

“STEERING FINTECH FOR A PROSPEROUS SOCIETY”

Introduction

[Modem Connecting Sound]

Ladies and Gentlemen, if you are 30 years old or younger, by a show of hands, how many of you have heard that sound before?

You may not all be familiar with it but that, about 20 years ago, was the sound of a modem connecting to the internet. It was the latest technology at that time, and it was the envy of older generations who had never dreamed of seeing such luxuries during their lifetimes. This was the sound of the world of connectivity that was about to be unleashed.

Let us consider how far we have come. Back then, the fastest home connection time was 56 kilobits per second. At that speed, a 10 megabyte image would take around 25 minutes to download. Today, it would take seconds. Such a slow connection now would be completely unacceptable to all of you, even on your phones, let alone your computers and tabletsⁱ.

The world today is very different from what it was just two decades ago. The technological revolution has enabled us to communicate, socialize, shop, keep up with the news, and perform any number of other tasks simply and conveniently from the palms of our hands. It is by now inconceivable to imagine an isolated world stripped of its smart phones, high-speed internet, social media, or even food delivery apps.

ⁱKeynote address delivered by H.E. Dr. Mohammad Y. Al-Hashel, Governor, Central Bank of Kuwait at the Global Informatics Forum, November 27th, 2018, Gulf University for Science and Technology, State of Kuwait.

Yet, it is a false notion to see technology as the sole driver of change when it can be argued that it is, in fact, propelled more by society's insatiable thirst for ever-faster access to information and entertainment and empowerment.

There is no sign of the revolution in digital technology slowing down. If anything, the technology is evolving and being adopted at an increasingly amazing pace. Economists have labeled this the Fourth Industrial Revolution. They believe the latest digital technology is transforming the economic landscape just as dramatically as the steam engine, internal combustion engine and microchip did before, but this time at an exponential rate. It is plain to see that the world is not only changing, but is also being disrupted by technology infused with humanity. Seemingly every sector of the economy – whether healthcare, transportation, hospitality, retail or manufacturing – is being utterly transformed.

So, what about financial services? What will the future look like for this industry? How will these changes affect our life? What role should the regulators play in the technological revolution? And the role of other stakeholders? These questions will be the subject of my keynote address today: existing trends in financial technology, opportunities and risks, and the Central Bank's steering role as facilitator and enabler.

It must always be remembered that people are at the center of all we do. So in light of the many changes that financial technology is bringing and the possibility that we are drifting into uncharted territory, all stakeholders, including the Central Bank, must ensure that this transformation is aligned with our ultimate objective, which is to ensure inclusive and sustainable prosperity. This means helping to build a brighter and safer future for all of society. And we believe that one vital step towards achieving this objective is embracing technological innovation while steering clear of, or at least mitigating, risks to consumers, the economy and broader society.

Fintech Developments

The changes we are seeing in financial technology are happening at an exponential rate. But ultimately, change is driven by consumers' needs and demands. If technology can enhance and improve our life, then society will adopt it.

This is certainly true of financial technology, or, as we abbreviate it, fintech. Fintech is a broad term covering a wide variety of innovative technologies, both emerging and advanced, that have caused a paradigm shift in the world of finance. Fintech encompasses technologies including data analytics, artificial intelligence, blockchain, crypto-assets, payment solutions and online shopping. Some technologies, such as mobile banking, have been widely adopted. But others have not been so quickly embraced by banks and customers.

The gap this leaves means there are huge opportunities in fintech, which has not gone unnoticed by investors. According to KPMG, Total investment in fintech has grown from \$9 billion in 2012 to a predicted \$120 billion by the end of 2018 – an average annual growth rate of more than 50 percent. Not only this, but the average investment deal in fintech is \$66 million – more than double the average deal in any other type of technologyⁱⁱ.

Growth is even more impressive in the area of crypto-assets. Today, there are around 2,100 active crypto-assets in the world. In early November, the top five of these had a combined market value of over \$160 billion, with Bitcoin alone sitting at more than \$110 billion in value. To put this in perspective, this was more than the value of all British banknotes in circulation at that timeⁱⁱⁱ.

Even more impressively, at the height of their pricing in January this year, the total value of all crypto-assets was greater than \$830 billion – around eight times the value of British banknotes in circulation. Such massive and rapid growth, though highlighting what a risky new phenomenon this is, made all industry stakeholders take notice.

