ABBEYCROSS

EMERGING MARKETS 3.0

A new approach for all market participants:

It’s time to reduce the costs and risks of cross-currency payments to Emerging Markets countries

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1. Abstract

Global cross-currency payment volumes, particularly between developed countries and the Emerging Markets (EM) have grown steadily over the past decade. While there has been significant investment and innovation in foreign exchange and payments during this time, activity has focused primarily on the major currencies and developed markets, with payments to EM countries trailing behind.

Specialist vendors have increased the reach of banks, enabling them to make payments to more EM countries and improve service levels. This has benefited a wide range of stakeholders, including the banks themselves, multinational corporations, NGOs, small businesses, charities, individuals sending remittance payments home and the family members they support, and local businesses in EM countries.

While these benefits are welcome, the reliance by banks on one, or a small number of, specialist vendors has created an inefficient and structurally defective market. As the volume of cross-currency payments to EM countries has grown, the negative impacts of this structural issue on banks, and all stakeholders in the EM payments value-chain, have become more acute.

The impact has been felt in high costs, lack of transparency and difficulty complying with regulatory obligations. Banks are unable to properly understand and assess the pricing they receive, unable to demonstrate to their own suprvisory teams, customers and regulators that they are trading at fair and on-market prices, and are running material concentration and continuity risks.

This white paper draws on interviews with some of the world's largest payment banks and the specialist vendors who assist them to make payments to EM currencies. Despite widespread criticism of banks regarding the cost of, and service levels for, their cross-currency payments to EM countries, banks are generally delivering the best cost and service outcome possible within the current structural limitations of the market. It is however time to address these limitations

We propose a solution to these issues focussed on three outcomes:

- improved market data for cross-currency payments to EM countries. Currently there is no accurate and relevant market data set for use by banks in this segment of the market
- supervisory tools capable of providing market analysis, including total-cost-analysis, for cross-currency payments to EM countries. The banks' existing tools are not able to take account of the specicifities of this market
- the creation of a formal marketplace for cross-currency payments to EM countries, enabling banks, specialist vendors and other providers to transact in a more efficient manner

Many large payment banks and specialist vendors are already engaged with AbbeyCross on the development of this marketplace. Their willingness to collaborate, not just for their own benefit but rather to improve outcomes for all stakeholders, from multi-national corporates to NGOs and individuals, suggests that this innovation is long overdue.

2. Background

2.1 Cross-currency payments – a large and growing market

In an increasingly globalised world, with multiple international manufacturing options, internatonal distribution and sales networks, and a large and growing population of mobile professionals and migrant workers, international payments have steadily grown in volume. **In 2019, McKinsey estimated global volumes of international payments to be approximately USD $140 TN[1] per year, while Ernest & Young (EY) estimate that the volume of international payments will reach USD $156 TN[2] per year by the end of 2022.** The prevalence of the dollar, and the Euro zone, mean that much of this volume is single-currency. There is no currency conversion involved and the currency that is sent, for example, USD, is the same as the currency that is delivered to the beneficiary in the receiving country.

McKinsey further estimates that, in 2021, the volume of cross-currency international payments was approximately USD $40 TN[3]. These are international payments that are initiated from the sending country in one currency, such as USD, and delivered to the beneficiary in the receiving country in a second currency, say INR.

2.2 Key features of cross-currency payments

Cross-currency payments involve two major elements:

- a conversion of the sending currency into the receiving currency. This is achieved via a foreign exchange transaction, where the sending currency is sold and the receiving currency is purchased, by the sender
- the delivery of the receiving currency to the beneficiary. Typically, this will be paid to the beneficiary's bank account, although there are exceptions. In remittance payments, physical cash is often paid to the beneficiary. And the growth of mobile wallets, crypto-currency based payment networks and other innovations mean that alternative delivery methods are becoming increasingly common

2.3 Cross-currency payments and the wider foreign exchange market

The wider foreign exchange market is the biggest and most liquid financial market in the world, with global volumes of approximately USD $6TN per day. It is important to note two key differences between the wider foreign exchange market and cross-currency payments:

- the majority of transactions in the wider foreign exchange market are net settled. This is typical where swaps, Non-Deliverable Forwards and other instruments are used to both hedge foreign currency exposure and speculate on foreign currency fluctuations. Cross-currency payments, however, require the delivery of the full amount of the counter-currency to a third party beneficiary. This applies equally whether the receiving currency is a major, liquid, and freely tradable currency, like the USD, or an exotic, illiquid currency only tradable onshore in the receiving country

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[1] McKinsey Payment Dashboard, 2021

[2] https://www.ey.com/en_us/banking-capital-markets/how-new-entrants-are-redefining-cross-border-payments

[3] McKinsey Payment Dashboard, 2021

- banks in the wider foreign exchange market generally don't allow third party settlements. This means that banks will only allow settlement between the counterparties to a transaction themselves.This is because the banks' Markets division, where its foreign exchange trading desks and their operations teams sit, are not equipped to perform the anti-money laundering, sanctions and similar checks necessary to settle to a third party beneficiary. The Transaction Banking division, where the payments teams sit, are equipped to perform these activities. This means that, for the banks, cross-currency payments are a cross-divisional activity, requiring the management of the foreign exchange leg by the Markets division and the management of the third party settlement to the beneficiary by the Transaction Banking division

2.4 Regulation

Banks operate in a highly regulated environment. Their Markets divisions and Transaction Banking divisions operate within a matrix of regulatory, internal policy and risk management processes and systems. There is some overlap of these processes and systems between the two divisions, particularly in jurisdictions like the United Kingdom where a principles based regulatory system imposes general obligations such as treating customers fairly. The two divisions are also subject to different regulatory, internal and risk management processes and systems applicable to the specific products and services they offer. As cross-currency payments are a cross-divisional activity for banks, all of these regulatory, policy and risk considerations apply to each transaction.

2.5 Correspondent banking and specialist vendors

No bank has the ability to directly make payments in every country of the world. This would require the bank to have a local branch, or at least an account with a local bank, in every country of the world.
In order to offer a comprehensive, global cross-currency payments service, banks must use third parties to make payments to the countries that they do not cover themselves. Traditionally, banks used other banks, known as correspondents, for this purpose. However, even a bank's correspondent network is unlikely to cover all countries in the world, so the large payments banks use specialist vendors who make payments to more difficult countries to complete their global coverage.

The banks' use of specialist vendors has grown in the last ten years due to a number of factors, including the fact that banks have been reducing their correspondent networks (see figure 1). This is due to perceived regulatory risks associated with maintaining accounts in some EM countries and due to the cost of maintaining these correspondent relationships. This has meant that the number of countries not covered by their correspondent network has increased and therefore they are relying on specialist vendors for greater numbers of countries.

