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Options to Improve Adoption of The LEI, in Particular for Use in Cross-border Payments

7 July 2022

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Executive summary

The G20 roadmap to enhance cross-border payments[1] has launched several initiatives to reduce frictions in the data processes connected with payments by promoting the use of common message formats, data exchange protocols, conversion and mapping approaches from legacy formats and standardised data. To address data handling issues and improve compliance processes, it also aims to examine the scope for a global unique identifier that links to the account information in payment transactions. This would facilitate straight through processing (STP), reducing costs, enhancing accuracy and increasing speed in transactions, and could as well assist market participants in meeting Know-Your-Customer (KYC) requirements.

In exploring the potential for, and the challenges to develop, a global digital unique identifier for cross-border payments, the FSB has been requested by the G20 to take into account existing identifiers including the Legal Entity Identifier (LEI) and to explore options to improve the LEI's adoption.

This report explores benefits that could accrue from the use of the LEI in cross-border payment systems and, in close coordination with the Global LEI Foundation (GLEIF), the Regulatory Oversight Committee (ROC) and national authorities, explores options to promote broader LEI adoption. It builds on a survey among FSB authorities and an outreach event with market participants, both held in the first half of 2022. It also extensively benefitted from inputs provided by GLEIF and ROC, including the ROC's 2018 and 2019-2021 Progress Reports.

Both authorities and market participants recognise the potential benefits of the LEI in strengthening data standardisation as well as assisting and supporting STP, KYC processes and sanction screening. The main obstacles to wider LEI adoption identified by authorities were not specific to the payment domain but pertained to general challenges already known to both GLEIF and ROC, i.e. costs, legacy issues and lack of perceived incentives for voluntary adoption of LEI by market participants and end-users. The timely update of the information contained within the LEI was also stressed as an important prerequisite for LEI use.

Market participants broadly agreed with the identified obstacles but considered legacy systems less of an issue. They underscored the need to provide use cases to better inform market participants of the benefits of the LEI, which would help to explain why the cost of adapting legacy systems would be warranted. They also pointed out the importance of easy access to LEI for cross-border payment purposes and stressed that its wider use would by itself provide incentives for voluntary adoption.

GLEIF, in cooperation with the ROC, has several initiatives to promote LEI adoption more broadly, including bulk LEI registration by intermediaries and business registries – which could both lead to a significant reduction of per capita fees and increase network effects – and additional LEI features that could incentivise voluntary adoption, such as the verifiable LEI (vLEI), i.e. a digitally verifiable credential containing the LEI. Further improvement in the quality of LEI data remains a GLEIF and ROC priority to enhance the effective use of the LEI and broaden adoption.

[1] FSB (2020), *Enhancing Cross-border Payments: Stage 3 roadmap*, October

Building on these initiatives, this report sets out recommendations (summarised below) for promoting the use of the LEI in cross-border payments, providing use cases to highlight the potential benefits of the LEI in supporting STP and contributing to the KYC process.

The report also sets out, in addition to these recommendations, some specific options for encouraging use of the LEI in cross-border payments, based on the inputs gathered from authorities, ROC, GLEIF, market participants and other stakeholders, that can be considered by relevant bodies.

Recommendations

The FSB remains committed to promoting broader use of the LEI globally, in line with its Thematic Review on Implementation of the Legal Entity Identifier in 2019. This report sets out recommendations and options for improving adoption of the LEI in cross-border payments in order to assist in achieving the goals of the G20 roadmap. Achieving these goals will depend on promoting uptake of the LEI among non-financial corporates, as well as financial institutions.

The following recommendations are addressed to FSB member jurisdictions, the FSB itself, ROC and GLEIF, relevant standard-setting bodies (e,g. the Committee on Payments and Market Infrastructures (CPMI), the International Organization of Securities Commissions (IOSCO), the Basel Committee on Banking Supervision (BCBS), and the Financial Action Task Force (FATF)) and international organisations (IMF, World Bank).

1) FSB member jurisdictions should:

- Explore ways to promote LEI adoption, particularly outside the financial sector, for instance by fostering nationwide implementation strategies to maximise the cross-sectoral benefits of the LEI; increase knowledge on the LEI to raise awareness of potential benefits and increase the visibility of LEI through public outreach initiatives; and consider the use of LEI before exploring the possibility of introducing other identifiers locally.

- Consider mapping the LEI to domestic identifiers in their digital infrastructures to promote interoperability of LEI and other identifiers to facilitate automated reconciliation and validation.

- Consider including an optional field for the LEI in routing message formats, including for those migrating to ISO 20022 messages, and where appropriate, explore the scope to mandate use of the LEI for certain payment message types.

- Consider adding, where appropriate, the LEI as a requirement in newly created or amended regulations, directives and legislation relevant to cross-border payments where entity identification is needed.

- Consider providing guidance on using the LEI in the payment chain, including how intermediaries should address challenges in obtaining the LEIs for cross-border payment beneficiaries (which are often more difficult to obtain than the LEIs for cross-border payment originators).

2) The FSB should:

- Explore synergies with the work of other building blocks in the roadmap (e.g. BB6 on reviewing the interaction between data frameworks and cross-border payments, BB8 on fostering KYC and identity information sharing, BB14 on adopting a Harmonized ISO 20022 version for message formats, including rules for conversion/mapping, and BB15 on APIs).

3) The FSB and member jurisdictions should:

- Support, as appropriate, ROC's and GLEIF's initiatives to address obstacles to broader LEI adoption (e.g. costs, lack of awareness of incentives and data quality), including the validation agent model, bulk registration and vLEI in continuing the work of the G20 roadmap.

4) The ROC members and GLEIF should, according to their respective mandates:

- Continue their efforts to increase adoption of the LEI (including by non-financial corporates), promote timely update of the LEI reference data and ensure their quality, and explore further, with national regulators and others, the role the LEI might play in assisting entities with due diligence for KYC, as well as other use cases.

- Set up pilot projects among relevant stakeholders regarding standards for including the LEI in payment messages and provide examples to financial institutions on possible uses of the LEI when transmitted in payment messages.

- Increase the visibility of the LEI through public outreach initiatives, particularly outside the financial sector, and increase knowledge on the LEI to help address any perceived lack of benefits in cross-border payments. This should involve developing and publishing use cases in cross-border payments for non-financial corporates, and ways in which they can directly benefit from adopting the LEI.

5) Relevant standard-setting bodies (e.g. BCBS, CPMI, IOSCO, FATF) and international organisations (IMF, OECD, World Bank) should:

- Consider ways to embed or enhance references to the LEI in their work, in line with recommendation 3 of the 2019 FSB Thematic Review on Implementation of the Legal Entity Identifier (LEI peer review). This could facilitate the implementation of relevant LEI uses for authorities and market participants, including for cross-border payments.

- Consider issuing guidance and carrying out further outreach regarding sanctions, customer due diligence and wire transfers on how the LEI may be used as a standardised identifier for sanctions lists or as the primary means of identification of legal entity customers or beneficiaries, (in line with suggestions made in the FATF Survey of October 2021 and consistent with existing FATF Recommendations).

The FSB will review progress in implementing these recommendations and publish a progress report by end-2024, together with a review of progress in implementing the recommendations of the LEI peer review.

Introduction

The G20 has made enhancing cross-border payments a priority, with the goal to make such payments faster, cheaper, more transparent and more inclusive, while maintaining their safety and security. In October 2020 the FSB published the G20 roadmap to enhance cross-border payments[2] to address the key challenges often faced by cross-border payments and the frictions in existing processes that contribute to these challenges.

Poor data quality, fragmentation in data sources and limited standardisation of data exchange cause complexity when processing cross-border payments, which increases their cost, limits speed and impacts transparency. To address data handling issues and improve compliance processes, the roadmap has prompted several initiatives to promote the use of common message formats, data exchange protocols, conversion and mapping approaches from legacy formats and standardised data. One of these initiatives is the consideration by the FSB of the scope to establish unique identifiers with proxy registries (Building Block 16 of the roadmap, BB16). In exploring the potential for, and the challenges to develop, a global digital unique identifier for cross-border payments, the FSB agreed to take into account existing identifiers, including the LEI developed by the FSB in 2012.[3]

The LEI was developed to uniquely identify counterparties to financial transactions across borders, and thereby to improve and standardise financial data for a variety of purposes; for instance, to support a more accurate and timely aggregation of data on the same entity from different sources, especially on a cross-border basis. The LEI is a 20-digit alphanumeric code based on the ISO 17442 standard that uniquely identifies legally distinct entities.[4] It has no embedded intelligence but is connected to reference data that enables unique identification of legal entities and provides some information on their ownership structure. The LEI and its associated reference data are freely available open data.

This report explores the options to improve adoption of the LEI, as requested under the first milestone of Action 2 of BB16 (see Annex 1 for the BB16 Actions and timeline). In preparing this report, the FSB CPDI (Cross-border Payments Data and Identifiers Group) has worked in close coordination with GLEIF,[5] the ROC[6] and national authorities. The ROC and GLEIF regularly assess the use and adoption of LEI. This report includes examples of their work and is not intended to stand in the place of the ongoing broader work of ROC and GLEIF. In order to avoid duplication with the work of the ROC and within the Global LEI System (GLEIS),[7] this report

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2 FSB (2020), *Enhancing Cross-border Payments: Stage 3 roadmap*, October

3 See *Global Legal Entity Identifier for Financial Markets* (FSB, 2012)

4 See ISO 17442: "legal entity" includes but is not limited to unique parties that are legally or financially responsible for the performance of financial transactions or have the legal right in their jurisdiction to enter independently into legal contracts, regardless of whether they are incorporated or constituted in some other way (e.g. trust, partnership, contractual). It includes governmental organisations, supranationals and individuals when acting in a business capacity1), but excludes natural persons. It also includes international branches.

