

Practical Research on the Inclusion of Data Assets of Data-Driven Intelligent Enterprises in Financial Statements: Taking "Merit Interactive" as an Example

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Abstract: The inclusion of data assets in financial statements is a crucial step in the digital transformation of enterprises. It makes the value of data explicit, which is conducive to in-depth exploration and utilization. However, existing research mainly stays at the theoretical level, lacking practical cases of implementation in enterprises, and there is a problem of disconnection between theory and practice. Taking Merit Interactive as an example, this paper uses the longitudinal single-case study method and the literature research method to study the financial reports of this enterprise in the first three quarters of 2024. The study finds that the inclusion of data assets in financial statements not only helps Merit Interactive turn losses into profits, but also has a positive impact on the market value of the company. According to the study, promoting the inclusion of data assets of data-driven intelligent enterprises in financial statements is conducive to making the value of their data resources explicit. This paper attempts to explore the possible economic consequences of including data assets in financial statements for data-driven intelligent enterprises, and provides empirical references for enterprises to better realize the explicit manifestation of data assets.

1 INTRODUCTION

The digital economy is increasingly becoming a key force in reorganizing global factor resources, reshaping the global economic structure, and changing the global competition pattern. As a core production factor, data is of positive significance for promoting the optimization of resource allocation and facilitating the upgrading of the industrial structure (Liu Liyan and Sun Yue, 2025). In order to unlock the potential of data factors and strengthen, optimize, and expand the digital economy, in 2022, the Central Comprehensively Deepening Reforms Commission adopted the "Twenty Provisions on Data", exploring a new model for including data assets in financial statements (Lv Meng et al., 2024). On August 21, 2023, the Ministry of Finance issued the "Interim Provisions on the Accounting Treatment Related to Enterprises' Data Resources", which marked that it was "imperative" for data assets to be included in financial statements in China. In September of the

same year, the China Association of Assets Appraisers formulated the "Guiding Opinions on the Appraisal of Data Assets". The introduction of the above policies has made the inclusion of data assets in financial statements more feasible.

Domestic A-share listed companies have responded to national policies and carried out preliminary explorations on including data assets in financial statements. The financial data of the third-quarter reports in 2024 show that among A-share listed companies, the number of companies that have included data assets in their financial statements has reached 55, and the total amount included has increased to 1.512 billion yuan (SAIF, 2025). From the perspective of enterprises, the recognition and inclusion of data assets in financial statements can more truthfully and comprehensively reflect the asset status of enterprises (Zhang Xinmin and Jin Ying, 2022). At the same time, inclusion in financial statements can promote the transformation of data from a cost center to a value center, enhance data

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competitive advantages, and provide a basis for the trading, pledging, and investment of data assets (Xie Kang et al., 2020). However, due to the limitations of enterprises' data management awareness and capabilities, as well as the lack of relevant laws and accounting rules, listed companies that present data assets in the form of accounting items and monetization and actively disclose information account for less than 3% of the total market. The massive amounts of data owned by most enterprises have not yet become a source of value for production and development (Cleveland H., 1982).

Considering that Merit Interactive Company included data assets in its financial statements relatively early, this paper takes Merit Interactive Company as the research object, adopts the longitudinal single-case study method and the literature research method, and studies its financial reports for the first three quarters of 2024. It explores the practice of the accounting treatment and disclosure of its data assets, and further discusses the possible economic consequences. This study aims to make contributions in two aspects: On the one hand, it acquires and refines the application practices of the businesses related to enterprises' data assets; on the other hand, it explores and analyzes the possible economic consequences that the inclusion of data assets in financial statements may bring to data-driven intelligent enterprises, so as to help enterprises make the value of data assets explicit and enhance their data competitiveness.

2 THE BUSINESS SITUATION OF MERIT INTERACTIVE'S DATA RESOURCES

2.1 The Formation Methods and Application Scenarios of Data Assets

The formation methods of data assets: Firstly, the original data mainly comes from the company's developer services. The accumulated data resources are legally collected on the premise of users' authorized consent, forming the original data of relevant data resources, including device information, network information, scenario information, APP characteristics, etc. As of the first half of 2024, the cumulative installation volume of the company's software development kit (SDK) has exceeded 110 billion, the cumulative installation volume of the software development kit (SDK) for smart Internet of

Things (IoT) devices has exceeded 370 million, and the number of daily active independent devices (with duplicates removed) of the SDK has exceeded 400 million. Secondly, a dedicated data team conducts in-depth insights and governance on the data, accumulating profound data assets and ensuring the accuracy and effectiveness of the data. After data governance and mining, more than 7,000 types of data tags have been formed, and the cumulative number of characteristic parameters directly involved in calculations exceeds 200 million. Thirdly, the self-developed data intelligent operating system (DiOS) is used to process and govern the data, realizing the collection of data, asset management, and integrated application management. The generated data products will be regularly iterated and optimized (SAIF, 2024).

