Data Asset Disclosure and Nonprofessional Investor Judgment: Evidence from Questionnaire Experiments

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Received 9 May 2022; Revised 2 June 2022; Accepted 10 June 2022; Published 23 June 2022

1. Introduction

Since entering the computer era, advances in Internet technologies such as big data and cloud computing as well as the popularity of Internet devices such as mobile phones and computers have led to the flourishing of the digital economy [1, 2]. Also, a large number of outstanding Internet enterprises have emerged at home and abroad. Compared to traditional enterprises, Internet enterprises do not necessarily get involved in the development, production, and sale of physical goods, but they continue to collect and generate massive amounts of data. Data owned or controlled by the enterprise can be used for potential economic benefit through computer algorithmic techniques, passive knowledge production, or digital products [3, 4]. Facebook, for example, bought WhatsApp in 2014 for $19 billion precisely because it had 450 million users and held a lot of data assets.

In fact, the problem of disclosure of data assets not only causes difficulties in the valuation of Internet enterprises, but also affects the judgment of statement users. This may cause changes in the evaluation of investment value by statement users. Thus, adversely affecting the financing, operation, and value enhancement of the enterprises.

The above phenomenon draws our attention to the fact that Internet enterprises have a large number of data assets. These data assets may even become a monopoly asset because of the industry they are in [5–7], contractual arrangements, technical restrictions, etc. According to resource-based theory, when an enterprise’s certain resource is valuable, scarce, irreproducible, and difficult to replace, it can give the enterprise a long-lasting competitive advantage. A data asset is a unique or even monopolistic resource under the control of an enterprise. It can be transformed into a high growth engine and future revenue stream after a series of evaluation, management, and processing procedures, according to Conceptual Framework of Financial Accounting from IASB. However, the current data asset is just a ghost floating on the financial statements of the enterprises. We can only find clues to its existence through a few subjects such as intangible assets [8], but not its figure.

Currently, scholars’ discussions on data assets have focused on the concept of data assets [9–11] and its auditing.
frameworks [12, 13]. The existing literature provides little support in terms of the impact of data assets on business development and investment. Therefore, this paper examines the link between enterprise data asset disclosure and nonprofessional investor judgments. We hope that experimental data analysis will illustrate the necessity to require disclosure of data assets owned or controlled by the enterprises, so as to help investors make more effective investment decisions and reduce the degree of information asymmetry in capital markets.

According to information asymmetry theory and signal transmission theory, information disclosure can reduce the information asymmetry between internal managers and external stakeholders, and then affect the value of the enterprises. The lack of data asset information disclosure undoubtedly affects the judgment of nonprofessional investors. They cannot fully understand the status of the enterprises and make reasonable assessments of the enterprises [14]. Moreover, the existence of information asymmetry leads to unfairness in the trading market [15, 16] and increases the risk of investors' trading [17, 18], which reduces their evaluation of the enterprises. Therefore, the data asset information disclosed by the enterprises can reduce the degree of information asymmetry between nonprofessional investors and enterprises, correct investors' evaluation of enterprises, and reflect the value of enterprise data assets to market value. At the same time, the effective disclosure of information about data assets can also reduce the pressure of public opinion, help enterprises to establish a good reputation and enhance the overall evaluation of investors.

For the study design, an Internet enterprise listed on the New York Stock Exchange was chosen as the case subject, and the content of the relevant material was adapted based on real data. All participants in the experiment were asked to take on the role of nonprofessional investors (which they did in real life). We provided the same questions in the experimental and control group questionnaires to obtain information on the personal and investment characteristics of the experimental participants. The experimental participants would then read background material and data on the enterprise, assess the various capabilities of the enterprise, and give their likelihood of buying the stock. In addition, the experimental group questionnaire provides additional information about the data assets of the hypothetical enterprise. It is used to examine whether there are significant differences in the investment intentions of the experimental participants towards the hypothetical enterprise. The questionnaires were distributed without any special restrictions on the participants, other than the requirement that those completing them must be of age, to ensure a random sample for the experiment. Thus, the experiment took full advantage of the convenience, randomization, and decentralization of an Internet-based questionnaire experiment [19, 20].

