

AI and the Evolution of Payment Services

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Introduction

The financial services industry can hardly keep up with current developments, as new smart services with different angles are introduced on an almost daily basis. Are national regulators up to the task of keeping these services in check with acceptable standards for customer protection, market integrity, the prevention of Base Erosion and Profit Shifting (“BEPS”) as well as the prevention of money laundering? Or should financial regulators follow the global trend of evolving in a global regulatory framework which shall allow them to be better equipped to deal with these multiple objectives? What role shall AI-based applications play in all of this?

Gaming Legal Group’s Bas Jongmans, attorney at law and Xavier Rico, forensic consultant discuss the current worldwide trends of these developments from an industry perspective, as well as the developing regulatory principles.

Neobanking and Other Trends in the Development of Financial Services

The 2008 financial crisis led to the common understanding amongst nations that it was time to reform regulations of the consumer credit market, aimed at enhancing protection of consumers. As one of the first nations to do so, the United Kingdom introduced a more robust, proportionate regulatory system on 1 April 2013.¹ Tailored to the characteristics of the consumer credit market, a two-tier authorization (or “limited permission”) approach for credit activities should suit the diverse nature of the consumer credit market. Bringing a focus *“from the boardroom to the point of sale and beyond, to put the well-being of their customers at the heart of how they run their businesses and to promote behavior, attitudes and motivations about good conduct above anything else”*.² Although the vision and ambition of these reforms is clear, at the time it remained to be seen how the Financial Conduct Authority and other financial regulators would in practice approach regulation of the UK’s banking and financial services industry.

These new regulations helped to stimulate the rise of the so-called *“challenger banks”*. A new type of smaller retail bank, an independent form of *“neobanking”*, independently running on a “self-owned” licence, set up to compete directly with the longer-established banks in the UK, sometimes by specializing in areas underserved by the “big four” banks. The Bank of England even set up the New Bank Start-up Unit, guiding firms through the application process.³

This new breed of banks heavily relies on technology-focused initiatives, and has an edge over traditional banks. Neobanks have the potential to offer far better and more customised services than traditional banks. For instance, neobanks have the ability to forecast cash flows or encourage savings through a virtual piggy bank account.⁴

Typical for these next generation banks is a ring-fencing strategy, established by a separation of traditional investment banking from retail banking. *Atom Bank*, the first smartphone app-based bank of its kind, launched in April 2016. It was keen to adopt machine learning and artificial intelligence technologies whilst not being constrained by legacy systems of traditional banking competitors. *Atom Bank* does not have any traditional online banking outlets.⁵ On 9 March 2017, the bank experienced over 5,000 new customer sign-ups in one day. The surge led to the end of a special interest rate offer, which created controversy in some financial publications.⁶

Another new model of banks conceptualized by the Reserve Bank of India – so-called “*payment banks*” – were set up in India as of 2013. Payment banks distinguish themselves from historic banks by not giving out loans and setting a limit on deposits per client.⁷

Prior to the 2008 credit crunch, *Fidor Bank*, operating in Germany (since 2007) and Russia, used social media to overcome the cost and complexity of traditional banking, while increasing customer trust through an online community.⁸

Evolution has not been restricted to financial institutions only. Over time, payment service providers teamed up with merchants on a software-as-a-service basis (“*SaaS*”). Working with SaaS allowed the offering of more advanced payment services via an electronic portal, a payment gateway. Already in 2005, the Dutch company *Currence iDEAL B.V.* introduced “*iDEAL*” in the Netherlands, allowing a direct contact, a “live” payment, executed between customers, merchants and their banks. It also allowed recurring payments without the necessity of the merchant storing customer-sensitive information, highly increasing protection against identity theft-related fraud. SaaS also allowed for a “live” risk analysis on transactions as well as to make an AML risk calculation on the origins of the payment.

The gambling industry received a big boost in popularity when the electronic processing of payouts to end users was introduced. Combining SaaS with mobile points of sale, further enhanced by object recognition technology such as quick response (“*QR*”) codes, resulted in the offering of the cardless, digital wallet. Combining these technologies with a crypto-based currency eliminated the necessity for customers and merchants to hold a traditional account, connected to any individual or company, eliminating all together the necessity for a bank and even for cash to be involved in a transaction. After all, a cryptocurrency holds its own value. Bitcoin, for example, has properties that make it similar to gold. The developers of the core technology limited the production of Bitcoin to a fixed amount, 21 million BTC. It therefore does not resemble cash. The term “*Digital Gold*” seems more appropriate.⁹

