

# Research on the Practice of Data Assets Entering into the Table of Haitian Ruisheng Company

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**Abstract:** This study takes Haitian Ruisheng as a typical case to explore the impact of data assets listing on enterprises and practical experience. After the implementation of the Interim Provisions on Accounting Treatment of Enterprise Data Resources in 2024, as one of the few listed companies that included data resources into “inventory”, Haitian Ruisheng realized the explicit value of data assets through accurate division of data resource types, refined cost accounting and comprehensive information disclosure. The study found that the listing of data assets significantly improved the profitability of enterprises. In 2024, the net profit increased by 105.24% year on year, and the return on equity turned from negative to positive. The market valuation increased significantly, and the price-to-sales ratio, price-to-book ratio and price-to-earnings ratio were significantly higher than the industry average, reflecting the high recognition of enterprise value in the market. At the same time, the listing measures stimulated the innovation momentum of enterprises, promoted the large-scale production of data assets and business model innovation, and the operating revenue in 2024 increased by 39.45% year on year. Haitian Ruisheng practice shows that the correct classification data resources scientific calculation value and full disclosure of information is the core of assets into the table data path, for enterprise provides reproducible operation pattern, also to improve data assets accounting rules, the deepening marketization of data elements configuration provides an important reference.

**Keywords:** Data Resources; Inventory; Haitian Ruisheng

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## 1.Introduction

In the wave of digital and intelligent transformation, data assets have become a key element for enterprises to enhance their core competitiveness. With the continuous progress of digital and intelligent technologies, the methods for confirmation and measurement of data assets will be further improved, and the degree of standardization and normalization will continue to increase. <sup>[1]</sup> To fully leverage the value of data assets, the government should actively organize experts in relevant fields, industry associations, and enterprise representatives to jointly study and formulate unified standards for the classification, valuation, and disclosure of data assets, thereby guiding enterprises to conduct effective data asset information disclosure. <sup>[2]</sup> This will not only help to enhance the transparency and credibility of enterprises but also provide strong support for their innovation and development. <sup>[3]</sup> It has been proven that the disclosure of data asset information can effectively enhance the innovation capacity of enterprises. By fully disclosing data asset information, enterprises can better attract investment, optimize the allocation of resources, and thus promote the implementation and implementation of innovation projects. This

will not only help enterprises stand out in fierce market competition but also lay a solid foundation for their sustainable development.<sup>[4]</sup>

Since the implementation of the Interim Provisions on Accounting Treatment Related to Enterprise Data Resources on January 1, 2024, as of December 31, 2024, 100 listed companies have carried out the practice of entering data assets into the table, among which 69% of the data resources of listed companies meet the conditions for the recognition and measurement record of intangible assets.<sup>[5]</sup> In the annual financial report of intangible assets in the balance sheet items of data resource value disclosure, 20% of listed companies, whose data resources are in the R&D stage, disclose the R&D expenditure in the annual report; 20% of listed companies have both intangible assets and R&D data resources in their annual financial reports, 2% of the listed companies included the data resources conforming to the definition of inventory in the “inventory” item of the balance sheet. Then, after the data resources are put into the table, what are the impacts on the enterprise and what are their practical experiences? This paper will be based on the financial report of Haitian Ruisheng enterprise analysis and research.

Haitian Ruisheng is a leading enterprise in the field of AI training data in China, with a high reputation and influence in the industry. The company was established on May 11, 2005, and is mainly engaged in the research and development, design, production and sales of AI training data. It provides professional datasets needed for algorithm model development and training for various institutions in the AI industry chain, covering multiple core areas such as intelligent speech, computer vision, and natural language, and fully serving a variety of innovative application scenarios such as human-computer interaction, smart home, intelligent driving, smart finance, and intelligent security.

At present, among the companies whose data assets are on the balance sheet, only three companies have data resources that are in line with inventory assets, namely Duke Culture, Haitian Ruisheng and Bluefocus. Among them, Haitian Ruisheng has a relatively high proportion of data resources in inventory, which is related to the nature of its business. As shown in Table 1, Haitian Ruisheng has a relatively large proportion of data assets in its inventory, averaging more than 50%. An interesting phenomenon is that in the balance sheet disclosure of the 2024 annual report, in the column of data as December 31, 2023, data resources under the inventory item amount to 4,342,849.45 yuan. According to the notice requirements of the Interim Provisions, the inclusion of data resources in the balance sheet should be implemented as of January 1, 2024. Theoretically speaking, there should be no information related to data resources in the December 31, 2023 column of the 2024 annual report balance sheet, but Haitian Ruisheng is eager to fill in the information of data resources. The main reason is that the company has been engaged in data resource development and research business since 2005, and providing data resource product services as the main business of the company, which can prove that the company's rich data resource assets have not been legally included in the financial report, and this policy of the Ministry of Finance on the inclusion of data assets in the balance sheet, the company's data resources that meet the definition of inventory have been successfully included in the balance sheet, and the value of inventory is no longer underestimated.

