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Virtual (additional) IBANs: Opportunities and Money Laundering Risks [*]

Michele Manna

Abstract

This paper examines the issuance of multiple IBANs linked to a single account, commonly referred to as "virtual IBANs" (vIBANs), though the term "additional IBANs" is more precise. Originally adopted to facilitate payment reconciliation, these identifiers offer operational advantages but also pose money laundering risks, as highlighted by a 2024 EBA report. Addressing a gap in the literature, the study proposes a taxonomy of vIBAN configurations based on identifier attributes and account ownership structures. It further situates the analysis within the context of retail payments in the Single Euro Payments Area (SEPA) and broader industry trends such as Open Banking and Banking-as-a-Service. Empirical insights are drawn from an examination of leading vIBAN providers and the distribution of the payment institutions across the European Union. Findings underscore three priority actions: eliminating IBAN discrimination, enhancing transparency in complex transaction chains, and addressing uneven patterns in cross-border operations of payment institutions.

Sommario

Questo articolo esamina l'emissione di più IBAN collegati a un unico conto, comunemente indicati come "virtual IBAN" (vIBAN) sebbene il termine "IBAN aggiuntivi" risulti più preciso. Originariamente introdotti per agevolare la riconciliazione dei pagamenti, tali identificativi offrono vantaggi operativi ma comportano anche rischi di riciclaggio di denaro, come evidenziato da un rapporto EBA del 2024. Colmando una lacuna della letteratura, lo studio propone una tassonomia delle configurazioni di vIBAN basata sugli attributi degli identificativi e sulle strutture di titolarità dei conti. L'analisi è inoltre contestualizzata nell'ambito dei pagamenti al dettaglio nell'area SEPA e delle tendenze di settore quali Open Banking e Banking-as-a-Service. Il paper si completa con un approfondimento empirico su dati dei principali fornitori di vIBAN e sulla distribuzione delle istituzioni di pagamento nell'Unione europea. I risultati evidenziano tre azioni prioritarie: eliminare le discriminazioni degli IBAN, rafforzare la trasparenza nelle catene transazionali e affrontare le disomogeneità che emergono nelle operazioni transfrontaliere delle istituzioni di pagamento.

JEL Classification: G21, G23, K24, O33

Keywords: virtual IBAN, money laundering, payment institutions, SEPA

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Contents

1. Scope and structure of the work

This paper analyzes the practice – and occasional misuse – of assigning multiple identifiers to a single bank account, a mechanism commonly referred to as "virtual IBANs" (vIBANs).

The use of multiple alphanumeric strings to refer to the same account dates back at least to 2013.[1] However, the broader implications of this practice only gained prominence in 2024 following the European Banking Authority's (EBA) publication of its "Report on virtual IBANs". Today, vIBANs are widely recognized as a tool to enhance liquidity management of professional entities. However, in adverse scenarios, their use can obscure the link between the original payer and the ultimate beneficiary, potentially facilitating money laundering.

Assigning multiple IBANs offers significant benefits. For example, a company receiving payments from a large customer base may assign a unique IBAN to each client to facilitate payment reconciliation. Likewise, separate IBANs can simplify managing transactions in different currencies. Beyond these one-to-many configurations, additional IBANs may also be requested in one-to-one payment relationships to circumvent IBAN discrimination, a prohibited yet not uncommon practice.[2]

The emergence of vIBANs signals structural shifts in the payment industry, driven primarily by the expansion of Open Banking frameworks and the adoption of Banking-as-a-Service models. In essence, these developments empower account holders by offering greater flexibility in executing payments and, frequently, reducing transaction costs. Importantly, the new payment landscape involves multiple actors performing specialized roles, extending well beyond the traditional four-party model of payer, payer's bank, payee, and payee's bank. As this network of relationships becomes more complex, it poses growing challenges for compliance with Know-Your-Customer (KYC) obligations.

This paper was prepared against a backdrop of limited scholarly research on virtual IBANs. By contrast, numerous commercial sources are available, highlighting the business significance of vIBANs. Given this scarcity of academic and institutional contributions, special attention should be given to the EBA 2024 report, which is entirely dedicated to virtual IBANs. The report primarily addresses AML experts while remaining accessible to a broader audience. It presents six use cases illustrating different interactions among account providers, account holders, and other intermediaries, offering a comprehensive basis for assessing the advantages and risks of vIBANs. In short, EBA (2024) serves as a key reference for informing debate and guiding potential policy responses.

Against this backdrop, we have structured the paper around four key areas guiding our analysis.

Firstly, we adopt a top-down approach to propose a taxonomy of vIBAN configurations based on three criteria:[3] (i) the bank identifier, which may either match that of the IBAN originally linked to the account or differ from it; (ii) the country identifier, applying the same distinction; and (iii) whether the master account is held by the ultimate payer, the ultimate payee, or by neither party, indicating the involvement of an additional intermediary.

Secondly, we examine how retail payments are cleared and settled in Europe, a topic notably absent from the EBA (2024) report. The Single Euro Payments Area (SEPA) defines a geographical domain

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[1] Based on a query for the term "virtual IBANs" on a widely used search engine. It should be noted that the absence of results prior to 2013 does not prove, in itself, that virtual IBANs did not exist before that date.

[2] A typical example involves a household originally from country A, where they hold a bank account, that works in country B. To receive their salary into the account in A, when the employer or its bank resists transfers to a non-domestic IBAN, a second IBAN is issued. This is linked to the same account but carries the identifier of country B.

[3] The approach outlined in EBA (2024) can be characterized as a bottom-up methodology.

within which euro credit transfers are processed seamlessly, regardless of whether the accounts involved are located in the same SEPA country or in different ones.[4]

Thirdly, we analyze the provision of vIBANs in the context of broader developments in Open Banking and Banking-as-a-Service. Although vIBANs are not a direct outcome of these developments, they share commons drivers such as the demand for greater flexibility in the use of payment accounts and the ability to leverage technological innovations.

Fourthly, we collect data and other information on the supply and use of vIBANs. This involves leveraging open sources to identify key players in this segment and analyze their business models. Complementary statistics on payment institutions, drawn from EBA data, will provide a more comprehensive view.

We conclude this introduction by addressing an important terminological point. To date, we have used the term "virtual IBANs", the commonly used expression for multiple IBANs linked to a single bank account. However, we find this terminology potentially misleading – a view shared by other authors, such as Hansen (2024a). For greater precision, we propose using the term "additional IBANs" to denote identifiers that supplement the "primary IBAN", the original identifier issued when the account is opened and linked to the account provider.[5]

The remainder of this report is organized as follows. Section 2 introduces the definition of IBAN and its transposition into European law. Section 3 puts forward a taxonomy of implementation categories for virtual (additional) IBANs. Section 4 examines the major vIBANs providers. Section 5 broadens the discussion to Open Banking and Banking-as-a-Service. Section 6 concludes.

2. IBAN: Definition and Transposition into EU law

As laid down in the international standard ISO 13616[6], the IBAN is the

> *expanded version of the basic bank account number (BBAN), intended for use internationally, which uniquely identifies an individual account at a specific financial institution, in a particular country*

In turn, the BBAN is an

> *identifier that uniquely identifies an individual account at a specific financial institution in a particular country and which includes a bank identifier of the financial institution servicing that account*

Additionally, it is important to bear in mind the further provision set out in the ISO standard:

> *Only the financial institution which services (maintains) the account is allowed to generate its IBAN (including check digits)*

These sentences prompt several observations:

- the identifier "*uniquely identifies*" the account, yet the definition does not require each account to be associated with a single identifier;[7]
- there is no reference to multiple identifiers and to additional IBANs;

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4 SEPA includes all EU Member States and 14 non-EU countries.

5 Throughout the text, however, we shall retain the expression "*virtual IBANs*" in the context of legal sources that employ term. In addition, for simplicity, we retain the acronym *vIBAN* , more euphonic than *aIBAN*.

6 We refer here to the 2020 edition of the standard. The first edition dates back to 2007.

7 Some national authorities argue that an IBAN should always correspond on a one-to-one basis with a payment account (EBA, 2024, point 34).

- the second quote may suggest a link between the financial institution servicing the account and the IBAN itself. However, the notion of account servicing has become increasingly blurred over time, largely due to developments in Open Banking;
- the phrase "*in a particular country*" implies a strict correspondence between the country where the servicing institution is established and the country code embedded in the IBAN. Broader interpretations of this requirement may, however, be permissible;[8]
- although a B in both IBAN and BBAN stands for "*bank*", the third quote refers instead to a "*financial institution*". This terminology suggests that, in principle, a non-bank financial entity could issue the bank identifier.[9]

Referring to Box 1 for more technical details, we find it important to underline how the ISO, in describing the structure of the identifier, foresees that

> *the first two letters [...] shall always be the two-character country code [..] of the country in which the financial institution servicing the account resides*

We will return to this point later.

Box 1. Structure of an IBAN

The IBAN format consists of three groups of characters:

(i) a two-letter country code, as defined in ISO 3166;
(ii) a two-character check digit, known as the Control Internal Number (CIN); and
(iii) the remaining string, which forms the Basic Bank Account Number (BBAN).

Groups (i) and (ii) have fixed content and length across all IBAN-adopting countries. By contrast, the national payment authority – often the central bank – determines both the length of the BBAN (up to 30 alphanumeric characters) and its composition. The BBAN typically includes a national bank code, sometimes accompanied by a branch code, and the account number or another routing identifier. In certain jurisdictions, it may also contain a check digit – distinct from the IBAN check digits in group (ii) [(a)] – and, more rarely, an indicator of the account type.

As of 16 October 2025, the IBAN was mandatory to varying degrees in 80 countries, 51 of which are fully or partly in Europe, which represent 64%. This share rises to 73% when considering the subset of countries where IBAN is required both domestically and for international transfers.

(a) The verification of these check digits follows a specific procedure. First, the IBAN is rearranged by moving its first four characters to the end of the sequence. Next, all alphabetic characters are converted into numerical values (a = 10, b = 11, …, z = 35). The resulting numeric string is then evaluated using a modulo-97 operation. An IBAN is valid only if the remainder of this division equals 1.

The IBAN was transposed into European law via Regulation (EU) 2012/260 establishing technical and business requirements for credit transfers and direct debits in euro (the SEPA Regulation). In its Article 2, point (15), this Regulation states:

> *IBAN means an international payment account number identifier, which unambiguously identifies an individual payment account in a Member State, the elements of which are specified by the International Organisation for Standardisation (ISO)*

8 One possible interpretation of "*in a particular country*" is that the IBAN incorporates a country code.

9 The ISO definition does not use the term "*credit institution*", which is specific to EU legislation. This is understandable, as the IBAN standard applies in several non-EU countries and ISO is not an EU body.

This text consists of two parts: (i) the meaning of IBAN (from "*an international payment*" to "*Member State*"), and (ii) the reference to ISO's specifications regarding the identifier's elements.

When contrasting part (i) with ISO 13616, two distinctions emerge. First, the SEPA framework emphasizes that the identification must be *unambiguous*, whereas ISO describes it as *unique* – a subtle difference, as the two terms are not strictly synonymous.[10] Second, SEPA explicitly refers to a *payment account*, while the ISO definition does not include the term *payment*.[11] These deviations, while noteworthy, appear to have little impact on the substance of what constitutes an account identifier.

More broadly, SEPA references ISO exclusively in part (ii), suggesting that the legislator requires the identifier's syntax – its length and field structure, beginning with the country code – to align with ISO specification. However, this does not imply full incorporation of the ISO document into SEPA.[12] Consequently, certain descriptive elements of ISO remain in a regulatory gray area. For example, it is unclear whether the ISO statement that "*only the financial institution which services [...] the account is allowed to generate its IBAN*" carries any legal weight within SEPA.

Moving forward, the Directive (EU) 2015/2366 on payment services in the internal market (PSD2) does not cite the concept of IBAN as such. However, its Article 4, point (33), defines the *unique identifier* as

> *a combination of letters, numbers or symbols specified to the payment service user by the payment service provider and to be provided by the payment service user to identify unambiguously another payment service user and/or the payment account of that other payment service user for a payment transaction*

The rule stipulates that the identifier – a "*combination of letters, numbers or symbols*" – must unambiguously identify the payment account, meaning a single identifier cannot correspond to multiple accounts. However, this does not preclude a payment account from being linked to several identifiers. One may infer that the legislator accepted the possibility of one account being associated with multiple identifiers, as implicitly acknowledged by the ISO document.

Nearly a decade later, the European legislator revisited the IBAN concept through Regulation (EU) 2024/1624 on the prevention of the use of the financial system for the purposes of money laundering or terrorist financing (AMLR). Its Article 2, point (26), provides a definition of virtual IBAN:

> *'virtual IBAN' means an identifier causing payments to be redirected to a payment account identified by an IBAN different from that identifier*

According to the text, a virtual IBAN is an account identifier, not the account itself. However, the definition leaves room for interpretation when it compares virtual IBANs with other IBANs that identify the same bank account while differing from the former. Notably, SEPA does not define this other IBAN, referring simply to "IBAN" without qualification. Therefore, the distinction between the two concepts remains vague. What is less debatable – based on SEPA's definition and ISO 13616 – is that any IBAN must uniquely correspond to a bank account, but no rule requires the converse. Consequently, a single account may be linked to multiple IBANs.

The choice of the terms "*identify*" and "*identifier*" creates a further connection between the definition in Article 2 of AMLR with that in Article 4 of PSD2. In this context, it is important to recognize that

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[10] The online version of the Merriam-Webster Dictionary lists synonyms for unambiguous such as obvious, unmistakable, apparent, clear, straightforward, evident and distinct – but notably not unique.

[11] Directive 2007/64 on payment services (PSD1) defines (Article 4, point 14) the payment account as "*an account held in the name of one or more payment service users which is used for the execution of payment transactions*". The definition is reprinted in the ensuing PSD2.

