"Advances in Technology: How FinTech and Cyber Risks are being addressed."

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Firstly, I would like to thank the OECD, ADBI and Japanese FSA for inviting me to attend this Roundtable, which already has provided us with some interesting and stimulating commentaries.

My name is Matthew Aire from the Dubai Financial Services Authority. I am Associate Director of Authorisation with responsibility for managing a team dealing with complex cross sectoral applications, and more latterly, the authorisation of applicants into our Regulatory Sandbox through the Innovation Testing Licence regime.

We have heard already today that technological change is occurring at a rapid pace. With FinTech, InsurTech and RegTech the applications are wide reaching; increasing operational efficiencies and productivity, providing alternative funding and, importantly, financial inclusion. Such developments include mobile payments, use of crypto or virtual currencies, big data, artificial intelligence and natural voice recognition and response.

Such changes pose great challenges as financial institutions upgrade legacy systems and deal with all the regulatory reforms. The DFSA remains technology neutral in respect of regulating financial services. We believe that such an approach will enable businesses to adopt approaches that best suit their business model and consumer preferences. The DFSA's fostering of FinTech and use of technology itself, is reflected in the addition of a new strategic theme; Innovation; to the DFSA strategic priorities and aligning ourselves with the United Arab Emirate's National Innovation Strategy.

The Financial Stability Board (FSB), in its third annual report on the implementation and effects of the G20 reforms, placed cooperation and information sharing of financial authorities as a number one priority. This is reflected in IAIS statements and member activity.

2018 is likely to see a continuation of the trend for enforcement agencies to coordinate with their counterparts across jurisdictions. There is a need to continue to improve communication and information-sharing between the financial sector, regulators and government agencies, embracing all those components that can be included in the "FinTech Umbrella", so we may successfully defend against money laundering, terrorist financing, cyber and data attacks and complex commercial fraud internationally.

Cyber-attacks continue to disrupt financial services and financial market infrastructures and remains one of the top concerns for a range of stakeholders including regulators.

In 2017, the FSB published the results of a stocktake on cyber security regulations, guidance and supervisory practices as the first step in enhancing cross-border cooperation. Three quarters of the 25 member jurisdictions reported publicly released plans to issue new regulations, guidance or supervisory practices that address cyber security for the financial sector within the next year.

These plans include engaging with financial market infrastructures in a self-assessment exercise, developing a cyber-security strategy and guidance for the financial sector, and issuing new cyber security regulations. Participants stated that up to 90 percent of threats can be mitigated by basic cyber security hygiene.

The DFSA announced a more focused approach on cybersecurity issues in 2017 with a public-private partnership approach as the best solution to address risks in this area. With increasingly high profile cybersecurity incidents around the globe, we aim to establish a bespoke cyber security framework in 2018 that is commensurate with the level and depth of operations conducted in the Dubai International Financial Centre.

As a minimum all firms have to be aware of the threat, able to defend themselves effectively, and respond and recover proportionately to cyber events. Senior managers need to ensure cyber risks are effectively identified, managed, mitigated, monitored and reported on within their firm's corporate governance framework.

Technological innovations developed in the financial services sector, mostly start-ups, are forcing financial institutions to become more innovative and competitive. At the enterprise level, FinTech has grown from a perception of "niche" finance solutions to an attractive and increasingly common way for business to raise money more easily, and optimise corporate finance. This is why, in the financial sector, FinTech is perceived as a threat.

McKinsey has stated that; "The changes to come over the next 10 years will be less visible than the global financial crisis or the bursting of the dot-com bubble and yet their impact on banking's economics and even fundamental business models will be much more substantial."

As we are all aware, threats and challenges may also present themselves as opportunities. Dubai is recognised throughout the World for its drive to diversify away from reliance on petrodollars and be innovative in its economic approach to being a "non-oil state". It is natural therefore for the Dubai International Financial Centre and the DFSA, as the financial services regulator, to embrace the challenges of FinTech and recognise the opportunities presented.

2017 saw the launch of the FinTech Hive at the DIFC, a first-of-its-kind accelerator in the region, which received over 100 applications from more than 32 countries for its inaugural programme, run in partnership with Accenture. Of these, 11 start-ups were selected to develop, test and adapt their technologies to meet the needs of the regional financial services sector.

