

CAPTIVE
INNOVATIONS
Thinking Differently

2023

Thinking Differently about How to Underwrite Cyber Insurance

Panel Moderator: Ward Ching, Aon and USC
Shawn Ram, Head of Insurance, Coalition
Paul Campbell, FIS Global
Paul Kim, Aon

SESSION DESCRIPTION



Cyber insurance continues to be a significant risk finance problem area for most organizations.

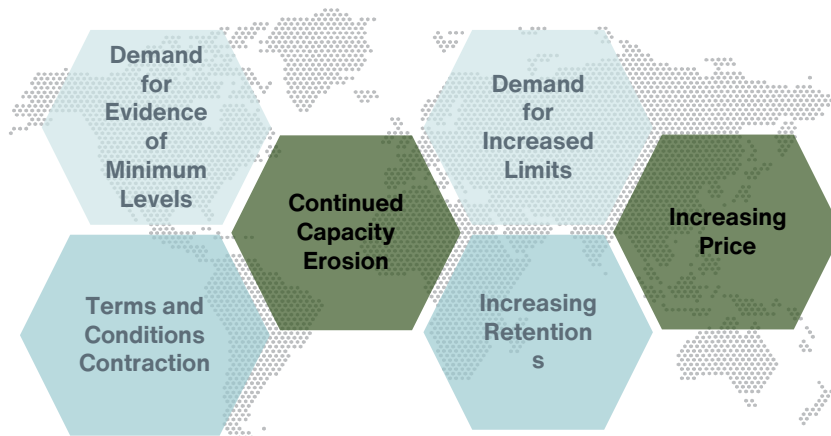
While systems breaches have increased in complexity, ransomware has quickly outstripped cyber coverage levels, while premiums have been increasing and capacity shortages continue to be the norm. Rudimentary economics would suggest that high and sustained market pricing should attract new risk capital into the market. Additionally, technological advances in cyber risk mitigation should also encourage insurance industry innovation. Has it?

As a follow up to the 2022 HCIC Forum, this panel will continue their discussion around what new program innovations are presenting themselves in the market.

Cyber Today?

Market conditions, known and unknown variables, and capital availability indicate demand for a risk-taking vehicle

Market Conditions Demand a Long-Term Solution...



... And Current Events Require a Response

Russia Invasion of Ukraine

Insurers are in process of expanding "War Exclusions," "Territory restrictions" and "Aggregated/Systemic/Correlated Risk Exclusions" in wake of Russia invasion of Ukraine

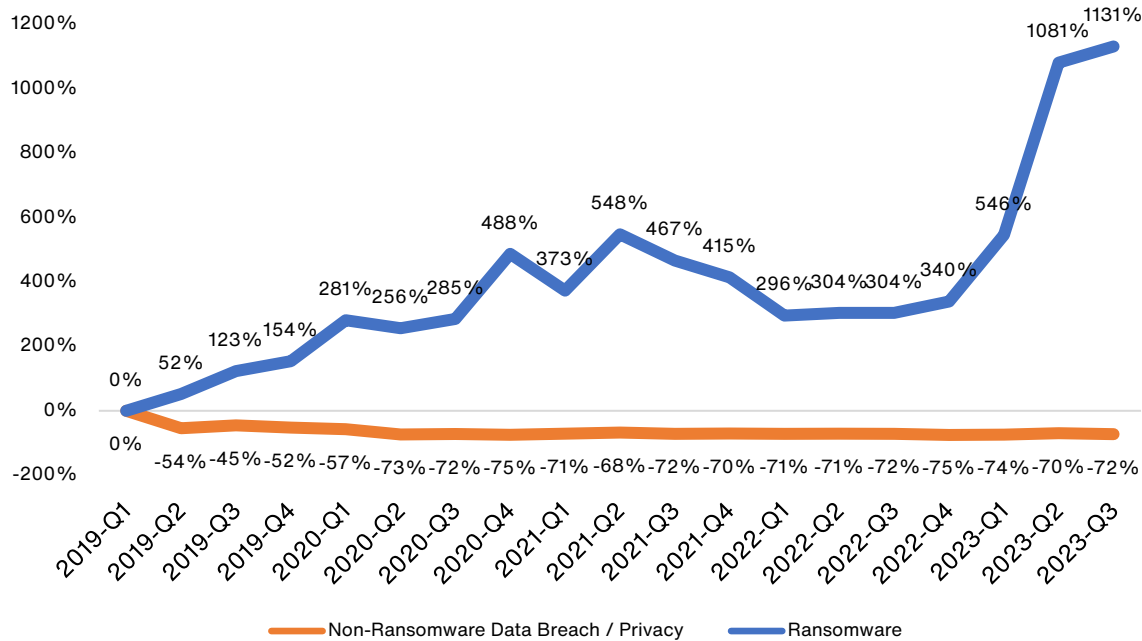
Industry Losses

Equifax: \$2.1B
Amazon: \$888M
EU GDPR has handed out about \$1.2 billion in fines since Jan. 28, 2021

