REDEFINING DOMESTIC PAYMENT SCHEMES:

Next-generation payment technology creates new opportunities for central banks
Contents

Executive summary 1
Creating financial inclusion 1
Developing a cash-lite economy 2
Strengthening the role of central banks 3
The need for alternative domestic payment schemes 4
Introducing a new platform for domestic payments 5
Conclusion 7
Executive summary

The global payments paradigm is changing. Worldwide, the dominant international card schemes battle against ever-increasing fraud, exposing their underwhelming response to the emergence of card-not-present transactions. In the developing world, banks are looking to mobile technologies to capture payments by the unbanked and remove reliance on cash. And in the first world, disruptors are carving out pieces of the market to capitalise on new technologies and widening gaps in niche market payment scenarios, particularly for e-commerce and m-commerce.¹

In this white paper, we discuss how a new payments scheme can assist central banks to regain control of their domestic payments, draw the unbanked into the financial system, promote a “cash-lite” economy, combat financial fraud, and reduce the cost of payments for consumers, merchants and banks without eroding margins in the payments industry.

Creating financial inclusion

Today, more than 2.5 billion adults do not have access to a bank account, severely limiting their ability to electronically send and receive payments, interact with merchants, and participate in commerce². The rapid deployment of mobile technology in the developing world does, however, promise to remedy the low inclusion of the poorest segments of the population in the financial system.

A study done by the World Bank Group reported that 90 percent of the world’s poor are now covered by a mobile signal, and, on average, 8 in 10 individuals in the developing world own a mobile phone³. This gives central banks the opportunity to reach vast segments of the population who may not live near a physical banking location. Mobile payments can eliminate the need for a physical location for banking—something that can be extremely challenging in many areas of the developing world.

Mobile payments can also reduce the cost of financial transactions, in some cases by more than 90 percent, according to a study by Fighting Poverty, Profitably. The telco payment systems currently available to the unbanked are closed-loop, push-only transactions, which are generally inefficient, unsecure, and expensive. Payments are typically done through agents or telcos by cash or high-fee based money orders. This often results in excessively high percentage costs on low-value transactions, disadvantaging the poor.

Moving to a mobile-based domestic payment scheme makes it easier and more cost effective for the previously unbanked to be financially included and encourages a “cash-lite” economy.

¹ National Payments Schemes: Drivers of Economic and Social Benefits, John Chaplin, Andrew Veitch, Prof. Dr. Jürgen Bott
Developing a cash-lite economy

While emerging economies around the world have made significant progress in regulating payments and deploying payment infrastructure, there is still scope for ensuring that these systems are embedded in the daily lives of the average person, to the point where these systems are used in preference to cash for payments.

Consider data from the 2015 Financial Inclusion Insights: Mobile Money Momentum in Four African Countries survey. According to the survey, in Kenya and Tanzania, more adults have mobile money accounts than bank accounts. Even though in Kenya, for example, 65% of the adult population has either a bank account, a mobile money account, or an account with a non-bank financial institution, but only 4% use their accounts for proximity payments. This indicates a strong dependence on a cash economy.

The key to transitioning to a cash-lite economy is to displace cash in almost all payment scenarios. To achieve this, the cashless alternatives must offer clear advantages over cash payments, in every payment situation.

Mobile Network Operators (MNO) have made significant investments in developing their merchant/agent network. These agents largely do cash-in-cash-out (CICO) transactions. The MNOs, are looking to go beyond CICO and to extend to retail payments using different schemes.

Although there has been a significant rise in the volume and value of mobile money transactions, the majority of transactions largely remain peer-to-peer (P2P) transfers. The main reason for the generally slow adoption of alternative payment channels is usually because of two factors: convenience and cost.

Convenience depends on the depth of the payment network—that is, the number and spread of merchants that can accept the electronic payment device used by their customers and the number of customers with the appropriate device who are willing to use it instead of cash. To be convenient, it is also important that the method of payment is efficient and reliable.

Cost inhibits the growth of electronic payment systems—that is, the cost of devices, merchant fees, and transaction costs. The high cost of credit card payment terminals, for example, severely restricts the growth of card-based systems.

Developing a cash-lite economy by digitising existing payment streams that are currently occurring in cash is a significant growth opportunity for mobile money and domestic payment schemes.

4 2015 Financial Inclusion Insights: Mobile Money Momentum in Four African Countries survey
Strengthening the role of central banks

A core responsibility of a central bank is to monitor the performance of their domestic banking industry. They are responsible for protecting consumers from anti-competitive behaviours of financial institutions, card schemes, and other service providers. They act to reduce risk and increase stability in the financial system. And they seek reforms to the local payments industry that promote competition, efficiency, security, and innovation.