Over the course of 12 weeks, the participating FinTech firms - including a dedicated Islamic FinTech start-up - benefitted from active engagement with firms based in the DIFC, as well as the DFSA and other strategic partners. Working closely with regional and international financial institutions from the DIFC FinTech ecosystem, which now encompasses more than 45 partners, participants received guidance and mentorship from the likes of HSBC, Citibank, Dubai Islamic Bank, Emirates NBD, VISA and the Dubai Islamic Economy Development Centre. This reinforces the view that development may be viewed as complimentary and collaborative to existing industry rather than necessarily negatively disruptive...echoing Masujima-san's views given earlier.

Following the success of the 2017 programme, the FinTech Hive is set to introduce two new specialist programmes focused on InsurTech and RegTech this year. A new Incubator programme will be added, aimed specifically at early stage FinTech start-up companies. As a further indicator of its commitment, Dubai Government and the DIFC has announced a \$100m fund to accelerate their development from incubation through the growth stage.

The initiative aims to help gain momentum for the development of FinTech in a region, which has somewhat lagged behind. The Middle East and North Africa (MENA) currently attracts only 1% of the \$50 billion or more invested globally in the sector since 2010, according to Accenture.

On the regulatory side, the DFSA instituted its Innovation Testing Licence regime in 2017 and, similar to other "sandboxes", we have experienced huge interest with over 50 firms applying initially. We have applied a rigorous filter to ensure we accept only those who meet our eligibility criteria. To date we have issued 2 ITL licences and are advanced in the authorisation process for a 3rd. We expect a further 5 or 6 by year end. None so far have been from the insurance sector but we are looking forward to the second wave of Hive entrants, focused on RegTech and InsurTech and who may convert into applicants for the ITL programme.

It is estimated that the InsurTech market will grow annually at over 10% in the lead up to 2020.

The Global InsurTech Market 2016-2020 report stated that; "Insurance technology is an increasing phenomenon that has revamped the insurance industry to connect with a wider client base consisting of high-net-worth individuals, upper middle-income groups and lower middle-income groups. The InsurTech platforms have the potential to help insurance companies improve their relevancy to the customers to rebuild their trust. This will help in customer engagement."

InsurTech start-ups develop innovative insurance solutions, from pay-per-mile car insurance policies and the use of "telematics"; driving style, frequency of vehicle use etc., to health insurance that will monitor your lifestyle using "dynamic data"; as was mentioned in the presentation this morning, such as how often you go to the gym, how much you walk, your heart rate, blood pressure etc. It also involves cross-selling of insurance product via online retailers or apps to manage insurance online and control due dates, services and annual costs.

Michael Jensen, Managing Director, MENA, at AIG has said; "InsurTech has, quite drily, been defined as 'the use of technological innovations to squeeze out savings and efficiencies from the current insurance industry model.' However, what we are now witnessing is nothing short of a revolution, taking place not only in the insurance sector, but across the entire financial services industry."

He believes there are two key areas where the impact of InsurTech is most visible.

First, on data analysis, thanks to the increasing use of connected devices that will allow the generation and collection of vast amounts of data, which can be analysed afterwards, as well as used for risk calculation and customisation of products for a smarter and better service. Secondly, InsurTech will positively impact customer engagement. Innovative uses of technology are now actively sought by customers looking for a better experience.

Brands can also remain connected to their clients more easily by using their social media profiles or automated claims and settlements in real time. This is especially relevant in the GCC with some of the highest smart phone penetration rates in the world, especially in the UAE and Saudi Arabia.

RegTech is about using innovative technology like artificial intelligence, block chain or biometrics in financial compliance to better detect anomalies or enhance identification and security.

According to Thomson Reuters and Deloitte's recently published *3rd Financial Crime Report* covering the MENA region, 44% of respondents lacked confidence in their compliance programmes. Over a third said their lack of understanding of the regulatory environment was an issue, with 22% mentioning the overwhelming pace and complexity of regulatory updates.

To assist with this, the DIFC has recently opened a training facility; The Academy. Partnering with the Financial Times and IE Business School, The Academy will offer courses on the impact of new technologies, such as AI, and Machine Learning on how the financial services industry operates.

In conclusion, FinTech, InsurTech and RegTech provide challenges and opportunities. Whether or not every jurisdiction or every regulator wants to embrace this change, we surely cannot ignore it and, in line with the FSB and IAIS, we must continue to share information and best practice across jurisdictions.

Thank you.

Disclaimer: This speech was prepared by Mr Aire in his personal capacity. Any views, thoughts or opinions expressed do not necessarily reflect the views or policy of the Dubai Financial Services Authority.