

**IN THE UNITED STATES DISTRICT COURT
SOUTHERN DISTRICT OF NEW YORK**

SECURITIES AND EXCHANGE)
COMMISSION,)
)
<i>Plaintiff,</i>)
)
v.)
)
SOLARWINDS CORP. AND TIMOTHY G.)
BROWN,)
)
<i>Defendants.</i>)
)

Civil Action No. 1:23-cv-9518

Hon. Paul A. Engelmayer

**MOTION OF CHIEF INFORMATION SECURITY OFFICERS AND
CYBERSECURITY ORGANIZATIONS FOR LEAVE TO FILE BRIEF AS *AMICUS
CURIAE* IN SUPPORT OF DEFENDANTS’ MOTION TO DISMISS THE COMPLAINT**

Pursuant to the Court’s order dated December 27, 2023 (ECF No. 38), Chief Information Security Officers (“CISOs”) and Cybersecurity Organizations respectfully request leave of this Court to file the attached Brief as *amicus curiae* in support of Defendants. The SEC does not oppose this motion for leave to file.

Amici are thirty individuals and entities with vast experience in cybersecurity.¹ In the proposed Brief, amici seek to aid the Court’s consideration of Defendants’ motion to dismiss by informing the Court about the potential impact of the SEC’s action on cybersecurity professionals, including CISOs, as well as the impact on cybersecurity and national security more broadly. In particular, the Brief explains how the SEC’s theories of liability are counterproductive given the real-world demands of cybersecurity, and risk harmful consequences, including elevating the frequency and harm of cyberattacks, impeding internal efforts to bolster cybersecurity, worsening the CISO hiring and retention crisis, and deterring CISOs from cooperating with the Government. Amici submit that the SEC’s claims, if permitted to proceed under the facts as alleged in its Complaint, are likely to undermine cybersecurity and national security.

¹ The identities, titles, and affiliations of individual and organizational amici are provided in the Appendix.

For these reasons, amici respectfully request the permission to file the attached brief.

February 2, 2024

Respectfully submitted,

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CYBERSECURITY ORGANIZATIONS AS *AMICUS CURIAE* IN SUPPORT OF
DEFENDANTS' MOTION TO DISMISS THE COMPLAINT**

TABLE OF CONTENTS

	Page
IDENTITY AND INTERESTS OF <i>AMICI CURIAE</i>	1
SUMMARY OF ARGUMENT	1
BACKGROUND	3
ARGUMENT	3
I. CISOs Play an Indispensable Role in Cyber- and National Security	3
A. CISOs Face an Increasingly Challenging Threat Environment.....	3
B. Flexible Regulatory Frameworks Enable Tailored Cybersecurity Practices	6
C. Cybersecurity Demands Robust Private-Public Collaboration.....	9
II. The SEC’s Claims Are Counterproductive.....	11
A. The SEC’s Claims Could Benefit Threat Actors	11
B. The SEC’s Claims Could Exacerbate the Damage Caused by Cyberattacks	12
C. The SEC’s Claims Could Chill Internal Discussions and Self-Assessments	15
D. The SEC’s Claims Are Likely to Worsen the Critical Shortage of Cybersecurity Professionals.....	16
E. The SEC’s Claims Could Chill Private-Public Cooperation	20
CONCLUSION.....	22
APPENDIX – LIST OF <i>AMICI CURIAE</i>	22

TABLE OF AUTHORITIES

Cases

Curling v. Raffensperger,
2023 U.S. Dist. LEXIS 202368 (N.D. Ga. Nov. 10, 2023)6

Statutes

15 U.S.C.....8
 18 U.S.C.....8
 Cyber Incident Reporting for Critical Infrastructure Act of 2022, 6 U.S.C.
 § 681e(a)(2)(A).....14, 20
 Cybersecurity Information Sharing Act of 2015, 6 U.S.C. § 1505.....20
 Federal Information Security Management Act, 44 U.S.C. § 3541, et seq.7
 Internet of Things Cybersecurity Act of 2020, 15 U.S.C. § 278g-3c(b).....7
 Md. Code Ann., Com. Law § 14-3503(a) (West 2022)7
 N.Y. Comp. Codes R. & Regs. tit. 23, § 500.12(b)7
 Sarbanes-Oxley Act of 2002, Pub. L. 107-204, 116 Stat. 745.....8

Other Authorities

16 C.F.R. § 314.4(c)(5).....7
 45 C.F.R. § 164.306(b)(2).....7
The 2023 Fortune 500 CISOs Analysis, FORTIFY EXPERTS (2023),
<https://bit.ly/48NQI1f>.....19
45% of Companies Do Not Employ a CISO, SECURITY MAGAZINE (Nov. 24,
 2021) <https://bit.ly/3HRQUkt>19
 Alicia Hope, *Hackers Compromised Two Large Data Centers in Asia and Leaked
 Major Tech Giants’ Login Credentials*, CPO MAGAZINE (Mar. 8, 2023),
<https://bit.ly/48NetGT>4
 Alicia Hope, *Healthcare Tech Firm HealthEC Data Breach Impacted Nearly 4.5
 Million Patients*, CPO MAGAZINE (Jan. 11, 2024), <https://bit.ly/497TKx7>.....4

Allen D. Householder et al., *The CERT Guide to Coordinated Vulnerability Disclosure*, CARNEGIE MELLON UNIVERSITY SOFTWARE ENGINEERING INSTITUTE xi (Aug. 2017), <https://bit.ly/3ua2OCT>10, 12

Andi Wilson Thompson, *Assessing the Vulnerabilities Equities Process, Three Years After the VEP Charter*, Lawfare (Jan. 13, 2021), <https://bit.ly/48L7vSN>11

Arnold Lucas Commandeur, *Understanding legacy information systems and abandonment decision making: Towards methodological support* (Mar. 2019) (Ph.D. thesis, University of Groningen, SOM Research School), <https://bit.ly/3HI4R4j>.....4

Cambrie Eckert, *Just In: U.S. Desperately Needs Cyber Talent, Congress Says*, NATIONAL DEFENSE MAGAZINE 50 (June 26, 2023), <https://bit.ly/3vWnKxw>.....18

Charlie Osborne, *CISO Workforce and Headcount 2023 Report*, CYBERSECURITY VENTURES 8 (2023), <https://bit.ly/3HyFjGx>4

Charlotte A. Tschider, Locking Down “Reasonable”6

Chris Butler, *Lessons from 100+ Ransomware Recoveries*, CPO MAGAZINE (Nov. 6, 2023), <https://bit.ly/42jFJdG>.....5

CISA, *Coordinated Vulnerability Disclosure Process*, <https://bit.ly/42e108v>.....10, 12

CVE, <https://bit.ly/42sl8ne> (last visited Feb. 2, 2024).....11

Cyber Incidents: How Best to Work with Law Enforcement, CYBER SECURITY: A PEER-REVIEWED JOURNAL 103 (May 22, 2017), <https://bit.ly/3OjzOiR>21

CYBERSECURITY & INFRASTRUCTURE SEC. AGENCY, U.S. DEP’T HOMELAND SEC., BINDING OPERATIONAL DIRECTIVE 20-01 (2020), <https://bit.ly/42l4c23>7

Cybersecurity & Infrastructure Security Agency (“CISA”), *Defining Insider Threats*, <https://bit.ly/4blSjNE> (last visited Jan. 18, 2024).....4

Cybersecurity Duty, 41 Yale L. & Pol’y Rev. 75, 80 (2023)6

Cybersecurity Risk Management, Strategy, Governance, and Incident Disclosure, 17 C.F.R. pts. 22, 232, 240 & 249, Exchange Act Release Nos. 33-11216, 34-97989, SEC Final Rule 65-66 (Sept. 5, 2023), <https://bit.ly/42fIBZ6>.....8

David Yaffe-Bellany, *A Hack of the SEC’s Social Media Account Caused a Bitcoin Frenzy, Briefly*, NEW YORK TIMES (Jan. 9, 2024)6

Deepti Gopal et al., *Predicts 2023: Cybersecurity Industry Focuses on the Human Deal*, GARTNER 61 (Jan. 25, 2023), <https://www.bitsight.com/thank-you/gartner-predicts-2023>20

Erastus Karanja & Mark A. Rosso, *The Chief Information Security Officer: An Exploratory Study*, J. of Int’l Tech. & Info. Mgmt.: Vol. 26: Iss. 2, Article 2, SCHOLARWORKS 39 (June 1, 2017), <https://bit.ly/3tVLcL2>8

Evolution of the Chief Information Security Officer, THE INSTITUTE OF WORLD POLITICS, <https://bit.ly/3S8YE6h> (last visited Jan. 17, 2024)4

Federal Government Cybersecurity Incident & Vulnerability Response Playbooks, CISA (Nov. 2021) <https://bit.ly/3SAp8PC>15

