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NATIONAL STANDARD OF THE PEOPLE'S REPUBLIC OF CHINA

GB/T 42777-2023

Financial risk prevention and control based on text data - Technical framework guidelines for knowledge graph construction

基于文本数据的金融风险防控 知识图谱构建技术框架指南

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Foreword

This document complies with the provisions of GB/T 1.1-2020 "Standardization Work Guidelines Part

1.Structure and Drafting Rules of Standardization Documents" Drafting. Please note that some content in this document may be subject to patents. The publisher of this document assumes no responsibility for identifying patents. This document is under the jurisdiction of the National Financial Standardization Technical Committee (SAC/TC180). This document was drafted by: China Banking Association, China Institute of Standardization, Industrial and Commercial Bank of China Co., Ltd., Bank of Qingdao Co., Ltd., Lanzhou Bank Co., Ltd., Jiangsu Jiangnan Rural Commercial Bank Co., Ltd., and Beijing Haizhixingtu Technology Co., Ltd. The main drafters of this document. Gao Feng, Zhao Chenggang, Zhong Junfeng, Cao Xinyu, Liu Yong, Yang Bin, Miao Xiaojun, Hu Zhenghong, Yang Juan, Zhai Shidan, Liu Qing. Financial risk prevention and control based on text data Knowledge graph construction technical framework guide

1 Scope

GB/T 42777-2023 gives the technical framework for building knowledge graphs from text data for financial risk control. Most of what a bank knows about a borrower's real risk is in text it cannot query - filings, news, court records, registry documents - and the relationships that matter, the guarantee circles and the shared beneficial owners that turn one default into twenty, are exactly what a knowledge graph makes visible. The standard sets the overall architecture, from the basic support and data source layers through knowledge extraction and processing, knowledge management and knowledge mining and analysis, to the risk control application and knowledge service interaction layers, then the construction of the graph itself: the build steps, the knowledge extraction and processing, the storage, and the fusion, reasoning and quality evaluation. It took effect on 6 August 2023.

This document gives a financial risk prevention and control knowledge graph and an overview of risk prevention and control based on text data, and provides knowledge graph construction, based on Guidelines for risk prevention and control applications of knowledge graphs. This document is suitable for financial institutions to build financial risk prevention and control knowledge graphs based on text data.

2 Normative reference documents

The contents of the following documents constitute essential provisions of this document through normative references in the text. Among them, the dated quotations For undated referenced documents, only the version corresponding to that date applies to this document; for undated referenced documents, the latest version (including all amendments) applies to this document.

GB/T 36618-2018 Information Security Technology Financial Information Services Security Specification

3 Terms and definitions

The following terms and definitions apply to this document.

3.1 entity entity A type of concepts, people, and things with independent logical meaning.

Note. For example, enterprises, natural persons, judgment documents, tender documents, accounts, etc.

3.2 relationshiprelationship The connection between entities at a specific time and under specific behavior.

Note. For example, equity relationships, transfer relationships, guarantee relationships, etc. between business entities.

3.3 attributeattribute Characteristics of an entity or relationship.

Note. For example, the attributes of "natural person" include name, address, phone number, etc., and the attributes of "equity relationship" include shareholding ratio, relationship establishment time, etc.

3.4 knowledge graph knowledgegraph A structured description of concepts, entities and their relationships in the objective world.

3.5 Investors who act in concert in the acquisition of listed companies and related changes in equity interests.

Note. Acting in concert refers to an investor's agreement or other arrangements to jointly expand the voting rights of a listed company's shares with other investors. A right amount of behavior or fact.