Enabling the transformative power of new technologies: Article in The National, 1 Jun 2018

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Enabling the transformative power of new technologies

New technologies are disrupting regulated industries including finance, transport, energy, telecoms, health, defense & government

Technology has often resulted in disruptions (remember typewriters, fax machines, film cameras, desk telephones and floppy disks?) but also supported the process of globalization via digital transformations, cross-border flows of data and information, e-commerce and cloud computing.
New technologies have been disrupting many regulated industries including banking and finance, transport, energy, telecoms, health, defense & government. We now live in a world where the largest movie house no longer owns any cinemas thanks to Netflix, the largest accommodation provider, Airbnb, owns no real estate and where Skype, WeChat and WhatsApp exist without owning any telecom infrastructure.
Blockchain – which has become a buzzword and is associated by the public largely with Bitcoin – distributed ledger technology (DLT) and artificial intelligence (AI) are *general purpose technologies*, with widespread applicability in modern economies.

DLT applications can be used for digital identities of people and companies, maintaining patient records in healthcare, or sale and purchase of real (think property) as well as digital assets, or supply chain like IBMs' fully transparent food system use case for instance. AI will soon become ubiquitous, with applications in national security, data science, business intelligence, healthcare, entertainment and the list goes on.

The UAE's aspiration to support and become a leader in the 4th industrial revolution – with its blockchain and AI strategy – is likely to benefit it to help it transform and diversify its economy. Given its growing digitisation over the past decades, the banking and financial sector is a leading candidate for disruption.

Total global investment in the fintech sector was $122 billion over the past three years, with 2017 alone seeing investments to the tune of $31bn, ,according to Kpmg. The US remains the largest player, accounting for some two-thirds of the investments, but China is fast catching up in this space. As the fintech grows, increased focus should be on its economic development potential: given widespread availability of smartphones, fintech is an enabler for financial inclusion and access to finance.

The Middle East is a ripe playing field for such initiatives, especially given the relatively high mobile phone penetration: among the *unbanked*, 86 per cent of men and 75 per cent of women have a mobile phone but only 35 per cent of women have a bank account. Not to mention how useful it could be for creating digital identities and thereby allow for access to finance and e-services for more than 15 million Syrian, Iraqi and other refugees and displaced in the region. All of this requires investment in infrastructure and an enabling environment.

Supportive Regulatory Frameworks for New Technologies

Current bank regulatory and supervisory frameworks generally predate the emergence of technology-enabled innovation. As regulators in the region start implementing new supervisory models, it is critical to avoid regulatory barriers to adoption and spread of new technologies, especially those that could stifle innovative ideas, while ensuring consumer protection and financial stability.

To facilitate innovation, regulators across the globe have focused on either building regulatory sandboxes – testing in a controlled environment, with tailored policy options – or developing accelerators or “boot-camps” for start-ups, ending with a pitch presentation, or just enabling an “innovation hub” that acts as a place to meet and exchange ideas. In the region, both the DIFC and ADGM are at the forefront with accelerators and regulatory sandboxes in place.

Given the cross-country applications of the technology like DLT and payment systems, coupled with global growth of some fintech firms, cross-country and cross-sector cooperation is essential between regulators. Ongoing discussions are needed, especially with respect to uncertainties: safeguarding data privacy, digital identity and its impact on the use of financial services, cyber security, compliance with anti-money laundering and countering financing of terrorism (AML/CFT), risk mitigation when there is a technology-governance gap and so on.

While incumbents and new entrants evolve and adjust to the disruptive potential, regulators are themselves starting to adapt within this ecosystem, leading to a branch called regtech. What is regtech? The Bank for International Settlements defines it as “any range of fintech applications for regulatory reporting and compliance purposes by regulated financial institutions. This can also refer to firms that offer such applications”.

Regtech could transform regulatory compliance by reducing its and risk management at financial institutions. It could also facilitate identity management (know your customer for onboarding, AML/ CFT checks) and improve fraud detection. Suptech – technology for supervisors – goes a step beyond and could increase supervisory effectiveness and efficiency. Some examples include algorithmic regulation and supervision (in areas such as high-frequency trading, algorithm-based credit scoring, robot-advisors) or real time supervision (look at the data as it is generated in the regulated institutions’ operational systems) or even moving towards machine-readable regulations. Together, these could result in major paradigm shifts as to how a regulator functions and a major challenge.

Enabling Innovation & Fintech

A new integrated, digital financial world is emerging. The region’s policy makers and regulators should support the burgeoning, innovative start-up culture, rather than being protective of incumbents, which are typically owned by governments and have been shielded from competition. Some guidelines and principles are:

1. Be supportive of technologies like DLT, AI and related innovations, and remove barriers to their use by undertaking a pro-active and regular review of regulatory regimes.
2. Create and support innovation facilitators like hubs, sandboxes, incubators, accelerators. The best practice is to review and create structural mechanisms to enable ongoing market engagements.
3. Coordination, collaboration and communication between domestic regulators is necessary. The emergence of innovations such as digital money, crypto-assets, initial coin offerings (ICOs), digital financial and non-financial services, requires the development of new regulatory regimes and cooperation & coordination between regulators in different industries, such as telecoms.
4. Build staff capacity and knowledge of regulators and supervisors in the fast-evolving landscape
5. Digital finance has gone beyond cross-border to become borderless. This requires international coordination and cooperation by authorities to monitor macro-financial risks, mitigate of cyber-risks, and the managing of operational risks from third-party providers, such as cloud-based services.