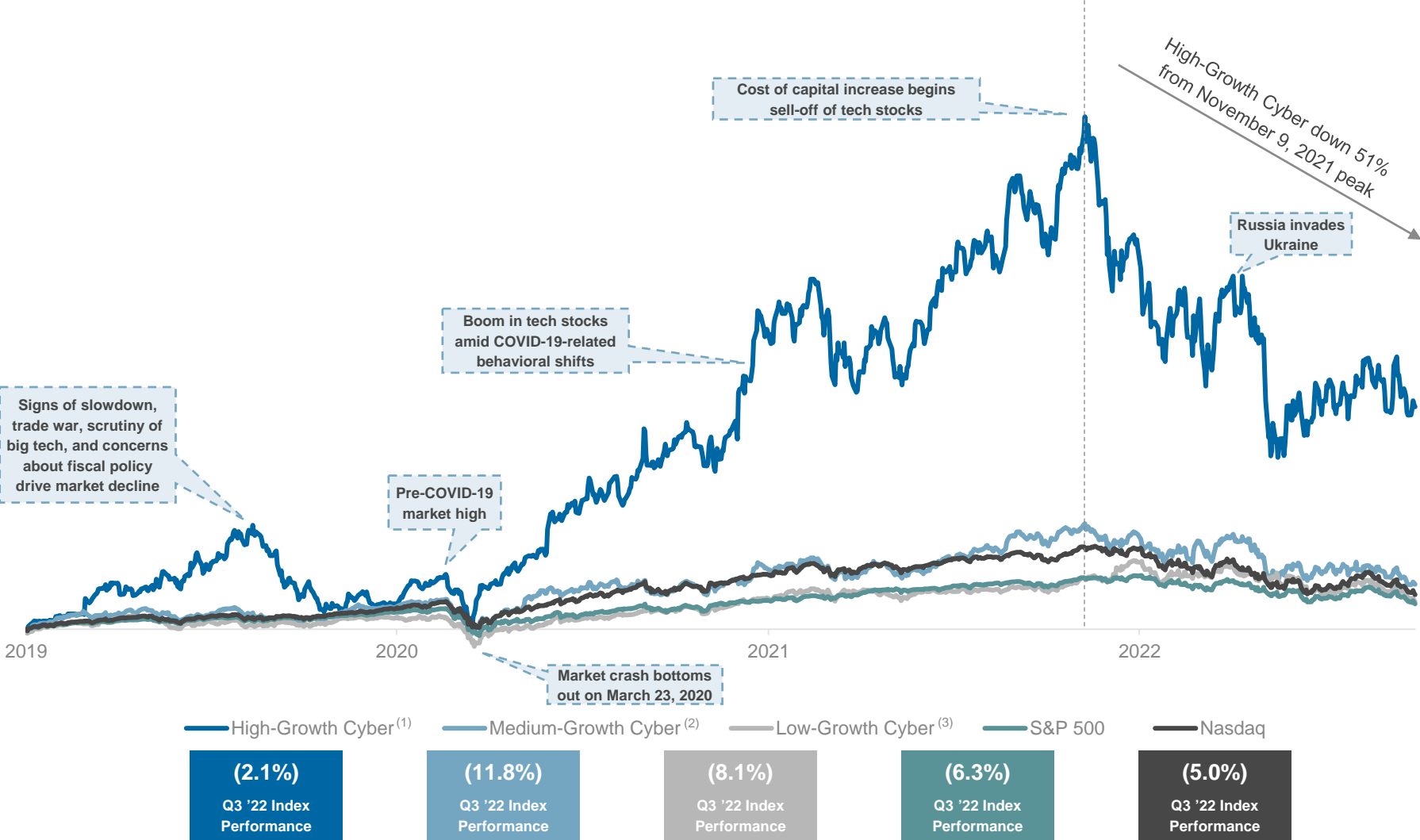
## General Market Environment (\$B)



- Cybersecurity momentum is expected to push onwards and upwards as secular trends remain intact

# Despite Correction, Cyber Remains Above Pre-COVID-19 Levels...

## Relative Index Performance Change



Source: S&P Capital IQ as of September 30, 2022.

(1) High-Growth Cyber includes S, CRWD, ZS.  
 (2) Medium-Growth Cyber includes PANW, FTNT, SPLK, OKTA, FFIV, CYBR, QLYS, TENB, KNBE, RPD, DARK, FORG, SUMO, RSKD, TLS, ABST, WITH.  
 (3) Low-Growth Cyber includes AVGO, CHKP, JNPR, 4704, OTEX, BB, SWI, FSECURE, OSPN.

# ...And Cybersecurity Remains Top of Mind

## Data Breaches Are Persistent

**abcNEWS**  
“Hackers threatening to release LAUSD data if demands not met by Monday”  
September 30, 2022

**The Guardian**  
“The biggest hack in history: Australians scramble to change passports and driver licenses after Optus telco data debacle”  
September 30, 2022

**DARKReading**  
“Reshaping the threat landscape: deepfake cyberattacks are here”  
September 30, 2022

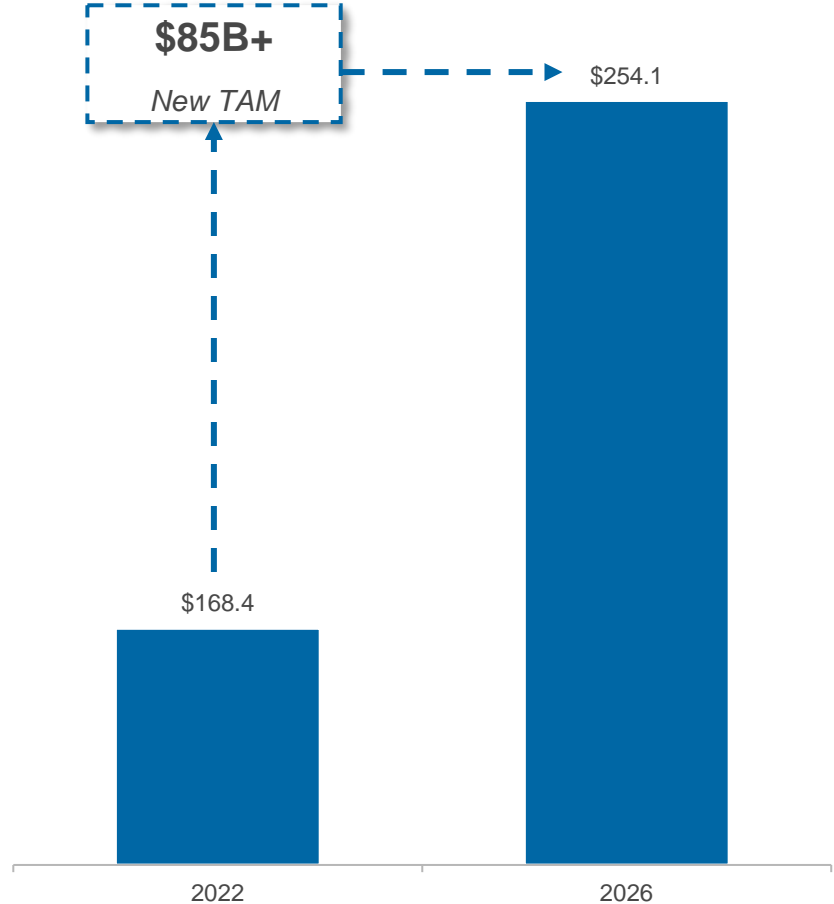
**The Suffolk Times.**  
“Suffolk County struggles to recover from BlackCat ransomware attack”  
September 16, 2022

**abcNEWS**  
“Newly unsealed indictment accuses three individuals of ransomware attacks against hundreds of U.S. victims”  
September 14, 2022

## TAM Expected to Grow in Response

Despite macro conditions and the overall market pullback, security spend is expected to continue

(\$B)



Source: Gartner Information Security and Risk Management Forecast 2022.



# Pressing Cyber Concerns for CISOs in Q3 2022

As the cyber threat environment continues to proliferate and cyber attackers increase their sophistication, cybersecurity solutions continue to be top of mind for CISOs in 2022.