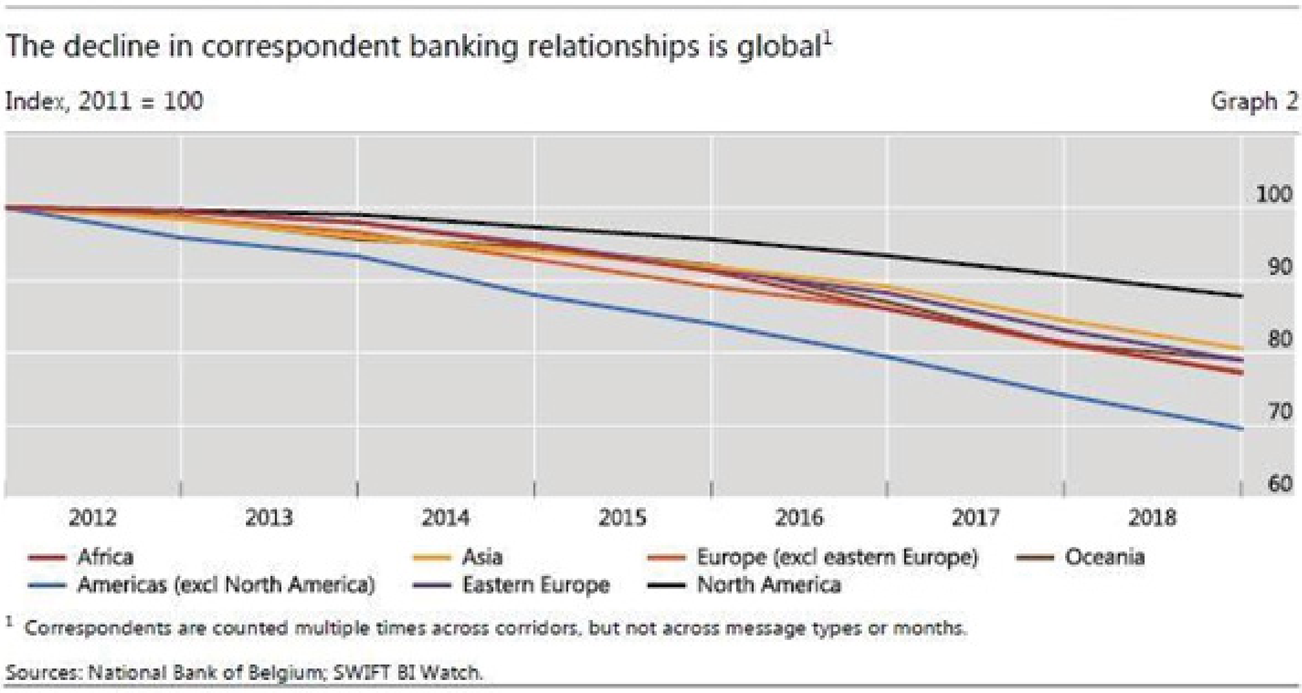

Figure 1: Correspondent Banking relationships are shrinking

3. Payments to EM countries

As overall cross-currency payment volumes have increased, cross-currency payment volumes to EM countries have increased even faster. **In 2019[4], the volume of payments to EM countries reached approximately $3 trillion per year.** As a percentage of total cross-currency payments, payments to EM countries have grown from single digit percentages pre-2010 to over 25%[5] of total volume at some banks today. The growth in the volume of payments to some EM countries has far outstripped the 5% CAGR of the overall cross-currency payment market.

3.1 How banks manage EM payments

Typically, large payment banks manage cross-currency payments in three ways:

- **Internally Managed Payments** – Where a bank has a branch in the destination country, or a bank account in the destination country, it is likely to handle both the foreign exchange transaction and the final settlement to the beneficiary account internally. In such cases, it maintains its own liquidity in the currency of the destination country and is connected to the local payment network in the destination country directly (if it has a branch) or indirectly (if it has an account). For Internally Managed Payments, the destination countries tend to be other developed countries, such as the G10, or major regional financial centers

- **Correspondent Banking** – As discussed above, where a bank does not have a branch or account in the destination country, but does have a commercial relationship with a correspondent bank that can make a payment to the destination country, it will use the correspondent to do so. The bank initiating the payment will generally send its domestic currency to the correspondent bank and the correspondent bank will handle both the foreign exchange transaction and final settlement to the beneficiary. For Correspondent Banking payments, the destination countries are typically outside the G10 countries

- **Outsourced Payments –** As also discussed above, where a bank does not have its own branch or account in the destination country, and does not have a correspondent bank that can make payments to the destination country, it will instruct a specialist vendor to make the payment. The specialist vendors are typically non-bank providers who specialize in payments to EM countries and act as aggregators of the EM banks' foreign exchange trading and settlement capabilities. One integration with a specialist vendor will generally enable a bank the make payments into the majority of EM countries. For Outsourced Payments, therefore, the destination countries are typically EM countries

Internally Managed Payments and Correspondent Banking generally function well, although there has been much discussion of the shortcomings of correspondent banking in the last ten years with a focus on its cost, speed and lack of traceability. Correspondent Banking has also been a major focus of fintech investment during this time and numerous initiatives, including crypto currency-based payment systems, have sought to improve or disrupt it. Additionally, SWIFT itself has developed and rolled out several enhancements, including its major GPI initiative, which has produced significant improvements in the speed and traceability of Correspondent Banking payments.

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[4] McKinsey Payment Dashboard, 2021
[5] McKinsey Payment Dashboard, 2021

During this time, there has been very little focus on Outsourced Payments, or payments to EM countries more generally, at a market infrastructure level. There have been numerous initiatives focused on purely consumer payments to EM markets, primarily remittances, but the lack of attention to the underlying market infrastructure means that the major payments banks, and the fintechs that rely on their services, are making Outsourced Payments in the same way that they were twenty years ago.

