

Q3 2024 Cyber Security Update

We continue to believe that the long-term investment thesis of cybersecurity is intact. Cybersecurity may seem like it has reached a saturation threshold, where market participants are broadly aware of the ongoing risks of new, more sophisticated cyberattacks, and the corresponding need for attack targets - corporations, governments, and individuals alike - to spend adequately to secure themselves. Yet, with a total addressable market (per McKinsey) of ~\$1.5-2T in terms of global cybersecurity spending, we are seeing the industry's penetration rate at best around 10% based on ~\$160-170B of global spend in 2023. This presents a massive runway for continued growth for the industry, which has already been recording very impressive and consistent growth rates of around 10% per year for several years running.

The Nasdaq ISE Cybersecurity Select™ Index (HXRXL™) has generated YTD returns of 12.9%, as of September 30th 2024; in the third quarter, it was up 5.6%. Demand for cybersecurity software has continued to remain strong despite pressures from tighter IT budgets. Companies that make up the index have shown margin improvements, which have boosted overall returns of the index's constituents. They have also focused on "balanced growth" versus "growth at any cost" in the recent quarter. There have been pockets of strength among high priority areas of cybersecurity spend including Endpoint, Identity and Network Security (ex firewall).

Cybersecurity companies continue to focus on platform consolidation as end users struggle with the number of security vendors and tools that they need to manage. With this transition towards platformization comes a degree of uncertainty, which has weighed moderately on investor sentiment. These concerns are likely to be allayed when uncertainty abates, and especially when emerging drivers of cybersecurity such as generative AI are properly factored in. Interest in generative AI among customers has been on an uptrend, with indications that it will become a long-term tailwind for the sector.

For the rest of the year, federal spending is expected to be elevated relative to other areas of IT spend, affording an opportunity for cybersecurity vendors to grow their business. The White House's Focus on Code Security is expected to be another tailwind for cybersecurity, with the Office of National Cyber Director (ONCD) calling on developers to reduce the risk of cyberattacks by using programming languages that do not have memory safety vulnerabilities¹. This is likely to be seen as a tailwind for the sector going forward.

In the first half of this year, investor sentiment towards artificial intelligence remained elevated relative to other areas of technology. As sentiment towards AI has shown recent signs of cooling, other areas of the market have begun to look more attractive, including cybersecurity; HXRXL finished the quarter with its best rally all year, up 14.1% off of the interim lows on August 5. At the same time, as its use proliferates, AI itself is seen as a potential major new growth driver for cybersecurity.

Today's threat landscape encompasses more attack surfaces than before. Additionally, generative AI has armored attackers with a new tool, making attacks harder to detect and defend against. With the changes

¹ <https://www.whitehouse.gov/oncd/briefing-room/2024/02/26/press-release-technical-report/>

in the threat environment, there have been concurrent changes in the demand environment. Demand for SASE and Secure Service Edge (SSE), for example, has grown, especially among enterprise customers. In the near-term, companies' cybersecurity practices are likely to be tested by the rise of running AI models on individual devices, like an iPhone or Windows laptop. With sensitive data residing on individual devices, it is likely to spur demand for cybersecurity solutions tailored for AI-powered devices.

There has also been a noticeable uptick in government attention to the issue through new regulation from agencies like the SEC around cybersecurity-related disclosures by publicly traded firms, providing an added tailwind over the coming decade-plus.

All these factors contribute to Nasdaq's assessment of cybersecurity as a unique area of thematic tech that is much more of a defensive play for investors, given the stability of its growth trajectory, the demand push by governments, the unstoppable rise in cyberthreats, and the consistent ranking by corporate CISOs of Security Software as the highest-priority area of spending in their budgets, and the one that is least likely to get cut under any circumstances. This defensive nature for the sector is borne out both by its measurably lower volatility compared to broad benchmarks like the Nasdaq-100® and other thematic/tech areas like Cloud & Semis, as well as by how well the cyber M&A market has held up over the last 2 years, with nearly 1 out of every 5 of the ISE Cyber Security UCITS™ Index's constituents getting acquired at average premiums of 40%.