Framework for Improving Critical Infrastructure Cybersecurity, Version 1.1, NAT’L INST. OF STANDARDS & TECH. (“NIST”) 2 (Apr. 16, 2018), <https://bit.ly/3vQqXPr>.....7, 9

Fredrik Björck et al., *Cyber Resilience - Fundamentals for a Definition*, in 1 NEW CONTRIBUTIONS IN INFORMATION. SYSTEMS & TECHNOLOGIES 311-126

Global Cybersecurity Outlook 2023: Insight Report, WORLD ECONOMIC FORUM 12 (Jan. 2023), <https://bit.ly/3u8C1a2>.....2

Growing the National Cybersecurity Talent Pipeline: Hearing Before the Subcomm. on Cybersecurity & Infrastructure Prot. of the H. Comm. on Homeland Sec., 118th Cong. 118-19, 1518, 19

Gurbir S. Grewal, *Remarks at New York City Bar Association Compliance Institute*, SEC (Oct. 24, 2023), <https://bit.ly/484SdqV>17

Heidrick & Struggles, 2022 Global Chief Information Security Officer (CISO) Survey 5, <https://bit.ly/3SboRRE>.....19

Henrik Nilsson, *Federal Watchdog Faults Most Agencies’ Cybersecurity* (Jan. 9, 2024, 10:08PM), <https://bit.ly/3SA9NP2>6

HSHDF, *Fireside Chat with CISA Director Jen Easterly and Former Rep. Jim Langevin*, YOUTUBE, at 3:25-4:00 (June 21, 2023), <https://bit.ly/48PANzI>10

INT’L ORG. FOR STANDARDIZATION & INT’L ELECTROTECHNICAL COMM’N, ISO/IEC 30111 (2019), <https://bit.ly/3UimTS5>.....10, 12

INT’L ORG. FOR STANDARDIZATION & INT’L ELECTROTECHNICAL COMM’N, ISO/IEC 29147 (2018), <https://bit.ly/47VL6ka>.....10

ISC2 Cybersecurity Workforce Study: How the Economy, Skills Gap and Artificial Intelligence Are Challenging the Global Cybersecurity Workforce (2023), <https://bit.ly/3Hy9PA1>.....18

Jon Boyens et al., *Cybersecurity Supply Chain Risk Management Practices for Systems and Organizations at 17* (May 2022), U.S. Department of Commerce, Natl. Inst. of Standards & Tech., <https://bit.ly/484o7Uh>.....4

The Journey in Data: HackerOne Hits 100 Million Dollars in Bounties, ETHICAL HACKER (May 28, 2020), <https://bit.ly/3UoPV2o>11

Justin Rende, *Attracting and Retaining Top Cybersecurity Talent Amid Worker Burnout and Shortages*, FORBES (Dec. 30, 2022, 6:30 AM), <https://bit.ly/48M5TYV>19

Karen Scarfone et al, *Technical Guide to Information Security Testing and Assessment: Recommendations of the National Institute of Standards and Technology* (Sept. 2008)4

Kevin Townsend, *CISO Conversations: Steve Katz, the World’s First CISO*, SECURITYWEEK (Dec. 1, 2021), <https://bit.ly/496AzDR>.....3

Kim Schaffer et al., *Recommendations for Federal Vulnerability Disclosure Guidelines*, NIST SP 800-216, NAT’L INST. STANDARDS & TECH., U.S. DEP’T COM. (May 2023), <https://bit.ly/49ddFe0>7

National Cybersecurity Strategy: Protection of Federal and Critical Infrastructure Systems: Hearing Before the S. Homeland Sec. & Governmental Affs. Comm., Testimony 2 (Sept. 23, 2021) (statement of Jen Easterly, Dir. of CISA), <https://bit.ly/3Sv4T5K>.2, 10

National Initiative for Cybersecurity Education, *Implementation Plan 9* (2021), <https://bit.ly/3HADTeR>18

Neta Oren, *Looking Back at Our Bug Bounty Program in 2022*, META (Dec. 15, 2022), <https://bit.ly/3w8otfa>.....11

Nonprofit Service Provider Blackbaud Settles Data Breach Case for \$49.5M with States, ASSOCIATED PRESS (Oct. 5, 2023), <https://bit.ly/3Sfj2CA>.....10

Office of Intelligence & Analysis, *Homeland Threat Assessment*, DHS 18 (2024), <https://bit.ly/48MkMue>5

PBSNewsHour, *WATCH: House Hearing on “Worldwide Threats to the Homeland with DHS Secretary Mayorkas*, YouTube, at 2:38:40-2:38:50 (Nov. 15, 2023), <https://bit.ly/3vOTaGh>.....13

Press Release, Gartner, *Gartner Predicts Nearly Half of Cybersecurity Leaders Will Change Jobs by 2025* (Feb. 22, 2023), <https://bit.ly/48N3ddp>.....19

Press Release, National Institute of Standards and Technology, NIST Updates
Cybersecurity Guidance for Supply Chain Risk Management (May 5, 2022),
<https://bit.ly/3Suol2y>.....4

Press Release, U.S. Att’ys Off., Cent. Dist. of Cal., North Korean Regime-Backed
Programmer Charged in Conspiracy to Conduct Multiple Cyberattacks and
Intrusions (Sept. 6, 2018), <https://bit.ly/3Uwinjd>5

Press Release, U.S. Att’ys Off., S. Dist. of N.Y., Manhattan U.S. Attorney
Announces Charges Against Seven Iranians for Conducting Coordinated
Campaign of Cyber Attacks Against U.S. Financial Sector on Behalf of
Islamic Revolutionary Guard Corps-Sponsored Entities (Mar. 24, 2016),
<https://bit.ly/3OiTI30>5

Press Release, U.S. Att’ys Off., W. Dist. of Penn., U.S. Charges Five Chinese
Military Hackers for Cyber Espionage Against U.S. Corporations and a Labor
Organization for Commercial Advantage (May 19, 2014),
<https://bit.ly/3vVzHUc>.....5

Press Release, U.S. Dep’t of Just., Two Chinese Hackers Associated with the
Ministry of State Security Charged with Global Computer Intrusion
Campaigns Targeting Intellectual Property and Confidential Business
Information (Dec. 20, 2018), <https://bit.ly/3OiTbbU>5

Press Release, U.S. Dep’t of Just., U.S. Charges Russian FSB Officers and Their
Criminal Conspirations for Hacking Yahoo and Millions of Email Accounts
(Mar. 15, 2017), <https://bit.ly/42bh3ns>5

Report to the CISA Director: Corporate Cyber Responsibility, CISA
Cybersecurity Advisory Committee (Sept. 13, 2023), <https://bit.ly/494Yt2H>8

Robert Kemp & Richard Smith, *Security and Safety Incidents and Standards*,
CYBER SECURITY: A PEER-REVIEWED JOURNAL (vol. 5, no. 2) 164
(Feb. 2, 2021).....5

Robert S. Mueller, III, U.S. Dep’t of Justice, Report on the Investigation into
Russian Interference in the 2016 Presidential Election (vol. 1) 50-51
(Mar. 2019), <https://bit.ly/42epm23>.....6

Scott Neuman, *The U.S. Has Formally Accused China of a Massive Cyberattack
on Microsoft*, NPR (Jul. 19, 2021), <https://bit.ly/48K33Dz>.....4

Scott Shane et al, *Security Breach and Spilled Secrets Have Shaken the N.S.A. to
Its Core*, NEW YORK TIMES (Nov. 12, 2017).....6

*SEC’s X Account Hacked, Causing Frenzy Over Bitcoin ETF - The New York
Times*, SECURITIES DOCKET (Jan. 10, 2024 8:45AM), <https://bit.ly/42gXk5N>.....6

See Secure by Design, Shifting the Balance of Cybersecurity Risk: Principles and Approaches for Secure by Design Software, CISA 8 (Oct. 2023), <https://bit.ly/498bTLq>2

Shaun Bertrand, *SEC SolarWinds Filing: Forecasting the Fallout for CISOs*, CONVERGE TECHNOLOGY SOLUTIONS (Dec. 14, 2023), <https://bit.ly/47U5ulQ>.....19

Testimony of Christopher A. Wray, Dir., Fed. Bureau Investigations, Worldwide Threats to the Homeland Before the Comm. on Homeland Sec., 118th Cong., at 5 (Nov. 15, 2023), <https://bit.ly/42a4mtd>.....5, 14, 20

U.S. Cybersecurity Group, *The Evolving Role of the CISO: More Than Just Security*, ASPEN INSTITUTE 2 (Oct. 2023), <https://bit.ly/48NF8mH>4

