



# flow briefing



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## How to foster ISO 2022 harmonisation

**As efforts to enhance cross-border payments processing continue to ramp up, one of the important next steps in the journey is the implementation of the Committee on Payments and Market Infrastructures' (CPMI) harmonised minimum data requirements for ISO 2022 messages**

Over the past few years many jurisdictions around the world have been focused on the implementation of ISO 2022 as the global messaging standard for high-value and cross-border payments. The challenge faced today is that the global adoption of the standard has not been harmonised, resulting in various "flavours" across the globe in line with local market practices. To foster a truly global, seamless payment ecosystem that goes beyond mere compliance, it is, therefore, important that these different flavours are brought in line with a minimum common denominator. This will help to resolve potential interoperability issues and unlock the full potential of a fully harmonised global standard.

To assess the state of the industry – specifically the alignment of market infrastructures (MIs) and potential obstacles to the broad adoption of minimum data requirements – a dedicated task team under CPMI's Cross-Border Payments Interoperability and Extension (PIE) Taskforce has published an [in-depth report on the subject](#). This briefing looks into the report to uncover its key findings and main takeaways.

### Most challenging data requirements

Figure 1 (see page 2) shows the level of alignment between individual usage guidelines around the globe and the CPMI's minimum data requirements.

While the heatmap confirms a generally consistent level of alignment with the data requirements across the globe, there are a few requirements that appear to be more challenging for markets to be implemented:

- **#1 To use the appropriate ISO 2022 message for a specific business function**
- **#2 To use ISO externalised codes for payments and payment-related processes**
- **#8 To uniquely identify all financial institutions (FIs) involved in an internationally recognised and standardised way**
- **#9 To identify all entities involved in a cross-border payment in a standardised and structured way**
- **#11 To provide a common minimum level of postal address information structured to the extent possible**

It should be noted, however, that the level of impact on cross-border payments may vary depending on the requirement. For example, usage of local time format (e.g. non-alignment with requirement #4) may not have the same negative impact on efficiency and traceability of cross-border transactions as the lack of support of dedicated return messages (e.g. non-alignment with requirement #1).