[12] A broader interpretation could have been supported by an alternative wording of Article 2, point (15), such as: "IBAN means an international payment account number identifier as set out by ISO…".

the "*combination of letters, numbers or symbols*" mentioned in PSD2 remains the same regardless of the IBAN's function. In other words, this combination cannot be used to distinguish a virtual IBAN from any other type of IBAN.[13]

As no peer-reviewed study directly addresses this specific matter,[14] we draw on Hansen (2024b), whose LinkedIn article offers a valuable perspective. This author asks, among others, two questions:

- *the definition says that the virtual IBAN is not the legitimate identifier of the account it "redirects a payment to" because the "payment account" is "identified by an IBAN different from" the virtual IBAN. So, we may ask: how come is this 'redirection' (if any, of course) legitimate at all?*
- *either virtual IBAN can – supposedly – be only used to 'redirect a payment to some payment account' but cannot be used to 'redirect a payment from some payment account' or anything (incl. an account identifier looking like a virtual IBAN) which redirects a payment from some payment account does not fall under the scope of AMLR?*

Regarding the first question, the virtual IBAN is explicitly recognized by the AMLR and can therefore be considered a legitimate identifier. Hansen's question may thus challenge the notion of a hierarchy among IBANs linked to the same account. If such a hierarchy were accepted, his second question – focused on a strict interpretation of payment redirection[15] – would appear provocative. Taken narrowly, Article 2, point (26) would be construed restricting virtual IBANs to one-way payment flows. We regard this interpretation as overly restrictive and incompatible with Article 22(3) of the AMLR, which requires obtaining information "*identifying and verifying the identity of the natural person using that virtual IBAN*", with no mention of fund direction. Accordingly, we support a broader interpretation and regard Hansen's second question as a valuable point for discussion.

Moreover, all IBANs linked to a given account share the same formal structure, and there is no reliable way to distinguish one from another. IBANs are character strings used as identifiers; it is unclear why some should be considered more "*virtual*" than others. This underlies our caution in using the term *virtual*. Furthermore, Merriam-Webster defines *virtual* as "*being such in essence or effect though not formally recognized or admitted*". Since the AMLR explicitly recognizes additional IBANs, they are formally admitted and therefore cannot be regarded as merely virtual in this sense. Finally, if *virtual* is understood to refer to something that exists primarily online, as also suggested by the dictionary, the same characterization applies to all IBANs, in today's largely digital world.

Even the notion of a hierarchy – akin to distinguishing an official name from a nickname – appears weak, as it presumes payment operations occur only after the system converts the virtual IBAN into a real one. If that were the case, opacity would be minimal, at least within the relevant Clearing and Settlement Mechanism (CSM; see Box 2 below).

The only robust conclusion is that each bank account must have at least one IBAN, though it may be associated with multiple.

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[13] In some cases, the BBAN section of an IBAN contains elements indicating that IBAN is additional. However, such markings are applied voluntarily by the issuing institution and should be regarded as the exception rather than the rule.

[14] We identified two relevant contributions: Lener (2024) examines virtual IBANs from a legal perspective but does not reference the AMLR or its definition in point (26) – possibly because this definition was introduced late in the drafting process – and Mezzacapo (2021), who addresses virtual IBANs indirectly in the context of IBAN discrimination.

[15] Alternatively, the legislator might have chosen the term "direction", omitting the suffix '-re'.

3. Taxonomy of Additional (Virtual) IBAN Models

3.1 The EBA (2024) report

The EBA (2024) report outlines six use cases involving a master account provider, a master account holder and, in some cases, additional financial partners. Not all entities are necessarily based in the European Union.

- Use case 1: The account holder requests a virtual IBAN with a country identifier different from the account's location.
- Use cases 2 and 3: A Payment Service Provider (PSP) partners with another CI or PSP to offer customers IBANs issued by the latter, possibly through a branch.
- Use cases 4 and 5: The first financial actor is located outside the EU; through a partnership with an EU-based PSP, it provides customers with IBANs bearing an EU Member State identifier.
- Use case 6: A PSP offers IBANs to a company that manages the payments for a group, which then assigns each IBAN to a different entity within the group.

EBA (2024) bases its analysis on a survey of National Competent Authorities (NCAs), supplemented by interviews, industry consultations, input from the European Commission and Europol, and a priori knowledge accumulated through earlier work.

From a cognitive psychology perspective, EBA's methodology aligns with a bottom-up approach – perceptual processing driven by data and accumulated experiences (Main, 2023). This choice was logical given the near absence of prior literature on virtual IBAN. The bottom-up approach thus serves as an initial interpretation of the available data.

A top-down approach represents the next and more advanced stage in knowledge-building, engaging higher-level cognitive functions. While bottom-up processing moves from raw sensory data toward cognitive understanding, top-down processing works in reverse; it begins with mental constructs and later influences lower-level sensory functions. Importantly, these processes are not mutually exclusive.

Building on EBA (2024), we aim to progress toward a top-down approach, implemented through a taxonomy of conceptual models. To achieve this, we first present one of the few published works on virtual IBANs, followed by an introduction of key concepts underlying payment systems in the European Union.

3.2 The approach proposed by Grabowski

Grabowski (2022) identifies two basic configurations for offering multiple IBANs, both starting from the same premise: a licensed EU financial institution – such as a credit institution, electronic money institution, or payment institution – provides a master account to a client. From this common starting point, the two configurations diverge.

In the first model, the account holder is a non-financial client who requests additional IBANs from the account provider and allocates them to its customers. A typical example is a utility company assigning unique IBANs for bill payments, thereby streamlining reconciliation.

Conversely, the second model involves a master account holder that is itself a financial institution, interacting with multiple end-users and potentially other financial institutions. These end-users may, in turn, seek additional IBANs, resulting in a multi-layered account structure.

Conceptually, the first model involves a single master payment account supported by technical sub-accounts, whereas the second introduces a more complex structure enabling access to local payment schemes, often across multiple countries.

Grabowski's approach is relevant for several reasons. First, it categorizes different setups using a top-down perspective – albeit a relatively simple one – which complements the bottom-up approach used by EBA (2024). Second, it emphasizes the contractual dimension, examining whether the master account holder formalizes agreements with its partners. Third, it identifies key categories that can serve as a foundation for developing a broader taxonomy, which we introduce in the next section.

3.3 Towards a Taxonomy of Additional IBANs

Section 1 introduced the concepts of "*primary IBAN"* and "*additional IBANs*" (commonly referred to as "*virtual IBANs*"). The primary IBAN reflects both the country code and the reference code of the institution maintaining the master account. Conversely, an additional IBAN may retain both identifiers, only one, or neither. Furthermore, the ultimate payer or payee may access the master account either directly or through a financial intermediary.

Table 1 presents eight possible configurations based on variations in (i) the bank identifier, (ii) the country identifier, and (iii) the mode of account holding. It also suggests potential business drivers and offers a tentative correlation with the use cases identified by EBA (2024).

Table 1

Taxonomy of additional IBANs (1)

		Bank identifier as in primary IBAN			
		Yes		No	
		Direct holding	Indirect holding	Direct holding	Indirect holding
Country identifier same as in primary IBAN	Yes	**A**. Payee manages payments from multiple payers *(use case 6)*	**C**. Foreign payees opting for indirect relationship (possible)	**E**. Not obvious	**G**. Foreign payee opting for indirect relationship (possible)
	No	**B**. IBAN discrimination (?) *(use cases 1/6)*	**D.** (as above)	**F**. IBAN discrimination (?) *(use cases 2/3)*	**H.** (as above)

(1) Association with EBA (2024) use cases made by the author.

We now map eight categories (A to H) of payment structures, incorporating elements from Grabowski (2022). The figures will include:

- a master account, associated with a primary IBAN and possibly additional IBANs, through which funds flow at some stage;
- the two end-parties of the transfer – the initiating payer and the final payee – denoted as "End-A" and "End-B_i", where the subscript "*i*"' indicates that there may be a single or multiple Bs (i = 1, …, N);[16]

[16] Our diagrams will show only a single endpoint, labeled End-Bi, for simplicity. Readers should keep in mind that, in practice – as in the case of a utility company serving numerous customers – there are often multiple End-Bi endpoints.

- optional financial intermediaries that either partner with the master account holder or manage the master account on behalf of an end-party.

Our assessment of the eight categories of Table 1 will primarily consider their capacity to ensure compliance with Article 22(3) of the AMLR, read together with its Article 18(2), across the full credit transfer process.[17]

These transfers take place within the Single Euro Payments Area (SEPA), which encompasses 41 countries: the 27 EU Member States, the 3 non-EU countries of the European Economic Area (EEA), and 11 additional non-EEA countries. SEPA ensures that a euro transfer – for example, from an account in London to one in Germany (a non-EU and an EU country) – is processed under the same cost and timing conditions as a cross-border transfer within the EU (e.g., Germany to Italy) or a domestic transfer within Germany or Italy. The reference to the United Kingdom is deliberate, underscoring that Brexit has not affected its status as a full SEPA participant.

It is important to note, however, that the entities participating in such transfers may operate under different legal frameworks and KYC requirements, as the *acquis communautaire* does not extend beyond the Union except for certain nuances applicable to the three non-EU EEA countries and, to some extent, Switzerland. Box 2 provides a concise overview of SEPA, together with the European Payments Council (EPC) and EBA clearing.

Box 2. SEPA, European Payments Council, and EBA Clearing

The Single Euro Payments Area (SEPA) was established to harmonize electronic euro payments, making cross-border transactions within Europe as simple and convenient as domestic payments. Its objective is to enable citizens and businesses to pay across Europe using a single payment account and card.[(a)]

As of January 2026, the SEPA encompasses 41 countries: all 27 EU Member States (21 of which have adopted the euro, while 6 have retained their national currency), the three non-EU countries the European Economic Area, EEA (Iceland, Norway, Liechtenstein), and 11 non-EEA (non-EU) countries (Albania, Andorra, Moldova, Monaco, Montenegro, North Macedonia, San Marino, Serbia, Switzerland, the United Kingdom, and Vatican City State).[(b)] Following a decision of the European Payments Council (EPC) Board on 7 March 2019, the United Kingdom remains within SEPA's geographical scope despite Brexit.

The EPC, a not-for-profit association composed of payment service providers (PSPs) and their representative associations, plays a pivotal role within SEPA. Although it is not part of the EU institutional framework, the EPC performs two key functions: it manages five euro payment schemes and it represents PSPs in high-level fora.[(c)]

To date, the EPC has established five SEPA payment schemes:[(d)]

- SEPA Credit Transfer (SCT) scheme;
- SEPA Instant Credit Transfer (SCT Inst) scheme;
- SEPA Direct Debit (SDD) Core (SDD Core) scheme;
- SDD Business-to-Business (SDD B2B) scheme;
- One-Leg Out Instant Credit Transfer (OCT Inst) scheme.

By creating each scheme, the EPC defines the set of rules governing the transfer of euro-denominated funds through specific payment instruments, such as credit and direct debits. The EPC itself does not participate in the execution of transfers between PSPs. This function is performed by Clearing and Settlement Mechanisms (CSMs), which provide PSPs with services for transmitting transfer orders. These services may include netting transactions, determining final positions, and settling them – typically on accounts held at a central bank. CSMs that comply with EPC rules are referred to as "SEPA scheme compliant CSMs".

Each PSP participating in EPC payment schemes is free to choose the SEPA scheme-compliant CSMs through which it can be reached. Under Regulation (EU) 260/2012 (the SEPA Regulation), participation in

[17] AMLR, Article 18(2): "*The obliged entity shall remain fully liable for any action, whether an act of commission or omission, connected to the outsourced tasks that are carried out by service providers*".

the SCT and SDD Core schemes is mandatory for all PSPs offering euro credit transfer and direct debit services within the EEA. The SDD B2B and the OCT Inst schemes remain optional.

Currently, there are 40 CSMs that comply with SEPA schemes. Most are supervised by national authorities – typically the National Central Bank – and the majority operate schemes that support SCT Inst.

EBA Clearing distinguishes itself from other CSMs in several respects:

- it operates under all five EPC payment schemes;[e]
- it is supervised by the ECB, rather than a national authority;
- its origins trace back to the European Banking Association. This heritage is reflected in its shareholder structure, comprising major banks from 15 EU countries (including all large ones), as well as banks from the UK and Swiss, and EU subsidiaries of US banks.

Taken together, these characteristics underscore EBA Clearing's role as a truly pan-European CSM. It alone accounts for half – or slightly more – of all non-cash payments in the euro area.[f] Participation in EBA Clearing's key infrastructures can occur either directly or indirectly, with the latter being the most common option. In practice, most PSPs are "reachable" – to use the technical term – through a direct participant.

EBA Clearing settles participants' positions using a Continuous Gross Settlement (CGS) mechanism. Under this arrangement, each participant maintains a dedicated amount of central bank funds in a technical account at the ECB within TARGET2. This balance is updated in real time as each bilateral settlement instruction – whether incoming or outgoing – is processed.[g] During TARGET2 opening hours, participants may transfer funds from this technical account to their TARGET2 RTGS account at any time.

When processing payment instructions, EBA Clearing performs a formal validation of the payee's IBAN: its length and format must comply with the rules applicable in the relevant country, including verification of check digits. Subsequently, EBA Clearing systems extract the bank identifier from the IBAN, determine the corresponding Bank Identification Code (BIC), and verify that it appears in the Reach Table – the list of PSPs that are "reachable" for each scheme. EBA Clearing only accepts PSPs whose BIC is listed in the EPC Register of Participants for the relevant scheme.

The Register includes only legal entities within SEPA that have adhered to EPC schemes. Branches are excluded unless they are SEPA branches of a PSP incorporated outside the SEPA geographical area.[h]

The vast majority of euro credit transfers within SEPA – over 29 billion annually – are processed under the EPC SCT scheme.[i] Under this scheme, the two PSPs involved verify and execute the transfer within a maximum of one business day. By comparison, an international transfer outside SEPA typically requires 4 to 5 days and incurs significantly higher fees due to limited standardization, lower automation, and the costs associated with the SWIFT interbank network.[l]

The SCT Inst is a more recent and dynamic alternative, available 24/7, every day of the year. From the moment the payer's PSP receives an SCT Instruction, the payer's PSP, the payee's PSP, and the selected CSM have a total of nine seconds to process the transaction and make the funds available in the payee's account. Notably, SCT Inst no longer imposes a maximum transaction amount at the scheme level.