U.S. Dep’t of Defense, Directive No. 8000.01, Management of the Dep’t of Defense Information Enterprise 3 (July 27, 2017), <https://bit.ly/3Ui3Lnd>.....18

U.S. Dep’t of Justice, Cybersecurity Unit, Criminal Division, Best Practices for Victim Response and Reporting of Cyber Incidents 1, <https://bit.ly/3HvXzQP> *passim*

U.S. Department of Commerce, Natl. Inst. of Standards & Tech., <https://bit.ly/3Ov2o0G>4

U.S. SEC. & EXCH. COMM’N, *Cybersecurity Risk Management, Strategy, Governance, and Incident*, <https://bit.ly/48PAxRg> (last visited Jan. 25, 2024)8

White Paper – CISO’s Guide to Sensitive Data Protection: An Application Security Viewpoint, SYNOPSIS 3-4 (Mar. 2021), <https://bit.ly/3HGn81U>.....4

IDENTITY AND INTERESTS OF *AMICI CURIAE*

Amici are thirty professionals and entities with vast experience in cybersecurity.² Individual amici include current and former Chief Information Security Officers (“CISOs”) and other senior cybersecurity professionals employed by public and private organizations across the United States, all of whom are signing the Brief in their individual capacities. Organizational amici represent or advise organizations, CISOs, and other cybersecurity professionals on cybersecurity governance, risk, and mitigation, and collectively represent the interests of hundreds of CISOs and the broader cybersecurity community. Given their firsthand day-to-day experience with novel cybersecurity risks, vulnerabilities, threats, and cyberattacks, amici have great concerns that, based on the alleged facts in the Complaint, the SEC’s unprecedented theories of liability against SolarWinds Corporation (“SolarWinds”) and its CISO may culminate in harmful consequences for cybersecurity and U.S. national security.

SUMMARY OF ARGUMENT

An organization’s information security team, led by its CISO, stands on the front lines against cyberattacks from criminal enterprises, insider threats, “hackers,” non-state actors, and hostile foreign governments seeking to steal personal data or intellectual property, hold organizations hostage, compromise critical infrastructure, and undermine U.S. national security. Defending against these threats, CISOs and their teams serve as engineers safeguarding IT infrastructure; intelligence officers identifying and mitigating new vulnerabilities; compliance experts navigating regulations; advisors educating organizational leadership; and—when a cyber incident occurs—emergency responders assessing and containing the damage, protecting

² The identities, titles, and affiliations of amici are provided in the Appendix. Amici affirm that no counsel for a party authored this Brief in whole or in part and that no person other than amici, their members, or their counsel made a monetary contribution intended to fund the Brief’s preparation or submission.

organizational and third-party assets, patching software, and engaging with victims, other organizations, and the Government in defense of cyber- and national security.

The private sector operates the “vast majority” of IT systems in the United States and the risk of cyberattacks continues to grow.³ In the war between cyber-attackers and defenders, “attackers have a structural advantage: they need to find only one exploitable weakness” using a limitless array of strategies and tools, whereas organizations must defend against evolving threats on multiple fronts.⁴ As the Cybersecurity and Infrastructure Security Agency (“CISA”) recognizes, not even the best-resourced CISO can guarantee success against 100% of sophisticated attacks.⁵

Amici, who represent entities and individuals with vast experience on the front lines of this global battlefield, submit this Brief based on their deep concern about the negative impact of the SEC’s claims. The SEC’s theories propose to sanction SolarWinds and Timothy G. Brown based on internal communications aimed at improving cybersecurity, as well as alleged inadequacies in public filings, which CISOs are not typically responsible for drafting or approving. Liability under these theories empowers threat actors, chills internal communications about cyber-threats, exacerbates the already severe shortage of cybersecurity professionals, and deters collaboration between the private sector and the Government. Amici respectfully submit that the SEC’s claims, if allowed to proceed, could significantly harm U.S. cyber- and national defense.

³ *National Cybersecurity Strategy: Protection of Federal and Critical Infrastructure Systems: Hearing Before the S. Homeland Sec. & Governmental Affs. Comm.*, Testimony 2 (Sept. 23, 2021) (statement of Jen Easterly, Dir. of CISA), <https://bit.ly/3Sv4T5K>.

⁴ *Global Cybersecurity Outlook 2023: Insight Report*, WORLD ECONOMIC FORUM 12 (Jan. 2023), <https://bit.ly/3u8C1a2>.

⁵ See *Secure by Design, Shifting the Balance of Cybersecurity Risk: Principles and Approaches for Secure by Design Software*, CISA 8 (Oct. 2023), <https://bit.ly/498bTLq>.

BACKGROUND

Between 2019 and 2020, the Russian government and its affiliates engaged in cyberattacks against SolarWinds. On December 14, 2020, shortly after learning that it had fallen victim to such an attack—one of the most sophisticated in history—SolarWinds disclosed this news in a Form 8-K. In January 2021, Mr. Brown—who previously served as SolarWinds’ Vice President of Security Architecture—became SolarWinds’ CISO.

On October 30, 2023, the SEC filed a Complaint alleging that Mr. Brown and SolarWinds made materially misleading statements or omissions about cybersecurity risks and vulnerabilities in: (i) a “Security Statement” posted to the company’s website before Mr. Brown and SolarWinds knew of the cyberattack; (ii) Form S-1 and S-8 Registration Statements filed with the SEC before they knew the cyberattack; and (iii) the Form 8-K disclosing the attack. In its allegations, the SEC contrasts the company’s public statements with Mr. Brown’s internal discussions, in which he sought to keep SolarWinds executives informed about risks and progress on security initiatives.

ARGUMENT

I. CISOs Play an Indispensable Role in Cyber- and National Security

A. CISOs Face an Increasingly Challenging Threat Environment

The CISO position emerged in 1995 when Citibank, reeling from a cyberattack, hired its first specialized cybersecurity executive.⁶ Companies had historically delegated IT-related responsibilities to their Chief Information Officer (“CIO”). Yet CIOs mainly focused on IT infrastructure and not the unique challenges of cybersecurity.⁷ As companies responded to “the

⁶ Kevin Townsend, *CISO Conversations: Steve Katz, the World’s First CISO*, SECURITYWEEK (Dec. 1, 2021), <https://bit.ly/496AzDR>.

⁷ *Id.*

ever-increasing need to maintain the security of information and operations,”⁸ the CISO role grew more common. Today, over 7,500 CISOs are employed in the United States,⁹ although, as noted below, many positions are unfilled due to a shortage of qualified cybersecurity professionals.

Although each CISO role is different based on their organization’s unique needs, all CISOs manage evolving cybersecurity risks against necessary tradeoffs.¹⁰ For example, CISOs commonly manage risks associated with modifying or replacing a legacy information system, when doing so may disrupt operations and divert resources;¹¹ protecting customer and user privacy;¹² conducting penetration testing that may identify new risks but divert engineers from other pressing security priorities;¹³ and deciding how to engage with third-party systems that may create risks for the organization’s own systems.¹⁴ In addition to these day-to-day risks, CISOs also face actual or attempted security breaches, including insider abuses and external cyberattacks.¹⁵

⁸ *Evolution of the Chief Information Security Officer*, THE INSTITUTE OF WORLD POLITICS, <https://bit.ly/3S8YE6h> (last visited Jan. 17, 2024).

⁹ Charlie Osborne, *CISO Workforce and Headcount 2023 Report*, CYBERSECURITY VENTURES 8 (2023), <https://bit.ly/3HyFjGx>.

¹⁰ See U.S. Cybersecurity Group, *The Evolving Role of the CISO: More Than Just Security*, ASPEN INSTITUTE 2 (Oct. 2023), <https://bit.ly/48NF8mH>.

¹¹ See generally Arnold Lucas Commandeur, *Understanding legacy information systems and abandonment decision making: Towards methodological support* (Mar. 2019) (Ph.D. thesis, University of Groningen, SOM Research School), <https://bit.ly/3HI4R4j>.

¹² *White Paper – CISO’s Guide to Sensitive Data Protection: An Application Security Viewpoint*, SYNOPSIS 3-4 (Mar. 2021), <https://bit.ly/3HGn81U>.

¹³ See Karen Scarfone et al, *Technical Guide to Information Security Testing and Assessment: Recommendations of the National Institute of Standards and Technology*, NATL. INST. OF STANDARDS & TECH. 2-1 (Sept. 2008), <https://bit.ly/3Ov2o0G> (“[T]ime, staff, hardware, and software, resource availability [are] often a limiting factor in . . . security assessments.”).

¹⁴ See generally Jon Boyens et al., *Cybersecurity Supply Chain Risk Management Practices for Systems and Organizations*, NATL. INST. OF STANDARDS & TECH. 17 (May 2022), <https://bit.ly/484o7Uh>.

