A Study on the Effects of Data Asset Recognition in Financial Statements: A Case Study of China Mobile

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Abstract. In the era of the gradual prosperity of the digital economy, the inclusion of data assets in financial statements has become a key measure of the national strategy and one of the key issues of concern in contemporary society. Currently, some researchers have extensively explored the current status, problems, and financial impacts of data asset disclosure, but there is a lack of in-depth analysis on the aspect of effectiveness. Therefore, this study takes China Mobile as an example and uses methods such as case analysis and comparative research to analyze the various effects brought about by China Mobile's data asset disclosure and the problems it still faces. The study finds that the scale and growth rate of China Mobile's data asset disclosure rank first in the industry, attracting widespread attention from investors and customers, and generating positive market feedback. In addition, it has a certain impact on some financial indicators. Despite achieving results, it still faces challenges such as insufficient measurement methods, disclosure compliance, and transparency of data sources. They require further breakthroughs to improve the practice of including data assets in financial statements.

Keywords: Data Assets, Data Asset Recognition, Effects, China Mobile.

1. Introduction

As the digital economy has become a new engine for global economic growth, the market-oriented allocation of data factors has become a key national strategy. In recent years, the government has issued a series of important policies focusing on data, data assets, and data factors. Among them, the official implementation of the Interim Provisions on the Accounting Treatment of Enterprise Data Resources (hereinafter referred to as the Interim Provisions) in 2024 clearly specifies the requirements for the recognition, measurement, and accounting information disclosure of data resources as assets in financial statements. This is an epoch-making breakthrough in the field of accounting [1], and it is of great significance for reshaping the asset structure of enterprises and enhancing their commercial value. In recent years, the academic community has conducted in-depth research on the issue of data asset recognition in financial statements, but most of the studies focus on disclosure status and financial impacts. There is a lack of in-depth analysis on the post-recognition effects. By the end of 2024, 100 enterprises in the A-share market had responded to national policies and completed the recognition of data assets in their financial statements, involving a total amount of approximately 2.164 billion yuan. Among them, China Mobile ranked first with 616 million yuan of data assets in its financial statements. Moreover, as a leading enterprise in China's telecommunications industry, China Mobile has taken the lead in responding to national policies such as the Interim Provisions. Whether in terms of the disclosure process or practical exploration, China Mobile has set an industry benchmark and holds important research value. This study takes China Mobile as the case study object, comprehensively uses research methods such as case analysis and comparative research to analyze the effects achieved by China Mobile in the nearly one year after the first recognition of data assets in financial statements from multiple perspectives, as well as the existing problems. This study has advanced the process of data assets from theory to practice and further to value creation, strengthened the confidence of the entire industry in the business value creation of data assets. And it provided a promotable and replicable practical sample for the inclusion of data assets in financial statements in the telecommunications industry and even the entire industry.

2. Theoretical Basis and Policy Basis for Data Asset Disclosure

2.1. Basic Concept of Data Assets

Data assets refer to digital resources generated, collected, stored, and managed by enterprises or organizations in the process of production and operation. These data can generate economic value after analysis and processing. According to the specific definition derived from previous studies, data assets are data resources owned or controlled by enterprises or organizations, with actual or potential value, in compliance with data laws, and recorded in electronic form [2]. Their essential characteristics that distinguish them from traditional assets include intangibility, high reconfigurability, non-exclusivity, and value variability over time [3].

2.2. Policy Basis for Data Asset Disclosure

As early as 2019, the Fourth Plenary Session of the 19th Central Committee of the Communist Party of China first proposed to include data in the category of production factors. Subsequently, the Opinions of the CPC Central Committee and the State Council on Establishing a Basic Data System to Better Play the Role of Data Factors ("Twenty Provisions on Data") issued in 2022 provided a policy basis for the whole-chain management of data asset confirmation, pricing, and transaction. Nowadays, the Interim Provisions issued by the Ministry of Finance serve as a guiding policy to systematically standardize the accounting treatment of enterprise data resources, strengthen the disclosure of relevant accounting information, and also mark that data resources can be formally recognized as an asset in financial statements starting from 2024, which is of great significance.

3. Overview of China Mobile's Data Asset Disclosure

3.1. Disclosure Process

When the Interim Provisions were officially implemented, China Mobile, as one of the three major telecommunications operators, actively responded to national policies and disclosed data assets for the first time in its 2024 semi-annual report (70 million yuan). The amount of data assets grew rapidly in its 2024 annual report (616 million yuan) and was continuously updated and disclosed in its 2025 semi-annual report (774 million yuan).

3.2. Disclosure Content

At the financial statement level, in strict accordance with the requirements of the Interim Provisions, China Mobile lists data assets separately under the headings of "Intangible Assets" and "Development Expenditures" and discloses their amounts.