WeChat Pay and *Alibaba’s* payments arm *Alipay* dominate China’s mobile payments landscape, which is considered by many experts as one of the most advanced in the world. Until recently, both platforms required users to have a Chinese bank account to make payments. These evolutions also almost “obliterated” the need for cash payments. As a next step, facial and fingerprint recognition is now replacing QR technology in that nation. In August 2019, *WeChat Pay* introduced its “*Frog Pro*” system that allows customers to make payments by simply scanning their faces, without the use of their mobile phones. The technology is now being tested in several Chinese retail chains and came after *Alipay* rolled out its own facial recognition payment system, the “*Dragonfly*”, last year.¹⁰

Evolution of Substance

Evolution of payment services also sheds new light on what is to be perceived as “substance of transaction”. Substance is “key” for many reasons. Distribution of taxation rights between nations hinges on substance. It is also an essential tool in combatting money laundering.

By request of the G20 international forum for governments and central bank governors (“**G20**”) in 2013, the Organization for Economic Cooperation and Development (“**OECD**”) produced its 15 standards (also referred to as “**Actions**”) on BEPS in 2015. These Actions are aimed at enhancing an international “level playing field” by, for example, introducing obligations in legislation to provide for “substance”: to have an actual presence and/or establishment as a requirement to claim favorable tax features. Since then, its “*framework members*” have been in the process of implementing these Actions; such implementations are subject to “*peer review*”.¹¹

Economies shifting towards pure digital trade cannot escape redefining minimum substance criteria. A clear example of this struggle to keep the innovation going may be found in the efforts of the government of Malta.

In the Malta chapter of the first (2019) edition of *AI, Machine Learning & Big Data*, we quoted Steve Tendon, a former strategic adviser (in 2016) for the Ministry of Economy, Investment and Small Business (“**MEIB**”) and the first Chairman of the Blockchain Malta Association (“**BMA**”).

Malta held its first long-anticipated Malta Blockchain Summit in 2018.¹² The nation set out to present an ambitious National Blockchain Strategy (“**NBS**”), consisting of six separate key projects, aimed at transforming the island into an economic superpower in the emerging Crypto Global Economy.

Tendon notes on his website that “*crypto-economy*” should not be limited to cryptocurrencies alone, but to the broader new dimension of economic enterprises that can work on top of cryptographic technologies, which typically are blockchain technologies. By creating a legal environment where such enterprises can thrive, the idea is to attract those kinds of businesses to Malta.¹³ Such enterprises do not necessarily require a physical presence, or “classic” substance so to speak. Regulators may follow the blockchain/publicly accessible ledger of whatever qualifying cryptocurrency and the chain of transfer thus not needing *per se* to access paper files and records from various intermediaries. *Ergo*: no need for substance as one used to be familiar with.

On the contrary, such demands would lead to “fake” substance. If regulators fail to redefine the said substance criteria, this would stimulate the “scam artists” of the future, suppliers of empty office buildings, filled with a surrogate staff, all in the name of pretense.

In the view of Tendon. Malta’s development into the “Blockchain Island” seems to have gone stale. In a fascinating and brutally honest article about the birth of the blockchain island concept, Tendon claims that Malta completely “*missed the point*” of the power of cryptocurrencies.

The opportunity of shifting services to the digital realm was “lost” by forcing companies to put down a physical presence on its shores. The nation seems to have fallen into the trap of following its “classic” existing model for success: attracting foreign investments and making companies set up a physical presence on the island.

Tendon aimed to create an entirely virtual jurisdiction. This could then serve to connect cryptocurrencies and blockchain technologies to the rest of the global financial system. Cryptocurrencies do not just offer multiple advantages when it comes to sending cross-border payments, peer-to-peer transfers or reducing fees. That, he argues, is just scratching the surface. However, this was “a bold move which Malta was ultimately unwilling to take”.¹⁴ The idea of becoming a dominant player in the fully virtual *crypto-sphere* has in his view been lost. The country’s insistence on crypto-companies setting up a physical presence is in

his view entirely unsustainable. It would be a constant drain on the island's limited resources. Based on this view, Malta could soon become even more heavily overpopulated with a searing housing crisis, an insufficient infrastructure, and a diminishing quality of life for its people. Tendon claims that it is hard to overstate the innovative potential of cryptocurrencies. From a financial perspective, cryptocurrencies offer a number of clear and unique advantages over existing technologies and currencies, including almost real-time, cross-border, peer-to-peer transfer and settlement of values at affordable fees.

Tendon seems to have found a new partner in the Republic of the Marshall Islands (“**RMI**”). Ironically, a nation even far smaller in (geographical) size than Malta. The capital Majuro is a 13 km² strip of land surrounding a 300 km² lagoon.