As for consumer adoption, the right fintech proposition can enable institutions to attract more customers when compared to traditional channels. We have seen this trend in Kuwait, where numerous fintech initiatives have attracted thousands of users. These initiatives include food delivery apps, e-commerce platforms and online shopping. By our latest in-house estimates, we have over 60 fintech firms operating in Kuwait, and this number is increasing each month.

In short, such rapid growth in innovation and adoption shows that fintech is more than a trend – it is a transformative force to be reckoned with. Change is happening at a rapid pace, and it is being driven by the needs of society. We cannot slow this change, but that should not make us passive bystanders. We cannot be still. We, along with all stakeholders, must steer this promising industry towards the benefit of all society and align it with our objective: to promote ‘inclusive sustainable prosperity’.

Opportunities and Risks

Let us explore what fintech offers and how it can support a more prosperous society. An ocean of opportunity has opened up due to fintech's tremendous appeal for consumers. What society needs is a frictionless financial experience. And that is precisely where fintech’s appeal lies, centering around four key features – Access, Efficiency, Cost, and Customer Experience.

Today, around a quarter of the global population, or 1.7 billion people, have no access to basic financial services. But fintech can do much to support governments in addressing financial inclusion by making it easier for people to benefit from these services.

One example among many is M-pesa, launched in Kenya in 2007. In a country where it is far easier to get a mobile phone than it is to open a bank account, M-pesa has been credited with providing millions of unbanked consumers with access to financial services through its phone-based money transfer system. The service now has more than 25 million customers and operates in 10 countries^{iv}.

Fintech represents a true paradigm shift when it comes to access to financial services. Let us look at the world's largest bank – Industrial and Commercial Bank of China (ICBC). The bank has around 500 million customers. This seems impressive until you learn that it is eclipsed by the world's largest fintech firm, Ant Financial, which has more than 870 million customers. This is an astonishing example of how fintech is providing access to financial services for ordinary consumers^v.

Ant Financial is valued at more than \$150 billion. So, as we speak, this brings it in line with banks such as HSBC or Citibank, and is more than double the value of Goldman Sachs. This is remarkable, given that these institutions have been operating for more than 150 years, while Ant Financial has only been around for 14 years. At this rate, what will the industry look like in another 14 years?

In addition to access, innovations in fintech have increased efficiency for all types of financial service. A good example of this is the execution of financial transactions, where transactions that once took several days to process can now be completed in seconds - as quickly as sending an email.

This efficiency also reduces costs for customers, who can now transfer funds or make financial investments at a fraction of the cost of traditional services.

The increased efficiency and reduced costs have also opened up new investment avenues for consumers. For example, customers can now invest in institutions such as Chinese money market fund Yuebao for as little as 16 cents. By leveraging technology and opening investment opportunities for a much broader consumer base, Yuebao has created the largest money market fund in the world, currently managing over \$270 billion in assets. This is an excellent example of how fintech can make financial and investment services available for all^{vi}.

Moreover, fintech has the capability to enhance customer experience, in line with our current needs and expectations. Today, we live in a world where consumers expect 'on-demand services', forcing institutions to operate around customers' schedules rather than their own. Branch operating hours, hard copies of documents and physical presence are becoming increasingly disconnected from the expectations of the current generation. Fintech, through user-friendly digital services and 'on-demand' banking, is empowering consumers to access their financial information wherever, however and whenever they need it.

But these opportunities tell only half the story. Fintech also presents many different challenges and risks that we will need to navigate around.

Some of the biggest challenges facing fintech relate to identifying and implementing these new technologies and integrating them with existing legacy systems. Moreover, fintech adoption requires a cultural shift in how businesses operate, and this will require new skills and extensive training. Investing in training and up-skilling of human resources is a must if we are to effectively address these challenges.

But even as we do this, fintech still poses many risks that we need to steer clear of, or at least mitigate. First and foremost is the risk to consumers. While technology opens up many opportunities for consumers, it also exposes them to potential dangers. For example, their funds and data could be vulnerable to theft unless effective safeguards are put in place.

Fintech firms operating with different stakeholders and third parties across jurisdictions can also create loopholes that can be exploited by individuals or organizations to abuse the system through money laundering or other illegal activities. Monitoring and preventing such activity is crucial to safeguarding the overall wellbeing of society.

And with an increasingly interconnected financial system, we need also to ensure that our IT infrastructure is robust and secure. Otherwise, we expose

ourselves to operational risks, technical glitches, and other unforeseen technical issues.

Finally, Fintech firms that grow too big, too fast, could pose a systemic risk to the entire financial system. Imagine if a large fintech firm, with millions of customers, were to be hacked or go bankrupt. What would be the impact on the financial system and the broader economy?

