ISSN 2616-5902 Vol. 7, Issue 3: 32-36, DOI: 10.25236/AJBM.2025.070305

Data Asset Analysis, Financial Reporting, and Recommendations

Tong Wu [1,a,*], Xin Song [1,b]

[1] Business School, University of Shanghai for Science and Technology, Shanghai, China
[a] yuanfang22022@163.com, [b] songxin@usst.edu.cn
**Corresponding author*

Abstract: *With the development of the digital economy, data has become a resource as important as traditional production factors. This paper distinguishes the concepts of data, data resources, and data assets, analyzes the current state of financial reporting for data assets in China, and addresses the challenges of data asset ownership confirmation and valuation. It proposes three recommendations and measures to help enterprises better manage and disclose data assets, thereby realizing their economic value.*

Keywords: *data assets, financial reporting, data asset valuation*

1. Introduction

As a new production factor in the digital economy, data plays a vital role in fostering new productivity[1], enhancing the integration of digital technologies, and significantly improving total factor productivity. Including data assets in financial statements (hereinafter referred to as "digital asset reporting") is a critical step in promoting the monetization of data assets.

Since 2023, the Ministry of Finance has issued the "Provisional Regulations on the Accounting Treatment of Enterprise Data Resources", which aims to standardize the accounting treatment of enterprise data resources, strengthen information disclosure, and enhance the operational and monetization capabilities of corporate data assets. This allows enterprises' data resource status to be directly reflected in financial statements, offering new approaches to discovering value in the digital economy era.

2. Differentiating Data, Data Resources, and Data Assets

Data serves as a fundamental element, recording objective facts and typically existing in forms such as numbers, text, and images. It has become a new production factor alongside land, labor, capital, technology, knowledge, and management[2]. These are raw materials in their unprocessed state.

When data is processed and gains potential value, it becomes a data resource. Data resources refer to raw data and their derivatives that have been identified, collected, processed, stored, and managed, with potential economic value. From the perspective of resources and management, data resources are an important type of resource that supports managerial decision-making[3]. These processed raw data provide support for business operations and decision-making.

Data assets, on the other hand, are datasets in cyberspace with ownership rights (exploration, usage, and ownership rights), measurable value, and controllability[4]. Data assets represent data resources capable of generating value for organizations. The formation of data assets requires proactive management and effective control of data resources, emphasizing controllability and value realization. Their economic value is reflected through measurement or transactions.

Understanding the connotation and extension of these concepts helps enterprises effectively manage and utilize data in the digital economy, thereby enhancing competitiveness.

3. The Current State of Digital Asset Reporting in China

Due to the incomplete and unclear definition and management of data assets, the "Provisional

ISSN 2616-5902 Vol. 7, Issue 3: 32-36, DOI: 10.25236/AJBM.2025.070305

Regulations on the Accounting Treatment of Enterprise Data Resources" issued by the Ministry of Finance stipulates that data resources used by enterprises should be recognized as intangible assets if they meet the definition and recognition conditions of intangible assets under accounting standards. Similarly, data resources held in daily activities with the ultimate goal of sale should be recognized as inventory if they meet the definition and recognition conditions of inventory.

3.1 Listed Companies

As per the 2024 semi-annual reports, as of October 23, 2024, among over 5,000 A-share listed companies, 41 companies disclosed matters related to data resource reporting, with a total amount of 1.364 billion yuan. Four companies later corrected their semi-annual reports due to reporting errors, setting the data-related figures to zero.

Among these 41 companies, 26 companies recorded data resources as intangible assets, 18 companies recorded them under development expenditure, and 5 companies categorized them as inventory. Additionally, 8 companies recorded data resources under two accounts simultaneously, as shown in Figure 1[1].

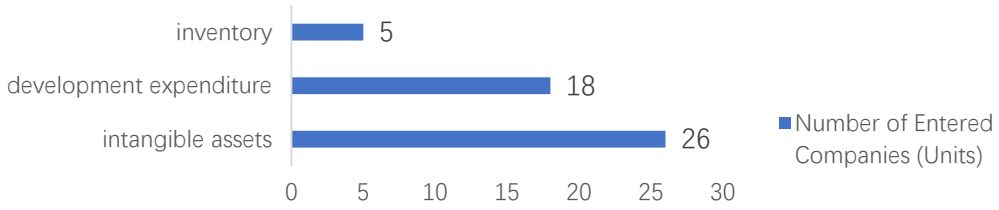

Figure 1 Listed Company Data Resource Entry Accounts

In terms of financial reporting: 34.6% of the total 1.364 billion yuan was recorded as inventory, 43.1% as intangible assets, and the rest under development expenditures, as shown in Figure 2[2].