3.2 Why have Outsourced Payments been left behind?

There has been a 'set and forget' mentality toward Outsourced Payments. In many cases, large payment banks have integrated with one specialist vendor and, having found a way to make these seemingly difficult and specialized payments, they have simply left the arrangement to run unchallenged and, in some cases, relatively unmonitored. The reasons for this include the fact that:

- the specialist vendors add real value. This takes the form of specialist regulatory, operational and trading expertise, local banking relationships and deep experience dealing with EM countries. As the banks are often lacking this mix of expertise and experience, they have understandably left it to the experts
- the banks do not have quality market data for the specific, deliverable foreign exchange transactions and associated settlement costs applied to payments to EM countries. This makes it very difficult for the banks' foreign exchange trading desks, and supervisory teams, to properly understand and monitor the pricing provided by specialist vendors. In many cases, the banks' traders have access to some market data for EM currencies, but this is non-tradable, composite market data, made up of pricing that is not relevant to payments to EM countries. It might, for example, be Non-Deliverable Forward pricing, or the official exchange rate published by an EM central bank viewed on a Refinitiv or Bloomberg screen, that has little relevance to the real market for payments to the specific EM country
- most of the foreign exchange trading at the large payment banks is neither payment-related nor EM currency-related. The majority of this trading volume relates to G10 currencies that are not settled to third parties in the manner that payments are. As technology and market infrastructure in this bigger market has developed, including low-latency electronic and quantitative trading and the rise of multi-dealer platforms, it is understandable that the banks have applied their limited IT and operational budgets to this 'larger volume' market segment. The lower volumes, and more complex market, for payments into EM countries, has been left to the specialist vendors
- it is a long and costly process to integrate and start trading with a specialist vendor. The banks rightly have an extremely rigorous due diligence and approvals process before they will integrate with a third party and commence trading with them. The security, financial, operational and data protection risks associated with any such integration are material and the bank is therefore bound by its regulatory and corporate governance responsibilities to ensure that these risks are properly mitigated. When KYC, AML, credit and other onboarding processes are added, it is an even bigger undertaking. As such, most banks have tended to integrate with only one specialist vendor

This is now changing. As the volume of payments to EM countries have grown, clients have begun to demand a better EM payment offering from their banks. At the same time, the banks' supervisory teams are beginning to look more closely at the pricing, operational risks and regulatory implications of the current Outsourced Payments model.

3.3 The structural problem with the Outsourced Payments model

The lack of attention to Outsourced Payments at a market infrastructure level has created a significant structural problem. With the vast majority of banks using only one specialist vendor, without the ability to easily switch specialist vendors or use multiple specialist vendors, the Outsourced Payments market is fragmented, inefficient and institutionalises concentration and continuity risk.

The structural problem is exacerbated by the lack of applicable market data referred to above, making it difficult for the banks' traders and supervisory teams to adequately monitor the pricing and service provided by their single specialist vendor.

It is important to note that, while banks are often accused of overcharging and underserving for payments to EM countries, they are not necessarily at fault here. In addition to the factors referred to in 3.2 above, this structural problem cannot be solved by any one bank. New market infrastructure, supported and used by the banks, is required.

4. Consequences of the structural problem with the Outsourced Payments model

4.1 The regulatory challenge

Banks make cross-currency payments in a complex regulatory environment. While the regulatory frameworks differ between jursiditctions, they all generally require banks to:

- **treat customers fairly.** In doing so, a bank is required to ensure that its cross-currency payments offering is fit for purpose and fairly priced. Many large corporate clients make large batches of cross-currency payments without even seeing the foreign exchange rate offered by their bank in advance. This heightens the obligation on a bank to ensure that the pricing is fair and on-market. Many retail customers use their banks' cross-currency payment services and, as they are not professionals, this further increases the obligation on banks to ensure that their pricing is fair and on-market

- **ensure the security and continuity of the services that they provide to clients.** In the case of cross-currency payments, an extended outage could have significant implications for a corporate client who cannot make salary payments to its staff at an overseas manufacturing facility or sales office, cannot pay its overseas suppliers or perform other business critical functions. Although retail customers operate on a much smaller scale, an extended outage could have a major negative impact, by preventing them sending much-needed money home to family, preventing them paying a mortgage or meeting other financial commitments. Just as banks cannot easily move between specialist vendors, clients cannot easily move between banks. It can take twelve months for a large corporate to open new accounts and activate cash management services, including cross-currency payments, from a new bank, so clients are reliant on their banks to maintain service continuity are typically outside the G10 countries

- **understand, manage and monitor their businesses. –** To discharge this responsibility, banks maintain detailed policies governing their trading and commerical activities, deploy sophisticated monitoring tools and maintain dedicated supervisory teams. To manage their foreign exchange trading activities, for example, banks use tools to ensure that they are trading on-market and that any margins they apply are fair and reasonable.

As will be covered in more detail below, the structural problem with the current market creates challenges for the banks in complying with all of these obligations.

4.2 No price competition or choice

There is a complete lack of price competition and choice when a bank trades with only one specialist vendor. This is exacerbated by the difficulty of changing specialist vendors. As a result, there is little, if any, downard pressure on pricing. The effects have been seen in increasingly wide margins for payments to EM countries to the point that some banks do not add their own margin when passing the specialist vendor's price through to their clients. In other cases, banks are even passing lower pricing through to their clients and accepting that payments to some EM countries are loss-making. For the banks, this represents a loss of value, and for their clients, this means excessive cost.

Contrast this with foreign exchange and settlement costs in the G10 and other commonly traded currencies, where the market is highly efficient and there is intense price competiton and wide price choice. In this market, competitive pricing is widely available at interbank level and through multiple channels including multi-dealer platforms. The effect has been a steady reduction in margins over the last twenty years.

The lack of competitive pressure and price choice manifests at a number of levels in this market. In addition to the general lack of downward pressure on pricing, the current Outsourced Payments model makes it impossible for a bank to obtain the best available pricing across all EM countries. Due to the number of EM countries and their different local specificities, specialist vendors naturally have different strengths and areas of focus. As a result, no one specialist vendor provides the best pricing for all EM countries. Even if a bank is able to select the vendor with the best overall pricing, determined on average and taking into account quality of service, they will not be able to access the best pricing for all EM countries simply because the specialist vendor they have chosen cannot be the market leader for every EM country. Banks using one specialist vendor know, therefore, that they are not seeing, much less trading at, the best available pricing and service levels for some EM countries yet, despite this, they continue to pass that pricing on to their clients.

4.3 No price transparency

There is a lack of useable market data for cross-currency payments to EM countries. This is due to a number of factors, including:

- the fragmented nature of the deliverable EM currency markets, which include numerous restricted onshore currencies
- the separate bilateral relationships between single specialist vendors and individual banks, with no marketplace or trading venue with visibility of the pricing
- the different pricing conventions used in payments to EM countries. Unlike the wider foreign exchange market, the foreign exchange margins applied by some specialist vendors for payments to EM countries include:
    - an element to cover the cost of settlement to the beneficiary. In the wider foreign exchange market, this cost is not a factor, and in the wider payment market it will often be broken out as a separate payment fee. By bundling it into the foreign exchange margin, these specialist vendors are creating a foreign exchange rate that cannot be compared to rates in the wider foreign exchange market and, therefore, foreign exchange market data
    - a static foreign exchange rate that is adjusted periodically, for example once every 24 hours. This requires the specialist vendor to add an additional margin to cover the market risk associated with the movement of the underlying foreign exchange rate during each 24 hour period. In the wider foreign exchange market, live foreign exchange rates are used. Again, this creates a foreign exchange rate that cannot be compared to rates in the wider foreign exchange market and, therefore, foreign exchange market data
- the different pricing conventions used by different specialist vendors. The pricing conventions referred to above are not applied consistently by all specialist vendors. For example, some apply a foreign exchange margin that bundles in the payment fee and some do not. Some use static foreign exchange rates and some use live foreign exchange rates

  As a result, banks are unable to understand, monitor and benchmark the pricing provided by a single specialist vendor for payments to EM countries. A bank cannot comply with its obligations to trade at a fair and on-market rate, and treat its customers fairly, if it does not know, or cannot verify, what the market rate is, what margin the specialist vendor is applying, or what other prices are available in the market.