While most credit transfers are still processed under the SCT scheme, SCT Inst is rapidly gaining ground. Its market share reached 26.4% in the second quarter of 2025, up 17.3% two years earlier.[k]

(a) https://www.europeanpaymentscouncil.eu/about-sepa. **(b)** Non-EEA territories such as Saint Pierre et Miquelon, Guernsey, Jersey and the Isle of Man fall within SEPA's geographical scope. **(c)** The EPC is a member of the Euro Retail Payments Board (ERPB), which promotes integration, innovation and competitiveness in euro retail payments across the EU. **(d)** The EPC has also created other "payment-related" schemes, e.g., an 'EPC VOP scheme rulebook' to lead the technical implementation of verification of payee services. **(e)** Iberpay, supervised by Banco de España, is the only other CSM compliant with all five EPC schemes. **(f)** Based on a comparison between €71trillion in of payment services (2024) and €131 trillion in non-cash payments in the euro area for same year (EBA 2024 Annual Report, ECB Statistical DWH). While the two definitions differ slightly, this suggests an approximate market share of 54%. **(g)** Upon receipt of transactions from a participant, STEP2 aggregates and sorts them by receiving participant, creating a bilateral settlement instruction. **(h)** https://www.europeanpaymentscouncil.eu/what-we-do/be-involved/register-participants. **(i)** https://www.europeanpaymentscouncil.eu/what-we-do/sepa-credit-transfer. **(j)** https://www.iziago.com/sepa-transfer-non-sepa-transfer/. **(k)** https://www.europeanpaymentscouncil.eu/what-we-do/sepa-credit-transfer.

3.4 Eight Categories of the Taxonomy

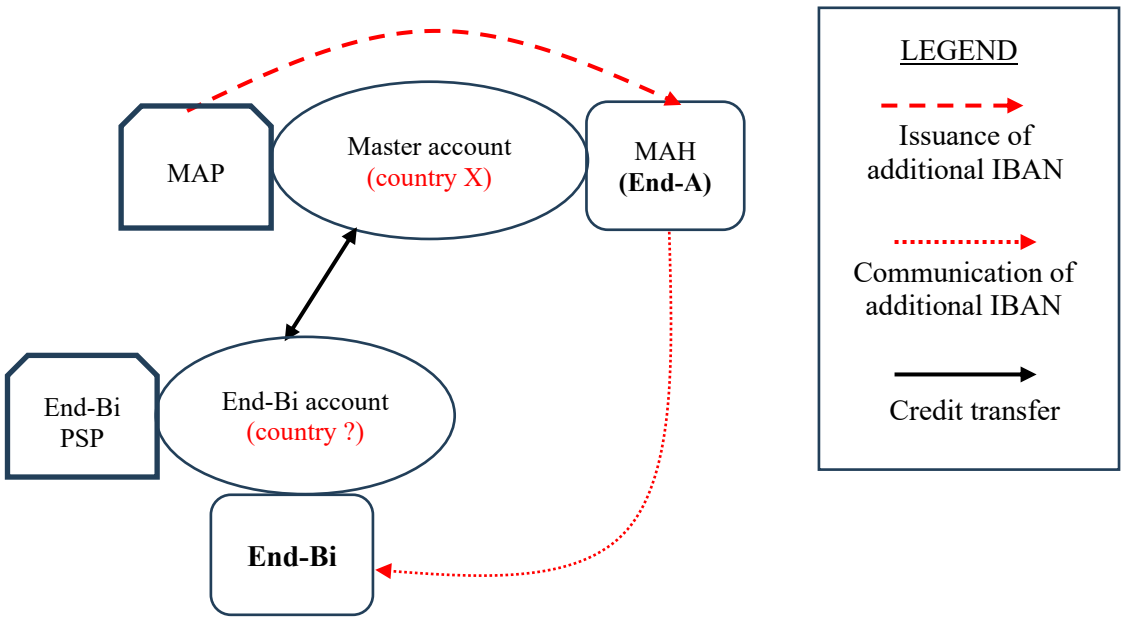
Category A represents the baseline scenario, where additional IBANs retain both the country and bank identifiers of the primary IBAN (Figure 1). A typical example is a utility company assigning a unique IBAN to each customer to streamline bill payment tracking. This category can also accommodate multi-firm groups, as illustrated in use case 6 of EBA (2024).

Under this arrangement, either end-party may hold the master account; in Figure 1 overleaf, End-A serves as the Master Account Holder (MAH). Funds move between the master account and a second account held by other end-party (End-B_i). This arrangement applies whether both accounts are in the same SEPA country or in different ones. In the figure, black solid lines represent fund flows, while red dotted lines indicate the issuance and communication of additional IBANs – a convention maintained in subsequent figures.

The master account provider (MAP) maintains full control because (i) it issues the additional IBANs and (ii) all credit transfers are directed to the master account, whose holder is the ultimate payer or payee. Typically, transfers flow predominantly toward the master account, with outgoing payments being rare.[18] However, group structures may exhibit more balanced flows, providing a counterexample to this pattern.

Figure 1

Category A): bank and country identifiers as in primary IBAN; direct holding



Category B covers cases where the master account holder (MAH) requests additional IBANs bearing a country code different from that of the master account provider (MAP). The MAP can fulfil such requests through a branch located in the selected country.[19] Under a strict interpretation, the branch issues the additional IBANs and informs the MAP, which then communicates them to one end-party of the payment (End-A). End-A subsequently relays the IBANs to the End-B_i, the final recipient.

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[18] It appears that the AMLR legislator considered this combination when defining the virtual IBAN in Article 2, point (26) as "*an identifier causing payments to be redirected to a payment account*" (see Chapter 2 above).

[19] If the MAP uses a partner PSP to issue the IBAN, the bank identifier will differ from the MAP's identifier.

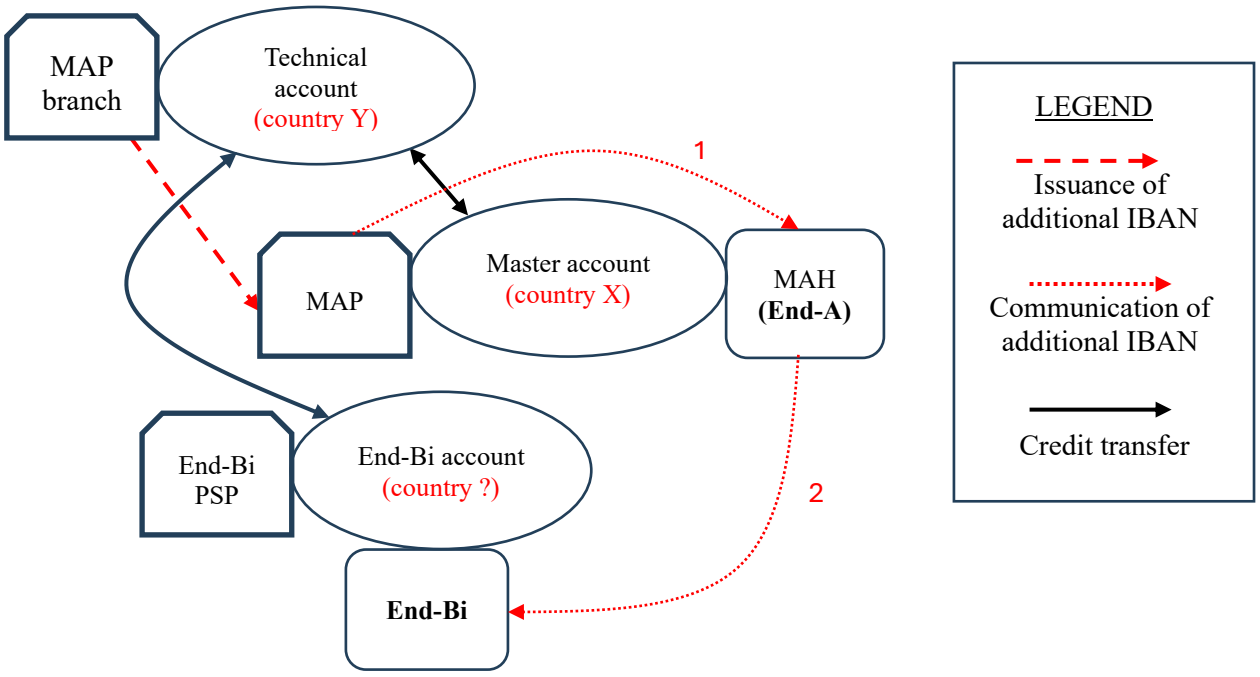
As shown in Figure 2, the solid black connects End- B_i's account to the technical account with the branch, which relays to the master account. While not being a direct connection in this case, the MAP retains full visibility over both sides of the payment process.

External authorities, such as FIUs or law-enforcement, might initially be confused when the bank identifier points to country X, while the IBAN indicates country Y. Complexity increases when End-A holds an account with a branch in country Z of a bank headquartered in X, while the additional IBAN shows country Y. In such cases, a query to the competent NCA – potentially in coordination with the bank – should provide sufficient information to determine the account's exact location. Although this may slow down identification, it does not represent an insurmountable obstacle.

Financial institutions receiving requests for additional IBANs – whether explicitly or implicitly aimed at circumventing IBAN discriminations – must report such cases to competent authorities rather than fulfilling the request. Failure to do so, and agreeing to issue additional IBANs in this context, would make the institution jointly responsible for perpetuating IBAN discrimination.

Figure 2

Category B): bank but not country identifier as in primary IBAN; direct holding



IBAN discrimination, prohibited under the SEPA Regulation, occurs when an individual or entity is unable to make or receive a SEPA credit transfer or pay via a SEPA direct debit from a bank account located in another Member State (see fn. 2 for an example). The concept may also encompass cases where the payment is executed but incurs higher charges than it otherwise would (Huertas, 2024; see Box 3 for details).

Box 3. IBAN Discrimination in Payments

IBAN discrimination refers to the practice of refusing or charging higher charges on cross-border payments within SEPA compared to domestic payments. As confirmed by established case law and highlighted by the European Commission, this practice constitutes a breach of the SEPA Regulation.[(a)] Its Article 9 explicitly states

> *A payer making a credit transfer to a payee holding a payment account located within the Union shall not specify the Member State in which that payment account is to be located, provided that the payment account is reachable in accordance with Article 3.*[(b)]

Despite this provision, individuals and businesses continue to face difficulties when making or receiving cross-border payments across the SEPA. According to a 2025 report by the European Court of Auditors (ECA), the "Accept My IBAN" platform recorded 3,500 complaints of IBAN discrimination between February 2021 and September 2023. The problem affects all Member States, but cases are most frequent in France (31%) and Spain (21%), followed by Italy and Germany.

It is also of note that Article 11(1) of SEPA requires Member States to

> *lay down rules on the penalties applicable to infringements of this Regulation and shall take all measures necessary to ensure that they are implemented. Such penalties shall be effective, proportionate and dissuasive.*

However, the ECA report highlights significant disparities in financial penalties: not all countries have established minimum amounts, and where they exist, thresholds range from €250 to €20,000. Furthermore, the Commission is not obliged to assess whether these penalties are effective, proportionate and dissuasive (ECA, 2025, page 25), which undermines the requirement set out in Article 11(1).

As for why IBAN discrimination persists, a market source offers the following perspective:

> *Protecting customers' money is a core principle of banking, and banks and other FIs have a responsibility to determine their own risk profiles and security protocols. [..] A bank's duty of care to protect their customers' money usually supersedes their willingness to take risks solely to meet regulations. [..]. While all countries must meet certain EU-wide regulatory standards outlined by the European Payments Council to be a member of SEPA, banks may feel they require additional measures to protect themselves and their customers from heightened risk.* Yapily (2025), IBAN discrimination: Everything PSPs need to know

The text largely speaks for itself. For the purposes of this report, it is sufficient to note that none of the concerns raised can be addressed by issuing an additional IBAN with an altered country identifier.

(a) European Commission (2020) cites Verein für Konsumenteninformation v Deutsche Bahn (C-28/18, EU:C:2019:673 (5 Sept. 2019). In Italy, the practice has been examined several times by the Competition Authority. Mezzacapo (2021) recalls Resolutions n. 27642-27645 of 10 April 2019 (PV2-PV5: Vodafone, Wind, Telecom, Fastweb – *Discriminazione Iban esteri*). **(b)** The second section 9(2) states the same concept, applied to the payee.

With the main actors introduced, IBAN discrimination explained, and SEPA outlined, we can now examine the more complex categories C to H, illustrated in Figures 3 to 8.

Categories C and D (Figures 3 and 4) feature an additional IBAN that shares the same bank identifier as the primary IBAN. In these cases, the master account holder acts as an intermediary rather than a payment end-party. All transactions pass through the master account, enabling the provider (the MAP) to retain adequate control over the arrangement.

Category E (Figure 5) introduces a deliberate change: the bank identifier differs from the MAP's. When processing the payment, the BIC extracted from the IBAN reveals that the recipient's account

is with another bank.[20] Funds from End-B_i reach a technical account with the partner PSP before being forwarded to the master account.

Category F (Figure 6) adds further complexity. Here, the additional IBAN differs from the primary IBAN in both country and bank identifiers. This indicates that the MAP does not rely on a branch, as in Figure 2; instead, a different PSP is involved. According to ISO 13616, the country identifier must correspond to the country where the financial institution servicing the account is located. Therefore, the institution referenced in the additional IBAN is the partner PSP, confirming the existence of a technical account separate from the master account.

Categories G and H (Figures 7 and 8) introduce an additional layer compared to E and F: the master account is held by an intermediary. End-A, in turn, maintains an account with this intermediary.

The complexity of these arrangements can be illustrated by the number of communication lines or credit transfers in each category: the baseline category A counts three such lines and transfers, increasing to five in Categories C, E and F, and reaching seven in Categories D, G and H. More broadly, these patterns progressively reduce the portion of the network over which the MAP has direct visibility.

It is worth noting note that our representation likely underestimates the complexity of real-world networks. This is because the figures include only institutions servicing the accounts, in addition to the two end-parties. In practice, with Open Banking and BaaS becoming widespread, additional intermediaries often participate in the payment process without directly servicing accounts, adding further layers of complexity.

