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future for payments

## Let's give a voice to end users: Cross-border payments, attributes, and use cases

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### **A tourist arrives in London**

A North American vacationer arrives at Heathrow airport, eager to make it to their hotel in central London. They have heard that the new Elizabeth Line is the way to go. As the tourist walks briskly to the connecting underground station, they have already made two cross-border consumer-to-business (C2B) payments related to their holiday, and another payment is coming.

Contingency planning played a role in the first two transactions. The tour package was expensive and purchased six months prior, so the tourist wanted a level of protection should something go wrong with the vendor over the next half year. The traveler shifts the handmade leather duffel bag hanging from their shoulders to better make it through the approaching tube ticket barrier. The bag was purchased online from a small vendor in Argentina that seemed promising, but with whom there was no prior relationship—or trust. For this cross-border purchase, the idea of recourse for a faulty product or service loomed large in their selection of payment method. But the bag had arrived in perfect shape, and the ticket barrier is now 10 feet away. The tourist takes out their mobile phone, taps in the designated spot, and enters through the turnstile without breaking stride.

For this third cross-border payment, insurance and recourse considerations did not matter. Settlement speed could not have been further from the vacationer's mind. For this transaction, the ability to not break stride—thereby not creating a pile-up of frustrated humanity in the first moments of a holiday on foreign soil—was the key consideration, and the vacationer needed almost immediate payment authorization for that to happen.

All of these payments were cross-border C2B, yet they satisfied distinct needs for the tourist, mostly—if not entirely—without their knowing anything at all about the vast architecture that undergirds these transactions. For now, let's wish the tourist well on their trip, and let's get granular in talking about cross-border payments and how to advance innovation even further.

**Cross-border payments have been vital to the global economy for centuries, and they are becoming even more important with expanding global supply chains, trade, and e-commerce**

The overall payments industry has undergone significant advancements in the past several years. Some of the most notable transformations have come from:

- Private sector investment in payments totaling ~\$51 billion in 2021 and ~\$30 billion in 2022 globally (KPMG, 2022).
- The migration of cash and check to digital—the 2022 Future of Payments Survey found that around 74 percent of survey respondents prefer digital payments over cash or checks (Fidelity National Information Services [FIS], 2022).
- Global traction of real-time payment systems (though primarily domestic to date), as 70+ percent of the world has existing or upcoming real-time payments infrastructure, offering benefits such as speed of funds availability, richer data in messaging, and expanding network reach (Worldpay & CPI Pal, 2022).
- Financial inclusion improvements, including 1.2 billion adults gaining access to a digital bank account between 2011 and 2017 and digital financial services, including those involving the use of mobile phones, launching in more than 80 countries (World Bank, 2022).

While new initiatives and digital technology innovations have been accelerated by the COVID-19 pandemic, further improvements to cross-border payments are needed. The Group of 20 (G20) has made enhancing cross-border payments a priority, and in response, the Financial Stability Board (FSB) developed a three-stage roadmap to address the key challenges faced by cross-border payments.

The Stage 1 report assessed existing cross-border payment arrangements and challenges. The FSB (2020a) identified four main frictions, which later evolved into seven. From the FSB's point of view, these frictions included long transaction chains, legacy tech platforms, limited operating hours, complex processing of compliance checks, fragmented and truncated data formats, weak competition, and funding costs.

In the Stage 2 report, the Bank for International Settlements' Committee on Payments and Market Infrastructures (CPMI, 2020) identified 19 building blocks to enhance cross-border payments through solving challenges on transparency, speed, access, and cost. The building blocks mapped to the frictions identified earlier, and they also explored several new payment technologies such as digital currencies.

In the Stage 3 report, the FSB (2020b) produced a roadmap to turn these building blocks into real projects. As a part of this implementation, the FSB (2020c) also set aspirational quantitative targets for cost, speed, access, and transparency for three cross-border payment segments: wholesale, retail, and remittances.

More recently, the FSB has developed three priority areas for ongoing work, oriented around interoperability, regulatory frameworks, and data exchange and message standards (FSB, 2022a). The FSB also created a framework for monitoring progress against the targets (FSB, 2022b). Progress in the retail segment will be monitored according to several general use cases: business-to-business (B2B) (small business), business-to-person (B2P), person-to-business (P2B), and non-remittance person-to-person (P2P).

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As these governmental and industry cross-border efforts continue, we believe there is an opportunity to give a voice to end users<sup>1</sup> and their needs, a perspective sometimes missing from these dialogues.

