Lesson 4.4 Quiz: The New Risk Landscape

Module 4: The Risk Problem

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Digital Finance — BSc Course (v2026.05)

Question 1

A bank's Chief Risk Officer states: "Cyber risk is fundamentally different from market risk because it is adversarial." Which of the following **best** explains what "adversarial" means in this context?

A. Cyber losses follow a normal distribution, unlike market losses

B. Cyber threats originate from intelligent actors who adapt their methods in response to defenses

C. Cyber losses are always larger than market losses

D. Cyber risk affects only technology firms, not financial institutions

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Question 2

The NIST Cybersecurity Framework organizes security activities into five core functions. Which of the following lists them in the **correct** order?

A. Identify, Protect, Detect, Respond, Recover
B. Protect, Identify, Respond, Detect, Recover
C. Identify, Detect, Protect, Respond, Recover
D. Detect, Protect, Identify, Recover, Respond

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Question 3

A security architect proposes implementing zero-trust architecture at a bank. A board member asks: "What is the core assumption of zero trust?" Which answer is **most accurate**?

- (A) Zero trust means eliminating all passwords and using biometrics exclusively
- (B) The firewall is the only layer of defense needed to protect internal systems
- (C) No user, device, or network segment is inherently trustworthy — every access request must be verified
- (D) All employees inside the corporate network can be trusted, but external users cannot

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Question 4

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B. Oracle risk
C. Transition risk
D. Governance risk

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Question 5

In an order book, the **bid-ask spread** represents which of the following?

A. The total volume of all orders in the book
B. The maximum daily price movement allowed by the exchange
C. The average price of all executed trades in the last minute
D. The difference between the highest buy order and the lowest sell order

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Question 6

A FinTech company maps its cybersecurity program to the NIST CSF. It has strong firewalls and encryption (Protect) and a rapid incident response team (Respond), but it has never conducted an asset inventory or threat assessment. Which NIST function is **missing**?

- A Recover
- B Detect
- C Identify
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Question 7

A DeFi lending protocol accepts tokenized stablecoin as collateral. That stablecoin itself depends on an underlying lending pool, which in turn relies on a price oracle. If the oracle fails, what is the likely sequence of events?

- (A) The stablecoin may depeg, triggering collateral shortfall in the lending protocol, causing cascading liquidations across all downstream protocols
- (B) The blockchain halts all transactions until the oracle is repaired
- (C) The lending protocol automatically switches to a backup oracle with no impact
- (D) Only the oracle provider suffers losses; the lending protocol is unaffected

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Question 8

An institutional trader needs to sell €5 million of a mid-cap stock. The current order book shows a best bid of €50.00 with 2,000 shares, and the next bid levels are at €49.95, €49.90, and €49.80. What risk does the trader face?

- **A** The order will "walk the book" — each successive block executes at progressively lower prices, resulting in an average price below €50.00
- **B** The exchange will reject the order because it exceeds the daily limit
- **C** The spread will narrow as the order absorbs liquidity
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A portfolio manager holds shares in a major coal mining company. Regulators announce a carbon tax of €80 per tonne of CO_2, effective in two years. This regulatory change is an example of which type of climate risk?

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B. Transition risk — policy-driven
C. Transition risk — technology-driven
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A bank conducts a climate stress test under the NGFS "Disorderly Transition" scenario. Under this scenario, which combination of risks is **most likely**?

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Question 11

During a flash crash, the price of an ETF drops 8% in 90 seconds and recovers within 5 minutes. A risk manager's daily VaR model shows a 2% daily loss limit at the 99% confidence level. What does this event reveal about the model?

- (A) The model is correct — the crash was within the 1% tail
- (B) Daily VaR models are designed to capture flash crashes and this was an expected outcome
- (C) The model fails to capture intraday liquidity risk and microstructure dynamics; the realized intraday loss far exceeds the daily VaR
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A cybersecurity consultant argues that traditional operational risk models (e.g., loss distribution approach) are inadequate for cyber risk. Which of the following is the **strongest** argument supporting this claim?