Building on this, the implications for regulatory compliance become evident. These findings strongly support Article 22(3) of AMLR, which requires that the MAP[21] "*shall ensure it can obtain from the institution issuing the virtual IBAN the information identifying and verifying the identity of the natural person using that virtual IBAN*" – End-B_i in our framework. Only through co-operation among all actors can sufficient information on fund flows be obtained. However, the institution issuing the virtual IBAN may reside in a SEPA country outside the EU and therefore not subject to the AMLR. This limitation applies more broadly to other actors in the network as well.

The eight figures illustrate several risks identified by EBA (2024). Specifically, we refer to:

(i) risks 2, 4, and 7, due to the cross-border nature of many configurations; furthermore, in some cases, the MAH may have only a partial view of the network and its web of links;[22]
(ii) risk 3 and 6, since neither of the two end-users accesses the master account directly. Consequently, intermediaries involved in the flow may struggle to fully track these users;[23]
(iii) risks 9 and 10, because some configurations may involve setups located in SEPA countries outside the EU, and thus subject to different jurisdictions.[24]

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[20] An exception could concern legacy BICs tied to banks that have ceased activity and been incorporated into other institutions.

[21] We follow the wording of the AMLR, "*The credit institution or financial institution servicing the bank or payment account to which a virtual IBAN*..".

[22] Risk 2 is "*Lack of visibility for NCAs of the scale of vIBAN offerings in their jurisdiction*"; risk 4 is "*Divergent interpretation of applicable AML/CFT regulatory framework for the cross-border provision of vIBANs*"; risk 7 is "*Divergent categorisation and reporting of payment transactions by PSPs under PSD2, where the vIBANs and the IBAN of the master account have different country codes*" (EBA, 2024, pp. 14, 17 and 22)

[23] Risk 3 is "*Lack of visibility of the identity of the end users of the vIBANs*"; risk. 6 is "*The end users of vIBANs where they are not the master account holder*" (EBA, 2024, pp. 15 and 21)

[24] Risk 9 is "*vIBANs being used by non-EU financial institutions or by EU non-PSPs to provide payment services without the required authorization*"; risk 10 is '*Divergent supervisory practices about the possibility to issue vIBANs, from a CRD perspective*" (EBA, 2024, pp. 24-25).

Figure 3

Category C): bank and country identifiers as in primary IBAN; indirect holding

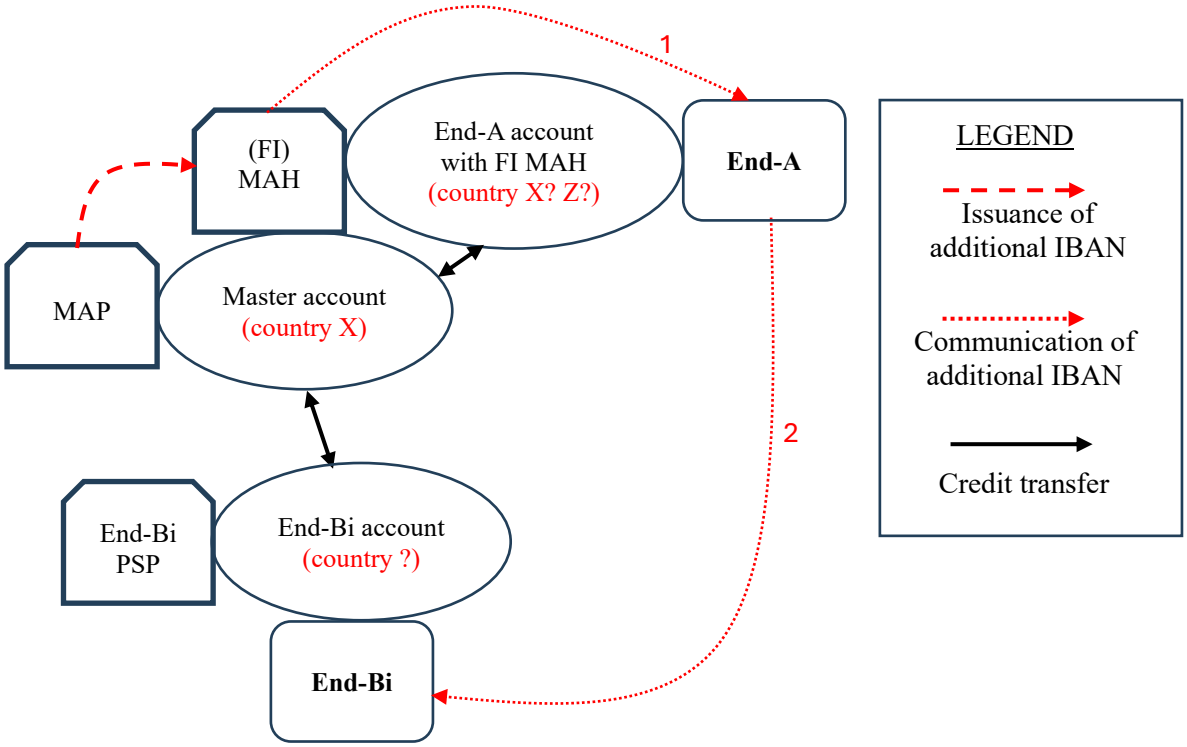


Figure 4

Category D): bank but not country identifier as in primary IBAN; indirect holding

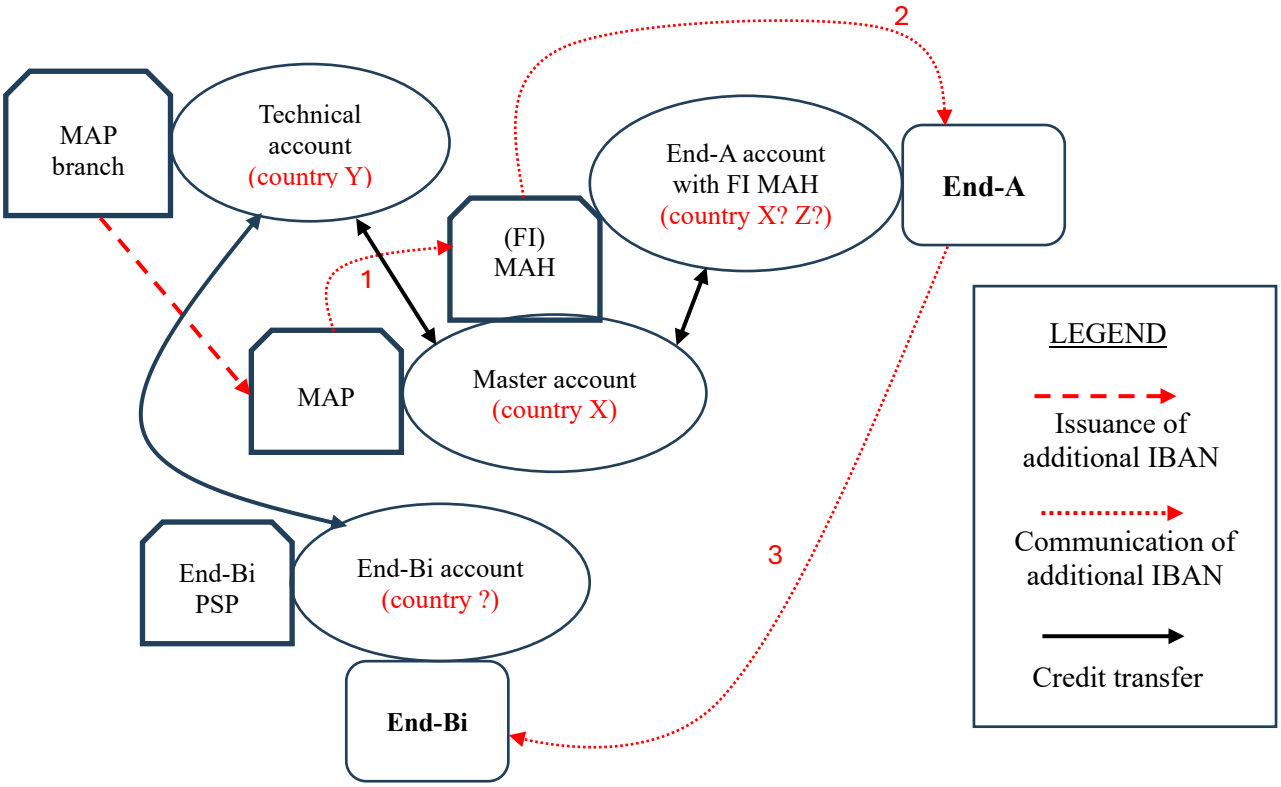


Figure 5

Category E): country but not bank identifier as in primary IBAN; direct holding

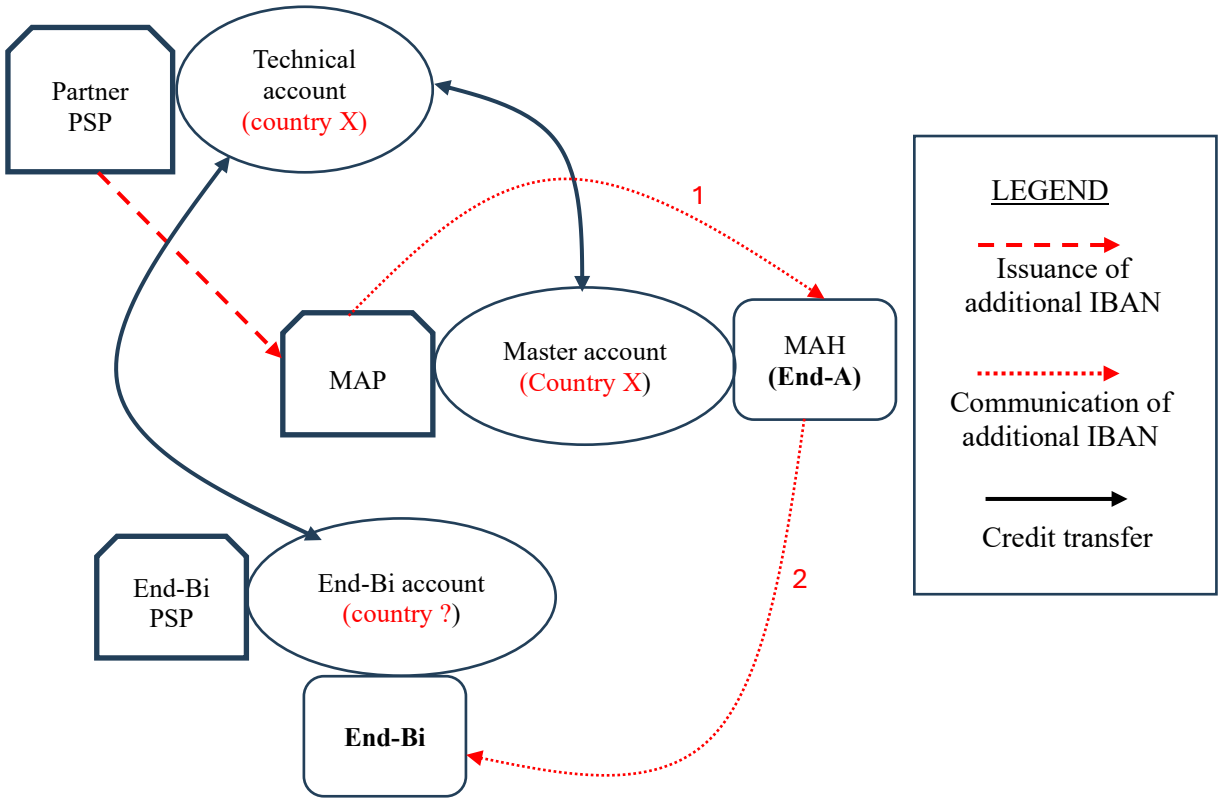


Figure 6

Category F): neither country nor bank identifier as in primary IBAN; direct holding

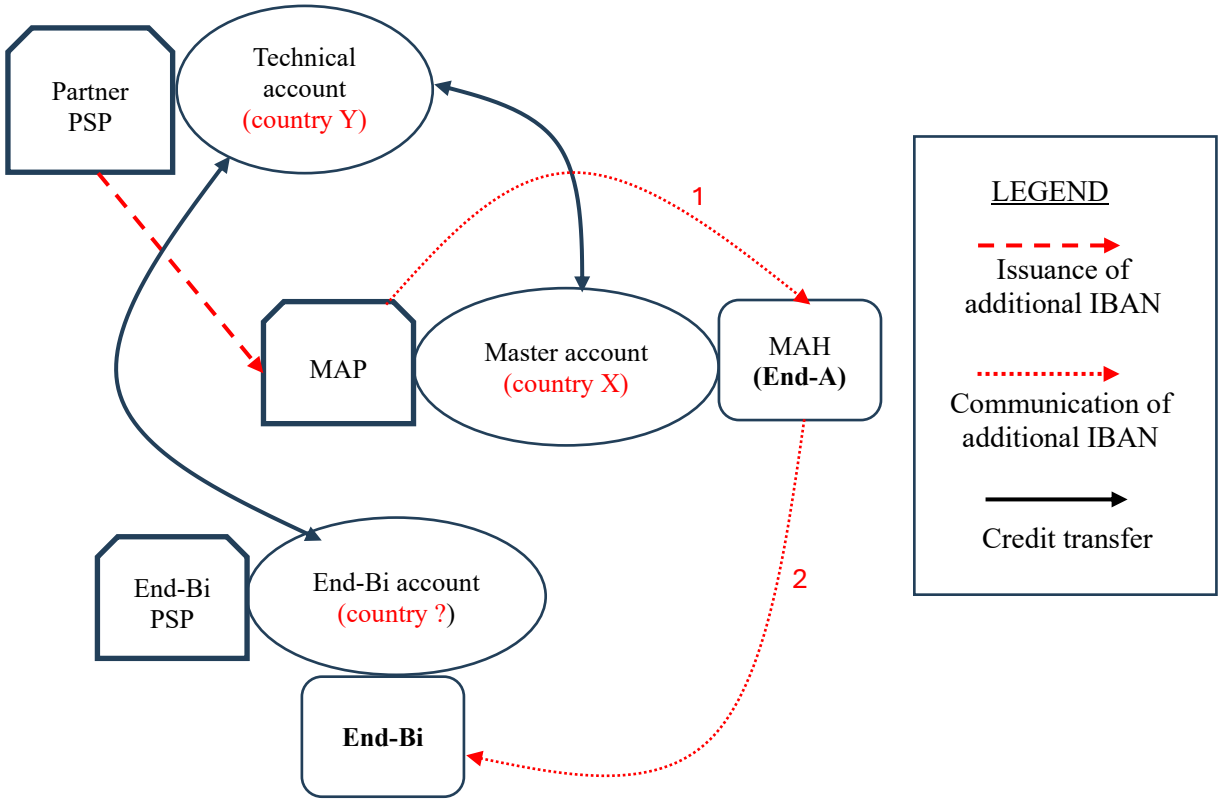


Figure 7

Category G): country but not bank identifier as in primary IBAN; indirect holding

