

EMERGING AND DEVELOPED: TERMINOLOGY OF THE PAST?¹

It is facile to believe that developed markets use technology that is more modern and sophisticated than emerging markets, but it is equally misleading to believe that emerging markets have a stronger appetite for technological innovation. Both developed and emerging markets can in fact use both information and social technologies to add resilience and increase efficiency, but the factors inhibiting and driving change, and their order of priorities, are different.

¹ Emerging and developed: Terminology of the past?: A panel discussion held at Sibos, Sydney, 22 October 2018. The video of the panel can be watched here: <https://www.youtube.com/watch?v=djLKd-SHaU4>

“They are all developing,” is how Walter Verbeke, global head of business model and innovation at Euroclear, erases the distinction between emerging and developed markets. “New technologies are enabling new business models and we need to accommodate them. Technology is driving change in our world.” Certainly, the commonplace notion that a developed market is by definition technologically more sophisticated than an emerging market is utterly mistaken.

Technology is not a distinguishing factor between developed and emerging markets

“The easiest and most seamless consumer payments experience in the world today is in China, which is generally regarded as an emerging market,” explains Chris Hamilton, CEO of BankservAfrica. “It is also an emerging market which does not even have a fully structured market infrastructure for that purpose. Likewise, the largest issue of crypto-assets in the world today, by a very significant margin, was in Venezuelan petro-dollars. There is no guide here which says the lead is taken by the developed markets and the emerging markets follow on.”

In fact, the institutional and technological legacy which encumbers developed markets can mean they adopt technology more slowly than emerging markets. Switzerland, for example, hosts one of the most developed and sophisticated financial markets in the world. Sebastien Kraenzlin, head of banking operations at the Swiss National Bank (SNB), adds that “When it comes to innovation, we distinguish between the core of the FMI – e.g. the stock exchange, the clearing house, the CSD, the RTGS system – and the outer layer, which is the interface between customers and banks.” “In the core of the Swiss FMI, you can settle transactions in less than four seconds, so where is the sense of urgency to go into a different technology environment?” he asks. Yet he describes the country as less advanced in the outer layer, i.e. in terms of offering consumers instant payment, round-the-clock, on mobile devices. “I would say that several initiatives

in Switzerland have so far concentrated on the core of the FMI and that more could be done on the outer layer.”

The Russian securities markets, by contrast, are less than 30 years old. Unencumbered by the past, the policymakers of the early 1990s were able to adopt best practices from developed markets. “So we have always had this completely paperless and dematerialised market,” says Maria Krasnova, deputy chairman of the executive board of the National Securities Depository (NSD) in Russia. “The market was relatively small, but fully digitised, and that allowed us to make changes over a very short period of time without taking any unacceptable risks.”

DLT and the Cloud can enhance security, resilience and efficiency

Because they service smaller levels of assets and transactional activity and were established at a later stage in the evolution of digital technology, emerging market infrastructures should in principle be able to transition more easily to the latest developments in technology, such as the Cloud and distributed ledger technology (DLT). “Central securities depositories (CSDs) were created to mitigate the risks that intrinsically exists in capital markets, such as safekeeping, settlement and liquidity risk,” says Verbeke. “But that is only part of the story. Market resilience is ultimately also dependent on the financial institutions around it. For an emerging market, DLT could create a stable environment for the entire market. By using DLT to create a single common but distributed ledger, you improve the overall strength of the eco-system.”

This is why he thinks the power of DLT and Cloud technologies should not be reserved for emerging markets only. It is not technology as such that drives investment in change but rather the search for safety and efficiency. “Every economy and market infrastructure has to move in that direction,” says Verbeke. “We [at Euroclear] have already a number of applications that run on the Cloud. None of the core applications is there yet, but it is ultimately a

“I am not saying emerging markets are not going to use new technologies. I am saying they are going to use them in very targeted ways to solve real-world problems.”

**- Chris Hamilton, CEO of
BankservAfrica**

question of time. A number of years from now, we will be running our core applications – or at least some of them - on the Cloud as well.”

The reason behind his confidence is the engineering excellence the Cloud guarantees. “Where can I find top notch IT people, best equipped to withstand cyber-attacks?” asks Verbeke. “The Cloud is arguably that place, because cloud providers are able to draw such top notch IT engineers.” Much the same is true of DLT, he adds. “By moving your overall market infrastructure into a DLT environment on the Cloud, I would argue that you enhance the cyber-security of your entire eco-system.”

