HEALTH WEALTH CAREER CYBERSECURITY: A GROWING OPERATIONAL RISK IN THE INVESTMENT MANAGEMENT INDUSTRY DECEMBER 2018

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On Friday, May 12, 2017, the National Health Service (NHS) became one of the most high-profile victims of a global ransomware attack, resulting in ambulances being diverted, doctors unable to access patient records and cancelled operations.

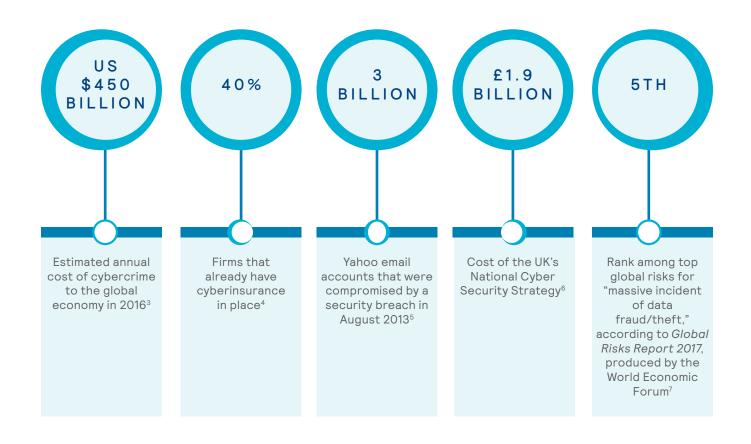
Five months later, one of the world's biggest credit agencies, Equifax, was subject to a cybersecurity breach that led to possible exposure of social security numbers, birth dates, addresses and driving license numbers for up to 143 million US residents. Equifax's CEO and chief security officer both resigned shortly after the breach was publicized.

To some extent, the cases above support the argument that cyberattacks are becoming more frequent and have a more significant impact, and the targets of these attacks are becoming more high profile. This trend is a cause for concern. Shawn Henry, former head of the FBI's cyber division, said in his interview with BRINK: "The biggest mistake is that companies are being reactive and not proactive. In other words, they're responding to incidents after the fact. ... The proactive piece, where companies take security into their own hands or start actively hunting for adversaries in their environment, is the single biggest step that organizations can take."²

Healthcare and credit reporting organizations are not the only potential targets — investment managers are not immune to the threat of an attack. Although the financial industry has started (albeit slowly) to address its obligations in relation to protecting client data, the potential reputational damage and monetary impacts, the journey is far from over. The reality is that the threats posed by cyberhacks and data breaches are dynamic, ever changing and evolving in complexity.

¹ Federal Trade Commission. "The Equifax Data Breach: What to Do." September 8, 2017, available at https://www.consumer.ftc.gov/blog/2017/09/equifax-data-breach-what-do. ² BRINK. "CrowdStrike's Shawn Henry on Cyberterrorists, Ransomware and Hacked Elections." October 24, 2016, available at www.brinknews.com/crowdstrikes-shawn-henry-on-cyberterrorists-ransomware-and-hacked-elections.

CYBERSECURITY BY THE NUMBERS



Lloyd's. "Counting the Cost," July 10, 2017, available at https://www.lloyds.com/news-and-insight/risk-insight/library/technology/library/technocountingthecost.

Hiscox. Cyber Readiness Report 2017, available at https://www.hiscox.co.uk/cyber-readiness-report/docs/cyber-readiness-report-2017.pdf.

⁵ Stempel J, Finkle J. "Yahoo Says All Three Billion Accounts Hacked in 2013 Data Theft," October 3, 2017, available at https://www.reuters.com/ article/us-yahoo-cyber/yahoo-says-all-three-billion-accounts-hacked-in-2013-data-theft-idUSKCN1C8201.

[&]quot;Britain's Cyber Security Bolstered by World-Class Strategy," November 1, 2016, available at https://www.gov.uk/government/news/britainscyber-security-bolstered-by-world-class-strategy.

World Economic Forum. The Global Risks Report 2017: 12th Edition, available at http://www3.weforum.org/docs/GRR17_Report_web.pdf.

REGULATORY OVERSIGHT



The threat to the financial industry has not gone unnoticed by regulators, who are well aware of the dangers and implications to market stability. The US Securities and Exchange Commission (SEC) has made it a priority to address the preparedness of investment managers to handle cybersecurity and information security threats. In addition to the Cybersecurity 2 Initiative review, which included the assessment of cybersecurity policies and procedures among a sample of investment, advisors and broker dealers, the SEC recently announced two new initiatives to help combat cybersecurity threats and protect retail investors.

First, the SEC created a Cyber Unit with a mandate to target cyber-related misconduct, with a focus on market-manipulation schemes, hacking to obtain material non-public information and threats to trading platforms and other critical market infrastructure. Second, the SEC's Retail Strategy Task Force is developing proactive and targeted measures to identify misconduct impacting retail investors.⁸

The UK's Financial Conduct Authority (FCA) has not yet followed the lead of the SEC by conducting direct cybersecurity and information security reviews. However, forthcoming regulations in the form of General Data Protection Regulation, which applies in the UK as of May 25, 2018, and the Network & Information Security Directive, due in 2019, demonstrates how the increase and impact of cyberattacks have grabbed the attention of regulators outside the US.