There are two types of application scenarios: Firstly, the company utilizes data resources to provide professional push solutions for mobile application developers, including services such as message push SDK and user operation platform SDK. Secondly, relying on data resources, the company has developed data intelligence applications for different industries, such as intelligent transportation, medical and health care, etc., and also provides data support for brand marketing, public governance, etc. In addition, the company is actively exploring the combination of data resources with new technologies such as artificial intelligence. For example, it has accessed large models like ChatGPT and developed applications of large models for vertical scenarios.

2.2 The Business Model of Data Resources

The company's business logic is divided into three layers (D-M-P, Data-Machine-People): The bottom layer "D" refers to data accumulation. Based on the data accumulated in developer services and in-depth insights into massive dynamic data, the company continuously provides data support for top-level businesses. The middle layer "M" refers to data governance. The company has created a data intelligent operating system (DiOS), which can collect and gather data, manage it as assets, and conduct refined processing, and then provide the upper-level business systems with the ability of data services. The upper layer "P" refers to data application. Combining data models with industry understanding, the company has created productized and large-scale profit-making data intelligent applications in the fields of commercial services and public services.

3 THE OVERALL SITUATION OF MERIT INTERACTIVE'S INCLUSION OF DATA ASSETS IN FINANCIAL STATEMENTS

3.1 Inclusion of Data Resources in the "Intangible Assets" Account

As of September 30, 2024, the carrying value of the company's data resources at the end of the period was 32,840,600 yuan. Among the three ways of obtaining intangible assets of data resources, the intangible

assets of data resources that Merit Interactive has currently included in the financial statements are all obtained through self-research and development, and there is currently no involvement in acquisition through external purchase or other means (Zou Zhaoju, 2017). The company's data resources are measured using the cost method as shown in Table 1. Considering that the timeliness of data resources generally decreases year by year, the accelerated depreciation and amortization method is used for amortization. Through a comprehensive analysis of the historical data of the past three years, the amortization period is confirmed to be 5 years.

Table 1: Useful Life and Amortization Method of Merit Interactive's Data Resources.

Project	Useful Life and Its Determination Basis	Amortization Method
Land Use Right	The land use term (50 years)	Straight - line Method
Asset Groups Such as Copyrights, Patents, and Trademarks	10 years	Straight - line Method
Management Software	5 years	Straight - line Method
Self - developed Operating System	5 years	Straight - line Method
Data Resources	5 years	Accelerated Amortization Method

Data Source: Merit Interactive's Financial Report (Juchao Information, 2024)

3.2 The Situation of Including Data Assets in Financial Statements in the First Three Quarters of 2024 and Comparative Analysis

As shown in Table 2, in the third - quarter report of 2024, the intangible assets of Merit Interactive were 187.62 million yuan, including 32.8406 million yuan of data resources, accounting for 17.50%. In the semi

- annual report of 2024, the intangible assets of Merit Interactive were 183.0774 million yuan, including 23.3331 million yuan of data resources, accounting for 12.75%. In the first quarter of 2024, Merit Interactive included data resources in the financial statements for the first time. As of March 31, the company's intangible assets were 177.7344 million yuan, including 12.8369 million yuan of data resources, accounting for 7.22%.

Table 2: The Situation of Merit Interactive's Inclusion of Data Resources in Financial Statements (Unit: Yuan)

Intangible Assets	167,569,605.07	177,734,449.71	183,077,447.89	187,620,034.26
Among which: Data Resources	—	12,836,884.11	23,333,053.90	32,840,611.29

Data source: The financial report of Merit Interactive (Juchao Information, 2024)

3.3 Overview of the Impact of Including Data Assets in Financial Statements on the Company's Profits

As shown in Table 3, as of September 30, 2024, the company's total operating revenue was 333 million yuan, an increase of 7.5%; the net profit was 5.9189 million yuan, an increase of 88%. The impact of including data resources in the financial statements on the net profit was 32.8406 million yuan, and the profit margin was 1.78%. If the data resources had not been

included in the financial statements, the net profit should have been -26.9217 million yuan, and the profit margin would have been -8.08%. It can be seen that the inclusion of data resources in the financial statements helped the company turn losses into profits.

