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The accelerating digital payments landscape in Indonesia



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If there is ever a silver lining of the COVID-19 pandemic, it would perhaps be its inadvertent revolution of the digital payments landscape in Indonesia. Amidst the outbreak, Indonesia's four major e-commerce platforms doubled their estimated transaction values from IDR 201 trillion in 2019 to about IDR 429 trillion¹, and total digital transactions in Indonesia recorded an approximate 37.8 percent year-on-year increase in volume² as consumers turned to e-commerce and contactless payment methods on the back of large-scales social restrictions and other social distancing measures.

But what is even more significant about this shift is how the pandemic has encouraged consumers to overcome some of their barriers and concerns relating to the use of digital payment methods. In a Deloitte survey conducted in the first half of 2019 before the onset of the pandemic, for example, it was found that a significant proportion of respondents continued to prefer cash-on-payment methods for their online shopping, avoiding digital payments as a result of concerns over fraud and security issues³.

One major contributing factor here has been the introduction of the comprehensive digital payments system, known as Quick Response Code Indonesia Standard (QRIS), by Bank Indonesia earlier in 2019. By enabling the interconnectivity and interoperability of QR-code-facilitated payments in a secure environment, the system had been developed with the objective of encouraging Indonesia's 65 million micro, small, and medium enterprises (MSMEs) to adopt cashless payment systems⁴.

In this report, we will take a look at how the QRIS is universalising digital payments in Indonesia by enabling interoperability amongst different digital payment system service providers. Although most of the use cases currently focus on MSME retailers, we believe that the full potential of the digital payments ecosystems lies in many other uses case beyond that we will also briefly explore later in this report.



¹"Digital payment on the rise as top four e-commerce eye \$29b sales amid pandemic". Jakarta Globe. 24 July 2020.

²"Gubernur BI: Selama Pandemi Transaksi Digital Naik 37,8 persen". Kompas.com. 29 September 2020.

³"Deloitte Consumer Insights: Dawn of the digital age in Indonesia". Deloitte. 2020.

⁴"Bank Indonesia launched national standard QR code". The Jakarta Post. 27 May 2019.

Universalising digital payments

Launched by Bank Indonesia in August 2019 as part of its Indonesian Payment System Vision (SPI) for 2025, the QRIS is a Quick Response (QR) code standard that facilitates real-time, secure digital payments through server-based e-money applications, electronic wallets, and mobile banking⁵.

Broadly, the QRIS system aims to balance the need for innovation with consumer protection by ensuring the integrity, stability, and fairness of the payment systems and promoting compliance with Know Your Customer (KYC) and Anti Money Laundering/Counter Terrorist Financing (AML/CFT) rules.

Under the Regulation of Board of Member of Governors No. 21/18/PADG/2019 on Implementation of National Standard on Quick Response Code for Payment issued by Bank Indonesia, all payment system

service providers are required to adopt the QRIS system, and are obliged to replace their own QR codes with the new standards as defined under QRIS by 1 January 2020.