Region	Country	Usage guidelines	Support of data requirements												
			#1	#2	#3	#4	#5	#6	#7	#8	#9	#10	#11	#12	
Global	Global	HVPS+	Aligned	Aligned	Aligned	Aligned	Aligned	Aligned	Aligned	Aligned	Aligned	Aligned	Aligned	Aligned	
		CBPR+	Aligned	Aligned	Aligned	Aligned	Aligned	Aligned	Aligned	Aligned	Aligned	Aligned	Aligned	Aligned	
		IP+	Aligned	Aligned	Aligned	Aligned	Aligned	Aligned	Aligned	Aligned	Aligned	Aligned	Aligned	Aligned	
Americas	Brazil	STR	Not aligned	Not aligned	Not aligned	Not aligned	Not aligned	Not aligned	Not aligned	Not aligned	Not aligned	Not aligned	Not aligned	Not aligned	
	Canada	Lynx	Aligned	Aligned	Aligned	Aligned	Aligned	Aligned	Aligned	Aligned	Aligned	Aligned	Aligned	Aligned	
	Chile	LBTR	Aligned	Aligned	Aligned	Aligned	Aligned	Aligned	Aligned	Aligned	Aligned	Aligned	Aligned	Aligned	
	Honduras	HN-RTGS	Aligned	Aligned	Aligned	Aligned	Aligned	Aligned	Aligned	Aligned	Aligned	Aligned	Aligned	Aligned	
	The Bahamas	BISS	Aligned	Aligned	Aligned	Aligned	Aligned	Aligned	Aligned	Aligned	Aligned	Aligned	Aligned	Aligned	
	United States of America	CHIPS	Aligned	Aligned	Aligned	Aligned	Aligned	Aligned	Aligned	Aligned	Aligned	Aligned	Aligned	Aligned	Aligned
		Fedwire	Aligned	Aligned	Aligned	Aligned	Aligned	Aligned	Aligned	Aligned	Aligned	Aligned	Aligned	Aligned	Aligned
APAC	Australia	HVCS	Aligned	Aligned	Aligned	Aligned	Aligned	Aligned	Aligned	Aligned	Aligned	Aligned	Aligned	Aligned	
		NPP	Aligned	Not aligned	Aligned	Aligned	Not aligned	Aligned	Aligned	Aligned	Aligned	Aligned	Not aligned	Aligned	
	China	CIPS	Aligned	Not aligned	Aligned	Not aligned	Not aligned	Aligned	Not aligned	Aligned	Aligned	Aligned	Aligned	Aligned	
	Chinese Taipei	FISC	Aligned	Aligned	Aligned	Aligned	Aligned	Aligned	Aligned	Aligned	Aligned	Aligned	Aligned	Aligned	
	Hong Kong SAR	CHATS	Aligned	Not aligned	Aligned	Aligned	Aligned	Aligned	Aligned	Aligned	Aligned	Aligned	Aligned	Aligned	
	India	NG-RTGS	Not aligned	Not aligned	Aligned	Not aligned	Not aligned	Not aligned	Not aligned	Not aligned	Not aligned	Not aligned	Not aligned	Not aligned	Not aligned
		UPI	Not aligned	Not aligned	Not aligned	Not aligned	Not aligned	Not aligned	Not aligned	Not aligned	Not aligned	Not aligned	Not aligned	Not aligned	Not aligned
	Japan	FXYCS (BOJ-NET)	Not aligned	Not aligned	Aligned	Aligned	Aligned	Aligned	Aligned	Aligned	Aligned	Aligned	Aligned	Aligned	Aligned
	New Zealand	ESAS	Aligned	Not aligned	Aligned	Aligned	Aligned	Aligned	Aligned	Aligned	Aligned	Aligned	Aligned	Aligned	Aligned
	Philippines	PhilPaSS	Aligned	Not aligned	Aligned	Aligned	Aligned	Aligned	Aligned	Aligned	Aligned	Aligned	Aligned	Aligned	Aligned
	Singapore	MEPS+	Not aligned	Not aligned	Aligned	Aligned	Aligned	Aligned	Aligned	Aligned	Aligned	Aligned	Aligned	Aligned	Aligned
	Sri Lanka	LankaSettle	Aligned	Aligned	Aligned	Aligned	Aligned	Aligned	Aligned	Aligned	Aligned	Aligned	Aligned	Aligned	Aligned
	Thailand	BAHTNET	Not aligned	Not aligned	Aligned	Aligned	Aligned	Aligned	Aligned	Aligned	Aligned	Aligned	Aligned	Aligned	Aligned
	Europe	Albania	AIPS	Aligned	Aligned	Aligned	Aligned	Aligned	Aligned	Aligned	Aligned	Aligned	Aligned	Aligned	Aligned
Czechia		CERTIS	Not aligned	Not aligned	Not aligned	Not aligned	Not aligned	Not aligned	Not aligned	Not aligned	Not aligned	Not aligned	Not aligned	Not aligned	
Denmark		Target DKK	Aligned	Aligned	Aligned	Aligned	Aligned	Aligned	Aligned	Aligned	Aligned	Aligned	Aligned	Aligned	
Euuro area countries		T2/Euro1	Aligned	Aligned	Aligned	Aligned	Aligned	Aligned	Aligned	Aligned	Aligned	Aligned	Aligned	Aligned	
Hungary		Viber	Aligned	Aligned	Aligned	Aligned	Aligned	Aligned	Aligned	Aligned	Aligned	Aligned	Aligned	Aligned	
Norway		NBO	Aligned	Aligned	Aligned	Aligned	Aligned	Aligned	Aligned	Aligned	Aligned	Aligned	Aligned	Aligned	
Poland		SORBNET	Not aligned	Not aligned	Aligned	Aligned	Aligned	Aligned	Aligned	Aligned	Aligned	Aligned	Aligned	Aligned	
Romania		ReGIS	Aligned	Aligned	Aligned	Aligned	Aligned	Aligned	Aligned	Aligned	Aligned	Aligned	Aligned	Aligned	
SEPA countries		OLO Scheme	Not aligned	Not aligned	Aligned	Aligned	Aligned	Aligned	Aligned	Aligned	Aligned	Aligned	Aligned	Aligned	
Sweden		RIX-RTGS	Aligned	Aligned	Aligned	Aligned	Aligned	Aligned	Aligned	Aligned	Aligned	Aligned	Aligned	Aligned	
Switzerland		SIC	Aligned	Not aligned	Aligned	Aligned	Aligned	Aligned	Aligned	Aligned	Aligned	Aligned	Aligned	Aligned	
Ukraine		SEP	Aligned	Not aligned	Aligned	Aligned	Aligned	Aligned	Aligned	Aligned	Aligned	Aligned	Aligned	Aligned	
United Kingdom		CHAPS	Aligned	Aligned	Aligned	Aligned	Aligned	Aligned	Aligned	Aligned	Aligned	Aligned	Aligned	Aligned	Aligned
		Faster Payments	Not aligned	Not aligned	Not aligned	Not aligned	Not aligned	Not aligned	Not aligned	Not aligned	Not aligned	Not aligned	Not aligned	Not aligned	Not aligned
MEA	Angola	SPA	Aligned	Aligned	Aligned	Aligned	Aligned	Aligned	Aligned	Aligned	Aligned	Aligned	Aligned	Aligned	
	Arab Monetary Fund countries	BUNA	Aligned	Aligned	Aligned	Aligned	Aligned	Aligned	Aligned	Aligned	Aligned	Aligned	Aligned	Aligned	
	Botswana	BISS	Aligned	Aligned	Aligned	Aligned	Aligned	Aligned	Aligned	Aligned	Aligned	Aligned	Aligned	Aligned	
	Egypt	RTGS	Aligned	Aligned	Aligned	Aligned	Aligned	Aligned	Aligned	Aligned	Aligned	Aligned	Aligned	Aligned	
	Ghana	GIS	Aligned	Aligned	Aligned	Aligned	Aligned	Aligned	Aligned	Aligned	Aligned	Aligned	Aligned	Aligned	
	Israel	ZAHAV	Aligned	Aligned	Aligned	Aligned	Aligned	Aligned	Aligned	Aligned	Aligned	Aligned	Aligned	Aligned	
	Kenya	KEPSS	Aligned	Aligned	Aligned	Aligned	Aligned	Aligned	Aligned	Aligned	Aligned	Aligned	Aligned	Aligned	
	South Africa	SAMOS	Aligned	Aligned	Aligned	Aligned	Aligned	Aligned	Aligned	Aligned	Aligned	Aligned	Aligned	Aligned	
	SADC countries	SADC	Aligned	Not aligned	Aligned	Aligned	Aligned	Aligned	Aligned	Aligned	Aligned	Aligned	Aligned	Aligned	
	Tanzania	TISS	Aligned	Aligned	Aligned	Aligned	Aligned	Aligned	Aligned	Aligned	Aligned	Aligned	Aligned	Aligned	
	Uganda	UNIS	Aligned	Aligned	Aligned	Aligned	Aligned	Aligned	Aligned	Aligned	Aligned	Aligned	Aligned	Aligned	
	Zambia	ZIPSS	Aligned	Aligned	Aligned	Aligned	Aligned	Aligned	Aligned	Aligned	Aligned	Aligned	Aligned	Aligned	
	Ziimbabwe	ZETTS	Aligned	Aligned	Aligned	Aligned	Aligned	Aligned	Aligned	Aligned	Aligned	Aligned	Aligned	Aligned	

