

Ravi Menon: FinTech – harnessing its power, managing its risks

Panel remarks by Mr Ravi Menon, Managing Director of the Monetary Authority of Singapore, at the Singapore Forum, Singapore, 2 April 2016.

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FinTech is fundamentally transforming the financial industry.

- The smartphone is becoming our bank.
- Computer programmes are offering investment advice.
- People can now lend directly to one another online.

Technology will replace many jobs in finance but will also create exciting new jobs.

- Calls for new and different skill sets – understanding technology and the ability to work with and harness the power of machines and algorithms
- As someone in Silicon Valley put it, “the geek shall inherit the earth”.

Unregulated FinTech companies are now providing many financial services. They will challenge traditional financial institutions (FIs), disrupt and even displace some of them but will not replace them.

- Banks and insurance companies have something that unregulated entities do not have – trust. Trust based on a track record of performance.
- FIs are not sitting still.
 - They are actively harnessing technology to enhance product offerings and improve efficiency.
 - They are setting up in-house FinTech units to replicate the start-up mentality. Many global banks have set up “innovation labs” in S’pore: Citibank, StanChart, UBS, HSBC, to name a few. And insurance companies too: Aviva, Aon, AXA, MetLife.
 - They are also collaborating with or buying over FinTech companies to tap their technologies.

Financial technology, or FinTech, may well be the best hope for the future of finance.

- The financial industry is facing many headwinds
 - slower economic growth, narrower margins, tighter regulation, and greater competition from outside.
- FinTech can potentially help the financial industry regain its dynamism and at the same time purposefully serve the economy and the people.

But the FinTech phenomenon is not without risk.

- The rapid pace of innovation and adoption throw up many questions for the industry and financial regulators.
- What should be the policy approach? Will speak from the perspective of MAS.

First – take a differentiated approach to different technologies and their applications.

FinTech encompasses a wide range of technologies: we cannot take a “one-size-fits-all” approach.

The nature of technologies, their benefits, and risks are very different.

- Digital payments, digital currencies – they pose issues of authentication, identity
- P2P lending platforms, crowdfunding – there are implications for consumer protection and fraud risk
- Cloud computing, big data – there is the issue of cyber security
- E-trading platforms, algorithmic trading – there are implications for market functioning, both good and bad.
- Blockchains and distributed ledgers systems (DLS) – this is potentially the most transformative innovation, at least until artificial intelligence comes along in a big way.

Many new technologies intelligently used can help to **reduce** risk. Take for example DLS.

- Decentralisation reduces concentration risk. A cyber attack cannot bring down the entire system because every player has a copy of the ledger.
- Speed of transaction verification reduces counterparty risk. This could potentially translate to lower collateral requirements, better capital optimisation.
- Imagine clearing and settlement in seconds rather than days.
- But mind you, these are still at proof-of-concept stage. There is still no scalable market-wide solution in place.

But contrary to what DLS advocates proclaim, it is not without risk and may even introduce new ones.

- The public DLS is susceptible to malwares being uploaded into the system. Blockchains are not hack-proof.
- And as all data are replicated to every node in the system, there is a risk of compromise of privacy.

So, each technology must be evaluated on its own merits.

- And we must also consider which financial activity it is being applied to
 - blockchains in clearing and settlement systems are very different from blockchains in trade finance or e-KYC.

Second – adopt a risk-based approach to FinTech innovation in the unregulated sector.

Regulation must not front-run innovation.

- Introducing regulation prematurely may stifle innovation and potentially derail the adoption of useful technology

MAS applies a *materiality* and *proportionality* test.

- This means when the risk posed by new technology becomes material, then regulation comes in.
- And the regulation must be proportionate to the risk posed.

Take for example internet-based payments or P2P lending that takes place outside regulated banks.

- We regulate banks chiefly because they take deposits.
 - When they get into trouble, they have systemic consequences.
 - So, we supervise their lending activity and their payments systems.

- We do not regulate P2P lending platforms – as long as they do not take deposits.
 - But if they get very large and pose macroprudential concerns, then we may consider regulation.
- Likewise, a payment service through the Internet will not automatically attract regulation
 - These are typically small payments, often in connection with e-commerce.
 - Only larger, more significant players that cross the materiality and other thresholds are regulated.
 - Even then, we do not regulate them as banks and throw at them the whole kitchen sink of capital and liquidity requirements under the Banking Act.
 - We regulate them under the Payment Systems Oversight Act or the Remittance Agents Act – modular regulation customised to address the specific risks or concerns they pose.
 - But I must acknowledge we do not have ready-made regulations for all new technology solutions; often we must improvise the use of existing legislation, even as we draw up new ones.

Third – actively promote the FinTech ecosystem and seek to harness its potential for good.

While regulation must not front-run innovation, regulators must run *alongside* innovation

- We must know what’s going on and be ready: either to promote or to restrain.

There are three ways in which MAS does this.

One, we actively engage FinTech firms to better understand emerging innovations and help them design their solutions for financial services.

Take for example cloud computing.

- Our traditional approach was to deal only with regulated FIs, not their service providers
 - But with cloud solutions proliferating, we changed tack
 - Many of these solutions offered strong efficiencies and cost savings but not all models met our regulatory requirements for data integrity and protection.
- So we engaged in dialogue directly with cloud service providers to explain our concerns and at the same time understand the technology
 - The service providers then came up with solutions that met our concerns
 - And we modified our requirements to take account of new business models and technological capabilities.

Two, we allow our FIs to experiment with new technologies in a safe environment.

FIs do not have to seek MAS’ permission to try new things.

- Responsibility lies with boards and management to assess the risks and put in place adequate safeguards
- But with many innovations, it is not always possible to anticipate every vulnerability or whether there is a risk of breaching regulation.
- Sometimes, as Nike puts it, you have to “just do it”.

MAS will therefore introduce a “*regulatory sandbox*” approach that aims to give FIs more confidence to experiment and launch their innovative products or services within controlled boundaries.

- The idea is not to remove all risk. Failure is an inherent part of innovation.
- Rather, we want to create an environment where if an experiment fails, it fails safely and cheaply, without larger adverse consequences.
- MAS will soon issue guidelines for public consultation on how the regulatory sandbox will work.

Three, we promote greater inter-operability within the industry to harness the full potential of technology.

An innovative environment proliferates a wide range of technologies and solutions.

- But if the solutions cannot interact with one another, we sub-optimize efficiency gains or customer experience.
- While we should allow a hundred flowers to bloom, we should also take care we create a garden.

Greater inter-operability across data systems is therefore a key priority. Let me give two examples of what MAS is doing together with the industry.

- One, common standards for payments systems to realise more seamless payments across a range of platforms.
 - We are working towards a unified Point of Sales (POS) terminal – a single terminal that can read all kinds of cards at retail and hospitality outlets.
 - We are also exploring an “all-in-one” addressing system, that will enable us to pay someone electronically using the payee’s mobile number, email address, social network account, or other proxies. No need to know the payee’s bank account number.
- Two, seamless data sharing through publication of open Application Programming Interfaces, or APIs.
 - We just had a two-day API conference earlier this week, where industry players shared their views on how we can take the API strategy forward.
 - MAS is working with FIs to leverage on new technologies to share aggregated data to improve market and risk analyses, forecasts and projections.

We are committed to building a Smart Financial Centre, where innovation is pervasive and technology is used widely to:

- Increase efficiency
- Manage risks better
- Create new opportunities
- Improve people’s lives.