## Expanding Attack “Surface”

- With 60% of knowledge workers currently working remotely, **the usage of the public cloud and digital infrastructure has exploded, exposing new and challenging attack “surfaces”** or points of security weakness
- This leaves organizations more vulnerable to attack—security leaders must look beyond traditional approaches to MDR in order to manage this wider set of risks



## Identity System Defense

- Misuse of credentials is now a primary method that attackers use to access systems and achieve their goals
- Due to the criticality of IDTR systems, the **identity management market will see consolidation** in the longer term



## Digital Supply Chain Risk

- By 2025, **45% of organizations worldwide will have experienced attacks on their software supply chains**—security leaders must prioritize digital supply chain risk management to mitigate the likelihood and effects of these attacks



## Distributed Decisions

- Executive leaders need a fast and agile cybersecurity function to support digital business priorities
- To support this, **digital businesses have moved away from a centralized CIO role and are building the Office of the CIO to enable distributed cyber judgement**



## Moving Beyond Awareness

- Human error continues to play a prominent role in most data breaches, showing that the **existing approaches to security awareness training are ineffective**
- Organizations must move beyond outdated compliance-based awareness programs and begin investing in holistic behavior and culture change programs to provoke more secure ways of thinking

# Macro Factors Impacting the Cybersecurity Market

## Severity of Cyber Threats



- Global awareness of Russian cyber attacks and the potential **spillover effects from large-scale cyber war (e.g., the 2017 NotPetya cyber attack) are bolstering cybersecurity investment** and focus
- **Cyberattacks continue to remain persistent**, particularly amid the invasion of Ukraine, with extremely dangerous attacks from both an espionage perspective as well as in terms of the physical disruption of assets<sup>(1)</sup>
  - This form of precision striking will continue to be aimed at Ukraine's critical infrastructure and energy and financial sectors<sup>(1)</sup>
- The increase in attack severity **highlights the need for heightened cybersecurity measures** such as multifactor authentication, zero trust, and incident response plans
- In the wake of amplified, evolving cyber threats, **the Biden administration is expanding its role in protecting the U.S.'s digital infrastructure and will be releasing a "strict and demanding" national cyber strategy in Q4 2022<sup>(2)</sup>**

## Bear Market



- High inflation and rising interest rates are negatively impacting fund performance and portfolio valuations across all industries
- However, **cybersecurity is considered a top investment theme** across funds and will remain stable amid adjusting valuations as the threat environment continues to be persistent and security is a priority
  - Thoma Bravo announced in August that it would take authentication company Ping Identity private for an estimated \$2.8 billion<sup>(3)</sup>
- **Consolidation/roll-ups continue to be a popular play as the cyber space remains fragmented<sup>(3)</sup>**
  - In September, HelpSystems announced its acquisition of Outflank to add to its vulnerability management and simulations solutions; HelpSystems, backed by TA, has completed 14 add-ons in the past five years
- Public listings are less attractive exit options in volatile public markets, **with sponsor-to-sponsor exits and corporate acquisitions likely to be the primary exit paths for 2022**

## Security Staff Shortage



- About 1 million people work in cybersecurity in the U.S., but there are nearly 700,000 unfilled positions; **more than 90% of these openings are in the private sector<sup>(4)</sup>**
- In the past 12 months, cybersecurity job openings in the U.S. **have increased 29%, more than double the rate of growth** between 2018 and 2019<sup>(5)</sup>
- Several factors are driving the cybersecurity staffing shortage, including a lack of qualified professionals, increasing threats, and new challenges presented by more automation and telework
- Companies typically **spend a minimum of 90 days** to find the right candidate and have to pay up given the limited supply<sup>(6)</sup>
- The staffing shortage is becoming a more recognizable problem as businesses realize the criticality of protection in the face of the growing number of hackers

(1) DarkReading: Russian Cyber Attacks.

(2) CyberScoop: Preview of National Cyber Strategy.

(3) PitchBook: Q3 PE Breakdown.

(4) CyberSeek Data.

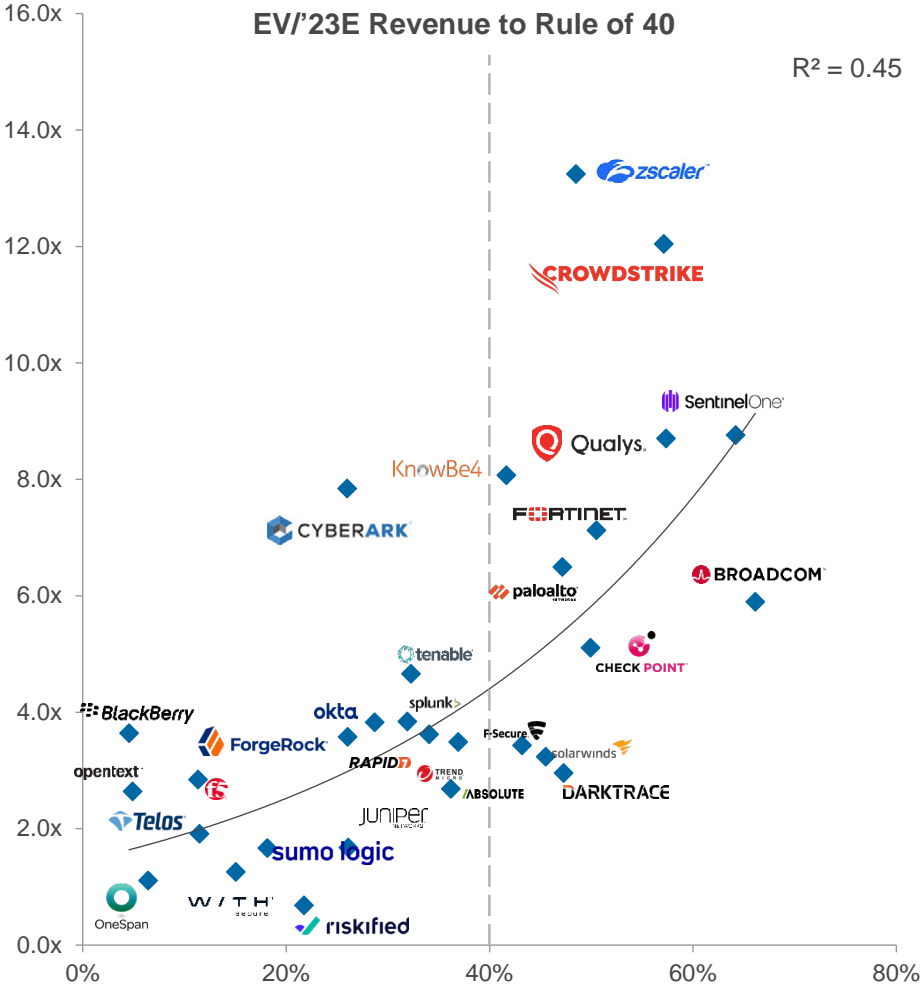
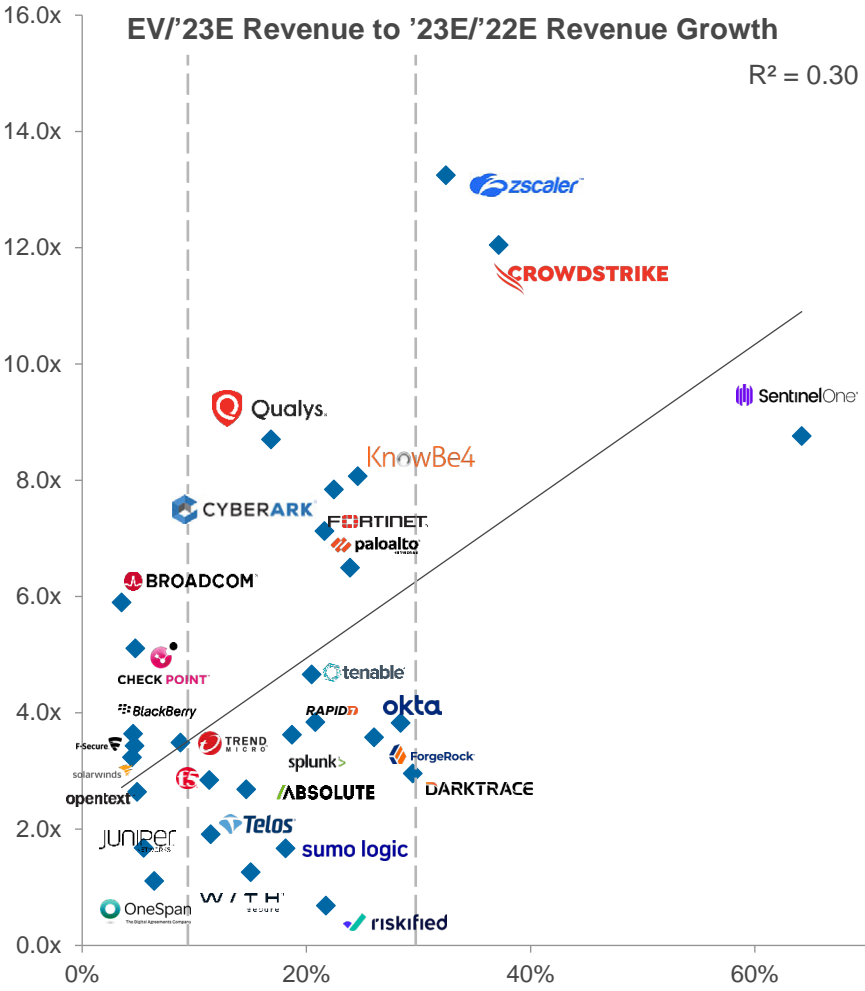
(5) Gartner TalentNeuron.

