

30 May 2023



Ripple Labs Inc. (“Ripple”) welcomes the opportunity to comment on the Bank for International Settlements’ (“BIS’s”) Consultation on ISO20022 harmonization (“The Consultation”). Ripple would like to thank BIS for the in-depth and comprehensive analysis that has been undertaken in drafting the Consultation, as well as the opportunity to provide our comments. Ripple has valuable experience in implementing a more harmonized cross-border service, particularly through our service RippleNet, which we hope will prove useful as you develop your work in this area.

Leveraging ISO 20022 based data structures, Ripple has encountered the challenge of different parties interpreting the standards in different ways. However, we have dedicated significant time to creating a uniform approach to handling, structuring, and using the format across all cross-border participants. Ultimately, this effort benefited the network as a whole. Our responses below reflect the importance of achieving a harmonized cross-border payment ecosystem that enhances efficiency, transparency, and compliance procedures.

To ensure successful harmonization, it is crucial to consider alternative approaches, such as Distributed Ledger Technology (DLT), and allow for flexibility in the adoption of messaging standards. By defining a comprehensive set of core messages, accommodating country-specific requirements, and considering the impact on domestic systems, we can mitigate the risks of inconsistent message usage and fragmentation.

Ultimately, by fostering collaboration and aligning participants around common standards, we can create a more harmonized and efficient global payment ecosystem. We look forward to further discussions and working together towards achieving the vision of ISO 20022 harmonization.

Ripple would be happy to provide any further information or clarification you may require. Please note that Ripple’s Director of Payments Operations, Rene Huijsen, sits on the BIS Committee on Payments and Markets Infrastructures (CPMI) taskforce on cross-border payments interoperability and extension (PIE).

About Ripple

Using blockchain technology, Ripple allows financial institutions to process payments instantly, reliably, cost-effectively, and with end-to-end visibility anywhere in the world. Our customers are financial institutions that want tools to effect faster and less costly cross-border payments, as well as eliminate the uncertainty and risk historically involved in moving money across borders using interbank messaging alone.

Some customers, in addition to deploying Ripple's blockchain solution RippleNet, leverage the digital asset known as XRP for an On-Demand Liquidity ("ODL") capability. Just as Bitcoin is the native asset to the open-source Bitcoin ledger, and Ethereum is the native asset to the open-source Ethereum ledger, XRP is the native asset to the open-source XRP Ledger. XRP, given its unique design, can serve as a near instantaneous bridge between fiat currencies (or any two representations of value), further reducing the friction and costs for commercial financial institutions to transact across multiple global markets.

Although Ripple utilizes XRP and the XRP Ledger in its product offerings, XRP is independent of Ripple. The XRP Ledger is decentralized, open-source, and operates on what is known as a "consensus" protocol. While there are well over a hundred known use cases for XRP and the XRP Ledger, Ripple leverages XRP for use in its product suite because of XRP's suitability for cross-border payments. Key characteristics of XRP include speed, scalability, energy efficiency, and cost efficiency - all of which benefits the consumer and helps reduce friction in the market for cross-border payments.

Consultation Responses

Guiding principles (Section 2.2)

Question 1. Do you agree with the guiding principles followed for setting the requirements, including the platform or network agnostic approach, the level of ambition and the future state orientation?

Yes, we agree with the guiding principles and especially the need for it to be network neutral, the one observation that we would make however is the primary support / usage of messages as the underpinning of this solution. A number of the networks themselves are moving towards single versions of the truth accessible through APIs which might make the use of a message based architecture redundant. We would recommend that the guiding principles are extended or allow for alternative approaches

such as the use / inclusion of Distributed Ledger Technology as well, especially when so many of the world's central banks are looking at this technology to power domestic CBDCs.

Requirement #1 – To use the appropriate message for a particular business function (Section 2.5.1)

Question 2. Do you agree that the inconsistent use of messages can be adequately addressed through this requirement?

Yes for cross border payments, but this places a potential deviation from the domestic systems and how they function that may result in the vision never being fully realized.

Question 3. How could the risk of inconsistent use of messages or deviation from the business functions defined by ISO 20022 be mitigated? Would the proposed solution contribute to mitigating such risks and lead to improved efficiency of cross-border payments processing? Please explain.

Work should be done on defining a full set of core messages that work for both domestic and international, this would greatly help with the harmonization and greater a more consistent experience regardless of country where the payment is being processed.