Again, contrast this with the wider foreign exchange market, where sophisticated total-cost-analysis and other tools are applied to highly efficient markets with exhaustive market data, and the extent of the transparency problem with payments to EM countries is clear.

There is a large and growing inconsistency between the way that banks monitor and supervise their wider foreign exchange trading activity and the way they monitor and supervise payments to EM countries. The former is closely monitored, well supervised and effectively reported. The latter is loosely monitored, supervised using tools and processes that do not bear close scrutiny and are not reported, to either senior executives within the bank or their Regulator, in a manner that the growing volumes in this currency segment demand. It is also evident that some banks are aware of the risks this situation poses while others are not.

4.4 Concentration and continuity risk

Trading with one single specialist vendor creates a material concentration and business continuity risk for banks. This risk is exacerbated by the length of time it would take a bank to onboard a replacement specialist vendor exacerbates this risk.

It is hard to see how a bank can meet its regulatory obligation to ensure the security and continuity of this service when it is dependent on one external specialist vendor with no backup provider or means of quickly replacing the specialist vendor if it suffers business interruption or ceases trading.

As discussed in 4.1, cross-currency payments are an important product for a bank's clients, and are used to perform many business critical functions by corporate clients, and personally important functions for retail customers. In 4.6 below we explain how the clients themselves are not necessarily able to switch easily bewteen providers so are dependent on the banks maintaining continuity of service.

4.5 Limited ability to select payment type

One of the most exciting developments in cross-currency payments over the last decade has been the expanding range of payment networks, settlement times and costs. Traditional Correspondent Banking payments now sit alongside local ACH networks, real-time payments, mobile wallets, push-to-card payments, blockchain and crypto-currency based networks and others. The development of local ACH networks has, for example, enabled banks to offer payment services tailored to clients needing to make high volumes of low value payments – for example a travel insurer sending small payments around the world to cover medical costs or governments sending pension payments to expatriates – in a cost effective manner. As real-time payments and other new payment types mature, banks will wish to make these payment types available to their clients.

Trading with a single specialist vendor will limit a bank's ability to use and, therefore, offer their clients, these new payment types. This is due to the fact that specialist vendors will adopt and offer these new payment types at different times and to different extents. This will be influenced by their regional and country strengths and focus, the quality of their local banking relationships in each EM country, their business and commercial strategies and other factors. One specialist vendor is unlikely to be able to offer all payment types available in all EM countries.

Even if a bank may, one day, be able to obtain all new payment types from one specialist vendor, the lack of price competiton and choice, and the lack of price transparency, described in 4.2 and 4.3 above will become even more acute as the banks enter into more complex pricing and service delivery models with that specialist vendor.

4.6 Where is the client in all this?

Large corporates do not purchase cross-currency payment services in isolation. Rather, through a request-for-proposal (RFP) process, they select a bank to provide cash management services. Within this cash management mandate, the bank will provide a range of services, from bank accounts to cash pooling, domestic payment and collection services and cross-currency payments. It can take a year for a large corporate to issue a cash management RFP, select a bank, go through the onboarding process and begin using the bank's cross-currency payment services. Even where a large corporate has multiple banking relationships, the cash management mandate tends to sit with one bank and, increasingly, large corporates are establishing payment hubs in one location to manage cross-currency payments on behalf of all of the its group entites, thus further concentrating their reliance on one bank.

Similarly, retail customers tend to use one provider for cross-currency payments. Historically, this was their bank. As a retail customer's business is more portable and easier to segment by provider (a bank account with one bank, a mortgage with a finance company etc), retail customers have been quicker to move their cross-currency payments business to new, non-bank entrants like fintechs. Although this appears to give the retail customer some advantage, many of these non-bank providers simply rely on the banks' services themselves, meaning that the structural probem with the Outsourced Payment model simply flows down through the non-bank provider to the retail customer. This is not to diminish the offerings of some new entrants, who have established their own ACH settlement networks and been able to work around the large payment banks, but most of the volume of cross-currency payments to EM countries is affected by the structural problem discussed above.

In any discussion of the wide margins applied to cross-currency payments, and the lack of downard price pressure to constrain them, it should be noted that the banks do not actually bear many of these costs. As noted above, some banks have begun to waive their own margin or even take a loss on these payments to try to keep the pricing reasonable, but in the vast majority of cases the cost is simply passed on to the client. Many people in both the banking and corporate sectors have commented that this is one reason that the banks have been slow to address this issue.

5. Proposed solutions don't go far enough

More effective cross-border payments, with improved costs and better risk management, are a long recognised necessity. Banks, fintechs, and associated bodies have been steadily improving the underlying infrastructure for many years.

The Committee on Payments and Market Infrastructures (CPMI)[6] - a body which seeks to promote, monitor, and make recommendations around the safety and efficiency of payment, clearing, settlement and related arrangements – has long known this. As a member of this committee, the Financial Stability Board (FSB) published a roadmap to enhance cross-border payments in October 2020[7].

Figure 2: 19 Steps to enhance cross-border payments

This initiative is very comprehensive in its reach and goals, with the FSB stating: "Faster, cheaper, more transparent and more inclusive cross-border payment services, including remittances, while maintaining their safety and security, would have widespread benefits for citizens and economies worldwide, supporting economic growth, international trade, global development and financial inclusion."
The roadmap builds on the FSB's Stage 1 report (published in February 2020) sets out the challenges and the frictions in cross-border payments that contribute to them. The CPMI's Stage 2 report

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[6] https://www.bis.org/cpmi/charter.htm?m=3063
[7] https://www.fsb.org/2020/10/fsb-delivers-a-roadmap-to-enhance-cross-border-payments/

(published in July 2020) describes the necessary elements of a response. It is a comprehensive set of 19 building blocks, which are illustrated in Figure 2 in the page above.

