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Cyber Risk Awareness and Spending is on the Rise Among Public Finance Sectors

May 2024

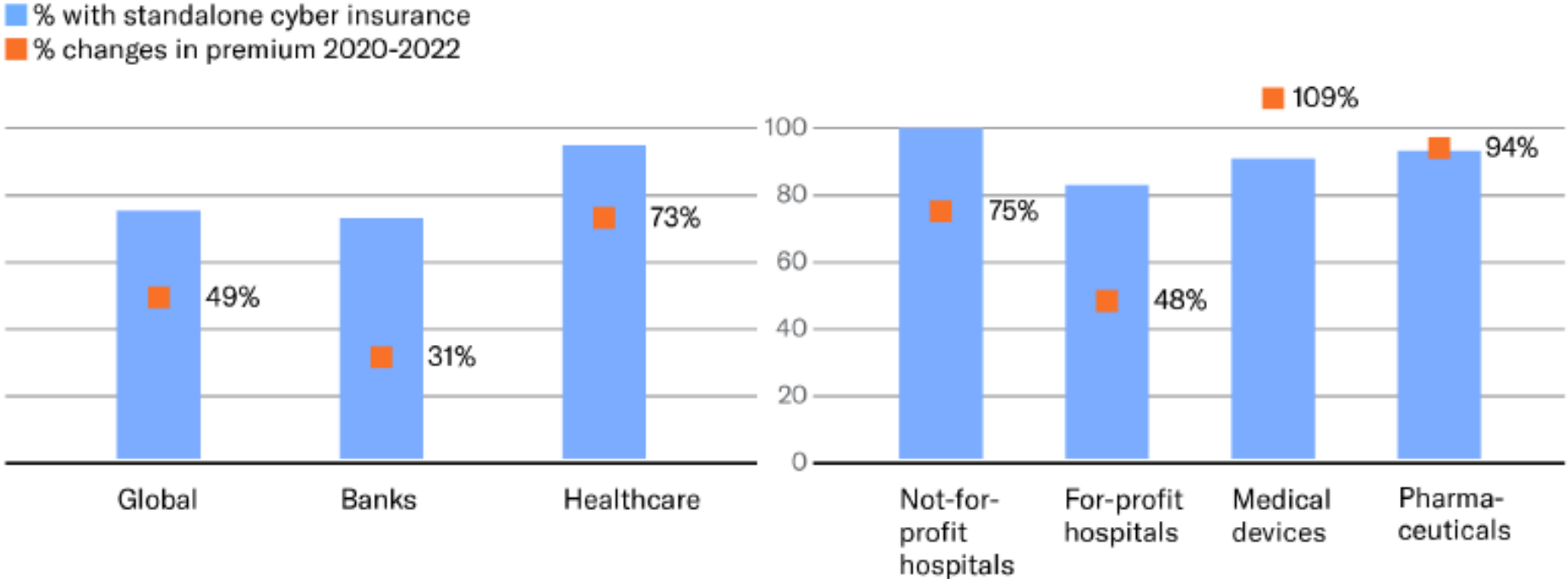


Healthcare

Matthew Cahill

Standalone Cyber insurance

Despite rapidly rising premiums, more healthcare companies carry cyber insurance



Percentage change in premium represents reported percentage change between 2020 and 2022.
Source: Moody's Ratings

Traditional insurance coverage leaves vulnerabilities

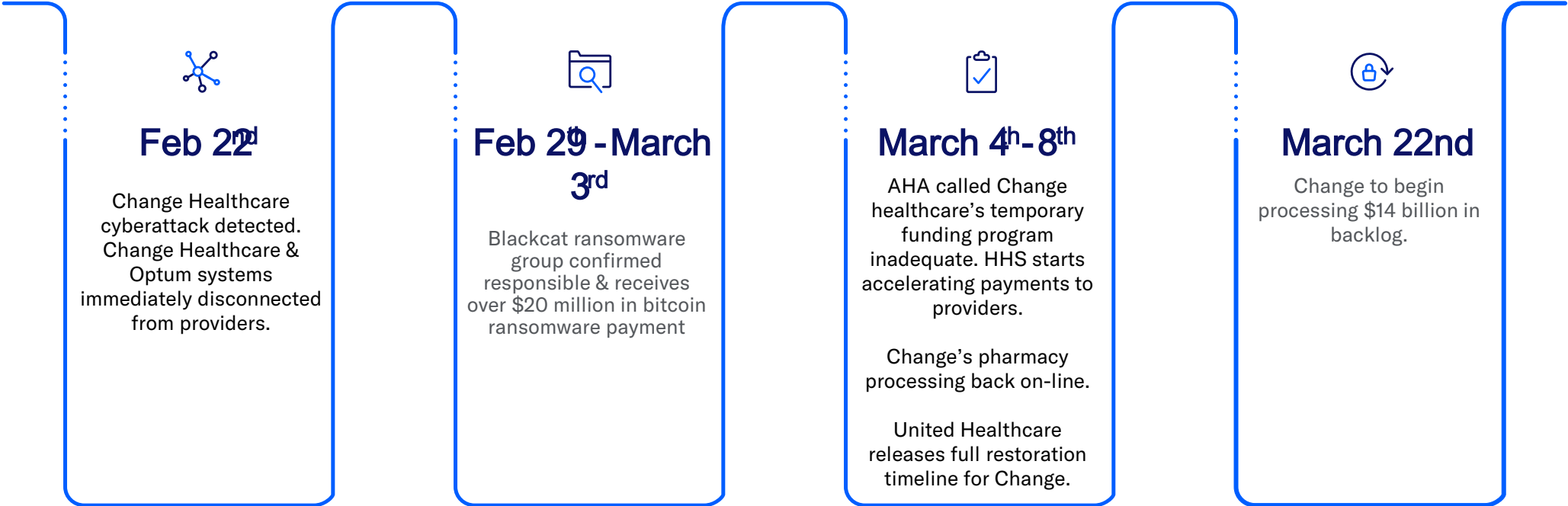
% of issuers whose traditional insurance policy includes a particular type of cyber coverage