Table 1. Data Asset Recognition in Financial Statements of China Mobile Limited (2023-2025)
Unit: Million Yuan

Item	End of 2023	Mid-2024	End of 2024	Mid-2025
Intangible Assets	47,597	46,622	50,804	47,784
-Including: Data Resources	-	29	560	454
Development Expenditures	2,279	2,319	2,157	3,141
-Including: Data Resources	-	41	56	320

In the notes to the financial statements, China Mobile supplements the disclosure of the measurement method (cost method) of data assets, the estimated useful life (2-5 years), and the amortization method (straight-line method) (see Table 1).

4. Case Analysis

4.1. Effects of Data Asset Disclosure

4.1.1 Comparison with the Same Industry

It can be seen from Table 2 that China Mobile leads the industry in both the amount and growth rate of data asset recognition in financial statements in 2024.

Table 2. Comparison of Data Asset Disclosure of the Three Major Telecommunications Operators in 2024 Unit: Million Yuan

Operator	2024 Semi-annual Report	2024 Annual Report	YoY/QoQ Change
China Mobile	70	616	780%
China Telecom	151	371	146%
China Unicom	85	379	346%

In terms of the amount, the differences among the three operators may be due to the significant differences in their data asset types and service fields. China Mobile mainly provides services in emergency management and smart cultural tourism. By 2024, the Indus Big Data Platform built by China Mobile has accumulated a data scale of over 2000 PB, and its data governance level has reached the highest domestic level of DCMM Level 5. In addition, the training data generated by the "Jiutian" large model built by China Mobile has also greatly increased the value of data assets. China Telecom's data assets are mainly medical and health databases and video network videos. Its National Health Big Data Platform has participated in the construction of more than 130 provincial and municipal platforms, with a total contract value of over 2.6 billion yuan, and the data scale is only about 800 PB. China Unicom focuses on serving the digital government, including the intelligent upgrading of service hotlines and the intelligent governance of cities, to help improve the digital capabilities of the government, with a data scale of about 1200 PB in the same period [4].

In terms of growth rate, from the semi-annual report to the annual report, the quarter-on-quarter growth rate of China Mobile's data assets reached 780%, far exceeding that of China Unicom and China Telecom. The main reason may be that after the Interim Provisions clarified the rules for data asset recognition in financial statements, China Mobile accelerated the process of data assetization in the second half of the year, converting data resources into measurable assets. For example, it completed the compliance confirmation and productization of 2000 PB of data. Its high-speed growth is in line with policy requirements.

4.1.2 Market Reaction

By the end of 2024, as a listed company with the largest scale of data asset recognition in financial statements, China Mobile not only plays a strong benchmarking role but also attracts the attention of a large number of investors and customers.

For investors, the recognition of data assets in financial statements can increase the financial transparency of enterprises, help investors gain a more comprehensive understanding of the asset status of enterprises, and also reflect the newly developed data resources and their value of enterprises. This will help improve the future economic benefits of enterprises and thus boost the stock price [5]. After the recognition of data assets in financial statements in 2024, China Mobile's stock price in the A-share market showed a fluctuating upward trend, which clearly indicates the positive effect of data asset recognition in financial statements on the stock price. On the other hand, it can be clearly seen from Figure 1 that after the release of the 2024 annual report, the number of institutions received by China Mobile increased by 2.6 times, and the conference set up a number of theme events and sub-forums around topics such as intelligent computing infrastructure and security, data factors, and original technology sources (see Figure 1).

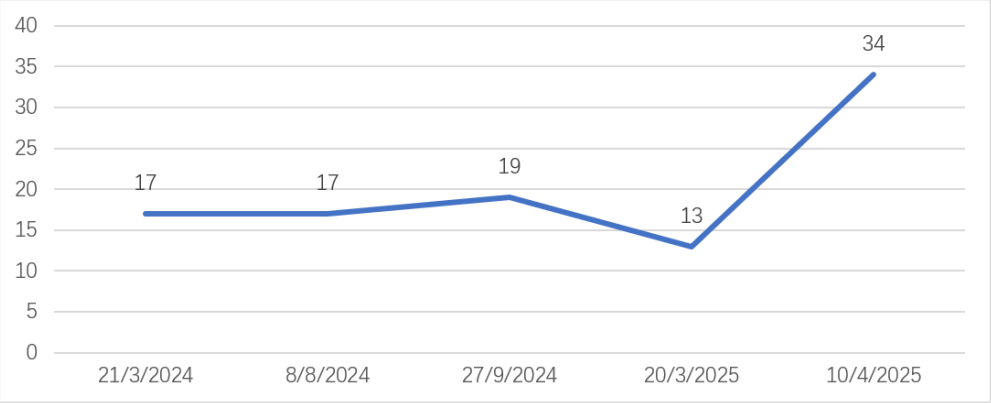


Fig 1. Changes in the Number of Institutions Received by China Mobile

In terms of customers, the recognition of data assets in financial statements by China Mobile has enabled the market to see its rich data resources and strong technological strength, which will help attract more customers and projects. For example, China Mobile has achieved remarkable results in the government and enterprise market. In the first half of 2025 alone, it won a total of 196 digital large orders with a total amount of 5.388 billion yuan, ranking first among the three major telecommunications operators in terms of the number of projects.