There needs to be a common framework that participants are aligned to / abiding by to ensure an SLA and also how to use the various values used by ISO 20022. Without a common standard for the message content there will only be partial success of this initiative. This was something we experienced with RippleNet, we leveraged ISO 20022 based data structures but found different parties interpret the standards in different ways. We spent considerable time creating a uniform approach to handling, structuring and using the format across all cross border participants which did ultimately benefit the network.

It is also important to consider the domestic systems which will often be responsible for the last leg of the payment. Without factoring in the domestic systems there is also a risk that it will lead to more fragmentation and costs for participants.

Question 4. How do you assess the level of effort that will be required to adopt the appropriate message as defined by the ISO 20022 standard?

Benefits from standards will only be realized when all parties adhere to the standard. The level of effort will primarily depend on the existing infrastructure and systems in place. Organizations with modern, flexible systems may find it relatively easier to adopt the appropriate message format compared to those with legacy systems that require significant modifications or upgrades. The effort required will also depend on the size

and complexity of the organization, as well as the extent of integration with other systems and platforms.

Requirement #2 – To use ISO 20022 externalised codes for payments and payment-related processes (Section 2.5.2)

Question 5. Would requiring the use of ISO 20022 externalised codes facilitate faster, cheaper and more transparent cross-border payments? How do you assess the implementation effort?

The use of ISO 20022 externalized codes improves the efficiency of cross-border payments by reducing the need for manual intervention, increasing automation, and enabling straight-through processing.

Ripple's cross-border payments network implements various ISO20022 externalized code sets for cross-border payments. From experience, code sets should be enriched to cater for country specific requirements and innovations. Examples include the purpose of payment codes and sub-codes for countries as India and the Philippines, clearing system codes and countries. A wholesale review process should take place to provide explicit guidance on their purpose, how to use the codes, the removal of any duplications between schemes and PII/sensitive data related codes.

Implementation could be phased, by providing a common and minimum set of data to align to as well as providing backwards compatibility/a fall back mechanism to previous code sets.

Question 6. Are there any limitations/challenges resulting from increased reliance on ISO 20022 codes? How difficult would it be to overcome these limitations/challenges?

Provide clear guidance of the benefits of adopting ISO 20022 codes and the costs and effort associated for adopting the standards. ISO 20022 is a highly complex standard, with many different message fields and codes. This complexity can make it difficult to implement and use effectively, especially for organisations that are not familiar with the standard. For each code, besides short codes, long codes, and a description, provide an implementation guideline on how to apply the codes correctly including possible and negative examples.

As ISO 20022 is still evolving, provide direction on how different codes can be interoperable to avoid fragmentation and interoperability issues between different systems and organizations.

Requirement #3 – To indicate that a payment is a cross-border payment (Section 2.5.3)

Question 7. Do you agree that identifying a payment as a cross-border payment should be required to enhance the processing efficiency of cross-border payments? Would such a flag facilitate compliance procedures including financial crime screening? Please explain.

By flagging a payment as cross-border, financial institutions can more easily identify these transactions and ensure that they are processed in accordance with relevant regulations and standards and ultimately, enhance the efficiency and safety of cross-border payments. For compliance purposes, institutions involved in cross-border payment can more easily identify transactions that may be at a higher risk of being involved in financial crime or money laundering.

It is key that the sending institution sets the identification of cross-border payment, as not all parties processing the cross-border payment may be able to derive this information (e.g. innovative payment solutions using stable coins or blockchain-based solutions). Intermediaries, receivers and payout providers should be able to receive and store the identification.

Question 8. Do you agree that the use of an ISO 20022 external code (eg a Category Purpose) would be the most effective way to flag a payment as cross-border? Are there alternative approaches you would suggest?

When introducing an identification to flag a payment as 'cross-border', it is essential to define what a cross-border transaction involves. Is a cross-border payment a financial transaction that involves the movement of funds between entities in different countries and/or between different jurisdictions?

Clarify the requirement regarding the in-country use of foreign currency accounts, such as USD or EUR. While these currencies may be used within a country, the distinction lies in whether the transaction involves entities in different countries or jurisdictions. If a transaction involves parties in different countries, even if the currency used is the same (e.g., EUR), it would still be considered a cross-border payment?

It is crucial to apply the same rules and regulations to all transactions, regardless of the jurisdiction or currency involved. This helps create a level playing field and avoids discrepancies arising from different banking laws in various jurisdictions.

Note that ExternalCategoryPurpose1Code is used for individual payment purposes and is typically provided by the Ultimate Debtor. A Purpose Code identifying cross-border

payment should be validated by the Financial Institution.

Question 9. How do you assess the level of cost and effort required for the implementation effort?

