Can Wall Street Solve the Cyber-Security Problem?
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1. IT cyber-risk is (very) systemic (highly correlated & inter-networked)
Current IT businesses function amidst many software vulnerabilities common to inter-networked IT systems.

2. Poses market scalability challenges to IT security boosting (re-)insurers
Firm C-suites resort to insurance to reduce multi-party loss impact and boost security via policy controls. But policy demand far exceeds supply (i.e., market failure).

R1 – High premiums/deductibles, low premium inflow.
R2 - Re-insurers - few in #, do not inject enough capital.
R3 - High information asymmetry (IA) on (aggregate) risk and their impact space in (inter-)networked settings.

3. Enter (C)yber-(I)nsurance (L)inked (S)ecurities to boost market capital!
Idea: A CILS (e.g., cyber-CAT bond) trader (hedge fund) wishes to diversify highly volatile, aggregate IT cyber-risks in the TRS financial market, expecting high gains.

Analogy: Think CAT bonds in Hurricane Andrew (1993)!
Existing CILS Product: Beazley Cyber-CAT Bond, 2023
Goal: Push large capital in cyber (re-)insurance markets.

Q: Can we have sustainable markets to trade CILSs?

4. A decision science will formally derive sustainability conditions
We propose a decision theory framework designed via amalgamating probability theory, actuarial math, and finance basics to derive conditions for sustainable CILS trading markets.

CAMS Relevance: All CAMS members should invest in (CILS capital injected) cyber-insurance to boost (supply-chain) security; what role should they play to make CILS markets a success?

5. and..what will the social impact of proposed decision science?

6. What does math say about CILS market performance?

7. Action items for CILS markets be in the blue/ green zone
1. Unlike in natural CATs, cyber-CATs are not independent of financial stability (FS); IA matters!
2. Cyber-vulnerability information disclosure regulations promotes cyber-CAT bond markets
3. Ensure every IT/OT enterprise publishes a software bill of materials (SBOMs)
4. Cyber-insurance products should be equipped with strong ‘consulting’ services
5. Re-insurers should partner with governments to share high cyber-CAT bond basis risk
6. Enterprises should opt for stand-alone cyber policies with consultancy services
7. Advocating good IT/OT cyber culture is an absolute necessity to sustain CILS ecosystems

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