

BS ISO 4914:2021



BSI Standards Publication

Financial services — Unique product identifier (UPI)

National foreword

This British Standard is the UK implementation of ISO 4914:2021.

The UK participation in its preparation was entrusted to Technical Committee IST/12, Financial services.

A list of organizations represented on this committee can be obtained on request to its committee manager.

Contractual and legal considerations

This publication has been prepared in good faith, however no representation, warranty, assurance or undertaking (express or implied) is or will be made, and no responsibility or liability is or will be accepted by BSI in relation to the adequacy, accuracy, completeness or reasonableness of this publication. All and any such responsibility and liability is expressly disclaimed to the full extent permitted by the law.

This publication is provided as is, and is to be used at the recipient's own risk.

The recipient is advised to consider seeking professional guidance with respect to its use of this publication.

This publication is not intended to constitute a contract. Users are responsible for its correct application.

© The British Standards Institution 2022
Published by BSI Standards Limited 2022

ISBN 978 0 539 13697 5

ICS 03.060

Compliance with a British Standard cannot confer immunity from legal obligations.

This British Standard was published under the authority of the Standards Policy and Strategy Committee on 31 January 2022.

Amendments/corrigenda issued since publication

Date	Text affected
------	---------------

**INTERNATIONAL
STANDARD**

**ISO
4914**

First edition
2021-11-16

**Financial services — Unique product
identifier (UPI)**

Services financiers — Identifiant unique de produit (UPI)



Reference number
ISO 4914:2021(E)



COPYRIGHT PROTECTED DOCUMENT

© ISO 2021, Published in Switzerland

All rights reserved. Unless otherwise specified, no part of this publication may be reproduced or utilized otherwise in any form or by any means, electronic or mechanical, including photocopying, or posting on the internet or an intranet, without prior written permission. Permission can be requested from either ISO at the address below or ISO's member body in the country of the requester.

ISO copyright office
Ch. de Blandonnet 8 • CP 401
CH-1214 Vernier, Geneva, Switzerland
Tel. +41 22 749 01 11
Fax +41 22 749 09 47
copyright@iso.org
www.iso.org

Contents

	Page
Foreword	iv
Introduction	v
1 Scope	1
2 Normative references	1
3 Terms and definitions	1
4 UPI code structure	2
5 UPI reference data library	2
Annex A (informative) Definitions of the minimum set of UPI reference data elements	3
Annex B (informative) Minimum UPI reference data elements by asset class and instrument type	5
Annex C (normative) Check character calculation	7
Bibliography	9

Foreword

ISO (the International Organization for Standardization) is a worldwide federation of national standards bodies (ISO member bodies). The work of preparing International Standards is normally carried out through ISO technical committees. Each member body interested in a subject for which a technical committee has been established has the right to be represented on that committee. International organizations, governmental and non-governmental, in liaison with ISO, also take part in the work. ISO collaborates closely with the International Electrotechnical Commission (IEC) on all matters of electrotechnical standardization.

The procedures used to develop this document and those intended for its further maintenance are described in the ISO/IEC Directives, Part 1. In particular, the different approval criteria needed for the different types of ISO documents should be noted. This document was drafted in accordance with the editorial rules of the ISO/IEC Directives, Part 2 (see www.iso.org/directives).

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. ISO shall not be held responsible for identifying any or all such patent rights. Details of any patent rights identified during the development of the document will be in the Introduction and/or on the ISO list of patent declarations received (see www.iso.org/patents).

Any trade name used in this document is information given for the convenience of users and does not constitute an endorsement.

For an explanation of the voluntary nature of standards, the meaning of ISO specific terms and expressions related to conformity assessment, as well as information about ISO's adherence to the World Trade Organization (WTO) principles in the Technical Barriers to Trade (TBT), see www.iso.org/iso/foreword.html.

This document was prepared by Technical Committee ISO/TC 68, *Financial services*, Subcommittee SC 8, *Reference data for financial services*.

Any feedback or questions on this document should be directed to the user's national standards body. A complete listing of these bodies can be found at www.iso.org/members.html.