5 For further information about GLEIF see here.

6 The ROC, a group of approximately 65 public sector authorities, was established in November 2012 to oversee the GLEIS's responsibility of issuing and maintaining LEIs. For further information about ROC see here

7 In June 2012 the FSB issued recommendations to set up the GLEIS, comprised of a central unit, the not-for-profit GLEIF, and several local LEI issuing organisations (so-called Local Operating Units) that provide an LEI code to registrants at local level. The GLEIS was set up to allow legal entities from all around the world to register for an LEI and as safekeeper of the uniqueness and exclusivity of LEI codes.

focuses on governance and technical aspects only to the extent that these are relevant for broader adoption of the LEI in markets that are cross-border, whose participants usually engage in cross-border payments and that directly impact entities connected to cross-border payments. The report takes account of the 2019 FSB *Thematic Review on Implementation of the Legal Entity Identifier* (LEI peer review)[8] and will also inform future FSB follow-up on the recommendations set out in the peer review.

While the LEI is designed to identify legal entities (and individuals acting in a business capacity), it does not contain attributes to identify natural persons or link a legal entity to a natural person. Under Action 1 of BB16, the FSB CPDI is reviewing the scope and technical and operational requirements of existing and proposed digital identifiers[9] for both legal entities and natural persons and analysing the need for a decentralised proxy registry.[10] It plans to finalise a separate report by October 2022[11] to explore the scope for, and obstacles to developing, a global digital unique identifier for cross-border payments, and potentially other financial transactions, that takes into account existing identifiers, including the LEI for legal entities and identifiers for individuals. If there is consensus that a new identifier is necessary specifically for the purpose of cross-border payments, other actions will follow, such as to propose standard design principles for proxy databases and define minimum requirements for personal identifiers.

1. Survey of member authorities and outreach with market participants

The potential benefits of the use of the LEI in cross-border payments have been explored in several jurisdictions, as explained later, albeit to a lesser extent than in some other use cases (e.g. derivatives markets).[12] Standardisation of data, data sharing and more efficient reconciliation and compliance processes – all issues that could potentially be addressed by a *global* identifier such as the LEI – are aspects that were prominent in the design of the roadmap and that came up strongly also in the stocktaking exercises conducted in the initial phase of the work under the roadmap.

To shed more light on such potential benefits, and to relate them more directly with the specific characteristics of the LEI, the FSB carried out a survey among its member authorities in early 2022, followed by an outreach event in April 2022 with representatives from banks, financial market infrastructures (FMIs), mobile money operators, international credit card companies and non-bank payment service providers engaged in cross-border e-commerce and remittance activities as well as industry bodies. Participation was balanced to ensure a mix of industry and regional representation. In both cases, the goal was to explore whether and how broader adoption of the LEI across jurisdictions could provide benefits for the processing of cross-border

8 FSB (2019), *Thematic Review on Implementation of the Legal Entity Identifier*, May.

9 An identifier is an attribute or set of attributes that uniquely characterises an identity in a domain (See: *Final Report of JFSA Multilateral Joint Research on Digital Identity*, Nomura Research Institute, June 2020). One such identifier currently under development is the ISO Natural Person Identifier (NPI). See here.

10 Proxy registries are decentralised structures linking digital unique identifiers with the account information of the payer and the payee. (see CPMI 2020 Enhancing cross-border payments: building blocks of a global roadmap. Stage 2 report to the G20 – technical background report).

11 FSB 2021 G20 Roadmap for enhancing cross-border payments: First consolidated progress report.

12 A recent example of increased attention is SWIFT's PMPG, *Global adoption of the LEI in ISO 20022 Payment Messages 2021*.

payments, including related to customer due diligence, facilitating greater STP, reducing payment fraud, improving transparency in the payment chain, and enabling faster and simpler reconciliation. Participants were invited to share views on ways to improve the adoption of the LEI and identify main challenges to the broader adoption of the LEI and to its use in cross-border payments. A dedicated outreach was also conducted by the GLEIF to explore these themes among business partners, including Local Operating Units (LOUs).

1.1. Survey of member authorities[13]

Several surveyed FSB member authorities highlighted the potential benefits of including LEI within cross-border payment messages to improve the efficiency of the payment process and promote STP: by including the LEI in a dedicated payment message field that processing systems can capture, legal identities involved in the transaction can automatically be identified. China has also expressed support outside the survey for widening the adoption of the LEI in cross-border payments.[14]

A few members pointed to operational efficiencies that could be gained in the KYC due diligence process, suggesting that the LEI could help in streamlining the monitoring and onboarding processes. Such automated reconciliation and validation could be achieved by including the LEI both in payment messages and KYC utilities, provided that banks map the LEI with proprietary customer identification numbers.[15] Similarly, a member noted that a widespread adoption of the LEI in cross-border payments would support compliance monitoring and also reduce the risk of payments being delayed, making LEI benefits tangible for legal entities of all sizes.

Several members noted that, for the benefits of LEI use in cross-border payments to be realised, adoption of the LEI would need to be widespread. In this regard, some members noted that issues such as cost and data validity and protection should be considered as well as the awareness of business cases for voluntary adoption by market participants. These aspects are further explored in Section 3.2.

1.2. Outreach event

Industry representatives echoed the perceptions of the official sector regarding the benefits that a wider adoption of the LEI could bring to cross-border payments in terms of efficiency and security, as well as the attendant challenges and potential solutions to achieving that goal.

It was recognised that the adoption of unique identifiers such as the LEI could streamline payment flows and be an important element for enabling the KYC and sanction screening processes. Participants cited the following as the goals to be achieved to facilitate wider use of the LEI beyond the financial sector:

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13 The list of survey respondents is in Annex 2.

14 In Promote LEI in RMB Cross-border Payment Ecosystem, China's Cross-border Interbank Payment System has introduced its use case for use of LEI in cross-borders payments as well as its perspective on the relevant benefits and challenges.

15 Two FSB members noted that in the future a broader availability of the information on the direct and/or ultimate parent entity encompassed in the more advanced reference data of the LEI (the Level 2 data, see Box 1) could help compliance check procedures and the analysis of inter-group payments.

- Improving data quality to avoid legal risks for the financial institutions which rely on that data for KYC purposes. The extent to which organisations can rely on LEI data in KYC is a subject that raises compliance considerations, and responsibility for accuracy cannot simply be passed to the original data source. Financial institutions need to have confidence in the information they acquire from an outside source;

- Achieving reduced LEI fees by achieving economies of scale via expanded roll-out;

- Reducing complexity of retrieving and verifying information. For example, suggestions to develop an application programming interface (API) to facilitate the implementation of automated queries came from respondents both from the public and private sector. Access to identifiers should be easily scalable and imply low costs and administrative effort. Another participant suggested including the LEI within decentralised ID systems whose use is encouraged by the EU; and

- Increasing knowledge about the LEI among cross-border industry players to help raise awareness of potential benefits.

The solutions envisaged by the private sector mirror the challenges identified. Those include:

- Allowing for the interoperability of identifiers and coupling adoption of the LEI with ISO 20022 implementation to enhance cross-border payments;

- Introducing more verifiable versions, strong forms of authentication, and tiered assurance levels, as well as educating corporates about the security that using the LEI adds to cross-border payments, since firms support mechanisms to reinforce the security of payments;

- Developing compelling use cases beyond payments that can add value to businesses, such as the LEI's original function as a tool to aid firms in tracking and managing their exposures or the use for e-invoicing; and

- Working with legal authorities to clarify the legal scope of using LEI for KYC procedures.

Finally, in the context of the work of BB6 of the roadmap, which seeks to assess frictions to cross-border payments arising from data frameworks, some private sector respondents to the public outreach conducted by the FSB highlighted the importance of having a unique global identifier for legal entities, such as the LEI, in cross-border payment transactions to address data sharing issues.

1.3. GLEIF survey

- In a survey conducted by GLEIF among business partners and LOUs, respondents also stressed how the LEI for payments' originators and ultimate beneficiaries would provide benefits to due diligence activities. By facilitating and accelerating the matching of account holder and account number as well as the sanctions checks of payments' originator or beneficiary, the LEI would make due diligence activities quicker and more efficient and ultimately enhance the safety of payments.[16] Some respondents suggested that initial costs of introducing the LEI in cross-border payments (such as costs to introduce the LEI as a new field in payments messages, to include the LEI in databases, to clarify payment processing practices whenever the LEI would not be provided or incorrect) would be outweighed by the savings in due diligence activities and enhanced trade competition.[17] Some organizations highlighted that there is an opportunity for wider adoption of the LEI with the migration to the ISO20022 messaging standard, bringing fundamental changes to the legacy systems of the financial institutions. Some respondents emphasized that the LEI can play a positive role in reducing de-risking by providing a credible global identity to the entities, particularly small and medium-sized enterprises (SMEs) or non-profit organisations in developing countries or conflict zones, which are excluded from payments and financial transactions due to increasingly stringent KYC/AML requirements. One organization confirmed that validation of client identity in international payments will likely be faster with the LEI. Currently without a form of global legal entity identifier, some transactions, particularly for new players, may take up to 14 days to complete due to compliance checks.

- When surveyed by the GLEIF about the role they could play to support broader LEI adoption, one LEI issuing institution mentioned that it could enhance the outreach to its corporate clients by offering training on the benefits of the LEI. Two other respondents recommended that banks get an LEI for any new corporate client and arrange for renewals. One respondent mentioned that the LEI could provide benefits in free trade areas, such as the African Continental Free Trade Area (AfCFTA) or the Association of Southeast Asian Nations Free Trade Area (AFTA), to enhance the overall cross-border exchange of goods, both to simplify customs procedures as well as to facilitate the connected cross-border payments. Finally, another respondent suggested that software that requires an LEI in order to access and execute transactions could provide an incentive for entities involved in cross-border payments to adopt an LEI. Finally, another respondent urged that FATF recommendations, in particular recommendations 16 and 10, provide options on how to identify a company, presenting the LEI as a potential solution.

2. Rationale for the LEI and recent progress

In 2011 G20 Leaders supported "the creation of a global legal entity identifier (LEI) which uniquely identifies parties to financial transactions" and mandated the FSB to "prepare recommendations for the appropriate governance framework, representing the public interest, for such a global LEI".[18]

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16 Organisations responding to the GLEIF survey also mentioned that the LEI could be used to provide globally accepted credit scoring profiles: in this way small businesses that currently do not engage in international trade due to the lack of a globally accepted risk profile could be facilitated in competing with large players, creating a more level playing field.