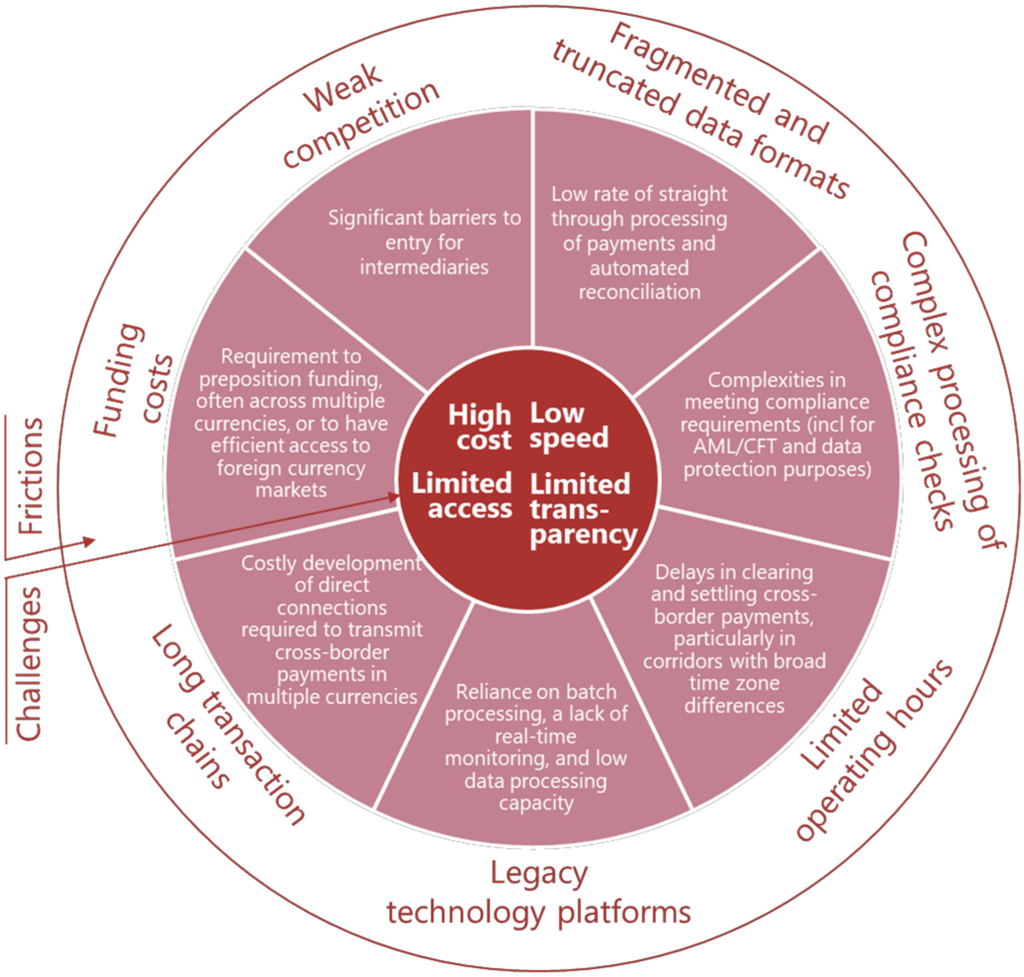

Figure 3: The challenges and frictions within the cross-border payments ecosystem

This roadmap seeks to address the key challenges often faced by cross-currency payments and the specific frictions[8] in existing processes. These challenges (see figure 3) are:

- High cost
- Low speed
- Limited access
- Insufficient transparency

End-users and service providers suffer in multiple ways:

- Individuals and small companies face particular challenges with retail cross-border payments.
- Financial inclusion remains a challenge for many, especially in EM and developing economies.

[8] A friction is a factor that adds to costs or lowers access, speed, or transparency (i.e., increases the challenges for a cross-border payment). Identifying these fundamental frictions is crucial for analysing the potential effectiveness of remedies to address challenges in cross-border payments.

- Low-value payments may incur high fees as a percentage of the amount sent and face cumbersome processes.
- The unbanked individuals and firms from fragile states are amongst those who may not be able to access payment services at all.

The frictions for service providers are many and include:

- Fragmented and truncated data format
- Complex processing of compliance checks
- Limited operating hours
- Legacy technology platforms
- Long transaction chains
- High funding costs
- Weak competition

Addressing these are laudable goals and a solution has to be a collective effort. However, perhaps because the member countries of the FSB are primarily the G20, the report does not seek to deal with the added challenges of making cross-currency payments to EM countries. We submit that there are a number of reasons why cross-currency payments to EM countries are relevant to the G20 and should be included in the FSB's roadmap, including:

- a large and increasing volume of payments are made by businesses and individuals between G20 to EM countries. Improving the cost, efficiency and transparency of payments to and from EM countries will deliver material benefits to G20 businesses and individuals and, therefore, to G20 economies

- many cross-currency payments made from one EM country to another, and from some G20 countries to EM countries, involve a separate G20 currency. This is due to the market practice of crossing foreign exchange transactions through a major currency such as the USD or EUR. For example, there may not be a market in PLN / NGN, so the foreign exchange transaction is conducted in two legs, being PLN / USD and USD / NGN. Given this central role of some G20 currencies in cross-currency payments to EM countries, it would be beneficial to the economies of all countries involved, including the G20, to improve this end-to-end process and thus facilitate an increase in trade and foreign exchange transactions

6. The AbbeyCross solution

AbbeyCross is the first wholesale, multi-vendor marketplace for cross-currency payments to EM countries. AbbeyCross is focussed on three outcomes:

- improved market data for cross-currency payments to EM countries – to address the lack of accurate and relevant market data for use by banks in this segment of the market, and to improve price and market transparency
- supervisory tools capable of providing market analysis, including total-cost-analysis, for cross-currency payments to EM countries - the banks' existing tools are not able to take account of the specificities of this market and, therefore, it is difficult to assess pricing and trading outcomes
- the creation of a formal marketplace for cross-currency payments to EM countries, enabling banks, specialist vendors and other providers to transact in a more efficient manner – to enable banks to move away from the current practice of trading with one specialist vendor, to create price choice, and enable banks to manage concentration and continuity risk

Through AbbeyCross' single integration and more efficient onboarding protocols, banks and payment companies can access rich market data, analytical tools and price choice. This will improve price and market transparency, reduce costs and mitigate current regulatory and compliance risks. See Figure 4.