Source: Aon 2022

With cyber insurance pricing increasing 50%-100%+ and minimum SIR's increasing from \$1m-\$5m to \$10m-\$25m, the creation of a risk-taking vehicle with robustly vetted companies is more prudent than ever

Cyber Incident Rates Indexed to Q1 2019



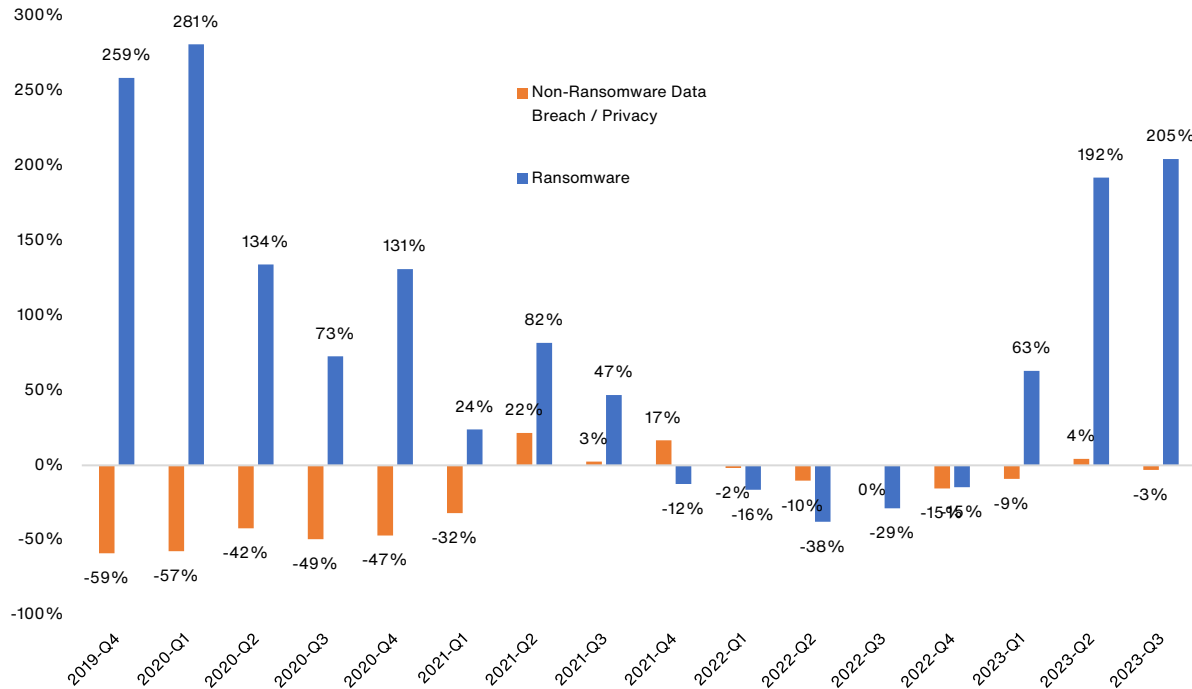
Key Observations:

- Ransomware activity has continued to **outpaced Non-Ransomware Data Breach/Privacy Event activity**.
- **Ransomware up 1,131%** from Q1 2019 to Q3 2023
- Compared to Q2 2023:
 - Ransomware up 4%
 - Non-Ransomware Data Breach/Privacy down 9%
- The most commonly impacted industries by Ransomware in Q3 2023 were:
 - Business Professional Services
 - Manufacturing
 - Real Estate / Construction
 - Education
 - Healthcare

Source: Risk Based Security, analysis by Aon. Data as of 10/2/2023; Claim count development may cause these percentages to change over time

Source: Samuel J.Y. Tashima, FCAS, MAAA, MBA, Director & Actuary, US Actuarial & Analytics, Aon