Introduction

The G20 leaders agreed in 2009 that over-the-counter (OTC) derivatives contracts should be reported to trade repositories as part of their commitment to reform OTC derivatives markets in order to improve transparency, mitigate systemic risk and protect against market abuse. Aggregation of the data reported across trade repositories can enable authorities to obtain a comprehensive view of OTC derivatives markets and activity.

Standardization and harmonization of identifiers and data elements is crucial for global data aggregation. The motivation behind the unique product identifier (UPI) is to uniquely identify OTC derivative products, as defined by a specific set of reference data elements, for the purpose of regulatory reporting to trade repositories.

While the primary driver of the UPI is regulatory reporting, the UPI can also serve other purposes, such as pre- and post-trade processes performed by market participants and financial market infrastructures.

As a result of implementing this document, a unique UPI code will be assigned to each distinct OTC derivative product that is reportable to trade repositories and maps to a set of reference data elements having specific values that together describe the product. The collection of UPI reference data elements and their values for each product will be stored in the UPI reference data library.

Financial services — Unique product identifier (UPI)

1 Scope

This document specifies the elements of an unambiguous scheme to identify over-the-counter (OTC) derivative products that are reportable to trade repositories, in particular:

- the structure and format of the unique product identifier (UPI) code;
- the minimum data elements of the UPI reference data library, together with their allowable values.

At a minimum, the UPI code is applicable to OTC derivative instruments falling under the following categories of the classification of financial instruments (see ISO 10962):

- swaps (S);
- forwards (J);
- non-listed and complex listed options (H);
- others (miscellaneous) (M).

2 Normative references

The following documents are referred to in the text in such a way that some or all of their content constitutes requirements of this document. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

ISO/IEC 7064:2003, *Information technology — Security techniques — Check character systems*

3 Terms and definitions

For the purposes of this document, the following terms and definitions apply.

ISO and IEC maintain terminological databases for use in standardization at the following addresses:

- ISO Online browsing platform: available at <https://www.iso.org/obp>
- IEC Electropedia: available at <https://www.electropedia.org/>

3.1

OTC derivative instrument

financial instrument that is, or would be, identified by an ISIN with the prefix "EZ" or "ZZ"

Note 1 to entry: Details regarding how the prefix of an ISIN is determined can be found in ISO 6166:2021, Annex A.

3.2

OTC derivative product

group of *OTC derivative instruments* (3.1) that share common values for a set of data elements specified within the *UPI reference data library* (3.3), as determined and published by the *UPI service provider* (3.4)

3.3

UPI reference data library

set of data comprising reference data elements with specific values that together describe the product

3.4

UPI service provider

organization designated by an external body of financial regulators to assign UPIs and operate the *UPI reference data library* ([3.3](#))

Note 1 to entry: At the time of publication this external body is the Regulatory Oversight Committee, confirmed by the Financial Stability Board as the International Governance Body for the globally harmonized identifiers used to track OTC derivatives transactions.

4 UPI code structure

The UPI code consists of 12 alphanumeric characters decomposed as follows:

- the two-character prefix “QZ”;
- nine alphanumeric characters [upper-case A to Z and 0 to 9 only, excluding the vowel characters (A, E, I, O, U) and the character Y] without separators or special characters;
- one alphanumeric check character [upper-case A to Z and 0 to 9 only, excluding the vowel characters (A, E, I, O, U) and the character Y], shall be calculated using the method specified in [Annex C](#).

5 UPI reference data library

The reference data library is a set of reference data elements, together with their values, which is properly organized and maintained by the UPI service provider. The library shall associate UPI codes with the values of the reference data elements that as a minimum enable the characterization of the products.

Further information concerning the UPI reference data elements and their definitions can be found in [Annex A](#).

Further information concerning the association of the UPI reference data elements to different asset classes and instrument types can be found in [Annex B](#).