As highlighted in our [comprehensive investment case on cybersecurity](#), the industry continues to see steady improvements in its profit margins and quicker paths to profitability for newer entrants post-IPO. In 2023, approximately 70%-90% of the index (by weight) saw free cash flow, gross margins, net margins, and operating margins grow. More than 50% of the index weight saw revenues grow and close to 45% of the index weight saw earnings grow. For 2024, the constituents of the index are expected to grow sales by 16%, EBITDA by 66% and earnings by 14%, on an index-weighted basis as per Bloomberg estimates. The vast majority of our index's constituents have now reached profitability, remain cash flow positive, and are positioned for continued improvement in growth and margins.²

Cyber Security News/Insight

- Revenue in the cybersecurity market is expected to grow to \$185.7 billion in 2024, with an annual growth rate of 11.0%.¹ The security services segment is expected to contribute \$97.3 billion to the total revenues with the rest driven from cyber solutions.² During the period 2024-2029, revenue is expected to show an annual growth rate of 7.9%, resulting in a total market size of \$271.9 billion by 2029.³ This growth is expected to be led by the cyber solution segment with an estimated CAGR of 10.9% and a resultant market size of \$148.3 billion⁴ by 2029, followed by the security services segment at a lower rate of 4.9% and a resultant market size of \$123.6 billion by 2029.⁵ Region wise, the largest market for cybersecurity, the U.S. is expected to have a market size of \$81.4 billion in 2024 and is expected to grow at a CAGR of 7.4% during the period 2024-2029 to a market size of \$116.2 billion by 2029.⁶
- According to Statista, cybercrimes are expected to cost about \$9.2 trillion in 2024 with average cost per data breach at \$4.9 million, with the health care industry having the highest cost per breach (about \$10 million).^{7,8} The average cost per breach in the US stood at \$9.4 million, close to twice the global average.⁹

² https://indexes.nasdaqomx.com/docs/HXRXL_Research.pdf

Furthermore, the cost of cybercrime worldwide is expected to grow by 69.4% from 2024 to \$15.6 trillion in 2029.¹⁰

- In September 2024, the U.S. Cybersecurity and Infrastructure Security Agency (CISA) published the Federal Civilian Executive Branch (FCEB) Operational Cybersecurity Alignment (FOCAL) plan. It uses this plan to guide coordinated support and services to agencies, drive progress on a targeted set of priorities, and align collective operational defense capabilities.¹¹

Notable Ransomware Attacks and Breaches in Q3 2024

- On September 16, the Port of Seattle, which operates the Seattle-Tacoma International Airport, confirmed that the August 24 cyberattack was a result of ransomware which caused days-long outages. On September 13, the Port announced that most systems were restored a week after the attack. Some data was encrypted during the attack and the Rhysida ransomware gang was responsible for the incident. The Port believes the exfiltrated data could eventually be leaked online, as no ransom was paid.¹²
- On August 22, Halliburton (NYSE: HAL) confirmed that it was a victim of a cyberattack that affected its Houston, Texas offices as well as some global connectivity networks. The oil major also confirmed that data was stolen in the attack. The RansomHub ransomware group is believed to be behind the attack.^{13,14,15}
- On August 20, U.S.-based semiconductor supplier Microchip Technology (NASDAQ: MCHP) disclosed a cyberattack which forced the company to shut down its systems, impacting operations at multiple manufacturing facilities and affecting several orders. MCHP revealed the attackers had stolen some employee data, but it has yet to find evidence that customer information was also exfiltrated.^{16,17}