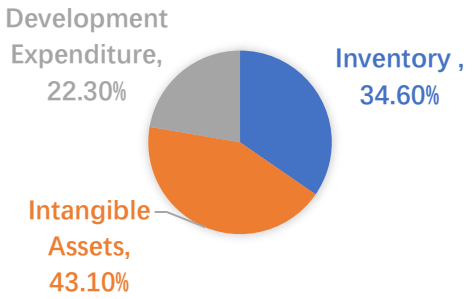

Figure 2 Proportion of Each Entry Account Amount to Total Amount

3.2 Non-Listed Companies

By the third quarter of 2024, 126 non-listed companies disclosed data resource reporting information, including 38 city investment companies, 72 quasi-state-owned enterprises, and 16 private enterprises. The financing amount also increased from 104 million yuan in Q1 to 511 million yuan in Q3, as shown in Figure 3 and 4[3].

[1] Source: Wind, "China Data Asset Listing Tracking Report"
[2] Source: Wind, "China Data Asset Listing Tracking Report"
[3] Source: Wind, "China Data Asset Listing Tracking Report"

ISSN 2616-5902 Vol. 7, Issue 3: 32-36, DOI: 10.25236/AJBM.2025.070305

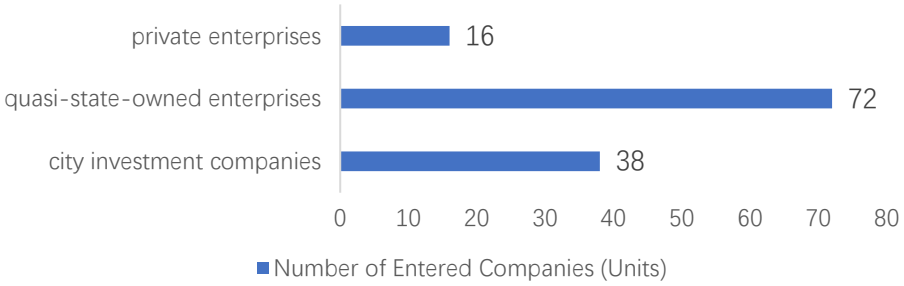

Figure 3 Non-Listed Company Data Resource Entry Enterprise Types

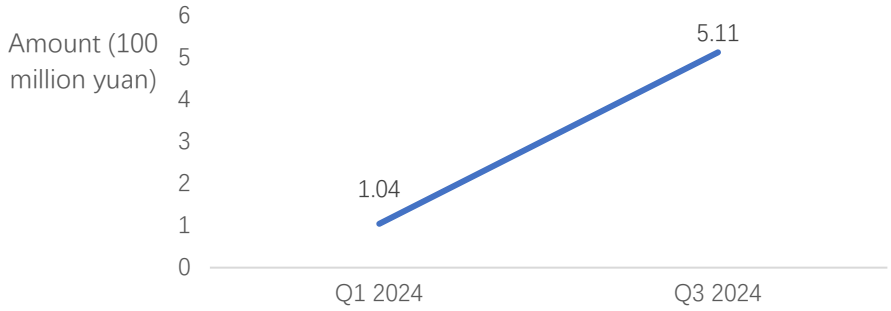

Figure 4 Total Amount Raised

Although only a small number of companies have disclosed data assets, this trend is expected to accelerate as the value of data resources becomes increasingly recognized.

4. Challenges in Digital Asset Reporting

The academic community currently debates two major issues regarding data assets: ownership confirmation and valuation[5].

4.1 Ownership Confirmation

As an intangible asset, data faces complex challenges in ownership definition, becoming a primary obstacle for enterprises attempting data monetization. The current legal system does not clearly define the connotation of "data rights." The intangible and replicable nature of data makes it difficult to define ownership, unlike traditional physical assets[6]. This leads to legal ambiguities and risks during financial reporting of data assets.

4.2 Valuation

Traditional valuation methods, such as the cost, income, and market face limitations in addressing the unique characteristics of data assets:

Cost Approach: Evaluates data assets based on the costs incurred in their formation, including direct costs (e.g., data collection, organization, storage) and indirect costs (e.g., management fees, reasonable profit). Adjustments must account for depreciation and other factors[7].

Income Approach: Estimates the present value of future economic benefits generated by data assets. It requires reliable predictions of expected earnings and appropriate discount rates[8].

Market Approach: Relies on comparable market data to estimate fair value.

For example, State Grid Zhejiang New Technology Co., Ltd. conducted a valuation combining market and cost approaches, with reference prices provided by a data exchange. The process is shown in Figure 5.