Annex A (informative)

Definitions of the minimum set of UPI reference data elements

Data element name	Data element description
Asset class	Indicates whether the asset, benchmark or another derivatives contract underlying a derivatives contract is, or references, an equity, rate, credit, commodity or foreign exchange asset.
Instrument type	Indicates whether the instrument is a swap, option, forward or “other” type of derivative instrument.
Currency associated with a reference rate	The currency to which the market reference rate or index relates.
Delivery type	Indicates whether a derivatives contract will deliver a physical asset or a cash equivalent at settlement.
Notional schedule	Indicates whether a notional schedule is constant, amortizing, accreting or custom.
Option style	Specifies when an option can be exercised. The value “European” specifies that an option can only be exercised on the expiration date; “American” specifies that an option can be exercised any time up to and including the expiration date; and “Bermudan” specifies that an option can be exercised only at specified times during the life of the contract. Bermudan-style options include variations such as Canary- and Verde-style options.
Option type	Specifies whether an option gives the buyer the right to buy the underlying, i.e. “Call”, the right to sell the underlying, i.e. “Sell”, or the right to choose whether to buy or sell the underlying at the time of exercise, i.e. “Chooser”.
Return, pricing method or payout trigger	Return values indicate how a contract’s payout is determined; pricing method values indicate how a contract is valued; payout trigger values indicate an event that would result in a contract paying out.
Seniority	Indicates the seniority of the debt security, or debt basket or index underlying a derivative.
Settlement currency	For a cash-settled contract, the currency to be delivered at the time of settlement.
Single or multiple currency	Indicates whether a single currency or multiple currencies underlie a derivative.
Standard contract specification	The name of an existing document or reference that provides standard terms and conditions to be applied to the contract having the underlying asset or benchmark identified by the underlier ID and underlier ID source for which the UPI is assigned.
Underlier ID	An identifier that can be used to determine the asset(s), index (indices) or benchmark underlying a contract or, in the case of a foreign exchange derivative, identification of the currency pair or index.
Underlier ID source	The origin, or publisher, of the associated underlier ID.
Underlier type	A high-level description of the characteristics of an asset, index, commodity base product or contract underlying a derivative.
Underlier sub-type (first level)	A lower-level description of the characteristics of an asset, index, commodity sub-product or contract underlying a derivative.
Underlier sub-type (second level)	A further lower-level description of the characteristics of an asset, index, commodity sub-product or contract underlying a derivative.

Data element name	Data element description
Underlying credit index series	A number reflecting the constituents of an index for a given period of time.
Underlying credit index version	A number reflecting any changes to the constituents of an index during the lifetime of the series.
Underlying rate index tenor period	The unit of time for the tenor of an index (e.g. day, week, month).
Underlying rate index tenor period multiplier	The number of time units for the tenor of an index.

Annex B
(informative)

**Minimum UPI reference data elements by asset class and
instrument type**

Data element name	Credit			Rates			Commodities			Equities			FX			Multi-asset			Other class and/or type
	S	O	F	S	O	F	S	O	F	S	O	F	S	O	F	S	O	F	
Asset class ^a	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	d
Instrument type	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	
Currency associated with an underlying reference rate ^b				M	M	M										C	C	C	
Delivery type	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	
Notional schedule				M												C			
Option style		M			M			M			M			M			M		
Option type		M			M			M			M			C			M		
Return, pricing method or payout trigger	M	M	M		M	M	M	M	M	M	M	M		M	M	M	M	M	
Seniority	M	M	M													C	C	C	
Settlement currency													C	C	C	C	C	C	
Single or multiple currency				M												C			
Standard contract specification	C	C	C													C	C	C	
Underlier ID ^c	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	
Underlier ID source	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	
Underlier type	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	
Underlier sub-type (first level)	M	M	M				M	M	M							C	C	C	
Underlier sub-type (second level)							C	C	C							C	C	C	
Underlying credit index series	C	C	C													C	C	C	
Underlying credit index version	C	C	C													C	C	C	
Underlying rate index tenor period				C	C	C										C	C	C	
Underlying rate index tenor period multiplier				C	C	C										C	C	C	

Key
 F forward
 O option
 S swap
 C conditional (to be delivered if applicable)
 M mandatory
 Blank not applicable

^a Two or more instances required for multi-asset products.
^b Can be repeated, e.g. for cross currency swaps.
^c Underlying identifiers and their sources are not required for custom baskets of assets.
^d To be determined by the UPI service provider as it makes operational decisions in its implementation of the standard.