17 The respondents noted that the LEI has the potential to improve the efficiency and lower the cost of vendor vetting, electronic contract signing and supply chain automation, thus facilitating the digitalisation of cross-border trading and associated payments.

18 G20 2011 Cannes Summit Final Declaration. The absence of a system that uniquely identified parties to financial transactions was considered an obstacle to a number of financial stability objectives such as the improvement of risk management in firms, better assessment of micro and macroprudential risks, facilitation of orderly resolution, containing market abuse, curbing financial fraud and enabling higher quality and accuracy of financial data overall. Already in the aftermath of the 2008-09 financial crisis

The LEI federated system has been in operation since 2012. The not-for-profit Global LEI Foundation (GLEIF) was created as the central operating unit, directly overseen by the Regulatory Oversight Committee (ROC), and a variety of organisations have been accredited by the GLEIF as LEI issuing organisations. As of end of first quarter 2022, 38 LEI issuing organisations are serving 226 jurisdictions.[19] LEI issuing organisations can be any type of organisation. For example, LEI issuers are also stock exchanges, numbering agencies,[20] certification authorities,[21] national statistical offices, business registries, etc. The majority serve multiple jurisdictions[22] and are accredited to provide an LEI to a variety of legal entity types.[23] Box 1 briefly summarises the main characteristics of the LEI.

Box 1: Legal Entity Identifier

The LEI is a 20-character reference code, based on a standard of the International Organisation for Standardisation (ISO 17442), that uniquely and exclusively identifies legally distinct entities. An LEI is assigned uniquely to an entity; the same code cannot be reassigned to another entity. Once a legal entity has obtained an LEI it cannot obtain another one.

The LEI is associated with core reference data, that provide primary information on the legal entity (Level 1 data) that respond to the question "Who is who?":

- The official name of the legal entity as recorded in the official registers.
- The registered address.
- The country of incorporation.
- The legal form of the entity (its Entity Legal Form Code, ISO 20275:2017).
- The date of the first LEI assignment; the date of last update of the LEI information; and the date of expiry, if applicable.

Besides that, an LEI is connected to information on the relationships it has with other legal entities it is connected to (Level 2 data), responding to the question "Who owns whom?". In particular, if the direct and/or ultimate parents of a legal entity with an LEI have obtained an LEI, these are included in the Level 2 data of the child entity. Likewise, the LEI of child entities – if available – is included in the reference data of their direct or ultimate parent's LEI.

In order to enhance LEI data quality, both ROC and GLEIF are constantly defining and implementing various mechanisms as setting the obligation of annually reviewing the reference data, adding enhancements to the LEI issuing process or making available for any person to send a challenge to review the data associated to the LEI.

it was recognised that a unique global system for legal entity identification "would reduce operational risks within firms by mitigating the need for tailored systems to reconcile the identification of entities and to support aggregation of risk positions and financial data, which impose substantial deadweight costs across the economy. It would also facilitate straight through processing".

19 See GLEIF's statistics available here.

20 National numbering agencies in some jurisdictions are in charge of assigning ISIN (ISO 6166) codes for the identification of financial instruments.

21 Certification authorities are entities that issue digital certificates.

22 Only 6 LEI issuing organisations serve just one jurisdiction, whereas 50% of the LEI issuing organisations serve 16 or more countries.

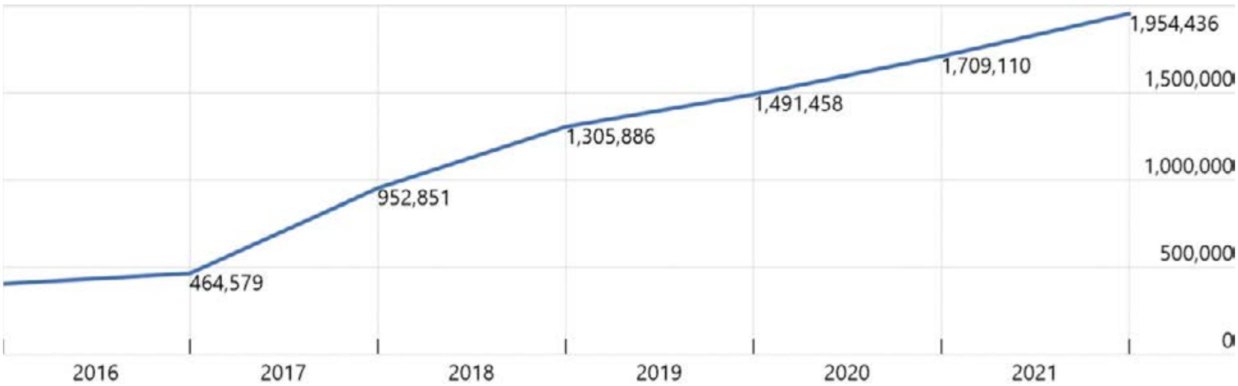
23 LEI issuing organisations need a dedicated accreditation to provide LEIs to mutual funds devoid of legal personality.

2.1. Progress in LEI adoption

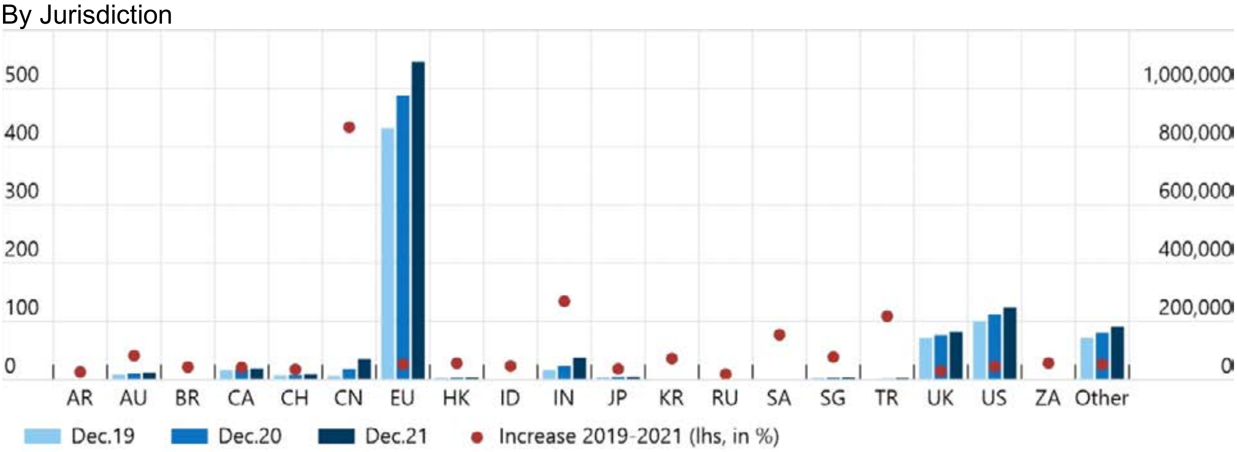
The number of active LEIs[24] had reached 1.9 million at the end of January 2022, from 400,000 in 2015 and 1.4 million in 2019 (+30%) (see Graph 1 upper panel). The European Union continues to be the jurisdiction with the highest number of active LEIs, with an increase of 26% since the end of 2019 (see Graph 1 lower panel). A similar growth rate has been experienced by Brazil (+22%), Canada (+21%), Hong Kong (+28%), South Africa (+26%), the UK (+23%) and the US. Jurisdictions with a limited number of active LEIs in 2019 have experienced high growth rates in the past few years, such as China (+433%), India (+135%), Saudi Arabia (+77%) and Turkey (+109%).

Number of active LEIs **Graph 1**

Total



By Jurisdiction



Source: GLEIF, GLEIF dashboard.

Initially the use and adoption of the LEI was predominantly in the financial markets and for securities, mainly driven by regulatory requirements. In May 2019 the FSB LEI Peer Review noted that LEIs identify reporting entities for close to 100% of the gross notional outstanding for over-the-counter (OTC) derivative trades and identify securities issuers for around 78% of the outstanding amount of debt and equity securities. However, LEI adoption was low outside securities and derivatives markets and uneven across jurisdictions, with several FSB

24 An active LEI is an LEI whose entity status indicates that the legal entity is legally registered and operating ("Active"). If the legal entity is no longer registered or operating, its entity status will appear as "Inactive". An LEI's entity status is "Inactive" if its registration status is either "Merged" (no longer exists as an operating legal entity due to merger) or "Retired" (ceased operation for reason other than merger).

jurisdictions – particularly in Asia and emerging market economies – not yet taking steps to mandate use of the LEI in any area, at that time.

In the meantime, regulatory use of the LEI has been expanded to other industries and business cases. Overall, since 2019 27 additional rules implementing the LEI have been issued.[25] New regulations introduced the LEI into banking supervision (Australia and China), for credit rating agencies (China), in the insurance sector, corporate credit and non-derivatives sectors (India), for asset management and market surveillance (in the EU), in securities markets (in China for certain securities issuers, investors and in order to open a securities custody account) and securitisation (in the EU), for statistical purposes (in China for reporting loans and foreign assets and liabilities for statistical purposes) and for foreign exchange and physical trade (China). Some countries have also issued a roadmap for the implementation of the LEI in the coming years, such as China (see Box 2 for its impact on cross-border payments). While the UK and the EU remain to be the jurisdictions with the highest number of regulations implementing the LEI (58 and 44 respectively),[26] the new regulations since 2019 have been introduced not only in the UK (+10) and the EU (+2), but also in the Asia-Pacific region, including China (+9), India (+3) and Australia (+1).

A few more regulations are currently under consultation or discussion that in future may increase the number of LEIs:

- The US Bureau of Consumer Financial Protection is currently proposing that financial institutions providing credit to small businesses[27] be required to report data on credit applications, including a unique alphanumeric identifier composed of their LEI and a unique code internally assigned to the credit extension.[28]
- Also in the US the Financial Transparency Act (FTA), currently under discussion in Congress,[29] proposes to amend securities, commodities, and banking laws to make the information reported to financial regulatory agencies electronically searchable, to further enable the development of RegTech and artificial intelligence applications, and reduce the private sector's regulatory compliance burden, while enhancing transparency and accountability. To these ends, the FTA proposes to require the adoption of an open, non-proprietary legal entity identifier – such as the LEI – across the major financial regulatory reporting regimes, to allow easy matching of filings from the same legal entity with multiple regulators.
- The European Systemic Risk Board (ESRB) recommended in December 2020 to the European Commission (EC) to consider introducing a union-wide legal framework governing the identification of legal entities involved in financial transactions by way of an LEI, to require legal entities to identify themselves with an LEI when reporting financial information and to require authorities to identify with the LEI any legal entity

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[25] See ROC, Regulatory uses of the LEI.