Not aligned
  Partially aligned
  Aligned

Figure 1: Heatmap of the alignment status

Source: PIE TT3

## Most frequently misaligned market practices

The report also explores the most frequently encountered market practices that contribute to misalignment with the data requirements (see Figure 2).

#	Harmonised ISO 20022 data requirement	Associated market practices	
1	To use the appropriate ISO 20022 message for a specific business function	MP1	Absence of dedicated Exceptions & Investigations messages in the message portfolio
		MP21	pacs.009 cov messages not supported
		MP25	Return messages not supported
		MP28	Usage of an alternative message type
2	To use ISO externalised codes for payments and payment-related processes	MP2	Support of embedded codes
		MP9	Usage of BSB codes
		MP10	Usage of proprietary codes
3	To support/restrict the character set used for ISO 20022 cross-border payment messages to current market practice	MP7	Special characters not allowed in certain data elements
		MP11	Support of local characters
		MP30	Restricted character set
4	To use a common time convention across all ISO 20022 messages associated with cross-border payments	MP3	Support of an +13:00h time offset
		MP12	Usage of local time
5	To include a unique end-to-end reference for all cross-border payments	MP8	UETR generation not supported
		MP13	UETR data element not supported
6	To ensure full transparency on amounts, currency conversions and charges of cross-border payments	MP14	Optional support of amount data elements
		MP22	Amount data elements not supported
7	To recommend use of account numbers (or proxies) to the extent possible	MP15	Dedicated account data elements not supported
		MP27	Proxy data element not supported
8	To uniquely identify all financial institutions (FIs) involved in cross-border payments in an internationally recognised and standardised way	MP4	LEI not supported as a standalone identifier
		MP16	LEI identifier not supported
		MP23	Absence of standardised agent identification
		MP31	Mapping of actor data in alternative data elements
9	To identify all entities involved in a cross-border payment in a standardised and structured way	MP4	LEI not supported as a standalone identifier
		MP16	LEI identifier not supported
		MP17	Organisation identification element not supported
		MP23	Absence of standardised agent identification
10	To identify all persons involved in a cross-border payment in a standardised and structured way	MP18	Private identification element not supported
		MP29	Non-standardised identification of persons
		MP31	Mapping of actor data in alternative data elements
11	To provide a common minimum level of postal address information structured to the extent possible	MP5	"Hybrid" postal address not supported
		MP6	"Hybrid" postal address partially supported
		MP19	Postal address component not supported
12	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 structured or unstructured remittance information with the payment, or to reference such information when sent separately	MP20	Structured remittance information with bilateral agreement only
		MP24	Structured remittance information not supported
		MP26	Non-standardised usage of remittance information