Table 3: The Impact of Including Data Assets in Financial Statements on Merit Interactive.

Company	Merit Interactive
Account for Inclusion in Financial Statements	Intangible Assets
Total Amount of Data Resources Included in Financial Statements (Yuan)	32,840,611.29
Asset-Liability Ratio	9.77%
Asset-Liability Ratio (Estimated) if Data Resources are not Included in Financial Statements	10.90%
Decrease in Asset-Liability Ratio after Including Data Resources in Financial Statements	1.13%
Profit Margin	1.78%
Profit Margin (Estimated) if Data Resources are not Included in Financial Statements	-8.08%
Increase in Company's Profit Margin after Including Data Resources in Financial Statements	9.86%

Data source: The financial report of Merit Interactive (Juchao Information, 2024)

The asset-liability ratio (estimated) when data resources are not included in the financial statements is equal to the total liabilities divided by (total assets minus the total amount of data resources included in the financial statements). The decrease in the asset-liability ratio after including data resources in the financial statements is equal to the asset-liability ratio (estimated) when data resources are not included in the financial statements minus the actual asset-liability ratio. The profit margin (estimated) when data resources are not included in the financial statements is equal to (net profit minus the total amount of data resources included in the financial statements) divided by the total revenue. The increase in the net profit margin after including data resources in the financial statements is equal to the net profit margin minus the profit margin (estimated) when data resources are not included in the financial statements.

4 THE IMPACT OF INCLUDING DATA RESOURCES IN FINANCIAL STATEMENTS ON THE FINANCIAL PERFORMANCE AND MARKET VALUE OF MERIT INTERACTIVE

The financial information disclosed in Merit Interactive's semi-annual report is more detailed than that in the third-quarter report, making it more suitable for the analysis of the company's financial situation due to the inclusion of data assets in financial statements. Based on this, this chapter mainly explores the economic consequences and the impact on the market value of the company caused by the inclusion of data assets in financial statements by obtaining and analyzing the data from Merit Interactive's semi-annual report.

4.1 Analysis of the Financial Performance Generated by Including Data Resources in Financial Statements

4.1.1 Analysis from the Changes in Financial Statement Data

Firstly, this paper focuses on analyzing the changes in the balance sheet before and after the inclusion of data assets in financial statements. Before inclusion, there were no accounts related to data assets in the enterprise's balance sheet. After inclusion, data assets that meet the recognition criteria of intangible assets are recorded in the balance sheet. As shown in Table 4, the recognition of data assets leads to a corresponding increase of 23,333,100 yuan in the carrying value of intangible assets (after deducting the amortization amount of the current year). At the same time, since the data assets that were originally expensed are recognized as intangible assets after being included in the financial statements, the total profit increases by 23,333,100 yuan. The intangible assets formed by data assets in the current period are amortized using the accelerated amortization method over 5 years, and the deferred income tax assets formed by the straight-line amortization of taxes over 10 years increase by 121,600 yuan. The reclassification of research and development expenses to data assets leads to a reduction of 4,024,000 yuan in the additional deduction of research and development expenses. As a result, the income tax payable (reflected in taxes payable) increases by 7,645,600 yuan in a comprehensive manner.

Table 4: Simplified Balance Sheets before and after the Inclusion of Data Assets in Financial Statements (Unit: Yuan)

Project	Before Inclusion (Estimated) June 30, 2024	After Inclusion June 30, 2024	Difference
Assets			
Total Current Assets	70,058.66	70,058.66	0.00
Deferred Income Tax Assets	4,783.08	4,795.24	12.16
Intangible Assets	15,974.43	18,307.74	2,333.31
Total Non-current Assets	111,779.77	114,125.24	2,345.47
Total Assets	181,838.43	184,183.90	2,345.47
Liabilities and Owner's Equity			
Taxes Payable	4,270,963.91	4,271,728.47	764.56
Total Current Liabilities	13,766.06	14,530.62	764.56
Total Non-current Liabilities	1,082.03	1,082.03	0.00
Total Liabilities	14,848.10	15,612.66	764.56
Undistributed Profits	46,310.92	47,891.83	1580.91
Total Owner's Equity	166,990.33	168,571.24	1580.91
Total Liabilities and Owner's Equity	181,838.43	184,183.90	2345.47