[26] 33 EU regulations have been preliminarily considered on-shored by the UK. All the EU on-shored regulations that were in force in the EU in 2019 were considered also UK LEI regulations in 2019.

[27] The Equal Credit Opportunity Act regulates financial institutions providing credit to small businesses, pursuant to section 1071 of the Dodd-Frank Act.

[28] CFPB 2021 Small Business Lending Data Collection under the Equal Credit Opportunity Act.

[29] Passed by the House of Representatives on the 25 October 2021, the FTA will be discussed by the Senate in 2022.

about which they publicly disclose information and which has an LEI.[30] By June 2023, the EC is requested to deliver a report on the implementation of this recommendation. The ESRB has also recommended that, in the meantime, relevant national and European authorities – to the extent permitted by law and subject to the principle of proportionality – require an LEI from legal entities that are involved in financial transactions under the authorities' supervisory remit or are subject to reporting obligations or public disclosure. In response to this second ESRB recommendation, the European Insurance and Occupational Pension Authority (EIOPA) revised at the end of 2021 its Guidelines on the LEI and recommended that national competent authorities require a broader set of legal entities to have an LEI.[31] The revised Guidelines also foresee that competent authorities include the LEI in the non-aggregated information they report to EIOPA. EIOPA expects to include rules on the use of the LEI in reporting and disclosure requirements in a new or amended legislative act.[32] The European Banking Authority (EBA) highlighted that it supports the introduction of an EU-level legally binding requirement for the use of the LEI. EBA also supports any effort in an extensive use of the LEI and expects an enhancement in the use of the LEI in areas such as payment related reporting.[33] The European Securities and Markets Authority, in turn, has suggested to the European Commission expanding the obligation to apply for the LEI under the Alternative Investment Fund Managers Directive.[34]

- The European Commission added the LEI in its AML Regulation proposal. Reference to the LEI is made in Article 18, which is titled 'Identification and Verification of the Customer's Identity'. The text makes clear that, where available, an LEI should be obtained by obliged entities, to identify a legal entity customer. In parallel to the AML Regulation proposal, the LEI has been added to the revised Transfer of Funds Regulation as a new requirement: "Complete information on the payer and the payee should include the Legal Entity Identifier (LEI) when this information is provided by the payer to the payer's service provider, since that would allow for better identification of the parties involved in a transfer of funds and could easily be included in existing payment message formats such as the one developed by the International Organisation for Standardisation for electronic data interchange between financial institutions". The Revised Transfer of Funds Regulation is being discussed at the European Parliament at the time of writing of this report.

- The European Parliament adopted the European Commission's proposal regarding the Markets in Crypto-assets (MiCA) Regulation in March 2022. In MiCA Regulation, there is an LEI requirement for the issuer of asset-referenced tokens and crypto-asset service providers. MiCA Regulation is a good example of extending the LEI requirement to virtual asset issuers and providers.

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30 ESRB 2020 Recommendation of the European Systemic Risk Board of 24 September 2020 on identifying legal entities.

31 Not only insurance and reinsurance undertakings and Institutions for Occupational Retirement Provision should be required to have an LEI, but also relevant branches and intermediaries operating cross-border.

32 Some jurisdictions of the European Unions have also taken steps to introduce the LEI in the national business register. For example, in Germany since July 2021 the LEI – if available - can be connected to newly established federal uniform business number assigned nationwide for firms in a federal business register.

33 European Banking Authority's (EBA) response to the European Systemic Risk Board's (ESRB) first LEI Recommendation.

34 See here.

3. Furthering the adoption of the LEI

3.1. Potential benefits of greater LEI adoption for market participants and authorities

A globally unique identification system for legal entities may benefit market participants and authorities in several ways, once it is broadly adopted.

Transparency requirements for financial institutions to publish information with their own LEI makes it easier for market participants, including investors, to retrieve the information and match it with other information in their own risk analysis. The use of the LEI could, as well, enhance banks' management of information across legal entities, facilitate a comprehensive assessment of risk exposures at the global consolidated level and improve the speed at which information is available internally, especially after a merger or acquisition.[35]

As suggested by the overview of LEI uses for authorities included in the 2018 ROC progress report,[36] global adoption of the LEI would also facilitate authorities' ability to monitor financial risks. Where the LEI does not exist, manual reconciliation and mapping efforts may be required to perform such financial stability oversight in domestic markets. Contagion risk analysis may be incomplete when assessing the stress from a particular counterparty in a given market if exposures are accidentally omitted because of incorrect counterparty identification.

The need to reconcile legal entities' identities that are not uniquely identified at global level can slow down market surveillance and resolution of financial institutions. If the matching of transactions involving the same legal entity is incomplete, abusive behaviours and market manipulations could be undetected. Recordkeeping of financial contracts that do not include the counterparty's LEI can require significant efforts and resources in case of resolution, in particular in case of cross-border business with foreign counterparties. Finally, many authorities may face significant challenges in their statistical analysis and to map foreign subsidiaries of domestic entities if these entities and subsidiaries do not have an LEI.

3.2. Obstacles to LEI adoption

LEI adoption, whether driven either by regulatory requirements or by voluntary actions by the private sector, faces obstacles. Based on ROC and GLEIF analyses, the most relevant barriers to increasing the adoption are the fees for adoption and renewals and other costs, the existence of legacy technological systems relying on previously existing or local identifiers, a lack of clearly articulated benefits and use cases, and some quality issues concerning the LEI reference data, in part due to out-of-date data resulting from non-renewals (lapsed LEIs).

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35 See Basel Committee on Banking Supervision "Progress in adopting the Principles for effective risk data aggregation and risk reporting", April 2020 (available here).

36 ROC (2018), *Progress report by the Legal Entity Identifier Regulatory Oversight Committee (LEI ROC): The Global LEI System and regulatory uses of the LEI,* April.

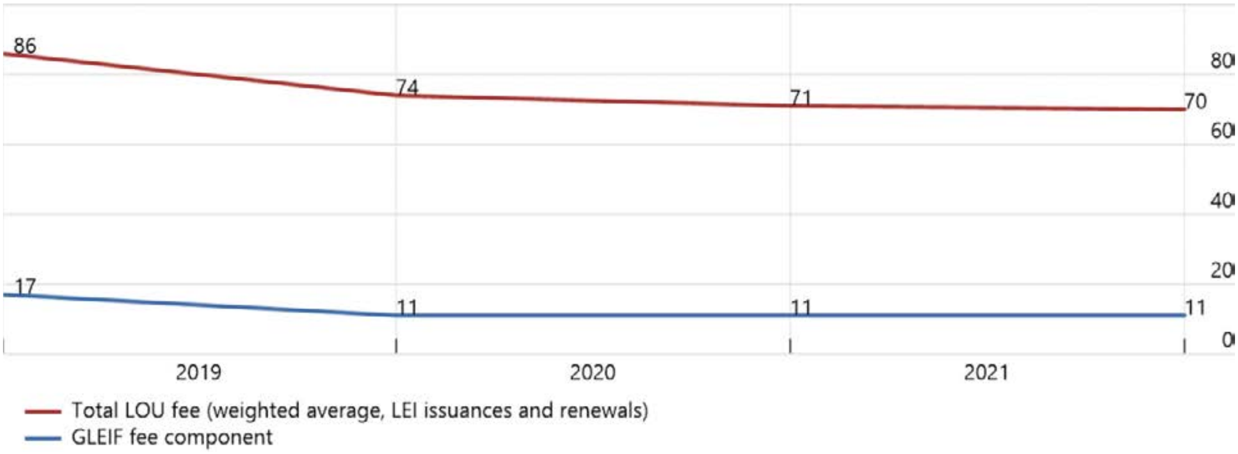
Fees and other costs

Legal entities are charged a fee to register an LEI and, on a regular basis, to renew it. A core component of the LEI fees covers GLEIF costs to vet LEI issuing institutions' compliance with the service level agreement, to run data quality checks, to maintain the central database, and to publish it for free access. Each LEI issuing institution adds a fee component to cover its own operating costs, depending on its business model and level of automation. The overall cost to register for an LEI therefore depends on the LEI issuing institution that is used.

The total cost charged for registering and annually renewing[37] an LEI was on average $70 in 2021, down from $86 in 2018 (see Graph 2). In the years 2018-2021 it ranged between $56 and $220.[38] The component of the overall issuance fee requested by the GLEIF has been reduced over time but has been stable at $11 since 2019.

Average Fee for LEI issuance **Graph 2**

In USD



Notes: weighted average LEI issuance and renewal pricing as published on websites of LEI issuing institutions at year-end. The price is weighted by the number of issuances and renewals. Exchange rate as of December 2018 has been applied. LEI issuing institutions may apply customised prices to certain customers, so the prices published on their website may represent an upper bound of the total average cost for LEI users

Source: GLEIF analysis, websites of LEI issuing institutions.

The reduction so far in the GLEIF component of the LEI fee is the result of the steady expansion of the GLEIS. It can be expected that it will continue its decline in particular if demand for LEI issuance and renewals continues to rise. Also, portability of LEIs from one issuing organisation to another allows LEI registrants to move to more competitive LEI issuers, exerting competitive pressures on the remaining component of the overall LEI cost.

Despite the reduction, the costs of getting an LEI can be perceived by legal entities that would not use the LEI often as too high compared to the expected benefits, considering also the costs

37 LEI renewals have the goal to confirm that all previously registered information is still up to date or to update information that has changed in the meanwhile.

38 During the period 2018 to 2021, the minimum fee for new issuance was 56 USD and for renewal 34 USD. The maximum fee for new issuance was 220 USD and for renewal 145 USD. This range remained mostly stable across the years. This analysis excludes the LOU based in China who charges no fee for its LEI services.

of other identifiers that the entity is obliged to purchase for other reasons and the costs to embed the LEI into their own systems and processes.

