

Analysis of Revenue Recognition Issues in the Online Game Industry under the New Standards

Duanlang Zhou *

¹ Lyceum of The Philippines University Manila, Manila, Philippines

² Yulin Normal University, China

* Corresponding author: Duanlang Zhou (Email: 318335875@qq.com)

Abstract: With the continuous development of the Internet and the implementation of the new revenue standards officially announced by the Ministry of Finance in 2017, the recognition of revenue has a significant impact on the online game industry, which is related to the healthy development of the entire online game industry. Accounting treatment is also based on the recognition of revenue. This paper uses the investigation method and literature research method to study the online game industry revenue recognition under the new revenue criteria, which mainly includes three aspects: revenue recognition time point, transaction complexity, precipitation income, and puts forward suggestions, aiming to provide reference for the future online game industry revenue recognition related issues.

Keywords: Online game industry, Online game enterprises, New revenue criteria, Revenue recognition, Precipitation income.

1. Introduction

1.1. Background and Significance of The Study

1.1.1. Research background

With the arrival of the Internet era, many transactions can now be realised through the network, especially in the online game industry. In 2020, the scale of China's game users exceeded 660 million people, and the actual sales revenue of China's game market was 278.687 billion yuan, an increase of 20.71% year-on-year, and the growth rate increased by 13.05% year-on-year [Data source: '2020 China Game Industry Report'], the Internet The rapid development of the online game industry makes the relevant accounting standards of the online game industry face new situations, among which, revenue recognition is the core issue in accounting treatment. As the revenue recognition of the online game industry has certain specificity and complexity, coupled with the official announcement of the new revenue standard in 2017, which puts forward new requirements for the online game industry in terms of revenue recognition and other aspects, it makes the revenue recognition problem of the online game industry become an important research topic.

1.1.2. Research significance

Revenue recognition has been the subject of continuous research by accounting scholars, and the promulgation of the new revenue standards has further standardised the revenue recognition in the online gaming industry. The online gaming industry developed on the basis of the Internet and the traditional industry are quite different in terms of business, and the online gaming industry needs to consider how to better implement the new standard, how to deal with the virtual props revenue recognition issue and the recognition of sinking revenue. This is of practical significance to the development of the online game industry and the standardisation of issues related to revenue recognition in the industry.

This paper has theoretical and practical significance by exploring the revenue issues of online game industry under the new standard and putting forward suggestions to provide

reference and reference for the revenue recognition of online game industry.

1.2. Current Status of Domestic and Foreign Research

1.2.1. Current status and development trend of foreign research

On the issue of revenue and recognition in the online gaming industry, foreign scholars have carried out certain theoretical research. KA Schipper, CM Schrand and T Shevlin (2009) proposed that the determination of the time of revenue recognition should be based on the changes in the recognition of assets and liabilities. Patricia McConnell (2014), on the other hand, said that in order to different subjects, industries, companies should recognise the amount and timing of revenue on the basis of contracts concluded with customers. In 2012, Ernst & Young summarised three revenue recognition models to provide guidance on revenue recognition in the online gaming industry, which are: project-based revenue model (IBRM), user-based revenue model (UBRM), game-based revenue model (GBRM), user-based revenue model (UBRM), user-based revenue model (UBRM), and game-based revenue model (GBRM). The three models are: project-based revenue model (IBRM), user-based revenue model (UBRM), and game-based revenue model (GBRM).

Foreign research started relatively early and proposed many methods with practical value for revenue recognition in the online game industry, laying the foundation for the development of online game industry.

1.2.2. Current Status and Development Trend of Domestic Research

The increase in the research of domestic scholars on revenue recognition in the online game industry is caused by the rapid development potential of the Internet industry in recent years, which also provides a lot of reference value for the revenue recognition of the online game industry in China.

Li Keliang (2016) believes that the main game props sold in online games are consumable period props and permanent

props. Consumable period props can be recognised as revenue after the player has consumed them, while permanent props will follow the player all the time during the player's game, and for such game props can be recognised in stages according to the player's game time. Similarly, Yantian proposed (2018) that according to the 'five-step approach', enterprises should recognise revenue at a certain point in time (or a certain period of time) when they fulfil their performance obligations, and game props should not be recognised at the point of time when they are exchanged for game props unless the game props purchased by the player will be consumed immediately.