	Sector Comparison			Healthcare Subsector Comparison			
	Global	Banks	Healthcare	Not-for-profit hospitals	For-profit hospitals	Medical devices	Pharmaceuticals
Business interruption	77	70	76	80	71	75	67
Contingent business interruption	56	50	70	70	71	75	67
Regulatory fines	57	56	67	71	76	63	33
Reputational damage	58	50	74	73	88	75	58
Funds transfer fraud	43	35	53	59	59	38	25
Incident response	77	73	81	80	94	75	67
Legal settlements	63	57	75	80	76	63	58
New equipment	43	35	51	55	41	38	50
Property damage	39	47	42	46	29	25	50
Ransom payments	72	64	81	82	100	75	50

Source: Moody's Ratings

Change Healthcare Cyberattack

Timeline of events



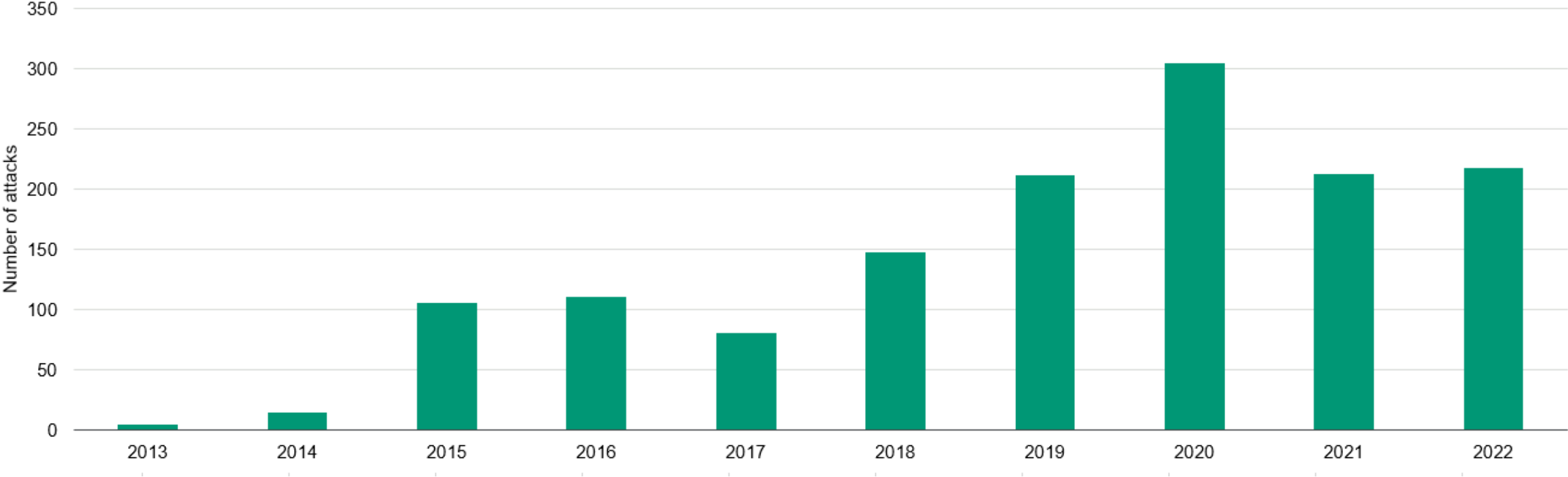


Regional and Local Governments

Gregory Sobel

Cyberattacks are on an upward trend

Number of cyberattacks on governmental entities by year