The survey conducted among FSB authorities for this Report confirmed that several members considered fees associated with the issuance and renewal of the LEI as obstacles for its wider adoption, with one authority noting that the costs of getting an LEI should be at a minimum or even zero. Participants in the outreach event also mentioned high fees as a barrier to wider adoption of the LEI.

In this regard, and as illustrated in Section 3.3, the GLEIF is studying a differentiated cost approach for entities that decide to register all their own clients or partners for an LEI and bear the costs of such registration (such as via a validation agent), possibly leading to very limited residual costs for the legal entities.

Legacy technological systems and requirements for other identifiers

Entities that use legacy technological systems relying on previously existing or local identifiers must consider the costs associated with adding to, or transitioning away from, existing corporate identifiers. Embedding the LEI into legal entities' own systems might requires investments that may include mapping the LEI to existing system identifiers and possibly update the entities' systems and processes.

Some surveyed FSB member authorities highlighted that the interlinkage of the LEI with existing national identifiers is an important issue and stressed the current burden of managing multiple legal entity identifiers. At the same time, several FSB members recognised that adapting existing systems and message standards entails efforts and costs, and that a broader LEI adoption requires appropriate implementation lead times.

The private sector echoed the inconvenience of a fragmented landscape of identifiers. Yet, whereas some industry members favoured the development of a unique identifier system, others voiced a preference for interlinking the LEI and the other existing identifiers. Regarding the costs of updating legacy systems for use with the LEI, some participants expressed the view that these may be overstated, as most systems are capable of managing multiple identifiers.

While interlinking the LEI with existing national identifiers is still pending and there are challenges in adapting existing systems to encompass the LEI, freely available mapping services between the LEI and other existing identifiers allow entities to use the LEI without changing immediately their own technological system. Examples of these services are the freely available mapping of the LEI to the BIC and to the ISIN.[39]

Moreover, COVID-19 has accelerated the trend towards digitalisation of retail financial services.[40] Digital innovation is creating pressures for traditional firms and financial market participants to modernise their legacy core systems and applications, to meet clients'

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[39] The BIC to LEI mapping process is established by SWIFT & certified by the GLEIF (see here). Both the GLEIF and the Association of National Numbering Agencies (ANNA) publish daily open-source mapping files that link newly issued ISINs and LEIs (see here). Private vendors offer identifier listing and comparison data that can potentially be helpful to entities seeking to harmonize LEI and existing identifiers.

[40] FSB, forthcoming FIN report on "FinTech and market structure in the COVID-19 pandemic: implications for financial stability".

expectations in terms of service features and customer care that they receive from high-tech firms. Renewals of obsolete legacy systems can offer the right opportunity to implement innovations such as a new identifier.

Perceived lack of benefits

Many legal entities may not see clear and immediately tangible benefits from adopting the LEI. Some FSB member authorities suggested that more clarity should be provided on such benefits or cautioned that fees and implementation costs may balance benefits for private participants. Several private sector participants in the outreach agreed, emphasising the lack of network effects and the weaker incentives for non-financial companies to sign up than for banks. They also supported providing more information about the benefits of LEI use both in cross-border payments and other activities. GLEIF partners also supported referencing the LEI in relevant FATF recommendations regarding customer due diligence, sanction screening, and wire transfers.

Raising awareness of the usefulness of the LEI in different contexts and creating new incentives to adopt the LEI can help entities recognize the benefits as well as the costs. GLEIF has conducted research and informed the public about potential benefits of the LEI for a variety of financial activities and in several nonfinancial industries. For example, McKinsey has estimated, on behalf of the GLEIF, that with the LEI the global banking sector could save up to $4 billion annually in client onboarding costs.[41] In trade financing, the savings for banks that use the LEI in the issuance of letters of credit could amount overall to $500 million annually.[42] GLEIF and McKinsey also identified a number of steps in the commercial credit lifecycle where the LEI would allow efficiency gains, such as rating and onboarding of customers, or invoicing.[43] They note that use of the LEI could assist in addressing the following frictions: 1) manual linking of entity data from disparate internal and external sources; 2) difficulty in assessing entities' legal ownership structure; 3) limited transparency into entities' key officers; and 4) poor customer experience due to having to make multiple round trips to gather client data and documents.[44]

The B20 2021 policy paper *Trade and Investment* recommended exploring the LEI as a mutually recognised credential for counterparty identification and verification among financial intermediaries, as it could help lowering the cost of cumbersome requirements.[45] And lastly the Asian Development Bank and African Development Bank have both published surveys demonstrating the LEI could address the unintended consequences of AML requirements contributing to financing gaps or de-risking.[46]

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41 GLEIF McKinsey & Company and GLEIF: LEIs and Client Lifecycle Management in Banking - a U.S.$4 Billion Beginning.

42 GLEIF LEI in Trade Finance - McKinsey & Company and GLEIF: Creating Business Value with the LEI.

43 GLEIF LEI in Commercial Credit - McKinsey & Company and GLEIF: Creating Business Value with the LEI.

44 See *GLEIF eBook: LEIs and Client Lifecycle Management in Banking - a U.S.$4 Billion Beginning*.

45 See B20 Italy, *Trade and Investment Policy Paper 2021*. For a more focused analysis of the benefits of the LEI in this context, see B20 Italy, *Trade Finance, a Flywheel Effect to Boost the Economic Recovery Post COVID-19 Pandemic*. A specific focus on the benefits of the LEI in this context is in the B20 paper on *Trade Finance*. (available here)

46 2021 Trade Finance Gaps, Growth, and Jobs Survey and More Transparency for Better Business – the Potential of Legal Entity Identifiers for African Economies

Finally, GLEIF is pursuing a digital strategy for the LEI. Embedding the LEI in digital verifiable credentials[47] (vLEI)[48] and in digital certificates[49] creates incentives to adopt the LEI by cryptographically binding the LEI to an organisation in order to allow a smoother access to digital services (see Section 3.3 *Ongoing efforts to support LEI*). Some participants at the outreach event noted that vLEI is a welcome innovation to help address challenges in LEI use, including incentives for entities to provide timely and accurate updates.

Some FSB members suggested that the LEI – if not coupled with a dedicated solution to uniquely link individuals acting in a business capacity such as beneficial owners – may have limited benefits in KYC due diligence processes.[50] The forthcoming FSB report exploring the scope for, and obstacles to developing, a global digital unique identifier for cross-border payments also for natural persons will consider the scope to address this limitation and more fully unlock the benefits of the LEI for due diligence processes.

Finally, several FSB member authorities noted that the current low level of LEI coverage – particularly outside of the financial sector - is in itself a barrier to its further expansion. The broader collective action problem in the LEI adoption applies also to the cross-border payments context: some FSB member authorities pointed to the fact that cross-border payments could be enhanced through universal adoption in payment messages but market participants do not show a great desire in voluntarily adopting the LEI for cross-border payments needs.

Quality issues concerning the reference data

One of the reasons for lower-than-expected LEI adoption may be due to issues with the quality of LEI reference data, in particular out-of-date reference data resulting from the non-renewal of existing LEIs. While the LEI currently needs to be renewed annually to ensure that the reference data remains up-to-date, still a non-negligible proportion of entities with an LEI do not renew it regularly, which creates a risk that the data behind those LEIs might be outdated or incorrect. Weaknesses in the quality of the LEI reference data may create lack of trust in the LEI by public authorities, contributing to the reasons why jurisdictions are refraining from mandating its use.

3.3. Ongoing efforts to support LEI growth

The GLEIF, the ROC and national authorities are committed to foster further adoption of the LEI.

The GLEIF is pursuing in particular the following three strategies.

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47 A verifiable credential can represent all of the same information that a physical credential represents. The addition of technologies, such as digital signatures, makes verifiable credentials more tamper-evident and more trustworthy than their physical counterparts (see Verifiable Credentials Data Model v1.1 W3C Recommendation 03 March 2022).

48 GLEIF Introducing the Verifiable LEI (vLEI) - GLEIF's Digital Strategy for the LEI.

49 See GLEIF, The LEI in Digital Certificates - GLEIF's Digital Strategy for the LEI - LEI Solutions – GLEIF.

50 Note in the KYC domain there are two areas for attention, 1. Commercial accounts by legal entities and their employees (e.g. individuals acting in a business capacity) and 2. Individual accounts. The KYC activities would include both and 1 would use LEI whereas 2 may need a natural person identifier.

Engaging banks to get an LEI for all their clients, exploiting synergies between the onboarding of clients and the validation of the information necessary to register for an LEI. [51]

The data collection and verification procedures performed by the LEI issuing organisations are to a great extent also performed by financial institutions as part of identity checking and onboarding of clients. By becoming "Validation Agents", banks can use their client's LEI reference data as part of their existing KYC, anti-money laundering or other regulated onboarding processes via liaising with the LEI issuing organisation. It is designed to remove the duplication of processes across a financial institution's client onboarding and LEI issuance, resulting in a simpler, faster and more convenient experience for financial institutions and their clients, enabled by a more efficient LEI issuance process.[52]

Validation Agents streamline their internal data standardization, reduce onboarding costs and timing and generate efficiencies through straight through processing enabled with the LEI. The open, publicly available GLEIF API allows financial institutions to receive updates regarding their clients on a timely basis and support their continuous KYC refresh programs. And some financial institutions took the Validation Agent path to provide LEIs to their SME client base and increase the visibility of their clients, thereby contributing to financial inclusion efforts.

The Validation Agent operating model is open to any related organisation that performs relevant validation and verification practices which are overseen by an independent legal authority, such as certification authorities. It supports the vision highlighted in the B20 paper, which aims to solve fragmented KYC data landscape that creates burden on entities through the "global value chain passport".[53] If LEIs were used by all financial institutions at the time of onboarding to tag legal entity clients, this could significantly minimize the burden of KYC, AML and other processes requiring validation of identity for both firms and financial institutions, by:

- Avoiding duplicative identification verification procedures for clients.
- Ensuring maximum transparency, interoperability and clear communication with investors and supervisory authorities.
- Allowing for easier information exchange between financial institutions and with supervisory authorities.
- Helping to prevent fraud with regards to financial transactions and misidentification.