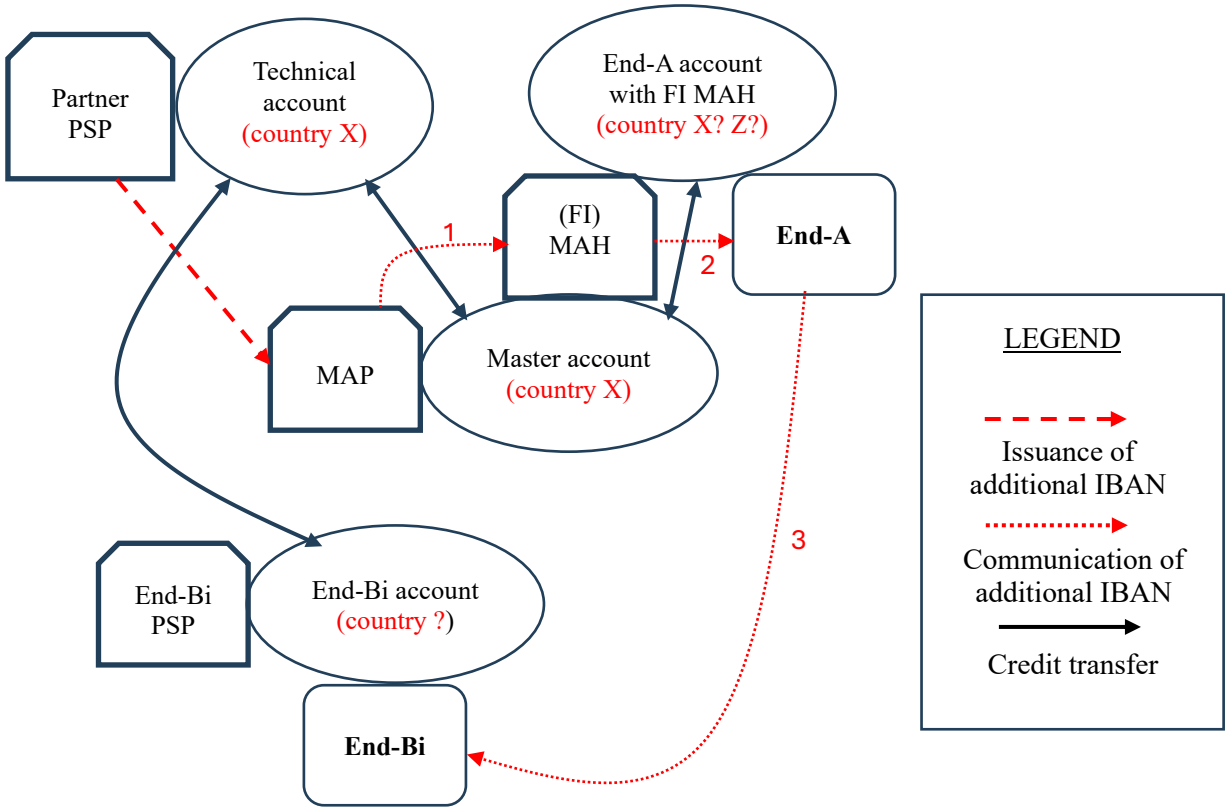
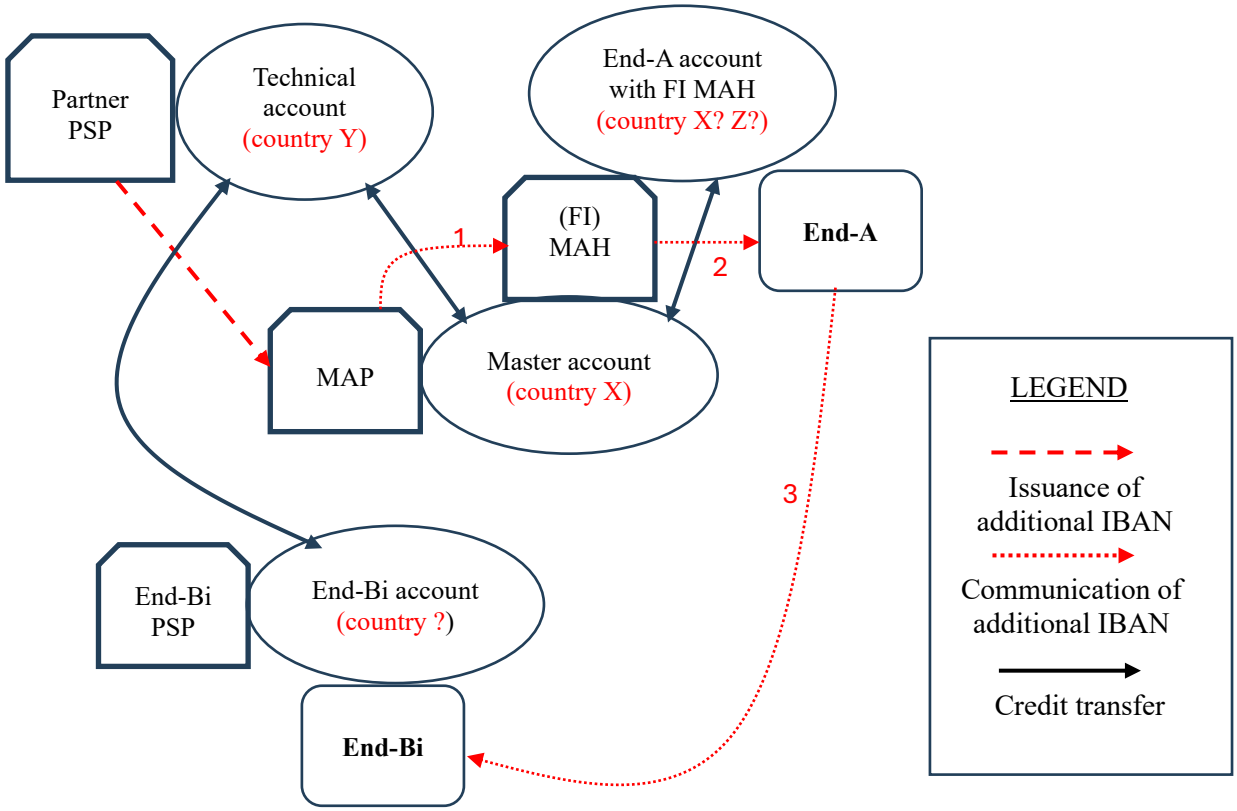


Figure 8

Category H): neither country nor bank identifier as in primary IBAN; indirect holding



4. Major vIBANs providers and Europe's *Payment Institution* industry

4.1 Major vIBAN providers

We used information from four market sources – Geekflare, Airwallex, Offshore Gateways, and Transferra[25] – to identify the major providers of additional IBANs. Each source lists between five and ten top providers, resulting in a combined total of 20 distinct names, with some of them appearing in multiple lists. Table 2 ranks these providers based on an aggregate score calculated using Copilot.

Table 2

Top providers of additional (virtual) IBANs

		Score	Source			
			GeekFlare	Airwallex	Offshore	Transferra
1)	Wise	77	1	4	1	1
2)	Payset	55	3	2		3
3)	Revolut	53	2	5	3	
4)	Payoneer	46	8	7	2	
5)	Airwallex	43		1	9	5
6)	Rapyd	31	5	6		
7)	Transferra	19				2
8)	OpenPayd	18		3		
9)	MyGuava	17	4			
10)	Paysera	17			4	
11)	Multipass	17				4
12)	Skrill	16			5	
13)	Monese	15			6	
14)	Novalnet	15	6			
15)	PayDo	14	7			
16)	N26	14			7	
17)	iCard	13			8	
18)	Bankera	12	9			
19)	Treezor	11	10			
20)	Remitly	11			10	

Sources: websites listed in fn. 25. Ranking and score suggested by Copilot (see also fn. 26).

The algorithm ranks Wise first, with a score of 77. It is followed by five firms – Payset, Revolut, Payoneer, Airwallex and Rapyd – scoring between 31 and 55.[26] The remaining 14 firms (Transferra, OpenPayd, MyGuava, Paysera, Multipass, Skrill, Monese, Novalnet, Paydo, N26, iCard, Bankera, Treezor, and Remitly) receive scores ranging from 11 to 19. The ranking reflects the frequency of

[25] https://geekflare.com/software/virtual-iban-providers/ , https://www.airwallex.com/uk/blog/virtual-iban-providers, https://www.offshoregateways.com/credit-card-payments/top-10-virtual-ibans/, and https://transferra.uk/blog/top-5-emis-for-a-business-account-2025/.

[26] We advised Copilot to exercise caution when considering the self-assessment provided by Airwallex.

mentions across sources: Wise appears in all four lists and tops three of them, the middle group appears in more than one lists, and the remaining firms in only one.

We consulted several official and quasi-official databases to determine where these providers operate and under which licenses, both within the EU and in the UK, as well as beyond. Specifically, we relied on:

- the EBA's Credit Institution and Payment Institution registers,[27]
- the UK Financial Conduct Authority's Financial Services Register,[28]
- the Legal Entity Identifier (LEI) of the Office of Financial Research (OFR),[29] and
- SWIFT.[30]

Additional information was obtained from The Banks website[31] and the providers' own websites. The results are presented in Table 3.[32] A cautionary note is warranted: the table reflects research conducted on a best-effort basis, with care taken to reconcile occasional brand variations, though errors cannot be fully excluded.

Bearing this caveat in mind, several points stand out. First, for some providers, we could not identify a financial entity holding an EU license. While this may align with SEPA's structure (see Box 2), it is likely that these firms partner with EU-based banks to provide IBANs. Second, not all entities listed by the EBA and FCA appear in the EPC Register. Third, in at least one case, no SWIFT code could be directly associated with the firm under review, whereas other entities hold SWIFT codes that appear to correspond only to branches.

It is important to state clearly that this variability does not, in itself, indicate any breach of rules. However, it strongly suggests the involvement of additional actors and intermediaries beyond those identified in our analysis. In other words, the networks under consideration are likely more complex than the streamlined representations shown in Figures 1-8.

This complexity has significant implications. It has long been recognized that the more intermediaries are involved in a credit transfer, the more challenging it becomes to identify the final beneficial owner and to assign AML/CFT responsibilities (Muller, Kälin and Goldsworth, 2007; Pieth and Aiolfi, 2004). The issue is not the legal obligations – these are clearly defined – but rather the ability of each entity to contribute to a comprehensive understanding of the overall network. This challenge becomes particularly relevant when multiple IBANs are associated with the same account, as it increases the risk of obfuscation in payment service trails and underscores the need for enhanced transparency and coordination among all actors involved. Moreover, new vIBANs can be created rapidly, and the

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27 https://euclid.eba.europa.eu/register/cir/search and https://euclid.eba.europa.eu/register/pir/search.

28 https://register.fca.org.uk/s/search?q=wise&type=Companies.

29 The Legal Entity Identifier (LEI) is a 20-character alphanumeric code, established under the ISO 17442 standard, that uniquely identifies legal entities participating in financial transactions.

30 The Society for Worldwide Interbank Financial Telecommunications (SWIFT) operates as a global messaging network used by financial institutions to facilitate for international payments. Each member institution is assigned a unique Bank Identification Code (BIC), which specifies its name, country, city, and branch (https://www.theswiftcodes.com/).

31 https://thebanks.eu/

32 Using Wise as an initial example, line 1 of the table lists two PIs registered with the EBA – one based in Cyprus and the other in Belgium – along with a CI established in Italy. These entities are labeled A, B and C. For each PI, we note that they can operate cross-border on a host basis in all EEA countries. A fourth entity, D, appears in the UK FCA register. Among these four, entities A, B and D are included in both the EPC Register of Participants and the Swift catalogue.

Moving to line 3, which relates to Revolut, the cell under the SWIFT column contains 'A) LT; B) UK + BE, ES, IE, IT, PT'. This indicates that we retrieved SWIFT codes for the entities A and B of this brand, as well as five additional codes for entities in Belgium, Spain, Ireland, Italy and Portugal – likely branches, as they do not appear directly in the EBA or FCA registers.

movement of funds across jurisdictions can be equally swift, amplifying the potential vulnerabilities of such arrangement from an AML perspective.

Using the available data, the 20 top providers of additional IBANs listed in Table 3 can be grouped as follows:

A) Payment institutions headquartered in the UK with an EU license
Wise (1), Revolut (3), Openpayd (8), Skrill (12), Paydo (15)
Aggregated score: 178
B) Payment institutions headquartered in the UK without an EU license, yet apparently offering EU IBANs
Payset (2), Transferra (7), MyGuava (9), Multipass (11), Monese (13)
Aggregated score: 123
C) Payment institutions or banks headquartered in the EU
PaySera (10), Novalnet (14), N26 (16), iCard (17), Bankera (18),[33] Treezor (19)
Aggregated score: 82
D) Payment institutions headquartered outside SEPA, with an EU license
Payoneer (4), Airwallex (5), Rapyd (6) and Remitly (20)
Aggregated score: 131.

The data confirms London's prominence in this market segment. Groups A and B include the top three providers overall, with a combined score of 301 (178+123) out of a total of 514. This underscores our earlier warning that we are dealing with a common payment market where participants operate under different jurisdictions. Additionally, Group D also poses risks: when non-SEPA firms route payments through their EU intermediaries without full transparency, oversight of transaction flows becomes fragmented.