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In particular, the current approach to the cross-border targets risks not fully accounting for the varied improvements needed to address end user needs by use case, corridor, and context. It risks comparing apples to oranges and apples to zucchinis in combining frameworks for transactions that have almost nothing in common.

The value in understanding end user needs across a wider set of attributes (beyond cost, speed, access, and transparency) and a more granular set of use cases (within the general retail use cases employed by the FSB) is in understanding how these policies will actually affect real people, real businesses, and the real economy. Assessing how well cross-border payment solutions are meeting those end user needs can then inform how both the public and private sectors should prioritize, implement, and monitor improvements.

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<sup>1</sup> We use "end users" broadly in this paper to encompass stakeholders such as consumers, businesses, and migrant workers sending remittances, among others.

## End user needs differ across attributes and by cross-border use case at a granular level

The cross-border policy dialogue has focused a great deal on cost, speed, access, and transparency. However, end user needs extend beyond these attributes. We believe that end users may be more interested in optimizing these goals, to trade off among cost, speed, transparency, and access between themselves and in favor of other attributes, such as geographic reach and revocability/returns depending on the use case.

Below, we first discuss the attributes that should be considered; second, we discuss the use cases in cross-border payments; and lastly, we illustrate how end user needs across attributes differ by use case.

## Attributes matter a lot, and they fall into two groups

We propose that there are at least 15 “payment” attributes and 7 “product” attributes in a cross-border transaction that drive value for the end user<sup>2</sup> (see Table 1). Payment attributes are elements of the money movement part of the transaction. These attributes are largely influenced by payment infrastructure providers. Product attributes focus on the user experience and journey and are disproportionately influenced by the front-end providers that own the end customer relationship.

We can think of the payment attributes in two further categories:

- 1. Foundational:** payment attributes that are essential to end users across all use cases; these are “non-negotiable” attributes for which expectations should always be high
- 2. Differentiators:** payment attributes that drive unique value to end users for a specific use case and/or context

There is a range of end user needs for each attribute. For example, end user needs for speed of funds availability could range from instantaneous to one or two days, depending on the use case and context.

Cost, we believe, reflects the combination of payment and product attributes that deliver value across the payments journey, ultimately to the benefit of the end user in meeting their unique needs.

In this paper, we will primarily focus on the payment-specific attributes of a cross-border transaction (see Table 2 for attribute definitions).

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<sup>2</sup> This is a fluid area, and the authors welcome suggestions for other attributes.

**Table 1: There is an expanded set of attributes that drives end user value in cross border payments**

Focus of our discussion

Payment attributes	Foundational	• Security (AML, KYC, cyber, fraud)
		• Integrity / failure rate
		• Resilience
	Differentiators	• Speed of clearing
		• Speed of settlement
		• Speed of funds availability
		• System availability
		• Transparency
		• Predictability of fees and timing
		• Ubiquity <ul style="list-style-type: none"> <li>- Accessibility across users</li> <li>- Reach</li> <li>- Transaction liquidity</li> <li>- Scale</li> </ul>
• Returns		
• Information and data		
Product attributes	• Trusted brand	
	• Rewards	
	• Convenience including ease of use	
	• Customer support and servicing (e.g., personal account management, documentation to support payment nuances, self service portal)	
	• Integration with related processes	
	• Access to value added services and features (e.g., access to wide range of products such as options, forwards, conditional payments based on exchange rates)	
	• Protection of end user data	

Cost reflects the combination of payment and product attributes that deliver value across the payments journey

Source: VEEI analysis



**Table 2: Fifteen payment-specific attributes deliver value to end users**

Payment attributes		Definition	
Foundational	1. Security	Level of security required, including level of compliance across either developed or most geographies, and fraud detection	
	2. Integrity / failure rate	Consistency with which product/service meets promised functions and service levels without errors (e.g., payment error rate)	
	3. Resilience	Ability to avoid, withstand, and recover from failure, disruptions, and outages (e.g., up-time)	
Differentiators	4. Speed of clearing	Timing of authorization for card payments (i.e., bank guaranteeing funds) and frequency of clearing for account-based payments (i.e., bank exchange of payment information)	
	5. Speed of settlement	Frequency by which transactions are settled between banks	
	6. Speed of funds availability	Time between transaction execution and when funds are debited from the payer and made available to the payee	
	7. Service availability	Degree to which payment transaction can occur (e.g., 24/7 vs 9-5, weekends vs weekdays)	
	8. Transparency	Transparency on fees (including FX), expected delivery time, and tracking of payment status for both payer and payee	
	9. Predictability of timing and fees	Extent to which payments are completed as communicated on fees and timing of payment completed	
	Ubiquity	10. Accessibility across users	Ease of access to the solution across end users (e.g., fully identified, or all consumers, including unbanked) with the ability to use different payment methods (e.g., card, cash)
		11. Reach	Ability to reach any geography (i.e., corridor, currency) with a payment
		12. Transaction liquidity	Ability of system to handle sending/receiving of any ticket size
		13. Scale	Ability of system to handle low value payments at scale
		14. Returns	Ability to cancel the payment and seek refund in case of any challenges
		15. Information and data	Ability to exchange critical payment information along with the payment instruction either in structured or unstructured fashion