Verbeke also contends that the transition will reduce costs. “We keep busy hundreds of thousands of people within our industry with the sole purpose in live to systematically reconcile breaks in data, i.e. running behind the facts,” he says. “Dream of a world in which everyone is running a node on a single common [distributed] ledger. That need for reconciliation would structurally fall away. You also get rid of systemic risks because it is typically at times of stress that you ask, ‘Do we have all our data correct?’”

Developed and emerging markets have different priorities

Chris Hamilton sounds a note of caution. “There is absolutely a need to explore these incredible new technologies,” he says. “But we must always come back to the real-world problems that exist in the marketplace and see how we can apply technologies to solving those problems. That is what we are all here for.”

As Walter Verbeke points out, emerging market infrastructures tend to have different - and often more urgent – priorities from their counterparts in developed markets. They include socially important issues (such as financial inclusion) but also commercial imperatives (such as broadening the range of clients and activities).

In Brazil, for example, the CSD is diversifying from securities into vehicle registration and mortgages. In India, a CSD stores details of university degrees. In

developed markets, by contrast, such adjacencies are often in the hands of other entities already, and more powerful technology is challenging core services rather than opening up peripheral opportunities. “There is now so much happening in our core CSD and collateral management activities that there is much less focus on pure activity diversification,” says Verbeke. “There is indeed already so much going on in our closest remit that draws 100% of our attention there.”

However, as Chris Hamilton points out, even in emerging markets the urgent needs can constrain technology-driven diversification. “Fascinating as this technology is, you only have the luxury to think about it if you have a fully functioning, existing system that meets real-world economic challenges such as getting money into people’s hands,” he says. “You are unlikely to go with these kinds of solutions right now because there are just too many unanswered questions. I am not saying emerging markets are not going to use new technologies. I am saying they are going to use them in very targeted ways to solve real-world problems.”

Government is an important driver of change in emerging markets

In emerging markets, the targets are often set by governments rather than market infrastructures, or their users, or consumers. In Russia, for example, the authorities have sought deliberately to reduce the use of cash in the economy by increasing access to bank accounts and their associated payments services. It was also a government-led initiative that led to the construction of a modern securities market infrastructure – CSD, central counterparty clearing house (CCP), payments market infrastructure (PMI) – with the stated goal of attracting international investors to Russia.

Maria Krasnova says the government also lay behind the centralisation and standardisation of corporate information distribution and corporate actions processing, and for the same reason. “It is an example of something we initiated but the government endorsed,” she says. Now,

experiments in crypto-asset issuance, settlement and safekeeping enjoy the full backing of the central bank and the government. “The idea is to understand how the technology works in particular cases, and use the findings when drafting legislation,” explains Krasnova. “More than eight draft legislative acts and regulations are under way.”

Official action, driven by wider socio-economic concerns, is also behind the drive to instant payments in Brazil. The country has a large, unbanked population with limited financial literacy, much of which relies on cash to make payments. This creates security problems, but cash has proved immune to debit and credit cards (which are seen as too expensive) and on-line credit transfers (which are regarded as too complex). So the Brazilian central bank is instead encouraging the development of instant payment, accessible through mobile telephones, as an alternative to cash.

Digital currencies not yet mature but have potentially profound consequences

In making that choice, the Banco Central do Brazil specifically rejected the daring technological alternative of abolishing physical cash and replacing it by a digital equivalent, on precisely the grounds Chris Hamilton identifies: digital currencies are still at the experimental stage.

“Right now, we think the technology that is better is electronic money,” says Breno Lobo, an adviser to the department of banking operations and payments systems at the Brazilian central bank. “So we are building the infrastructure to facilitate the transfer of money through mobile and other convenient devices. That will be more effective and decrease the use of cash. Right now, in 2018, I do not think digital currencies are the best solution.”

It is not yet clear if the Brazilian instant payments infrastructure will be built by the central banks or the commercial banks, but Banco Central do Brazil is adamant that it wishes to preserve the distinction between the payments market infrastructure and the providers of payment services. “We are sure we want

“The central bank could agree the amount of money (i.e., credit) the banks are allowed to print. Because they have a controlling node in the DLT network, they will know how much money the banks are printing in real-time and could adjust in real-time, as well as have a tool to manage M1 and M2. That would be kind of cute.”