¹⁵ See, e.g., Press Release, National Institute of Standards and Technology, NIST Updates Cybersecurity Guidance for Supply Chain Risk Management (May 5, 2022), <https://bit.ly/3Suol2y>; Cybersecurity & Infrastructure Security Agency (“CISA”), *Defining Insider Threats*, <https://bit.ly/4blSjNE> (last visited Jan. 18, 2024); Alicia Hope, *Hackers Compromised Two Large Data Centers in Asia and Leaked Major Tech Giants’ Login Credentials*, CPO MAGAZINE (Mar. 8, 2023), <https://bit.ly/48NetGT>; Scott Neuman, *The U.S. Has Formally Accused China of a Massive Cyberattack on Microsoft*, NPR (Jul. 19, 2021), <https://bit.ly/48K33Dz>; Alicia Hope, *Healthcare Tech Firm HealthEC Data Breach Impacted Nearly 4.5 Million Patients*, CPO MAGAZINE (Jan. 11, 2024), <https://bit.ly/497TKx7>; Chris Butler, *Lessons from 100+ Ransomware Recoveries*, CPO MAGAZINE (Nov. 6, 2023), <https://bit.ly/42jFJdG>.

In managing risks, CISOs must deal with the threat of hostile foreign governments sponsoring cyberattacks against U.S. organizations. FBI Director Christopher Wray recently testified: “[W]e have seen the People’s Republic of China (“PRC”), the Democratic People’s Republic of Korea (“DPRK”), and Russia use cyber operations to target U.S. research.”¹⁶ In turn, the U.S. Department of Justice (“DOJ”) has indicted individuals for cyberattacks associated with hostile powers like China,¹⁷ Russia,¹⁸ Iran,¹⁹ and North Korea.²⁰ Defending against such sophisticated foreign-sponsored attacks requires a constant arms race between CISOs and persistent, well-funded adversaries.²¹ As on any other battlefield, decisions are made in dynamic situations with incomplete information and no guarantee of perfect security.²² Under these fog-of-war conditions, CISOs and their teams must triage a steady stream of potential threats while recognizing that ultimately, “[a]ny Internet-connected organization can fall prey to a disruptive network intrusion or costly cyber attack.”²³

¹⁶ Testimony of Christopher A. Wray, Dir., Fed. Bureau Investigations, Worldwide Threats to the Homeland Before the Comm. on Homeland Sec., 118th Cong., at 5 (Nov. 15, 2023), <https://bit.ly/42a4mtd>.

¹⁷ See Press Release, U.S. Dep’t of Just., Two Chinese Hackers Associated with the Ministry of State Security Charged with Global Computer Intrusion Campaigns Targeting Intellectual Property and Confidential Business Information (Dec. 20, 2018), <https://bit.ly/3OiTbbU>; Press Release, U.S. Att’y’s Off., W. Dist. of Penn., U.S. Charges Five Chinese Military Hackers for Cyber Espionage Against U.S. Corporations and a Labor Organization for Commercial Advantage (May 19, 2014), <https://bit.ly/3vVzHUc>.

¹⁸ See Press Release, U.S. Dep’t of Just., U.S. Charges Russian FSB Officers and Their Criminal Conspirators for Hacking Yahoo and Millions of Email Accounts (Mar. 15, 2017), <https://bit.ly/42bh3ns>.

¹⁹ See Press Release, U.S. Att’y’s Off., S. Dist. of N.Y., Manhattan U.S. Attorney Announces Charges Against Seven Iranians for Conducting Coordinated Campaign of Cyber Attacks Against U.S. Financial Sector on Behalf of Islamic Revolutionary Guard Corps-Sponsored Entities (Mar. 24, 2016), <https://bit.ly/3OiTI30>.

²⁰ See Press Release, U.S. Att’y’s Off., Cent. Dist. of Cal., North Korean Regime-Backed Programmer Charged in Conspiracy to Conduct Multiple Cyberattacks and Intrusions (Sept. 6, 2018), <https://bit.ly/3Uwinjd>.

²¹ Novel technologies, including artificial intelligence, are already being weaponized by threat actors against U.S. companies and the Government. See Office of Intelligence & Analysis, *Homeland Threat Assessment*, DHS 18 (2024), <https://bit.ly/48MkMue>.

²² Robert Kemp & Richard Smith, *Security and Safety Incidents and Standards*, CYBER SECURITY: A PEER-REVIEWED JOURNAL (vol. 5, no. 2) 164 (Feb. 2, 2021) (“Often the victims of these attacks turn out to be compliant with a number of security standards.”).

²³ U.S. Dep’t of Justice, Cybersecurity Unit, Criminal Division, Best Practices for Victim Response and Reporting of Cyber Incidents 1, <https://bit.ly/3HvXzQP>.

The Government is no exception. Even the SEC and the nation’s most sophisticated intelligence agencies such as the National Security Agency, have fallen prey to cyberattacks.²⁴ During the 2016 election cycle, for example, “18 states were the subject of cyberattacks” by foreign adversaries and other threat actors.²⁵ Many federal agencies have “mostly ineffective” cyber defenses, according to a January 2024 report by the U.S. Government Accountability Office.²⁶ Given this reality, “the cybersecurity world has shifted to . . . ‘cyber resilience’”—accepting “that cyberattacks will continue and cannot be fully avoided.”²⁷

B. Flexible Regulatory Frameworks Enable Tailored Cybersecurity Practices

To date, most regulatory regimes have wisely avoided prescriptive “one-size-fits-all” approaches to cybersecurity governance. Instead, they have offered CISOs frameworks to triage risks. Amici know from their own experiences that a flexible approach is required to distinguish between acceptable and unacceptable cybersecurity risks in light of competing tradeoffs and resource constraints. The SEC’s action against Mr. Brown threatens to undermine this flexibility, which regulators—including the SEC itself—have recognized as essential.

For example, the federal National Institute of Standards and Technology (“NIST”) Cybersecurity Framework (“CSF”) is a leading guide, followed voluntarily by many public and

²⁴ See, e.g., Scott Shane et al, *Security Breach and Spilled Secrets Have Shaken the N.S.A. to Its Core*, NEW YORK TIMES (Nov. 12, 2017); *SEC’s X Account Hacked, Causing Frenzy Over Bitcoin ETF – The New York Times*, SECURITIES DOCKET (Jan. 10, 2024 8:45AM), <https://bit.ly/42gXk5N> (citing David Yaffe-Bellany, *A Hack of the SEC’s Social Media Account Caused a Bitcoin Frenzy, Briefly*, NEW YORK TIMES (Jan. 9, 2024)).

²⁵ *Curling v. Raffensperger*, 2023 U.S. Dist. LEXIS 202368, at *119–21 (N.D. Ga. Nov. 10, 2023); see Robert S. Mueller, III, U.S. Dep’t of Justice, Report on the Investigation into Russian Interference in the 2016 Presidential Election (vol. 1) 50–51 (Mar. 2019), <https://bit.ly/42epm23> (detailing Russian cyberattacks against state- and county-level election administration).

²⁶ Henrik Nilsson, *Federal Watchdog Faults Most Agencies’ Cybersecurity*, Law360 (Jan. 9, 2024, 10:08PM), <https://bit.ly/3SA9NP2>.

²⁷ Charlotte A. Tschider, Locking Down “Reasonable” Cybersecurity Duty, 41 Yale L. & Pol’y Rev. 75, 80 (2023) (citing Fredrik Björck et al., *Cyber Resilience - Fundamentals for a Definition*, in 1 NEW CONTRIBUTIONS IN INFORMATION SYSTEMS & TECHNOLOGIES 311-12).

private organizations.²⁸ The CSF recognizes that each organization has “different threats . . . vulnerabilities, [and] . . . risk tolerances,” and that there is no “one-size-fits-all approach to managing cybersecurity risk for critical infrastructure.”²⁹ The CSF gives utmost flexibility to CISOs based on their distinct organizational needs and constraints.

Federal and state regulations also seek to maximize flexibility in organizations’ approaches to cybersecurity.³⁰ Even prescriptive rules in these regulatory schemes afford significant discretion, such as exempting organizations from multi-factor authentication protocols if the CISO “approve[d] in writing the use of reasonably equivalent or more secure compensating controls.”³¹

The CISO role is evolving. One study noted that “[t]here is a lack of consensus regarding the scope of the [CISO] position, the duties, and its place in the organizational hierarchy.”³² CISOs appear to occupy senior positions, but their role is distinct in compensation, authority, and reporting lines from core C-suite executives. CISOs’ authority and communication lines within a

²⁸ See Federal Information Security Management Act, 44 U.S.C. § 3541, et seq.

²⁹ See *Framework for Improving Critical Infrastructure Cybersecurity, Version 1.1*, NAT’L INST. OF STANDARDS & TECH. (“NIST”) 2 (Apr. 16, 2018), <https://bit.ly/3vQqXPr>.