Secondly, analyze the changes in the income statement before and after the inclusion of data assets in the financial statements. Before the inclusion, the enterprise accounted for the expenditures related to data assets as expenses. After the inclusion, the enterprise capitalized the expenditures that met the asset recognition criteria. As can be seen from Table

5, the research and development expenses decreased by 23,333,100 yuan. Due to the adjustment for inclusion in the financial statements, the total profit and net profit of the enterprise in the current period increased significantly. Meanwhile, the income tax expense also increased significantly, with an increase of 6,999,900 yuan.

Table 5: Simplified Income Statements before and after the Inclusion of Data Assets in Financial Statements (Unit: Yuan)

Project	Before Inclusion (Estimated) June 30, 2024	After Inclusion June 30, 2024	Difference
Business Revenue	21,701.84	21,701.84	0.00
Less: Cost of Business Operations	4,867.24	4,867.24	0.00
Research and Development Expenses	8,393.37	6,060.06	-2,333.31
Other Expenses	10,207.31	10,207.31	0.00
Operating Profit (Loss is filled with the "-" sign)	-1,766.08	567.23	2,333.31
Less: Non-operating Expenses	266.41	266.41	0.00
Total Profit (Total Loss is filled with the "-" sign)	-2,032.49	300.82	2,333.31
Less: Income Tax Expenses	-886.42	-226.39	660.03
Net Profit (Net Loss is filled with the "-" sign)	-1,146.07	527.21	1,673.28

Finally, regarding the cash flow statement, the inclusion of an enterprise's data assets in the financial statements mainly affects the cash flow from investing activities and the cash flow from operating activities. Due to the increase in intangible assets of data resources after inclusion, the item of "Cash paid for the acquisition of fixed assets, intangible assets and other long-term assets" increased by 23,333,100 yuan. At the same time, the cash payments for operating activities (expenditures in the items of "Cash paid to and on behalf of employees" and "Cash paid for other operating activities") that were originally included in the operating costs or research and development expenses before inclusion

decreased by 23,333,100 yuan correspondingly. The specific differences are shown in Table 6.

Table 6: Simplified Cash Flow Statements before and after the Inclusion of Data Assets in Financial Statements (Unit: Yuan)

Project	Before Inclusion (Estimated) June 30, 2024	After Inclusion June 30, 2024	Difference
I. Cash Flows from Operating Activities:			
Cash paid to and on behalf of employees and cash paid for other operating activities	24,446.30	22,112.99	-2,333.31
Net cash flows from operating activities	-9,676.17	-7,342.86	2,333.31
II. Cash Flows from Investing Activities:			
Cash paid for the acquisition of fixed assets, intangible assets and other long-term assets	2,091.26	4,424.57	2,333.31
Net cash flows from investing activities	9,264.38	6,931.07	-2,333.31
III. Cash Flows from Financing Activities:			
Net cash flows from financing activities	-14,612.02	-14,612.02	0.00

4.1.2 Comparative Analysis of Financial Indicators Before and after the Inclusion of Data Assets in Financial Statements

Based on the above financial statements, this paper calculates the key financial indicators before and after the inclusion of data assets in financial statements, including the current ratio, asset-liability ratio, return on net assets, and gross profit margin, as shown in Table 7. Through the comparative analysis of the inclusion process and key indicators, the main changes brought about by the inclusion of data assets in financial statements are as follows: (1) The inclusion leads to an increase in income tax expenses, an increase in current liabilities such as taxes payable. The increase in current liabilities is greater than that of current assets, resulting in a decrease in the current ratio; (2) The increase in total assets is caused by the increase in intangible assets. However, due to the increase in taxes payable and other factors, the change range of liabilities before and after is greater than that of assets, resulting in an increase in the asset-liability

ratio; (3) After data resources form intangible assets, they need to be amortized according to the estimated useful life. Although the inclusion of some expensed data assets in the balance sheet in the current year of inclusion leads to a decrease in current costs or expenses, the amortization of intangible assets of data resources in subsequent years will be included in the current costs or expenses again until the intangible assets are finally disposed of or scrapped. That is, the inclusion may lead to a time difference in the recognition of an enterprise's costs or expenses, showing a pattern of being low first and then high; (4) Assuming that the enterprise's revenue is stable, since data assets are transformed from being expensed to being capitalized, the costs or expenses included in the current period are low first and then high, enabling the profit to turn from loss to profit, and at the same time showing a state of being high first and then low. The gross profit margin and return on net assets will also show a state of being high first and then low; (5) Due to the change of profit being high first and then low, it may lead to income tax also showing a pattern of being high first and then low.

