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# Reference data distribution in financial services

# National foreword

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# Reference data distribution in financial services

*Distribution de données de référence dans les services financiers*

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# Contents

Page

**Foreword** ..... **v**
**Introduction** ..... **vi**
**1 Scope** ..... **1**
**2 Normative references** ..... **1**
**3 Terms and definitions** ..... **1**
**4 Principles** ..... **2**
4.1 General ..... 2
4.2 Compatibility ..... 2
4.3 Data accuracy ..... 2
4.4 High availability ..... 2
4.5 Extensibility ..... 2
4.6 Security ..... 3
4.7 Maintainability ..... 3
**5 Related technology** ..... **3**
5.1 Fintech ..... 3
5.2 WebSocket ..... 3
5.3 AJAX ..... 3
5.4 RMI 4
5.5 Blockchain ..... 4
5.6 P2P 4
**6 Business model** ..... **4**
**7 Logical model** ..... **5**
7.1 Logical model ..... 5
7.2 Distribution process ..... 6
7.3 Domains and topics ..... 6
7.4 Publisher module ..... 7
7.5 Subscription module ..... 7
**8 Physical model** ..... **7**
8.1 Broker-based ..... 7
8.2 Non-broker ..... 8
8.2.1 Multicast ..... 8
8.2.2 P2P ..... 8
8.3 Interactions ..... 8
8.3.1 General ..... 8
8.3.2 Publisher view ..... 8
8.3.3 Subscriber view ..... 8
8.3.4 Smart contract ..... 8
8.3.5 Accuracy ..... 8
**9 Data payload syntax** ..... **9**
9.1 General ..... 9
9.2 Syntax and structures ..... 9
9.3 Data types ..... 9
**10 Authority** ..... **10**
10.1 Access control ..... 10
10.2 Privacy protection ..... 10
**11 Security** ..... **10**
11.1 Data security ..... 10
11.2 Transport security ..... 10
11.3 Application security ..... 11

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**12 QoS control** ..... **11**
12.1 General ..... 11
12.2 Latency ..... 12
12.3 Consistency ..... 12
12.4 Deadline ..... 12
12.5 Reliability ..... 12
**13 Use cases** ..... **12**
13.1 Broker-based ..... 12
13.2 Non-broker ..... 13
**Bibliography** ..... **15**


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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 9, *Information exchange 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.

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# Introduction

### 0.1 Opening comments

With the increasing correlation between financial products, a lot of reference data (trading product, trading institution, trader information) are shared and reused in financial services. There is an urgent and significant worldwide demand for guidance and standardization of reference data distribution in financial services. Moreover, many industries expect efficient data distribution to ensure consistency, integrity, relevance and accuracy.

This document covers distribution modes (distributed and centralized), task scheduling, privacy protection, security and other issues. Data consistency and security are fundamental concerns for distributors, receivers, the ordered execution of the distribution tasks and independent distribution tasks of different receiver systems. Efficient distribution can achieve the goal of real-time synchronization of reference data, ensure that all organizations receive the most accurate data information in time and prevent system operation problems caused by information asymmetry.

This document's potential applications are independent of specific business scenarios and irrelevant to data type and data format specifications.

This document is intended to provide:

— reference information for distributors;

— new products and services for developers;

— benefits for receivers using reference data.

The purpose of this document is to simplify the data processing procedure, as well as improve the data distribution reliability and data sharing capabilities. Specifically, it will include two distribution modes: centralized distribution mode and distributed distribution mode. The former is traditional and the latter is emerging. Therefore, this document will be conducive to promoting new solutions for reference data distribution scenarios, such as distributed ledger technology. These benefits would be realized between certain service participants and within them.

### 0.2 How to approach this document

This document aims to provide a comprehensive insight into the development of reference data interfaces (RDIs) to realize efficient reference data distribution in financial services. In this sense, some aspects of the document are more mature than others. For example, the text is prescriptive where there is room to be so; where areas are less mature, commentary on good practice is provided and the considerations set out.

Broadly speaking, the document adopts the following logic:

— terms and definitions: all terms in the document;

— design principles: the principles and considerations for the design of the RDI;

— related technology: considerations and commentaries on different technologies;

— business model: the transmission process of public reference data and financial data standards;

— logical model: analysis of the logical structure of business data;

— physical model: overview and commentaries on the broker-based model and the non-broker-based model;

— interactions: considerations of the interactions between publishers and subscribers;

— QoS control: control of the network resource application in the transmission of reference data.


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# Reference data distribution in financial services

## 1 Scope

This document discusses the modes, related mainstream technologies, logical models, physical implementation models, data management (data storage and data security) and service quality control used in the reference data distribution in financial services.

This document applies to the reference data distribution and transmission processes in financial services.

## 2 Normative references

There are no normative references in this document.

## 3 Terms and definitions

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

ISO and IEC maintain terminology 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**
**reference data**
shareable and reusable basic information in financial service scenarios

Note 1 to entry: A large amount of shareable and reusable basic information exists in financial service scenarios, such as legal entity identification codes (LEI), bank identification codes (BIC), bond issuers, buyers and sellers.

**3.2**
**distributed ledger**
data store through a network of distributed nodes

Note 1 to entry: Distributed ledger is a way of recording data that does not need to be stored or confirmed by any centralized entity.

Note 2 to entry: Distributed ledger is the most critical blockchain technology used in the capital market, an asset database that can be shared among multiple sites, different geographic locations or networks composed of multiple institutions.

**3.3**
**financial technology**
technology innovation of traditional financial products and services

Note 1 to entry: Financial technology uses various technological means to innovate the products and services provided in the traditional financial industry to improve efficiency and reduce operating costs.

**3.4**
**full-duplex communication protocol**
network protocol based on TCP

Note 1 to entry: Full-duplex communication protocol realizes full-duplex communication between the client and the server, which allows the server to send information to the client actively.

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