³⁰ See, e.g., Internet of Things Cybersecurity Act of 2020, 15 U.S.C. § 278g-3c(b) (establishing federal guidelines “to be aligned with industry best practices and Standards 29147 and 30111 of the International Standards Organization or any other appropriate, relevant, and widely-used standard”); CYBERSECURITY & INFRASTRUCTURE SEC. AGENCY, U.S. DEP’T HOMELAND SEC., BINDING OPERATIONAL DIRECTIVE 20-01, at 3–7 (2020), <https://bit.ly/4214c23>; Kim Schaffer et al., *Recommendations for Federal Vulnerability Disclosure Guidelines*, NIST SP 800-216, NAT’L INST. STANDARDS & TECH., U.S. DEP’T COM. (May 2023), <https://bit.ly/49ddFe0>.

³¹ N.Y. Comp. Codes R. & Regs. tit. 23, § 500.12(b); cf. 16 C.F.R. § 314.4(c)(5). Similarly, federal health regulations provide a non-exhaustive list of factors that covered entities must consider for data security, without specifying any particular measure they must adopt. See 45 C.F.R. § 164.306(b)(2) (factors include “[t]he size, complexity, and capabilities of the covered entity or business associate,” “[t]he covered entity’s or the business associate’s technical infrastructure, hardware, and software security capabilities,” “[t]he costs of security measures,” and “[t]he probability and criticality of potential risks to electronic protected health information”). And many state-level regulations frame cybersecurity in terms of reasonableness, without defining or enumerating which security measures would qualify as reasonable. See, e.g., Md. Code Ann., Com. Law § 14-3503(a) (West 2022) (requiring businesses to “implement and maintain reasonable security procedures and practices that are appropriate to the nature of the personal information owned, maintained, or licensed and the nature and size of the business and its operations”).

³² Erastus Karanja & Mark A. Rosso, *The Chief Information Security Officer: An Exploratory Study*, J. of Int’l Tech. & Info. Mgmt.: Vol. 26: Iss. 2, Article 2, SCHOLARWORKS 39 (June 1, 2017), <https://bit.ly/3tVLcL2>.

company are often not commensurate with the responsibilities they are expected to fulfill.³³ And though senior management benefits from regulations and guidance promulgated under the Sarbanes-Oxley Act for a company's financial operations, Congress has never adopted a comparable law governing CISOs and cybersecurity.³⁴

Even the SEC has struggled to articulate the expected duties of CISOs under its current statutory authority, as shown by proposed amendments to its final rule on "Cybersecurity Risk Management, Strategy, Governance, and Incident Disclosure."³⁵ After the notice-and-comment process, the SEC backtracked on its proposed rule that companies disclose "whether and how the board integrates cybersecurity into its business strategy, risk management, and financial oversight," as well as "whether the company has a [CISO] or someone in a comparable position, and if so, to whom the individual reports within the registrant's organizational chart."³⁶ Instead, the final rule now avoids "inadvertently pressur[ing] registrants to adopt specific or inflexible cybersecurity-risk governance practices or organizational structures."³⁷ These changes underscore that regulators, including the SEC, have deliberately abstained from establishing a prescriptive set of rules for cybersecurity governance.

In light of the flexibility built into federal and state authorities, the SEC's stance here—that an organization and its CISO commit securities fraud for claiming to "follow" the NIST CSF

³³ See Report to the CISA Director: Corporate Cyber Responsibility, CISA Cybersecurity Advisory Committee (Sept. 13, 2023), <https://bit.ly/494Yt2H> ("Cyberattacks and their impact could be better mitigated or even prevented if corporate boards of directors were more educated and engaged on matters relating to cybersecurity, placed a higher priority on cyber resilience, and exercised stronger oversight over the development and execution of their companies' cybersecurity strategies.").

³⁴ See Sarbanes-Oxley Act of 2002, Pub. L. 107-204, 116 Stat. 745 (codified in scattered sections of 15 and 18 U.S.C.).

³⁵ U.S. SEC. & EXCH. COMM'N, *Cybersecurity Risk Management, Strategy, Governance, and Incident*, <https://bit.ly/48PAXRg> (last visited Jan. 25, 2024).

³⁶ See *Cybersecurity Risk Management, Strategy, Governance, and Incident Disclosure*, 17 C.F.R. pts. 22, 232, 240 & 249, Exchange Act Release Nos. 33-11216, 34-97989, SEC Final Rule 65-66 (Sept. 5, 2023), <https://bit.ly/42fBZ6>.

³⁷ See *id.* at 70-71.

if they identify vulnerabilities through self-assessments under “the NIST Framework”³⁸—makes no sense.³⁹ Indeed, the SEC’s attempt to effectively penalize an organization and its CISO for supposedly negative findings in NIST self-assessments undermines the key objective of the CSF to “support self-assessment of investment effectiveness and cybersecurity activities.”⁴⁰ The CSF expressly recognizes that risk management is inherently iterative, and that measuring “an organization’s cybersecurity state and trends *over time* can enable that organization to understand and convey meaningful risk information to dependents, suppliers, buyers, and other parties.”⁴¹ In other words, routine self-monitoring confirms a company’s good-faith attempt to implement the Framework and iteratively build cyber resilience. The SEC wrongly seeks to punish Mr. Brown for industry-standard practice for CISOs: identifying risks through self-assessments and using those results to bolster cybersecurity.

C. Cybersecurity Demands Robust Private-Public Collaboration

CISOs operate within a “cybersecurity ecosystem” that relies on increasing information-sharing among and between organizations and the Government to guard against novel threats. Information infrastructures are increasingly interconnected (for example, through cloud service providers or other data management contractors) such that a security breach in any one organization’s systems can affect the data of thousands of others.⁴² As a result, on top of their internal duties, CISOs must engage with the broader cybersecurity ecosystem in which their organizations are enmeshed. And because the private sector operates the “vast majority” of IT

³⁸ Complaint ¶ 45.

³⁹ See ECF No. 46 at 22-24.

⁴⁰ NIST CSF, § 4.0.

⁴¹ *Framework for Improving Critical Infrastructure Cybersecurity*, *supra* note 29 at 20.

⁴² See, e.g., *Nonprofit Service Provider Blackbaud Settles Data Breach Case for \$49.5M with States*, ASSOCIATED PRESS (Oct. 5, 2023), <https://bit.ly/3Sfj2CA> (sensitive information, including health information and social security numbers of over 13,000 nonprofits exposed in 2020 breach of software provider).

systems in the United States, CISA recognizes that it must work with the private sector to “create trusted valued partnerships through transparency [and] responsiveness” that encourage no-blame information sharing regarding cyber risks and attacks.⁴³ As CISA director Jen Easterly put it, “cyber[security] is a team sport.”⁴⁴

Questions about how to share or publicize information about a particular vulnerability are highly sensitive and require team-wide consideration of tradeoffs and follow-on effects, because, among other things, “[n]otifying the public that a problem exists without offering a specific course of action to remediate it can result in giving an adversary the advantage while the remediation gap persists.”⁴⁵ Thus, programs like CISA’s coordinated vulnerability disclosure process permit private companies to report vulnerabilities in software products to the agency in confidence, which then coordinates disclosure while considering the potential effects of the vulnerability on critical infrastructure and “availability of effective mitigations.”⁴⁶ As detailed below, *see* Section II.C *infra*, the SEC’s claims could chill this critical cooperation, as CISOs would need to weigh whether disclosing a vulnerability or breach to Government partners could increase their risk of personal liability, adding new layers of risk to an already difficult business decision.

⁴³ HSDF, *Fireside Chat with CISA Director Jen Easterly and Former Rep. Jim Langevin*, YOUTUBE, at 3:25–4:00 (June 21, 2023), <https://bit.ly/48PANzI>.

⁴⁴ *National Cybersecurity Strategy*, statement by Jen Easterly, *supra* note 3 at 2.

⁴⁵ Allen D. Householder et al., *The CERT Guide to Coordinated Vulnerability Disclosure*, CARNEGIE MELLON UNIVERSITY SOFTWARE ENGINEERING INSTITUTE xi (Aug. 2017), <https://bit.ly/3ua2OCT>; accord INT’L ORG. FOR STANDARDIZATION & INT’L ELECTROTECHNICAL COMM’N, ISO/IEC 30111 (2019) <https://bit.ly/3UimTS5>; INT’L ORG. FOR STANDARDIZATION & INT’L ELECTROTECHNICAL COMM’N, ISO/IEC 29147 (2018), <https://bit.ly/47VL6ka>.