Annex C (normative)

Check character calculation

A MOD 31,30 check character shall be calculated in accordance with ISO/IEC 7064:2003, Clauses 9 and 10, using the same character set as the base code [alphanumeric, but excluding vowels (A, E, I, O, U) and the letter Y] and with the following values assigned to the characters, replacing Table 4 in ISO/IEC 7064:2003 with [Table C.1](#).

Table C.1 — Values assigned to characters

Character	Value in systems for alphanumeric strings	Character	Value in systems for alphanumeric strings	Character	Value in systems for alphanumeric strings
0	0	B	10	N	20
1	1	C	11	P	21
2	2	D	12	Q	22
3	3	F	13	R	23
4	4	G	14	S	24
5	5	H	15	T	25
6	6	J	16	V	26
7	7	K	17	W	27
8	8	L	18	X	28
9	9	M	19	Z	29

In the following example, the starting value for the computation is defined as 30, one of two moduli whose value equals the number of characters in the character set. The operations involving the two moduli, 30 and 31, are defined as follows:

$\|_{30}$ is the remainder after dividing by 30; if this is zero then the value 30 shall be substituted.

$|_{31}$ is the remainder after dividing by 31; the remainder is never zero after this operation.

EXAMPLE If the base code (prefix + nine alphanumeric characters) is QZNX2JD91QC, it would be converted to values from [Table C.1](#) as follows:

Q	Z	N	X	2	J	D	9	1	Q	C
22	29	20	28	2	16	12	9	1	22	11

The operations are then performed on these values as follows:

$$\begin{array}{llll}
 30 + \mathbf{22} = 52 & \|_{30} = 22 & \times 2 = 44 & |_{31} = 13 \\
 13 + \mathbf{29} = 42 & \|_{30} = 12 & \times 2 = 24 & |_{31} = 24 \\
 24 + \mathbf{20} = 44 & \|_{30} = 14 & \times 2 = 28 & |_{31} = 28 \\
 28 + \mathbf{28} = 56 & \|_{30} = 26 & \times 2 = 52 & |_{31} = 21 \\
 21 + \mathbf{2} = 23 & \|_{30} = 23 & \times 2 = 46 & |_{31} = 15
 \end{array}$$

$15 + 16 = 31$	$\ _{30} = 1$	$\times 2 = 2$	$ _{31} = 2$
$2 + 12 = 14$	$\ _{30} = 14$	$\times 2 = 28$	$ _{31} = 28$
$28 + 9 = 37$	$\ _{30} = 7$	$\times 2 = 14$	$ _{31} = 14$
$14 + 1 = 15$	$\ _{30} = 15$	$\times 2 = 30$	$ _{31} = 30$
$30 + 22 = 52$	$\ _{30} = 22$	$\times 2 = 44$	$ _{31} = 13$
$13 + 11 = 24$	$\ _{30} = 24$	$\times 2 = 48$	$ _{31} = 17$

The final computed value, 17, plus the check digit is congruent to 1 (mod 30), so the check digit has a value of 14, and according to [Table C.1](#) the character itself is G. This is appended to the end of the base number to produce the UPI of QZNX2JD91QCG.

Bibliography

- [1] ISO 6166:2021, *Financial services — International securities identification number (ISIN)*
- [2] ISO 10962, *Securities and related financial instruments — Classification of financial instruments (CFI) code*
- [3] Committee on Payments and Market Infrastructures. Board of the International Organization of Securities Commissions. *Technical guidance on the Harmonisation of the Unique Product Identifier*. <https://www.bis.org/cpmi/publ/d169.pdf>
- [4] Financial Stability Board. *Governance arrangements for the UPI – Conclusions, implementation plan and next steps to establish the International Governance Body*. <https://www.fsb.org/wp-content/uploads/P091019.pdf>
- [5] Financial Stability Board. Letter to the chair of the Regulatory Oversight Committee (ROC), 25 September 2020. <https://www.fsb.org/wp-content/uploads/P250920.pdf>

British Standards Institution (BSI)

BSI is the national body responsible for preparing British Standards and other standards-related publications, information and services.

