

cryptocurrencies effectively enables further reduction in the cost of payments compared to mobile banking depends on the cryptocurrency used, as average transaction fees can vary from zero to more than US\$ 7 (Ohnesorge, 2018), even without considering the extreme volatility of most cryptocurrencies. Furthermore, cryptocurrency cross-border payments have the disadvantage of requiring an internet connection, while some mobile payment systems only require a regular mobile phone, an important factor in developing countries. Whether, therefore, the use of cryptocurrencies for cross-border payments will really drive down costs, foster financial inclusion and further disrupt the sector is still very much an open question.

The second category consists of companies that leverage the blockchain technology to offer end-users quick, secure and cheap cross-border payment solutions in fiat currencies\* via peer-to-peer networks. The startup Circle, for example, provides blockchain-based cross-border payments in fiat currencies with no fee or exchange rate markup. The company, which started in the United States before moving to Europe, recently entered the Chinese market with the aim of connecting Chinese consumers to the rest of the world (Lomas, 2016). Traxpay,<sup>44</sup> for its part, created a blockchain-based platform for businesses in a supply chain to make real-time payments to each other, bypassing banks and traditional trade finance instruments – a sort of PayPal for the B2B world. Whether such companies will manage to establish themselves as key players in the marketplace remains to be seen.

The third category includes companies that leverage the blockchain technology to challenge the low efficiency of the current correspondent banking system. Banks continue to use a complex infrastructure to transfer money abroad, with cross-border payments often routed through a series of counterparties. When cross-border payments need to take place between banks that do not have an established agreement, a correspondent bank must be used as an intermediary (see Figure 11). Since many banks worldwide do not have established banking arrangements with one another, the payer's bank often uses the SWIFT network to search for a correspondent bank that has agreements with the payee's bank or another correspondent bank on the territory of the payee's bank. The payer's bank then sends the transferred funds to the account held at the correspondent bank, which collects a fee and sends the money to the foreign corresponding bank or receiving bank.

Correspondent banking typically involves the two banks establishing reciprocal accounts with each other, usually referred to as "Vostro" or "Nostro" accounts.<sup>45</sup> Such correspondent accounts enable banks to handle cross-border payments requiring foreign currency exchange, such as those that occur when goods are imported from a foreign country.