Li Shouxi and Wang Mengxiao (2018) believe that due to the special characteristics of e-commerce enterprises make them possess greater uncertainty in the implementation of the new revenue standard. Therefore, the relevant training for financial personnel should be strengthened to improve the authenticity of accounting information. Regulators should also pay continuous attention to the relevant aspects to further promote the implementation of the new revenue standard.

Domestic research on revenue recognition in the online gaming industry started late and is not rich enough, but with the promulgation of the new standard, more scholars are gradually studying the problems of revenue recognition in the online gaming industry under the new standard, which is of positive significance to the healthy development of China's online gaming industry.

2. Relevant Theoretical Foundations

2.1. Basic Theory of Revenue Recognition

The latest revision of China's 'Accounting Standard for Business Enterprises No. 14 - Revenue' stipulates that revenue refers to the total inflow of economic benefits formed in the daily activities of the enterprise, which will lead to an increase in the owner's equity, and is not related to the owner's input of capital [Notice on the Revision and Issuance of 'Accounting Standard for Business Enterprises No. 14 - Revenue' [J]. -Revenue [J]. Green Finance and Accounting, 2017(07):31-38.]. The asset-liability view is based on the balance sheet, defined in terms of assets and liabilities and using changes in assets and liabilities as the basis for calculating earnings. The income-expense view is based on the change of profit, disclosed from the aspect of income and expense, and the disclosure content focuses on the reliability of the current accounting information.

2.2. China's Newly Revised Revenue Standard

The old revenue standard requires a distinction between revenue from the sale of goods and revenue from the provision of labour services and emphasises that revenue from the sale of goods is recognised when the major risks and rewards of ownership of the goods are transferred to the purchaser, which is sometimes difficult to judge in practice. In contrast, Article 4 of the new revenue standard issued by the Ministry of Finance of China in 2017 stipulates that enterprises should recognise revenue when they have fulfilled their performance obligations under the contract, i.e. when the customer obtains control of the relevant goods. Acquiring control of the relevant merchandise means being able to dominate the use of that merchandise and derive almost all of the economic benefits from it. The new revenue standard provides precise guidance on whether revenue recognition applies 'over a period of time' or 'at a point in time' and

improves the comparability of accounting information.

The old Revenue Standards classified operations into four types: revenue from the sale of goods, revenue from the rendering of services, revenue from the transfer of the right to use assets, and revenue from construction contracts, which are recognised separately. In the new revenue standard, a major change has been made, which no longer divides revenue into types, but specifies a model for revenue recognition - the 'five-step approach', as shown in Figure 1.

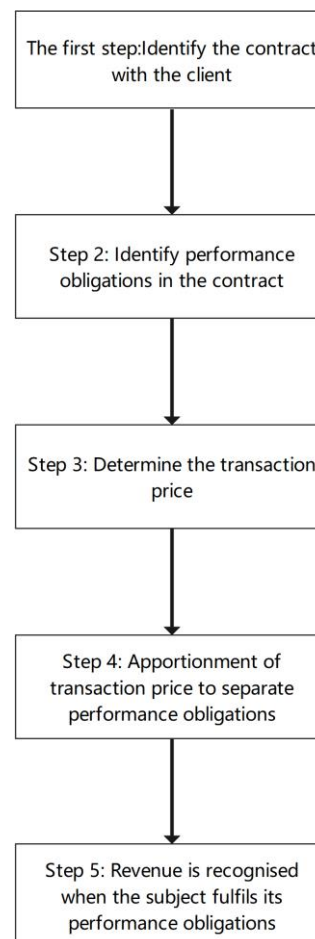


Figure 1. The 'five-step approach' of the new revenue standard

3. Analysis of the Current Situation of Revenue Recognition in China's Online Game Industry

3.1. Development and Status of Online Game Industry

From the '2020 China Game Industry Report', we can see that in 2020, under the guidance of the national policy, the development of China's online game industry has gained momentum, with the total actual marketing amounting to 278.687 billion yuan, an increase of 47.81 billion yuan in revenue compared with 2019, and the scale of users reaching 665 million people, a year-on-year increase of 3.7%. China's online game industry maintains sustained growth thanks to the continuous improvement of the ecological environment of the online game industry and the good policies provided by the state, China's online game industry has always insisted on the combination of 'bringing in' and 'going out', which has made China's game influence in the world is rising. The influence of China's games in the world is constantly rising. This year, some domestic games have topped the download