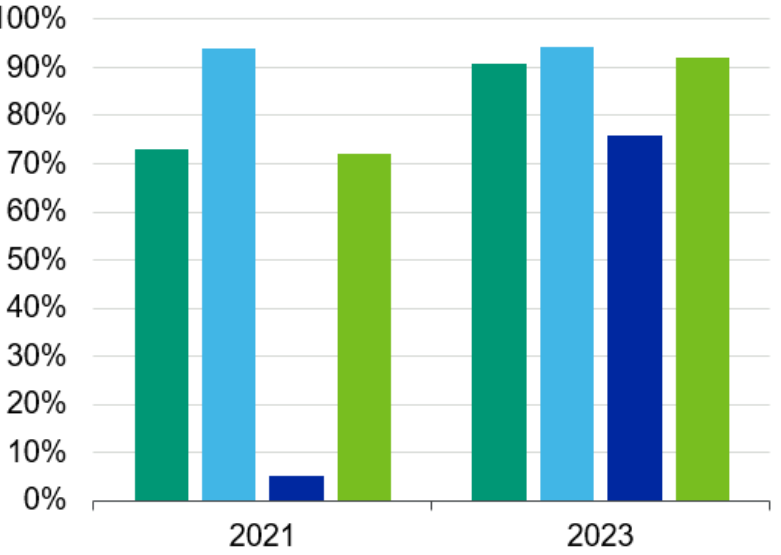


Source: BitSight and Moody's Ratings

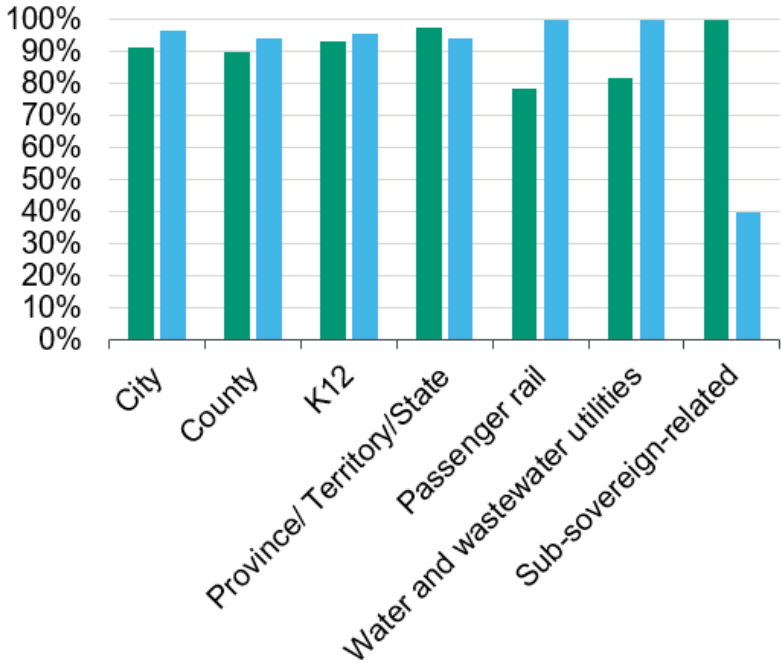
Employees are increasingly focused on cybersecurity

Regional and Local Governments have increased penetration testing

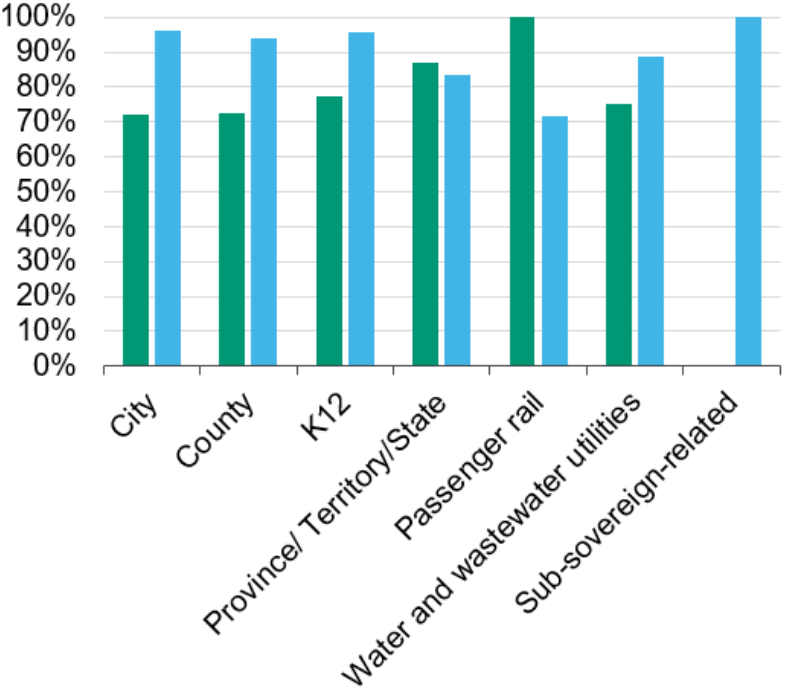
- % with senior cyber leaders reporting to senior government official
- % engaging with personnel on cybersecurity at least annually
- % conducting penetration testing at least annually
- % conducting system backups at least once per week



- % with senior cyber leaders reporting to senior government official
- % engaging with personnel on cybersecurity at least annually



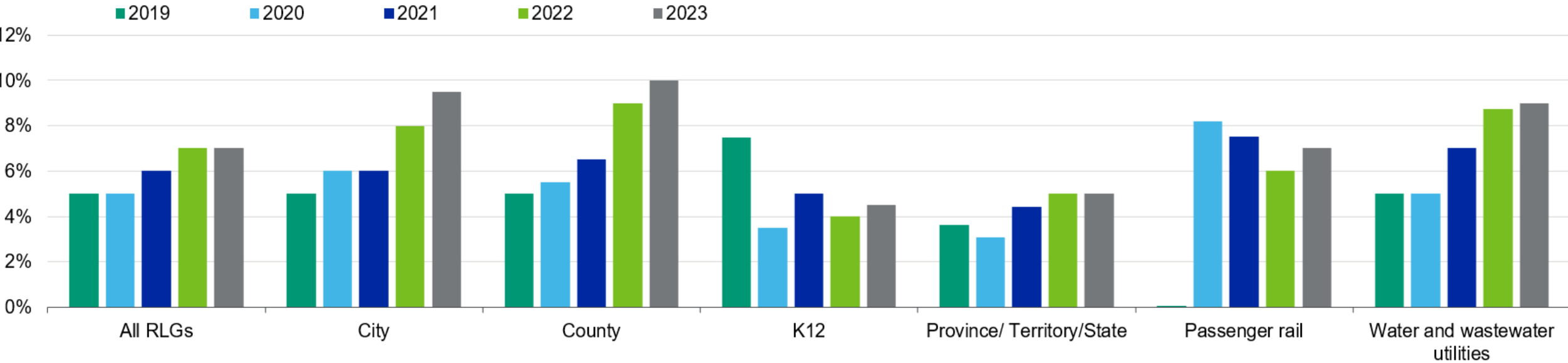
- % conducting penetration testing at least annually
- % conducting system backups at least once per week