In order to demonstrate whether the relationship between disclosure of data asset information and investment judgment of nonprofessional investors is mediated by nonprofessional investors’ judgment on nonfinancial indicators, we used a three-step regression method to test the abovementioned mediation effect. The results showed that there was no significant positive relationship between the independent variable of whether to disclose data asset information and the mediating variable of market expansion ability, but there was a significant positive relationship between the mediating variables of product development ability and user stickiness. The independent variables of whether to disclose data asset information and product development ability had a significant positive relationship with the nonprofessional investors’ investment judgment. In addition, to enhance robustness, we used the product coefficient method based on the bootstrap sampling method to test mediation effects. The results indicated that the indirect effects of the three nonfinancial indicators were significant.

Through the above experiments and conclusion analysis, we found that the disclosure of data asset information did not make a difference to nonprofessional investors’ judgments on the three indicators of profitability, growth ability, and going concern ability. On the contrary, the disclosure improved their judgments on the three indicators of market expansion ability, product development ability, and user stickiness. In other words, the disclosure of information on enterprise data assets did not have a significant impact on enhancing nonprofessional investors’ evaluation of subject enterprise’s financial performance, but had a significant impact on enhancing nonprofessional investors’ evaluation of subject enterprise’s nonfinancial performance. Overall, the disclosure of enterprise data asset information had a significant impact on nonprofessional investors’ evaluation about investment value.

We also found that the relationship between the disclosure of enterprise data asset information and the investment judgment of nonprofessional investors was influenced by the mediating effect of nonprofessional investors’ judgment on product development ability and user stickiness, but the mediating effect of market expansion ability needed to be further tested.

The contribution of this paper lies in the fact that it is based on the perspective of nonprofessional investors and information asymmetry theory to explain and justify the need for data asset disclosure. Also, it is based on a social experiment based on the Internet, with questionnaires published and collected on Internet platforms. In contrast, most of the existing studies are limited to normative research methods, with limited depth and persuasive power and are not closely integrated with social practice. In addition, the existing research perspectives are all based on the existing standards. They pay more attention to the recognition and measurement of data assets and relatively insufficient research on other aspects. Therefore, this paper can expand the boundaries of the existing research, both in terms of research methods and research topics. Also, it will fill the problems of insufficient methods, depth, and persuasiveness of the current research in this area, so as to lay the foundation for the formulation of relevant accounting standards and the construction of a conceptual framework for data assets.


2. Experimental Details

2.1. Hypotheses. The paper explores and discusses whether enterprises’ disclosure of their data assets changes their evaluation by nonprofessional investors and affects their ultimate investment value evaluation. We use the research method of questionnaire experimentation by publishing and returning questionnaires on an Internet platform.

Resource-based theory suggested that enterprises have different tangible and intangible resources, and when a particular resource is valuable, scarce, irreproducible, and difficult to replace, it can give the enterprise a long-lasting competitive advantage [21–23]. Data assets, on the other hand, as unique digital resources that many enterprises acquire through their business activities, have an important place in the creation of enterprise value [24]. For instance, for Internet enterprises, they can obtain data assets from the user’s data. The data are acquired through daily business activities or related transactions, through artificial intelligence algorithms, and through data mining tools and models. The Internet enterprises apply them to product development, system automation management, and improving user experience, thus improving nonfinancial performance such as market share and user stickiness.

Compared to financial data, information on nonfinancial performance is less available and more difficult to collect. Listed companies usually do not voluntarily disclose information about their data assets to the public, and it is difficult for nonprofessional investors to get additional information through other channels to correct the assessment gap. The lack of information leads to low evaluation of listed companies’ nonfinancial performance by nonprofessional investors [25, 26]. Therefore, the disclosure of information about data assets allows nonprofessional investors to obtain more reliable judgment bases at a lower cost. This helps to improve nonprofessional investors’ evaluation of listed companies’ nonfinancial performance. At the same time, compared to enterprises that do not disclose information on data assets, information on data assets disclosed by enterprises will become prominent and clear. It draws the attention of investors and influences their judgments and decisions [27]. In contrast, if enterprises do not disclose information about data assets, investors are likely not to pay attention to it, let alone delve further into it, thus increasing the difference between the two.

Usually, nonprofessional investors are only able to obtain indirect information like the number of users and views through third-party market research agencies. This information is less reliable, have different statistical calibres, and mostly require high information fees. The disclosure of information about data assets can help nonprofessional investors to obtain a more reliable and comprehensive basis for evaluating the value of an enterprise at a lower cost. Accordingly, the following hypothesis is formulated in this paper:

Hypothesis 1. Disclosure of information on data assets can significantly improve nonprofessional investors’ evaluation of an enterprise’s nonfinancial performance.