Central banks will often rely on regulation to drive reforms, such as setting limits on the fees applied to card payments. If the reform introduces new efficiencies, the cost base of the acquirer bank or payment processor is reduced, their margins are protected, and the consumer benefits from the cost savings. However, if there are no efficiency gains and costs remain at the same levels, the acquirer either loses margin or shifts their costs to their merchants (and thereby to consumers). The latter is the usual outcome, and so the consumer sees no benefit from the reform. Hence, a reform without a corresponding efficiency gain will usually prove ineffective.

Regaining control of domestic payments

Each national market is characterised by its own unique set of challenges and opportunities. In some markets, contactless payments flourish, while being shunned in others. Some markets have a high proportion of unbanked and cardless consumers. And the adoption rate of mobile payments varies enormously from region to region. But there is one factor that is common to all markets on all continents: the high rate of smartphone ownership. And therein lies the great opportunity for central banks to regain control of their national payments markets.

The latest mobile and online payments technologies are much smarter, cheaper, safer and easier to use than any plastic-card-based system can ever be. These new technologies are designed from the ground-up for real-time, low-cost, low-fraud payments. The point is that, although the card schemes currently wield considerable power in domestic payments markets, their position is not unassailable. With the right combination of technology, branding and regulatory controls, the opportunity to introduce a sovereign, domestic payments scheme has never been greater.

Learning from past mistakes

Many developed countries lost control over payments when their domestic schemes lost favour to international schemes in the 80s and 90s. Visa and Mastercard saw an opportunity in the marketplace, created by high growth in international travel in the 80s, for a domestic card with international acceptance. Australia’s Bankcard is a good example, which at its peak in the late 80s boasted more than 5 million cardholders, yet had all but disappeared from the market by the 2000s. The promotion of “premium” card reward schemes has strengthened the position of the international card schemes in domestic markets. And that’s despite the much lower fee structures offered by domestic schemes, such as JCB in Japan and Interac Debit in Canada, who continue to lose market share to behemoths Visa and Mastercard.
Just as societal changes in the 80s created opportunities for the international card schemes, a different set of societal changes is creating a new set of opportunities today. Today's international marketplace is characterised by the high penetration of smartphones, the continued growth in e-commerce, and the consequential growth in fraud. But, just as Australia's Bankcard failed to respond to the shifting needs of its customers, Visa and Mastercard are clinging to the past and failing to embrace change. Quite simply, plastic cards are an outdated technology and are incapable of meeting the changing needs of today's mobile and tech-savvy consumers.

The need for alternative domestic payment schemes

Mobile commerce (or m-commerce) has opened the door for domestic payment schemes to once again thrive. According to authors of the National Payments Scheme Report:

“There clearly is a place and a future for domestic card schemes and infrastructure and eventually domestic mobile solutions despite the globalisation trend….a number of markets will choose to operate domestic schemes as the preferred solution for in-country payments that in most cases are the vast majority of the transactions. This approach has the potential to be lower cost, to create services more suited to local market needs and to have a better relationship with regulators.”

But, according to the report, the existing domestic schemes have to up their game. They have to recognise that they are now in a much more competitive market and that they need to act more commercially. That's where a new platform for domestic payments is needed.

Phone apps like Apple Pay and Samsung Pay have already moved into the m-commerce space, yet they are e-wallets, which only emulate the contactless operation of a plastic card on an NFC-enabled point-of-sale terminal. Nothing has really changed: The payment is still processed by the Visa/Mastercard Card Scheme. The fee structures are still opaque and excessively high. The same inadequate security measures prevail. The same onerous conditions are still applied to merchants. And if the merchant doesn't support contactless card payments, the payment app on the consumer's smartphone is useless. These e-wallets also alienate the local banking industry by reducing margins or taking market share.

5 National Payments Schemes: Drivers of Economic and Social Benefits, John Chaplin, Andrew Veitch, Prof. Dr. Jürgen Bott
To effectively exploit the m-commerce opportunity and counter the market power of the international card schemes, central banks need to foster domestic schemes that are capable of operating independently of the international card schemes.

The Level One Project Guide, developed over 18 months as part of the Bill and Melinda Gates Foundation Financial Services for the Poor (FSP) initiative, outlines how an inclusive digital financial services system needs to be designed in order to drive financial inclusion and a cash-lite system. To do so, it recommends:

- A push payment model with immediate funds transfer and same day settlement
- Open-loop interoperability between providers
- Adherence to well-defined and adopted international standards
- Adequate system-wide shared fraud and security protection
- Efficient and proportional identity and know-your-customer (KYC) requirements
- Meeting or exceeding the convenience, cost and utility of cash.

A new payment scheme also needs to provide merchants and consumers with a low-cost, frictionless transition path from the old to the new. If a merchant switches to the new scheme, they will still need to take payments from customers who have yet to switch. And if a consumer switches to the new scheme, they still need to make payments to merchants who have yet to switch.