[33] This attribution remains uncertain. According to Crunchbase, Bankera appears to be headquartered in Lithuania; however, the same source lists a London-based phone number as its contact and identifies its legal name as 'Era Finance Ltd.', a UK-registered company (https://find-and-update.company-information.service.gov.uk/company/13690591). Neither the FCA nor the EBA registers return any results for "Bankera"' or "'Era Finance".

Licenses of top 20 providers of additional (virtual) IBANs [a] Table 3

Provider		Authorities			Registers				
		EBA		UK FCA	EPC RoP [b]	SWIFT	OFR LEI [c]		
		Home	host				EU	Other SEPA	Non-SEPA
1)	Wise	A) PI in CY B) PI in BE C) CI in IT	All EEA countries All EEA countries (passport)	D) EMI	A) CY; B) BE D) UK	A; CY; B) BE; D) UK	18	2 (UK, JE)	18
2)	Payset	-- [d]		A) EMI		A) UK	--	1 (UK)	--
3)	Revolut	A) CI in LT	(passport)	B) EMI	A) LT; B) UK	A) LT; B) UK + BE, ES, IE, IT, PT	8	1 (UK)	2
4)	Payoneer	A) EMI in IE	All EEA countries	B) EMI		A) IE; B) UK	2	1 (UK)	3
5)	AirWallex	A) EMI in NL B) EMI IN LT[f]	All EEA countries[e] No host services	C) EMI	A) NL	A) NL; C) UK	1	1 (UK)	6
6)	Rapyd	A) EMI in IS	All EEA countries	B) EMI		A) IS	--	--	--
7)	Transferra	-- [g]		A) EMI	A) UK	A) UK	--	1 (UK)	--
8)	OpenPayd	A) EMI in MT	All EEA countries	B) EMI [h]	A) MT; (B) UK	A) MT; B) UK	2	1 (UK)	--
9)	MyGuava	--		A) EMI [i]	A) UK	A) UK	3	--	6
10)	PaySera	A) EMI in LT B) PI in PL	All EEA countries No host services		A) LT	A) LT	2	1 (AL)	2
11)	Multipass	--		A) EMI	A) UK	A) UK	1	1 (UK)	--
12)	Skrill	A) EMI in IE	All EEA countries	B) EMI		B) UK	--	1 (UK)	1
13)	Monese	-- [j]		A) EMI	A) UK	A) UK + BE	1	--	--
14)	Novalnet	A) PI in DE	21 EEA countries				1	--	--
15)	PayDo	A) EMI in MT	All EEA countries	B) EMI [k]		A) MT	2	--	1
16)	N26	A) CI in DE	(passport)		A) DE	A) DE	6	--	1
17)	iCard	A) IME in BG	All EEA countries		A) BG	A) BG	3	--	1
18)	Bankera	A) EMI in CZ B) EMI in LT	No host services All EEA countries			B) LT	1 (LT)	--	--
19)	Treezor	A) EMI in FR	24 EEA countries		A) FR	A) FR + DE, ES, IT	4	--	--
20)	Remitly	A) PI in IE	All EEA countries	B) PI		UK	1	1 (UK)	2

Notes. (a) Updated as of 1 December 2025. Research conducted on a best-effort basis by the author using identified authorities' and providers' websites, supplemented by AI queries. (b) SEPA Credit Transfer (SCT) Register of participants maintained by the EPC. (c) Legal Entity Identifier (LEI), as defined by the Office of Financial Research (OFR). (d) Payset provides payment services in the EEA through Airwallex. (e) Based on DeNederlandsche Bank public register. (f) AWX Lithuania, UAB. (g) Transferra provides IBAN (vIBAN) services through Clear Junction Ltd and SettleGo Solutions Limited (OpenPayd UK), both authorized by the UK FCA, and card services via Wallester AS, an Estonian PI. (h) SettleGo Solutions Ltd. (i) MyGuava services in the UK are temporarily suspended. (j) Monese offers services to EEA customers indirectly through PPS EU SA, a Belgian EMI. (k) Ecommerce Technologies LTD.

4.2 Geography' of the Payment Institution Industry in the EU

To obtain a more thorough view of these profiles, we extended the analysis to all Payment Institutions (PIs) established in the EEA, using data from the EBA's Payment Institutions Register.[34] This register provides details such as the national competent authority for each PI, its home country, host countries where it can offer services, and the nature of those services, as defined in Annex 1 of the PSD2.

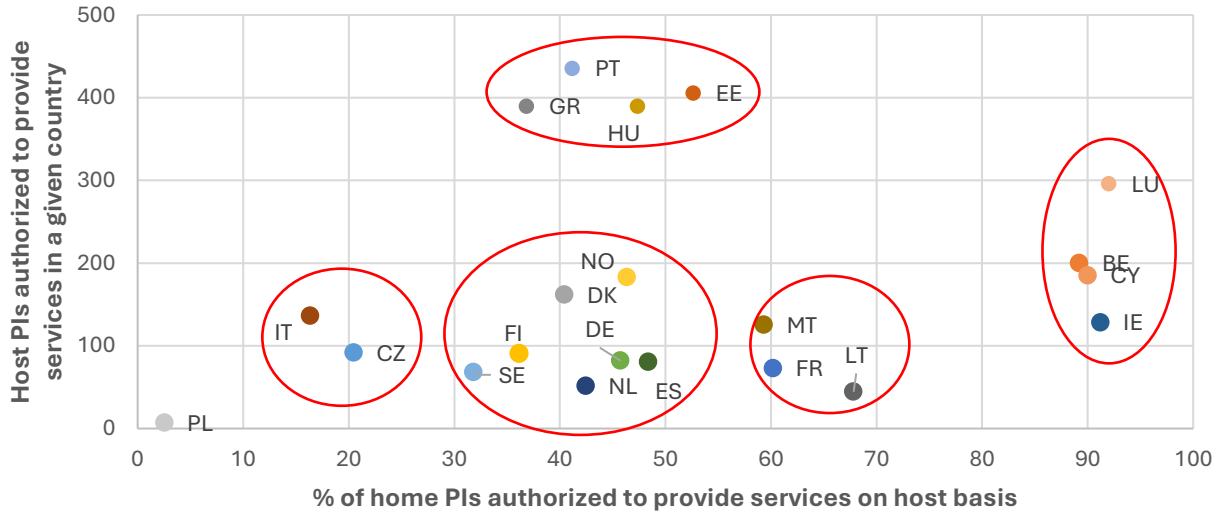
Our first exercise mapped two indicators per each Member State:

(I) the percentage of domestic PIs authorized to provide services on a host basis, and
(II) the ratio – scaled to 100 – between PIs operating as host in country and those domiciled there.

Figure 9 illustrates these metrics, with (I) on the x-axis and (II) and the y-axis, covering 21 EEA countries with at least 15 home PIs for representativeness. The chart reveals five clusters: on the left, net importers with (I) below 20% but a notable inflow of foreign PIs;[35] on the right, two groups where (I) reaches 60-70% and 90%, respectively. Between these extremes lie two intermediate clusters, both with (I) at 30-50%, differentiated by their (II) values.

Figure 9

Payment institutions providing services on a host basis: the 'import and 'export' dimensions (1)



(1) Author's elaboration on EBA data.

We then focused on PIs authorized to provide services on a host basis ("cross-border PIs"). Figure 10 compares two indicators:

(III) the share of cross-border PIs active in all other 29 countries ("full-EEA cross-border PIs") on the x-axis, and

[34] See the Payment Institutions Register https://euclid.eba.europa.eu/register/pir/disclaimer?returnUrl=%2Fpir%2Fsearch maintained by the EBA using information provided by the national competent authorities of the EEA Member States; the Register carries no legal effect.

[35] Poland (PL) is an outlier, exhibiting very low shares on both the import and export sides.

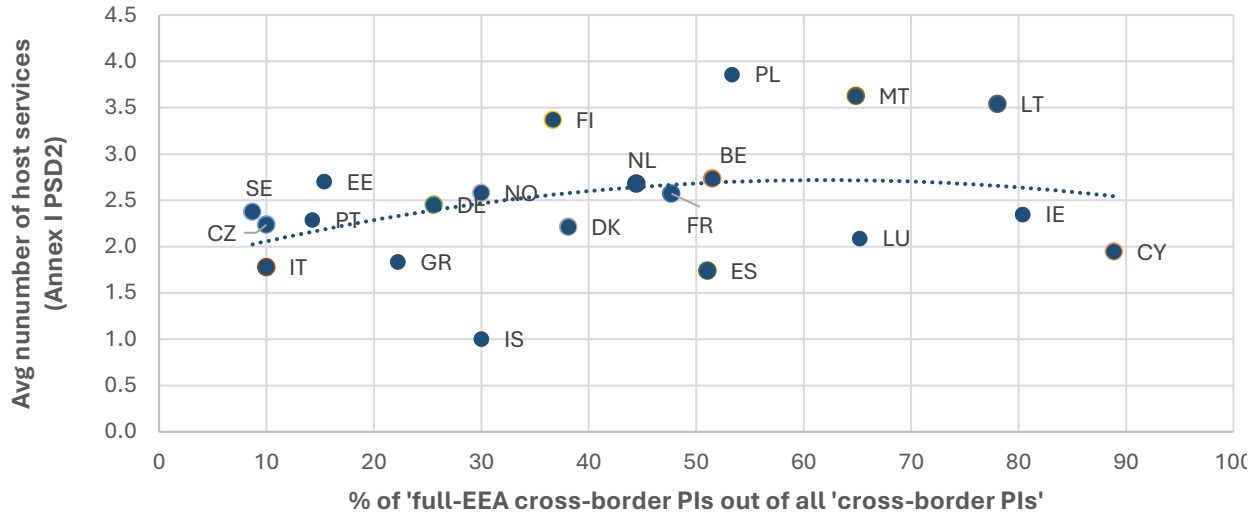
(IV) the average number of services these PIs offer on a host basis, per Annex I of the PSD2,[36] on the y-axis.

A first stylized finding is that countries on the right-hand side of Figure 10 correspond to those in the comparable region of Figure 9 – namely Luxembourg (LU), Belgium (BE), Ireland (IE) and Cyprus (CY) – which combine high shares of cross-border PIs with high shares of full-EEA cross-border PIs. Conversely, countries on the left-hand side of both figures show limited cross-border activity and, within that, limited engagement across the entire EEA. The average number of services offered follows a mild reverse-U pattern, with notable exceptions in Lithuania (LT), Malta (MT), Poland (PL) and Finland (FI).

Incidentally, PIs established in CY, LT, LU, IE and MT and authorized for cross-border operations are approximately 50% more likely to rank among the top 20 vIBAN providers compared to PIs based in other EEA countries.[37]

Figure 10

Payment institutions operating cross border: the business models (1)



(1) Author's elaboration on EBA data.

IE, LT and CY see 80-90% of their cross-border PIs offering services across all EEA countries. By contrast, Czech Republic (CZ), Estonia (EE), Italy (IT), Portugal (PT) and Sweden (SE) register only 10-20%. Among the two largest economies, Germany (DE) stands at about 25%, while France (FR) reaches 60%, underscoring its position as both a large domestic market and a platform for cross-border services (see Cafarotti and Parrini, 2025).

[36] Annex I of the PSD2 enumerates nine types of services. These include, among others, the execution of direct debits, payment transactions, and credit transfer (type 3), as well as the execution of the same services when covered by a credit line (type 4), and the issuing and acquiring of payment transactions (type 5). The total of nine categories is reached by also including the issuing, distribution and redemption of electronic money.

[37] We calculated the occurrences of PIs or EMIs in the "EBA" column of Table 3 for the five selected countries compared to all others, obtaining a relative frequency of 47%. By comparison, the share of PIs licensed in these countries and authorized for cross-border operations is 32%, corresponding to an excess frequency of about one and a half times. When considering all PIs and EMIs, including those operating only domestically, the share of institutions licensed in CY, LT, LU, IE and MT drops to 12% and the excess frequency rises to four times.

There is clear evidence that geography still matters within the payment industry, even in today's digital environment. Over two thirds of PIs operate exclusively within their home jurisdiction. Among those engaging in cross-border activity, neighboring countries are the preferred destinations compared to more distant ones within the EEA. If the number of PIs offering host services in distant countries is set to 100, the corresponding figure for neighboring countries rises to 137.[38]

If location matters, the next logical step is to identify the drivers behind the choice of a country of establishment. A primary factor could be the size of the local market for payment services, which we proxied using the volume of deposits held by households and enterprises with domestic banks, as well as the size of nearby markets. A second factor is the business environment, as firms tend to establish operations where starting and operating business is easier, all else being equal. A third driver relates to what Polasik *et al*. (2020) term as "regulatory policy". Within the EU, legislation is largely harmonized under PSD2, leaving only limited flexibility for national implementation. Thus, in this context, "policy" likely refers to the manner in which rules are applied and enforced.

In Figure 11, we plot the share of "full-EEA cross-border PIs" out of "cross-border PIs", as in Figure 10. This time, the vertical axis represents the size of the domestic payment market, proxied by the logarithm of deposits with domestic banks (in EUR billions).[39] Most country dots align along a south-west to north-east trend, indicating that the share of full-EEA cross-border PIs increases with domestic market size. A possible interpretation is that even PIs which aim for full EEA coverage maintain a strong domestic base. Two notable exceptions emerge: on the left, five countries (CZ, DE, IT, PT, and SE) with medium to large domestic markets but limited outward reach; and on the right, other five countries (CY, IE, LT, LU, and MT) with small domestic markets that act as hubs.

Notably, when the two side groups are included, the correlation between the share of full-EEA cross-border PIs and the logarithm of domestic deposits becomes negative, at -0.32. This finding will reappear later when we present the results of a small econometric model.

Next, we examined how the three country groups identified in Figure 11 – each represented by a different color – compare across three dimensions:

(i) business friendliness,
(ii) financial secrecy, and
(iii) the weight of financial services provided to non-residents.

For (i), we relied on World Bank indices measuring ease of starting and doing business, as well as the IMD World Competitiveness Center's business efficiency index.[40] As shown in Figure 12, LT and IE perform well on the World Bank indices relative to the entire EEA but rank average within Northern Europe, where countries cluster in the upper-right area quadrant. By contrast, the other three hubs (CY, LU, MT) do not appear in that quadrant associated with higher business friendliness.