*Table1: Proportion of data resources*

Project	2023Q4	2024Q1	2024Q2	2024Q3	2024Q4	2025Q1
Inventory (in ten thousand yuan)	454.43	689.68	709.06	893.03	2299.83	2398.90
Including data resources (10,000 yuan)	434.28	689.68	627.06	574.62	1412.95	1437.53
The percentage of data assets in inventory	95.57%	100.00%	88.43%	64.34%	61.44%	59.92%

## 2.The impact of data asset inclusion on corporate profitability

As shown in Table 2, the net profit of Haitian Ruisheng was -43.48% in 2021, then fluctuated upward and reached its peak in 2024, achieving a significant increase in profits. However, the change in the return on net assets is not as optimistic as the net profit. Currently, the company's return on net assets is only 1.51% less than one-third of that in 2021. The main reason is that at the end of 2024 there was a significant increase in the company's inventory, a significant increase in assets that had not

been sold, resulting in a lower return on net assets. But looking at the return on equity from a different perspective, it can be found that the company's return on equity increased significantly after data assets were included in the balance sheet, from -3.76% in 2023 to 1.51%, while in contrast, there turn on equity in 2021 was 5%. But this is the result of a decline in the return on equity (20.29% in 2020). So overall, the inclusion of data assets on the balance sheet has had a positive impact on the improvement of corporate profitability.

*Table2: Data Analysis Table of Enterprise Profitability*

Project	2021	2021	2022	2023	2024
Rolling growth in net profit attributable	--	-43.48%	19.84%	-42.68%	105.24%
Return on netassets	20.29%	5.00%	3.63%	-3.76%	1.51%

So, how significant is the contribution of data resources to a company's operating revenue? This paper attempts to determine the proportion of data resources in revenue to assess the contribution of data resources to corporate income after they are recorded in the financial statements. According to the information disclosed in HTS's 2024 annual report, the total operating revenue amounted to 237 million yuan. The company categorized its revenue sources based on product income. Specifically, intelligent voice revenue reached 164,598,477.92 yuan, with a gross margin of 76.13%; computer vision revenue was 46,546,343.02 yuan, with a gross margin of 37.84%; natural language revenue was 24,083,938.40 yuan, with a gross margin of 59.4%; and training data-related application services revenue was 1,854,270.73 yuan, with a gross margin of 18.3%. Although the revenue generated by data resources is not substantial, it still contributed 18% to the company's operating revenue and had a positive impact on income.

Furthermore, we conducted a comparison of the operating revenue growth rate with companies in the same industry. As shown in Table 3, the industry comparison table indicates that HTS's operating revenue growth rate and net profit growth rate in 2024 far exceeded those of the top three companies in the same industry—Xinhuadu, Runze Technology, and Keyuan Wisdom—and were also much higher than the industry average. It is evident that in 2024, after the data assets were recorded in the financial statements, HTS's profitability saw a significant improvement, thus confirming the positive impact of data assets on corporate profitability as mentioned earlier.

*Table 3: Comparison with Peers in 2024*

Project	Haitian RuiSheng	Xinhuadu	Runze Technology	Keyuan Wisdom	Industry Average
Revenue Growth Rate	39.45%	30.18%	0.32%	19.55%	-3.75%
Net Profit Growth Rate	137.26%	29.86%	3.47%	58.38%	-41.83%

### 3.The impact of data asset inclusion on enterprise valuation

As shown in Table 4, the price-to-sales ratio, price-to-book ratio, and price-to-earnings ratio of Haitian Ruisheng have been fluctuating upward since 2021. After data assets were disclosed in the financial report at the beginning of 2024, the price-to-sales ratio, price-to-book ratio, and price-to-earnings ratio as of the end of December of the same year increased significantly. This reflects a substantial improvement in the quality of the company's assets and strong market confidence in the enhancement of the company's future profitability. It is preliminarily believed that the inclusion of data resources in financial statements has a positive impact on the company's valuation.

*Table4: Enterprise Valuation Analysis*

Project	2021	2022	2023	2024	2024 Industry average
Price-to-sales ratio	17.87%	10.52%	21.86%	26.58%	9.15%
price-to-book ratio	4.91%	3.13%	5.55%	9.52%	7.11%
price-to-earnings ratio	70.74%	103.94%	-204.23%	624.21%	85.80%

It should be noted that the market's favorable valuation of Haitian Ruisheng is closely linked to the sense of responsibility demonstrated by the company's management in data asset management and information disclosure.