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51 GLEIF Introducing the LEI Validation Agent - Validation Agents.

52 As of end-March 2022, eight organisations have completed the Validation Agent on-boarding process. This includes large financial institutions such as JP Morgan and FinTechs such as Finclusive. It also includes organisations from emerging markets for the LEI such as NMB Bank of Zimbabwe and Rubix of India. There are nine institutions actively engaging with GLEIF to complete the Validation Agent on-boarding process and seven additional in contact with GLEIF and considering participating in the Validation Agent onboarding process. In total, 16 organisations are actively interested or engaged in the Validation Agent onboarding process.

53 B20 Italy Trade Finance, a flywheel effect to boost the economic recovery post COVID-19 pandemic

Discussing the possibility that business registries get an LEI for all the entities registered with them.

Several business registries are already LEI issuing organisations for individual legal entities that seek an LEI issuance and renewal services. Issuing an LEI in bulk to all the companies registered with a given business registry in a jurisdiction (bulk registration) would allow very low issuance costs and could help extend adoption among SMEs.

Business registries already register, depending on national legislation, either all or the majority of all economic relevant entities, but always at least all limited liability companies. And these are the type of entities that would typically have international operations. Being registered in a national business registry with a national unique identifier would allow for a sufficient way of uniquely identifying entities within a country, whereas having an LEI would enhance this status to being uniquely identified on a global scale. Given registries are experts in handling large data volumes with fully automated processes and proper procedures in place to check information provided by registering entities, they likely could add the LEI as an attribute for their registered entities in a low-cost manner.

Having the business registries issuing LEIs in bulk to all registered entities would increase the number of available LEIs dramatically and this would make the use of the LEI much more attractive for many use cases, both within and outside the financial reporting area.

Enhancing the benefits of the LEI for legal entities to boost voluntary adoption.

As part of its digital strategy, the GLEIF is working to embed the LEI in digital credentials and to establish a network of trusted partners to issue digital verifiable credentials based on the LEI (verifiable LEI or vLEI).[54] The vLEI ecosystem is intended to create a standardised, digitised service capable of enabling instant, automated trust between legal entities and their authorised representatives, and the counterparty legal entities and representatives with which they interact.

An example of the LEI in digital credentials has been developed by the GLEIF to enable the use of the LEI for digitally signing firms' financial reporting in electronic format. The GLEIF is also developing the vLEI to allow LEI registrants to provide decentralised verification of their own identity without having to disclose identity details.[55] The vLEI would be accepted as a reliable identity verification tool because of the trust in the GLEIS. As it is expected that more and more legal entities will engage in transactions and services in which digital identity verification is needed, the vLEI could create additional demand for LEIs from those legal entities that are not subject to regulatory requirements to have an LEI.

The GLEIF has also joined the DANIE project, a consortium of banks and data vendors that uses the LEI for distributed and cryptographic reconciliation of members' data to enhance data quality. By securely and anonymously sharing the own data and comparing them with the values submitted by others, members identify incorrect and anomalous data. The LEI allows automated

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[54] See GLEIF Introducing the Verifiable LEI (vLEI) - GLEIF's Digital Strategy for the LEI.

[55] The vLEI is based on self-sovereign identity (SSI), a concept that natural persons should have control over the personal information contained in their credentials and can choose to prove their identity and certain facts about themselves in a controlled and safe manner. (See GLEIF Introducing the Verifiable LEI (vLEI) - GLEIF's Digital Strategy for the LEI).

matching of the data provided by different DANIE members. The consortium is planning to extend the data set to AML and KYC areas and to use the LEI also to match those data sets.[56]

The ROC, as described in its 2019-2021 Progress Report,[57] is also taking actions to address the recommendations of the FSB Peer Review and boost LEI adoption.

More specifically, the ROC has provided clarity on how the LEI should be assigned to specific types of legal entities (funds, government entities[58]), paving the way for a broader LEI adoption by those entities. It has also elaborated a vision for the GLEIS and strategically explored potential evolutions of the GLEIS business model that could boost LEI adoption. As part of that work the ROC has identified the long-term goal of Global, Universal coverage and Real-Time accuracy for the LEI and its Level 1 reference data (the GURT goal). This goal would allow any user (human or machine) to be able to rely on LEI data without any further verification, and to retrieve LEI data on any legal entity addressed in any user's process.

Moreover, to enhance the usefulness of the LEI for users, the ROC is working with the GLEIF to improve the GLEIS data quality and is exploring innovative ways to enhance the scope and usability of the Level 2 parent relationship data. For example, a data quality indicator has been developed (the conformity flag) to label those LEIs that fulfil a set of quality criteria.[59] While the GLEIF has introduced in 2021 substantial enhancements for LEI issuing organisations to check the quality of each LEI individually before it is issued,[60] the ROC has focused on identification of quality issues that become evident by focusing on a population of LEIs rather than on individual LEIs.

Finally, the ROC supports the GLEIF's outreach and educational activities to explain the benefits of the LEI, such as the GLEIF's 2021 educational workshops on the use of the LEI for multinational corporates or in the context of virtual assets, and in other areas of potential applicability.

4. LEI in payments

4.1. Initiatives adopting the LEI for payments

In recent years, both the private and public sectors have taken steps to promote the adoption of the LEI for cross-border and domestic payments.

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56 Société Générale, November 2020, Privacy Enhancing Technologies (P.E.T), or how to improve overall efficiency and reduce management costs for many use cases in the financial sector.

57 ROC (2022), *Progress Report 2019-2021*, January.

58 ROC May 2019 Policy on Fund Relationships; ROC December 2020 Guidance on LEI eligibility for General Government Entities. The ROC is also currently considering whether and how to capture in the Global LEI System group structures based on relationships that do not fit in the traditional "group" definition in their jurisdiction (Unconventional Group Structures). The ROC has decided not to extend the LEI eligibility to individuals other than the individuals acting in a business capacity and, more broadly to discontinue any work on individuals, in light of the decision of the ISO Technical Committee 68 on financial services (ISO/TC 68) to work on an ISO standard for an identifier for natural persons.

59 The rollout of the conformity flag is yet to be determined.

60 The GLEIF has introduced in August 2021 a data quality application programming interface (API) that LOUs must use when populating the GLEIS database.

- As of October 2022, the Reserve Bank of India (RBI) will require national legal entities to provide an LEI to their bank in order to undertake cross-border capital or current account transactions above a certain value (INR 500 million, approximately $6.7 million). Though the mandate is for transactions of INR 500 million and above, it has been decided that once the reporting institution has obtained the LEI number of an entity, it must be reported in all cross-border transactions of that entity, irrespective of transaction size.[61] Already in 2021, the RBI had introduced the LEI requirement for entities which undertake large value domestic payments (in this case also above INR 500 million) in Centralised Payment Systems run by the RBI (i.e. the National Electronic Fund Transfer (NEFT), for retail payments, and the RTGS system).[62] Between April 2021, when the requirement came into force, and January 2022, approximately 204,000 transactions have been processed in the NEFT and RTGS system with an LEI, either of the payer or of the payee or of both, representing approximately 73% of transactions above the $6.7 million threshold.[63]

- In the UK, the Bank of England announced that, as part of its adoption of ISO 20022, LEIs will be mandatory for certain payment messages between financial institutions in the CHAPS payment systems from summer 2024.[64] The Bank has also said that this requirement will be extended to more users of CHAPS as LEIs become more prevalent. In 2020/21, 37 banks were direct participants of CHAPS, with a total volume of processed payments of £92 trillion.

- The Federal Reserve Board announced in October 2021 that Federal Reserve Banks will adopt the ISO 20022 message format for the Fedwire Funds Service, to enhance the efficiency of domestic and cross-border payments, and to facilitate market participants' compliance with sanctions and AML requirements. When consulting on the migration plan,[65] the Board proposed to include the LEI as one of many new and specific voluntary fields in the ISO 20022 messages for Fedwire. In 2020, Fedwire processed payments totalling $840 trillion, with an average value of $4.5 million.[66] In the same year it had 5,700 directly connected participants.[67]

- Hong Kong plans to introduce the LEI field in the payment messages of its wholesale payment system after ISO 20022 adoption in 2023.

- The European Commission, in its proposal for a revision of the Transfer of Funds Regulation,[68] has placed a requirement for payment service providers to include the LEI in payment messages, in cases where they have collected such information.

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61 RBI/2021-22/137, A.P. (DIR Series) Circular No. 20 Introduction of Legal Entity Identifier for Cross-border Transactions.

62 RBI/2020-21/82 DPSS.CO.OD No.901/06.24.001/2020-21 Introduction of Legal Entity Identifier for Large Value Transactions in Centralised Payment Systems.

63 For the remaining 27% of the transactions above this threshold, it is difficult to ascertain whether they involve legal entities and hence some of the transactions may between individuals.

64 Bank of England Policy Statement: Implementing ISO 20022 Enhanced data in CHAPS . As mentioned, adopting a harmonised ISO 20022 version for message formats is the subject of Building Block 14 of the G20 Cross-Border Payments Roadmap.

65 Federal Register (2021), New Message Format for the Fedwire® Funds Service, October.

66 CPMI https://stats.bis.org/statx/srs/table/PS3?c=&p=2020.

67 CPMI https://stats.bis.org/statx/srs/table/PS4?c=&p=2020.

68 Available at: https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX%3A52021PC0422.

- In the Eurosystem, participants in the forthcoming payments and settlement system T2 which is expected to replace TARGET2 in November 2022,[69] will be obliged to provide their LEI during the registration process.

- In addition, private sector participants included the use of LEI among the best practices in payments. For example, in its September 2021 White Paper[70] SWIFT's Payment Market Practice Group (PMPG)[71] provided information on existing market practices regarding the LEI as an identifier in payments and illustrated use cases of the LEI in payments, with benefits for participants in terms of more transparent, efficient and secure payments. The White Paper provides LEI use cases for market participants in sanctions screening, KYC processes, corporate invoice reconciliation, fraud detection and account to account owner validation. Benefits include:

  - Sanctions screening: avoiding false positive matches

  - KYC and customer onboarding: making KYC processes quicker and more efficient, reducing costs, improving client experience, and industry level re-use of KYC data across financial institutions

  - Corporate invoice reconciliation: automation, full transparency of parties to the transaction from start to end and interoperability across platforms

  - Fraud detection: exact matching criteria for account-to-account owner validation

  The paper encourages financial institutions to engage with GLEIF in the validation agent operating model and regulators to support the LEI by using it in sanctions lists.