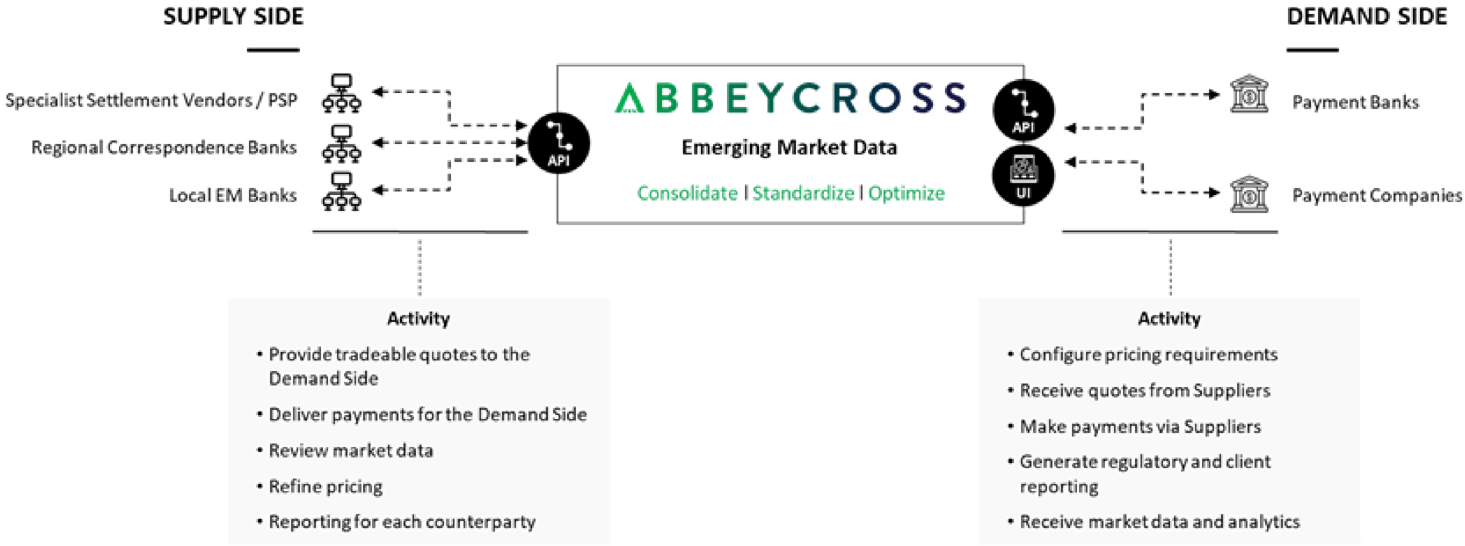

Figure 4: AbbeyCross: the "integrate once, trade with all" marketplace for cross-currency payments to EM countries

6.1 Market data and supervisory tools

Problem: there is a lack of useable market data for cross-currency payments to EM countries. As a result, banks are unable to understand, monitor and benchmark the pricing provided by a single specialist vendor for payments to EM countries. A bank cannot demonstrate compliance with its obligations to trade at a fair and on-market rate, and treat its customers fairly, if it cannot verify the real market rate and doesn't know what other prices are available in the market.

As discussed in 4.2 above, the lack of useable market data for cross-currency payments to EM countries is due to a number of factors including:

- the fragmented nature of the deliverable EM currency markets
- the separate bilateral relationships between single specialist vendors and individual banks, with no marketplace or trading venue with visibility of the pricing
- the different pricing conventions used in payments to EM countries
- the different pricing conventions used by different specialist vendors

The AbbeyCross solution:

AbbeyCross brings regional banks, specialist vendors and other suppliers of cross-currency payments to EM countries into one marketplace. In doing so, AbbeyCross is able to:

- develop, in consultation with all market participants, agreed pricing protocols to ensure that their pricing is comparable
- collect market data from the full range of suppliers, covering regional banks, specialist vendors, fintechs and other new entrants
- develop a complete picture, or definition, of the market for cross-currency payments to each EM country
- publish market data that is specifically relevant to this market segment
- provide analytical tools that take account of the specificities of payments, as opposed to] wider foreign exchange trading, to enable banks to demonstrate that they are trading on market in this segment and to benchmark and manage their suppliers

  In doing so, AbbeyCross acts as an independent, auditable third party (See figure 5 below). AbbeyCross is not a trading counterparty and has no incentive to promote any one price-maker or skew pricing in any direction.

AbbeyCross offers:

- raw market data for use by banks and other market participants
- composite rates for use as a benchmark
- analytical and reporting tools to perform supervisory activity (an example of which is in figure
  6 below), total-cost-analysis and other analysis of its cross-currency payments to EM

The data and analytical products are available via API, dashboard, data vendors and other delivery channels.

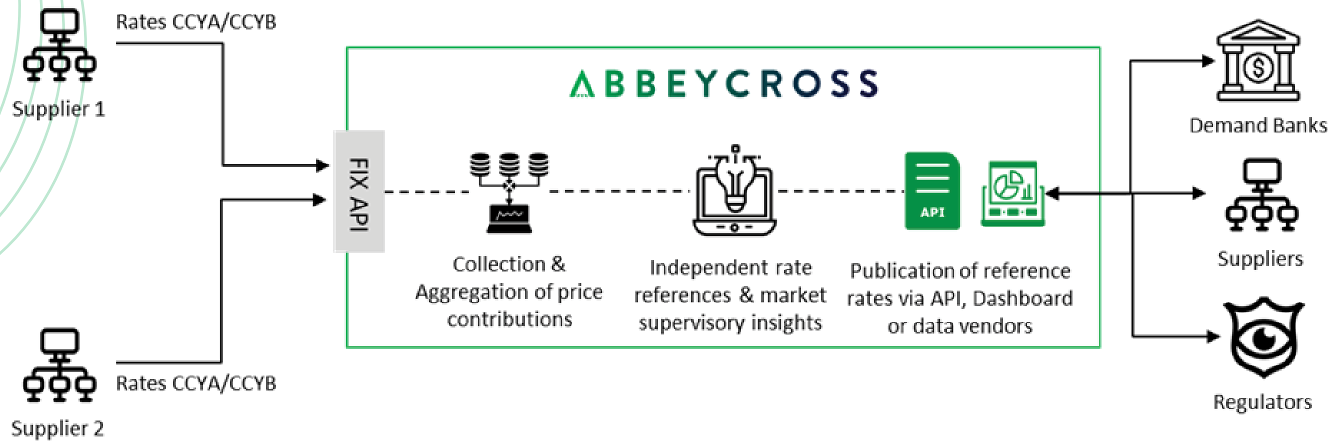

Figure 5: AbbeyCross: an independent, auditable third-party reference provider of EM market data