Year-over-Year Cyber Incident Frequency Change by Quarter



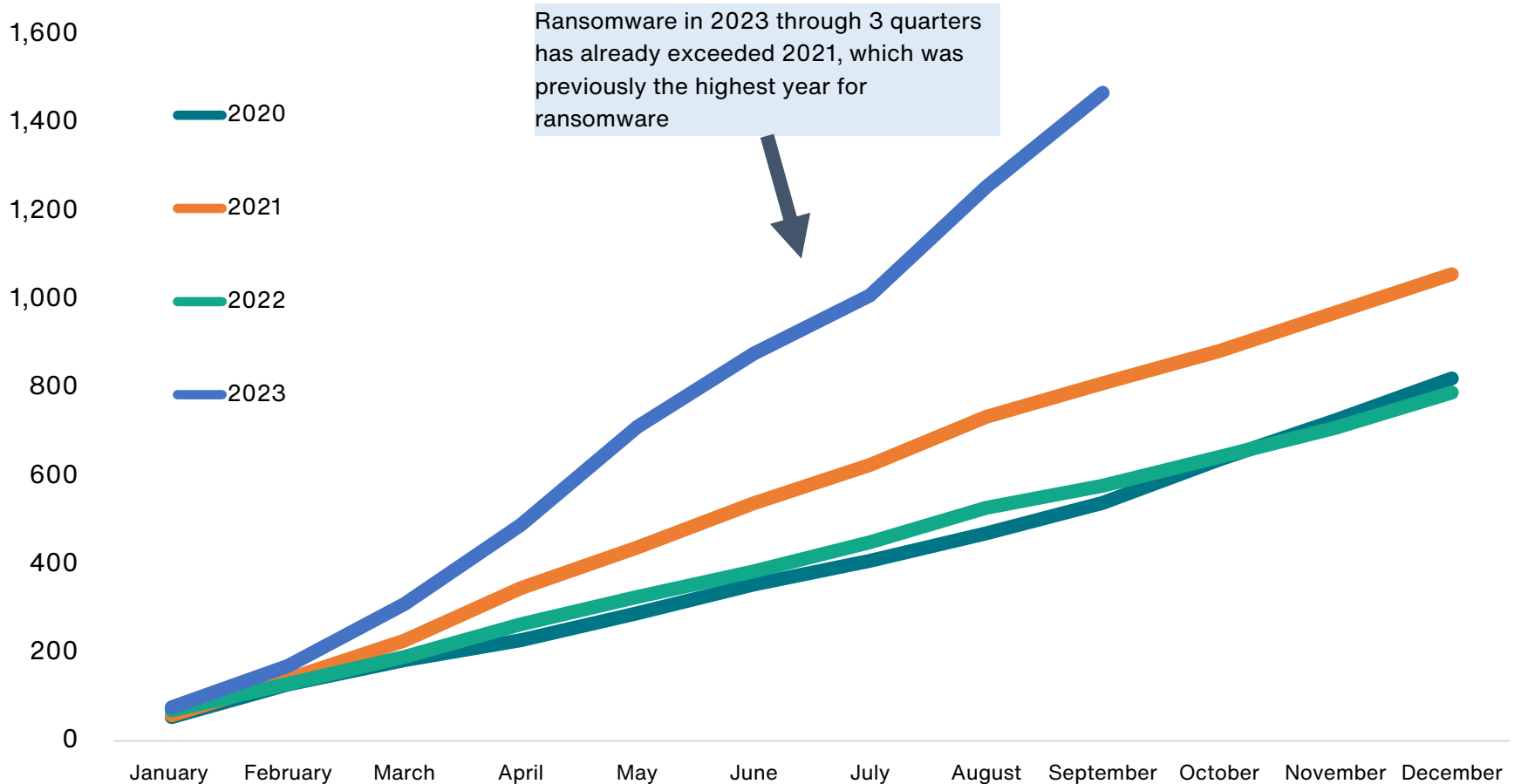
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Key Observations:

- Ransomware events continued its upward trajectory in 2023
- Non-Ransomware Data Breach / Privacy are slightly down by essentially unchanged year over year in Q3 2023
- NCC Group reported a 169% increase in ransomware attacks for the three months from June through August 2023 compared to the same period in 2022

Cumulative Ransomware Frequency Growth by Month



Source: Risk Based Security, analysis by Aon. Data as of 10/2/2023; Claim count development may cause these figures to change over time

Source: Samuel J.Y. Tashima, FCAS, MAAA, MBA, Director & Actuary, US Actuarial & Analytics, Aon



Who we are

Coalition is one of the largest commercial InsurTechs, and a market leader in cyber insurance