⁸ Securities and Exchange Commission. "SEC Announces Enforcement Initiatives to Combat Cyber-Based Threats and Protect Retail Investors," September 25, 2017, available at https://www.sec.gov/news/press-release/2017-176.

The impact of the regulators' oversight cannot be underestimated, and fines have already been issued to firms that fail to meet the standards required by regulators and other governmental organizations. and fines have already been issued to firms that fail to meet the standards required by regulators and other governmental organizations. Some of these fines can be seen in the table below; in the future, these fines are likely to be more common and possibly more costly. Early drafts of the UK's new Data Protection bill indicate that British organizations could face fines of up to £17 million, or 4% of global turnover, if they fail to take measures to prevent cyberattacks.⁹

DATE OF FINE	REGULATORS/ GOVERNMENTAL ORGANIZATION		PENALTY AMOUNT
Nov 2014	FCA/Prudential Regulation Authority	RBS Group	£56m
Jun 2016	SEC	Morgan Stanley	\$1m
Aug 2016	Philippine Central Bank	Rizal Commercial Banking Corporation	\$21m
Oct 2016	Information Commissioner's Office	TalkTalk	£400k

⁹ BBC. "Firms Face £17m Fine if They Fail to Protect Against Hackers," August 8, 2017, available at www.bbc.co.uk/news/business-40857219.

WHAT TO EXPECT FROM YOUR INVESTMENT MANAGER

So how does an investor or a trustee gain comfort that an asset or investment manager is doing the utmost to protect proprietary and client data? Mercer Sentinel has developed a safe and sound cybersecurity framework, which covers five key areas:

- · Polices
- Governance
- Awareness training
- External parties
- · IT infrastructure protection

When assessing managers, this framework enables us to form a view on the effectiveness of their cybersecurity framework. Within each area of our framework, we have highlighted some of the standards we would expect an organization to adopt to meet our "safe and sound" threshold.

SAFE AND SOUND CYBERSECURITY

Put in place a formally documented cybersecurity policy.

POLICIES

- Have a senior governing body review and approve the policy.
- Describe the firm's cybersecurity risk assessment process in the policy.
- Ensure the policy includes an incident response plan.

GOVERNANCE I

- Allocate responsibility for information and cybersecurity risk to management and senior individuals.
- Conduct a formal firm-wide cybersecurity risk assessment at least annually.
- Consider cybersecurity insurance coverage as part of the firmwide insurance

AWARENESS TRAINING

- Conduct training to build and maintain awareness of cybersecurityrelated issues across the organization.
- Provide training to new hires as part of the induction program and to existing staff on a regular basis.
- Perform regular testing through social engineering exercises, such as phishing emails.

EXTERNAL PARTIES

- Review vendors' cybersecurity policies as part of the RFP process.
- Ensure thirdparty vendors are required to notify the firm of any cyberattacks and information security breaches in a timely manner.
- Encrypt data anytime data are transferred between external parties.

IT INFRASTRUCTURE PROTECTION

- Engage third-party experts to conduct logical and physical penetration tests at least annually
- Develop a formal leaver/joiner policy for determining user access to systems and applications.
- Enforce the use of complex passwords, firewalls, multifactor authentication and breach detection software.

Mercer Sentinel's position in the market allows us a unique insight into the preparedness of many managers. We have performed operational due diligence on over 900 managers globally, and each manager's approach can be widely divergent. Mercer Sentinel has undertaken specific, targeted cybersecurity and information security surveys and investment manager reviews commissioned by clients.

As an example, Mercer Sentinel recently produced a research paper detailing the likelihood of direct-asset loss of securities or cash arising from cybersecurity issues. This paper was commissioned by the trustees of a large UK corporate pension scheme who sought to understand the impact of a cybersecurity breach in their custodian's systems, and whether such a breach could result in loss of scheme assets held at the custodian bank. Our experience in reviewing operational risk across the asset management industry allows us to provide clients with a tailored report to address specific concerns and to provide the trustees with a level of comfort on this point.

We continue to believe the threat to the asset management industry posed by cybersecurity is not going to disappear anytime soon, and therefore investment managers need to demonstrate that they have the appropriate controls and processes in place to prevent, identify and resolve data breaches in a timely manner. Mercer Sentinel can help investors and trustees assess asset and investment manager preparedness through onsite reviews and operational risk reports, surveys, gap analysis exercises and research papers.

Mercer Sentinel is a specialist team within Mercer's Wealth business, operating globally, with expertise in operational due diligence, custodial services review and benchmarking and asset transitioning services. We believe that investors and trustees should be aware of and understand whether the investment managers they deploy or are considering deploying capital to have adequate cybersecurity processes and procedures in place.



Should you wish to discuss any issues raised in this article, please feel free to contact your local Mercer consultant or our global team leaders.

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HOW MERCER CAN HELP

Wealth and investment require sophisticated solutions. We offer research and advice on how to assess risk and design investment strategies while keeping in mind the need to optimize throughout changing times. Along with more than 140 manager researcher with in-depth knowledge of the complexities and ever-changing factors that impact investment, Mercer's consultants can help you make effective decisions that align with your business needs and ensure more rewarding futures for your employees.

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