ISSN 2616-5902 Vol. 7, Issue 3: 32-36, DOI: 10.25236/AJBM.2025.070305

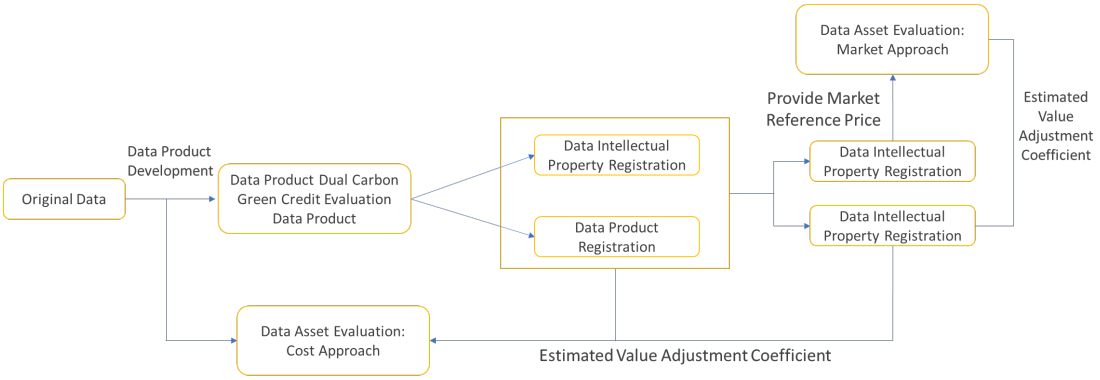

Figure 5 The Process Of valuation combining market and cost approaches

Data assets, unlike traditional physical assets, are highly influenced by market demand, technological advancements, and environmental changes, resulting in significant volatility. Additionally, the underdeveloped data market[9] and lack of unified standards exacerbate valuation challenges.

5. Recommendations for Digital Asset Reporting

5.1 Improve Legal and Regulatory Frameworks

The current legal system lacks clarity in defining and managing data assets. Clear ownership definitions, transaction rules, and usage rights should be established. Drawing from intellectual property and copyright law, a legal framework tailored to the digital economy should be developed. Unified regulations should ensure compliance in data transactions, enhance market transparency, and address cross-border data flow issues.

5.2 Establish a Data Asset Valuation System

A standardized and detailed valuation system should be developed, covering all stages of the data lifecycle (collection, processing, storage, exchange). Valuation models should consider factors such as historical accumulation, usage frequency, market demand, and technical potential. The system must be flexible enough to meet the needs of various industries and enterprises. Industry organizations should promote the marketization and standardization of data asset valuation.

5.3 Strengthen Enterprise Data Governance

Enterprises should build robust data governance frameworks, enhance data asset classification, management, and security, and ensure compliance. By managing data in detail, enterprises can ensure the legality of their data assets and provide accurate materials for valuation. Training professionals to recognize the strategic value of data assets can increase transparency and boost investor confidence.

References

[1] Li Tao, Ouyang Rihui. Data as a High-Quality Factor for Forming New Productive Forces [N]. Guangming Daily, April 23, 2024 (Page 11). (In Chinese)
[2] Li Haijian, Zhao Li. Data as a Factor of Production: Characteristics, Mechanisms, and Evolution of Value Forms [J]. Shanghai Journal of Economics, 2021, (08): 48-59. (In Chinese)
[3] Yang Shanlin, Zhou Kaile. Management Issues in Big Data: A Resource Perspective Based on Big Data [J]. Journal of Management Sciences in China, 2015, 18(5): 1-8. (In Chinese)
[4] Zhu Yangyong, Ye Yazhen. Understanding Data Assets from the Perspective of Data Attributes [J]. Big Data Research, 2018, 4(6): 65-76. (In Chinese)
[5] Zhang Shanshan. Challenges and Solutions for Incorporating Data Resources into Financial Statements [J]. China Certified Public Accountant, 2024, (01): 95-98. (In Chinese)
[6] Xue Qian, Zeng Xiaoqing, Ouyang Zanyou. Key Issues in Data Asset Recognition Under Digital Intelligence Transformation [J]. China Certified Public Accountant, 2024(10): 105-113. (In Chinese)
[7] Lin Feiteng. Research on Big Data Asset Valuation Based on the Cost Method [J]. Market Modernization, 2020, (10): 59-60. (In Chinese)

ISSN 2616-5902 Vol. 7, Issue 3: 32-36, DOI: 10.25236/AJBM.2025.070305

[8] Shen Junxin, Zhao Xueshan. A Dynamic Stacked-GBDT Algorithm-Based Approach for Data Resource Value Assessment [J]. Science and Technology Management Research, 2023, 43(01): 53-61. (In Chinese)

[9] Huang Yinxu. Legal Governance Transformation for Cultivating an Integrated Public Data Market [J]. Law Review, 2024, 42(06): 14-22. (In Chinese)