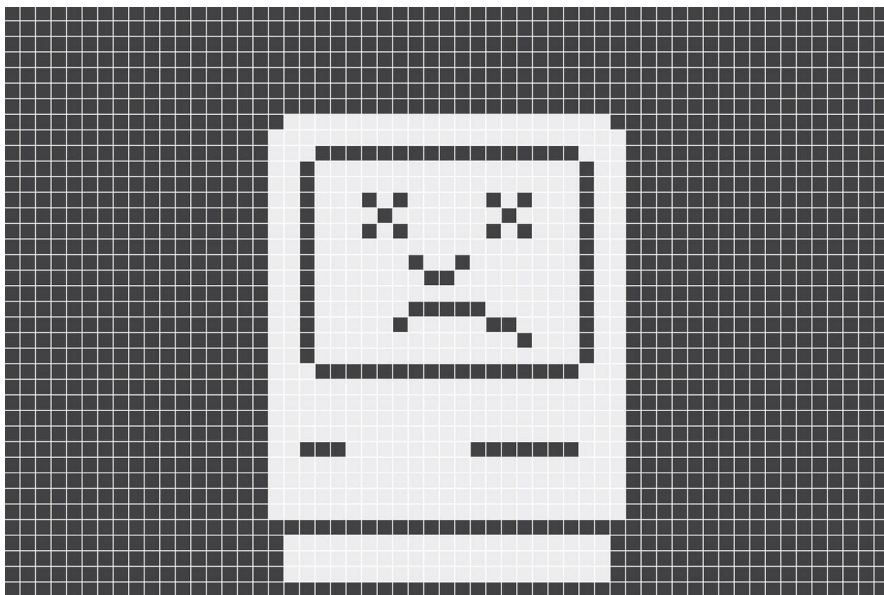# Too cool to fail: Tech will be heart of next financial crisis

We need objective technical standards to supervise the technology that is becoming so important to the system

Regulator says no: Authorities have failed to keep up with the spread of complex new technologies throughout finance

By Eoin O'Shea

December 14, 2018 Updated: 12:01 a.m. GMT

The next global financial crisis will be turbo-charged by failures in technology.

High-profile tech failures, such as online retail crashes, phishing attacks and hacking vulnerabilities, have soaked up public attention. But under the global financial hood, in critical systems dealing with complex client and transaction monitoring, screening and surveillance, there is something alarmingly seductive about the words "fintech" and "regtech".

When the first signs of the last crisis began to emerge in July 2007, Twitter was 12 months old, while the iPhone was barely a month old. Technology has since become ubiquitous in banking. And the industry is rushing to embrace even more of it. The same evolution has brought a quantum leap in the sophistication of criminal enterprises, or bad actors.

The use of artificial intelligence has been much written about, but as Joseph Sirosh, chief technology officer for AI at Microsoft, observed, it is better described as assisting and augmenting intelligence, rather than an artificial substitute.

He uses the example of an ant, able to react to real-world stimuli in ways that are still far beyond current AI computational capability.

Regulators have been very supportive of technology, but extremely reluctant to take direct oversight over its increasing use. Why? Right now, regulators are simply not mandated to carry out direct technology software or vendor reviews.

In addition, a fine balance needs to be constantly struck between supporting tech innovation and regulating its impact. No regulator wants to be perceived as a Luddite. So the default is to regulate the user – and that comes with consequences.

Regulators stress that the onus is on the user to satisfy itself that tech is fit for purpose. The Financial Conduct Authority clearly states that you can introduce new technology as long as it involves proper testing, governance and management.

But in its reluctance to take on direct vendor oversight and software endorsement, the UK regulator seems to be missing the mark.

Why is it that something so systemically important can be allowed to spread without direct oversight from the regulator? How can regulators imagine that a start-up in Shoreditch can possibly deal with multiple clients all looking for crisis support?

Why is the primary regulatory focus on the continuity planning of a bank's business and not on its tech suppliers' businesses?

The Financial Stability Board, an international body set up by the G20 and charged with monitoring and making recommendations about the global financial system, observed that there is a high reliance on a relatively small number of third-party technological developers and service providers when it comes to the development of machine learning and AI.

So what happens if a large technology supplier of machine-learning tools can no longer meet its financial obligations, or cannot continue to operate? This could lead to large-scale disruptions and systemic stress at a significant number of financial institutions it is intended to supply.

Now imagine this risk for something systemically important or mission critical, such as trying to determine cross-border flows or monitor the movement of money – under market stress or a downturn.

We know that bad actors will take advantage of global market dislocations, and we still use regulatory "sticks" to punish individual human beings (and not computers). After all, you can't bring your favourite R2D2 to a regulatory meeting.

But we might come to regret placing so much emphasis on a user-centric approach.

What is needed are objective, technical IT standards, directly supervised by regulators. These could be designed to prevent well-meaning individuals, whether users or enthusiastic tech entrepreneurs, from introducing systemic risk into the banking system.

To achieve this would require resources, and the political will to expand regulatory mandates. It would also require regulators to distinguish between tech vendors that have resources, resiliency and depth and those that do not. But it is a small price to pay, given the alternative.

Eoin O'Shea is chief executive of Temple Grange Partners, the risk consultancy