list or the best-seller list in different regions of the world, and there are also masterpieces that have won the 'Game of the Year Honour of the World's Largest Mobile Application Platform', and China's game industry has gradually developed in the direction of high quality, with more high-quality and original games heading for the world stage. The actual sales revenue and growth rate of China's game market, the actual sales revenue of China's game market as a whole presents a rising trend, and in the past five years, the growth rate of 2017 reached a peak of 23 per cent, followed by a sharp decline in 2018, while its slow rebound is visible from 2019, and by 2020 the growth rate appeared to be a significant increase. Although the growth rate has high and low, but the overall revenue shows growth, visible in China's game industry revenue overall in the rising stage.

3.2. Operation Modes of Online Game Industry

After the continuous development in recent years, the online game industry has formed three mature operation modes: independent operation mode, joint operation mode, and authorised operation mode. It is not necessary to choose only one of these three modes, therefore, online game enterprises usually choose multiple operation modes according to the feedback information on the actual gameplay, audience, development trend and other aspects of an online game in order to maximise the benefits of operation and achieve the expected profitability goals.

3.3. Profit Modes of Online Game Industry Revenue

In order to get a better or easier game experience, some online game players achieve this by consuming time and props. Therefore, the following profit channels mainly exist in China's online game market: selling monthly cards or point cards, selling game props, game currencies or in-game resources, and paying for downloads, etc. Earlier, time charges, point cards, and in-game resources were used to maximise the profitability of the online game industry. In the early years, time charges and point cards were the main sources of income in the online game industry, but with the continuous development of society and the online game industry, game operators have been gradually eliminating profit models such as point cards and monthly cards in order to attract players and increase their online time. Currently, the most common is the sale of game props, game currency or in-game resources. If online gamers expect to have a better gaming experience in the game or have stronger weapons or more powerful characters, etc., gamers usually buy game point cards to exchange for the required items, or use WeChat Pay and Alipay Payment to buy the required items directly.

4. Problems and Analyses of Revenue Recognition in the Online Game Industry

4.1. Problems of Revenue Recognition in The Online Game Industry

4.1.1. Difficult to clarify the point of time of revenue recognition

In online games, usually the game company relies on players to buy virtual currency and buy virtual props to obtain revenue, online game companies have different choices for

this point in time, some companies in the players use virtual currency to buy virtual props after the recognition of revenue, for example, Sanqihou Entertainment and Kaiying network, there are game companies in the players use the currency to buy props after the use of a certain period of deferred revenue, such as Tencent, Perfect World and NetEase. This different point in time to confirm the way, so that the online game industry is not enough norms, the industry is difficult to compare, can not reflect the characteristics of the online game industry, for the judgement of the point of time of revenue recognition, the existence of each company is more subjective, the authenticity of the accounting information to be verified.

The profit model of Internet game enterprises mainly includes: charging for package time, charging for time duration, charging for virtual items, built-in advertisement and membership charging mode. At present, the mainstream revenue model of the domestic Internet game enterprises is to sell virtual goods through the profit mode, and the price of virtual goods is difficult to confirm, and the use cycle of different virtual goods is not the same. In addition, the consumption of online game products is uninterrupted and uneven 24 hours a day, and there is no specific survival time for the products, and many props can be used at any time in the game. Sometimes game operators launch a variety of promotional activities at certain times of the day, often making it difficult to match revenues with cash flow and causing measurement problems in the amount of discounting.