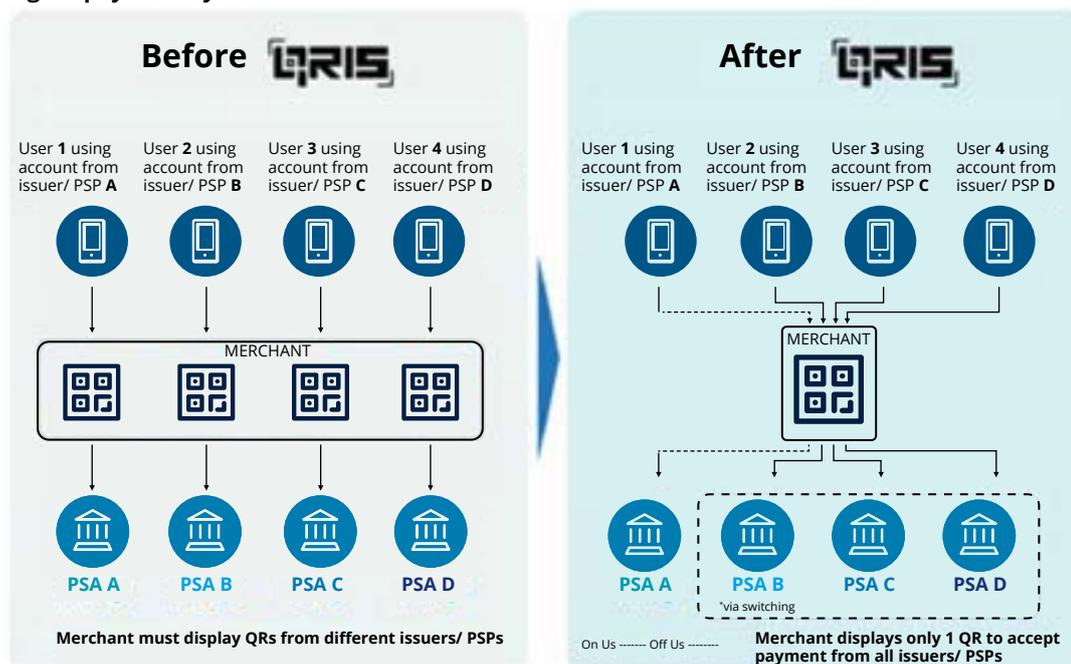
Such a mandatory adoption program will not only ensure interconnectivity and interoperability throughout Indonesia’s digital payments ecosystem, but also promote financial inclusion by making digital payments more accessible to both consumers and merchants, especially the MSMEs.

To continue to stimulate the growth of the digital payments market in Indonesia, the government has also recently introduced two additional sets of regulations: Government Regulation (PP) No. 71/2019 concerning Operation of Electronic System and Transaction and, PP No. 80/2019 concerning Trading through Electronic System⁶.

Enabling interoperability

Prior to the introduction of the QRIS, digital transactions would only have been possible when both the merchant and the consumer are using the same digital payments provider (see Figure 1). As a result, merchants who were trying to broaden their base of consumers had to adopt numerous digital payments systems – and in several instances, obtain certain specialised devices – to facilitate payments from consumers, and consumers frequently found themselves unable to pay for items at merchants that were not on the same digital payment networks as them.

Figure 1: An illustration of how QRIS enables greater interoperability between digital payment systems



Source: Bank Indonesia, 2019

⁵ "QRIS, one QR code for all payments". Bank Indonesia. 17 August 2019.

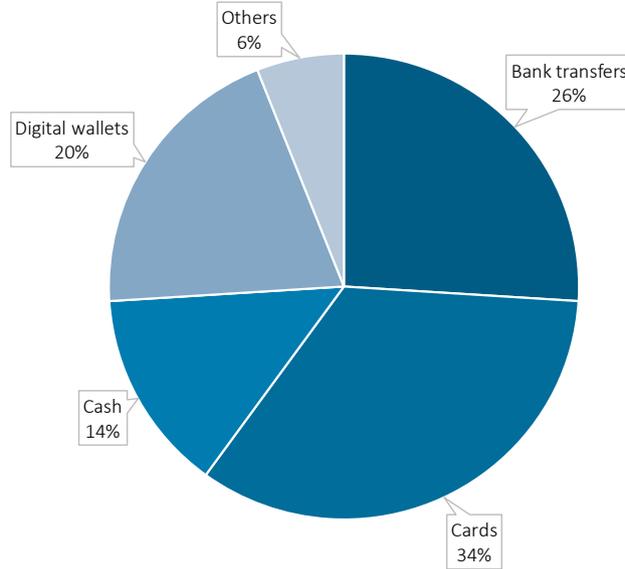
⁶ "Transaksi Digital Melonjak 64,48 Persen saat PSBB". Kompas.com. 18 June 2020.

Without sufficient interoperability in the market, it is perhaps little surprise that the uptake of digital payments had continued to remain low in Indonesia. In the e-commerce market, for example, digital wallets contributed to only about one-fifth of the market's total payment value in 2019, with cards and bank transfers accounting for the majority of the value⁷ (see Figure 2).