New Products

- In August 2024, Fortinet (NASDAQ: FTNT) announced the addition of sovereign SASE and generative AI capabilities to its unified SASE solution.¹⁸ The updates should help in delivering a comprehensive and flexible unified SASE solution to customers.¹⁹
- In August 2024, Trend Micro (TYO: 4704) announced its AI based new solution, included in Trend Micro's Vision One Sovereign Private Cloud powered by NVIDIA NIM microservices, part of the NVIDIA AI Enterprise software platform. This will allow organizations to maximize the potential of the AI era while maintaining business resilience.²⁰
- In September 2024, Broadcom (NASDAQ: AVGO) announced the availability of Sian 2,200 Gbps per lane DSP, which will enable pluggable modules with 200G/lane interfaces that are foundational to connect next generation AI clusters.²¹ In August, the company introduced VMware Cloud Foundation (VCF) 9 to accelerate customers' transition to a unified and integrated private cloud platform that lowers cost and risk.²²

M&A and IPO Activity in Q3 2024

Inside HXRXL™ Index Activity:

- On August 28, Check Point Software Technologies (NASDAQ: CHKP) agreed to acquire Cyberint Technologies, an external cyber risk management firm. The financial terms were not revealed but the deal is valued at approximately \$200 million, including cash and shares. The transaction is expected to close by the end of 2024, subject to customary closing conditions.²³
- On August 26, Cisco (NASDAQ: CSCO) announced that it is acquiring Robust Intelligence, a California-based company that specializes in securing AI applications. Robust Intelligence has developed an AI application security platform that automates testing for safety and security issues in AI models and claims it is used by major organizations such as JPMorgan Chase, IBM, Expedia, and Deloitte.²⁴
- On August 8, Trend Micro (TYO: 4704) announced that it had attracted buyout interest from acquirers including private equity firms. Terms remain unknown as the proposal is under strategic review.
- On August 5, Fortinet (NASDAQ: FTNT) announced that it has acquired Next DLP, a leader in insider risk and data protection. The acquisition will help Fortinet improve its position in the standalone enterprise data loss prevention (DLP) market and strengthen its leadership in integrated DLP markets within endpoint and SASE.²⁵

Top 3 Contributors to HXRXL Index Performance in Q3 2024

Trend Micro^{26,27,28,29}

- Stock price was up 29.9% (in local currency; 46.0% in USD terms) for the period June 28, 2024 - Sept 30, 2024. On August 9, Trend Micro was up more than 15% after announcing that it was exploring a potential sale after receiving buyout offers.
- The stock attracted investors' attention after Trend Micro announced it is collaborating with NVIDIA to develop strategies to secure generative AI to enable long-term business transformations.
- The uptick in stock price was also supported by strong Q2 2024 results with healthy sales growth across the regions of Japan, Americas, Europe and APAC & MEA, with APAC & MEA witnessing a +29% y/y growth particularly in the Enterprise segment. Q2 2024 revenue increased by 13% y/y to JPY 68.6 bn (USD 440.3 mn). Operating margin increased from 14% in Q2 2023 to 18% in Q2 2024. GAAP net profit was up 30% y/y to JPY 7.1 bn (USD 45.8 mn). Q2 Free Cash Flow (FCF) decreased by 20.0% y/y to JPY 11.1 bn (USD 71.2 mn).
- The company issued FY 2024 guidance for revenue at JPY 271.0 bn (9% y/y growth), and net income is expected at JPY 34.6 bn (222% y/y growth).

Fortinet^{30,31,32}

- Stock price was up 28.7% for the period June 28, 2024 - Sept 30, 2024.
- Fortinet's stock rose on the back of strong Q2 results. The company reported Q2 2024 revenue of \$1.4 bn with y/y revenue growth of 11.0%, driven by service revenue which grew 20% y/y to \$982 mn. GAAP

operating income stood at \$436.0 mn with an operating margin of 30.4%, its highest in the last 10 quarters. GAAP net profit rose by 42.6% y/y to \$379.8 mn. FCF for Q2 2024 was \$319 mn.

- In its guidance for Q3 2024, GAAP revenue is expected in the range \$1.4-1.5 bn which represents a 10.5% y/y growth; for FY 2024 the company expects GAAP revenue of \$5.8-\$5.9 bn representing 10.3% y/y growth. Non-GAAP operating margin is expected in the range 30.5%-31.5% for Q3 2024 and in the range of 30.0%-31.5% for FY 2024.