Source: VEEI analysis



## There are more use cases than we often discuss

The cross-border dialogue primarily focuses on five use cases: corporate and small business B2B, B2C, C2B, remittances, and other C2C payments. However, end user needs may differ even within these use cases. For example, end users have considerably different needs for C2B e-commerce payments vs C2B education payments. As a result, it is important to consider a more granular set of use cases to ensure solutions and improvements address end user needs.

We propose that there are at least 14 use cases<sup>3</sup> across B2B, B2C, C2B, and C2C with distinct end user needs (see Table 3).

To illustrate our points, we will focus our analysis on four use cases:

1. **B2B MSME**, where a micro, small, or medium enterprise (MSME) makes a one-off inventory purchase from a supplier in another country using a bank account (e.g., a South American MSME making one-off purchase for an inventory item from an Asian supplier)
2. **C2C remittances**, where a migrant worker sends money home (e.g., a migrant worker in a G20 country sending money home)
3. **C2B e-commerce**, where a consumer purchases from an international vendor via an e-commerce platform (e.g., a North American consumer buying shoes from a European Union e-commerce platform)
4. **C2B vertical (education) payment**, where parents in Asia pay their daughter's undergraduate tuition fees to a university in North America through a vertical education specialist

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<sup>3</sup> This list is likely not exhaustive. As with the attributes, the authors welcome additional suggestions for granular use cases.

Details on these sub-use cases to follow

**Table 3: Cross-border payments encompass a variety of sub-use cases across B2B, B2C, C2B, and C2C use cases**

Use case	Sub-use case	Description
B2B	MSME initiated	Payments either for imports and exports of goods and services between companies; also includes investments, revenue sharing and intra-company payments
	Corporate initiated	
B2C	Marketplace payouts	Payments to individuals for goods sold or services rendered or sold (e.g., e-lance payment to freelancers or e-commerce payments to merchants)
	Claims and one-time disbursements, including refunds and other verticals	One-time payouts from a corporation or government to individuals (e.g., insurance payout for a procedure)
	Salaries and social benefits	Typically recurring payments from a corporation or government to international employees or individuals
	Dividends and interest payments	Corporations paying interest payments or dividends to individuals
C2B	Online e-commerce	Payments from consumers for purchases from online cross border marketplaces
	Verticals (e.g., health, education, real estate)	Payments made to corporations for specific needs such as tuition, medical expenses, real estate
	In person travel and tourism	In person spend of international tourists when visiting a foreign country
	Bill payments (e.g., utilities, telco)	Recurring payments from individuals to corporations internationally for housing, utilities, insurance
	Loan repayments <sup>i</sup>	Repayment of a loan by a consumer to an issuer abroad
	One-time payments and investments	Defined one-off payments for specific needs or investments
C2C	Remittances	Payments between consumers in different countries for, e.g., presents, sustenance money, urgent requirements
	Account to account	Account to account payment between consumers in different countries (e.g., investments)

Source: VEEI analysis

<sup>i</sup> Including mortgage payments.

<sup>ii</sup> Excluding real estate.



## End user needs across attributes differ by use case



End users include both payers and payees. Let's first consider how payer needs differ between business and consumer use cases, while keeping in mind the foundational nature of **security, integrity, and resilience**.

- In the B2B MSME use case, the payer prioritizes the **reach** attribute to be able to send payments across a wide range of corridors and transact large ticket sizes for large inventory. The payer also places high value on **transparency, predictability, and speed of clearing and funds availability**, given speed and timing of payment may impact transfer of goods that may be critical to business operations. In addition, the payer values **information and data** to aid with invoice reconciliation.
- In comparison, in the C2C (remittance) use case, the payer prioritizes **speed of funds availability** to ensure funds reach their family quickly (ideally the same day) and accessibility across users so that they may use their payment method of choice. The payer also values **reach** to send funds across their desired corridor, and **transparency and predictability** of fees (including FX) to know upfront how much to expect to pay and when their funds may reach their family.