These risks are rare, but when they do happen, the damage can be on a massive scale. Let me elaborate with examples. We have seen how the data breach at credit rating agency Equifax resulted in the personal and financial details of 140 million people being stolen by hackers. Crypto-asset exchanges have also been hacked, the biggest being Coincheck, which lost over \$500 million in crypto assets^{vii}.

Fintech can present huge opportunities, but we need always to be aware that its mighty forces, if unchecked, can be equally destructive. These risks have to be avoided, or at least managed, even as we push forward on innovation, inclusion, engagement, awareness, protection and empowerment. Responsible innovation and safer fintech adoption can only be steered when all stakeholders, including us, work together towards our ultimate objective: to promote “inclusive sustainable prosperity”.

Central Bank Role

Now, let me touch upon our role at the Central Bank of Kuwait. It is the responsibility of regulators to strike a delicate balance between enabling innovation and ensuring the stability of the financial system, for the benefit of the broader economy and society.

We at the Central Bank are responsible for ensuring monetary and financial stability. What this means, in simple terms, is that we work to ensure that the people’s deposits are protected, that the value of our currency is stable, that prices of goods do not increase beyond what is acceptable inflation, and that the

overall financial system is secure and facilitating the growth of the broader economy.

We need to ensure that consumers are aware of the risks they undertake when they enter into fintech solutions. For customers to trust these new solutions, we need to also ensure that fintech firms have implemented reliable systems and sufficient controls to secure the funds and data of their customers.

In addition, funds from illicit criminal activities or terrorism should not sneak into the financial system through fintech platforms. And we, as the Central Bank of Kuwait, need to ensure that no fintech firm can threaten the stability of the financial system and the broader economy, either technically or systemically.

Looking at these potential risks, it becomes clear why regulators play a critical role in the development of the fintech ecosystem. We realize that modern and efficient regulations form a key building block for a safe, state-of-the-art, fintech ecosystem.

I would like to detail how we take a proactive and dynamic approach at CBK. We start with a clear vision and strategy on embracing technology and steering it towards the benefit of society. We adopt the latest relevant and useful innovations, and share experiences with other regulators to develop our framework, which fits the needs of our society. And prior to the release of any new regulations, we hold discussions with financial institutions and fintech firms to receive their input and incorporate it into developing regulations that benefit all parties and ensure sustainable growth.

For example, our recent regulations for electronic payments are a step CBK has taken to support local, innovative, fintech platforms. These regulations ensure that a safe and secure ecosystem is maintained that covers all stakeholders including consumers, retailers, payment channels and financial institutions. Clear roles are assigned to each stakeholder, and a monitoring system is in place to ensure that the provided services are secure.

We are also embarking on a long list of initiatives that will completely revamp and upgrade the IT infrastructure of financial systems in Kuwait, according to global best practices. A key component of this is that startups and entrepreneurs will be able to interact with and benefit from an improved payment system that is efficient, convenient and safe.

One major initiative is the Kuwait National Payment System (KNPS), a strategic mega project being developed with local banks and payment gateways to be rolled out in two phases in 2019 and 2020. The system will cover various initiatives including the Government Electronic Banking System, Wages Protection System, Digital Currency, and Automated Clearing House. Each initiative is designed to enhance the stability and efficiency of the financial system, and build the necessary infrastructure to address future needs.

For example, the Government Electronic Banking System dramatically improves efficiency by executing all government transactions online. It replaces a paper-based process with an online automated cycle that is both immediate and accurate. This system is live today and is being rolled out to all government bodies.

Another interesting example is the plan to prepare the infrastructure for Digital Currency. In case the Central Bank of Kuwait decides to issue Digital Currency in the future, we will have the tools ready to go live. In addition to e-wallets, this includes a Digital Kuwaiti Dinar, which will facilitate exchange against tokenized assets.

To encourage startups and entrepreneurs further, the Central Bank of Kuwait has recently announced the Regulatory Sandbox Framework. A regulatory sandbox is a safe space that allows for experimentation in innovative products and services, but with a lighter regulatory touch that ensures the safety and soundness of the financial and banking sector without stifling innovation. Fintech firms will also benefit from fast-track approvals and lower capital requirements. Furthermore, the Central Bank of Kuwait will offer fintechs free advice on their information security effectiveness, operating model design, and regulatory compliance. The sandbox initiative is a framework that enables you to

partner with the Central Bank of Kuwait. We encourage you to engage with us, and to submit ideas that will be secure, useful and beneficial to society.