Northrop Grumman^{33,34,35}

- Stock price was up 21.1% for the period June 28, 2024 - Sept 30, 2024.
- Northrop Grumman's stock rose due to stronger than expected sales and profit for the second quarter and projections for the rest of the year. The company benefitted supply chain issues receding, as well as increases in demand and government spending. Additionally, the company indicated in its most recent earnings call that it will be able to produce its B-21 units profitably, which is expected to provide a \$800-900 million FCF lift. This is likely to help the company move to normalized profitability over the next 4-5 years.

Bottom 3 Contributors in Q3 2024

CrowdStrike^{36,37,38,39,40}

- Stock price was down 26.8% for the period June 28, 2024 - Sept 30, 2024.
- The stock saw a multi-day crash in late July due to a major outage which caused disruptions to 8.5 mn Windows devices worldwide. On July 19, as part of regular operations, CrowdStrike released a Falcon content configuration update (via channel files) for the Windows sensor that resulted in a system crash. The outage caused disruptions at airports, public transport, healthcare, financial services, and media and broadcasting.
- The company delivered strong financial performance in fiscal Q2 2025 with a record subscription gross margin at 81% and an operating income which grew q/q and y/y. Annual Recurring Revenue (ARR) grew 32% y/y to \$3.9 bn as of July 31, 2024, of which \$218 mn was net new ARR added in the quarter. Revenue came in at \$963.9 mn for Q2 2025 and grew 31.7% y/y. GAAP operating income came in at \$14.2 mn against an operating loss of \$15.4 mn in Q2 2024. Net income increased five-fold to \$47 mn vs \$8.5 mn in corresponding quarter prior year. FCF came in at \$272.9 mn and was up 44% y/y.
- FY 2025 revenue is expected to be ~\$3.9 bn. Non-GAAP operating income is expected to be in the range of \$775-\$784 mn while non-GAAP net income is expected to be in the range of \$909-\$918 mn.

Okta^{41,42,43}

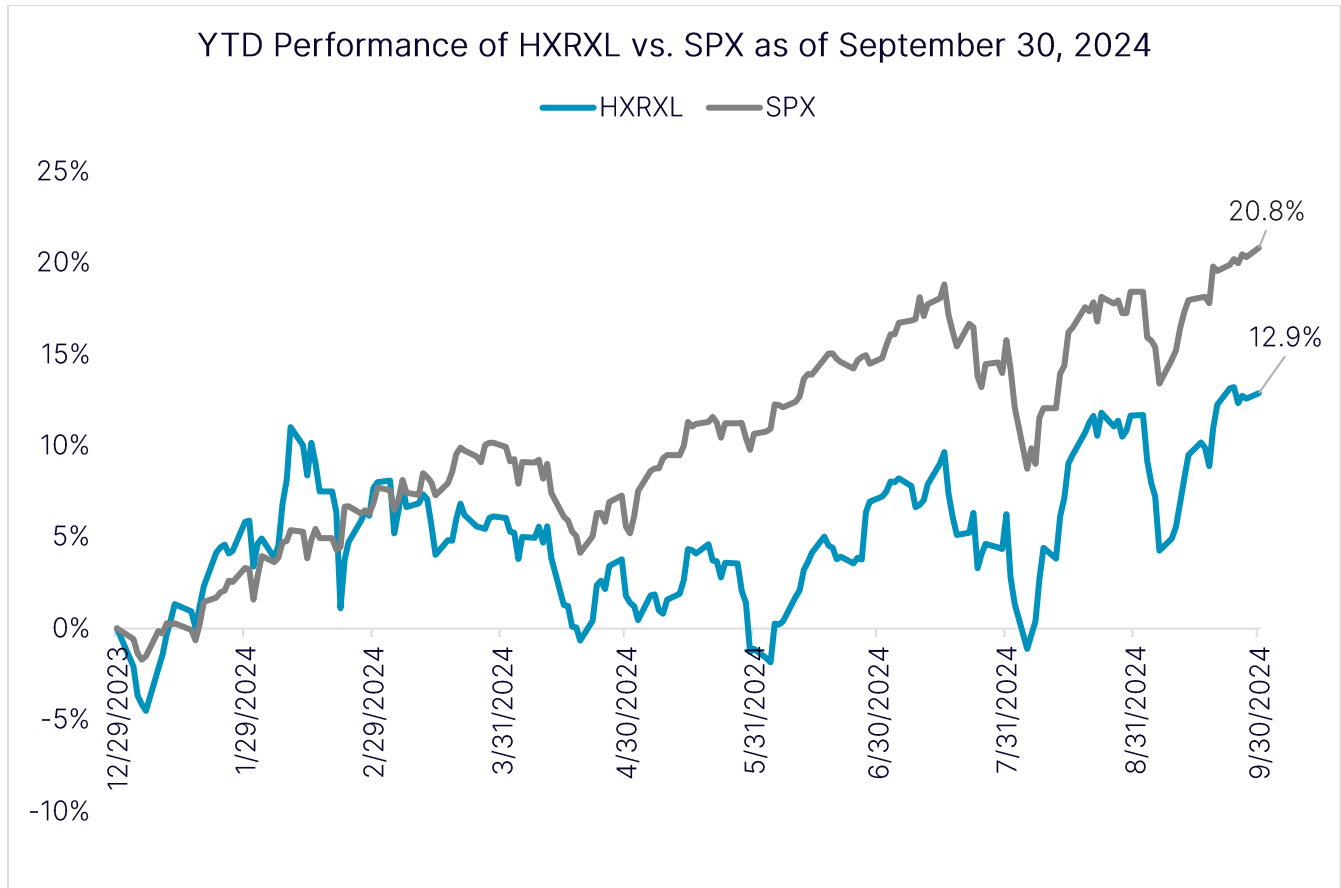
- Stock price was down 20.6% for the period June 28, 2024 - Sept 30, 2024.
- Okta's stock came under pressure due to a tough macroeconomic environment. Additionally, the company has been facing increasing competitive pressure from Microsoft. Its sales execution has been less than optimal over the last few years. The macroeconomic environment has been weighing down new logo growth, MAU growth for customer identity and seat growth within Workforce.