Following the introduction of the QRIS, however, there is now interoperability between the different payment system service providers: merchants now need to display only one QR code, and consumers can make payments through their own preferred payment system service providers. This development – which largely coincided with the outbreak of the COVID-19 pandemic, and its accompanying large-scale social restrictions that no doubt accelerated digital behaviours – appears to have been effective in encouraging the greater uptake of digital payments in Indonesia.

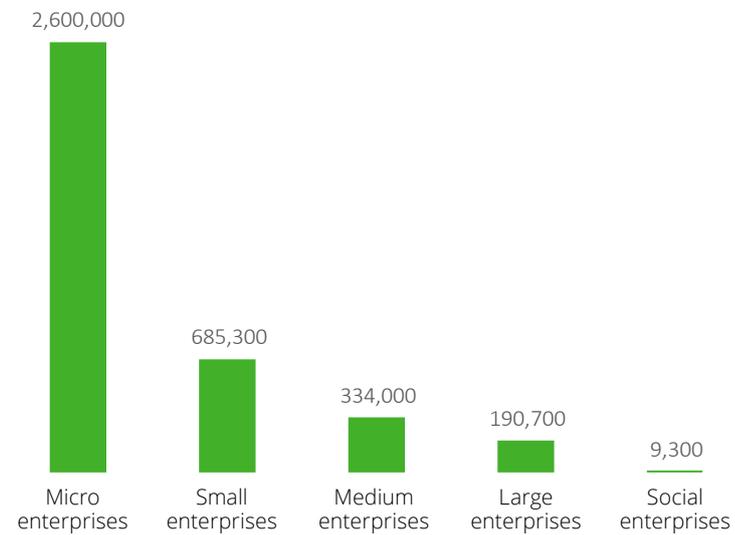
As of July 2020, QRIS has facilitated around 11 million transactions with a total value of about IDR 790 billion⁸. Nearly 5 million merchants have also been onboarded onto QRIS by October 2020 – with MSMEs accounting for nearly 85 percent of them⁹ (see Figure 3) – and at least 46 digital service providers, comprising 25 banks and 21 non-banks, have registered for QRIS licences¹⁰.

Figure 2: Indonesia's e-commerce market value split by different payment methods in 2019



Source: JP Morgan, 2019

Figure 3: Number of merchants who have been onboarded onto QRIS as of July 2020



Source: Katadata, 2020

⁷ "e-Commerce payment trends: Indonesia". JP Morgan.com. 2019.
⁸ "Hampir 5 juta penjual pakai kode QR BI, transaksinya Rp 790 miliar". Katadata. 8 October 2020.
⁹ "Hampir 5 juta penjual pakai kode QR BI, transaksinya Rp 790 miliar". Katadata. 8 October 2020.
¹⁰ "Digital payment in supporting Islamic economy: The case of Indonesia". Bank Indonesia. October 2020.

Promoting financial inclusion

There are some 65 million MSMEs in Indonesia¹¹, and providing them with easy access to an integrated digital payments network is a significant step in enabling the overall digital transformation of the economy and promoting financial inclusion. To support MSMEs during this challenging pandemic period, the Bank Indonesia has announced that it will nullify the merchant discount rate (MDR) of 0.75 percent until the end of 2020¹².

Beyond retail, however, it is also worth noting that the QRIS also has a number of other potential use cases. Specifically, Indonesia is home to world’s largest Muslim population, and has been experiencing increasing volumes of zakat, infaq, and alms (ZIA) transactions in recent years (see Figure 4). Of these transactions, digital payment methods have been gaining traction, representing about 13.6 percent of ZIA transactions last year¹³, and can conceivably be expected to continue to grow with the introduction of QRIS.

Nevertheless, the use of a QR code – while secure if used correctly – may be susceptible to malicious attacks. For example, as the QR codes are typically located in public areas, potential attackers may seize opportunities to make modifications to the QR codes to enable the payments to be redirected to another account¹⁴. Alternatively, counterfeit QR codes may be used to distribute malicious links, which could in turn enable the attackers to collect personal data from customers’ phones¹⁵. Raising the awareness of these threats will therefore be key to ensuring that the integrity of the system is maintained, and thereby support the further proliferation of a greater number of use cases.

