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Pushing through undercurrents

Technology's impact on systemic risk: A look at banking

As more financial institutions embrace digital innovation, risks emerge that could threaten the stability of the financial system. Some of these risks originate from a single sector. Either way, they could proliferate and become systemic without appropriate management.

To understand what these technology-driven risks look like, the World Economic Forum (the Forum) and Deloitte consulted over 100 financial services and technology experts in the development of a new report, Pushing through undercurrents. This group shared more specific perspectives on the forces behind technology-driven systemic risk in the banking sector. Here's a summary of what we learned. You can learn more in the *full report from the Forum, and the executive summary from Deloitte.*

Risk 1: Risk exposure from Banking as a Service offerings

What could go wrong?

Banking as a service (BaaS) increasingly relies on application programming interfaces, introducing vulnerabilities that can pose risks for banks. The risk is growing because:

- Customers' sensitive data and funds may be at risk from phishing and social engineering attacks
- Flawed APIs might provide a back door for hackers to penetrate banks' systems
- Noncompliance with data privacy rules by BaaS providers might expose partner banks to reputational risks

This risk could become systemic if, for example, a malicious actor launches a distributed denial-of-service attack on a BaaS provider, keeping customers from accessing their accounts or making transactions.

What sectoral and regional forces could amplify the risk?

- A complex BaaS technology stack
- Limited redundancy measures
- A lack of input validation, enabling attackers to upload malicious code into a bank's systems through its APIs

How can the industry mitigate it?

Goal	Mitigation opportunities
Strong security for BaaS platforms and API connectivity	• Use input validation protocols • Apply network segmentation and access control measures
Properly vetted BaaS partners	• Improve due diligence on BaaS providers
Institutional knowledge transfer from banks to BaaS partners	• Help BaaS and other fintech providers get better at risk management and compliance

Risk 2: Inadequate stability mechanisms for stablecoin arrangements

What could go wrong?

Stablecoins mimic fiat currencies but without the backing of a central bank, heightening the probability of a run. The risk is growing because:

- Governance and regulatory gaps could perpetuate illicit activities that might threaten the integrity of the broader financial system
- The novel technologies used for minting and managing stablecoins are exposed to security risks
- The absence of a stability mechanism like deposit insurance increases the risk of a run

This risk could become systemic if, for example, a significant stablecoin issuer fails to promptly honor large customer withdrawal requests, touching off a run and eventually collapsing the stablecoin arrangement.

What sectoral and regional forces could amplify the risk?

- A less mature regulatory environment
- Stringent capital controls, which may encourage individuals in those jurisdictions to park their assets in global stablecoins
- Unsecure systems and poorly managed internal processes

How can the industry mitigate it?

Goal	Mitigation opportunities
Standardization and oversight of stablecoin arrangements	• Requirement for anti-money laundering and "know your customer" processes for stablecoin issuers
Investor and customer protection	• Offer insurance coverage for stablecoin tokens • Enforce responsible marketing rules and customer education
Transparency of capital reserves	• Periodically audit and stress-test stablecoin issuers' reserve assets

To learn more about technology's impact on systemic risk in banking, including examples, please see pages 60-70 of the full report.

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