Product Launch

January 1, 2018

Customers

160,000+ policyholders

60,000+ SaaS users

Technology Platform

48 trillion data collection events annually

Cyber Programs

Cyber primary & excess up to \$1B revenue in the US and Canada

Run-rate Premium

\$1 Billion

as of September 2022

Carrier Partners

Allianz

Arch

ascot

LLOYDS

RenaissanceRe

Swiss Re

TransRe

VANTAGE

ZURICH

Team

- 650+ employees across 7 countries
- Deep bench of insurance & reinsurance

AIG

amazon

AON

CLOUDFLARE

CNA

Dropbox

HISCOX

Lookout



Funding

\$755M



Durable CAPITAL PARTNERS

Felicis Ventures

GENERAL ATLANTIC



Index Ventures

Kinetic

Ribbit Capital

VALOR EQUITY PARTNERS

VY capital

WHALE ROCK CAPITAL MANAGEMENT LLC



Active Protection

Monitoring and alerting to identify and prevent risk before it escalates

Active Risk Assessment

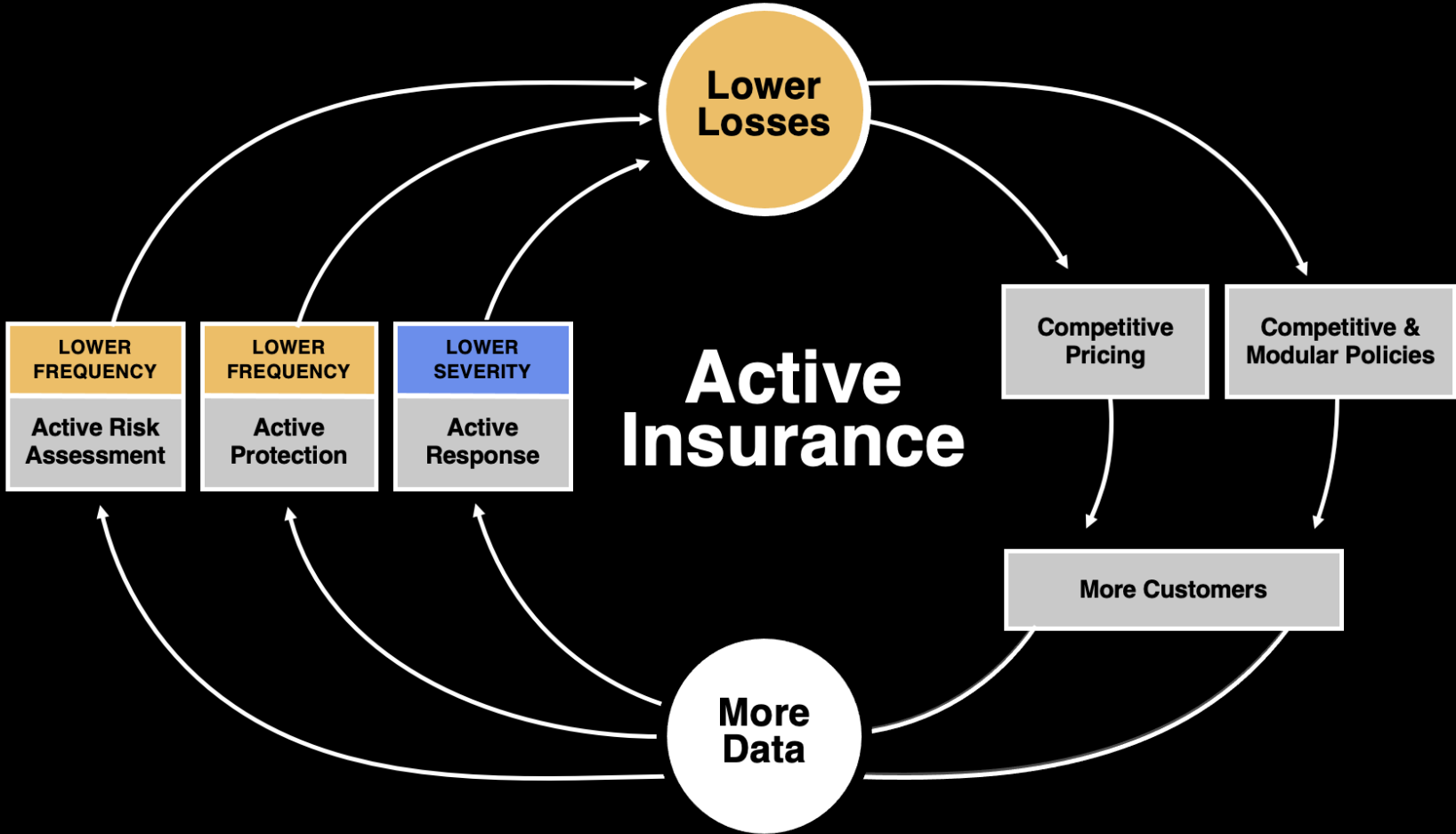
Underwriting, quoting, renewals, and digital risk scores powered by real-time data