⁴⁶ *See* CISA, *Coordinated Vulnerability Disclosure Process*, <https://bit.ly/42e108v> (last visited Jan. 17, 2024). Likewise, the Vulnerability Equities Process, first developed by the White House in 2017, “outlines the procedure through which the government weighs various considerations in determining when to disclose software vulnerabilities and when to exploit them for law enforcement or foreign intelligence purposes” in consultation with multiple government stakeholders. Andi Wilson Thompson, *Assessing the Vulnerabilities Equities Process, Three Years After the VEP Charter*, Lawfare (Jan. 13, 2021), <https://bit.ly/48L7vSN>.

II. The SEC's Claims Are Counterproductive

A. The SEC's Claims Could Benefit Threat Actors

The SEC seeks to hold Mr. Brown personally liable for allegedly insufficient detail about vulnerabilities in SolarWinds's information system in SEC filings. *See* Compl. (ECF No. 1) ¶¶ 175–77 (implying that, to avoid liability, SolarWinds should have “disclose[d] the numerous risks, vulnerabilities, and incidents affecting its products in its SEC filings”). But, by virtue of their responsibilities, CISOs engage with countless, novel “risks” and “vulnerabilities” daily. For example, organizations commonly conduct “penetration testing” to probe their systems for weaknesses, which virtually always result in some findings of risks and vulnerabilities. These findings take time to fix due to technical complexity and resource constraints, and remain open issues in the meantime. As another example, many organizations operate bug bounty programs, which incentivize “white hat” security researchers to find vulnerabilities in their software products, resulting in dozens, hundreds, or even thousands of vulnerability reports through these channels.⁴⁷ As yet another, organizations often use third-party software, in which its manufacturers discover risks and offer patches, which take time to implement across organizations.⁴⁸

These are only several examples of the many types of risks that CISOs must manage daily. It is plainly impracticable and, amici submit, impossible to expect a CISO or company to detail all major risks and vulnerabilities in public SEC filings. No organization's cybersecurity is perfect. At any given moment, organizations identify new cybersecurity risks and have hundreds, if not

⁴⁷ *See, e.g.*, Neta Oren, *Looking Back at Our Bug Bounty Program in 2022*, META (Dec. 15, 2022), <https://bit.ly/3w8otfa> (explaining that Facebook has received “more than 170,000 reports” through its bug bounty program since 2011); *The Journey in Data: HackerOne Hits 100 Million Dollars in Bounties*, ETHICAL HACKER (May 28, 2020) <https://bit.ly/42sl8ne> (reporting that the HackerOne service that many companies use to receive bug bounty reports receives 40 vulnerability reports every 100 minutes).

⁴⁸ For example, in 2023 alone, over 28,000 such vulnerabilities were publicly reported by software companies through the what is known as the CVE Program. *See* CVE, <https://bit.ly/42sl8ne> (last visited Feb. 2, 2024).

thousands, of ongoing vulnerabilities that they are working to mitigate in real-time. And as soon as one set of critical risks is resolved, others are virtually certain to arise because the vulnerability landscape is continuously changing and requires constant internal reassessment and scaffolding of risks, based on tradeoffs, priorities, and other constraints.

Requiring organizations to provide detailed public disclosures of vulnerabilities would also result in harmful impact across the cybersecurity ecosystem. Consider a cloud company hosting sensitive data from thousands of persons, organizations, and Government agencies. Disclosures revealing the company's vulnerabilities would provide a trove of useful intelligence to threat actors interested in exploiting those vulnerabilities. That risk in turn could potentially harm the cloud company and all others whose data the company hosts. Publicizing such information near to real-time would be impractical, dangerous, and a radical departure from best practice.

For that very reason, CISA's coordinated vulnerability disclosure process for third-party software that may affect other companies calls for "sufficient time for affected users to obtain, test, and apply mitigation strategies prior to public disclosure."⁴⁹ Despite this recommendation by the Government's main cybersecurity agency, the SEC's theory of liability here would give CISOs and companies an incentive to make premature and detailed disclosures before mitigation strategies have been carried out—to the benefit of threat actors.

B. The SEC's Claims Could Exacerbate the Damage Caused by Cyberattacks

The SEC's theory of liability concerning public disclosures *during* a cyberattack also runs counter to Government-endorsed best practices. *See* Compl. ¶¶ 182–93 (suggesting that SolarWinds should have publicly disclosed that the ongoing cyberattacks "definitively allowed the attacker to compromise the server on which the Orion products were running" and allowed for

⁴⁹ *Coordinated Vulnerability Disclosure Process*, *supra* note 46; *see also* ISO/IEC 30111, *supra* note 48; ISO/IEO 29147, *supra* note 48; Householder, *supra* note 45.

“infiltration of customers’ systems”). For example, DOJ’s Best Practices for Cyber Victims emphasize that, “[d]uring an intrusion, an organization’s management and personnel should be focused on containing the intrusion, mitigating the harm, and collecting and preserving vital information that will help them assess the nature and scope of the damage and the potential source of the threat.”⁵⁰ The guidance lays out a multi-step process for a cyberattack response: (1) conduct an initial assessment; (2) minimize continuing damage; (3) collect information; and finally (4) notify employees, law enforcement, DHS, regulators, and other victims.⁵¹

DOJ’s Best Practices for Cyber Victims recommends cyberattack victims take steps to “minimize continuing damage.”⁵² CISOs concerned about potential personal liability during an attack will be distracted from this urgent task. Recognizing this issue, during a recent hearing before the House Committee on Homeland Security, Congresswoman Yvette Clarke admonished the Government for subjecting cyberattack victims to contradictory reporting requirements that “undermine security . . . [due to] a disproportionate focus on compliance with various reporting regulations over security and incident response.”⁵³ The FBI Director echoed those sentiments, testifying that, during “cyber incidents [such as] SolarWinds,” the Government should speak with “one voice” and not impose contradictory reporting requirements.⁵⁴

Ignoring these concerns, the SEC faults SolarWinds for simply stating in its initial disclosure that it was “still investigating” an issue, asserting this was “false” given that Mr. Brown already had formed a belief about that issue. *See, e.g.*, Compl. ¶¶ 189–90. The SEC’s allegations

⁵⁰ Best Practices for Victim Response and Reporting of Cyber Incidents, *supra* note 23 at 2.

⁵¹ Best Practices for Victim Response and Reporting of Cyber Incidents, *supra* note 23 at 14.

⁵² Best Practices for Victim Response and Reporting of Cyber Incidents, *supra* note 23 at 7.

⁵³ PBSNewsHour, *WATCH: House Hearing on “Worldwide Threats to the Homeland with DHS Secretary Mayorkas*, YouTube, at 2:38:40–2:38:50 (Nov. 15, 2023), <https://bit.ly/3vOTaGh> (statement of Rep. Clarke).

⁵⁴ Testimony of Christopher A. Wray, Dir., Fed. Bureau Investigations, *Worldwide Threats to the Homeland Before the Comm. on Homeland Sec.*, 118th Cong., at 7 (Nov. 15, 2023), <https://bit.ly/42a4mtd>.

fail to appreciate the fast-paced and uncertain nature of breach investigations, and presume that preliminary beliefs of individual incident response team members are established facts to be disclosed immediately, rather than issues that may require further investigation and validation.

Detailed early disclosures during an ongoing attack or its immediate, chaotic aftermath would compromise cybersecurity. CISOs who believe that oversharing information in public disclosures protects them and their organizations against claims of material omissions could have an incentive to disregard DOJ guidance to “not disclose incident-specific information” to any outside party other than the Government and other known victims.⁵⁵ This is particularly true while Government investigations into a breach are ongoing. “The FBI and U.S. Secret Service will . . . conduct their investigations with discretion and work with a victim company to *avoid unwarranted disclosure of information*. . . . Victim companies should likewise consider sharing press releases regarding a cyber incident with investigative agents before issuing them *to avoid releasing information that might damage the ongoing investigation*.”⁵⁶

Discretion is prudent because “[i]t is possible that, despite best efforts, a company that has addressed known security vulnerabilities and taken all reasonable steps to eject an intruder has nevertheless not eliminated all of the means by which the intruder illicitly accessed the network.”⁵⁷ Under those conditions, disclosing detailed “incident-specific information” in a public filing may provide valuable intelligence to the attacker, showing what the organization knows and does not know about the breach. Such details could also prove useful to other threat actors, who may

⁵⁵ Best Practices for Victim Response and Reporting of Cyber Incidents, *supra* note 23 at 12.

⁵⁶ *Id.* at 10-11 (emphasis added); see also Cyber Incident Reporting for Critical Infrastructure Act of 2022 (CIR CIA), 6 U.S.C. § 681e(a)(2)(A) (Upon receiving a report regarding “an ongoing cyber threat or security vulnerability,” CISA will “identify, develop, and rapidly disseminate to appropriate stakeholders actionable, anonymized cyber threat indicators and defensive measures.”).