Introducing a new platform for domestic payments

Responding to the rapidly changing mobile payments landscape, Bluechain has created a payment platform that enables central banks to collaborate with national payment switches and banks to regulate a new domestic payments scheme. Bluechain shifts control of the domestic payments market away from the international card schemes back to national regulators and the domestic payments industry. Freed from the restrictions of an expensive and fraud-prone card-based technology, the new domestic payments platform can deliver major cost savings in every payment scenario, including contactless or mobile payments, MOTO, unattended sales, in-app, e-commerce, bill payments, and more.

Frictionless transition

Although Bluechain is built on a radically different security paradigm, Bluechain is not a disruptor—it works alongside and supports traditional card-based technologies. The Bluechain card-reader allows merchants to accept non-Bluechain transactions on the same device with the same POS app as a Bluechain transaction. And the Bluechain GlobalCard bridges the technology gap by allowing Bluechain customers to purchase from non-participating merchants, in-store, over the phone or on the Internet.

This enables merchants and consumers to migrate at their own pace, avoiding the need for high-risk or high-cost roll-outs of new banking systems and merchant hardware. And licensing is on a per-transaction basis, which enables member banks to deploy merchant and customer solutions with a minimal upfront investment.
Bluechain becomes the single point of connection in the new national payments network

A true partnership

Through direct partnership with central banks, national payments switch, financial institutions, infrastructure providers, and national regulators, the Bluechain payment processor becomes the single point of connection in the new national payments network. By using existing bank infrastructure and taking a non-disruptive approach, Bluechain ensures that banks can issue eCards and GlobalCards to consumers and merchants and collect their fair share of interchange and merchant service fees. Bluechain payment hubs are connected to the central Bluechain spine, enabling cross-border settlement between each jurisdiction.

Licensed acquirers sign up and certify merchants and payment processors. Issuers sign up and identify consumers in much the same way as they do now. But instead of issuing POS terminals and plastic cards, merchants and consumers install an app on their existing iOS, Android and Windows devices. The app is built and managed by each licensee using Bluechain’s developer toolkit, with the Bluechain logo providing international recognition for local consumers travelling abroad and foreign consumers shopping locally.

Combatting card fraud

Although Bluechain works with the existing card-based payment platform (anywhere a credit card is accepted), it provides an alternative payment path that bypasses the problem areas that have hindered previous attempts to modernise the payment system. Bluechain applies a different security paradigm, which ensures that, even when passing through the old system, the transaction details are never revealed to a third party. In fact, the payer’s details aren’t even revealed to the merchant who processes the payment.

Every Bluechain transaction is protected by a proprietary patented security solution, which addresses the major causes of card fraud regardless of the payment channel employed. Payments to a remote merchant, whether over the phone or by email or on the internet, are just as secure as in-store and device-to-device payments. By eliminating the major causes of fraud, particularly in card-not-present and other e-commerce transactions, a Bluechain-powered payment system has the potential to slash both the direct and indirect costs of fraud—currently running at over US$30 billion a year and growing.
Conclusion

Through a confluence of technology and market conditions, the market is ripe for central banks to realise goals of achieving cash-lite and inclusive economies with greater control over data sovereignty, reduced fraud and lower costs through new domestic payment schemes.

The Bluechain Scheme is a licensable, national payment scheme with international capabilities. Bluechain hubs are connected to an international payments spine, which facilitates transfers and payments by domestic consumers travelling abroad and foreign visitors shopping locally.

Bluechain is not an e-wallet or a payment gateway: it is a scheme. Bluechain does not compete with banks or payment gateways; instead, it leverages existing payments infrastructure. It can be used for all payment scenarios and supports both traditional plastic card payments through the old schemes and Bluechain payments through the Bluechain scheme with the same high level of security.

It meets all of the criteria for success:

- **Digital**—Bluechain is a next-generation payments solution designed for both e-commerce and mobile commerce.
- **Sovereignty**—Bluechain is a licensable payments platform enabling sovereign control of fee structures and consumer data.
- **Non-disruptive**—Bluechain partners with regulators, banks, financial institutions, switches and infrastructure providers and leverages existing payments infrastructure for an easy transition.
- **Interoperable**—Bluechain is designed to work on any mobile or PC device allowing low cost acquiring through BYOD.
- **Universal**—Bluechain supports both nearby and remote, card-based payments.
- **Secure**—Bluechain minimises the risk and costs of fraud for all payments and uniquely secures payment requests from merchant to consumer.
- **International**—Bluechain accepts payments within any jurisdiction.

The Bluechain platform provides central banks and regulators with the tools they need to drive reform in the payments industry. It addresses the fundamental causes of fraud, lowers overheads for banks, reduces fees for merchants, and delivers more choice, more convenience, and an uncomplicated payment experience for consumers.

For more information about Bluechain mobile payment technology visit www.bluechain.com