- (A) Cyber losses are always small and frequent, unlike operational losses
- (B) Cyber threat actors evolve their methods, making historical loss data a poor predictor of future loss severity and frequency
- (C) Cyber risk only affects external-facing systems, not internal operations
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An attacker uses a flash loan to borrow 1 million governance tokens, votes to drain a protocol's treasury, executes the proposal, and returns the tokens — all in a single transaction. Which defense mechanism would **most effectively** prevent this attack?

- A Increasing the total supply of governance tokens
- B Removing the governance mechanism entirely
- C Switching to a different blockchain with lower transaction fees
- D Requiring tokens to be locked (vote-escrowed) for a minimum period before they can be used to vote

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A market maker posts bids at €99.90 and asks at €100.10, earning a €0.20 spread per round trip. During a sudden news event, the stock drops to €98.00. The market maker's outstanding bid at €99.90 is filled by aggressive sellers. What happened?

- (A) The bid-ask spread widened, protecting the market maker from loss
- (B) The market maker earned the spread as intended
- (C) The exchange cancelled the market maker's orders automatically
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- (A) Government bonds decline most because governments depend on fossil fuel tax revenue
- (B) Renewable energy stocks decline because they are in the same sector as fossil fuels
- (C) All three asset classes decline equally
- (D) Fossil fuel equities decline sharply; renewable energy stocks may appreciate; government bonds are relatively unaffected

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Question 16

A DeFi protocol uses a single oracle for its ETH/USD price feed. A risk analyst recommends switching to a multi-source oracle with time-weighted average pricing (TWAP). Which specific risk does each improvement address?

A. Multi-source increases gas costs but does not reduce risk; TWAP introduces latency risk

B. Multi-source addresses single-point-of-failure risk; TWAP addresses short-duration price manipulation on low-liquidity venues

C. Both address only smart-contract bug risk

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Question 17

A regulator proposes that all DeFi protocols must implement a "kill switch" — a centralized mechanism that allows a designated authority to pause or shut down the protocol in an emergency. Evaluate the trade-offs. Which concern is **most significant**?

- (A) The kill switch would have no effect because DeFi protocols cannot be paused
- (B) The kill switch would make the protocol faster
- (C) The kill switch would only benefit the regulator, with no impact on users
- (D) A centralized kill switch reintroduces the single point of failure and censorship risk that DeFi was designed to eliminate, while potentially improving crisis response

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Question 18

A bank's risk committee is debating whether to integrate climate risk into its standard VaR model or to treat it as a separate scenario analysis. Which argument **best** supports treating climate risk through scenario analysis rather than VaR?

A. Climate risk is characterized by deep uncertainty, non-stationarity, and long time horizons that make historical distribution fitting unreliable; scenario analysis explores multiple plausible futures without requiring distributional assumptions

B. Climate risk is too small to affect VaR at the 99% confidence level

C. Scenario analysis is simpler to implement and requires no data

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Question 19

After a flash crash, regulators consider imposing a "speed bump" — a mandatory 50-millisecond delay on all orders. A market maker argues this will reduce market quality. Evaluate the market maker's likely concern. Which argument is **most valid**?

- (A) Market quality always improves when trading is slower
- (B) Speed bumps would prevent all flash crashes entirely
- (C) The delay would reduce the market maker's ability to update stale quotes quickly, increasing their adverse selection risk, which would lead to wider spreads and less liquidity
- (D) The delay would only affect retail investors, not professional traders

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- (A) Regulators require all risks to be managed by a single department
- (B) Integrated management is cheaper because it requires fewer staff
- (C) Under stress, these risks become correlated — a cyberattack during a climate event, or a DeFi composability failure during a market crash — and siloed models cannot capture cross-risk amplification
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