Source: Moody's Ratings

The size of cybersecurity budgets has grown across the sector

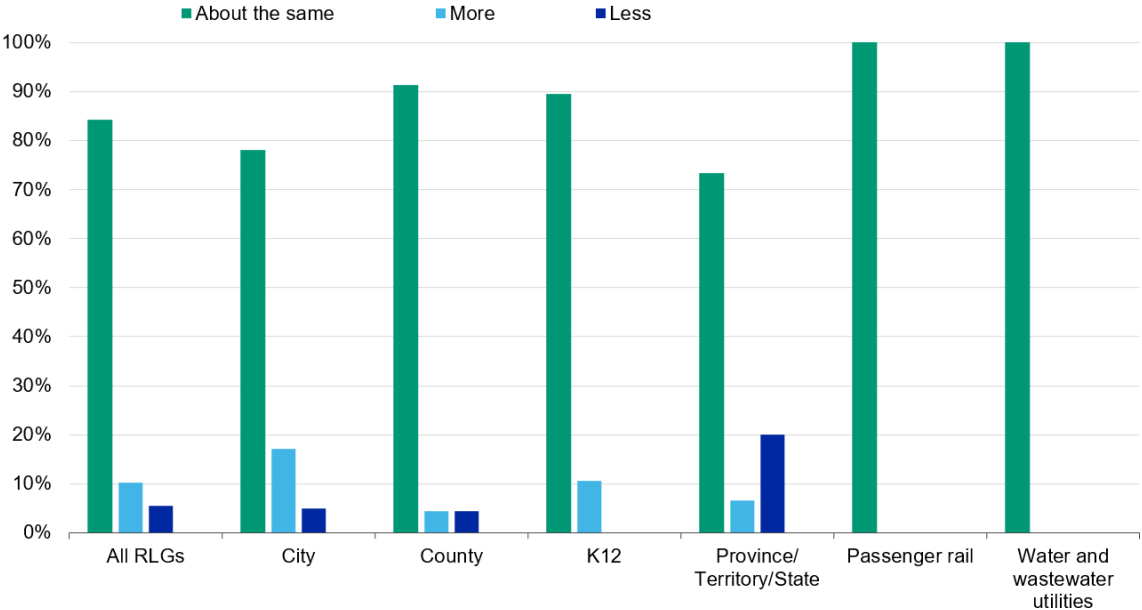
Cybersecurity spending as a percentage of total technology budget



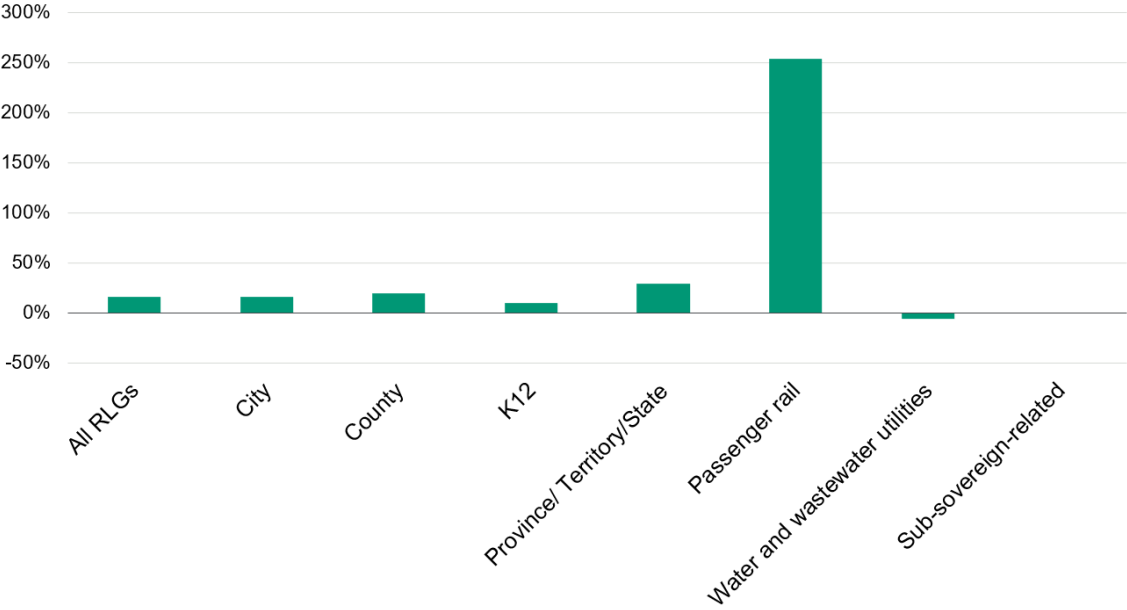
Source: Moody's Ratings

Cyber insurance is a prominent risk transference tool despite cost growth and increasing insurance premiums

Response to whether issuers expect to buy more, the same, or less cyber insurance in 2023

