

## Pushing through undercurrents

### Technology's impact on systemic risk: A look at investment management

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 investment management 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: Market volatility from speculation fueled by social media

##### What could go wrong?

With retail investor activity and speculation on social media platforms on the rise, the market volatility from strategies like meme-stock investing may have systemic implications. The risk is growing because:

- The democratization of trading complex investment products through online trading platforms can multiply the effects of speculative trading by unsophisticated investor
- Social media platforms, recognized by retail investors as a trusted source of market data, can create echo chambers that reinforce speculation and bias
- The unpredictability of meme-stock episodes can make it difficult for investment firms to update their risk models and for retail investors to make informed investment decisions

This risk could become systemic if, for example, unfounded rumors about undervalued stocks circulate on social media and spark multiple activist online campaigns on alternative media, prompting herd buying among retail investors.

##### What sectoral and regional forces could amplify the risk?

- Online trading platforms that encourage risky trading behavior
- Social media penetration rates across communities
- Investors who use social media to boost a company's stock price

##### How can the industry mitigate it?

Goal	Mitigation opportunities
Deterrence from participating in speculative trades	<ul style="list-style-type: none"> <li>• Embed financial literacy programs in online trading platforms</li> <li>• Increase retail shareholder engagement through social media</li> </ul>
Greater transparency for institutional investors on leading meme-stock indicators	<ul style="list-style-type: none"> <li>• Set up exchange-traded funds and indexes to help investors track meme stocks</li> <li>• Use machine learning algorithms to help institutional investors spot warning signs of a meme-stock surge</li> </ul>



## Risk 2: Investor manipulation from compromised sensor-generated data

### What could go wrong?

More investment firms are using sensor-generated data to inform their decisions, expanding the attack surface for malicious actors to compromise and manipulate market data. The risk is growing because:

- Open-source channels help cyber criminals share malware source code quickly and accelerate the rate of new types of attacks on internet-connected devices
- High-speed 5G networks help investment managers gain instant access to real-time sensor data feeds
- The Internet of Things, with its multiple end points, has a wide attack surface that makes comprehensive security oversight challenging
- Sensors that are interconnected make all devices vulnerable if one is attacked with malware

This risk could become systemic if, for example, a shared set of sensor devices is compromised for a global commodity (either through manipulated or falsified data), causing investment firms and hedge funds to make the wrong trading decisions

### What sectoral and regional forces could amplify the risk?

- Service providers using non-proprietary components to connect devices to 5G networks
- Consolidation of sensor device makers
- An unregulated data broker industry

### How can the industry mitigate it?

Goal	Mitigation opportunities
Increasing data quality sourced from sensors	<ul style="list-style-type: none"> <li>• Establish global certification and labeling for connected devices</li> <li>• Mandate due diligence for alternative data vendors</li> </ul>
Containing malware contagion across a sensor network	<ul style="list-style-type: none"> <li>• Protect sensor data through entropy service providers</li> <li>• Employ extended threat response techniques that integrate data across devices</li> </ul>

To learn more about technology's impact on systemic risk in investment management, including examples, please see pages 36-47 of the [full report](#).

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