(6) Think Consulting Cyber Staffing Crunch.

# Public Investors Remain Focused on Growth and Profitability

Low Revenue Growth Rate	Medium Revenue Growth Rate	High Revenue Growth Rate
Mean: 5%   3.4x	Mean: 20%   4.2x	Mean: 45%   11.4x
Median: 5%   3.4x	Median: 21%   3.6x	Median: 37%   12.0x

Below "Rule of 40"	Above "Rule of 40"
Mean: 15%   3.5x	Mean: 22%   6.4x
Median: 15%   4.5x	Median: 23%   8.4x

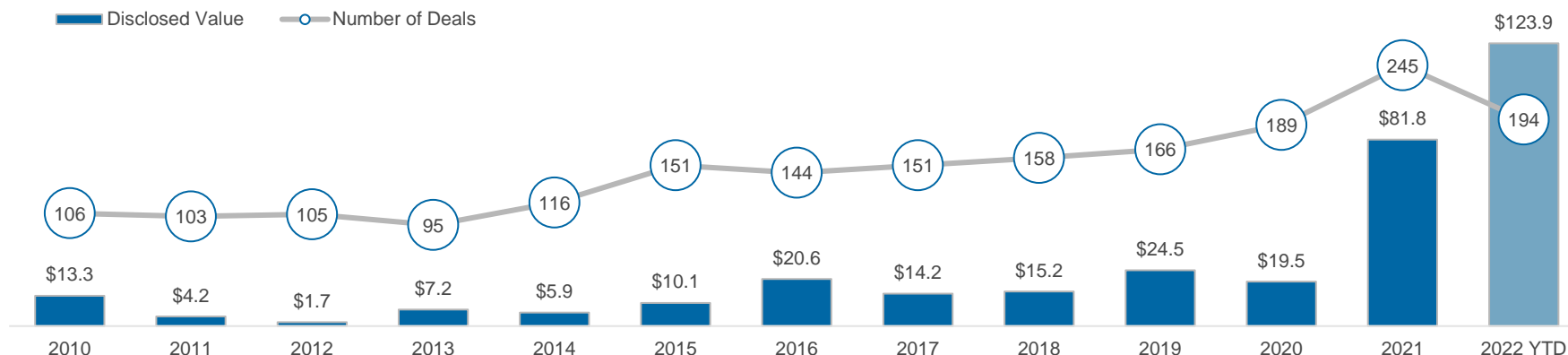


Sources: Trading multiples are based on share price, other market data, and broker consensus future earnings estimates from S&P Capital IQ as of September 30, 2022. All financials calendarized to a December year-end.

# M&A Continues to Be an Exciting Exit for Cyber Companies...

## Cyber M&A Summary (2010–Q3 2022)

(\$B)



## Select Recent Cyber Transactions (Q3 2022)

Ann. Date	Acquirer	Target	Subsector	EV (\$M)	EV/Rev
09/12/22	newfold digital	MarkMonitor™	Application Security	\$303	3.8x <sup>(1)</sup>
09/01/22	helpsystems	OUTFLANK	Security Testing	NA	NA
08/25/22	opentext™	MICRO FOCUS	Application Security	5,656	2.1x
08/03/22	THOMABRAVO	PingIdentity.	Identity and Access Management	2,796	9.1x
07/12/22	THALES	onewelcome	Identity and Access Management	102	NA

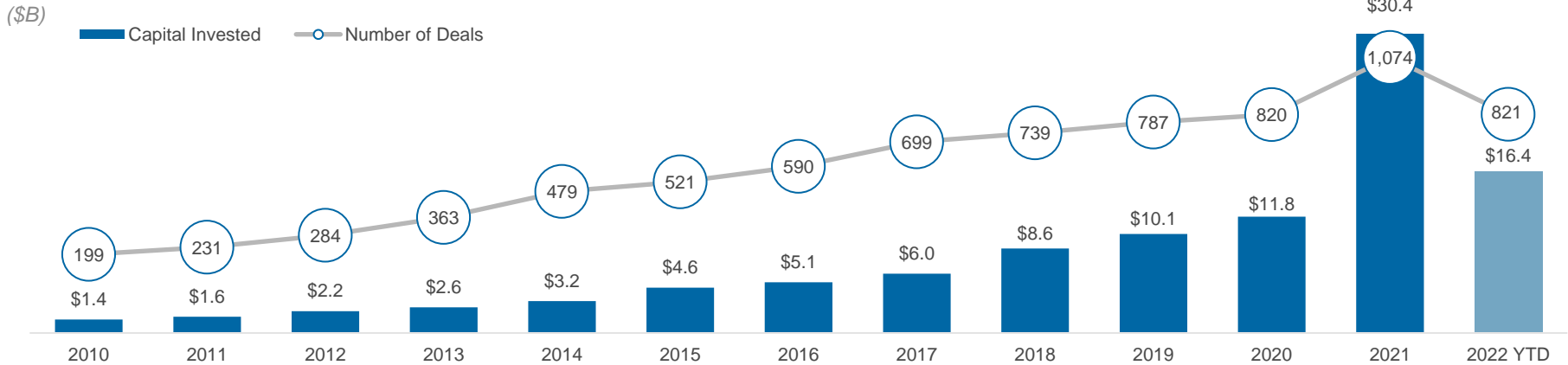
Sources: PitchBook, 451 Research as of September 30, 2022.

Note: NA indicates not publicly available.

(1) Based on 2022 estimated revenue.

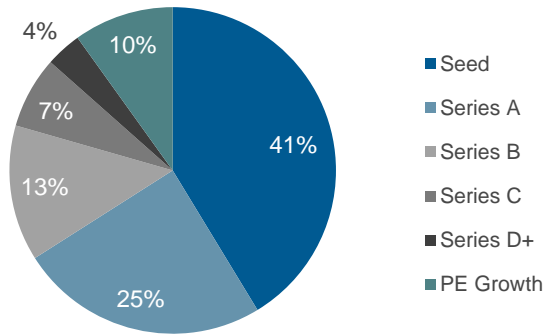
# ...And Cyber Continues to Draw Investment

## Private Funding Summary (2010–Q3 2022)



## Private Funding by Round (2022 YTD)

Percentage of Deals by Round



(\$ in millions)

	Seed/Angel	Series A	Series B	Series C	Series D+	PE Growth
<b>Median Post-Money Valuation</b>	\$14	\$48	\$140	\$500	\$2,600	\$70

## Select Minority Transactions (Q3 2022)

Ann. Date	Lead Investor	Target	Subsector	Amt. (\$M)	Val. (\$M)
09/21/22	VECTOR CAPITAL	Malwarebytes	Endpoint Security	\$100	NA
09/02/22	ICONIQ	DRATA	Data Security	128	1,020
08/31/22	FIRSTMARK	zilla SECURITY	Identity and Access Management	14	41
08/18/22	SYN VENTURES	SYNSABER	Endpoint Security	13	55
07/09/22	INSIGHT PARTNERS	DNSFilter	Network Security	9	NA
07/01/22	HMC Harbert Management Corporation HARBERT GROWTH PARTNERS	THREATX	Application Security	30	120

Sources: PitchBook, 451 Research as of September 30, 2022.

Note: Val. reflects estimated post-money valuation. N/D indicated that investors were not disclosed.