The "Interim Provisions on Accounting Treatment of Enterprise Data Resources" stipulate that enterprises should establish a "Data Resources" item under inventory or intangible assets in the balance sheet to disclose the value of data resources. Furthermore, enterprises should also disclose information about the increase, decrease, and remaining balance of data resources in the relevant disclosures.<sup>[6]</sup>

To explore the current state of corporate disclosure after data assets are included in financial statements, we randomly selected 20 2024 financial reports from 100 listed companies that have implemented the inclusion of data assets, covering different industries, for comparative analysis. The results show that in these 20 financial reports, in addition to strictly disclosing necessary information in accordance with the Ministry of Finance's Interim Provisions on Accounting Treatment Related to Enterprise Data Resources, there are significant inconsistencies in the disclosure content of data resources among various enterprises.

Specifically, most enterprises add a "data resources" sub-item under the "inventory", "intangible assets" or "development expenses" items in the balance sheet of their financial reports. Moreover, in related accounts such as intangible assets and inventory, they disclose in detail the opening balance, current period increase, current period decrease, amortization amount, impairment provision and closing balance of data resources, and also explain the acquisition methods of data resources. However, regarding voluntary disclosure content beyond the required provisions, most enterprises either choose not to disclose it or only mention it briefly, lacking more in-depth and detailed information presentation.

In sharp contrast, Haitian Ruisheng has set a highly illustrative example in the disclosure of data resources. The company not only strictly disclosed basic information about data resources in accordance with regulations, but also proactively expanded the dimensions in relevant disclosures, clearly listing the names, specific contents, quantity scales, valuation methods and development prospects of data resources. What is particularly noteworthy is that it emphasized key individual data resources, clearly pointing out that the company's inventory includes high-quality general graphic and text data projects, the Content Moderation (CM)-2024-12 project, high-definition general scene video non-descriptive dataset projects, and general scene video non-descriptive dataset projects. For each of the above projects, it disclosed in detail the corresponding book value and net realizable value, enabling investors to more comprehensively and clearly understand the actual situation of the company's data assets.

#### **4.The Impact of Including Data Assets in Financial Statements on Corporate Innovation Capability**

As one of the earliest enterprises in China engaged in the R&D and sales of training data, Haitian Ruisheng is also the first and currently the only A-share listed enterprise providing AI training data services in China, holding a benchmark position in the industry. Its business of standardized dataset products covers three major fields: intelligent speech, computer vision, and natural language processing. By the end of 2024, its dataset reserves had reached 1,716, and it had cumulatively provided over 9,500 customized or standardized training datasets to downstream customers, which are widely applied in 22 categories of innovative application fields such as personal assistants, voice input, smart home, intelligent driving, smart healthcare, and smart finance. The measure of including data assets in financial statements has not only further stimulated the internal driving force for corporate data innovation but also injected strong momentum into the in-depth integration of artificial intelligence technology and the real economy.

In terms of data asset accounting treatment, Haitian Ruisheng has also demonstrated unique innovation. Unlike most enterprises that classify data assets under the "intangible assets" account, the company, based on the business characteristic that "data assets are directly sold as standardized products," classifies them under the "inventory" account — a classification that fully aligns with the core definition of inventory as "held for sale." As presented in the 2024 annual report, the amount of its inventory-type data assets reached 22.9983 million yuan, surging by 406% compared to 2023, fully reflecting the significant trend of large-scale production of data assets.

In terms of business model, Haitian Ruisheng innovatively drew on the "data product production line" concept of China

Central Depository & Clearing Co., Ltd., and built a full-process standardized system covering data collection, annotation, and packaging, successfully achieving an efficient operation model of “produced once, sold multiple times.” Currently, the company has established in-depth cooperative relationships with 1,000 global leading enterprises such as ByteDance and Zhipu AI, with a continuously high customer repurchase rate. Its operating income increased by 39.45% year-on-year in 2024, strongly confirming the prominent commercial value and market recognition of this business model.

## **5. Practical Experience of Haitian Ruisheng in Including Data Assets in Financial Statements**

### **5.1 Correct classification of data resource types**

According to the guidelines in the Ministry of Finance’s Interim Provisions on Accounting Treatment Related to Enterprise Data Resources, current data resources are mainly classified into two categories in accounting: those that meet the definition of inventory shall be included in the “inventory” item; those that meet the definition of intangible assets shall be classified under the “intangible assets” item. This classification standard is not a simple formal division but a precise match based on the purpose of holding data resources, their economic attributes, and the enterprise’s business model, providing clear guidance for the standardized inclusion of corporate data assets in financial statements.