- Walter Verbeke, global head of business model and innovation at Euroclear

to shape the infrastructure, and let the players play the game,” says Lobo.

This is a relatively conservative position, and one endorsed by the SNB, but loaded with additional meaning. “Today, central banks are the banks for banks, and banks are the banks for customers,” explains Sebastien Kraenzlin. “By having a central bank digital currency available for the wider public, the central bank would become the bank for the wider public. It is a different role and could fundamentally alter the relationship between commercial banks and the central bank in the provision of credit and payment services (incl. anti-money laundering).”

Kraenzlin is more enthusiastic about digital currencies being used to settle transactions in financial market infrastructures (FMIs) such as CSDs. He mentions SIX Digital Exchange (SDX), a planned DLT platform on which Swiss equities and mutual funds would be traded, cleared and settled between financial institutions. The cash settlement could be done with digitised tokens backed by cash deposits, possibly at the SNB.

“The crypto-currency which is covered by central bank money is something which is actually commercial bank money,” says Kraenzlin. “It is not a claim towards the central bank and hence not central bank money. It is rather credit-risk-free commercial bank money. But the central bank would and could not guarantee the coverage.”

To preserve that distinction, he predicts that DLT-based infrastructures and current FMIs will co-exist for some time, with the links between them becoming more efficient rather than disappearing altogether. Kraenzlin adds that making central bank money available in digital form for the wider public has potentially unpredictable consequences for financial stability (a digital bank run could take place in a matter of seconds) and credit intermediation (shorn of deposits, commercial banks would not be able to fund their loan books).

But Jean-Michel Godeffroy, a former director at the European Central Bank (ECB) and now

an independent consultant, argues that digital currencies have the potential to make the financial system safer by transforming payments banks into custodians of cash, akin to CSDs acting as custodians of digital securities. “It does not necessarily mean the complete disintermediation of the banks,” he says. “It means disintermediation of their balance sheets.”

Walter Verbeke points out that economies still require banks to offer credit as well as custody, and that digital currencies could provide the perfect tool for central banks to control how much of it they create. “You want the banks to provide credit,” he says. “which de facto is a way of printing a bit of additional money in the economy. It could be a collaborative model. The central bank could agree the amount of money (i.e., credit) the banks are allowed to print. Because they have a controlling node in the DLT network, they will know how much money the banks are printing in real-time and could adjust in real-time, as well as have a tool to manage the M1 and M2 in real-time. That would be kind of cute.”

There are however more immediate opportunities than the control of monetary conditions in real-time. Verbeke himself points out that the crypto-asset markets have yet to offer the guarantee of settlement finality and delivery versus payment (DvP) that most securities markets have enjoyed for at least 20 years. “The biggest challenge for CSDs and Real-Time Gross Settlement Systems (RTGSSs) is how to bring the additional safety and efficiency of DvP to the business networks on DLT,” he says.

Verbeke argues that FMIs and their users in both emerging and developed markets are now embarked on a common process that he dubs “modularisation.” By this he means that technological hardware, the processing and the data itself will become increasingly de-layered and unbundled. That will allow data to be extracted and APIs installed to facilitate its exchange. “None of us however is starting from a blank sheet of paper,” he concludes. “Whenever there is a business case, we will unplug certain things within our legacy systems. Everybody has to do it. But it will take years.”

Editor

Dominic Hobson
dominichobson@dominichobson.com

Head of Payment Market Infrastructures, SWIFT

Carlo Palmers
Carlo.Palmers@swift.com

Design

Bim Hjortronsteen
bimhjortronsteen@gmail.com

Publisher

SWIFT
Avenue Adèle 1
B-1310 La Hulpe
Tel: +32 2 655 31 11
Fax: +32 2 655 32 26
SWIFT BIC: SWHQ BE BB
<http://www.swift.com/>

Disclaimer

SWIFT publishes MI Forum Magazine for information purposes only. Any personal views expressed in MI Forum Magazine are the contributors' own and do not necessarily reflect the views of SWIFT or its members.
SWIFT © 2019. All rights reserved.