# Sponsor-Backed Strategics Penetrating the Cyber Market

Select Cyber Investments:

<p><b>INSIGHT PARTNERS</b></p> <p>ADAPTIVE SHIELD aqua</p> <p>ARMIS cycode</p> <p>detectify DNSFilter</p> <p>frontegg Island</p> <p>identiq INKY</p> <p>FIREMON Kaseya</p> <p>KEEPER KEYFACTOR</p> <p>noname OneTrust</p> <p>Recorded Future SaaSAlerts</p> <p>transmit Prevalent</p> <p>VEEAM</p>	<p><b>THOMABRAVO</b></p> <p>CONNECTWISE Delinea</p> <p>EXOSTAR ForgeRock<sup>(1)</sup></p> <p>illumio INTEL471</p> <p>IMPERVA imprivata</p> <p>LogRhythm proofpoint</p> <p>PingIdentity SailPoint</p> <p>SOPHOS Venafi</p>	<p><b>VISTA EQUITY PARTNERS</b></p> <p>BetterCloud</p> <p>CRITICALSTART</p> <p>Infoblox</p> <p>KnowBe4<sup>(2)</sup></p> <p>MENLO SECURITY</p> <p>securonix</p> <p>UnboundID</p>	<p><b>KKR</b></p> <p>Barracuda</p> <p>DARKTRACE</p> <p>NETSPI</p> <p>OPTIV</p> <p>RELIAQUEST</p> <p>semperis</p> <p>TA ASSOCIATES</p> <p>digicert helpsystems</p> <p>HORNETSECURITY ivanti</p> <p>MATESO netwrix</p> <p>OUTFLANK PDI</p> <p>RADIANT LOGIC riskconnect</p> <p>VERACODE</p>	<p><b>Audax Group</b></p> <p>FLASHPOINT</p> <p>mobileum TEAM CYMRU</p> <p>Battery</p> <p>bitwarden CONTRAST SECURITY</p> <p>DomainTools GUARDSQUARE</p> <p>Normalyze Plixer</p> <p>CVC</p> <p>Acronis Omada</p> <p>SKYBOX SECURITY SheerID</p> <p>STG</p> <p>ARCHER NETWITNESS</p> <p>OUTSEER REDSEAL</p> <p>SecurID Skyhigh security Trellix</p>
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Source: Sponsor websites.

(1) Thoma Bravo agreed to acquire ForgeRock for \$2.3 billion on October 11, 2022.

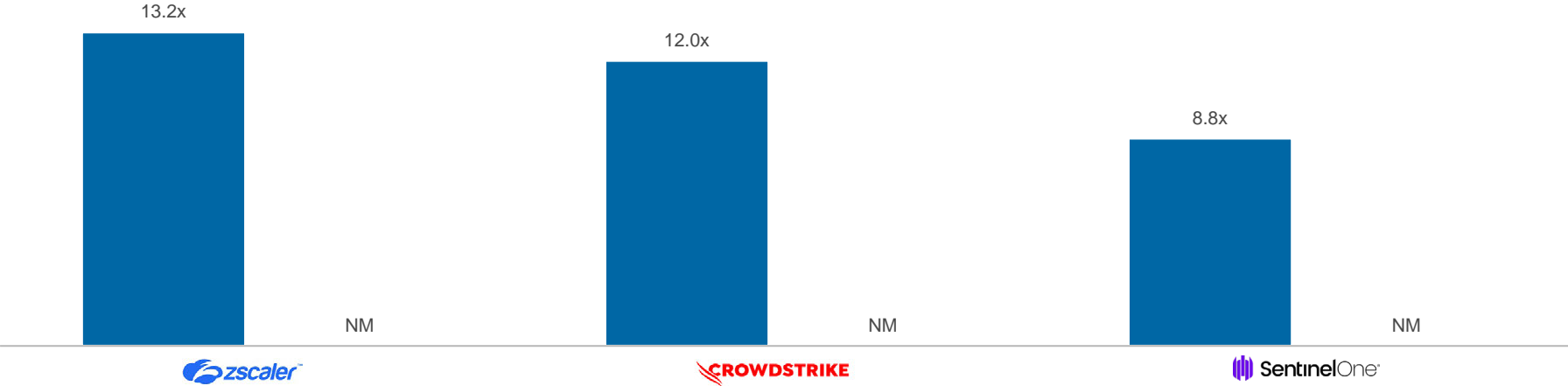
(2) Vista Equity Partners agreed to acquire KnowBe4 for \$4.6 billion on October 12, 2022.

# Public Company Benchmarking: EV/CY 2023E Revenue and EBITDA

■ EV/2023E Revenue    ■ EV/2023E EBITDA

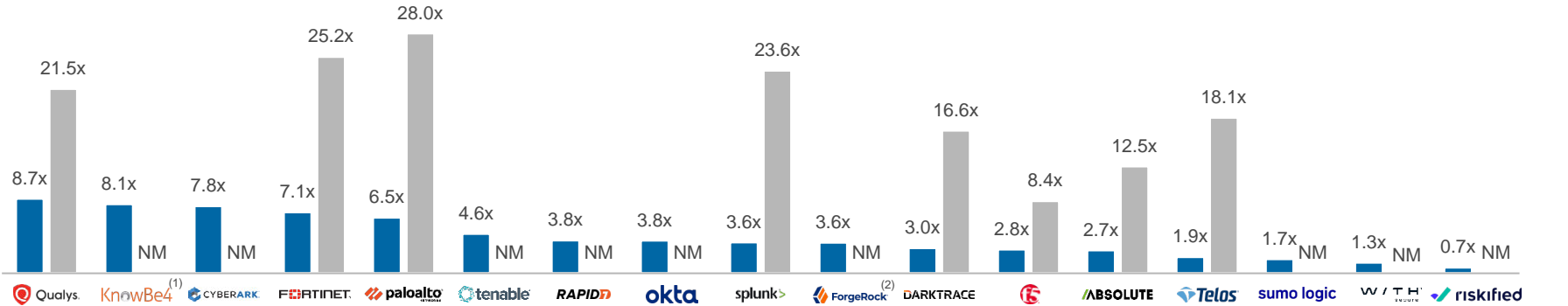
## High-Growth Cyber (30%+ Revenue Growth)

Median EV/2023E Revenue: 12.0x



## Medium-Growth Cyber (>10% and <30% Revenue Growth)

Median EV/2023E Revenue: 3.6x  
Median EV/2023E EBITDA: 19.8x



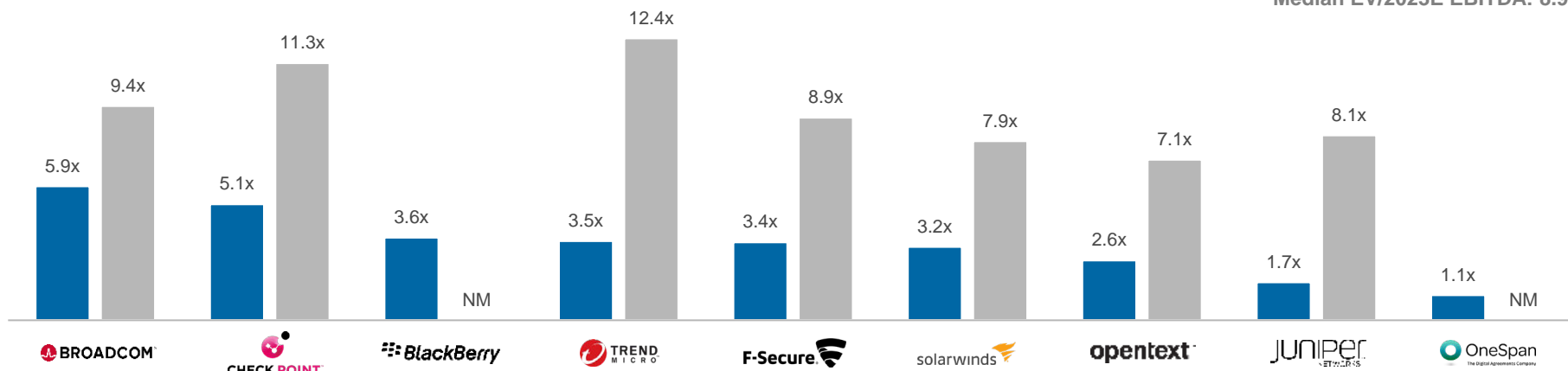
Sources: Trading multiples are based on share price, other market data, and broker consensus future earnings estimates from S&P Capital IQ as of September 30, 2022. All financials calendarized to a December year-end; NM indicates not meaningful or EV/EBITDA >30x or <0x. Sorted by EV/2023E revenue.  
 (1) Acquisition by Vista Equity Partners announced October 12, 2022.  
 (2) Acquisition by Thoma Bravo announced October 11, 2022.