We have also ensured that our regulations follow a proportionate, or scaling, approach, where firms are treated differently depending on their size and sophistication. We differentiate between large sophisticated institutions such as banks and entrepreneurial fintech startups. This ensures that regulation and supervision are tailored to the specific risks inherent in their different business models, and provide an accelerated registration process for smaller, less complex or less risky firms.

Since people are the center of everything we do, we are continually working to upskill human resources at the Central Bank. Not only are we acquiring talent and training existing staff, we are actively leveraging on the expertise of external advisors, and engaging with banks and other partners. This ensures our ability to effectively support and regulate the industry as it grows and evolves in coming years.

Our role in contributing to Kuwait's economic and social development also extends to preparing recruits for future jobs in banking and leveraging the skills of existing professionals in financial technological innovation. We are running several successful training programs, with the full support of local banks, and under the management of the Institute of Banking Studies. These programs are wide ranging in scope from providing new graduates with the practical knowledge they need for working in the banking sector and in maintaining cyber and data security, to offering Masters degree scholarships at leading international universities in all fields related to the banking industry. We also provide awards for best economic researcher and best student economic researcher, in order to encourage and advance scientific research in the fields of economics and banking.

In short, we believe that when regulators work hand in hand with all stakeholders to serve society, financial innovation can be responsibly steered towards our aim of promoting inclusive sustainable prosperity.

Conclusion

From that gushing sound we heard at the beginning of this address to the vastly different world we inhabit today, this incredible pace of change has been driven by just one thing: society's needs and demands. With the advent of fintech, technology is revolutionizing the ways in which we spend, save, invest and lend. We realize that we cannot slow technological advance, nor would we want to. We welcome change, and we choose to steer technological innovation in the right direction towards our objective of providing inclusive sustainable prosperity.

But we cannot do this alone. All stakeholders need to come together to play their part in ensuring that fintech is steered in the right direction. We as regulators, and other regulatory bodies, must ensure that we play a proactive and dynamic role in creating regulations that facilitate innovation and growth, while at the same time avoiding or at least mitigating risks. We must be agile and vigilant.

Educators must include digital technology courses in all curriculums and programs to prepare the next generation. We also encourage them to partner with international institutions and establish innovation labs to research and develop fintech solutions, aligned with the needs of society. We are thinking seriously about establishing such a lab ourselves, in partnership with Thomson Reuters and international universities with relevant expertise. We invite universities and all interested parties to participate.

Innovators must provide out-of-the-box solutions to serve the needs of society in a responsible and sustainable manner.

And banks must be agile enough to develop fintech solutions, and to utilize big data to innovate and better serve their customers while maintaining their absolute trust.

Before I go, I have a message for the students in this audience. Let us travel back 20 years and see how life used to be. Information that used to take us an age to access, like the image we mentioned at the beginning of this address,

would still be downloading now. There is no doubt that having information at our fingertips has been beneficial for society in many ways.

But while it is right to demand speed of service, it must be remembered that some things need time. You yourselves are going through this today. You are working hard over four years to earn your degree and equip yourselves with the skills needed to succeed in your working life. I am sure you appreciate the value of this investment in your future, and I hope you will equally appreciate that many other things in life also take time. Shortcuts are not the answer. Only through hard work and commitment can you achieve your aspirations and, in turn, benefit society.

Once again, we call on you all to engage with us. And if your future brings you towards fintech, then you should know that you will always find a partner at the Central Bank of Kuwait that will work with you. We will support your financial innovations, and ensure they operate in a responsible manner, where all risks are considered, and the solutions going out to the market are beneficial and safe for the broader society.

Unfortunately, we don't have time for the picture to download. I think we will need to disconnect at this point, and be grateful that we have moved on from the 56 kilobit modem connections of the past.

[Modem Disconnecting Sound]

Thank you very much.

ⁱ www.download-time.com

ⁱⁱ KPMG International - Pulse of Fintech 2018

ⁱⁱⁱ www.coinmarketcap.com

^{iv} www.vodafone.com/content/index/what/m-pesa

^v Ant Financial Press Release – 2018/06/08 – ‘Ant Financial Raises Approximately US\$14 billion in Series C Equity Financing to Accelerate Globalization and Technology Innovation’

^{vi} Reuters News – ‘Jack Ma's Ant Financial adds two new money market funds to its platform’

^{vii} Reuters News – ‘Equifax reveals hack that likely exposed data of 143 million customers’ – ‘Tokyo-based cryptocurrency exchange hacked, losing \$530 million’