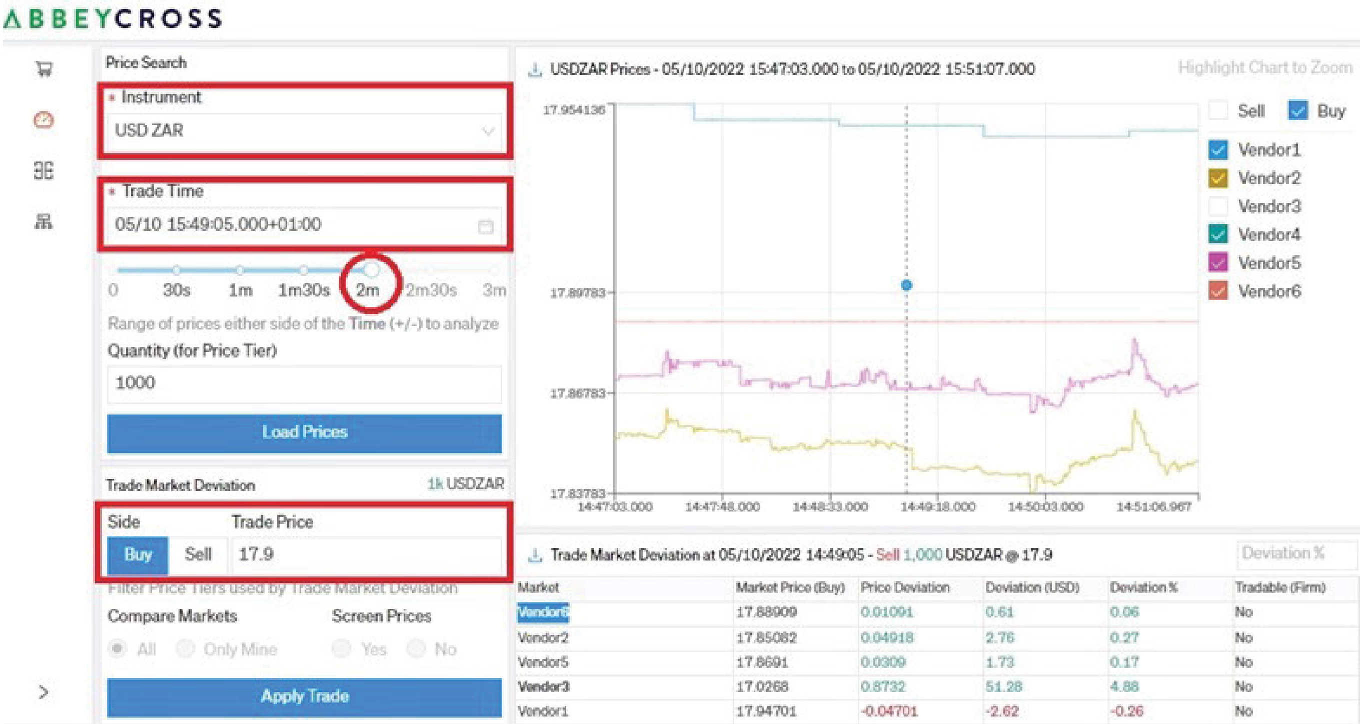

Figure 6: AbbeyCross: A supervisory query of a USDZAR trade at a specified trade time.

6.2 Trading

The problem: typically, banks trade with only one specialist vendor for payments to EM countries. As a result, they receive one 'take it ot leave it' price. The lack of price choice and market transparency creates an inefficient market with no downard pressure on pricing. This situation is exacerbated by the lengthy and costly process for banks to switch, or add additional, specialist vendors, due to their rightly rigorous due diligence and approvals processes.

AbbeyCross brings regional banks, specialist vendors and other suppliers of cross-currency payments to EM countries into one marketplace that collates and standardizes data within this market (see figure 7 on the page below). In doing so, AbbeyCross provides banks one point of integration that:

- shows side-by-side pricing from multiple suppliers of cross-currency payments to EM countries
- creates an efficient market with appropriate levels of price competition, reducing costs to the bank and its clients
- enables banks to initiate cross-currency payments with the supplier that, on a payment-by-payment basis, provides the best price and service to the bank and its clients. The AbbeyCross platform enables banks to pre-configure their preferences on a per-corridor or payment-by-payment basis, for example:
  - select best price
  - select best price from pre-selected vendors, for example vendors who meet the bank's service standards for that corridor
  - show all prices, or prices from pre-selected suppliers, to enable the bank to manually select a supplier for the transaction
  - select suppliers based on settlement rails and type offered – for example, local ACH, real-time, mobile wallet
  - select pricing convention (for example, foreign exchange margin and payment fee bundled or unbundled)
  - preconfigure qualitative standards, such as the banks' perception of, and preference for, the quality of service provided by a specialist vendor to a particular EM country
- provides post-trade reporting and analytics to enable:
  - banks making payments to better manage their suppliers, identify new suppliers, answer client questions and discharge their reporting requirements
  - suppliers to optimise their offerings
- enable banks to manage concentration risk and continuity risk by spreading payments across more than one supplier and maintaining back-up providers

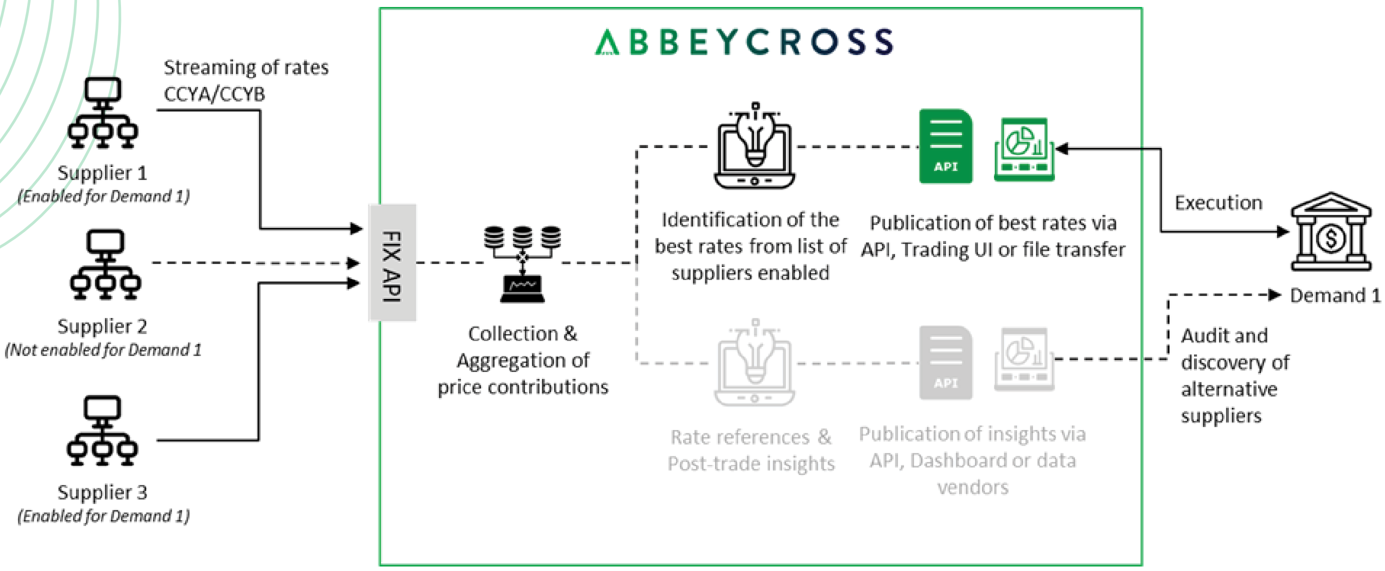

Figure 7 : AbbeyCross: collating, standardizing and optimizing data flow between banks and their vendors