# Public Company Benchmarking: EV/CY 2023E Revenue and EBITDA (cont.)

■ EV/2023E Revenue ■ EV/2023E EBITDA

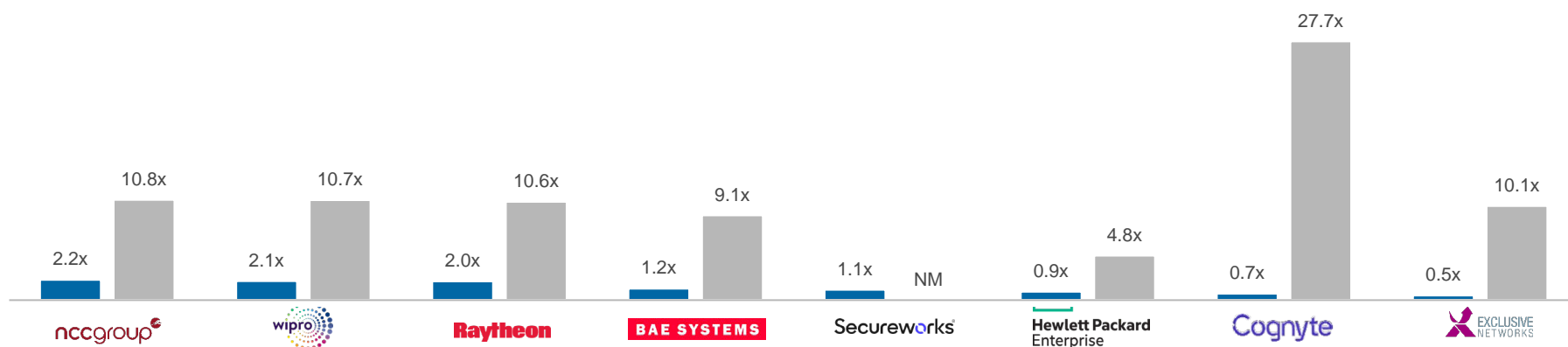
## Low-Growth Cyber (<10% Revenue Growth)

Median EV/2023E Revenue: 3.4x  
Median EV/2023E EBITDA: 8.9x



## Security Services

Median EV/2023E Revenue: 1.2x  
Median EV/2023E EBITDA: 10.6x

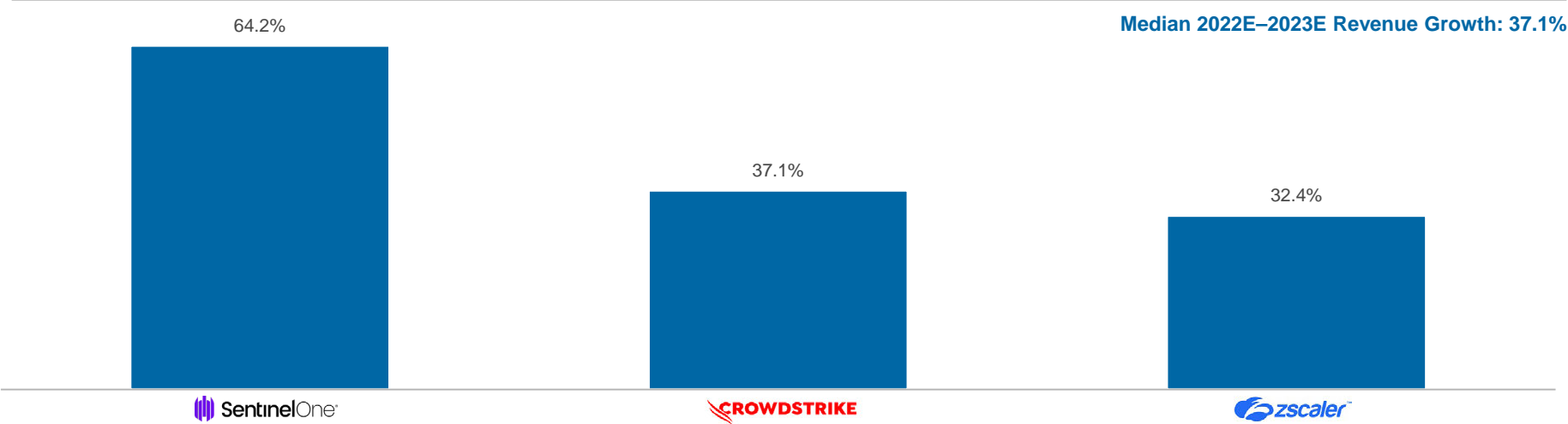


Sources: Trading multiples are based on share price, other market data, and broker consensus future earnings estimates from S&P Capital IQ as of September 30, 2022. All financials calendarized to a December year-end; NM indicates not meaningful or EV/EBITDA >30x or <0x. Sorted by EV/2023E revenue.

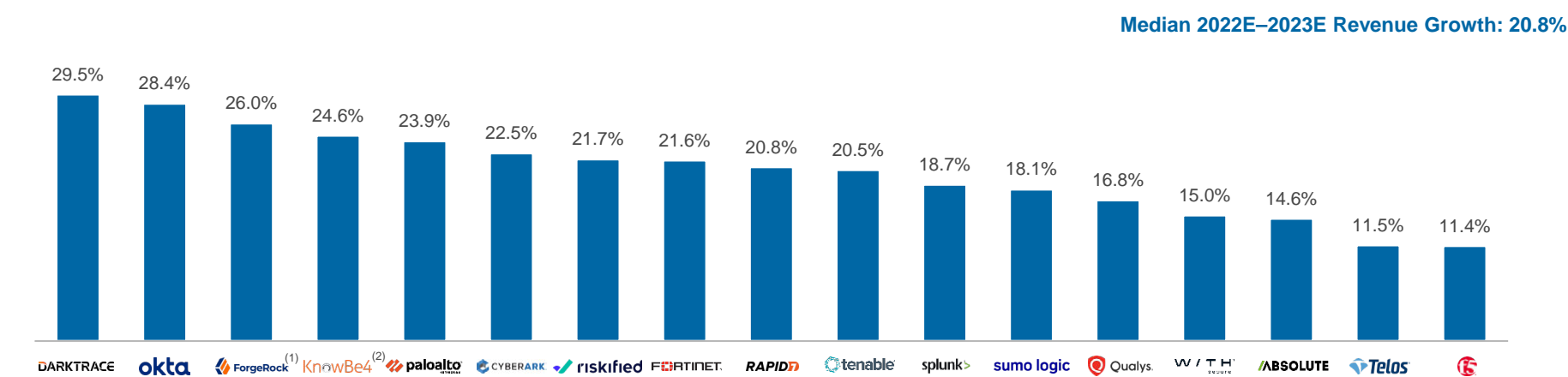


# Public Company Benchmarking: CY 2022E–2023E Revenue Growth

## High-Growth Cyber (30%+ Revenue Growth)



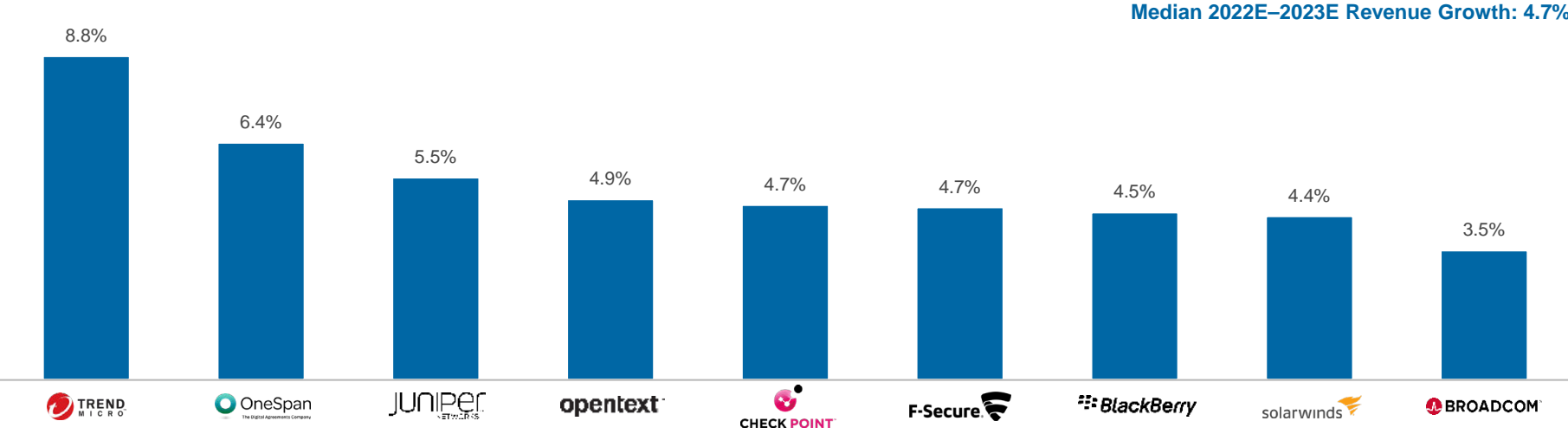
## Medium-Growth Cyber (>10% and <30% Revenue Growth)