Information asymmetry theory and signalling theory suggested that additional information disclosure by enterprises can mitigate information asymmetry between internal managers and external stakeholders, altering the decisions of nonprofessional investors, creditors, and governments [28]. Then, it will result in a series of economic consequences that affect the market value of the enterprises [29, 30]. In the case of data asset disclosure, information on data assets disclosed by enterprises can reduce the level of information asymmetry between nonprofessional investors and enterprises. Thus, it will reflect the value of the enterprises’ data assets in the share price, and ultimately increase the market value of the enterprise. As the level of data asset disclosure varies from enterprise to enterprise, the cost of gathering data asset information for nonprofessional investors also varies. Compared to enterprises that disclose more information, enterprises that do not disclose or disclose less information will increase the cost to nonprofessional investors and affect the decisions of nonprofessional investors. Eventually, the cost will be passed on to enterprises that disclose less information, reducing their market value. Also, the disclosure of data assets allows governments to better understand the operations of enterprises and reduces the cost of government regulation. Thus, it can reduce the political risk associated with government regulatory uncertainty for enterprises [31, 32]. Effective disclosure of data assets can also reduce the associated public opinion pressure and help enterprises build a good reputation [33]. Accordingly, the following hypothesis is formulated in this paper:

Hypothesis 2. Disclosure of information on data assets can significantly improve nonprofessional investors’ evaluation of an enterprise’s investment value.

How does the disclosure or nondisclosure of information on enterprise data assets affect the judgment of nonprofessional investors about enterprises’ investment value? The study conjectures that this path of influence is achieved by influencing investors’ judgments on financial and nonfinancial indicators. The presentation of information about an enterprise’s data assets is a further representation of the enterprise’s growth potential and operating conditions. And it has a wider range of information coverage. After a nonprofessional investor understands the basic financial information of an enterprise, the information on data assets is more directly related to the business condition and development potential of the enterprise. Also, it may further influence the investment value as judged by the investor. In contrast, between disclosure and nondisclosure of information on enterprise data assets, information related to data assets becomes prominent and explicit. This information is likely to attract the attention of investors and even influence their decision-making judgment. Without disclosure of materiality, investors are likely not to pay attention to it and may not gain a deeper understanding of materiality, thus leading to the difference between the two. Based on the above analysis, it is clear that whether or not materiality is disclosed affects the level of assurance that investors perceive the auditor to have on the reliability of financial reporting. This in turn affects the investment attractiveness of investors’
judgment. Accordingly, the following hypothesis is formulated in this paper:

**Hypothesis 3.** Disclosure of information on data assets influences investment decision preferences through nonprofessional investors' evaluation of enterprises' nonfinancial indicators.

2.2. Materials and Operations. In our study, we chose an Internet enterprise listed on the New York Stock Exchange, and the content of the material was adapted from authentic data. This listed company is anonymous to those who fill in the questionnaire. At the beginning of the questionnaire, the purpose of the questionnaire and the protection of privacy were explained to the participants to make sure that each participant fully understood the process and requirements of the questionnaire. The same seven questions were then provided in the experimental and control group questionnaires to collect information on the personal and investment characteristics of the experimental participants. Also, to facilitate testing whether the experimental participants met the random distribution. Question 8 of the control group questionnaire had the same information as question 8 of the experimental group questionnaire, but additional information on the data assets of the hypothetical enterprise was provided in question 9 of the experimental group questionnaire to examine whether there were significant differences in the investment intentions of the experimental participants towards the hypothetical enterprise. The questionnaire outline was as follows.

2.2.1. Design the Investment Environment. The paper takes the research approach of an Internet experiment and therefore requires giving discrete subgroups of participants the same investment environment. In this study, the investment environment is represented by the following basic information about the anonymous form.

"Existing listed company A is engaged in consumer-related business activities, its main business is virtual community services, and its main source of operating revenue is currently advertising, with paid business such as membership contributing to rapidly growing revenue, making it one of the leading enterprises in this segment. Assume it will be listed in early 2021. Please rate the value of your investment in this business based on the information given."

The investment environment was designed to briefly describe the business activities and main operations of anonymous enterprise A. It was used to avoid redundant information interfering with participants' subsequent evaluation of the metrics or inducing experimental participants to make associations about the existence of a realistic reference for the anonymous enterprise. Otherwise, it may negatively affect the results and interfere with the reliability and persuasiveness of the data obtained from the experiment.