See Table 4 for specific user needs across payment attributes for the two use cases discussed.



**Table 4: End user needs differ across consumer and business payments**

 Differences in payer needs  
 Priority attribute for payer

Attribute <sup>ii</sup>	B2B payer needs [MSME; MSME sending money to supplier for a one-off purchase]	C2C payer needs [Remittance sub-use case; migrant worker sends money to family abroad]
Speed of clearing	Near instant clearing	Near instant clearing
Speed of settlement	Longer than 2 days <sup>iii</sup>	Longer than 2 days <sup>iii</sup>
Speed of funds availability	Next day	Same day
Service availability	9-5, weekdays only (for non-urgent contexts)	24/7 access, including weekends
Transparency	Visibility on fees (including FX), timing and tracking	Visibility on fees (including FX), timing and tracking
Predictability of fees and timing	Both timing and fees as expected	Timing delayed <1 day, fees consistent
Accessibility across users	Fully identified, bank clients	Open to all, including unbanked
Reach	Any combination of corridors	Any combination of corridors
Transaction liquidity	Unlimited ticket size for transaction	Ticket size for transaction <\$10k
Scale	Not suited for low value payments at scale <sup>i</sup>	Well suited for low value payments at scale
Returns	Only revocable in limited set of circumstances	Only revocable in limited set of circumstances
Information and data	Fully structured, detailed payment information	Fully structured, limited payment information

**Source:** VEEI analysis, based on discussions with / survey of 30+ payment experts

<sup>i</sup> Payee needs are different.

<sup>ii</sup> We exclude foundational attributes here.



<sup>iii</sup> Speed of settlement is typically not as relevant for end users as speed of funds availability.

Even *within* a business or consumer use case, the end user needs can differ. For example, let's consider how payer needs differ between two sub-use cases within C2B cross-border payments: e-commerce and education payments.

- In the e-commerce use case, the payer prioritizes **speed of authorization** to have confirmation of payment as soon as they make their purchase. The payer highly values **returns** so that they may potentially revoke payment should there be any issue with the goods purchased. The payer also values **24/7 service availability** to make purchases at any time, **transparency** of FX, and **accessibility across users** (including unbanked users) to use their local payment method of choice. In specific cases, payers may also value **speed of settlement** to ensure timing and certainty of their returns on a product.
- In the vertical use case for education, the payer prioritizes product attributes such as **convenience** and **value-added** services like alerts and notifications, and choosing purpose for the payment. The payer also values payment attributes such as **accessibility** to pay using local payment methods, **transparency**, and **predictability of fees and timing**.

In both cases, end user needs extend beyond just speed, access, and transparency. See Table 5 for more detail on the end user needs across payment attributes for these two sub-use cases.

**Table 5: End user needs differ by granular use case**

 Differences in payer needs  
 Priority attribute for payer

Attribute <sup>ii</sup>	C2B payer needs [E-commerce sub-use case; customer purchases shoes from foreign e-commerce platform]	C2B payer needs [Vertical payments sub-use case; parent pays for student's college tuition in a different country]
Speed of clearing	Instant authorization	Near instant clearing <sup>i</sup>
Speed of settlement	Longer than 2 days <sup>iii</sup>	Longer than 2 days <sup>iii</sup>
Speed of funds availability	Longer than 2 days <sup>i</sup>	Longer than 2 days <sup>i</sup>
Service availability	24/7 access, including weekends	24/7 access, including weekends <sup>iv</sup>
Transparency	Visibility on fees (including FX), timing and tracking <sup>i</sup>	Visibility on fees (including FX), timing and tracking
Predictability of fees and timing	Timing delayed <1 day, fees consistent <sup>i</sup>	Both timing and fees (including FX) as expected
Accessibility across users	Open to all, including unbanked <sup>i</sup>	Open to all, including unbanked
Reach	Limited number of high volume corridors <sup>i</sup>	Any combination of corridors
Transaction liquidity	Ticket size for transaction <\$10k	Ticket size for transaction <\$1m
Scale	Well-suited for low value payments at scale	Not suited for low value payments at scale <sup>i</sup>
Returns	Always revocable <sup>i</sup>	Only revocable with approval from payee
Information and data	Fully structured, limited payment information <sup>i</sup>	Fully structured, limited payment information <sup>i</sup>
Product attributes	NA	Value-added services <sup>v</sup> , convenience and ease of use, integration with related processes <sup>vi</sup>

Source: VEEI analysis, based on discussions with / survey of 30+ payment experts

<sup>i</sup> Payee needs are different.