4.1.2. Internet transactions are more complex

Compared with traditional industries, the transactions of online game enterprises have certain complexity and uniqueness. The biggest difference between online game enterprises and traditional enterprises is that the main commodities sold by online game enterprises are virtual and without entity. The virtual props sold in online games carry the performance obligations of online game enterprises for players, which can be regarded as a kind of liability of online game enterprises. In the specific transaction process, players need to exchange cash for virtual currency first, and then through the virtual currency to exchange virtual props, which makes the transaction of online game enterprises become more complicated. From the above analysis, it can be seen that online game enterprises can only be regarded as fulfilling their performance obligations to customers after the virtual props are consumed, and then they can recognise revenue for the virtual props. However, due to the diversity of gameplay in the game, the consumption of game props in a variety of ways, online gaming enterprises on the timing of revenue recognition is difficult to grasp, if the game props in accordance with the part of the game has been consumed for revenue recognition, not only more efficient, but also on the accuracy of the enterprise's accounting information has a certain degree of protection, so that in the calculation of the net assets of the enterprise is more in line with the actual situation. The life cycle of different virtual props in the game has differences, and the degree of binding by time is also high and low, and the life cycle of most virtual props depends on the activity of paying players. Therefore, the specificity and complexity of online gaming enterprises have brought certain challenges to our revenue guidelines, and in practice online gaming enterprises will inevitably encounter some problems, and there are no clear application guidelines to solve these problems.

4.1.3. Unclear revenue determination of sunk income

The formation of precipitation income is due to the fact that

the player recharges his account, but gives up the game when he does not consume all the amount in his account, which also creates a situation where the virtual currency remains in the account. In this case, once the player has purchased, the game company will not return this part of the amount, online game companies do not have a unified standard for this treatment, for example, NetEase for a long time not to use the virtual currency to choose to recognise revenue, but many other companies do not recognise revenue, at the same time, some companies choose to recognise this revenue after the end of the game, which will lead to a large amount of revenue in the game is about to exit the At the same time, some enterprises choose to recognise this revenue after the game has ended, which can lead to a large amount of revenue during the period when the game is about to be withdrawn from the market, which is obviously not in line with the truthfulness of accounting information. Therefore, there is still a need for clearer constraints and regulations in this regard.

4.2. Impact of the New Standard on The Online Game Industry

Under the new revenue standard, there is a clear principle of differentiation between the performance obligation of a certain contract which belongs to the performance obligation at a certain point of time or within a certain period of time, and some experts believe that online game is a kind of experiential service, and the virtual props are a part of this experiential service, and the price paid by the players for purchasing the virtual props as well as the use of the virtual props is nominally the purchase of the virtual props but in fact the purchase of the whole service, and that the performance of a certain contract is not the performance obligation at a certain point of time, and that it is not the performance obligation at a certain period of time. To satisfy the standard that 'the customer obtains and consumes the economic benefits brought about by the performance of the enterprise at the same time of the performance of the enterprise', the online gaming company should recognise revenue in accordance with the 'performance of the obligation to perform within a certain period of time'.

The newly revised ASBE No. 14 'Revenue' adopts a unified revenue recognition and measurement method that identifies the point in time when a single performance obligation is fulfilled in a contract between an enterprise and a customer. As the accounting standard is principle-oriented, it gives enterprises a certain degree of freedom and room for operation, and only specifies the accounting treatment of specific transactions. There is no specific application guideline on revenue recognition for Internet game enterprises, which makes different enterprises choose different judgements and treatments on issues such as the revenue recognition model of virtual props, the point of time of revenue recognition of sunk currency, and the fair value of promotional products, giving enterprises room for surplus management operations and resulting in poorer comparability of earnings among the same industry.