BSI is incorporated by Royal Charter. British Standards and other standardization products are published by BSI Standards Limited.

About us

We bring together business, industry, government, consumers, innovators and others to shape their combined experience and expertise into standards-based solutions.

The knowledge embodied in our standards has been carefully assembled in a dependable format and refined through our open consultation process. Organizations of all sizes and across all sectors choose standards to help them achieve their goals.

Information on standards

We can provide you with the knowledge that your organization needs to succeed. Find out more about British Standards by visiting our website at bsigroup.com/standards or contacting our Customer Services team or Knowledge Centre.

Buying standards

You can buy and download PDF versions of BSI publications, including British and adopted European and international standards, through our website at bsigroup.com/shop, where hard copies can also be purchased.

If you need international and foreign standards from other Standards Development Organizations, hard copies can be ordered from our Customer Services team.

Copyright in BSI publications

All the content in BSI publications, including British Standards, is the property of and copyrighted by BSI or some person or entity that owns copyright in the information used (such as the international standardization bodies) and has formally licensed such information to BSI for commercial publication and use.

Save for the provisions below, you may not transfer, share or disseminate any portion of the standard to any other person. You may not adapt, distribute, commercially exploit or publicly display the standard or any portion thereof in any manner whatsoever without BSI's prior written consent.

Storing and using standards

Standards purchased in soft copy format:

- user for personal or internal company use only.
- The standard may be stored on more than one device provided that it is accessible by the sole named user only and that only one copy is accessed at any one time.
- A single paper copy may be printed for personal or internal company use only.

Standards purchased in hard copy format:

- A British Standard purchased in hard copy format is for personal or internal company use only.
- It may not be further reproduced – in any format – to create an additional copy. This includes scanning of the document.

If you need more than one copy of the document, or if you wish to share the document on an internal network, you can save money by choosing a subscription product (see 'Subscriptions').

Reproducing extracts

For permission to reproduce content from BSI publications contact the BSI Copyright and Licensing team.

Subscriptions

Our range of subscription services are designed to make using standards easier for you. For further information on our subscription products go to bsigroup.com/subscriptions.

With **British Standards Online (BSOL)** you'll have instant access to over 55,000 British and adopted European and international standards from your desktop. It's available 24/7 and is refreshed daily so you'll always be up to date.

You can keep in touch with standards developments and receive substantial discounts on the purchase price of standards, both in single copy and subscription format, by becoming a **BSI Subscribing Member**.

PLUS is an updating service exclusive to BSI Subscribing Members. You will automatically receive the latest hard copy of your standards when they're revised or replaced.

To find out more about becoming a BSI Subscribing Member and the benefits of membership, please visit bsigroup.com/shop.

With a **Multi-User Network Licence (MUNL)** you are able to host standards publications on your intranet. Licences can cover as few or as many users as you wish. With updates supplied as soon as they're available, you can be sure your documentation is current. For further information, email cservices@bsigroup.com.

Revisions

Our British Standards and other publications are updated by amendment or revision.

We continually improve the quality of our products and services to benefit your business. If you find an inaccuracy or ambiguity within a British Standard or other BSI publication please inform the Knowledge Centre.

Useful Contacts

Customer Services

Tel: +44 345 086 9001

Email: cservices@bsigroup.com

Subscriptions

Tel: +44 345 086 9001

Email: subscriptions@bsigroup.com

Knowledge Centre

Tel: +44 20 8996 7004

Email: knowledgecentre@bsigroup.com

Copyright & Licensing

Tel: +44 20 8996 7070

Email: copyright@bsigroup.com

BSI Group Headquarters

389 Chiswick High Road London W4 4AL UK