7. Conclusion

It is time to bring the market for cross-currency payments to EM countries up to date. Over the last twenty years, developments in the wider foreign exchange and payments markets have delivered significant and demonstrable benefits to banks and their clients. Similar benefits should now be delivered to banks and their clients for cross-currency payments to EM countries. The stakeholders who will benefit range from the banks themselves to multinational corporations, NGOs, small businesses, charities, individuals sending remittance payments home and the family members they support, and local businesses in EM countries.

The structural problems in the current market have entrenched high prices, a lack of transparency, regulatory and compliance risks, and concentration and continuity risks. These issues can only be fully resolved at a market infrastructure level, making it very difficult for any one bank or supplier to do so on their own.

AbbeyCross is a neutral, independent, auditable third party platform, that brings market participants into one marketplace to provide pricing and settlement services using standardised pricing protocols. In doing so, it provides previously unavailable market data and supervisory tools designed for the specificities of this market segment.

It has been clear to us, through all our interactions with market participants, from initial market validation to active enagagement and co-creation, that the industry recognises the need for this initiative. We have been encouraged by the depth of understanding, and concern for all stakeholders, shown by them, and how willing they are to collaborate to solve a problem felt most acutely by their clients.

We are grateful to the seven leading international payment banks on the demand side, and the regional banks, specialist vendors and fintechs on the supply side, who are working with us to co-create and deliver this solution.

8. Glossary

- **ACH payment:** – An Automated Clearing House, or ACH transaction is an electronic transaction that requires a debit from an originating bank and a credit to a receiving bank. It typically clears within the same day. The term is often used to distinguish a payment made using the local ACH clearing system of the receiving country from an international wire made using SWIFT.
- **API-based platform:** An API-based platform is a platform that brings together two or more distinct, but interdependent, functions, using APIs. This creates a foundation for automated transactions or communications between different networks.
- **Beneficiary:** the person or entity receiving a payment.
- **Beneficiary bank:** a Beneficiary will generally receive a payment into a bank account. The Beneficiary bank is the bank at which the Beneficiary holds this account.
- **Correspondent:** Correspondent banking is an essential component of the global payment system, particularly for cross-border transactions. Through correspondent banking relationships, banks can access financial services in different jurisdictions and make cross-border payments. A bank wishing to make cross-border payments using correspondent banking will open an account with a Correspondent bank who will make payments for it.
- **Developed Nations:** Developed nations —also called industrialised nations — have a mature and sophisticated economy, usually measured by gross domestic product (GDP) and/or average income per resident. Developed nations have advanced technological infrastructure and diverse industrial and service sectors.
- **Developing Nations:** A nation with a less sophisticated or diversified economy, where the average income is much lower than in industrial or developed nations.
- **Deliverable currency:** Refers to currencies where the currency can be traded outside the country in question and then physically settled to the beneficiary account offshore or onshore in that country. This differs from non-deliverable currencies where the currency can only be traded onshore in the country of settlement.
- **Emerging Markets** An emerging market economy is the economy of a developing nation that is becoming more engaged with global markets as it grows. Countries classified as emerging market economies are those with some, but not all, of the characteristics of a developed market. For the purpose of this white paper, the term Emerging Markets is used to cover both Emerging markets and Developing Nations.
- **G10:** The Group of 10 or G10 is a group of 11 industrialised nations that have similar economic interests. The G10 was formed when the wealthiest members of the International Monetary Fund (IMF) agreed to be part of the General Agreements to Borrow (GAB), so as to provide more funding for the IMF's usage.
- **G20:** The Group of 20 or G20, formed in 1999, is a group of twenty of the world's largest economies that meets regularly to coordinate global policy on trade, health, climate, and other issues. It includes those in the G10.

- **Liquid currencies:** Liquidity is the ability of assets to be sold quickly at a price close to the market price. A liquid currency is a currency that can be quickly exchanged for another asset or currency. This means that there are many sellers and buyers in a liquid market, creating pricing efficiency.
- **Market price:** The price of a commodity or currency when sold in a given market.
- **Multi Dealer Platform or MDP:** Non-exchange financial trading venues which enable trade matching between counterparties, offering pricing from a selection of investment banks and
- **Non-deliverable forward or NDF** A cash-settled, and usually short-term, forward contract. The notional amount is never exchanged, hence the name "non-deliverable." Two parties agree to price for, and take opposite sides of, a transaction for a set amount of money — at a contracted rate, in the case of a currency NDF.
- **Payment bank:** In the context of this document, a bank that initiates cross-currency payments for and on behalf of its clients.
- **Pricing convention:** The agreed upon method within a given market, by which a price is derived and presented to that market.
- **Regulatory risk:** The risk that a change in laws and regulation or the failure to adequately comply with existing laws and regulations will significantly impact an institution.
- **Reputational risk:** Reputation risk is the threat to the profitability or sustainability of a business or other entity that is caused by unfavourable public perception of the organizsation or its products or services.
- **SWIFT Network:** SWIFT is a messaging network that financial institutions use to securely transmit information and instructions through a standardized system of codes. SWIFT has become a crucial part of global financial infrastructure. However, it is not a financial institution itself: SWIFT does not hold or transfer assets.
- **Receiving Currency:** The currency that a Beneficiary receives a payment in.
- **Sending currency:** The currency that a bank or person sending a cross-currency payment uses to initate the transaction. For example, a US bank sending a cross-currency payment to to a Beneficiary in South Africa may send USD to a specialist vendor. The specialist vendor will settle ZAR to the Beneficiary in South Africa, which is the Receiving Currency.
- **Specialist vendor:** In the context of this document, a vendor that provides cross-currency payments to EM countries for banks and other fianancial institutions. Typically, a specialist vendor will maintain onshore banking relationships in multiple EM countries enabling to purchase and settle the EM currency onshore.