- The PMPG has also issued in October 2021 guiding principles for an effective and efficient screening of ISO 20022 payments[72] to address sanctions-related frictions in the payment chain. The PMPG notes that the global nature of LEIs and BICs makes them particularly suited to identify sanctioned entities matching information from public sanctions lists. Also the Wolfsberg Group endorsed these guiding principles.

As cross-border payments are the backbone of cross-border financial markets, cross-border trade and cross-border service provision, initiatives to introduce the use of the LEI more generally in cross-markets result in LEIs being created for both the payer and payee in cross-border payments. In that context, the US Custom and Border Protection (CBP) has launched in 2021 an Evaluative Proof of Concept for a Global Business Identifier (GBI) that includes the LEI,[73] along with the Global Location Number (GLN) and the Data Universal Numbering System

69 ECB, T2-T2S consolidation: what is it?

70 PMPG (2021), Global adoption of the LEI in ISO 20022 Payment Messages, September.

71 The SWIFT PMPG is a global discussion forum of private sector payments experts which takes stock of payments market practices across regions, discusses market practice issues, and recommends market and best practices related to payments messages.

72 PMPG (2021), *Guiding Principles for Effective Screening of ISO 20022 V1*, October.

73 Federal Register (2021), *Global Business Identifier*, October.

(DUNS).[74] The CBP will in the end determine whether to mandate the GBI solution as an alternative to the Manufacturer/Shipper Identification Code.

Box 2: LEI in cross-border payments: use case in China

In December 2020, the People's Bank of China, together with China Banking and Insurance Regulatory Commission, China Securities Regulatory Commission and the State Administration of Foreign Exchange, released the "Roadmap to Implement Legal Entity Identifier in China (2020-2022)" which put forward the use of LEI in Cross-border Interbank Payment System (CIPS) for customer identification, including adding LEI to CIPS financial messages and launching the cross-border legal entity information platform pilot project.

Drawing from global LEI use case experiences, CIPS has incorporated LEI into financial messages and actively explored the application of LEI in cross-border scenarios with the combination of LEI and digital certificates.

International consensus has formed that information exchange standards are to transition to ISO 20022 standards. Major payment messages such as pacs.008 have already incorporated LEI as an optional field in customer identification. CIPS is among the few financial market infrastructures that has adopted the ISO 20022 standard since its launch. To maximize the value of LEI in cross-border entity identification, CIPS has also mapped LEI to other applicable identifiers such as BIC, CIPS ID (a unique identifier generated by CIPS) and researched an inclusive identification system that supports LEI, BIC and CIPS ID.

In order to further the use of LEI in cross-border transactions and facilitate cross-border trade and investment, CIPS designed an innovative product "CIPS Connector", which provides an integrated "one-step" service for a variety of cross-border RMB transactions between banks and enterprises. Every CIPS Connector user is assigned with an LEI, which is used for activating the tool as well as a mandatory business element in their business transaction. By incorporating financial data exchange standards such as LEI and ISO 20022, CIPS Connector specifically addresses the challenges that business entities face when making overseas RMB remittances, including lengthy chains of intermediaries, **slow** speed**, and** low efficiency. By the end of 2021, more than 1,500 financial institutions have signed the intent form to use the product. Since its launch, the CIPS Connector has enhanced the straight-through processing rate and achieved full coverage of LEI for domestic CIPS Connector users. According to feedback from users, the installation of CIPS Connector shortens the time, reduces the costs, and improves the efficiency of cross-border payment.

"LEI + digital certificates" is another attempt to weave LEI into today's cross-border RMB payment process. In October 2021, the Register Authority (RA) System in CIPS was upgraded, with LEI information embedded in every newly issued digital certificate. In this way, more business scenarios are developed to apply both digital certificates and LEI for entity identification. As of January 2022, more than 1,100 new digital certificates with LEI information have been issued to CIPS users. Meanwhile, CIPS continuously encourages new users to apply for LEI when joining CIPS.

[74] The GLN is owned and managed by GS1, the DUNS by Dun & Bradstreet.

4.2. Assessment of specific challenges to the use of the LEI for cross-border payments needs

As with all use cases of the LEI, ensuring that the information on the legal entity embedded in the LEI is complete, correct and up-to-date is key for the use of the LEI in cross-border payments. The ROC and the GLEIF's ongoing efforts to improve the data quality within the GLEIS are valuable contributions in such efforts.

The data quality necessary for cross-border payment needs may differ from the quality needed for other use cases of the LEI, such as systemic risk analysis. For the use of the LEI in cross-border payments, it may be particularly important that the information on the legal form of an entity and on its country of incorporation are correct. While these are usually verified by the LEI issuers, which double check the information provided by the registering legal entity against other reliable sources such as business registries, some issues may need further investigation within and possibly beyond the GLEIS.[75]

Data quality is achieved not only when the relevant LEI reference data are correctly assigned to a new LEI code but also when this is timely updated whenever some information changes. For the use of the LEI in cross-border payments, it may be particularly important that the information on the country of incorporation of the legal entity is up to date and that the LEI correctly reflects corporate actions that have occurred to the legal entity, such as the merger with another legal entity or its dissolution. One FSB member jurisdiction surveyed pointed to inconsistencies in existing repositories and mapping between LEI numbers as obstacles to LEI expansion, though it is considered that the mapping between LEI and existing repositories would be the responsibility and task of that repository owner (not the GLEIF).

Some of the surveyed FSB member authorities highlighted the importance of ensuring a timely update of such reference information. To address this, jurisdictions could request legal entities with an LEI to revalidate it regularly within the GLEIS: one FSB member authority suggested that the mandatory revalidation of the LEI could be foreseen only for those legal entities that engage in cross-border payments. As a more cumbersome alternative, as a non-revalidated LEI could still be connected to reference data that is up to date, different updating mechanisms could be locally explored in case of corporate events relevant for cross-border payments that presumably need in any case notification or authorisation by local authorities.

In this regard, the introduction of the vLEI could be an opportunity to address such challenges by formalising certain protocols regarding legal entity verification such as the maximum period since last verification and validation. In fact, according to the vLEI ecosystem policies, the LEI of the Legal Entity may not be in the registration status of "lapsed". It should be noted, however, that GLEIF's work on the vLEI is ongoing and the product has not yet been finalised.

[75] For example, a preliminary Federal Reserve analysis shows that, for LEIs of US incorporated entities, in 8-10% of the instances the legal entity's name and its legal form do not match exactly with business registry records. The analysis also shows that some basic address information (city, state and postal code) may not accurately reflect the address of the legal entity. For example, the LEI reference data may reflect the address of professionals ("registration agents") that were involved in the establishment of the legal entity, such as their legal representative. However, such discrepancies may reflect the LEI's governing policies, under which a company's address is where it can be contacted, rather than where it may be formally situated.

Models could be considered that link revalidation of LEIs to identity checking within domestic digital identity frameworks, for example in those cases where an LEI is linked to an individual representing the organisation. Finally, as discrepancies between these specific core reference data of the LEI and information available to the payment service provider could create delays or represent obstacles in payments processing, payment service providers could cross-check LEI reference data with information provided by new clients during onboarding and they could remind to update the LEI whenever a client notifies them a change in some core identification data.[76]

LEI issuing organisations have indicated that there is a greater need for clear practices in using the LEI in the payment chain rather than pointing to specific concerns regarding LEI attributes or validation process. For example, they stressed the importance of determining in which step of the payment chain to request the LEI. They also noted that it is easier for an intermediary to ask for and/or provide an LEI for their clients but it is not possible for them to have control over the beneficiary's LEI: they would need clarity on what intermediaries should do in case the beneficiary's LEI is not provided or is incorrect.

Finally, solutions should be explored to favour an efficient interoperability between LEI and existing identifiers, which can help to decrease the complexity as well as possible costs for the LEI adoption.

4.3. Options for encouraging use of LEI for cross-border payments

Based on the inputs gathered from authorities, ROC, GLEIF, market participants and other stakeholders, options to enhance adoption of the LEI, with a focus on its use in cross-border payments, may include the following:

- ROC, GLEIF and national authorities' continued effort to promote the quality of LEI reference data, including keeping the attributed information up to date. In this context, the FSB CPDI may contribute to explore which attributes are essential for LEI use in cross-border payments;
- GLEIF's efforts to reduce obstacles to LEI adoption, including the validation agent model and digital strategy as initiatives that can address certain obstacles to the adoption of the LEI (costs, administrative burden, perceived lack of benefits) and can create incentives to timely updates of the LEI when necessary:
  - Models could be explored where – similar to the validation agent model - the LEI is generated as a by-product of other cross-border payment-related processes.
  - GLEIF could consider inviting banks to become Validation Agents for those of their clients who are more active in cross-border payments, e.g. those that meet a certain threshold in terms of value and/or yearly number of cross-border payments;

[76] Payment service providers could also create an automated process to challenge the LEI record via the public challenge facility. GLEIF continues to improve its challenge service to make it easier for public users of the LEI data to trigger validation/verification of LEI reference data.

- GLEIF could engage in specific pilot projects with relevant stakeholders regarding standards for including the LEI in payment messages and guidance to financial institutions on possible uses of the LEI when transmitted in payment messages.