The main driving factor behind these positive market reactions is the disclosure of enterprises' digital and data resources [6]. Moreover, strengthening the management and utilization of data assets can further improve their transparency and attractiveness in the capital market, ultimately leading to an increase in customers, a rise in stock prices, and more profits for investors [7].

4.1.3 Financial Impacts

The impact of data asset recognition in financial statements on the finance of enterprises is mainly reflected in two aspects: first, it affects the total assets and the asset-liability structure; second, it affects the net profit and profit composition of enterprises [8].

Table 3. Comparison of Some Financial Indicators of China Mobile in Recent Two Years

Indicator	2023 Annual Report	2024 Semi-annual Report	2024 Annual Report
Asset-Liability Ratio (%)	33.04	32.11	34.33
Net Profit Margin (%)	13.05	14.67	13.29
Total Asset Growth Rate (%)	3.01	2.89	5.90

The recognition of data assets in financial statements directly increases the amount of intangible assets, thereby increasing the total assets. For example, as can be seen from Table 3, the total asset growth rate of China Mobile in the 2024 annual report was 5.9%, which is almost twice that of 2023. Secondly, the slight increase in the asset-liability ratio compared with the previous period indicates that the increase in liabilities has exceeded the increase in assets. This may be because China Mobile obtained bank credit through data asset pledge, which enhanced its financing capacity [9]. For China Mobile, which is an asset-light enterprise, this is a manifestation of the optimization of its asset-liability structure. Finally, from the perspective of the income statement, data resources bring new sources of income, which can increase operating income and improve the net profit margin. On the other hand, the amortization expense of data resources will also reduce the net profit, which may be one of the reasons why the net profit margin in the 2024 annual report is lower than that in the semi-annual report (see Table 3).

4.2. Existing Problems in Data Asset Disclosure

4.2.1 Limitations of Measurement Methods

At present, the commonly used methods for the initial measurement of data assets are the income method, cost method, and market method [10]. According to the disclosure content in China Mobile's financial report, it adopts the cost method, which records the assets based on the costs incurred in the process of data collection, integration, and application. The advantage of this method is that the data is easy to verify and the audit is convenient. However, its disadvantage is that it tends to ignore the potential value that data assets may generate in the future, resulting in the book value being lower than the actual value. Therefore, enterprises cannot make reasonable judgments when conducting transactions.

4.2.2 Issues with Disclosure Compliance

The recognition of data assets in financial statements needs to meet the corresponding compliance requirements: data assets owned or controlled by the enterprise. Therefore, ensuring that all data used to form assets is fully compliant in the collection and processing links is a prerequisite for disclosure. However, data sources are diverse and complex, involving public channels, third-party cooperation channels, user-generated content, and other methods, leading to high costs and great difficulties in compliance audits. In addition, as a world-leading telecommunications operator, China Mobile has massive user behavior, network operation, and business service data, involving sensitive information such as user identity and location, and may even involve national security. This makes the scope of disclosure subject to strict regulations, thereby increasing the difficulty of compliance assessment.

4.2.3 Transparency of Data Sources

At present, due to the lack of unified standards for enterprises in the disclosure of data asset information, different enterprises have significant differences in the selection criteria, depth, and granularity of disclosure content. For China Mobile, up to the 2025 semi-annual report, although its disclosure of data assets is relatively comprehensive among the three major telecommunications operators, there are still deficiencies in the disclosure of data sources and ownership status. For example, China Mobile mentioned in its 2024 annual report that the Indus Big Data Platform has aggregated more than 2000 PB of data, but it did not specify the proportion of internal data such as user behavior data and location information, nor the proportion of external data from open-source or commercial datasets introduced through the Jiutian Ecological Platform. In contrast, China Telecom clearly stated in its annual report that it has "1.6 PB of self-owned data per day + data from 27 industries", while China Mobile did not provide similar breakdowns. This lack of transparency makes it impossible for investors to evaluate the independent controllability of data assets.

5. Conclusions

In summary, China Mobile has achieved remarkable results in the practice of data asset recognition. In 2024, its data asset scale and growth rate ranked first in the industry, effectively enhancing its competitiveness; it has attracted more attention from investors and customers, generating positive responses in the market; and it has had a certain positive impact on corporate financial indicators, such as optimizing the asset-liability structure. However, it also faces challenges such as limitations in measurement methods, disclosure compliance issues, and insufficient transparency of data sources, which need to be further optimized in practice.

From a practical perspective, this study takes China Mobile as an example to reveal the significant effects behind data asset recognition, advancing the process of data assets from theory to practice and then to value creation. It provides operable and replicable practical paths for China Mobile and other enterprises, which is conducive to further promoting the practice of data asset recognition and creating more value for enterprises. Nevertheless, due to its focus on the single case of China Mobile, this study cannot fully reflect the commonalities and differences in data asset recognition among

enterprises of different industries and scales. Additionally, the short research cycle makes it difficult to fully observe the long-term impact of data asset recognition on enterprises. Future research can adopt methods such as multi-case comparison and long-term tracking to conduct more in-depth studies.

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