Figure 2: Harmonised CPMI ISO 20022 data requirements vs. market practices

Source: Deutsche Bank

### – MP1. Absence of dedicated Exceptions & Investigation (E&I) messages in the message portfolio

The report highlights that each of the CPMI-defined data requirements can be breached in different ways and provides an overview of market practices contributing to non-alignment. For instance, requirement #1, which

mandates the use of dedicated messages for specific business function, reveals significant gaps. Many MIs were identified as non-aligned due to the absence of messages, such as pacs.004 for returns or pacs.009cov for cover payments, in their portfolios. Similarly, for the new dedicated E&I messages, most MIs have not incorporated them for two main reasons:

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- 1) E&I were developed only recently, following the publication of the minimum data requirements, and are scheduled for general availability in November 2025 (after many MIs had already implemented the ISO 20022 standard).
  - 2) It is a common practice in various markets to handle E&I processes through Swift, outside the scope of MIs. However, it should be emphasised that MIs are encouraged to adopt these messages in their portfolios should market demand for them arise.

#### – **MP2. Support of embedded codes**

ISO 20022 base message version 2019, which serves as a template for the individual usage guidelines and has been implemented by various MIs in the past few years, appears to contain embedded codes in the schema instead of a reference to an external standardised ISO 20022 code list as mandated by requirement #2. This leads to non-alignment with requirement #2 and is expected to be solved with an upgrade of MIs to a newer base message version.

#### – **MP4. Legal Entity Identifier (LEI) is not supported as a standalone identifier**

Given that the LEI does not allow a granular identification of the business party and its location (as opposed to Business Identifier Code (BIC), for example), it is not supported as a sole identifier in many usage guidelines across the globe. The subject is expected to be clarified with the publisher of the requirements to ensure the sole reliance on LEI does not cause friction if implemented for cross-border payments.

#### – **MP5. “Hybrid” postal address not supported**

Given that the ‘hybrid’ postal address (i.e. a mix of structured and unstructured address data elements) is only set to be introduced in November 2025 – with a view to eliminating fully unstructured addresses by November 2026 – many MIs have not yet included this option in their respective usage guidelines, conforming with the current HVPS+ & CBPR+ usage guidelines. However, in line with the HVPS+ implementation strategy, MI users of the standardised HVPS+ template are expected to introduce this option in advance of the 2027 milestone.

#### – **MP10. Usage of proprietary codes**

Due to country-specific requirements, various MIs have introduced a <proprietary> data element to

specify a particular information element (purpose, category purpose, etc.) instead of referring to the external standardised ISO 20022 code list as mandated by requirement #2. Given the local nature of this implementation and potential negative impact on straight-through processing once such a payment enters the correspondent banking space, it is recommended to implement a coded version instead.

### **Differing levels of readiness among MIs**

The report observes that MIs that have not yet adopted the ISO 20022 standard show a lower level of alignment with the minimum data requirements and contribute to greater levels of friction in cross-border payments as a result. By comparison, MIs that have adopted the HVPS+ template as the foundation for their usage guidelines are in an advanced position with minimal need for further alignment.

At the same time, the report also found that there are various MIs – particularly those who were among the first to implement the ISO 20022 standard – that implemented ‘earlier’ base message versions. Due to the absence of key data elements in these earlier versions, these MIs are not yet aligned with certain data requirements. For example, the Unique End-To-End Transaction Reference (UETR) data element became part of the ISO 20022 messages after the introduction of the Swift gpi initiative in 2017. This means that previous base message versions do not contain this data element – and MIs using this version are, therefore, not aligned with requirement #5. The good news is that many of these MIs are already planning an upgrade to a newer version and expect to be aligned by 2027.

### **What’s next?**

Having outlined the proposed actions for each of the analysed MIs, the working group plans to initiate an engagement phase by reaching out to MIs to raise awareness and explore potential solutions. This step is essential to ensure widespread alignment with minimum data requirements, which, in turn, will allow for smooth processing of cross-border payments. At the same time, all MIs are encouraged to assess their alignment and address any discrepancies well in advance of the official deadline end of 2027.

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