The costs of any implementation will likely be borne by the individual organizations / systems and not something Ripple can comment directly on. However, when thinking about the costs of implementation, we would first consider who the affected participants are and the systems they are using. If there is a change to the underlying domestic infrastructure this will have an impact on the underlying rail and any party that leverages that rail. Depending on the size of the system this could be very simple or the reality is likely this would be a complex undertaking that will need a multi year plan and budget to accommodate.

For individual organizations they will have to factor in the costs not simply of the messaging changes but also how they capture, validate and store any additional information. Depending on the sophistication and flexibility of each individual's systems this could again be a significant amount of work to undertake. There have been similar pieces of work when migrating to new messaging standards or even just iterating a version of the standard. If systems do not currently capture the required information this will significantly increase the work involved.

Requirement #4 – To support/restrict the character set used for ISO 20022 payment messages to current market practice (Section 2.5.4)

Question 10. Do you agree with the restricted character set for cross-border payments as described above? If not, which alternative character sets or additional characters should be included?

In principle this will make the transition to this a lot easier and provide common alignment, in practice this does create challenges for countries that do not use those character sets. We have seen first hand where receivers in non latin based countries have considerably more work to convert the text into local equivalents (if there are any) and often run mapping processes which limits their ability to scale and increases cost and friction.

Character sets are the most complex part of any harmonization. If we only take the sending side of the transaction, they would have to enter the data according to the destination then the system they are using would have to support the destination language / character set and the user would also have to know this. The same goes for the reverse of the transaction.

Having a common language / character set to base this on is a good foundation, consideration should be given to those that don't use that language in any proposals to ensure there is no fragmentation or creation of competing approaches / standards.

Requirement #5 – To use a common time convention across all ISO 20022 messages associated with cross-border payments (Section 2.5.5)

Question 11. Do you agree that requiring times in ISO 20022 messages to be stated either in UTC or in local time with UTC offset will enhance the transparency and efficiency of cross-border payments? If not, please explain.

Yes, we agree as this was something we encountered with Ripplenet when Members were sending payments 24 hours a day the receiver sometimes had challenges attributing the date for the payment for their internal booking. This was particularly relevant when you were crossing several time zones and where the day changed resulting in the instruction date being different to the date that it was applied on the account.

Requirement #6 – To include a unique end-to-end reference for all cross-border payments (Section 2.5.6)

Question 12. Do you agree that requiring the use of UETR for all cross-border payments will have a positive impact on the transparency, speed and cost of cross-border payments? If not, please explain.

Support of UETR will make cross-border payments more transparent, reduce risk of unauthorised access and reduce errors, which can ultimately improve the speed and efficiency of cross-border payments. Not all intermediaries (such as crypto currency exchanges) nor all domestic rails involved in cross-border payments support a UETR today, guidance and direction should be provided to implement UETR (and any uniqueness requirements) for all parties in the cross-border payments chain.

Question 13. How do you assess the effort required to implement this requirement?

Financial institutions and payment systems will need to update their systems and processes to support the generation and use of UETR. This may require changes to existing payment systems, IT infrastructure, and operational processes. A phased approach with support for any additional identifier(s) for those parties and domestic systems not supporting a UETR already should be recommended.

Requirement #7 – To ensure full transparency on processing times for cross-border

payments (Section 2.5.7)

Question 14. Do you believe that the requirement for inclusion of the time of debit of the debtor will increase transparency on the time it takes to complete the processing of cross-border payments?

What improvements would the requirement bring to the end user experience?

In principle this will help with greater transparency, the biggest challenge is this only supports tracking after the event or an activity has been confirmed and not whilst the payment is in flight. When you are constrained by message based solutions this will always be an issue.

Question 15. How do you assess the difficulty of adopting usage of the acceptance date time data element as a requirement for cross-border payments? Would the implementation effort and impact on the transparency needs of end users differ by message type?

Given the fragmented nature of cross border payments and often the reliance on intermediaries to perform the role, this would require even initiators of the transactions who might only focus on domestic transfers and rely on their correspondents for others to have to adopt this approach.

There will certainly be an impact by message type on the inclusion of data going beyond just the payment itself, considerations around whether this appears on statement messages and other reporting should be considered. This additional information will also need to be stored which will increase the time and complexity of including this.

Perhaps more importantly it is the time to credit the beneficiary that is more important to the originator. The originator knows when they have sent the payment as the funds leave their account typically instantly, they often don't know when it will arrive. They need certainty of delivery in the same way you would pay for 24 courier services, these are then held to an SLA otherwise this will always be on a best endeavors basis.