4.3. Analysis on Revenue Recognition Issues in the Online Game Industry

We must recognise that the nature of virtual props is not just a service. With the prosperous development of online games, hand games and e-sports, some virtual props are not only a part of online game entertainment services, virtual props have the attributes of commodities to a certain extent,

some props in the game can be transferred to sell tens of thousands of yuan or even more than 100,000 yuan, the game account number can be circulated and transferred. At the same time, under the existing online game operation mode, players can independently decide whether to go online and how to use the purchased virtual props, and gamers have the right to control the virtual props. In reality, the game player not only enjoys the game entertainment service but also owns a share of virtual assets, this situation exists at the same time in the whole game duration and cannot be divided, the game service that the player enjoys has existed since the first time he enters the game. The purchase of virtual props can be regarded as two contracts, one is the props purchase contract and the other is the long-term game experience service contract. The performance obligation of the online game enterprise in the props purchase contract belongs to the fulfilment of the performance obligation at a certain point in time, while the game experience service belongs to the fulfilment of the performance obligation within a certain period of time. The revenue from the sale of props can be allocated in accordance with the cost method, with the revenue from the props purchase contract recognised at the time of the sale in its entirety, and the revenue from the game experience service contract recognised evenly over the game's life span.

5. Suggestions on Revenue Recognition Issues in the Online Game Industry

5.1. Reasonable Recognition of Sunken Revenue

Players often do not use up all the virtual currency after obtaining it, so enterprises need to judge when players will no longer use the precipitated virtual currency in their accounts before they can recognise this part of the virtual currency as revenue. Under the guidance of the new revenue standard, online game enterprises can first recognise the deposited virtual currency as deferred revenue, and after the termination of the operation of the game, enterprises can recognise this part of the virtual currency as deposited revenue. However, this method of revenue recognition may result in the situation reflected in the financial statements not being consistent with the reality. Online game companies should establish a reasonable system to regularly disclose the precipitated income to improve the accuracy and reliability of accounting information, the system can be based on the historical data of players. When the online game enterprise can reasonably predict the point when the player abandons the game, the enterprise can recognise the sinking revenue. For example, the enterprise believes that the player has not logged into the game for two consecutive months, in which case the likelihood of the game player abandoning the game is extremely high. Then the enterprise can recognise revenue on the virtual currency in the account of the player who has not logged in for two consecutive months. This method is more scientific, but how to judge the point of time when the game player abandons the game is a difficult problem. Enterprises need to conduct extensive, scientific analyses of the data in the gamer data system before they can reasonably define this point in time. When using this method, it is important to ensure that the analysis of the player data system is representative of the future business results of the game to ensure the accuracy of the estimate. This method requires the enterprise's prediction and estimation, and it is inevitable that there will be errors, but such errors tend not to be too large,

so after the game terminates its operation, the enterprise can adjust the corresponding errors. For the existence of errors enterprises should more refund and less make up for the over-recognised sinking revenues to be re-recognised as income from the main business, and the recognised non-operating revenues to be eliminated; the under-recognised portion of the non-operating revenues to be made up in accordance with the actual amount.

Sunk revenue is recognised in conjunction with the concept of control. Online game enterprises control the operation of the game in the virtual world, and all transactions occurring in the enterprise are carried out in the virtual world through the Internet. Determining the point of time for revenue recognition and the period of revenue deferral by the performance obligation of the contract and combining the concept of transfer of control can largely solve the problem of determining whether the major risks and rewards of the goods are transferred. A performance obligation is a contractual commitment by an enterprise to transfer clearly distinguishable goods or services to a customer, which can be further divided into a performance obligation that is completed at a point in time and a performance obligation that is completed over a period of time. The transfer of control, on the other hand, is based on the ability to dominate the use of the good or service and the ability to obtain almost all of the economic benefits on the good or service. In Giant Network's Internet community tools, customers often do not use all of the virtual currencies after recharging and obtaining them, so it is necessary to first determine when customers will no longer use the virtual currencies deposited in their accounts, and under the guidance of the new revenue standard, online game companies may first recognise the deposited virtual currencies as deferred revenue and then recognise this virtual currency as revenue afterwards.

Recognition based on player game life. The online gaming industry is a fast-changing environment with rapid product updates, and paying players may switch to other players, generating a lot of deposited revenue. The New Revenue Standard instructs online game enterprises to recognise deposited revenue as deferred revenue until the game terminates operation, and then finally recognise the deposited revenue. Online game companies can make full use of the data analysis system (players), the paid players in the game to play the time for general analysis, so as to calculate the average life cycle of these players T , precipitation income in the cycle T for the assessment of accounting, in the end of the game life of the players will also be disclosed in advance of the precipitation income.