Tendon: “RMI truly encapsulates the ‘blockchain island’ problem: a situation of extreme isolation and an urgent need to forge connections - connections which are not rooted in the constraints of geography, space and physical resources.”

RMI introduced the Marshallese sovereign (“**SOV**”). It is a unique “*crypto-fiat*” currency, in the view of Tendon aimed at creating prosperity not for just one nation, but having a greater impact on the world. It is about social responsibility and even changing the very fabric of society with a deep concern about sustainability issues, social justice and distribution of wealth.¹⁵

Nevertheless, fiat money is a currency without intrinsic value that has been established as money by government regulation. Therefore, fiat money has value only because a government maintains its value, or because parties engaging in exchange agree on its value. That, however, may not have to pose a problem. Not unlike traditional cash, only until 1971, the value of bearer-demand notes used to be guaranteed by an equivalent of its value in gold.

Regulatory Developments and AI

In an attempt to keep up with the rapid developments, the Fifth EU Anti-Money Laundering Directive (“**5 AMLD**”) was adopted on 19 April 2018.¹⁶ It amends the Fourth EU Anti Money Laundering Directive.¹⁷ It introduces a further requirement for transparency by publication of large amounts of data. However, at the same time, this may lead to privacy concerns. How will the additional information be processed and by whom? Shall regulators be able to process such an abundance of information? Shall these amendments therefore actually lead to enhancements in the combatting of money laundering?

The beneficial ownership registers for legal entities, such as companies, will be public. This wider access to part of the beneficial ownership information is meant to enhance public scrutiny and to contribute to preventing the misuse of legal entities for money laundering and terrorist financing purposes. Furthermore, access to data on the beneficial owner of trusts will be accessible without any restrictions to competent authorities. These public national registers on beneficial ownership information will be interconnected directly to facilitate cooperation and exchange of information between Member States. In addition, Member States will have to put in place verification mechanisms of the beneficial ownership information collected by the registers to help improve the accuracy of the information and the reliability of these registers.

Member States will only by exception have a limited possibility to allow the anonymous use of electronic money products. Oversight under 5 AMLD shall furthermore be extended to entities which provide services that are in charge of holding, storing and transferring virtual currencies. Under 5 AMLD, these entities will also have to identify their customers and report any suspicious activity to the local so-called Financial Intelligence Units (“**FIUs**”). These

FIUs will have access to more information through centralized bank and payment account registers or data retrieval systems. Member States will be required to set up centralized bank account registers or retrieval systems to identify holders of bank and payment accounts. These systems should be set up in such a way that they can be interconnected.

EU Member States are required to implement these new rules into their national legislation by 10 January 2020. The EU shall target and, if necessary, blacklist third countries with low transparency on beneficial ownership information.¹⁸

As said, 5 AMLD mostly facilitates the call for more data, more information. That classic approach – hardly “AI” inspired – may not necessarily lead to more transparency, a clearer view. On the contrary, complex operations such as cross-border gaming structures that typically consist of many services working together (affiliates and marketing, payment services and gaming providers) may prove very difficult to properly price services at market value.

Although obviously seen by the authors of 5 AMLD as the “enemy” of transparency, blockchain technology may just prove useful in combatting money laundering. Its (optionally) decentralized, distributed and public digital ledger can be used to record transactions across many computers so that any involved records cannot be altered retroactively, without the alteration of all subsequent blocks. This allows the participants to verify and audit transactions independently and relatively inexpensively. A decentralized blockchain database is managed autonomously using a peer-to-peer network and a distributed timestamping server. Decentralized smart contract technology could be digitally enforced, contract rules verified and regulations and its governed transactions tracked and made irreversible. In the decentralized setup, the smart contract technology is key, as it is required to run without any centralized authority. It would provide an independent level of confidence, as the end user retains independent, unalterable ownership of payments, without third parties involved.¹⁹

Conclusion

It does not seem that regulators are “up to the task” of keeping the rapidly evolving payment services in check with acceptable standards for customer protection. Also the chosen approach in collecting more and more information by means of 5 AMLD is hardly inspiring. We do not see any future in a global regulatory framework. The EU’s call to simply “blacklist” non-EU third countries that do not sufficiently comply makes that clear. Instead, the world could benefit from technology that shall be tamper-proof (“*Provably Fair Technology*”).

Within this respect, we expect and also advise the payment services industry to pivot from custodial to non-custodial SaaS setups, in which regular transactions shall no longer be (mainly) controlled by a human factor. New technologies, although potentially harmful, may prove highly beneficial when applied in a responsible manner. Eliminating the human factor may benefit PSPs even more, as AML-related risks are mitigated while at the same time cutting costs, improving efficiency and boosting the prevention of fraudulent behavior.

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