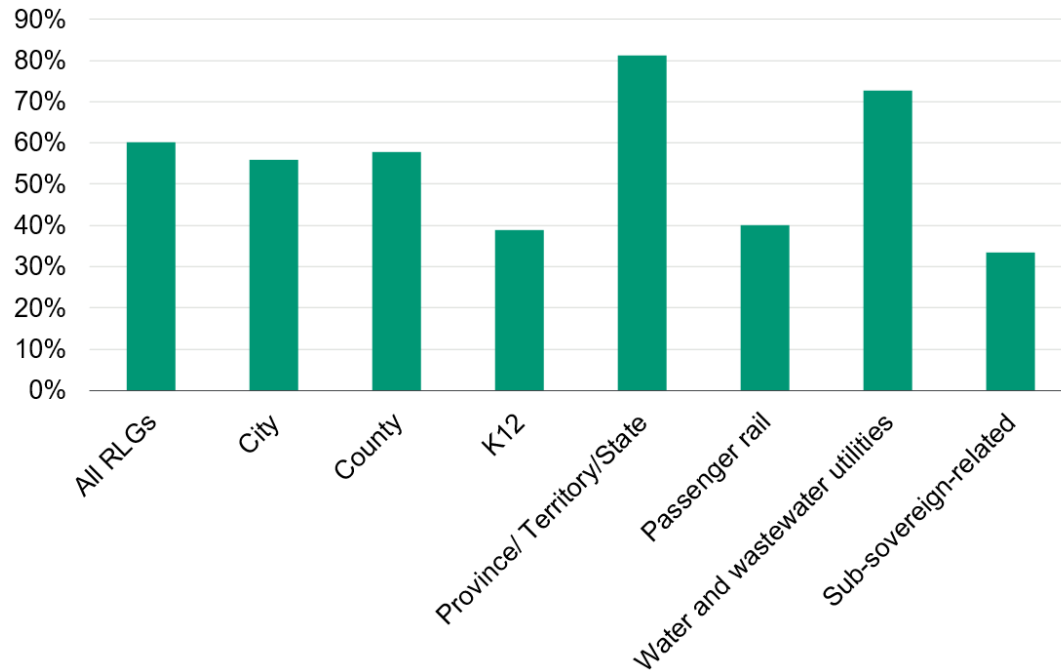


Percentage change in standalone cyber insurance premiums from 2020 to 2022

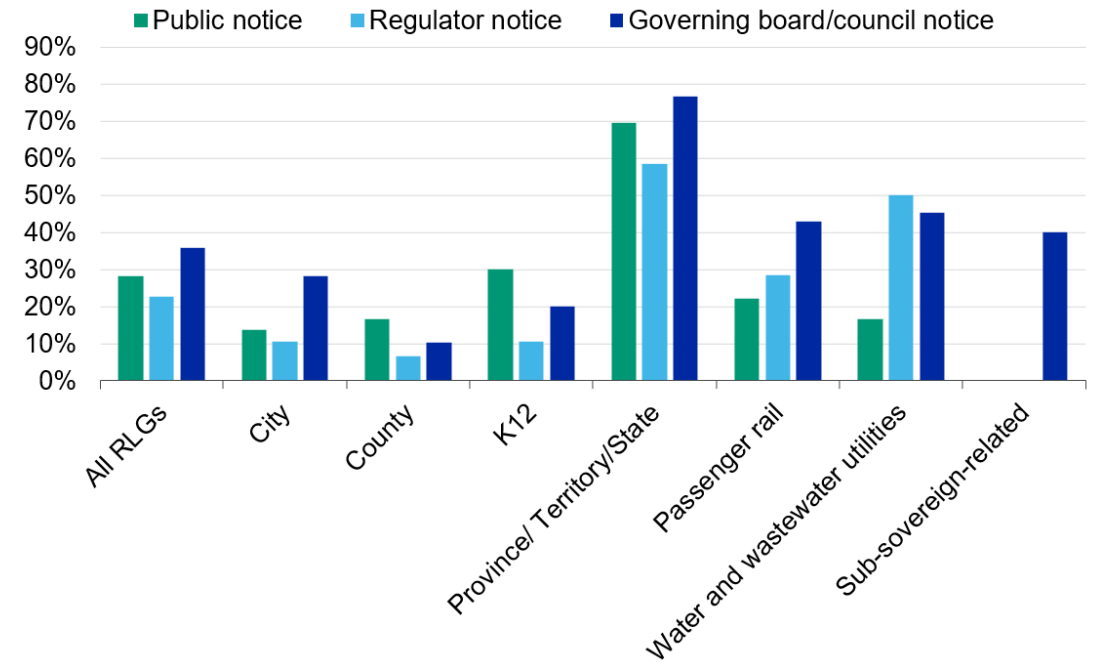


Reporting requirements and notifying stakeholders

Percentage of respondents that have any cyber incident reporting requirements