Table 7: Key Financial Indicators of Merit Interactive before and after the Inclusion of Data Assets in Financial Statements.

Indicator	June 30, 2024	
	Before Inclusion (Estimated)	After Inclusion
Current Ratio	5.09	4.82
Asset-Liability Ratio (%)	8.17	8.48
Net Profit Rate (%)	-5.28	2.43

4.2 The Impact of Including Data Resources in Financial Statements on Market Value

Based on the study of the impact of including data assets in financial statements on the important

financial indicators of Merit Interactive, this paper further explores whether, on the basis of improving some financial indicators of the enterprise, it will have an impact on the enterprise's market value or stock price. Due to the influence of multiple factors such as the stock market being affected by many factors, it is difficult to evaluate the impact of

including data assets in financial statements on the stock price or market value based on a single hypothesis. At the same time, the annual income and profits of many enterprises are not smoothly distributed over the four quarters, and the estimation based on semi-annual financial data and the company's price-to-earnings ratio (PE) has relatively low reference value, so it is not adopted for the time being. Therefore, this paper only calculates the theoretical impact of including data assets in financial statements on the market value of the listed company

by multiplying the increased value of assets brought about by including data assets in financial statements by the company's price-to-book ratio (PB) (Dong Dongming, 2015). According to the calculation of the marginal market value increment brought by including data resources in financial statements estimated by PB (see Table 8), the theoretical market value increment brought to Merit Interactive by including data assets in financial statements exceeds 1% of the company's market value.

Table 8: The Theoretical Marginal Impact on Market Value Brought by the Inclusion of Data Resources in Financial Statements Estimated According to Merit Interactive's PB.

Company	Account for Inclusion in Financial Statements	Total Amount of Data Resources Included in Financial Statements (Yuan)	Average PB Value	Marginal Impact on Market Value	Proportion of Market Value Impacted by Data Assets to Total Market Value
Merit Interactive	Intangible Assets	23,333,054	2.38	55,431,474	1.57%

5 CONCLUSION

By analyzing the situation of Merit Interactive's inclusion of data assets in financial statements, this paper draws the conclusion that promoting the inclusion of data assets in financial statements by data - driven intelligent enterprises is conducive to making the value of their data resources explicit. Firstly, this paper uses the literature research method to explore the formation methods and application scenarios of Merit Interactive's data resources. At the same time, it analyzes the current situation of Merit Interactive's inclusion of data assets in financial statements through the longitudinal single - case study method. Furthermore, through a simulation analysis before and after the inclusion of data assets in financial statements, it examines the changes in financial statements, the changes in key financial indicators, and the impact on the company's market value. It is found that the inclusion of data assets in financial statements not only helps Merit Interactive turn losses into profits but also has a positive impact on the company's market value. However, it should be noted that when data resources are transferred into intangible assets, there may be impairment and amortization, which will, to a certain extent, lead to risks such as an increase in the later - stage asset - liability ratio and a decrease in the return on net assets. This research shows that the inclusion of data assets in financial statements is not only an innovative tool for enterprise value management but also a systematic breakthrough in the in - depth development of the digital economy. Enterprises need

to adopt a trinity strategy of organizational change (such as establishing a data asset management committee), technological enablement (deploying an intelligent financial system), and ecological collaboration (participating in the formulation of industry standards) to achieve a dynamic balance between the release of data factor value and financial soundness.

This paper adopts a single - case study method, which, to some extent, limits the general applicability and extrapolation of the research results. Meanwhile, there are certain subjective biases in the process of case selection, data collection, and analysis, which have a certain impact on the objective accuracy of the research results. In the future, it is necessary to further explore the impact of the data rights confirmation mechanism on accounting recognition and the compound value measurement model of data assets under multi - scenario collaboration. It is recommended to expand cross - industry comparative research, especially paying attention to the differential practices of ToB platform - based and ToC service - based enterprises in the accounting treatment of data assets, so as to provide a basis for constructing a universal theoretical framework.

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