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[38] This measure is calculated by first comparing, for each country, the average number of cross-border PIs authorized to operate in neighboring countries with the corresponding average for non-neighboring countries. We then compute the mean of this ratio across all countries. Countries with fewer than two neighbors or fewer than five cross-border PIs (IS, IE, LA, MT, PT, SI) are excluded. Neighboring countries are defined by shared borders, with a few exceptions based on strong commonality: LU and NL, DK and FI within the Northern area, IT and ES.

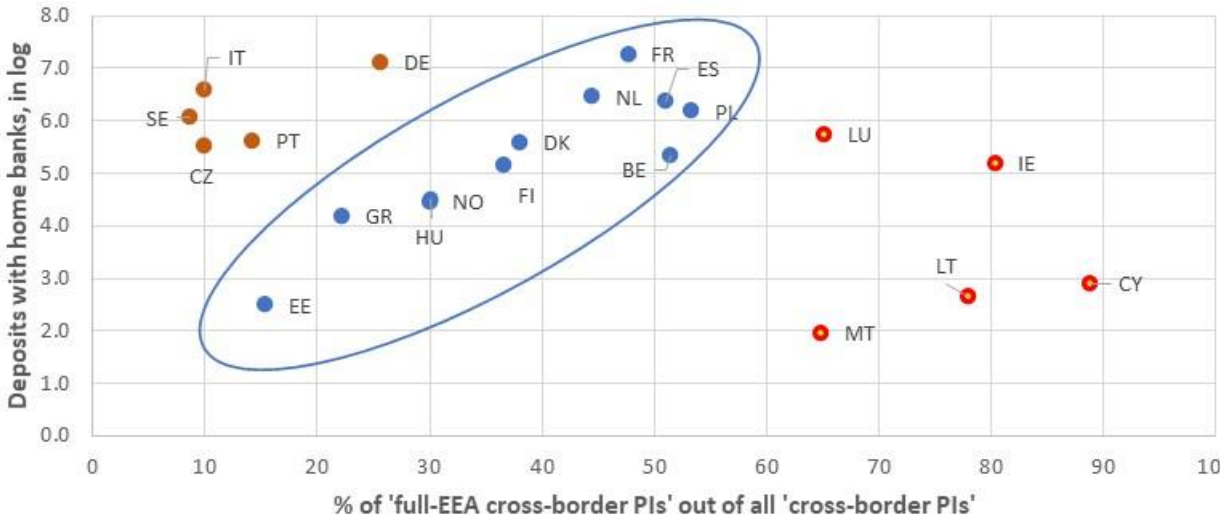
[39] Data as of June 2025 (source: ECB). The logarithmic adjustment accounts for the fact that larger national markets tend to host not only a greater number of PIs but also larger ones; in other words, the number of PIs increases less than proportionally with market size.

[40] After the 2020 edition, the World Bank suspended its *Doing Business* Report due to "data irregularities", although the measures remain available on its website. It seems unlikely that these irregularities affected EEA countries, given the strong reputation of their statistical offices. See https://archive.doingbusiness.org/en/doingbusiness and https://www.imd.org/centers/wcc/world-competitiveness-center/.

These results suggest that while business friendliness matters, it does not fully explain concentration of what we have defined as full-EEA cross-border PIs as similar patterns would otherwise emerge in Denmark (DK) and SE. Switching to IMD data reinforces this conclusion.

Figure 11

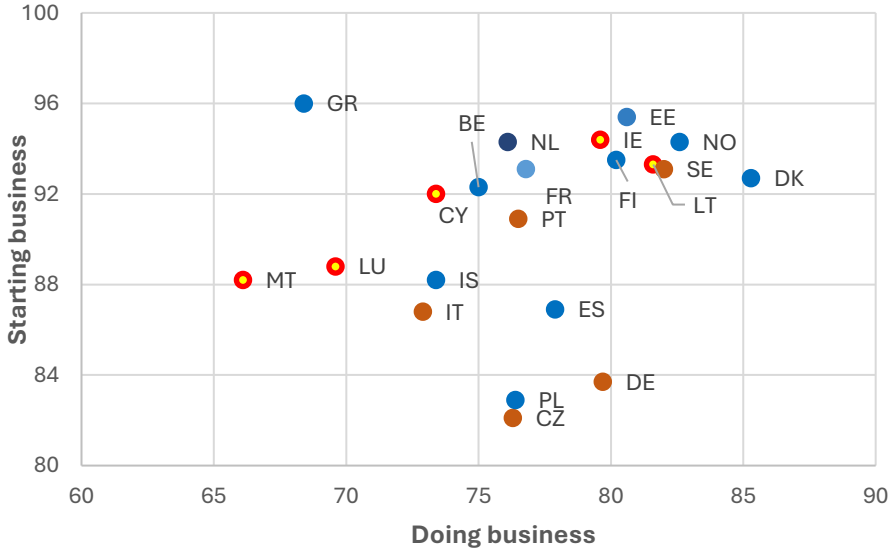
Cross-border projections of PIs and size of domestic deposits with MFIs (1)



(1) Author's elaboration on EBA and ECB data

Figure 12

Indexes of Easiness in doing business and in Starting business (1)



(1) Author's elaboration on World Bank data.

For measures (ii) and (iii), we relied on statistics from the Tax Justice Network (TJN). The secrecy score captures the degree of financial secrecy embedded in a jurisdiction's laws and regulations, while

the Global Scale Weight reflects the extent of financial services a jurisdiction provides to non-residents clients.[41]

To obtain an overall view on the impact of these indices and measures, we estimated a cross-sectional model with the share of full-EEA cross-border PIs as the dependent variable. Explanatory variables include: (a) the logarithm of deposits in the home country; (b) the logarithm of deposits in the neighboring countries; (c) the TJN financial secrecy score; (d) the TJN Global Scale Weight; (e) the World Bank index on ease of starting a business; (f) the World Bank index on ease of doing business; (g) the IMD business efficiency index.

Results from selected specifications are presented in the table below. Fits (1) and (3) use the same set of explanatory variables but differ in sample size, which decreases from 21 to 17 countries.[42] In the smaller sample, the fit improves, as indicated by the lower probability associated with the F-statistics, declining from 0.07 in fit (1) to 0.01 in fit (3). This comparison is replicated in fits (2) and (4), with similar results. Consequently, subsequent estimations focus on the smaller 17-country sample.

Regarding individual explanatory variables, both measures of deposit size are statistically significant in fits (3), (4), (5) and (6), with the expected negative sign – consistent with the correlation of -0.32 reported earlier. Conversely, the TJN financial secrecy measure is not significant in these fits while it was in fits (1) and (2), which use the 21-country sample. This may indicate explanatory power of this variable with respect to the four countries excluded when moving to the 17-country sample. However, given the lower overall quality of (1) and (2), this interpretation should be treated with caution.

Referring again to fits (3) to (6), the variable Log(Deps)_home takes a negative sign – consistent with the correlation described earlier in Figure 11 – and is statistically significant, as is Log(Deps)_neighbors. Conversely, in line with the preliminary remarks on Figure 12, neither the World Bank index for "Starting business" nor "Doing business" are significantly different from zero; in fact, the latter even fails to display the expected positive sign.

In fit (7), we replicated fit (6) but omitted the TJN Global Scale variable. Comparing residuals between the two fits suggests that this variable provides substantial explanatory power for LU. In other words, LU attracts many PIs with strong cross-border projection as part of a broader pattern of supplying financial services to foreign residents – a characteristic that extends beyond the specific provision of additional IBANs.

As a final observation, across the most reliable fits (3) to (6), the model systematically underestimates the dependent variable for both IE and LT by 7-8 percentage points compared to actual values. In other words, while the model anticipates high shares of full-EEA cross border PIs for these countries, observed values are even higher.

[41] https://fsi.taxjustice.net/about-the-index/.

[42] The four countries excluded from the latter sample (GR, HU, EE and PT) belong to the top cluster shown in Figure 9.

Table 5

Estimates – Dependent variable: 'full-EEA cross-border PIs' / 'cross-border PIs' (1)							
	(1)	(2)	(3)	(4)	(5)	(6)	(7)
Intercept	-15.2	5.33	80.6	93.48	52.74	107.6	27.69
Log(Deps)_home	-5.44	-7.00*	-8.23**	-9.08**	-8.54**	-8.83**	-5.61
Log(Deps)_neighbors	-0.61	-0.87	-1.12**	-1.10*	-0.97**	-1.10**	-0.90
TJN Financial Secrecy	1.62*	1.84**	0.64	1.03	0.93	0.94	1.53*
TJN Global Scale Weight	333.3	421.4*	404.0**	383.0*	356.9*	369.3*	
WB starting business		-1.20		0.29		-0.57	-0.19
WB doing business		1.19		-0.70	≈ 0		
IMD business efficiency	0.06		-0.19				
N	21	21	17	17	17	17	17
R^2	0.46	0.50	0.69	0.67	0.67	0.67	0.56
F-probability	0.07	0.08	0.01	0.04	0.02	0.02	0.03

(1) * / ** / ***: significant at 10% / 5% / 1% level.

The econometric fits should be interpreted in light of the fact that, together, Cyprus, Ireland, Liechtenstein, Luxembourg and Malta account for approximately 2.4% of the EEA population and 3.9% of its GDP (based on current estimates for 2025), yet host 16.3% of the Area's payment institutions authorized to operate on a cross-border basis (as of 9 February 2026). When this share is compared with the average of the two economic and demographic indicators, a cross-border payment institution is around five times more likely to choose one of these five jurisdictions as its home Member State than the EEA average. Excluding Ireland – the largest economy within the group – this multiple increases to approximately eleven.

Taken as a whole, the available results and descriptive statistics do not constitute direct evidence of differences in regulatory or supervisory policies. Establishing whether such differences exist would require either dedicated descriptive statistics or an econometric framework incorporating reliable and comparable data on supervisory and enforcement practices – data which, to our knowledge, are not currently available.

At the same time, we can confidently reject the hypothesis that the size of the domestic economy constitutes a primary driver of establishment choices in these jurisdictions.[43] Moreover, while indicators of business or market friendliness contribute to explaining location decisions in some cases, they do not provide a comprehensive account of the observed concentration and, even where statistically relevant, their explanatory power remains limited.

[43] As discussed above, geographical location continues to matter even in an increasingly digitalized payment landscape. All else being equal, an internationally oriented payment institution may therefore prefer to establish itself in a big jurisdiction in order to benefit from access to a sizeable domestic market.

Against this background, it appears reasonable to advance the more cautious conjecture that market participants' expectations regarding institutional practices, administrative processes, and the nature of supervisory engagements may play a role in the selection of home jurisdictions, without implying any inference regarding the actual intensity or effectiveness of supervisory activity.

5. Additional IBAN supply under Open Banking and Banking-as-a-Service

5.1 Open Banking (OB) and Banking-as-a-Service (BaaS): an Overview

As noted in the previous section, the four market sources consulted do not provide quantitative details on how they selected and ranked leading providers of additional IBANs. They do, however, indicate the main criteria considered:

(i) security and compliance, with UK and EU regulations, including FCA guidelines, PSD2 and GDPR;
(ii) multi-currency support;
(iii) global reach, measured by the number of regions and countries served;
(iv) pricing structure, including fee levels and transparency;
(v) quality of customer support.

This list clearly suggests that a financial firm aiming to rank among major vIBAN providers should offer this service along with other payment solutions, as highlighted by items (ii) and (iii). Moreover, the absence of any reference to traditional bank accounts indicates that such firms are unlikely to be banks;[44] even when holding a banking license, their brick-and-mortar presence is typically limited. Taken together, these elements point to the provision of payment services within the expanding Banking-as-a-Service (BaaS) ecosystem and the overlapping concept of Open Banking (OB). In this light, Lener (2024)'s view that additional IBANs represent another example of fintech innovations appears well-founded.

OB refers to a broad trend in which banks share customer data with third-party providers (TPPs), either voluntarily or under regulatory mandate, to enable new applications and services, such as real-time payments (Banca d'Italia, 2021; BIS, 2019). Data sharing occurs with the consent of the account holder but it does not require a contractual agreement between the bank and the third party.

From a technical standpoint, data access and payment initiation occur via an Open Application Programming Interface (Open API), which enables seamless communication between the bank's and third party's systems without additional arrangements (Polasik *et al*., 2024).

Turning to BaaS, this model enables banks and fintech firms to provide banking infrastructures and products to other businesses, often non-financial ones. These client firms – sometimes called distribution partners – integrate such services into their offerings without incurring significant capital costs or regulatory burdens (PWC, 2024). In practice, BaaS allows non-financial businesses, such as e-commerce platforms or physical retailers that would find it costly to establish their own financial entity, to offer financial services to its customers.

OB and BaaS overlap insofar as both expand payment options for households and businesses, with APIs serving as the technological enabler.[45] Moreover, OB facilitates BaaS (and embedded finance)

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[44] This does not preclude traditional banks from offering vIBAN services; nonetheless, the main providers are generally not-bank institutions.

[45] This block of text is drawn from the articles entitled "*Banking-as-a-Service vs. Open Banking: Understanding Their Roles in the Fintech Ecosystem*" and "*Open Banking vs Banking as a Service*" (https://blog.brankas.com/baas-vs-open-banking and https://connectpay.com/blog/open-banking-vs-banking-as-a-service/).

by enabling secure data sharing between banks and third-party providers. However, the two models differ fundamentally:

- OB involves sharing customer data with third-party providers, while
- BaaS allows businesses to embed banking services directly into their platforms under their own brand.