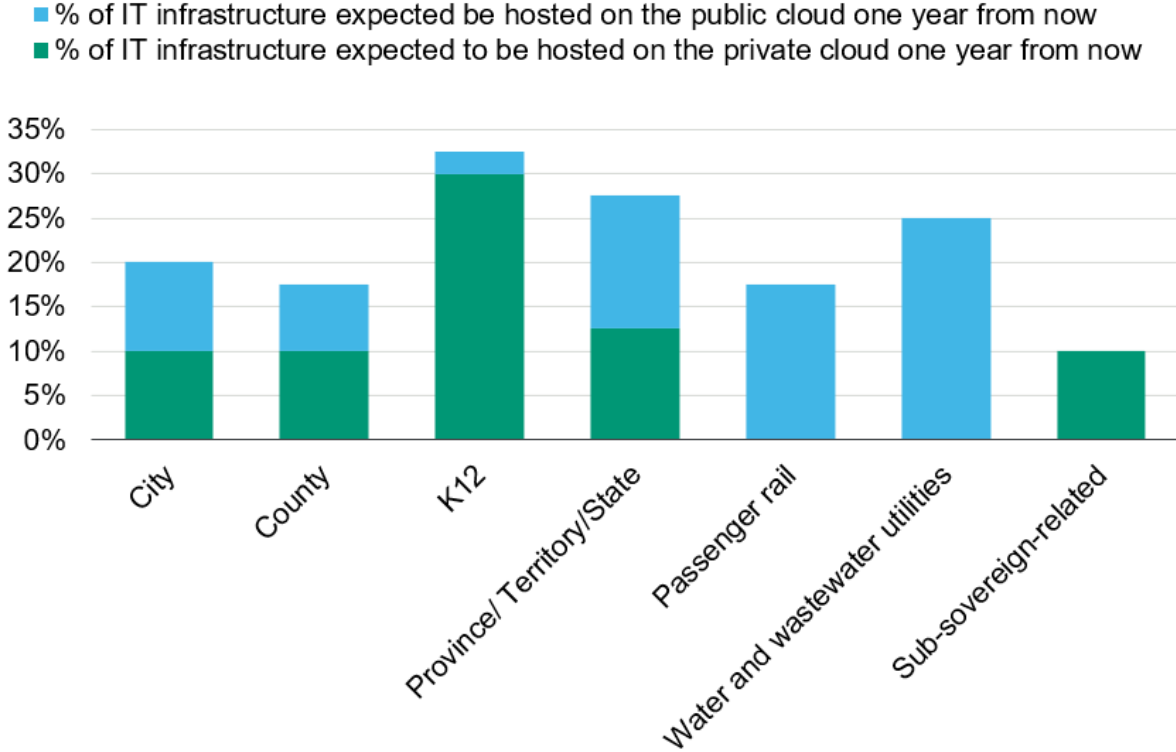
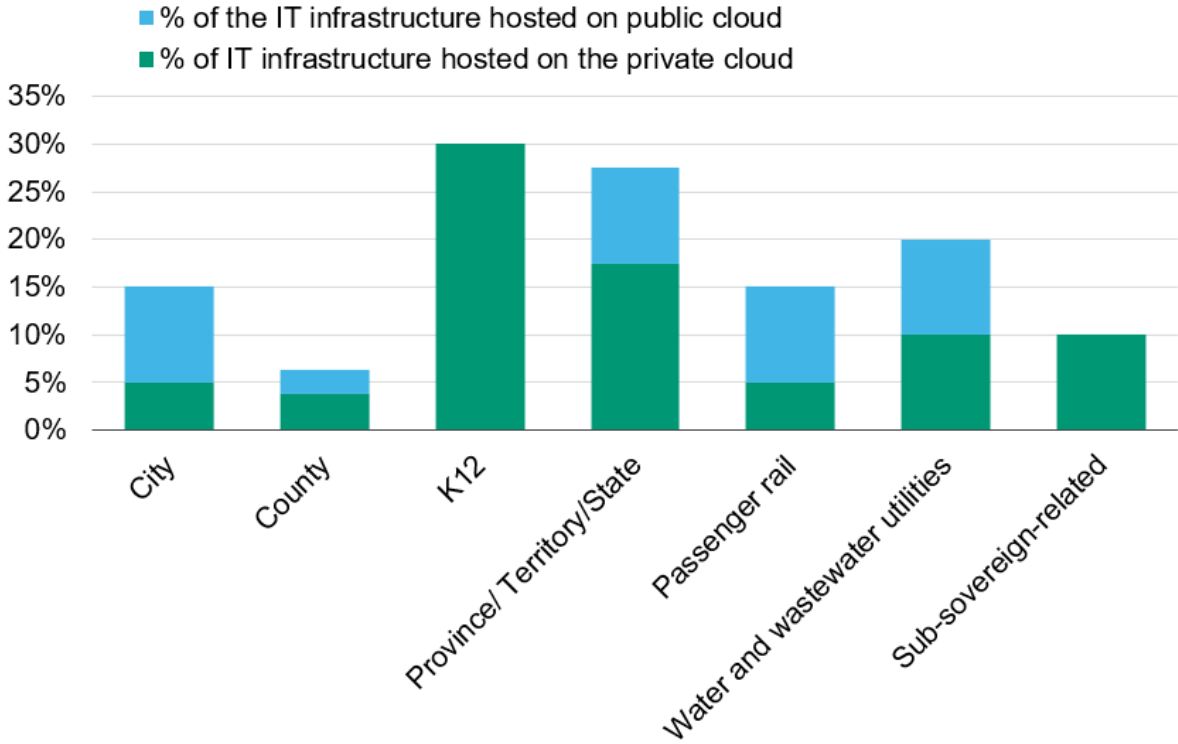


Percentage of respondents that published notices over the past two years



Source: Moody's Ratings

Many issuers have migrated their IT to the cloud and more expect to do so over the next year