5.2. Emphasis on Revenue Recognition and Information Disclosure Issues in the Online Game Industry

The new revenue standard has added a large number of contents that need to be estimated by accountants, and there is no specific specification on the practical operation, which requires the financial personnel of online game enterprises to make professional judgement according to their working experience in the specific operation. However, there are many matters that cannot be accurately assessed and can only be reasonably estimated, with a certain degree of error, resulting in a greater room for operation in revenue recognition by online gaming enterprises. At the same time, the new revenue standard allows enterprises to base on their own development, according to their own business model to make reasonable

judgement, choose the appropriate accounting estimates, so as to improve the decision-making usefulness of the financial report, which makes the enterprise's business model in the accounting information has more value. This paper suggests that the new revenue standard should emphasise the importance of information disclosure of online gaming enterprises, and clearly stipulate the key points of disclosure and the evidence to be presented by the company for the possible manipulation of the online gaming enterprises, so as to ensure that there is evidence to follow. The new revenue standard can take into account the characteristics of online gaming enterprises and formulate a unified reporting standard for the disclosure of business models of online gaming enterprises, so that online gaming enterprises can make relevant disclosure of their business models in their financial statements, which is convenient for the management of the regulatory authorities. Online gaming enterprises should disclose their business models in their regular reports and give reasonable reasons in their reports when their business models change.

Establishment of an industry oversight committee. In the early stage of the implementation of the new standard, it is recommended that online gaming enterprises establish an industry supervision committee to supervise and check the implementation of the new standard in real time, because in the early stage of the implementation of the new standard, many accountants have not studied the content of the standard thoroughly, which may lead to errors in the implementation process, and some enterprises may even take advantage of the chaotic situation during the transition period of the old and the new standard to increase revenue and other illegal behaviours, so an industry supervision committee should be set up to focus on the implementation of the new standard. Therefore, an industry supervisory committee should be set up to follow up and verify the application of the new standard of online game enterprises, for example, focusing on the estimation of the deferred period and the treatment of sunk income mentioned above, and verifying whether it is in line with the provisions of the new standard, whether it is in line with the enterprise's own situation, whether the treatment process is accurate, and whether the accountants have systematically learnt the new standard and other issues. The establishment of the industry supervision committee can ensure the smooth replacement of the old and new standards in the early stage of the implementation of the new revenue standards, reduce the possibility of fraudulent behaviour of accountants, ensure the smooth operation of the new standards, strengthen the authenticity of accounting information in the online gaming industry, and ensure the healthy and orderly development of the online gaming industry.

After the application of the new revenue standard, the accounting treatment of virtual props income, promotional activities and precipitation income of online game enterprises will be improved and standardised to a greater extent. In order to improve the quality of accounting information, this paper suggests that online game enterprises disclose the game operation mode in their financial reports, and clarify the responsibilities undertaken by the company in the industrial chain. The identity of the company should be defined according to whether it owns the control of the game products, whether it is responsible for the daily operation and management of the game, whether it provides major customer services, etc. It should be clear whether it belongs to the main

responsible person or the agent, and from this, it should be determined whether it adopts the gross method or the net method for recognising the revenues under the different operation modes. At the same time, it is also recommended that online game companies disclose the revenue recognition policies for different types of virtual props, the principles of allocating transaction prices for promotional activities, the method of accounting for sunk revenues, etc., and explain the method of measuring the progress of performance. Each online game enterprise should improve its ability to mine and analyse players' backstage data, build a scientific life cycle assessment model, and make full use of Internet information technology and big data platforms to improve the accuracy of accounting estimates. In addition, it is recommended that online gaming enterprises improve their internal processes and promote the integration of business and finance. Enterprises often need to obtain a large amount of business data when applying the new revenue standard to judge the transfer of control, and at the same time, the accounting estimation of prop life period, game life period and player active period also needs the support of business information. Enterprises should create a good environmental foundation for the implementation of the New Revenue Standards, design and optimise corporate processes so as to obtain first-hand data from sources such as game product development, operation and sales departments, which will be appropriately consolidated and processed by the finance department so as to make reasonable accounting estimates relating to revenue recognition in the subsequent bookkeeping process. According to the new standard, online game enterprises are required to fully disclose and present revenue-related information, including significant accounting estimates and professional judgements, to enhance the comprehensibility of revenue recognition policies and the transparency of revenue information, and to improve horizontal comparability.