2.2.2. Collect the Basic Information. Based on the topic design of the conventional questionnaire and the investor risk evaluation questionnaire, we set up gender, industry, education, investment experience, and other topics, so as to ensure that the participants in this Internet experiment can meet the requirements of randomness.

2.2.3. Determine the Experimental Variables. In line with the paper's research theme, the study gave participants additional information on the data assets of anonymous enterprise A in the experimental group questionnaire as follows.

"The average number of monthly active users in the past three years for enterprise A is over 70 million, with an average growth rate of 0.5%, a maximum value of 5.47% and a minimum value of −5.15%. The average number of monthly interactions in 2020 is 675.7 million, with a growth rate of 8.4%, and the number of paid members is over 30 million, with an average monthly growth rate of 6%. The average number of monthly content production in 2020 is over 12 million papers, with 3.5 million active content creators. Using the platform's user data, the enterprise has been formed to create the K violation information monitoring system and the F user interest recommendation algorithm. The former achieves identification, recall, and blocking treatment within 3 seconds of the publication of the offending information, while the latter is able to mine user profiles and improve the efficiency of personalized recommendations on homepages based on user behaviours."

The study achieves the analysis of the ability to affect the experimental variables, whether the disclosure or nondisclosure of information on data assets can influence the investment decisions of nonprofessional investors by controlling the above information related to data assets of anonymous enterprises.

2.3. Participants. Our experiment participants came from different regions of the country, working in different occupations, and with different investment experience. 72.09% of the participants had a bachelor's degree or above, and 17.06% of them were in accounting and finance-related industries. 56.35% of them have experience in getting involved in stocks and funds, with an average investment duration of 2.63 years.

As nonprofessional investors are the main participants in the Chinese stock market, this paper focus on the impact of these investors on the value of enterprise investments.

2.4. Procedure. All participants were encouraged to play the role of nonprofessional investors (which they do in real life). Experimental participants firstly fill in personal background information, which we treated confidentially. Then, they read the enterprise's background and financial data to assess the enterprise's profitability, growth, and ability to pursue as a going concern, and to ensure a judgment about the likelihood of buying shares. As in current practice, data assets were mostly used for new product development, user acquisition and maintenance, market expansion ability, product development ability, and user stickiness were
chosen as proxies for nonfinancial indicator capability in this experiment. Therefore, participants in the experimental group were asked to read information about the enterprise’s data assets and make a judgment about the enterprise’s market expansion ability, product development ability, and user stickiness based on the information given before making a judgment about the likelihood of buying shares, while participants in the control group were asked to make a judgment about this in the absence of relevant materials.

The experiment was conducted in July 2021 through the questionnaire star and Tencent questionnaire for the whole network, and more than 400 questionnaires were collected, including 240 questionnaires for the experimental group and 209 questionnaires for the control group. The questionnaires were distributed without any special restrictions on the audience, except for the requirement that those completing the questionnaires must be of age, to ensure the randomness of the experimental sample. Thus, the experiment took full advantage of the convenience, randomness, and decentralization of Internet-based questionnaire distribution.

3. Results

3.1. Manipulation Checks. The experimental design of this paper differs from traditional behavioural accounting experiments. The content of the experimental material in this paper is related to the questions, which are set after each section of the material and are answered instantly by the participants in the experiment after reading the material. Traditional behavioural accounting experiments, on the other hand, usually start with a set of materials and participants read them all, and then respond. In order to prevent participants from answering directly without reading the material, questions need to be set for manipulation tests. The paper therefore does not require manipulation tests.

3.2. Analysis of Reliability and Validity. Reliability and validity tests were performed for the control and experimental group questionnaire data separately, using SPSS software. The results are shown in Table 1. The internal consistency coefficient of the questionnaire data between the control group and the experimental group (the Cronbach’s alpha coefficient and half reliability coefficient) exceeded 0.8, indicating that the questionnaire data had excellent reliability; In the validity analysis process, the KMO value exceeded 0.8, the significance p value is less than 0.05, the extracted public factor was over 60%, and the experimental data better explained the problem set in the questionnaire design.