⁵⁷ Best Practices for Victim Response and Reporting of Cyber Incidents, *supra* note 23 at 13.

“actively monitor defensive response measures and shift their methods to evade detection and containment,”⁵⁸ and could target the breached organization or test other organizations for similar vulnerabilities. By charging Mr. Brown under the facts alleged here, the SEC neglects to consider the harmful consequences of premature disclosure, putting CISOs in the impossible position of having to weigh future liability against immediate security needs.

C. The SEC’s Claims Could Chill Internal Discussions and Self-Assessments

The SEC cites internal communications among Mr. Brown and other employees discussing areas for improvement or noting one-off deviations from SolarWinds’ cybersecurity policies. *See* Compl. ¶¶ 77–112, 194–202 (contrasting SolarWinds’s policies on access controls, strong passwords, and VPNs, with one-off instances of noncompliance). But this approach fails to recognize candid, real-time communications between a CISO and organizational leadership are essential to developing and maintaining effective cybersecurity. The fact that a CISO, or a member of their team, identifies specific deviations from their company’s policies does not indicate that the CISO negligently failed to address compliance, or that the company does not maintain and use those policies. Cybersecurity professionals reading a public disclosure—such as the SolarWinds Security Statement at issue here—would understand that it is not intended to convey any guarantee of perfect security or compliance.

Maintaining any organizational policy involves identifying and rectifying deficiencies, and candid discussions between CISOs, their teams, and organizational leadership are essential for any cybersecurity program seeking to mitigate risk. The SEC’s attempt to weaponize Mr. Brown’s presentations to higher-ups alerting them to cybersecurity risks cannot be reconciled with its insistence that Mr. Brown “failed to ensure” that “senior executives were sufficiently aware of, or

⁵⁸ *Federal Government Cybersecurity Incident & Vulnerability Response Playbooks*, CISA (Nov. 2021) <https://bit.ly/3SAp8PC>.

understood, the severity of” the risks identified in those briefings. Compl. ¶ 100. And by using such communications as a basis for personal liability for Mr. Brown, the SEC’s action could chill (and, in some cases, probably already has chilled) necessary and open discussion about cyberthreats within organizations. Indeed, the SEC’s action would give CISOs an incentive to refrain from candid communication for fear that an internal email or presentation intended to improve cybersecurity measures will be taken out of context by the SEC to claim that a CISO deliberately misled investors.

The SEC’s action could also discourage CISOs from conducting routine cybersecurity assessments—including those recommended by the NIST Framework—that could alert them to new vulnerabilities, for fear of discovering information that the SEC would say must be disclosed publicly, particularly before remediation can be fully addressed. Compl. ¶¶ 49–53, 65 (citing vulnerabilities identified in voluntary NIST self-assessments as a basis for Mr. Brown’s liability). Transparency is especially vital in the “all-hands-on-deck” situation of a breach, and concerns about personal liability will hinder efforts to resolve the crisis.

In short, the SEC’s action could incentivize CISOs to avoid discussing and investigating risks internally while also giving an incentive to overstate and overshare potential vulnerabilities in SEC disclosures. This, in turn, would hamstring CISOs in the arms race by undermining the work of detecting and improving vulnerabilities, stifle the flow of important information about cyber risks within an organization, while also tipping off hackers, thereby increasing the likelihood of a successful cyberattack.

D. The SEC’s Claims Are Likely to Worsen the Critical Shortage of Cybersecurity Professionals

The SEC’s claims against Mr. Brown are the *first time* a cybersecurity professional faces personal liability for alleged public material misrepresentations for, in effect, doing their job.

Under the SEC’s theories, a CISO who enforces a company’s policies by maintaining open lines of communication with their team about potential compliance gaps allegedly commits fraud by failing to disclose those gaps to the public. Compl. ¶¶ 7–9, 62 (alleging that SolarWinds’s public “cybersecurity risk disclosure[s]” were too “generic and hypothetical,” unlike internal discussions identifying cybersecurity risks and working to mitigate them). The SEC ultimately premises liability on routine aspects of a CISO’s job: trying to defend their organization against threat actors, conducting self-assessments, notifying senior executives about risks, taking proactive steps to resolve such risks, and establishing cybersecurity practices that the organization endeavors to implement.⁵⁹ Compl. ¶¶ 7–9, 49–53, 62, 65, 77–112, 182–202. These new theories of liability are likely to cause more CISOs to leave their positions and deter qualified individuals from entering the profession, thereby exacerbating an acute shortage of cybersecurity professionals.

The dearth of cybersecurity professionals is already so severe as to threaten U.S. national security. Indeed, the U.S. Department of Defense has identified the cybersecurity workforce gap—the difference between the number of cybersecurity personnel organizations require versus the number available for hire—as a critical priority.⁶⁰ The International Information System Security Certification Consortium (“ISC2”) estimates a gap of 4 million globally and 482,985 in

⁵⁹ In other contexts involving compliance professionals, the SEC’s practice has been *not* to pursue actions unless the “misconduct [is] unrelated to the compliance function,” or where there is a “wholesale failure” to carry out their duties. Gurbir S. Grewal, *Remarks at New York City Bar Association Compliance Institute*, SEC (Oct. 24, 2023), <https://bit.ly/484SdqV>.

⁶⁰ U.S. Dep’t of Defense, Directive No. 8000.01, Management of the Dep’t of Defense Information Enterprise 3 (July 27, 2017), <https://bit.ly/3Ui3Lnd> (emphasizing the need to cultivate a “highly qualified and capable cyberspace workforce”). The National Initiative for Cybersecurity Education’s 2021–2025 Strategic Plan also calls for private-public collaboration to “recruit, hire, develop, and retain the talent needed to manage cybersecurity-related risks.” National Initiative for Cybersecurity Education, Implementation Plan 9 (2021), <https://bit.ly/3HADTeR>.

the United States.⁶¹ In a recent hearing before the House Homeland Security Committee's Subcommittee on Cybersecurity and Infrastructure Protection, a witness testified about that gap:

[T]here are over 660,000 cybersecurity job openings in the United States, but we only have 69 skilled cybersecurity workers for every 100 that employers demand[.] . . . [W]e are stepping onto the digital battlefield missing nearly a third of our army, and the consequences of this talent shortage echo across our country.⁶²

Mr. Markow added that “annual demand for cybersecurity workers has grown 200 percent in the past 10 years. Such rapid growth is difficult for our education system to catch up with in any field, let alone one as technically demanding and dynamic as cybersecurity.”⁶³ Over 40% of cybersecurity professionals report that their organizations face difficulties in hiring and retaining individuals with the necessary skills.⁶⁴ This workforce gap helps explain why most cybersecurity professionals believe their organizations are at “extreme” or “moderate risk” of a cyberattack.⁶⁵

The workforce gap is most acutely manifest in vacant cybersecurity leadership roles. Largely because of the difficulty in finding qualified CISOs, nearly half (45%) of companies surveyed did not employ a CISO,⁶⁶ including 19% (94) of Fortune 500 companies.⁶⁷ Organizations hiring across all industries face a severe lack of CISO candidates.⁶⁸ Without a qualified CISO on staff, organizations face near insurmountable hurdles in managing sophisticated cyberattacks.

⁶¹ See *ISC2 Cybersecurity Workforce Study: How the Economy, Skills Gap and Artificial Intelligence Are Challenging the Global Cybersecurity Workforce*, ISC2 12 (2023), <https://bit.ly/3Hy9PA1>.

⁶² See Cambrie Eckert, *Just In: U.S. Desperately Needs Cyber Talent, Congress Says*, NATIONAL DEFENSE MAGAZINE 50 (June 26, 2023), <https://bit.ly/3vWnKxw>.

⁶³ *Growing the National Cybersecurity Talent Pipeline: Hearing Before the Subcomm. on Cybersecurity & Infrastructure Prot. of the H. Comm. on Homeland Sec.*, 118th Cong. 118-19, 15 (statement of Will Markow) (2023).

⁶⁴ See *ISC2 Cybersecurity Workforce Study*, *supra* note 61 at 24.

⁶⁵ *ISC2 Cybersecurity Workforce Study*, *supra* note 61 at 26.

⁶⁶ *45% of Companies Do Not Employ a CISO*, SECURITY MAGAZINE (Nov. 24, 2021) <https://bit.ly/3HRQUkt>.

⁶⁷ *The 2023 Fortune 500 CISOs Analysis*, FORTIFY EXPERTS (2023), <https://bit.ly/48NQ11f>.

⁶⁸ Justin Rende, *Attracting and Retaining Top Cybersecurity Talent Amid Worker Burnout and Shortages*, FORBES (Dec. 30, 2022, 6:30 AM), <https://bit.ly/48M5TYV>.