5.3. Other related Suggestions for The Online Game Industry

In addition to focusing on the timing of revenue recognition, measurement of revenue and disclosure of revenue policy, game enterprises should also create a favourable objective environment for the implementation of the new standard. Firstly, gaming companies may need to upgrade their IT systems. Because under the requirements of the new standard, enterprises need to obtain more data when judging the timing and amount of revenue recognition, such as data used to make estimates of revenue transactions and data to support information disclosure.

Secondly, gaming companies need to modify their accounting policies and internal control processes to suit their own circumstances. Companies need to design new processes to obtain initial data from the game development department, sales department and other sources, and make appropriate records for future revenue-related accounting estimates.

Improvement of professional competence of financial personnel. Compared with the old standard, the new revenue standard has significant differences in revenue recognition for online game companies. With the nationwide implementation of the new standard, the financial staff of enterprises can only keep up with the times by continuously learning new financial knowledge. Both accounting treatment and estimation flexibility for online gaming companies will be greatly increased with the implementation of the new standard. Whether it is the determination of individual performance

obligations, or the determination of individual sales prices and distribution transaction prices, strong accounting estimation skills are required.

Therefore, the implementation of the new revenue standard has a higher requirement for financial personnel's professional ability and professional quality to adapt to the new situation. Therefore, the online game company should consider the long-term development of the company, invite relevant experts to provide timely professional training for employees, so that the financial staff more profound understanding of the content and scope of the new revenue standard can inspire a higher enthusiasm for learning. And use the method of combining theory and examples to make financial staff better understand and master the new income standard. At the same time, the guidance of theory needs practical application, when the financial personnel encounter practical problems, may also need practical experts to guide, which can reduce the online gaming enterprise financial personnel in the accounting treatment of the possible mistakes, which can ensure that the online gaming enterprise's revenue recognition is more reliable. In addition, financial personnel can only improve their financial knowledge system in a timely manner, improve their professional judgement and enhance their professional ethics by continuously learning new revenue standards.

The complexity of revenue recognition of online game enterprises puts forward higher requirements for accounting estimation, especially when the game version update and game content changes will affect the game cycle of players and the life cycle of game products, which in turn will affect the recognition time and recognition amount of revenue, online game enterprises should improve the data analysis system of the enterprise and improve the efficiency of the use of the enterprise data analysis system, and make great use of a large amount of the enterprise's The company should improve its data analysis system and increase the efficiency of its data analysis system, and utilise the company's large amount of historical player data. At the same time, online game companies need to regularly track player data and consumer behaviour, regularly assess the game cycle of game players and the life cycle of game products, and reassess the game content or significant changes in the industry environment that may affect the company's previous assessment of the data, and make corrections based on the assessment of the updates, and adopt the 'future applicable method' for revenue recognition in the subsequent fiscal year. The 'future applicable method' will be adopted for the amortisation of revenue in future accounting years. In terms of talent development, MMOs can introduce and train a large number of data analysts and new types of accounting talents, and improve the professional quality of personnel through professional skills training at a later stage. At the same time, the management should enhance the awareness of financial management and recognise the importance of improving the quality of accounting statements and reflecting the real financial situation of the enterprise for the management to make correct decisions and be responsible to the shareholders and other statement users.

6. Conclusions and Shortcomings

This paper studies the related problems of revenue recognition in the online game industry under the new revenue standard, and puts forward corresponding suggestions on the different problems of revenue recognition

in the online game industry:

(1) The five-step revenue recognition model proposed in the new revenue standard provides a more comprehensive judgement basis for the point of time of revenue recognition of virtual props for online game enterprises. Relatively clear guidance is given on whether revenue should be recognised at a certain point or for a certain period of time, which plays a non-negligible positive role in enhancing the authenticity and reliability of revenue recognition and measurement in the online gaming industry.