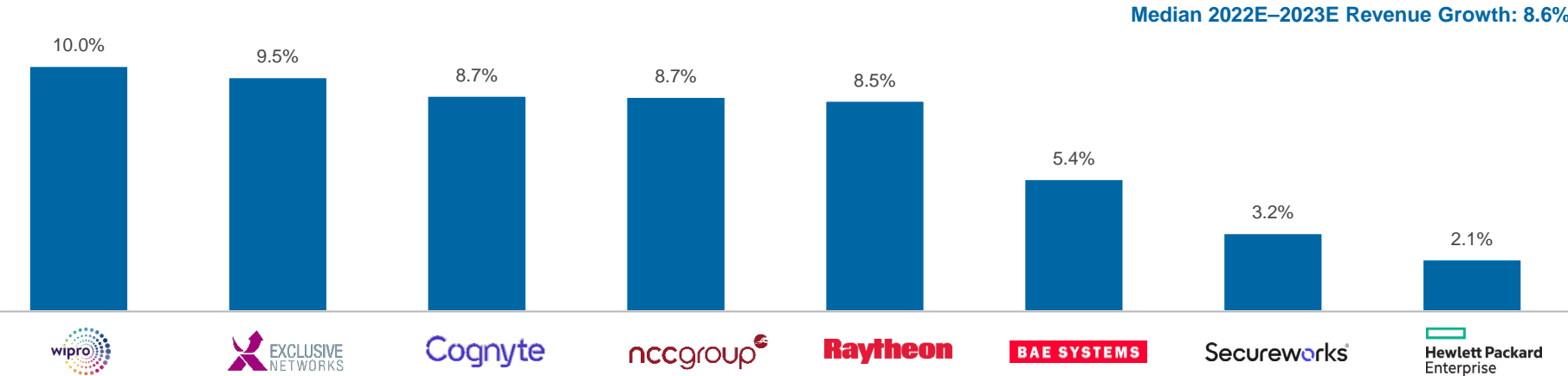
Sources: Trading multiples are based on share price, other market data, and broker consensus future earnings estimates from S&P Capital IQ as of September 30, 2022. All financials calendarized to a December year-end. Sorted by 2022E–2023E revenue growth.  
 (1) Acquisition by Thoma Bravo announced October 11, 2022.  
 (2) Acquisition by Vista Equity Partners announced October 12, 2022.

# Public Company Benchmarking: CY 2022E–2023E Revenue Growth (cont.)

## Low-Growth Cyber (<10% Revenue Growth)



## Security Services






Sources: Trading multiples are based on share price, other market data, and broker consensus future earnings estimates from S&P Capital IQ as of September 30, 2022. All financials calendarized to a December year-end. Sorted by 2022E–2023E revenue growth.

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# High-Growth Cyber Trading Metrics

(\$ in millions)



Company	Stock Price	% of 52-wk High	Equity Mkt Cap	Enterprise Value	EV/Revenue			EV/EBITDA		
					CY 2021A	CY 2022E	CY 2023E	CY 2021A	CY 2022E	CY 2023E
 CROWDSTRIKE	\$164.81	55.2%	\$38,481	\$36,916	25.4x	16.5x	12.0x	NM	NM	NM
 zscaler	164.37	43.7%	23,514	22,828	26.6x	17.5x	13.2x	NM	NM	NM
 SentinelOne	25.56	32.5%	7,180	5,990	29.2x	14.4x	8.8x	NM	NM	NM

<b>Top Quartile</b>	\$30,997	\$29,872	27.9x	17.0x	12.6x	NM	NM	NM
<b>Mean</b>	23,058	21,912	27.1	16.1	11.4	NM	NM	NM
<b>Median</b>	23,514	22,828	26.6	16.5	12.0	NM	NM	NM
<b>1st Quartile</b>	15,347	14,409	26.0	15.5	10.4	NM	NM	NM

Sources: Trading multiples are based on share price, other market data, and broker consensus future earnings estimates from S&P Capital IQ as of September 30, 2022. All financials calendarized to a December year-end; NM indicates not meaningful, not disclosed, or EV/EBITDA >30x or <0x. Sorted by market capitalization.

# Medium-Growth Cyber Trading Metrics

(\$ in millions)

Company	Stock Price	% of 52-wk High	Equity Mkt Cap	Enterprise Value	EV/Revenue			EV/EBITDA		
					CY 2021A	CY 2022E	CY 2023E	CY 2021A	CY 2022E	CY 2023E
 paloalto	\$163.79	76.7%	\$49,008	\$49,389	10.2x	8.0x	6.5x	NM	NM	28.0x
 FORTINET	49.13	66.1%	38,753	37,975	11.4x	8.7x	7.1x	NM	NM	25.2x
 splunk	75.20	42.6%	12,236	14,568	5.4x	4.3x	3.6x	NM	NM	23.6x
 okta	56.87	20.9%	9,035	8,946	6.9x	4.9x	3.8x	NM	NM	NM
 59	144.73	58.1%	8,664	8,358	3.1x	3.1x	2.8x	14.8x	9.7x	8.4x
 CYBERARK	149.94	74.3%	6,075	5,732	11.4x	9.6x	7.8x	NM	NM	NM
 Qualys	139.39	85.9%	5,348	4,971	12.1x	10.2x	8.7x	NM	23.2x	21.5x
 tenable	34.80	54.7%	3,912	3,759	6.9x	5.6x	4.6x	NM	NM	NM
 KnowBe4 <sup>(1)</sup>	20.81	70.5%	3,656	3,355	13.6x	10.1x	8.1x	NM	NM	NM
 RAPID7	42.90	29.6%	2,518	3,194	6.0x	4.6x	3.8x	NM	NM	NM
 DARKTRACE	3.29	29.9%	2,157	1,829	5.3x	3.8x	3.0x	NM	21.5x	16.6x
 ForgeRock <sup>(2)</sup>	14.53	38.0%	1,235	939	5.3x	4.5x	3.6x	NM	NM	NM
 sumo logic	7.50	42.1%	889	575	2.4x	2.0x	1.7x	NM	NM	NM

Sources: Trading multiples are based on share price, other market data, and broker consensus future earnings estimates from S&P Capital IQ as of September 30, 2022.

All financials calendarized to a December year-end; NM indicates not meaningful, not disclosed, or EV/EBITDA >30x or <0x.





Sorted by market capitalization.

(1) Acquisition by Vista Equity Partners announced October 12, 2022.

(2) Acquisition by Thoma Bravo announced October 11, 2022.

# Medium-Growth Cyber Trading Metrics (cont.)

(\$ in millions)









Company	Stock Price	% of 52-wk High	Equity Mkt Cap	Enterprise Value	EV/Revenue			EV/EBITDA		
					CY 2021A	CY 2022E	CY 2023E	CY 2021A	CY 2022E	CY 2023E
 riskified	3.94	16.8%	659	213	0.9x	0.8x	0.7x	NM	NM	NM
 Telos	8.89	30.7%	601	493	2.0x	2.1x	1.9x	NM	26.5x	18.1x
 ABSOLUTE	8.80	57.0%	449	655	4.1x	3.1x	2.7x	17.0x	15.0x	12.5x
 W / T H <sup>®</sup> secure	1.57	28.4%	274	193	0.7x	1.4x	1.3x	7.8x	NM	NM

<b>Top Quartile</b>	\$8,664	\$8,358	10.2x	8.0x	6.5x	15.9x	23.2x	24.0x
<b>Mean</b>	8,557	8,538	6.3	5.1	4.2	13.2	19.2	19.2
<b>Median</b>	3,656	3,355	5.4	4.5	3.6	14.8	21.5	19.8
<b>1st Quartile</b>	889	655	3.1	3.1	2.7	11.3	15.0	15.6

Sources: Trading multiples are based on share price, other market data, and broker consensus future earnings estimates from S&P Capital IQ as of September 30, 2022. All financials calendarized to a December year-end; NM indicates not meaningful, not disclosed, or EV/EBITDA >30x or <0x. Sorted by market capitalization.

