DRAFT INTERNATIONAL STANDARD

ISO/DIS 24366

ISO/TC **68**/SC **8**	Secretariat: **SNV**
Voting begins on: **2021-03-10**	Voting terminates on: **2021-06-02**

Financial services – Natural Person Identifier (NPI)

ICS: 03.060

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Reference number
ISO/DIS 24366:2021(E)

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Published in Switzerland

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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).

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This document was prepared by Technical Committee ISO/TC 68, Financial Services, Subcommittee SC 8, Reference Data for Financial Services.

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Introduction

Identification of natural persons for the purposes of provision of financial services has specific applications for protecting the personal data of Financial Services firms employees by allowing firms to respond to the requirements of regulation without exposing personal information, and to allow regulators a privacy-protected way to identify beneficial owners, amongst other use cases.

Benefits include straight through processing savings, ability to monitor systemic risk across jurisdictions and, more importantly, creating the ability to protect citizens personal information during the provision of services and responding to regulatory requirements.

This document fulfils the needs of the global financial services industry and the regulatory community for natural person identification. Its key provisions are that it:

- enables unique identification globally of natural persons requiring an identifier (NPI);
- defines an NPI code that contains no embedded intelligence;
- defines an NPI code that is interoperable with other standards and existing reference data and can be applied globally to support the financial services industry;
- leverages the expertise of ISO/TC 68 in defining and maintaining identifier standards;
- defines an NPI scheme that is reliable and an NPI code that is persistent;
- defines an NPI scheme that is extensible and free from limitation on use and redistribution.

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Already existing national natural person identifiers may not be applicable in cross-border transactions. The national person identifier defined in this document intends to close this gap allowing a co-existence of national identifiers and the international natural person identifier.

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Financial services – Natural Person Identifier (NPI)

1 Scope

This document specifies a machine-readable, unambiguous natural person identifier (NPI) and the relevant reference data to uniquely identify the natural persons relevant to any financial transaction in a privacy-protected way by utilizing the identifier rather than the personally identifying information.

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 17442, *Financial services — Legal Entity Identifier (LEI)*

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

ISO 3166 (all parts), *Codes for the representation of names of countries and their subdivisions*

ISO 8601 (all parts), *Date and time — Representations for information interchange*

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3 Terms and definitions

No terms and definitions are listed in this document.

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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/

4 Structure of the Natural Person Identifier

This document uses the following conventions for data element representations.

a) Character representations:

— n: digits (numeric characters 0 to 9 only);

— c: upper case alphanumeric characters (A–Z and 0–9 only).

b) Length indications:

— nn!: fixed length;

— nn: maximum length.

The format of the Natural Person Identifier shall be

— 13!c2!n.

The Natural Person Identifier consists of 15 characters decomposed as follows:

— characters (13!c) without separators or “special” characters;

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— the 14th and 15th characters (2!n) shall be the check digit pair, as calculated based on the procedure defined in this document.

5 Check digits

5.1 General

The check digits shall be calculated based on the simplified procedure defined in ISO/IEC 7064 (MOD 97-10) after the conversion of the (leftmost) 13 alphanumeric characters into a character string consisting only of digits. The check digits are used to verify the NPI.

Valid check digit pairs are in the range of [02 .. 98]. 00, 01, and 99 are not valid NPI check digit pairs.

If the check digits have been calculated correctly, when the entire 15-character NPI is converted to numbers following the process described in step 1 under Clause 5.2 and divided by 97 as described in step 3 of that clause, the remainder shall be “1”.

5.2 Calculating the check digits

Step 1: Any letters in the 13-character string shall be converted to digit pairs in accordance with ISO/IEC 7064 (MOD 97-10).

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

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Step 2: Two zeros shall be appended to the resulting string at the rightmost positions.

Step 3: A Euclidian division of the resulting number by 97 shall be performed to determine the remainder.

Step 4: The remainder shall be subtracted from 98 to determine the check digit pair.

Step 5: The check digit pair shall be appended to the original 13-character string to arrive at the NPI.`

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6 Natural Person Identifier Data Record

The Natural Person Identifier data record shall be composed of the following data attributes:

Reference Data Element	*Description*	*Mandatory/ Mandatory with Exception/ Optional/ Conditional*	*Cardinality*	*Discussion/Commentary*
Legal Name – Surname/ Family/ Last Name/ Sole Name	The surname shall be as validated by a valid certificate (e.g. birth certificate, passport).	M	1..1	Where only one name is held by the Natural Person, that name should be recorded in this field as is usual policy for jurisdictions where this convention currently applies. Where more than one legal name is held by the Natural Person, those names will be captured in the Alternate Name element. This field must accommodate alternate alphabets and transliteration.
Legal Name – Middle Name	The middle name shall be as validated by a valid certificate (e.g. birth certificate, passport).	O	0..*	This field must accommodate alternate alphabets and transliteration. Captured: number of middle names [Check with passport restrictions].
Legal Name - First Name	The first name shall be as validated by a valid certificate (e.g. birth certificate, passport).	MwE	1..1	Where only one name is held by the Natural Person, that name should be recorded in the surname/last name element as is usual policy for jurisdictions where this convention is currently recorded. This field must accommodate alternate alphabets and transliteration. Some jurisdictions utilize this field for first and middle name in official documentation. In order to accommodate variations on how names are structured, the syntax restrictions on this data should be xsd:string. In case of changing names or whatever field, identifier should stay the same.
Alternate Name(s)	Nicknames, aliases, "known as", maiden names, alternate legal name(s).	O	0..*	Freeform, unbounded, transliterate, …
Alternate Name Type	e.g. known as, maiden, alias, nickname …	O	0..*	Must use a controlled vocabulary set.
Date of Birth	Mandatory field, with an exception for certain cases if this DOB cannot be validated against an official source.	MwE	1..1	Use representation of date as per ISO 8601-1

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