3.3. Hypothesis Testing. First, normal distribution tests were conducted on profitability, growth ability, continuous operation, market expansion ability, product development ability, user engagement, and investment intention to determine whether the data obtained from the questionnaire met the premise assumptions of the t-test [32]. The Q-Q plot shows that the data points are distributed near the straight line, the kurtosis and bias values are about zero, and the Z

<table>
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<th>Table 1: Consequences of analysis of reliability and validity.</th>
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<tr>
<td><strong>Confidence analysis</strong></td>
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| Validity analysis | The KMO value | 0.895*** | 0.891*** |

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<th>Table 2: Statistics of t-test results.</th>
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<td><strong>F-statistic</strong></td>
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<td>Profitability</td>
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<tr>
<td>Growth ability</td>
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<tr>
<td>Continuous operation</td>
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<td>Market expansion ability</td>
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<tr>
<td>Product development ability</td>
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<tr>
<td>User stickiness</td>
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<tr>
<td>Investment value</td>
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Note. ***, **, and * are indicated as significant at the significance levels of 0.1, 0.05, and 0.01, respectively.
the underlying enterprises, and nonprofessional investors have formed a relatively uniform and fixed evaluation mindset. On the other hand, it shows that the disclosure of information related to data assets is valuable for nonprofessional investors to evaluate the nonfinancial performance of enterprises. Thus, hypothesis 1 is proved.

From the perspective of mean difference, the mean value of investment intention of the experimental group is 0.727 points higher than that of the control group (scored on a scale of 1–5), with a difference ratio of over 14%. Market expansion ability, product development ability, and user stickiness are also significantly higher than those of the control group by 0.118, 0.37, and 0.38 points, respectively. It indicates that the disclosure of information on enterprise data assets can significantly influence the evaluation and investment value evaluation of nonprofessional investors, otherwise the disclosure of information on enterprise-owned or controlled data assets does not significantly enhance the evaluation of investment targets by nonprofessional investors. From another point of view, it can also prove that nonprofessional investors are interested in the information of data assets of enterprises and it is necessary to increase the transparency of such information. Thus, hypothesis 2 is proved.

Hypothesis 3 expects that the relationship between disclosure or nondisclosure of information on enterprise data assets and investment judgments of nonprofessional investors is influenced by the mediation of nonprofessional investors’ judgments on enterprise’s nonfinancial indicators. The paper used a three-step regression to test the above mediation effect. The results of the mediation effect test are shown in Table 3, where the independent variable is whether to disclose data asset information, and the group of not disclosing data asset information is assigned a value of 0, and the group of disclosing data asset information is assigned a value of 1. There is a significant positive relationship between the independent variable of whether to disclose data asset information and the dependent variable of investment judgment of nonprofessional investors. The independent variable of whether to disclose data asset information and the mediating variable of market expansion ability do not have a significant positive relationship. There is no significant positive correlation between the independent variable whether data asset information is disclosed and the mediating variable market expansion ability, but there is a significant positive correlation between the mediating variables product development ability and user stickiness. Taking whether data asset information and product development ability are disclosed as independent variables and investment judgment of nonprofessional investors as dependent variables, it can be found that whether data asset information is disclosed and nonfinancial indicators still show a significant positive correlation with investment judgment of nonprofessional investors. The above results indicate that the relationship between disclosure or nondisclosure of data asset information and investment judgment of nonprofessional investors is influenced by the mediating effect of nonprofessional investors’ judgment on product development ability and user stickiness, but the influence of the mediating effect of market expansion ability still needs further testing.

### Table 4: Bootstrap test of the mediating effect of product R&D ability on the investment decision of nonprofessional investors.

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<tr>
<th>Effect value</th>
<th>Boot st.</th>
<th>95% L. Confidence interval</th>
<th>95% U. Confidence interval</th>
</tr>
</thead>
<tbody>
<tr>
<td>Market expansion ability</td>
<td>0.6869</td>
<td>0.0751</td>
<td>0.5515</td>
</tr>
<tr>
<td>Product development ability</td>
<td>0.5923</td>
<td>0.0750</td>
<td>0.4522</td>
</tr>
<tr>
<td>User stickiness</td>
<td>0.5908</td>
<td>0.0757</td>
<td>0.4520</td>
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</table>

3.4. Robustness Testing. To enhance the robustness, the paper used the product coefficient method based on bootstrap sampling method to test the mediation effect again. The paper set the sample to put back 500 times, and the confidence interval was selected as 95%. As is shown in Table 4, the results of the product coefficient method based on bootstrap sampling method showed that among the three relationships: whether to disclose data asset information, nonfinancial indicators, and investment judgment of nonprofessional investors, the indirect effect of market expansion ability on investment judgment of nonprofessional investors was 0.6869 with 95% deviation-corrected confidence interval (0.5315 and 0.8398). The indirect effect of product development ability on investment judgment of nonprofessional investors is 0.5923, and the 95% deviation-corrected confidence interval are 0.4522 and 0.7405. The indirect effect of user stickiness on investment judgment of nonprofessional investors is 0.5908, and the 95% deviation-corrected confidence interval are 0.4520 and 0.7527, both of which do not contain a zero value. Also, the effect values of