(2) The new revenue standard still has some problems in actual operation, for example, there is no uniform standard for the revenue recognition mode of virtual props, and the lack of specific guidance in the face of the many complex operations of online gaming enterprises has led to a lack of comparability of the accounting information of online gaming enterprises, which has increased the difficulty of the disclosure of information in the online gaming industry.

(3) Different treatments of the recognition of sinking revenues may lead to a certain gap between the situation reflected in the financial statements and the actual situation of online game enterprises. To ensure the reliability of sunk revenue should be reasonable recognition of the fair value of virtual items. The importance of accounting disclosure of online gaming enterprises is emphasised to correctly regulate the point of time when virtual items are recognised as revenue and the correct accounting treatment according to the new revenue standard.

However, this study analyses less data and discusses more theoretically, there is no research on how to determine the life cycle of a game and the player's life cycle, and there is no in-depth study on the operation mode of the game enterprise, these parts are also related to the sustainable and healthy development of the online gaming industry in the future, and thus the impacts of these parts on the online gaming industry need to be further researched.

References

- [1] Chen Xin. Research on Revenue Recognition and Measurement of Online Game Enterprises under the New Revenue Standard [D]. Beijing Institute of Printing, 2020.
- [2] Hong Weikai. Revenue Recognition and Measurement of Online Game Enterprises under the New Revenue Standard [D]. Huaqiao University, 2020.
- [3] Wang Zhichao. Research on revenue recognition of online game enterprises under the new standard [D]. Jiangxi Normal University, 2020.
- [4] Liu Yi-wen. Research on revenue recognition of online game enterprises [D]. Jiangxi University of Finance and Economics, 2019.
- [5] Nie Weiqian. Research on Revenue Recognition and Measurement of Game Enterprises [D]. Beijing jiaotong university, 2018.
- [6] YAN Tian. Research on revenue recognition of online game enterprises under the new revenue standard [D]. Wuhan Textile University, 2018.
- [7] Fan Yujie. Research on revenue recognition and measurement of internet game enterprises [D]. Guangdong university of foreign studies, 2020.
- [8] Tan Qin. Research on the impact of new revenue standard on revenue recognition and measurement of online game enterprises [D]. Henan University of Finance and Economics, 2020.
- [9] Mu Qing. Research on Revenue Recognition and Measurement Issues of Online Game Enterprises [D]. Capital University of Economics and Business, 2018.
- [10] Tao Jinfeng. Research on Revenue Recognition of Online Game Internet Enterprises [D]. Chang'an University, 2018.
- [11] Yang Yang. Research on revenue recognition and measurement of online game enterprises under the new revenue standard [J]. Guangxi quality supervision guide, 2019(09):85.
- [12] Liu Yang. Revenue recognition problems of online game enterprises under the new revenue standard [J]. Research on Finance and Accounting, 2018(06):36-39.
- [13] Tu Xuzhuo, Lin Bin. Revenue cost recognition of online game enterprises under new accounting standards [J]. Business Accounting, 2020(11):67-69.
- [14] Notice on the Revision and Issuance of ASBE No. 14 – Revenue [J]. Green Finance and Accounting, 2017(07):31-38.
- [15] Li Keliang. Discussion on revenue recognition of virtual items in online game companies [J]. Accountant, 2016(07):16-17.
- [16] Technical Line: Recognising Revenue on the Sale of Virtual Goods. <http://www.ey.com/>, 2012.
- [17] KA Schipper, CM Schrand, T Shevlin. Reconsidering Revenue Recognition. Accounting Horizons. 2009
- [18] Patricia McConnell. Revenue Recognition: finally, a Standard Approach for All. <http://www.ifrs.org>, 2014.
- [19] Li Shouxi, Wang Mengxiao. The Impact of China's Revenue Accounting Standards Changes on the Accounting of E-Commerce Enterprises [J]. Friends of accounting, 2018(05):142-144.