# Low-Growth Cyber Trading Metrics

(\$ in millions)









Company	Stock Price	% of 52-wk High	Equity Mkt Cap	Enterprise Value	EV/Revenue			EV/EBITDA		
					CY 2021A	CY 2022E	CY 2023E	CY 2021A	CY 2022E	CY 2023E
 <b>BROADCOM</b>	\$444.01	65.5%	\$179,825	\$209,343	7.3x	6.1x	5.9x	13.3x	NM	9.4x
 <b>CHECK POINT</b>	112.02	74.9%	14,171	12,402	5.7x	5.4x	5.1x	13.3x	11.8x	11.3x
 <b>JUNIPER</b>	26.12	68.5%	8,427	9,224	1.9x	1.8x	1.7x	13.6x	8.8x	8.1x
 <b>TREND MICRO</b>	54.05	85.5%	7,561	5,814	3.5x	3.8x	3.5x	10.4x	13.4x	12.4x
<b>opentext</b>	26.44	50.2%	7,037	9,811	2.9x	2.8x	2.6x	9.7x	7.8x	7.1x
 <b>BlackBerry</b>	4.74	42.2%	2,738	2,623	3.5x	3.8x	3.6x	NM	NM	NM
 <b>solarwinds</b>	7.75	37.7%	1,247	2,435	3.4x	3.4x	3.2x	25.8x	8.7x	7.9x
 <b>F-Secure</b>	2.41	77.5%	420	392	1.5x	3.6x	3.4x	16.9x	9.4x	8.9x
 <b>OneSpan</b> <small>The Digital Agreements Company</small>	8.61	39.9%	341	254	1.2x	1.2x	1.1x	NM	NM	NM

<b>Top Quartile</b>	\$8,427	\$9,811	3.5x	3.8x	3.6x	15.2x	11.2x	10.4x
<b>Mean</b>	24,641	28,033	3.4	3.5	3.4	14.7	10.0	9.3
<b>Median</b>	7,037	5,814	3.4	3.6	3.4	13.3	9.1	8.9
<b>1st Quartile</b>	1,247	2,435	1.9	2.8	2.6	11.9	8.7	8.0

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# Security Services Trading Metrics

(\$ in millions)

Company	Stock Price	% of 52-wk High	Equity Mkt Cap	Enterprise Value	EV/Revenue			EV/EBITDA		
					CY 2021A	CY 2022E	CY 2023E	CY 2021A	CY 2022E	CY 2023E
 <b>Raytheon</b>	\$81.86	77.2%	\$121,923	\$150,083	2.3x	2.2x	2.0x	13.2x	12.3x	10.6x
 <b>BAE SYSTEMS</b>	8.80	92.2%	27,826	33,175	1.3x	1.3x	1.2x	11.0x	9.7x	9.1x
 <b>wipro</b>	4.85	53.3%	26,528	24,643	2.5x	2.3x	2.1x	11.6x	12.1x	10.7x
 <b>Hewlett Packard Enterprise</b>	11.98	67.5%	15,468	26,591	1.0x	0.9x	0.9x	5.5x	5.0x	4.8x
 <b>EXCLUSIVE NETWORKS</b>	15.98	78.3%	1,468	1,749	0.6x	0.6x	0.5x	13.3x	11.3x	10.1x
 <b>nccgroup</b>	2.43	82.0%	755	865	2.3x	2.4x	2.2x	16.1x	12.2x	10.8x
 <b>Secureworks</b>	8.05	33.9%	684	536	1.0x	1.2x	1.1x	NM	NM	NM
 <b>Cognyte</b>	4.04	16.7%	290	258	0.5x	0.8x	0.7x	9.2x	NM	27.7x




<b>Top Quartile</b>	\$26,853	\$28,237	2.3x	2.2x	2.0x	13.3x	12.1x	10.7x
<b>Mean</b>	24,368	29,738	1.4	1.5	1.4	11.4	10.4	12.0
<b>Median</b>	8,468	13,196	1.1	1.2	1.2	11.6	11.7	10.6
<b>1st Quartile</b>	737	783	0.9	0.9	0.9	10.1	10.1	9.6

Sources: Trading multiples are based on share price, other market data, and broker consensus future earnings estimates from S&P Capital IQ as of September 30, 2022. All financials calendarized to a December year-end; NM indicates not meaningful, not disclosed, or EV/EBITDA >30x or <0x. Sorted by market capitalization.



# High-Growth Cyber Operating Metrics

(\$ in millions)

Company	Stock Price	Equity Mkt Cap	Enterprise Value	Revenue			EBITDA			Revenue Growth			EBITDA Margin		
				CY 2021A	CY 2022E	CY 2023E	CY 2021A	CY 2022E	CY 2023E	2020-2021A	2021-2022E	2022-2023E	CY 2021A	CY 2022E	CY 2023E
 <b>CROWDSTRIKE</b>	\$164.81	\$38,481	\$36,916	\$1,452	\$2,235	\$3,065	(\$80)	\$412	\$612	66.0%	53.9%	37.1%	NM	18.4%	20.0%
 <b>zscaler</b>	164.37	23,514	22,828	860	1,301	1,723	(242)	189	276	60.4%	51.4%	32.4%	NM	14.5%	16.0%
 <b>SentinelOne</b>	25.56	7,180	5,990	205	416	684	(260)	(217)	(128)	120.1%	103.3%	64.2%	NM	NM	NM

<b>Top Quartile</b>	\$30,997	\$29,872	\$1,156	\$1,768	\$2,394	(\$161)	\$300	\$444	93.0%	78.6%	50.7%	NM	17.4%	19.0%
<b>Mean</b>	23,058	21,912	839	1,317	1,824	(194)	128	253	82.1%	69.5%	44.6%	NM	16.5%	18.0%
<b>Median</b>	23,514	22,828	860	1,301	1,723	(242)	189	276	66.0%	53.9%	37.1%	NM	16.5%	18.0%
<b>1st Quartile</b>	15,347	14,409	532	859	1,203	(251)	(14)	74	63.2%	52.7%	34.8%	NM	15.5%	17.0%

Sources: Trading multiples are based on share price, other market data, and broker consensus future earnings estimates from S&P Capital IQ as of September 30, 2022. All financials calendarized to a December year-end; NM indicates not meaningful, not disclosed, or EV/EBITDA >30x or <0x. Sorted by market capitalization.

# Medium-Growth Cyber Operating Metrics

(\$ in millions)

Company	Stock Price	Equity Mkt Cap	Enterprise Value	Revenue			EBITDA			Revenue Growth			EBITDA Margin		
				CY 2021A	CY 2022E	CY 2023E	CY 2021A	CY 2022E	CY 2023E	2020-2021A	2021-2022E	2022-2023E	CY 2021A	CY 2022E	CY 2023E
 paloalto networks	\$163.79	\$49,008	\$49,389	\$4,858	\$6,136	\$7,603	(\$67)	\$1,450	\$1,767	28.4%	26.3%	23.9%	NM	23.6%	23.2%
 FORTINET	49.13	38,753	37,975	3,342	4,382	5,329	730	1,223	1,506	28.8%	31.1%	21.6%	21.8%	27.9%	28.3%
 splunk	75.20	12,236	14,568	2,674	3,388	4,022	(992)	367	617	19.9%	26.7%	18.7%	NM	10.8%	15.3%
 okta	56.87	9,035	8,946	1,300	1,820	2,337	(608)	(78)	7	55.6%	40.0%	28.4%	NM	NM	0.3%
 CYBERARK	144.73	8,664	8,358	2,666	2,698	3,005	566	859	993	10.8%	1.2%	11.4%	21.2%	31.8%	33.0%
 CYBERARK	149.94	6,075	5,732	503	597	731	(64)	(8)	26	8.3%	18.7%	22.5%	NM	NM	3.5%
 Qualys	139.39	5,348	4,971	411	489	571	151	214	231	13.3%	18.9%	16.8%	36.7%	43.8%	40.5%
 tenable	34.80	3,912	3,759	541	676	815	(19)	64	96	22.9%	25.0%	20.5%	NM	9.4%	11.8%
 KnowBe4 <sup>(1)</sup>	20.81	3,656	3,355	246	334	416	(1)	55	71	40.8%	35.5%	24.6%	NM	16.6%	17.1%
 RAPID7	42.90	2,518	3,194	535	688	831	(79)	51	92	30.1%	28.5%	20.8%	NM	7.4%	11.1%
 DARKTRACE	3.29	2,157	1,829	347	478	619	10	85	110	48.2%	37.5%	29.5%	3.0%	17.8%	17.8%
 ForgeRock <sup>(2)</sup>	14.53	1,235	939	177	208	262	(27)	(34)	(5)	38.6%	17.7%	26.0%	NM	NM	NM
 sumo logic	7.50	889	575	242	292	345	(113)	(80)	(81)	19.5%	20.5%	18.1%	NM	NM	NM
 riskified	3.94	659	213	229	256	311	(53)	(56)	(47)	35.0%	11.6%	21.7%	NM	NM	NM
 Telos	8.89	601	493	242	231	257	(38)	19	27	34.7%	NM	11.5%	NM	8.0%	10.5%

Sources: Trading multiples are based on share price, other market data, and broker consensus future earnings estimates from S&P Capital IQ as of September 30, 2022.