- The use of LEI for the onboarding process and, possibly, for the purpose of strong customer authentication could be explored by public and private sector stakeholders along the lines indicated in this report.[77] As noted by the PMPG, the LEI can enable financial institutions to move to an environment where information on KYC performed at different financial institutions can be used to improve the onboarding process. According to GLEIF, their private sector business partners consistently identify FATF recommendations 6, 10 and 16 as the important recommendations where the LEI should be incorporated. The Financial Action Task Force (FATF) highlighted in its Cross-Border Payments Survey Results on Implementation of the FATF Standards[78] that many respondents supported increased cooperation between regimes to standardise sanction list formats, interpretation of contents, expected response associated with listings and list distribution approaches. According to respondents, increasing uniformity in the list entries and greater use of structured identifiers such as Legal Entity Identifiers (LEIs), Business Identifier Codes (BICs) and digital identities and linkage of list entries between UN and country lists would simplify the screening process and improve detection performance. They also indicated that wider adoption of the LEI for entity client identification and identifying beneficiary and originator in payment messages would support widespread interoperability between systems and reduce costs and increase precision and transparency. Based on the dialogue with FATF, it was concluded that issuing guidance on how the LEI may be used as standardised identifying information for sanctions lists or the primary means of identification of legal entities would be a more reasonable approach than to upgrade relevant FATF recommendations. As FATF recommendations are principle-based and their implementation is left to the discretion of each jurisdiction, it would be inappropriate to champion a particular identifier such as the LEI.

- Public communication and promotion to raise the visibility of the LEI, particularly among non-financial sectors involved in cross-border payments. This should involve developing and publishing use cases in cross-border payments for non-financial corporates, and ways in which they can directly benefit from adopting the LEI.

- FSB members to consider including an optional field for the LEI in routing message formats for wholesale payment systems, and possibly migration to ISO 20022 messages, and as appropriate, explore the scope to mandate use of the LEI for certain payment message types.[79] While wholesale payment systems usually process high-value domestic payments, the most sophisticated payers and payees in the national payment spaces would, in this way, gather an LEI and could use it also in their cross-

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[77] The reference in the text regards the work the GLEIF is conducting with the DANIE consortium and to the request of the private sector for Authorities to clarify the role that LEI could play in KYC. Authorities also mentioned this aspect.

[78] Cross-Border Payments – Survey Results on Implementation of the FATF Standards; FATF (October 2021).

[79] This option would allow to achieve the expected results independently from the decision of the respective wholesale payments systems operator/regulator to shift to ISO 20022. As mentioned, Building Block 14 of the roadmap considers the adoption of a harmonised ISO 20022 version for message formats, including rules for conversion/mapping.

border payments. Two surveyed FSB members expect that the adoption of the LEI will increase when SWIFT and the major wholesale payment systems shift to ISO 20022 (in 2022 and 2023), as banks will be required to get an LEI to continue participating in such systems (Germany, India).

- FSB members to consider linkage of LEI to domestic identifiers in their digital infrastructures, to promote interoperability of LEI and other identifiers to facilitate automated reconciliation and validation.

Annex 1: BB16 – Establishing unique identifiers with proxy registries

Actions and milestones (as revised in the First consolidated progress report)

Action 1 **Review the scope, technical and operational requirements of existing and proposed global digital Identifiers for both legal entities and natural persons and analyse the need for a decentralised proxy registry.**	
FSB, in consultation with CPMI, IMF, WB, GLEIF, ISO and other stakeholders, to explore the scope for, and obstacles to develop, a global digital Unique Identifier (UI) for cross-border payments, and potentially other financial transactions, that takes into account existing identifiers, including the LEI for legal entities and identifiers for individuals The review would also: • consider mechanisms to match UIs with payment information, such as via a proxy registry[80], • take into account the work of relevant standard setting bodies, including the FATF, on technical, governance, or policy issues, • and analyse how to map to existing identifiers.	October 2020 - October 2022
Action 2 **Determine the next steps to promote the use of a (global) digital UI framework and decentralised proxy registry in jurisdictions**	
FSB in close coordination with GLEIF, the LEI ROC and national authorities to explore the options to improve adoption of the LEI.	June 2021 - June 2022
If there is consensus that a new identifier is necessary, **FSB, in consultation with CPMI, IMF, WB, ISO and other stakeholders,** to assess existing proxy databases for personal identifiers, propose standard design principles for these databases, and define minimum requirements for personal identifiers.	October 2022 – June 2023
Action 3 **If necessary: Implementation and progress monitoring.**	
If consensus is achieved on a possible new UI and new interoperable proxy databases, **FSB** to create an appropriate governance for the UI and for the interlinking of databases (based on the data sharing principles developed in BB 8). However, the decision to implement it should lie with the individual countries (that may have to adjust regulation accordingly).	June 2023 – June 2024
UI-Governance body that is established to begin registering of participants. Start of the voluntary scheme.	June 2024 - October 2024
National authorities to explore the processes involved in a possible adoption of a global digital unique identifier on a national level or the interlinking of existing identifiers.	October 2022 - June 2023

80 A proxy registry is a database which matches an identifier and payment information to help route the payment correctly

Annex 2: Survey respondents

Argentina

Australia

Brazil

France

Germany

Hong Kong

India

Indonesia

Italy

Japan

Mexico

Netherlands

Saudi Arabia

Singapore

Spain

Switzerland

Turkey

United Kingdom

United States

Annex 3: Survey questions

Stocktake of existing payments identifiers

i) Please list existing global, regional or national identifiers[81] that are widely used in your jurisdiction for payments to specify the sender or recipient (SWIFT and BIC codes are excluded in this context because they do provide information on the PSP, not the sender or recipient).

The information to be provided includes at least, but is not necessarily limited to, targeted coverage (universal/sectoral), access[82] (e.g., only for public authorities, only for resident entities, only for banks), costs for queries and other costs (including for PSPs, particularly those operating services for individuals across borders), issuer/governance of the identifier (e.g., public/private), possible standards (e.g., ISO) adopted for building the identifiers.

a) Please list any other global, regional or national identifiers that (although not yet widely used) are emerging or growing in usage in your jurisdiction (e.g., distributed ledger technologies such as blockchain) and indicate how widely they are used.

Existing identifier characteristics

(Please answer separately for each identifier)

ii) What is the current use for payment purposes of the identifiers listed in your answer to the previous question (e.g. enabling payment routing, reconciliations, KYC checks, sanctions screening)?

iii) What characteristics of such identifiers would need to be enhanced/changed to enable their use by both counterparties in cross-border payments (e.g. in terms of access and attributes)?

iv) For those identifiers used for payment purposes, please indicate if there is (or there is planned) any mapping to other existing identifiers (even if not used for payment purposes).

v) Is there any plan to require or promote the use for payments, or for wider purposes, of digital identities/identifiers in your jurisdiction? If yes, which characteristics will the respective identifiers have?

vi) With what type of personal identification information (e.g. name, gender, date of birth, address, mobile phone number, email address) are the identifiers listed in the answer to question (i)[83] associated?

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[81] This includes not only identifiers such as IBAN code, but also digital/physical IDs to identify individuals and legal entities for payment purposes.
[82] It would be useful to distinguish between domestic resident and cross-border access, where relevant.
[83] A global identifier could be underpinned by a basket of reference data/identifiers enabling flexibility but ensuring compliance and interoperability without going above and beyond jurisdictional redlines/preferences.

vii) Is the personal identification information embedded in the identifier information used for payments purposes, or is it separate, and the identifier as such contains no embedded intelligence about the individual/entity?[84]

   a) In case the personal identification information is separate, can the identifier information be accessed on a timely basis if so requested?

General questions

viii) The whole process that leads to digital identity certainty is supported under several frameworks by specific Level of Assurance (LoA)[85] typically associated with each stage of the process (proofing, verification, and binding). Please describe the situation in your jurisdiction.

ix) As mentioned in the Stage 2 Report for BB16, "the goal is that jurisdictions introduce digital unique identifiers and proxy registries, which are ultimately connected globally. The identification of payer/payee will be more efficient, and less costly since straight through processing (STP) could be more easily adopted in each link of the transaction chain."

   If possible, you may wish to reach out to selected PSPs in your jurisdictions to ascertain (at least in preliminary form) whether they would benefit from a global identifier to facilitate STP, how they would benefit (less costs related to reconciliation, simplified data compliance process, etc) and, on the other hand, whether they see significant disadvantages or obstacles. Please provide any information from such outreach here.

x) Please indicate any existing or ongoing specific piece of work of relevant standard setting bodies on technical, governance, or policy issues that in your view would be relevant when considering the scope for, or obstacles to develop, a global unique identifier?

xi) Which mechanisms could be used to match unique identifiers with payment information (e.g. via a proxy registry)?

   a) Could you mention any concrete example (for example, a mechanism such as that foreseen for the Nexus gateway)?[86]

   b) What operational requirements do you envisage for a decentralised proxy registry?

xii) Would the data frameworks in place in your jurisdiction allow the sharing of information concerning unique identifiers?

   a) Would sharing identifiers with <u>no</u> embedded intelligence about the individual/entity (see footnote 6) but simply used to retrieve the decentralized proxy register (i.e. to retrieve

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[84] *ISO 24366 - Identification of Natural Persons - Briefing note*. Work by this standard ISO is going in this direction (identifiers attached to Digital ID but with no embedded intelligence).

[85] Please refer to eIDAS, ISO/IEC 29115 or NIST 800-63-3 standards. In the ID4D Initiative (https://id4d.worldbank.org/) it refers to the "certainty with which a claim to a particular identity during authentication can be trusted to actually be the claimant's "true" identity".

[86] See "Nexus - A blueprint for instant cross-border payments", available at https://www.bis.org/publ/othp39.pdf.

the payment account information needed for the transfer of funds) be allowed in your jurisdiction?

b) Would sharing identifiers with embedded intelligence (e.g., date of birth) about the individual/entity be allowed in your jurisdiction?

c) If no information sharing is currently allowed, what changes would be needed to allow such sharing (e.g., changes to a domestic legal framework, to a supranational regulation, to regulatory rules)? Is any work is being undertaken in this regard?

Legal Entity Identifier (LEI)

xiii) In your view, could cross-border payments be enhanced with a widespread adoption of the LEI? If yes, how (e.g. including LEI within payment messages)?

xiv) In your opinion, are there any gaps in the attributes/validation of the LEI that might hinder its use for cross-border payments?

a) If yes, do you have in mind possible solutions?

b) Do you have a view on what role GLEIF's validation agency model, vLEI and bulk registration could play in supporting enhanced use of the LEI in a payments context?

xv) What obstacles do you see to an increased adoption of the LEI for use in cross-border payments in your jurisdiction and worldwide? What solutions would you envision to overcome these obstacles and why?

xvi) Is there any plan to require or promote the use of LEI for some payments purposes in your jurisdiction?