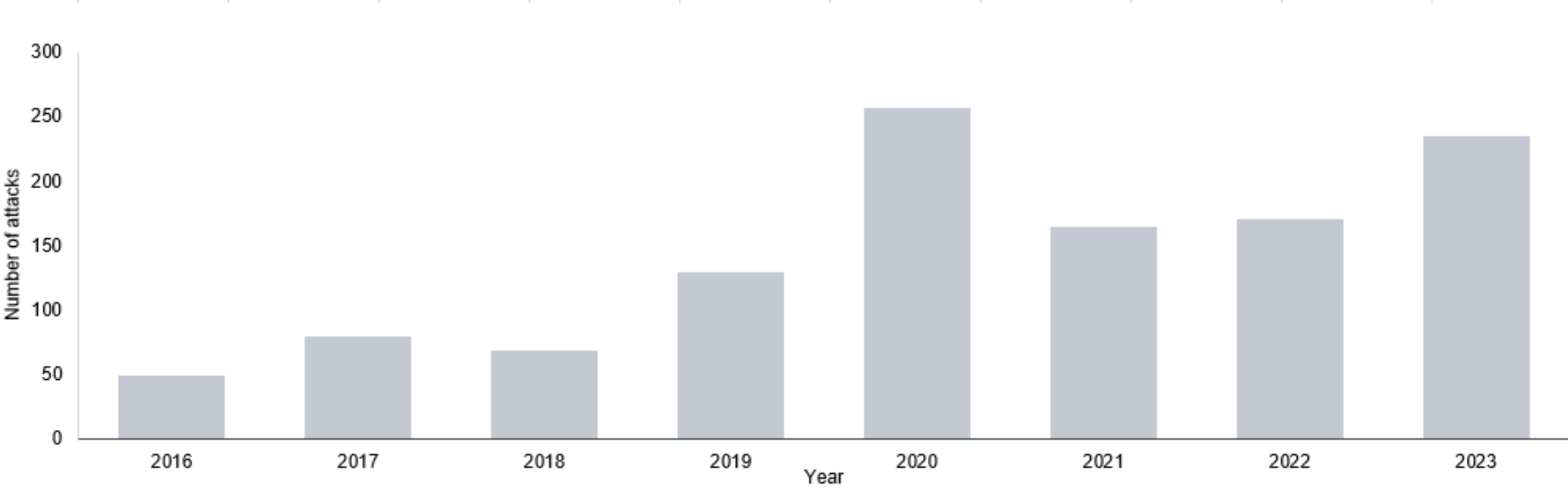
Source: Moody's Ratings



Higher Education
Melissa Nicandri

Cyberattacks are on the rise

Cyberattacks on the educational services sector have risen in the past eight years

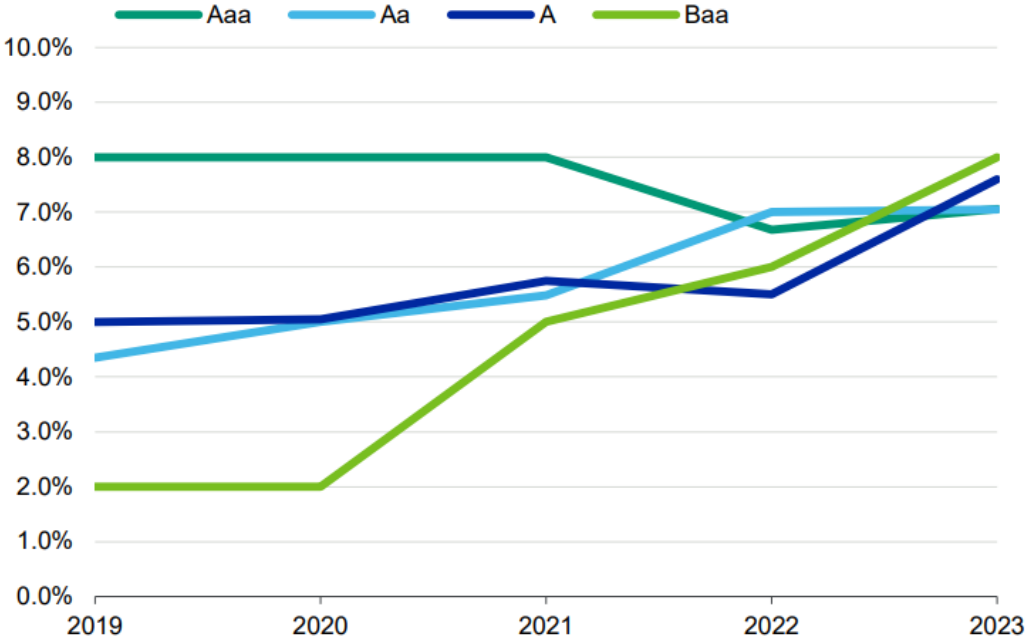


Source: University of Maryland CISSM Cyber Attacks Database, Harry, C., & Gallagher, N. (2018). Classifying cyber events. *Journal of Information Warfare*, 17(3), 1731

Increased budgets allocated to cyber

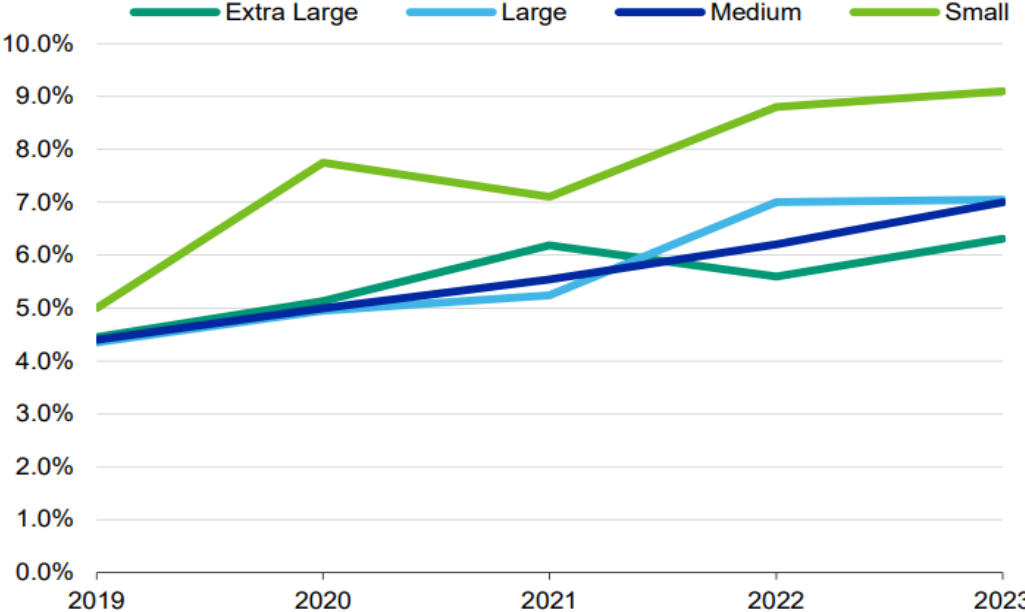
Baa-rated issuers has the biggest increases in their cyber budgets between 2019 and 2023