Active Insurance

Active Response

In-house resources that accelerate response and coverage if an incident occurs

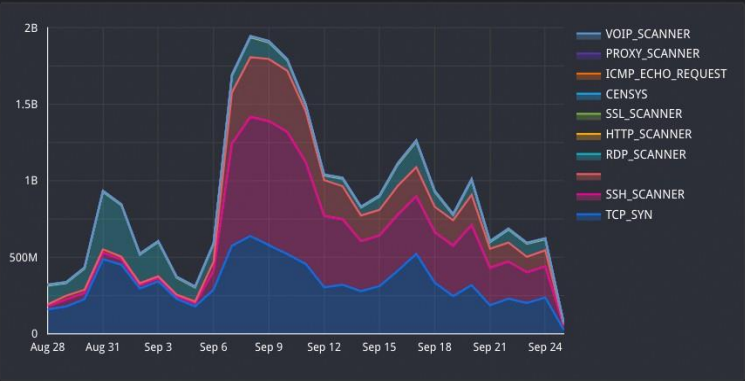
Active Insurance



Honeypot Heatmap

Past 30 days

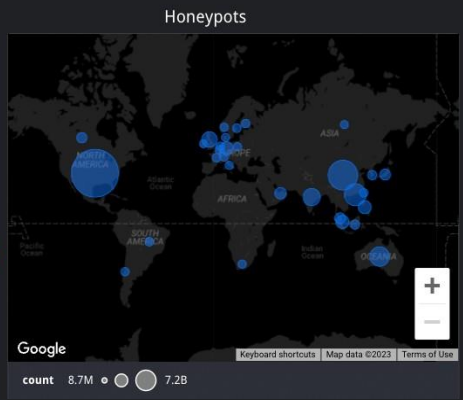
Events 25.7B |
 Attacker IPs 615.5K |
 Honeypot IPs 134 |
 Payloads 3.9B |
 Paths 636.6K |
 Tags 322 |
 Attacker countries 234 |
 Attacker cities 21.4K |
 Honeypot countries 31 |
 Attacker ISPs 12.1K |
 Attacker timezones 345 |
 Honeypot timezones 35 |
 Attacker ASN 12.8K



Attacker Countries	Count
1. United States	6,263,485,590
2. France	2,534,561,854
3. Germany	1,812,882,593
4. Poland	1,747,492,855
5. Russia	1,738,180,717
6. Singapore	1,383,742,181
7. India	1,356,001,595
8. United Kingdom	1,189,833,959
9. Indonesia	1,105,864,746
10. China	906,485,703
11. Canada	741,941,817
12.	681,162,181

Honeypot Countries	Count
1. United States	7,154,188,976
2. China	3,923,784,119
3. Hong Kong	2,535,644,881
4. Australia	2,078,070,313
5. India	1,676,600,391
6. United Kingdom	1,353,105,116
7. Singapore	951,140,147
8. Philippines	930,259,246
9. Germany	924,943,826
10. United Arab Emirates	642,491,607
11. Malaysia	548,524,496
12. Japan	524,420,217

Tags	Count
✓ TCP_SYN	9.5B
✓ SSH_SCANNER	8.4B
✓ RDP_SCANNER	3.3B
✓ HTTP_SCANNER	104.2M
✓ SSL_SCANNER	54.6M
✓ CENSYS	35.6M
✓ ICMP_ECHO_REQUEST	21.8M
✓ PROXY_SCANNER	17.3M



Attacker Proxy T...	Count
1. DCH	19,687,101,288
2. -	5,205,942,965
3. VPN	617,185,531
4. SES	92,402,966
5. PUB	65,139,995
6. TOR	501,868
7. WEB	236,071

Attacker ISP	Count
1. Digital Ocean	3,139,610,282
2. OVH SAS	2,633,099,780
3.	2,142,402,368
4. Meverywhere sp. z o.o.	1,743,623,951
5. Rostelecom	1,544,474,271
6. IP Volume inc	1,414,588,589
7. DigitalOcean	1,230,235,309
8. GoDaddy.com, LLC	1,002,201,895
9. Hostinger International Limited	948,704,639
10. Alibaba	920,420,544
11. Universitas Airlangga	729,206,028
12. AS-DC	552,872,245

