INTERNATIONAL STANDARD

ISO 13616-1

Second edition
2020-09

Financial services — International bank account number (IBAN) —

Part 1:
Structure of the IBAN

Services financiers — Numéro de compte bancaire international (IBAN) —

Partie 1: Structure de l'IBAN

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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*.

This second edition cancels and replaces the first edition (ISO 13616-1:2007), of which it constitutes a minor revision. The changes to the previous edition are as follows:

— updates of the Foreword and the Introduction;

— in 6.3.3, a note has been added to clarify how to implement the ISO/IEC 7064 check digit, to ensure proper validation of the IBAN;

— the status of Annex A changed to informative;

— minor editorial changes.

A list of all parts in the ISO 13616 series can be found on the ISO website.

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 use of electronic communication media and services internationally for the cross-border transmission of information and payment-related transactions between financial institutions, as well as between financial institutions and their customers, continues to increase. In order to facilitate automated processes in support of straight through processing (STP) in this environment, the ISO 13616 series has been developed as a means by which financial institutions and their customers can exchange, through inter-industry electronic data interchange (EDI), customer account identification details in a machine-readable form. It also makes provision for validation of the information provided.

In developing the ISO 13616 series, it was recognized that a single, universal method for identifying the account and banking relationship for customers of financial institutions was not practical. Accordingly, the ISO 13616 series recognizes that financial institutions would wish to retain, wherever possible, their current national identification methods. It therefore provides a method whereby a minimum amount of change to existing systems is required and, at the same time, proposes a means of structuring the information in a way that promotes automated processing of the information provided.

It is anticipated that the use of the ISO 13616 series in electronic data interchange will:

a)   reduce the need for manual intervention in the processing of inter-industry and intra-industry data interchange;

b)   improve the level of confidence in the accuracy of the information provided;

c)   provide certainty that the information provided is relevant to the country of ownership of the account.

It is recognized that the IBAN would also be of use in a paper environment. The use of information to further qualify details of the financial institution at which the IBAN applies is not precluded by their use outside of the IBAN.

Financial services — International bank account number (IBAN) —

Part 1: Structure of the IBAN

1 Scope

This document specifies the elements of an international bank account number (IBAN) used to facilitate the processing of data internationally in data interchange, in financial environments as well as within and between other industries. The IBAN is designed for automated processing but can also be used conveniently in other media interchange when appropriate (e.g. paper document exchange).

This document does not specify internal procedures, file organization techniques, storage media or languages to be used in its implementation, nor is it designed to facilitate the routing of messages within a network. It is applicable to the textual data which might be conveyed through a system (network).

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 3166-1, *Codes for the representation of names of countries and their subdivisions — Part 1: Country codes*

ISO/IEC 7064, *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 http://www.electropedia.org/

3.1
account number
identifier that identifies an account

3.2
bank identifier
identifier that uniquely identifies the financial institution and, when appropriate, the branch of that financial institution servicing an account

3.3
basic bank account number
BBAN
identifier that uniquely identifies an individual account at a specific financial institution in a particular country and which includes a bank identifier of the financial institution servicing that account

3.4
international bank account number
IBAN
expanded version of the basic bank account number (BBAN), intended for use internationally, which uniquely identifies an individual account at a specific financial institution, in a particular country

Note 1 to entry: Although designed for use internationally, there is nothing to prevent the use of the IBAN domestically.

4   Conventions

This document uses the following conventions for data element representations.

— status of sub-elements of a data element:

[ ]   optional.

— character representations:

n   digits (numeric characters 0 to 9 only);

a   upper-case letters (alphabetic characters A-Z only); or

c   upper- and lower-case alphanumeric characters (A-Z, a-z and 0-9);

e   blank space.

— length indications:

nn!   fixed length;

nn   maximum length.

5   Structure

The format of the IBAN shall be:

2!a2!n30c

where

a)   the first two letters (2!a) shall always be the two-character country code (alpha-2 code), as defined in ISO 3166-1, of the country in which the financial institution servicing the account resides;

b)   the third and fourth characters (2!n) shall be the check digits, as calculated from the scheme defined in this document (see Clause 6);

c)   the remaining part of the IBAN (up to 30c), the BBAN, shall only contain upper- and lower-case letters (A to Z and a to z) and numeric characters (0 to 9), without special characters such as separators and punctuation that may be used in national account number schemes;

d)   the BBAN shall in addition:

— have one fixed length per country;

— include within it a bank identifier with a fixed position and length per country.

If the BBAN is structured in line with d), the corresponding IBAN format would meet the requirements for inclusion in the ISO IBAN registry. IBAN formats whose design was based on a previous edition of the ISO 13616 series, and which do not conform with d), may be included in a special section of the registry where information will be included as free text.

