



Resilience and innovation in times of change

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Ms Julia Leung

Deputy Chief Executive Officer and Executive Director, Intermediaries

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Good afternoon, ladies and gentlemen. Thank you for inviting me to deliver the opening keynote for t

I want to begin by reflecting on the passing of Queen Elizabeth II of the United Kingdom last month. The late Queen was mourned by millions around the world. She was the embodiment of many virtues, lifelong dedication to public services above all else. But what is most sorely missed is probably the element of constancy which characterised her 70-year reign.

Constancy is something of a rare commodity these days, when financial markets, businesses and households in many parts of the world are being disrupted by a global health crisis, soaring interest rates and energy bills, and rapid technological advances.

We live in a time of great disruptions, where our ability to maintain constancy and preserve operational resilience against COVID and volatile markets are more important than ever. And equally important is the ability to capture the benefits of using new technology to create and distribute innovative products while minimising untoward disruptions.

In my speech today, I will focus on how the advent of artificial intelligence (AI) and other technological advances have changed the way we invest and how products a(04 Tf1 0 0 1 70.944 3s9dg220



Algorithms are the core component of these tools, and it is essential that firms have adequate resources to effectively manage and adequately supervise the design, development, deployment and operations of the algorithms they use. Robust controls should be in place to monitor and test the algorithms and the reasonableness of the advice provided to clients, and this should be done by suitably qualified persons.

In recent years, the SFC has seen a significant increase in interest from LCs in providing robo-advisory services, either fully automated or semi-automated. We have granted licences to around 10 robo-advisors who provide retail access to a full suite of wealth management services online. We can see that AI has helped make personalised investments



consuming manual processes. More firms are applying RPA in their screening for politically-exposed persons and sanctions as well as their adverse media searches. Instead of having a robot pull names and identifies details from source systems, automatically performs searches of screening databases and generates alerts when there are mismatches. s may also help clear simple false alerts, for example, when identification details do not match.

Transaction monitoring

Application programming interface (API) is another easy-to-implement technology for banks to obtain depositors' details and automatically identify if they match the name. If not, this is a third-party deposit which should be subject to enhanced due diligence.

Furthermore, with network analytics, firms can identify hidden connections between a group of seemingly unrelated customers. This includes when they share common personal particulars such as email addresses or their trading behaviour exhibits a high level of similarity. A common feature of insider trading schemes seen in the stock market.

In the past two years, the SFC has taken enforcement action against 11 firms for failures in relation to anti-money laundering controls. They commonly failed to identify third party fund transfers and potential nominee arrangements for concealing the real beneficial owner. As many firms still conduct surveillance manually, they are bogged down by a large back-log of false alerts and fail to follow up on genuine ones. We encourage firms to strengthen their anti-money laundering capabilities by adopting Regtech so that resources could be more efficiently deployed to high-risk, high-priority areas.

Suptech

Suptech is short for Supervisory Technology. In our investigations of company misconduct and enquiries into the fitness and properness of individuals, our supervisory and enforcement teams use network analytics extensively to identify relationships among target individuals and listed companies.

Our fascinating journey into Suptech passed a milestone in January this year when we launched the next generation licensing platform on WINGS² together with a companion mobile application, WINGS Mobile App. This fully digitalised platform provides a one-stop, comprehensive service for users to prepare and submit licensing forms electronically, track the progress of applications, pay licensing fees and communicate directly with the SFC. Online submission of all licensing applications, notifications and regulatory filings via WINGS became mandatory from April this year.

WINGS 2.0 is integrated with our internal platforms which generate business intelligence using online analytics and a highly-automated, risk-based workflow to enhance overall processing efficiency using a risk pattern identification process enabled by AI. We also expanded our monthly financial resources data collection from cash and futures brokers, and the data collected allow



Data standards for order life cycles

Another major Suptech initiative is data standards for order life cycles, or DS-OL. In July 2019, the SFC issued new data standards to prescribe the minimum content and presentation format of trading-related data submitted to us by in-scope brokers. This facilitates our use of data analytic tools in inspections, allowing us to examine large volumes of complex trading-related data to identify potential trading misconduct and systemic control deficiencies in key compliance areas such as short selling, best execution and conflicts of interest.

In our recent pilot testing, the analytic tool analysed execution outcomes of similar orders placed by clients and internal trading desks to identify abnormal patterns of best execution and preferential or unfair treatment of clients.

On the organisational front, the SFC Intermediaries Division will soon establish a Suptech team comprising professionals in data analytics and cybersecurity. This will enhance our Suptech and Regtech capabilities, which in turn will enable us to carry out our regulatory work more efficiently.

Managing the risks of digitalisation

While we embrace the use of technology to lower costs and achieve greater efficacy, we have emphasised to firms the risks that come along with digitalisation. We place a great deal of emphasis on the measures firms are adopting to ensure resilience including reliability of their information technology (IT) systems, adequacy of their capacity and security, as well as their contingency and recovery plans. Failure to manage these risks could severely hamper a s and harm client interests.

Cybersecurity

Cybersecurity has also become much more critical in recent years. In response to a few local hacking incidents in 2016 involving online brokers, the SFC issued its Cybersecurity Guidelines³ in the following year. These guidelines set out baseline requirements for intermediaries to reduce and mitigate hacking risks associated with internet trading. The requirements cover the digital journey of client instructions from login security including two-factor authentication, data encryption, infrastructure security management to system backup and contingencies, reporting and escalation to senior management.

Third-party vendor risks

We are also keeping a close eye on firms' use of vendor-supplied systems, applications or software to provide internet trading services, which has become more common. Firms rely on vendors or software providers to install or release security patches or hotfixes for network and system vulnerabilities which may be exploited by hackers. It is therefore important for firms to proactively engage their third-party vendors for updates, and review their security patches or hotfixes.