ASN Class	Count
1. shared	13,491,955,627
2. self_isp	8,142,976,622
3.	2,332,607,758
4. unknown	1,587,891,239
5. self_owned	113,079,438



Case Study

MOVEit Vulnerability

- We observed threat actor scanning activity for MOVEit software as early as November 2022 through our honeypot network - **6+ months before the vulnerability was publicly disclosed**
- Honeypot activity caused us to start proactively scanning for the technology in all applicants and policyholders
- When the vulnerability was publicly disclosed in June 2023, we already knew affected policyholders (19 total policyholders impacted) so we were able to notify them within minutes of the vulnerability being announced publicly. As of July 2, we were able to confirm that 14 have both patched and were not breached prior to patching. We are in contact with the remaining 5 to get simi ar confirmations, and expect to have no MOVEit exposure on our books shortly. We have not had any MOVEit claims
- Any new applicant receives a technical contingency on their quote if they are using MOVEit to ensure they are not exposed

Number of times honeypots were scanned for MOVEit

1.	Date (Year Mbnth) •	Count
	Nov 2022	4
2.	Dec 2022	2
3.	Jan 2023	2
4.	Feb 2023	6
5.	Mar 2023	2
6.	May 2023	88
7.	Jun 2023	615

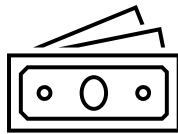


**We are only
10% of the way**

FIS TODAY – NYSE: FIS, \$14.6B REVENUE

FIS is a leading provider of technology solutions for financial institutions and businesses of all sizes and across any industry globally. We enable the movement of commerce by unlocking the financial technology that powers the world's economy. Our employees are dedicated to advancing the way the world pays, banks and invests through our trusted innovation, system performance and flexible architecture.

Economies Rely on Us Trusted to move the world's money.



\$ 40 T

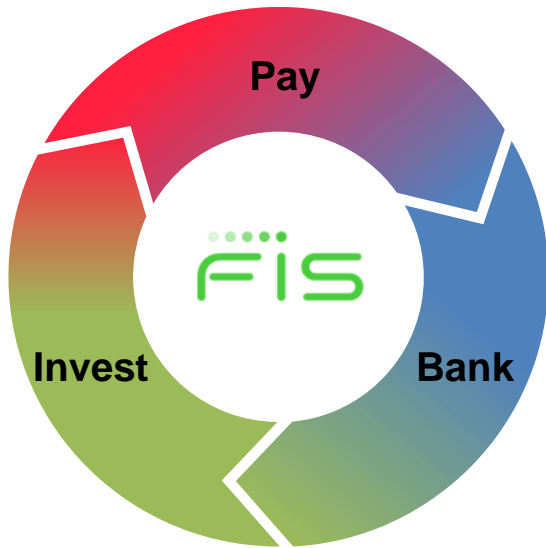
was processed on our asset management technology in 2022. That's nearly half the world's total and over 1.5x the GDP of the U.S



95%

We enable 95% of the world's leading banks.
Source: Forbes "World's Best Banks" - April 2022

What We Do



MERCHANT SOLUTIONS

WHAT WE DO
We provide a unique capability to **power global omni-commerce**



BANKING SOLUTIONS

WHAT WE DO
Our solutions allow people to **borrow, save, pay and invest**



CAPITAL MARKET SOLUTIONS

WHAT WE DO
We facilitate the **movement, management and growth of money**

ADVANCING THE WAY THE WORLD PAYS, BANKS AND INVESTS

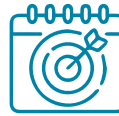
Approach – Insurance

Align Program with Enterprise Strategic Objectives - FIS



Strategic Objective

- Advance technology and innovation
- Accelerate revenue growth
- Expand strategic partnerships
- Leverage embedded finance opportunities



Challenges

- Identifying and maintaining executive sponsorship
- Marketing relationships with SMB's are complicated by third party relationships (ISO, ISV)
- Lack of insurance expertise across the organization



Strategy/Solutions

- Build on the success of SMB cyber insurance product to expand cyber insurance offerings
- Deploy SMB insurance platform through embedded finance and third party relationships
- Identify and launch key affinity products in 2023 and beyond

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HAWAII CAPTIVE INSURANCE COUNCIL

2023



Questions?

Mahalo. This concludes our presentation.

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