For the representation of the IBAN in a printed format, see Annex A.

6 Check digits

6.1 General

The check digits shall be calculated based on the scheme defined in ISO/IEC 7064 (MOD 97-10). See Annex B.

The check digits are used to verify the BBAN and country code.

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

6.2 Checking the check digits

6.2.1   If the IBAN is in paper format (see Annex A), delete all blank spaces.

6.2.2   Move the first four characters to the right-hand end of the IBAN.

6.2.3   Convert upper- and lower-case letters to digits in accordance with the following:

A = 10	F = 15	K = 20	P = 25	U = 30
B = 11	G = 16	L = 21	Q = 26	V = 31
C = 12	H = 17	M = 22	R = 27	W = 32
D = 13	I = 18	N = 23	S = 28	X = 33
E = 14	J = 19	O = 24	T = 29	Y = 34
				Z = 35

6.2.4   Apply the check character system MOD 97-10 (see ISO/IEC 7064).

6.2.5   If the remainder is 1 (one), the number is valid.

6.3 Generating the check digits

6.3.1   Add the country code (2!a) and "00" to the right-hand end of the BBAN.

6.3.2   Convert letters (alpha-2 code characters) to digits (numeric characters) in accordance with 6.2.3.

6.3.3   Apply the check character system MOD 97-10 (see ISO/IEC 7064).

NOTE   From this, the check digits can only be in the range [02..98].

7 Registration of IBAN formats

National standards bodies wishing to register an IBAN format that conforms with the ISO 13616 series for their country should refer to ISO 13616-2.

8   Formats and samples of IBANs

IBAN formats and samples conforming with the ISO 13616 series can be found in the registry of national IBAN formats maintained by the Registration Authority described in ISO 13616-2.

Annex A
(informative)

Representation of the IBAN in the printed format

A.1 Introduction

This annex specifies the use and representation of IBAN in the printed format.

A.2 Scope

In a printed format, where the specification of an international bank account number is requested, the IBAN shall be used as defined in this annex.

The generation of a payment (or related) instruction on paper shall always include an IBAN and, in addition, where appropriate, the instruction may include identification of the financial institution servicing the account by an alternative identification scheme other than that implicit in the IBAN (e.g. BIC as defined in ISO 9362).

Mandating the positioning of the IBAN in or on a paper or similar instruction is not considered to be within the scope of this annex.

A.3 Structure

In a printed format, the IBAN structure (2!a2!n30c) shall remain, but the IBAN shall be printed in groups of four characters and each group should be separated by a blank space. The reason for this is to increase the readability of the IBAN when presented on paper in a printed format.

EXAMPLE

Electronic IBAN: BE68539007547034

Printed IBAN: BE68 5390 0754 7034

Annex B
(informative)

Example of how to calculate and validate the check digits

B.1 Constructing an IBAN and calculating check digits

B.1.1 The example given in this annex is based on an example of a Czech Republic domestic account number and the explanation of the IBAN structure given in Clause 5. The structure of the Czech Republic domestic account number consists of an account number of between six and 20 digits, and within it a bank identifier with a fixed length of four digits which are always in the last four positions.

EXAMPLE   For the domestic account number 19–2000145399/0800, the bank identifier is 0800.

B.1.2 Format the BBAN by deleting all non-alphanumeric characters.

EXAMPLE   The domestic account number 19–2000145399/0800 becomes 1920001453990800.

B.1.3 Add the country code (2!a from ISO 3166-1) followed by the digits "00" to the right-hand end of the BBAN.

EXAMPLE   The same number now becomes 080000000192000145399CZ00.

B.1.4 Convert the alpha characters to numeric characters in accordance with 6.2.3.

EXAMPLE   The number now becomes 080000000192000145399123500.

B.1.5 Calculate the modulo 97 (the remainder after division by 97).

EXAMPLE   After division by 97, the remainder of 080000000192000145399123500 is 33 (33).

B.1.6 Subtract the remainder from 98 and, if the result is less than 10, insert a leading zero.

EXAMPLE   98 minus 33 equals 65.

NOTE   The example given in this annex does not require insertion of a leading zero.

B.1.7 Insert the country code and check digit at the left-hand end of the BBAN.

EXAMPLE   The IBAN is equal to CZ6508000000192000145399 (electronic format) or CZ65 0800 0000 1920 0014 5399 (print format).

B.2 Validating the check digits in an IBAN

B.2.1 This method is used to validate the check digits of an IBAN.

EXAMPLE   The IBAN to be validated is CZ6508000000192000145399.

B.2.2 Move the first four characters of the IBAN to the right of the IBAN.

EXAMPLE   The number becomes 080000000192000145399CZ65.

B.2.3 Convert the alpha-2 code characters to numeric characters in accordance with 6.2.3.