Apart from hiring, organizations also struggle to retain their existing CISOs. Surveys show that average CISO tenure is less than five years.⁶⁹ The cause for high attrition is apparent:

Cybersecurity professionals are facing unsustainable levels of stress. . . . CISOs are on the defense, with the only possible outcomes that they don't get hacked or they do. The psychological impact of this directly affects decision quality and the performance of cybersecurity leaders and their teams.⁷⁰

In a 2022 study, over half of CISOs surveyed reported that their current CISO roles saddled them with “significant personal risks,” including “stress,” “burnout,” “personal financial accountability for a breach,” and “job loss as a result of a breach.”⁷¹ Approximately 25% of CISOs expect to leave the CISO role entirely due to these overlapping “work-related stressors.”⁷²

One CISO described the ramifications of the SEC case as follows:

For CISOs already contemplating leaving their role, the SEC's charges will only add fuel to their desire to get out. Others feeling pressure or low support from their board of directors or C-level management will likely strongly consider moving on now. . . . [T]here will be attrition related to the CISO role, either by CISOs already in a similar position as Tim Brown or those who want to be sure not to head there.⁷³

More and more CISOs, as well as other cybersecurity leaders, are likely to opt out of a role in which they can be held personally responsible by the SEC based on issues outside of their control and beyond their reasonable ability to defend against in the case of nation-state attackers.⁷⁴

⁶⁹ Heidrick & Struggles, 2022 Global Chief Information Security Officer (CISO) Survey 5, <https://bit.ly/3SboRRE>.

⁷⁰ Press Release, Gartner, Gartner Predicts Nearly Half of Cybersecurity Leaders Will Change Jobs by 2025 (Feb. 22, 2023), <https://bit.ly/48N3ddp>.

⁷¹ Heidrick & Struggles, *supra* note 69 at 12; *Growing the National Cybersecurity Talent Pipeline*, *supra* note 63 at 3 (statement of Rep. Garbarino, Chair, H. Comm. on Homeland Security) (“61 percent of those who are employed [as cybersecurity professionals] say they are burned out after triaging years of major cyber incidents.”).

⁷² Press Release, Gartner, *supra* note 70.

⁷³ Shaun Bertrand, *SEC SolarWinds Filing: Forecasting the Fallout for CISOs*, CONVERGE TECHNOLOGY SOLUTIONS (Dec. 14, 2023), <https://bit.ly/47U5ulQ>.

⁷⁴ *Cf.* Deepti Gopal, et al., *Predicts 2023: Cybersecurity Industry Focuses on the Human Deal*, GARTNER 61 (Jan. 25, 2023), <https://www.bitsight.com/thank-you/gartner-predicts-2023> (noting that employee “churn will damage the [cybersecurity] mission and cost more”).

E. The SEC’s Claims Could Chill Private-Public Cooperation

Just as dangerous, the SEC’s action could deter cooperation with law enforcement and CISA. Many CISOs proactively, and quietly, cooperate with the Government when they learn about new risks. As FBI Director Wray emphasized:

[The Government] need[s] the private sector to come forward and warn us and our partners when they see malicious cyber activity. We also need the private sector to work with us when we warn them that they are being targeted. Significant cyber incidents—SolarWinds, Cyclops Blink, the Colonial pipeline incident—only emphasize what we have been saying for a long time: the government cannot protect against cyber threats on its own.⁷⁵

Private-public cooperation on cybersecurity is so essential that Congress expressly prohibits CISA from weaponizing voluntary cyberattack disclosures “to regulate [the disclosing organization], including through an enforcement action.”⁷⁶

Along similar lines, DOJ recommends that organizations “establish a relationship with their local federal law enforcement offices long before they suffer a cyber incident” since such a “trusted relationship . . . cultivates bi-directional information sharing that is beneficial both to potential victim organizations and to law enforcement.”⁷⁷ As DOJ acknowledges, when “deciding whether to notify law enforcement of a cyber incident or whether to cooperate fully in an investigation, organisations [and CISOs] weigh the anticipated benefits of a proactive approach against legal, business, reputational and other practical concerns.”⁷⁸

⁷⁵ Testimony of Christopher A. Wray, Dir., Fed. Bureau Investigations, *Worldwide Threats to the Homeland Before the Comm. on Homeland Sec.*, 118th Cong., at 7 (Nov. 15, 2023), <https://bit.ly/42a4mtd>.

⁷⁶ CIRCIA, 6 U.S.C. § 681e(a)(5)(A); *id.* § 681e(b)–(c) (providing protections for cyberattack reporting); *see* Cybersecurity Information Sharing Act of 2015, 6 U.S.C. § 1505 (protecting organizations from liability if they follow voluntary cybersecurity monitoring and disclosure practices). The law is replete with examples of the Government’s express recognition that risk of personal liability reasonably deters victims from reporting crimes and cooperating with law enforcement (*e.g.*, U Visas for victims of criminal activity, safe haven laws, safe harbor laws).

⁷⁷ Best Practices for Victim Response and Reporting of Cyber Incidents, *supra* note 23 at 5.

⁷⁸ *Cyber Incidents: How Best to Work with Law Enforcement*, CYBER SECURITY: A PEER-REVIEWED JOURNAL 103 (May 22, 2017), <https://bit.ly/3OjzOiR>.

Knowing that they may be unfairly and disproportionately exposed to personal liability rather than treated as a victim could deter CISOs from creating a “trusted relationship” with the Government. In deciding whether to disclose to law enforcement (1) known vulnerabilities seeking technical assistance; (2) attempted cyberattacks to share best practices; or (3) successful breaches, to prevent the further compromise of sensitive information and even national security, CISOs must grapple with mounting concerns that they are handing over incomplete evidence that the SEC may later weaponize against them. Even if information is turned over, any delay to assess the risk of individual liability may seriously hinder investigations into the perpetrators.

Faced with potential liability under the SEC’s theories here, the CISO of, for example, a chip company whose technology powers millions of computers and phones, would face a dilemma when discovering a new vulnerability. Rather than sharing what they know with the Government, they may seek to minimize potential SEC liability by either (i) choosing not to share any details with law enforcement, for fear of being accused of not simultaneously disclosing complete information to the investing public, or (ii) waiting to share information with law enforcement only when it can also safely be described in contemporaneous public filings, at which point law enforcement would be deprived of the benefit of early threat intelligence. Both choices undermine the cybersecurity ecosystem and tilt the board in favor of persistent threat actors. Accordingly, the SEC’s action risks disrupting a robust history of private-public information-sharing and is in stark tension with the collaborative best practices of other federal agencies like CISA, the FBI and DOJ, and with cybersecurity more broadly.

CONCLUSION

For these reasons, the claims against Mr. Brown and SolarWinds should be dismissed.

February 2, 2024

Respectfully submitted,

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APPENDIX — LIST OF AMICI CURIAE

ORGANIZATIONAL AMICI:

The **Cyber Governance Alliance (CGA)** is a coalition of experienced cyber professionals representing stakeholders throughout the critical infrastructure ecosystem and is committed to proactive solutions that protect and empower the cyber community. CGA educates policymakers about the importance of principles-based cyber governance solutions and believes those acting in good faith and in accordance with accepted best practices should be guaranteed liability protections under the law.

The **GlobalCISO Leadership Foundation (GCLF)** is an independent, CISO-led foundation that aims to advance mentor-driven, quality education for cybersecurity professionals.

The **Internet Security Alliance (ISA)** is a cross-sector trade group with membership from virtually every critical industry sector. Its mission is to integrate advanced technology with economics and public policy to create a sustainably secure cyber system. It is a recognized world leader in developing and promoting independently assessed and proven-effective cybersecurity risk management principles, toolkits and best practices.

The Petrie Group provides cybersecurity consulting support to small businesses.

The **Secure Policy Coalition**, owned and operated by Modern Fortis LLC, is a strategic alliance dedicated to the support of CISOs, cyber professionals, corporations, and stakeholders.

The **Security Innovation Network (SINET)** is a trusted and purpose-driven community that accelerates the investments and the advancement of early stage and emerging growth cybersecurity companies into global markets. Its model connects cybersecurity, CISO, risk executives, and professionals from venture capital, investment banking, system integration, policy, legal, academia and science, as well as international government, civilian, military and intelligence agencies.

TAG Infosphere is a trusted next generation research and advisory company that utilizes an AI-powered SaaS platform to provide on-demand insights, guidance, and recommendations to enterprise teams, government agencies, and commercial vendors in cybersecurity, artificial intelligence, and climate science.

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CERTIFICATE OF SERVICE

I hereby certify that on February 2, 2024, I electronically filed this document with the Court via CM/ECF, which will automatically send notice and a copy of same to counsel of record via email.

/s/ Andrew D. Goldstein
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