All financials calendarized to a December year-end; NM indicates not meaningful, not disclosed, or EV/EBITDA >30x or <0x.



Sorted by market capitalization.

(1) Acquisition by Vista Equity Partners announced October 12, 2022.

(2) Acquisition by Thoma Bravo announced October 11, 2022.

# Medium-Growth Cyber Operating Metrics (cont.)

(\$ in millions)










Company	Stock Price	Equity Mkt Cap	Enterprise Value	Revenue			EBITDA			Revenue Growth			EBITDA Margin		
				CY 2021A	CY 2022E	CY 2023E	CY 2021A	CY 2022E	CY 2023E	2020-2021A	2021-2022E	2022-2023E	CY 2021A	CY 2022E	CY 2023E
 ABSOLUTE	8.80	449	655	162	213	244	38	44	53	44.9%	31.7%	14.6%	23.8%	20.5%	21.5%
 W / T H secure	1.57	274	193	269	133	153	25	(26)	(9)	NM	NM	15.0%	9.2%	NM	NM

<b>Top Quartile</b>	\$8,664	\$8,358	\$1,300	\$1,820	\$2,337	\$25	\$214	\$231	39.2%	31.4%	23.9%	23.3%	25.8%	23.2%
<b>Mean</b>	8,557	8,538	1,103	1,354	1,638	(32)	244	321	30.0%	24.7%	20.3%	19.3%	19.8%	18.0%
<b>Median</b>	3,656	3,355	411	489	619	(27)	51	71	29.5%	26.3%	20.8%	21.5%	17.8%	17.1%
<b>1st Quartile</b>	889	655	242	256	311	(67)	(26)	7	19.8%	18.8%	16.8%	12.2%	10.1%	11.1%

Sources: Trading multiples are based on share price, other market data, and broker consensus future earnings estimates from S&P Capital IQ as of September 30, 2022. All financials calendarized to a December year-end; NM indicates not meaningful, not disclosed, or EV/EBITDA >30x or <0x. Sorted by market capitalization.

# Low-Growth Cyber Operating Metrics

(\$ in millions)

Company	Stock Price	Equity Mkt Cap	Enterprise Value	Revenue			EBITDA			Revenue Growth			EBITDA Margin		
				CY 2021A	CY 2022E	CY 2023E	CY 2021A	CY 2022E	CY 2023E	2020-2021A	2021-2022E	2022-2023E	CY 2021A	CY 2022E	CY 2023E
 <b>BROADCOM</b>	\$444.01	\$179,825	\$209,343	\$28,501	\$34,285	\$35,487	\$15,685	\$21,585	\$22,218	15.5%	20.3%	3.5%	55.0%	63.0%	62.6%
 <b>CHECK POINT</b>	112.02	14,171	12,402	2,167	2,317	2,427	930	1,049	1,097	4.9%	6.9%	4.7%	42.9%	45.3%	45.2%
 <b>JUNIPER NETWORKS</b>	26.12	8,427	9,224	4,735	5,213	5,498	677	1,045	1,133	6.5%	10.1%	5.5%	14.3%	20.0%	20.6%
 <b>TREND MICRO</b>	54.05	7,561	5,814	1,653	1,532	1,666	561	432	469	NM	NM	8.8%	33.9%	28.2%	28.1%
 <b>opentext</b>	26.44	7,037	9,811	3,436	3,541	3,714	1,010	1,252	1,388	4.1%	3.1%	4.9%	29.4%	35.4%	37.4%
 <b>BlackBerry</b>	4.74	2,738	2,623	743	689	720	(30)	(46)	(69)	NM	NM	4.5%	NM	NM	NM
 <b>solarwinds</b>	7.75	1,247	2,435	719	721	752	94	280	309	0.3%	0.3%	4.4%	13.1%	38.9%	41.1%
 <b>F-Secure</b>	2.41	420	392	269	109	114	23	41	44	NM	NM	4.7%	8.6%	38.0%	38.5%
 <b>OneSpan</b> <small>The Digital Agreements Company</small>	8.61	341	254	214	215	229	(19)	(5)	(3)	NM	0.4%	6.4%	NM	NM	NM

<b>Top Quartile</b>	\$8,427	\$9,811	\$3,436	\$3,541	\$3,714	\$930	\$1,049	\$1,133	6.5%	9.3%	5.5%	38.4%	42.1%	43.1%
<b>Mean</b>	24,641	28,033	4,715	5,402	5,623	2,103	2,848	2,954	6.3%	6.8%	5.3%	28.2%	38.4%	39.1%
<b>Median</b>	7,037	5,814	1,653	1,532	1,666	561	432	469	4.9%	5.0%	4.7%	29.4%	38.0%	38.5%
<b>1st Quartile</b>	1,247	2,435	719	689	720	23	41	44	4.1%	1.1%	4.5%	13.7%	31.8%	32.8%









Sources: Trading multiples are based on share price, other market data, and broker consensus future earnings estimates from S&P Capital IQ as of September 30, 2022.

All financials calendarized to a December year-end; NM indicates not meaningful, not disclosed, or EV/EBITDA >30x or <0x.

Sorted by market capitalization.

# Security Services Operating Metrics

(\$ in millions)

Company	Stock Price	Equity Mkt Cap	Enterprise Value	Revenue			EBITDA			Revenue Growth			EBITDA Margin		
				CY 2021A	CY 2022E	CY 2023E	CY 2021A	CY 2022E	CY 2023E	2020-2021A	2021-2022E	2022-2023E	CY 2021A	CY 2022E	CY 2023E
 <b>Raytheon</b>	\$81.86	\$121,923	\$150,083	\$64,388	\$67,737	\$73,524	\$11,374	\$12,203	\$14,094	13.8%	5.2%	8.5%	17.7%	18.0%	19.2%
 <b>BAE SYSTEMS</b>	8.80	27,826	33,175	26,433	25,250	26,606	3,011	3,407	3,649	0.4%	NM	5.4%	11.4%	13.5%	13.7%
 <b>wipro</b>	4.85	26,528	24,643	9,996	10,857	11,937	2,119	2,035	2,297	18.9%	8.6%	10.0%	21.2%	18.7%	19.2%
 <b>Hewlett Packard Enterprise</b>	11.98	15,468	26,591	27,912	28,148	28,744	4,837	5,271	5,564	3.9%	0.8%	2.1%	17.3%	18.7%	19.4%
 <b>EXCLUSIVE NETWORKS</b>	15.98	1,468	1,749	2,824	3,106	3,401	131	155	173	22.1%	10.0%	9.5%	4.6%	5.0%	5.1%
 <b>nccgroup</b>	2.43	755	865	377	362	394	54	71	80	6.1%	NM	8.7%	14.2%	19.6%	20.4%
 <b>Secureworks</b>	8.05	684	536	535	461	476	(12)	(64)	(78)	NM	NM	3.2%	NM	NM	NM
 <b>Cognyte</b>	4.04	290	258	474	331	360	28	(49)	9	6.9%	NM	8.7%	5.9%	NM	2.6%

<b>Top Quartile</b>	\$26,853	\$28,237	\$26,802	\$25,974	\$27,141	\$3,468	\$3,873	\$4,128	16.3%	9.0%	8.9%	17.5%	18.7%	19.3%
<b>Mean</b>	24,368	29,738	16,617	17,032	18,180	2,693	2,879	3,224	10.3%	6.2%	7.0%	13.2%	15.6%	14.2%
<b>Median</b>	8,468	13,196	6,410	6,982	7,669	1,125	1,095	1,235	6.9%	6.9%	8.6%	14.2%	18.4%	19.2%
<b>1st Quartile</b>	737	783	520	437	455	47	41	63	5.0%	4.1%	4.8%	8.7%	14.6%	9.4%

Sources: Trading multiples are based on share price, other market data, and broker consensus future earnings estimates from S&P Capital IQ as of September 30, 2022. All financials calendarized to a December year-end; NM indicates not meaningful, not disclosed, or EV/EBITDA >30x or <0x. Sorted by market capitalization.

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