Requirement #8 – To ensure full transparency on amounts, currency conversions and charges of cross-border payments (Section 2.5.8)

Question 16. What are the implications of requiring all those involved in cross-border payments to provide complete information on amount, conversions and charges?

Our expectation is this will require significant changes to the existing interoperability methods present and implemented today. Under the current frameworks these values can change and so to provide guarantees of the rates there will likely be the need for a contractual arrangement and these also be time bound to ensure rates are as specified.

Question 17. Are there any technical, legal or other hurdles that could impede the inclusion of complete information on amount, conversions and charges in cross-border payments that they process?

Having built something similar into RippleNet, there will need to be capabilities defined that allow the quotation process to be managed and the ability to maintain quotations. This is not a small task and might result in worse rates for end users due to the flexibility of the systems involved and their ability to quote in real time.

There is also a legal framework that will likely need to be agreed that creates a contractual agreement for any rates quoted, service level agreements and recourse when things go wrong.

Requirement #9 – To indicate that a cross-border payment is consistent with the CPMI service level agreement guidance (building block 3) (Section 2.5.9)

Question 18. Would the introduction of a CPMI service level code in ISO 20022 to track adherence to the CPMI guidance and harmonisation requirements facilitate improvements to cross-border payments processing?

The introduction of a service level code to reflect a service level agreement in ISO20022 would bring an important contribution to transparency in cross-border payments.

Question 19. How would the availability of a CPMI service level code in ISO 20022 messages impact the business models/strategies of financial institutions providing cross-border payment services?

Intermediaries processing cross-border payments and receiving institutions providing pay-out capabilities should be able to indicate what SLA / service level codes they can provide; and senders of cross-border payments should be able to choose the applicable service level code.

Question 20. How do you assess the difficulty of adopting a CPMI service level code?

The service level agreement can only be applicable to the stages the financial institution can control. For example: service levels on payout capabilities on local rails can only be governed by the SLA offered by the organisation handling the payout.

As part of introduction and roll-out, guidance should be provided on how senders, intermediaries, receivers and payout-providers set and follow the service level codes, and how they are different to the ExternalServiceLevel1Code as provided by ISO20022 today.

Requirement #10 – To recommend the use of unique account numbers (or proxies) to the extent possible (Section 2.5.10)

Question 21. Do you agree that the use of account identifiers (or account proxies), to the extent possible, would have a positive impact on the speed and cost of cross-border payments? Please explain.

Unique account identifiers are already part of today's cross border payment payout rails: individual systems (FedWire, ACH, IBAN, etc) ensure that Account Numbers are unique within their scope. What is missing are pre-validations: senders should validate account numbers against the payout system/rail, and not relying on post-settlement processing by receivers.

Requirement #11 – To uniquely identify all financial institutions (FIs) involved in cross-border payments in an internationally recognised and standardised way (Section 2.5.11)

Question 22. Do you agree that uniquely identifying all financial institutions involved in cross-border payments in an internationally recognised and standardised way would enhance cross-border payments? Please explain.

Yes, there needs to be a uniform and consistent way of identifying financial institutions that is unique and network independent.

Question 23. Do you agree with the proposed solution of requiring the use of the BIC to identify all financial institutions? Why or why not?

We are not sure this is a viable solution, not all financial institutions have BICs or leverage BICs of others and largely these are obtained / managed by a single entity. We think this should be similar to the way that the internet domain names are issued and managed. From our experience not all institutions use BIC addresses (or are registered with one in the case of domestic participants) in the same way and so there would need to be enforcement to ensure that each party is using them correctly. Adding multiple identifiers will likely create confusion and fracturing of standards.

We are also not sure how a BIC address will help with the reduction in false positives as these are largely used for routing payments and not identifying individuals / entities for which sanctions are applied.

Question 24. What would you assess to be the level of effort required by your jurisdiction: (a) to only use the BIC to identify financial institutions in ISO 20022 messages; and (b) for all financial institutions that currently do not have a BIC to

register for one?

We do not represent a domestic jurisdiction and are not able to respond to this question.

Requirement #12 – To identify all entities involved in a cross-border payment in a standardised and structured way (Section 2.5.12)

Question 25. Do you agree that requiring participants to identify all entities involved in a cross-border payment in a standardised and structured way would enhance the processing efficiency of cross-border payments? Please explain.

Requiring participants to identify all entities involved in cross-border payments in a standardized and structured way can enhance processing efficiency.