- While the company delivered solid results with better-than-expected cRPO (i.e., subscription backlog), revenue, operating margin and FCF, macro continues to be a headwind. It has guided Q3 cRPO below prior guidance due to continued macro pressures. Lack of seat growth in core markets, a challenging new environment and levels of growth deceleration are expected to weigh on the company this year.
- The company's guidance for fiscal 3Q 2025 expects revenue to be in the range of \$648 mn-\$650 mn. The cRPO has been guided down to \$1.99 billion, below consensus, with non-GAAP operating income of \$118 million to \$120 million, and non-GAAP diluted EPS of \$0.57 to \$0.58.

Zscaler^{44,45,46,47}

- Stock price was down 11.1% for the period June 28, 2024 - Sept 30, 2024.
- Zscaler's stock came under pressure due to a tough macroeconomic environment, sales execution challenges and a disappointing full-year forecast for adjusted earnings, revenue and billings. FY 2025 billings growth is expected to be 20%, with first half growth implied at 13% and second half growth implied at 20%.
- The company reported strong 4Q billings of \$911 million or 27% year-over-year growth, in line with upside scenarios of \$905 million - \$915 million. The number of users crossed 47 million, up 15% year-over-year, resulting in \$2.5 billion in ARR. It reported total revenues of \$592.9 million, up 30.3% y/y and above estimates of \$566.1 million.

Performance of HXRXL versus S&P 500



As seen in the chart above, the HXRXL Index generated price returns of 12.9% on a YTD basis, as of September 30th 2024. It underperformed the S&P 500, which generated price returns of 20.8%, by 8 percentage points. In Q3 2024, the HXRXL Index generated price returns of 5.55%, almost perfectly matching the S&P 500, which was up 5.53%.

Sources: Nasdaq Global Indexes, Consumer Technology Association, Statista, McKinsey, CyberEdge, CISA, Neustar International Security Council, AlphaWise, Morgan Stanley Research, Bloomberg, Factset

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