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<th>Model (1)</th>
<th>DV</th>
<th>MV</th>
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<tr>
<td>Market expansion ability</td>
<td>3.4115***</td>
<td>0.3700***</td>
</tr>
<tr>
<td>Product development ability</td>
<td>3.1675***</td>
<td>—</td>
</tr>
<tr>
<td>User stickiness</td>
<td>3.2201***</td>
<td>0.3799***</td>
</tr>
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</table>

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<tr>
<th>Model (2)</th>
<th>MV</th>
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<tbody>
<tr>
<td>Market expansion ability</td>
<td>3.4115***</td>
</tr>
<tr>
<td>Product development ability</td>
<td>3.1675***</td>
</tr>
<tr>
<td>User stickiness</td>
<td>3.2201***</td>
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<tr>
<th>Model (3)</th>
<th>DV</th>
<th>MV</th>
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<tbody>
<tr>
<td>Market expansion ability</td>
<td>3.4115***</td>
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<td>3.1675***</td>
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<td>User stickiness</td>
<td>3.2201***</td>
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the independent variables are within the 95% confidence interval, indicating that the mediating effect of the nonfinancial indicators is significant. The results of the robustness tests support the results of the hypothesis tests, indicating that the conclusions of the hypothesis tests are robust.

4. Conclusions

To examine the impact of data asset information disclosure on investors, this paper analysed and tested the impact of data asset information disclosure on nonprofessional investors’ investment value judgments. The paper was based on an information asymmetry perspective and an Internet-based social experiment research method. The study found that, compared to none or less disclosure of information on data assets, the nonfinancial performance scores judged by nonprofessional investors significantly improved after active disclosure of relevant information. In the meanwhile, nonprofessional investors’ judgment of investment value was significantly enhanced. The study also found that the relationship between whether or not to disclose data asset information and investment value as judged by nonprofessional investors was mediated by product development ability and user stickiness.

The research in this paper has important theoretical and practical implications. Firstly, this paper tested the impact of data asset information disclosure on the investment judgment of nonprofessional investors. This study enriched the literature related to data asset research and found that proactive disclosure of data asset information can improve nonprofessional investors’ evaluation of nonfinancial performance. Also, it can influence their judgment and decision making on investment value. Secondly, the findings of this paper provide a priori evidence for the development of subsequent data asset guidelines and provide a theoretical basis for the decision-making of guideline setting bodies.

At the same time, the findings of this paper suggested that it is necessary for enterprises to consider disclosing data asset information to the public through annual reports and regular announcements. And regulators may consider requiring and supervising enterprises to publicly disclose information on the current status of data assets and information on data asset transactions on a regular basis. It is helpful to reduce the level of information asymmetry in the domestic capital market and enhance the efficiency and effectiveness of the capital market.

The research in this paper also has certain limitations in that in testing the impact of data asset information disclosure, this paper only tests the impact of whether data asset information is disclosed on the investment judgment of nonprofessional investors and does not address the impact of the level of data asset information disclosure on nonprofessional investors and whether there are other mediating variables affecting the results. In future in-depth studies, there will be some research value in the relationship between different levels of disclosure and the judgment of nonprofessional investors. Thinking from a more macro perspective, research on the pricing and measurement of data assets is also necessary.

Data Availability

The datasets used and/or analysed during the current study are available from the corresponding author on reasonable request.

Conflicts of Interest

The authors declare that they have no known competing financial interests or personal relationships that could have appeared to influence the work reported in this paper.

Authors’ Contributions

The paper is the outcome of the authors’ joint work. However, in the final version, Yang Li was responsible for the “Literature review”, and the “Conclusions” sections, while Liming Dong was responsible for the “Introduction” section. The “Discussion” section was finished by both Yang Li and Cheng-kai Luo.

Acknowledgments

The authors gratefully acknowledge the help received from the Tencent Questionnaire Network and the participants in this Internet experiment. The financial help from Zhejiang University of Finance and Economics 2021 Postgraduate Fieldwork Fund (21TYDC016) is positive.

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