New technologies like AI and NLP can automate entity identification from unstructured data. Balancing standardization and accommodating regional variations through these strategies can lead to improved efficiency in cross-border payment processing.

Question 26. Do you agree with the proposed use of structured identifiers such as the LEI, if they exist, to complement the recommended minimum data requirements to identify the legal entities involved in cross-border payments? Should they be required instead?

The use of structured identifiers will certainly help but they should be used as a baseline for all parties to have meaning / value. If these are not required / mandated then the likelihood is they will not be used. To achieve harmonization there should be a consistent baseline that all parties agree to support. This will help lower the costs, remove friction and create a better experience for all parties.

Requirement #13 – To identify all persons involved in a cross-border payment in a standardised and structured way (Section 2.5.13)

Question 27. Do you agree that requiring participants to identify all persons involved in a cross-border payment in a standardised and structured way would enhance the processing efficiency of cross-border payments? Please explain.

The ISO 20022 standard currently does not support structured names. This can create difficulties when participants from different countries with diverse naming conventions are involved. For instance, some countries may not have a concept of last names, while others may use two last names or have the first and last names reversed. Incorporating

such diverse naming conventions within a structured framework needs to be addressed.

Requirement #14 – To provide a common minimum level of postal address information structured to the extent possible (Section 2.5.14)

Question 28. Do you agree that a requirement not to use unstructured postal address information and to use only structured postal address information can help enhance the processing efficiency of cross-border payments? Please explain.

While a requirement to use only structured postal address information can enhance the processing efficiency of cross-border payments, it is important to acknowledge that not every country in the world has a structured postal address format. In many regions, particularly in developing countries or areas with informal settlements, the concept of structured addresses may not be well-established (e.g. Mongolia, Bhutan, Laos, etc.). Therefore, enforcing a strict requirement may create challenges and potentially hinder the processing efficiency of cross-border payments in such regions. It is crucial to strike a balance between standardization and flexibility, allowing for alternative methods of capturing address information in cases where structured addresses are not available or widely used. This approach ensures inclusivity and accommodates the unique circumstances of different countries and regions..

Question 29. Do you agree with the minimum required postal address information consisting of the Country and Town Name fields? Should any additional fields be required?

For identification purposes and to reduce the number of false/positives, a postal code and/or house/building number should be included.

Requirement #15 – To cater for the transport of customer remittance information across the end-to-end cross-border payment chain by enabling the inclusion of a minimum size of structured or unstructured remittance information with the payment, or to reference such information when sent separately (Section 2.5.15)

Question 30. Do you believe that setting minimum end-to-end expectations with respect to the carrying of remittance information can improve the processing efficiency of cross-border payments?

ISO20022 supports exchanging redundant information. For example, it shouldn't be required to exchange invoice related data in cross-border payments (RmtInf.Strd.Invcee, RmtInf.Strd.Invcr) as that information is already exchanged via other means as the primary source: the invoice itself. For other use-cases beyond

cross-border payments (e.g. Trade Finance), exchanging invoice related data can serve a purpose.

Passing on more information than required in cross-border payments can create a liability to the receiver: the receiver may need to screen the extra information that is provided. A legal framework may need to be provided on how to handle additional information.

Setting minimum end-to-end messaging requirements for cross-border payments is essential. ISO20022 should provide guidance to all parties involved in the cross-border payments process.

Question 31. To what extent would the ability to include references to separately sent remittance- related information (eg through inclusion of hyperlinks or other references) be helpful to process a cross-border payment? Are there obstacles (eg legal, regulatory, supervisory limits) to including reference to separately sent remittance information in your jurisdiction/community?

Providing support hyperlinks and references is common practice: the reference links to the primary source, that implements its own security, authorization/authentication and validity rules. In case of discrepancies with the cross-border payment, the primary source prevails.

Implementation (Section 3)

Question 32. Is the timing envisaged for the requirements in section 2.5 to take effect in line with industry expectations? What would be the challenges in meeting the envisaged timeframe?

Our expectation is this will take longer than the outlined timeline. There will need to be reviews and alignment on the content of the messages any changes proposed will need to factor into domestic change cycles. Beyond just agreeing the expectations of the messages and outcomes there will likely be a requirement for legal / contractual frameworks that could consume the proposed time period in themselves.

Question 33. Do the requirements in section 2.5 provide clarity on how harmonised implementation of ISO 20022 can contribute to achieving the G20 targets?

They provide a guide and potential approaches, they will need to be ratified and agreed upon by all parties to be successful in their implementation. Without this the initiative has the potential to be implemented on a best endeavors basis rather than an agreed standard which all parties adhere to