Cyber investment as a % of IT budget



By size, smaller issuers saw the greatest budget growth

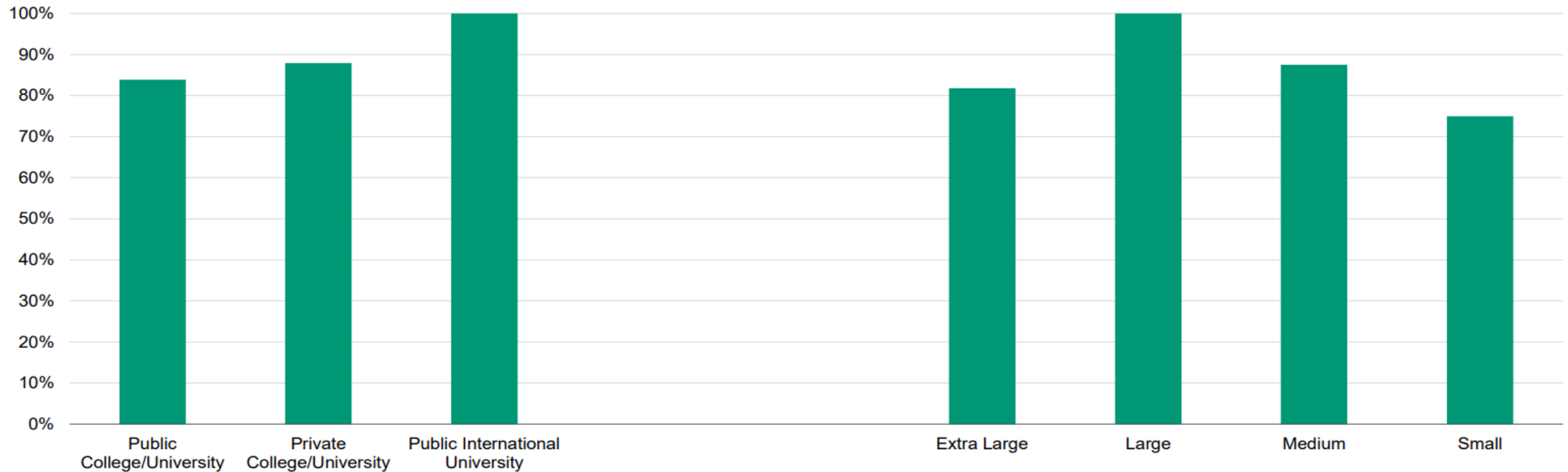
Cyber investment as a % of IT budget



Source: Moody's Ratings

Long-term cyber planning and risk management

All international university respondents have a multiyear cyber road map, an area where small US issuers lag

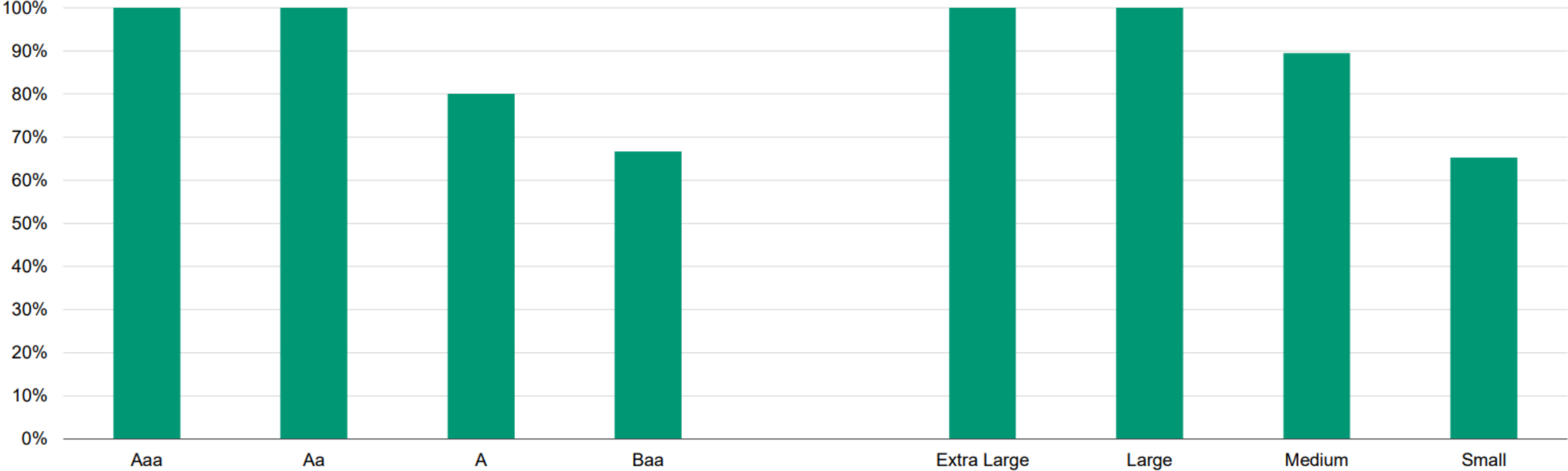


Total Cash & Investments	Size Category
<\$250 million	Small
\$250 million - \$1 billion	Medium
\$1 billion - \$5 billion	Large
>\$5 billion	Extra Large

Source: Moody's Ratings

Cyber-focused staff at universities

Less than 70% of Baa-rated issuers and small institutions have dedicated cyber staff



Source: Moody's Ratings

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Thank you

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