In OB, the originating bank remains central, whereas in BaaS the bank plays a background role. BaaS typically relies on white-label services, where distribution partners offer financial products under their own branding, even though the underlying services are provided by a bank, a feature absent in OB.[46] Differences also emerge in the APIs adopted by the two models.[47]

We are thus confronted with a single broad process, which while diversified among its components, shares common drivers on both the supply and demand side: technological developments (e.g., mobile devices, payment options) and customers seeking flexibility in undertaking purchases and payments, respectively. A bush more than a tree with bifurcations could be a fitting graphical representation.[48]

Awareness of the increasing fragmentation of payment chains – driven by the entry of new market participants and the adoption of new technologies – lies at the core of the revision of FATF Recommendation 16 (R.16), commonly referred to as the *Travel Rule*. As clarified in the associated Interpretive Notes (INR.16), the information included in the payment message should make it possible for all institutions involved in the transaction, as well as the competent authorities, to identify the financial institutions servicing the originator's and the beneficiary's accounts, respectively, and the jurisdictions in which those institutions are located (FATF, 2025a, paragraph 7 of INR.16).

This provision also directly addresses the use of virtual IBANs, which fall within the broader category of "virtual account numbers", as further specified in the subsequent public explanatory notes accompanying the revision of R.16 (FATF, 2025b). In this context, the FATF acknowledges that virtual account numbers may obscure the actual location of a customer's account, thereby hindering the ability of financial institutions and authorities to assess the true nature and routing of a transaction. This concern underpins the enhanced obligation to identify the relevant servicing financial institutions and their respective jurisdictions, as noted above. At the same time, the FAFT explicitly clarifies that the revised Recommendation is not intended to prohibit the legitimate use of additional (virtual) IBANs.

Further indication is expected from the forthcoming FATF guidance paper on payment transparency, which aims to promote a consistent implementation of the revised standards and is expected to be published in late 2026. The implementation deadline for the revised Recommendation has been set at a comparatively more distant horizon, namely the end of 2030.

5.2 Open Banking Models

As outlined by the World Bank (2022), three baseline models of OB have emerged globally:

(i) the regulatory-driven model, exemplified by the EU and the UK;

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[46] The concept of a white-label product extends beyond BaaS. It refers to situations where a company sells products, under various brand names, that are manufactured by another company. Whole Foods and Walmart are prominent examples of large retailers that make extensive us of white labelling. See "*What Is a White Label Product, and How Does It Work?*" at https://www.investopedia.com/terms/w/white-label-product.asp.

[47] The Brankas blog cited above points out that "*BaaS APIs [..] can access an account's entire lifecycle, from creation to retrieving transactions and making payments. […] In contrast, an open banking API is only involved in one stage of the life cycle: receiving transaction and balance data from a customer's account. It has no involvement in opening or terminating accounts*".

[48] The metaphor illustrates the close relationship among concepts such as Open Banking, Banking-as-a-Service, additional IBANs, and third-party providers, without suggesting any strict hierarchy or lineage between them.

(ii) the collaborative model, adopted in jurisdictions such as Singapore, and
(iii) the industry-led model, as seen in the USA.

The distinction between (i) and (iii) is straightforward: the former is mandated by regulation, while the latter is driven by market initiatives. As for (i) and (ii), both involve promotion by authorities, but in (ii) this takes place through non-mandatory regulations and governance frameworks.[49]

Even when focusing only on OB models where authorities play an active role, Plaitakis and Staschen (2020) note that these models differ along several dimensions:

- commitment to participation, which may be mandatory (for the entire industry or specific actors) or voluntary (at least formally; see fn. 49);
- scope of services covered, ranging from broad (multiple financial services) to targeted (banking and/or payments);
- definition of data holders, through designation of specific institutions, selection of entity categories, or inclusion of a wide range of financial entities; [50]
- types of data shared, from generic information (e.g., ATM location) to customer or transaction-level data;
- payment initiation by third parties, which may or may not be included in the package.

Table 6, compiled primarily from Plaitakis and Staschen (2020)[51], summarizes eleven OB models. Differences outweigh commonalities because, as Bianco and Vangelisti (2024) note, OB does not constitute a single, fixed model.[52]

Table 6

Types of OB regimes, promoted by the authorities (1)

		Mandatory regimes						Voluntary regimes				
		AUS	BHR	BRA	EU	MEX	UK	IND	JPN	MYS	SGP	HKG
Type of service	broad	✓		✓		✓		✓	✓	✓	✓	
	targeted		✓		✓		✓					✓
Pool of data holders	named entities			✓			✓					
	entire categories	✓	✓		✓				✓	✓	✓	✓
	broad range					✓		✓				
Payment initiation	yes		✓	✓	✓		✓		✓		✓	
	no	✓				✓		✓		✓		✓

[49] Babina *et al*. (2023) narrow the taxonomy to a binary distinction between government-led and market-led initiatives, omitting the intermediate case (ii) identified by the World Bank (2022). This may reflect the fact that, for some regimes classified under (iii), it is debatable whether industry actors retain meaningful freedom to adopt OB. Examples of approaches that are formally voluntary but appear de facto mandatory include Japan and Hong Kong (Plaitakis and Staschen, 2020).

[50] Examples include naming the nine largest banks in the UK, selecting all account servicing payment service providers (ASPSPs) in the EU, and extending participation to fintech firms, clearing house, and traditional financial institutions in Mexico.

[51] Plaitakis and Staschen (2020) mentions Indonesia as twelfth entity. In practice, their paper provides only limited information on this regime, likely due to restricted access to original sources. Consequently, Indonesia was not included in our summary Table 6.

[52] Based on the dimensions of service type, data holder pool, data type and payment initiation, the average bilateral correlation among the six mandatory OB regimes is only 0.13. The five voluntary regimes show slightly greater consistency, with an average correlation of 0.30. Across all 11 regimes, the overall average correlation is 0.18.

(1) Table compiled by the author using information provided mainly from Plaitakis and Staschen (2020).

5.3 Open Banking Implementation in the EU and UK

Art. 36(1) of the PSD2 establishes that:

> *Member States shall ensure that payment institutions have access to credit institutions' payment accounts services on an objective, non-discriminatory and proportionate basis. Such access shall be sufficiently extensive as to allow payment institutions to provide payment services in an unhindered and efficient manner*

This is the so-called access-to-account rule. Payment Initiation Service Providers (PISPs) require only the account holder's consent to access their banking account, without entering into a contractual relationship with the bank providing the account. While this provision marks a significant regulatory milestone, it did not emerge in isolation: its foundations were laid by PSD1 (2007), which established rights and obligations for a broad spectrum of payment services (Pozzolo, 2021).

PSD2 has been the subject of extensive and insightful commentary. For a comprehensive treatment, see the collective works edited by Bani, De Stasio and Sciarrone Alibrandi (2021), Gimigliano and Božina Beroš (2021), and Maimeri and Mancini (2019).

Thus, PSD2 incorporates not only an objective element – establishing the access-to-account rule – but also a subjective one within the OB concept, as highlighted by Olivieri (2021, p. 47):

> *From a subjective point of view, the PSD2 Directive aims at further increasing competition in the payment services sector by introducing and regulating a new type of operator, the Third Party Providers, in addition to those already present in the market for payment services and differing from both the "account rooting" PSPs and the Electronic money institutions, as they do not intervene in the management of payment accounts nor in the circulation of funds available to the holder.*

It is important to note a significant gap in the legal literature: the topic of additional (virtual) IBANs receives almost no attention. Among the three collective works cited on PSD2[53], we found only an indirect reference to vIBANs in Mezzacapo (2021), where the author addresses the issue of IBAN discrimination.[54]

This evident lack of interest suggests that, like the European legislators, scholars did not foresee the growing use of additional IBANs following the opening to Open Banking. This may explain the later decision to introduce the definition of "virtual IBANs" in an ad hoc manner within a non-payment regulation – the AMLR – published in 2024, nine years after PSD2. This, in turn, indicates that even in Europe, evolution was driven to an important extent also by market forces.

In the UK, the Competition and Markets Authority (CMA) introduced the CMA Open Banking Order in 2017, requiring banks by 2018 to "*give their personal and business customers the ability to access and share their account data on an ongoing basis with authorized [by the government] third parties*" (Babina *et al*., 2023). While this provision mirrors many elements of Article 36(1) of PSD2, the regulatory approaches diverged significantly: the EU adopted a stance of technological neutrality,

[53] Although the list we cite is not necessarily exhaustive of all published commentaries on PSD2, our research indicates that it provides broad coverage.

[54] Lener (2024) provides another reference. Although we could not ascertain whether the author was aware at the time of writing of the EBA report published that same year, it is clear that by then the connection between OB and additional IBANs had become more widely acknowledged.

refraining from specifying technical standards, whereas the UK invited the nine largest banks to agree on open and shared APIs (Colangelo, 2024).[55]

Conversely, the United States has long exemplified a hands-off approach to Open Banking, with developments driven by the industry under a light legal framework – Section 1033 of the Dodd-Frank Act.[56] In July 2025, the Consumer Financial Protection Bureau (CFPB) announced plans to revise this section to facilitate the transition from screen scarping – a rudimentary method for third-party access to account data – to API-based data sharing. Although the transition was initially scheduled to begin in April 2026, current information indicates uncertainty regarding both the timeline and the precise scope of the forthcoming changes.[57]

6. Conclusion

The issuance of multiple IBANs linked to a single bank account offers clear benefits for firms and other professional entities, yet it also introduces significant risks – most notably in relation to money laundering and terrorist financing, as highlighted by the EBA (2024). Based on the analysis presented in this report, three priority actions emerge.

First, decisive measures are required to eliminate IBAN discrimination, which constitutes a breach of SEPA rules. Treating such violations as minor – which they are not – may inadvertently enable certain actors to obscure more serious attempts to conceal fund flows.

Second, beyond the simplest configurations, the use of additional IBANs may prevent the master account holder and other intermediaries from maintaining a complete view of the money trail, from initial payer(s) to the final payee.[58] This limitation underscores the need for close cooperation among all parties involved in the transaction chain to ensure effective monitoring. Within SEPA – which spans the EU, the three EEA non-EU countries, and eleven non-EEA jurisdictions – entities frequently operate across border and, outside the EU, according to different legal frameworks. Accordingly, in order to ensure full compliance with the principle laid down in Article 22(3) of the AML Regulation, appropriate mechanisms should be considered to guarantee full disclosure by entities operating in SEPA non-EU countries whenever virtual (additional) IBANs are issued for EU-based accounts.

The revision by FATF of its Recommendation 16, commonly referred to as the *Travel Rule*, represents a constructive step towards addressing the challenges posed by increasingly complex and fragmented payment chains. While the revised standard is not intended to prohibit the legitimate use of additional (virtual) IBANs, it clarifies that the information accompanying a payment message should enable all institutions involved in the transaction, as well as the competent authorities, to identify the financial institutions servicing the originator's and the beneficiary's accounts, together with the jurisdictions

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[55] While Europe has not established common API standards, which leaves participants with considerable flexibility, the market is converging on two sets of standards proposed by banking associations: STET10 and the Berlin Group (World Bank, 2022; Colangelo, 2024). This illustrates how boundaries between different models often blur: the EU's OB framework, generally considered authority-led, incorporates significant market-driven elements.

[56] This section of the Dodd-Frank Wall Street Reform and Consumer Protection Act (the "Dodd-Frank Act") requires that, upon request, "*a covered person shall make available to a consumer, upon request, information in the control or possession of the covered person concerning the consumer financial product or service that the consumer obtained from such covered person*" (see full text at govinfo.gov)

[57] We follow here the blog "*Dodd-Frank Section 1033: with or without a CFPB rule, here's how you can act now on open banking*", by B. Otten, published on September 2, 2025 (available at Axway Blog).

[58] This finding is based on a taxonomy comprising eight categories related to the use of additional IBANs. The classification relies on three factors: the bank identifier, the country identifier (tested by whether these identifiers match those of the primary IBAN), and whether the master account is held directly or indirectly by one of the end parties of the payment transfer.

in which those institutions are located. Given that the implementation deadline has been set for the end of 2030, the effective impact of the revised Recommendation will only be assessable over an extended time horizon. In the European Union context, a more immediate point of reference may be provided by the finalization and implementation of the Payment Services Directive (PSD3) and the Payment Services Regulation (PSR), expected to be finalized in the course of 2026, with implementation likely to follow in late 2027 or early 2028.

Transparency regarding the network of financial and non-financial entities involved in money transfers is equally critical. A review of licenses held by twenty major vIBAN providers suggests that transactions chains often involve more intermediaries than those identifiable through official, publicly available registers. While complexity alone does not imply illegality, standard configurations – such as utility companies assigning unique IBANs to customers for payment reconciliation – typically involve few intermediaries and do not strictly rely on multiple country identifiers. A balanced approach is therefore essential: one that accommodates legitimate business use of payment innovations while ensuring strict adherence to know-your-customer (KYC) principles.

Third, descriptive statistics derived from data published by the EBA reveal a pattern whereby a limited number of EU Member States host payment institutions licensed to operate cross-border across the EEA with markedly higher frequency than is observed elsewhere. Cyprus, Ireland, Lithuania, Luxembourg, and Malta fall within this subset.

Our analysis of these data, including the fit of a cross-sectional model, calls into question the widely cited view that market friendliness constitutes an important driver of such concentration. Even in the cases of Ireland and Lithuania – the two jurisdictions within this group that perform relatively well on standard business environment indicators – the fit suggests that market friendliness explains the observed pattern only partially. Having reasonably excluded domestic market size as an explanatory element, the analysis points to the potential relevance of a broader “regulatory policy” factor, understood as market participants’ expectations regarding institutional practices, administrative processes, and supervisory engagement, rather than differences in formal regulatory requirements.

At the same time, it is important to avoid drawing premature conclusions. The evidence presented does not constitute proof of uneven policy implementation across the EU. Moreover, the identification of a robust and comparable proxy for the intensity of national supervisory scrutiny remains elusive, owing to the lack of reliable quantitative data. Nonetheless, these findings provide a basis for further inquiry into how the current fragmentation of the payment landscape—characterized by the entry of new actors and the diffusion of new technologies—interacts with the objective of maintaining a level playing field in the application of regulatory and supervisory frameworks for payment institutions across Member States. In this context, the location choices of newer market participants may be influenced by strategic considerations that extend beyond purely market-related factors.

Taken together, these findings highlight the need for greater transparency and coordinated action by all stakeholders – both authorities and intermediaries – to fully leverage the benefits of additional (virtual) IBANs while ensuring they do not become a conduit for AML/CFT-related activities.

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