<sup>ii</sup> We exclude foundational attributes here.

<sup>iii</sup> Speed of settlement is typically not as relevant for end users as speed of funds availability.

<sup>iv</sup> Includes, e.g., reminders on payment.

<sup>v</sup> Includes, e.g., integration with back-office software.

<sup>vi</sup> Other product attributes such as customer support (e.g., personal account management) are relevant to other vertical use cases such as real estate.

To get even more granular, we believe payee needs vary slightly from payer needs in most use cases. (C2C remittances are an exception where needs can be more interlinked.)

For example:

- B2B MSME use case: the B2B supplier, as another business, has similar priorities to the MSME payer, but may value transparency and predictability of funds along with speed of funds availability even more, given that they may lose control of goods after transaction and require immediate authorization of funds.
- C2B e-commerce use case: the e-commerce merchant values the ability to offer multiple payment methods, predictability of fees and timing, and desires a much higher degree of security and error tolerance of the service to avoid losing money and payers and ensure payer satisfaction.
- C2B vertical (education) payment sub-use case: the education institution would prioritize product attributes to support end user convenience including accessibility across local payment methods and integration with their back-end systems to support easy reconciliation.

Additionally, there may be further nuances by corridor. For example, accessibility across users may be more important for payees in an underbanked corridor. Therefore, improving cross border payments requires a granular consideration of end user needs across attributes, use cases, and even corridors.

## **Let's wish the tourist well—and look forward to a more granular dialogue**

Our North American tourist has made it to their hotel and contacted an old friend who has invited them to dinner in the southwest London district of Twickenham. Another cross-border payment will soon happen, as the traveler hails a ride on their app of choice. The payment method was long-ago embedded in the app, and therefore in the experience—and the international experience is the same as the domestic one. When our tourist gets out of the car a half hour later, there is no thought of a cross-border payment, but rather the focus is on seeing a friend and having a lovely meal. All of the vacationer's cross-border payments were actually quite simple and even routine, with trust having been earned and experience having been gained over time. But innovating to make these simple, seamless payment experiences was not routine, and it was not simple. Continued innovation won't be, either.

The analyses in this paper highlight the heterogeneity of the cross-border payments space and the challenges inherent in a common set of targets across disparate use cases. In light of what we have discussed, we propose that:



## **Improvements to cross-border payments should be determined according to granular use case**

The cross-border dialogue will need to go beyond the four common attributes of speed, cost, access, and transparency to address the improvement areas most valuable for end customers (e.g., decline rates and refunds for C2B e-commerce payments; data and information to support reconciliation for B2B payments).

We believe use case specific working groups involving the appropriate public and private sector stakeholders can expand on and validate these improvement areas and foster learnings from other use cases to address them. Working groups on e-commerce can include global networks, gateway providers, leading bank acquirers, and marketplaces; while those on B2B could include correspondent banks, consortiums, accounts receivable / accounts payable providers, etc.

## **Focus should be on the value of capabilities provided to meet needs**

We must ensure that the dialogue around measuring progress on the aggregate retail cost target focuses on the capabilities required to deliver value to end users—beyond just the basic money movement. These capabilities further vary across solutions, corridors, and the business model of the provider (e.g., an open network provider focused on an expanded set of corridors offering consistent rules and value-added services vs a closed network provider focused on a narrow set of corridors). This becomes critical to avoid any unintended consequences from a one-size fits all approach that views cross-border payments through a lens of uniformity. Broad-brush cost targets run the risk of disincentivizing continued private sector investment and innovation to meet end user needs or of reducing the level of service for attributes that drive most of the value for end users.

In upcoming analyses, the Visa Economic Empowerment Institute will offer more detailed views on improving cross-border payments at the granular use case, which will include several dimensions:

- the different approaches that current cross-border payment solutions take to deliver on end user needs through three layers of capabilities;
- improvement opportunities, which differ by use case, corridor, and context; and
- measuring progress in cross-border payments improvement at a more granular level.

We hope this paper and those that follow will contribute to a robust and productive discussion of how best to continue cross-border payments innovation and monitor progress along the journey.

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