

Pushing through undercurrents

Technology's impact on systemic risk: A look at capital markets

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 capital markets. 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: Market manipulation from the distribution of synthetic media

What could go wrong?

Synthetic media (like deepfake voice phishing and social botnets) may spread disinformation that maliciously influences capital markets. The risk is growing because:

- Ease of access to deepfake tools, open-source libraries, and generative AI is lowering the cost of producing synthetic media
- The growing volume of images and videos of central bank governors, bank CEOs, and other high-profile individuals increases the precision and effectiveness of malicious synthetic media
- Important institutions that use social media to communicate with the public can increase the degree of trust placed in these platforms

This risk could become systemic if, for example, someone used AI to generate a video of a trusted public official announcing a dramatic drop in interest rates, then posted the video to social media.

What sectoral and regional forces could amplify the risk?

- Communities highly dependent on alternative media
- Technology companies lowering the financial barriers to generate synthetic media
- High-frequency trading algorithms connected to real-time, high-speed data feeds

How can the industry mitigate it?

Goal	Mitigation opportunities
Stronger synthetic media moderation	<ul style="list-style-type: none"> • Limit opportunities to monetize synthetic media • Crowdsource social media fact-checking
Stronger content authentication and media literacy	<ul style="list-style-type: none"> • Embed digital content credentials in social media uploads • Use plug-in AI fact-checking tools

Risk 2: Contagion from cryptocurrency exchanges

What could go wrong?

The collapse of a crypto-asset ecosystem may spread contagion into traditional capital markets. The risk is growing because:

- Democratized access to highly leveraged trades can threaten the liquidity of exchange operations
- Limited transparency of leveraged trading volume and capital reserve data can make investor deposits vulnerable to loss
- Pseudonymous design of the underlying blockchain technology can make it challenging to assess creditworthiness
- Custody, lending, and borrowing offerings can create conflicting incentives for an exchange when facilitating trades

This risk could become systemic if, for example, a large cryptocurrency exchange becomes unable to meet customer withdrawal requests and puts a freeze on future requests, prompting other investors to withdraw funds from other cryptocurrency exchanges in a panic.

What sectoral and regional forces could amplify the risk?

- Fragmented and inconsistent crypto-asset regulation
- Growing adoption of decentralized cryptocurrency exchanges
- Interconnected decentralized finance applications

How can the industry mitigate it?

Goal	Mitigation opportunities
Protection of investor deposits	<ul style="list-style-type: none"> • Impose restrictions on using customer deposits to fund risky activity • Set up shared reserves to help financially healthy exchanges facing liquidity challenges
Controlled access to leveraged trading for investors	<ul style="list-style-type: none"> • Use publicly available blockchain transaction data to assess creditworthiness
Transparency on indicators of exchange solvency	<ul style="list-style-type: none"> • Mandate proof-of-reserve certificates from third-party auditors

To learn more about technology's impact on systemic risk in capital markets, including examples, please see pages 24-35 of the [full report](#).

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