As a leading domestic AI training data service provider, Haitian Ruisheng’s inclusion of core data resources in the “inventory” item is supported by profound business logic. The company’s main business focuses on the R&D, design, production, and sales of AI training data. The entire process, from data collection, cleaning, and annotation to the final formation of standardized or customized datasets, revolves around the “commercialization of data resources” — these data resources are not used for long-term empowerment in the enterprise’s own production and operation processes (such as system data supporting internal management decisions) but exist as “products” directly oriented to the market, with their core value realized through external sales. This characteristic fully aligns with the core definition of inventory as “held for sale”: on the one hand, the company’s data resources have a clear sales orientation, targeting customer needs from the production stage (such as datasets customized for scenarios like intelligent speech and autonomous driving); on the other hand, such data resources have strong liquidity and can usually be realized through sales within one year, conforming to the attribute of inventory as current assets.

Among the 100 enterprises that have disclosed the inclusion of data assets in financial statements, Haitian Ruisheng’s accounting treatment is typical. By classifying data resources into “inventory,” the company not only strictly follows the classification principles of the Interim Provisions but also realizes the explicit measurement of data assets — before inclusion in financial statements, a large amount of R&D investment in data resources might have been directly recorded as expenses or hidden in costs, leading to undervaluation of asset value; after being included in the inventory item, the book value of data resources is clearly reflected in the balance sheet, which not only objectively reflects the scale and value of the enterprise’s core assets but also provides investors with key basis for more accurately evaluating the company’s asset quality and growth potential, effectively avoiding misjudgment of enterprise value due to the “invisibility” of data assets.

### **5.2 Accurate measurement of data resource value**

In the practical exploration of including data assets in financial statements, Haitian Ruisheng’s forward-looking practices are particularly noteworthy — the company has included data resources in its financial reporting system since the first quarter of 2024. This initiative is not only highly compatible with its core business model of “data sales” but also benefits from its refined establishment of a cost measurement and recording system for data resources. As disclosed in its financial reports, Haitian Ruisheng has built a methodology for measuring the value of data resources that aligns with actual business conditions, providing a reusable practical model for the industry.

As mentioned in Haitian Ruisheng’s financial report disclosures, the cost measurement of data resources includes the following methods: For data resources acquired through external purchase and recognized as inventory, their procurement costs include purchase price, related taxes, insurance premiums, as well as other expenses attributable to inventory procurement costs incurred from data ownership authentication, quality evaluation, registration and settlement, and security management; for data resources obtained through data processing and recognized as inventory, their costs include



procurement costs, processing costs such as data collection, desensitization, cleaning, annotation, integration, analysis, and visualization, as well as other expenses incurred to bring the inventory to its current state; data resource inventory is valued using the specific identification method when issued.<sup>[7]</sup> Correct measurement and disclosure of the cost value of data resources enable report users to better obtain information about the cost of enterprise data resources, providing referenceable practical experience for the measurement of inventory value related to the inclusion of data assets in financial statements.

### 5.3 Full disclosure of data resource information

Data assetization provides enterprises with abundant data sources, reduces information asymmetry, can alleviate information friction between enterprises and the market, and promotes enterprise growth.<sup>[8]</sup> Haitian Ruisheng has provided relatively rich information about data resources in its disclosure. Although the Q1 2024 report only included mandatory disclosure information about data resources without voluntary disclosure, starting from the Q2 2024 report, Haitian Ruisheng has not only disclosed data resource information in the balance sheet and related accounting information in the notes to the financial statements as required by the Interim Provisions but also voluntarily disclosed important information such as detailed contents, industry comparisons, and future development prospects of data resources, providing report users with sufficient information about the enterprise's data resources.

In the previous data analysis, the enterprise's price-to-earnings ratio, price-to-book ratio, and price-to-sales ratio increased significantly in 2024 and exceeded the industry level, indicating that full disclosure of data resource information can enhance report users' confidence in the improvement of the enterprise's future profitability, thereby promoting enterprise growth.

## Conclusion

To sum up, as one of the few enterprises that include data resources in "inventory" in the process of including data assets in financial statements, Haitian Ruisheng's practice provides us with an extremely valuable research sample. Since the implementation of the Interim Provisions on Accounting Treatment Related to Enterprise Data Resources, Haitian Ruisheng has actively responded. By correctly classifying data resource types, accurately measuring their value, and fully disclosing effective information about relevant data resources, it has not only improved the enterprise's profitability and social status but also promoted the enhancement of corporate innovation capability.

Its practical experience shows that in the process of including data assets in financial statements, enterprises should correctly classify data resource types, accurately measure the value of data resources, and fully disclose data resource information. Haitian Ruisheng's practice in including data assets in financial statements not only provides replicable operational models for similar data service enterprises but also offers valuable first-line market references for the further improvement of data asset accounting treatment rules, helping to promote the in-depth implementation of market-oriented allocation of data factors.

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no

## Conflict of Interests

The authors declare that there is no conflict of interest regarding the publication of this paper.

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