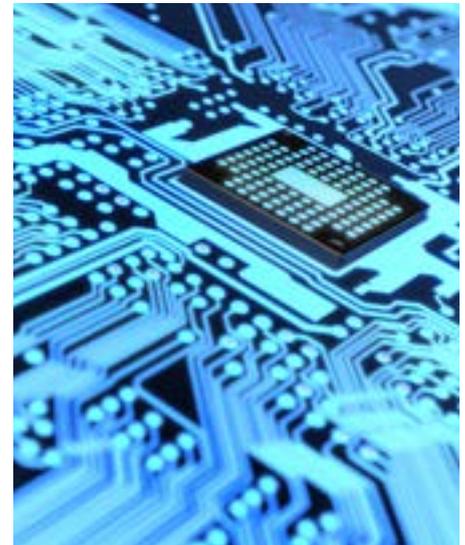
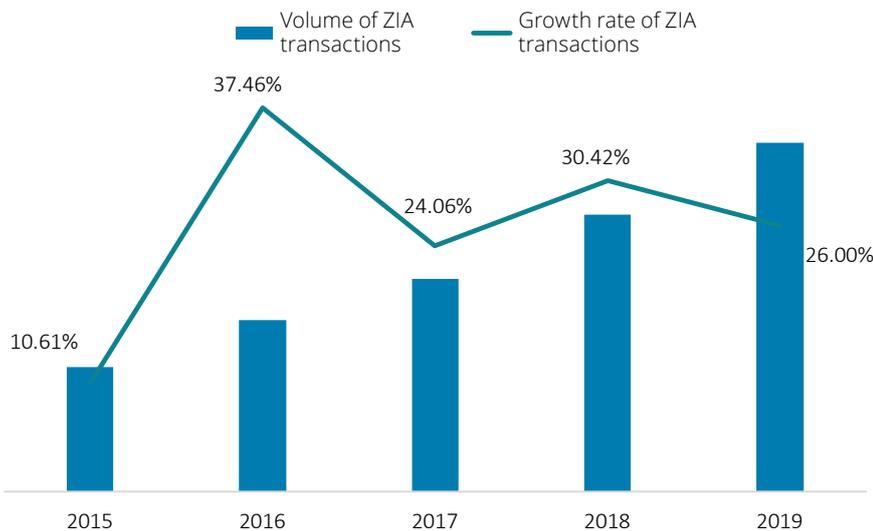


Figure 4: Volume and growth rate of ZIA transactions in Indonesia



Source: Badan Amil Zakat Nasional, 2019

¹¹“Bank Indonesia launched national standard QR code”. The Jakarta Post. 27 May 2019.

¹²“Empat Langkah BI Perluas Adopsi Kode QR Standar di Daerah”. Katadata. 27 October 2020.

¹³“National Zakat Statistic 2019”. Badan Amil Zakat Nasional. May 2020.

¹⁴“Standardisasi kode QR berlaku 2020. Ahli IT: Keamanan jadi perhatian”. Katadata. January 2020.

¹⁵“QR code security: A survey of attacks and challenges for usable security”. International Conference on Human Aspects of Information Security, Privacy, and Trust. June 2014.

Looking ahead

By enabling the interoperability and security of digital payment transfers, QRIS is expected to become a major catalyst that will propel the trajectory of Indonesia's digital economy towards fulfilling its full potential as Southeast Asia's largest digital economy.

Since its introduction about a year ago, we have already witnessed significant traction in the QRIS' ability to promote financial inclusion amongst MSMEs – and this promise could potentially extend to many other use cases, such as ZIA transactions.

Other use cases could also include, for example, cross-border payment applications. To this end, the Bank Indonesia has announced plans to enable QRIS transactions with local currency settlements across several other major markets, including India, Saudi Arabia, and Thailand, that could benefit Indonesian tourists, migrant workers, and pilgrims who are abroad¹⁶.

Ultimately, as with most digital ecosystems, collaboration with different partners will be key to ensuring uptake and the exponential proliferation of multiple use cases. To enable this, however, it is essential that safeguards – including measures to curb malicious attacks and protect consumer data – are put in place now to ensure the security and integrity of the QRIS ecosystem in the long run.



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¹⁶ "Indonesia Payment System Blueprint 2025." Bank Indonesia. 2019.

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