Research on Evaluation Method of Intangible Assets

Hui-ping HUANG¹,a,* and Hui-min HUANG²,b
¹Zaozhuang College, Zaozhuang, Shandong, China
²Bingtuan College, Wujiaqu, XinJiang, China
ªxjhhp@126.com, b 471134372@qq.com
*Corresponding author

Keywords: Intangible Assets, Intangible Assets Assessment, Income Method, Cost Method, Market Method

Abstract. The purpose of this paper is to study the application of income method, cost method and market method in the assessment of intangible assets. This paper pointed out that the use of three methods in the existing problems. The problems of Income method is manifested the Difficulties in Defining and Calculating the Excess Returns of Intangible Assets and the choice of discount rate is very difficult. Market method is as follows: first, the difficulty of choice than the enterprise. Second, the assessment coefficient and the difficulty of determining the financial indicators. Third, the reliability of the relevant data on the securities market. Fourth, how to use the information of listed companies to assess the value of non-listed companies. The problems of Cost method are, in the calculation of the rate of assessment, it is difficult to allocate as the weight of the actual use of intangible assets. At last we propose solutions.

Introduction

Modern society is the era of knowledge economy. With the advent of the era of knowledge economy, more and more intangible assets in the proportion of corporate assets growing. The management of intangible assets has become an important part of enterprise management.

Theory of Intangible Assets Evaluation

Overview of Intangible Assets

Intangible assets are non-monetary long-term assets that are not manifested in physical form, exist by relying on a certain entity, and reflect the value of an entity. Intangible assets are very valuable as an economic resource. A certain subjective control, and it can for the owners and operators continue to bring excess economic benefits. An enterprise which has intangible assets will bring long-term economic benefits. Intangible assets is an important factor in the production of enterprises in the production and operation Activities. It is necessary to have people, money, things these traditional "tangible" factors of production, but also with proprietary technology, trademark, franchise these "invisible" factors of production. [1]

Analysis of the Current Evaluation Methods of Intangible Assets

Income Method to Assess Intangible Assets

Income Method Definition and Calculation Formula. The method of income is a method of estimating the present value of the valuation of the base date and estimating the value of the asset by accumulating the expected return on the remaining life of the assessment object, using the appropriate discount rate. [2] The basic formula of the income method is:
\[ P = \sum_{i=1}^{n} \frac{F_i}{(1+i)^n} \]

Where \( P \) is the asset valuation
\( F_i \) Expected excess earnings for each year
\( i \) For the discount rate
\( n \) the period of excess returns

**The Theoretical Basis of Income Method.** The economic theory of assessing the value of intangible assets is based on the principle of expectation and utility. The essence of the valuation process using the proceeds method is to convert the proceeds of future assets into the present value of the assets and the present value as the revaluation value of the assets to be assessed. The greater the utility of the asset is, the stronger the profitability is and the greater its value. In the valuation of intangible assets, the income method is undoubtedly the best practical method.

The discount rate can be replaced by the expected rate of return. We can get the conclusion from the formula of the income method. whenever there is a very small difference in the discount rate, often resulting in significant differences in the results of the evaluation and the expected results. So the income method fully consider the discount rate.

**Analysis of Intangible Assets by Income Method.** The combination of income method and investment decision-making takes into account the time value of assets, taking into account the risk factors and the opportunity cost of remuneration, can truly and more accurately reflect the value of asset capitalization and is easy for buyers and sellers to accept. The revenue method takes into account the overall organizational effect of the firm (ie, the value of intangible assets) and provides a more applicable method for the assessment of the overall assets and the assessment of intangible assets.

**Cost Method to Assess Intangible Assets**

**The Choice of Cost Method.** The cost method, as one of the three assessment methods, refers to an asset valuation method that assesses the value of an asset by assessing the replacement cost of the asset being assessed and deducting its devaluation under the current conditions. The theoretical basis is the value of production cost theory. The idea that the cost of buying and selling costs determine the value of assets. The original cost is proportional to the original value. Its theoretical formula can be expressed as: valuation value = replacement cost—physical devaluation—functional devaluation—economic devaluation. In the formula, the replacement cost is the current cost of re-acquisition of assets; due to the use of the wear and tear caused by the physical depreciation; because of assets and other similar assets compared to the backward technology in the depreciation is called the functional devaluation; The economic losses caused by changes in the external environmental factors of the assets are called economic devaluation, such as changes in national policies, or the lack of start-up of firms, leading to a devaluation of assets resulting from the loss of assets. Because intangible assets generally do not have physical devaluation, so in actual life often use another formula: intangible asset valuation value = into the new rate \( \times \) reset the cost. We generally use the resetting algorithm, the function coefficient method, the price index to determine the replacement cost. [3]

**Market Method Assessing Intangible Assets**

Market method which may also be referred to as the market reference material, are those in the market that have similar or similar assets in the near-term transaction price, through direct comparison or analogical analysis to estimate the value of the assets of the various assessment techniques. From the definition can be seen that the conditions of market method and consider the impact of the error so that we must in-depth study of the problem.
Problems in the Evaluation of Intangible Assets

Risk Assessment of Intangible Assets

The Risk of the Subject Being Assessed. Defining the scope of the assessment is the primary task of the asset assessment and the object to be assessed. The intangible assets we assess in the asset valuation are often classified as intangible assets that cannot be identified and tangible intangible assets. Intangible assets that cannot be identified are called as goodwill, that those who can be sure that intangible assets include lease rights, production licenses, trademarks, patents, know-how, franchise, mining rights, copyright, computer software Geological exploration and exploration results and land use rights information.

Assess the Risk of the Method. The market method, the cost method and the income method are three basic methods of asset evaluation. The purpose of the assessment, the physical and chemical status of the assessment object, and the information available on the market are the condition of our assessment method. [4]

The Existing Problems of Income Method in the Assessment of Intangible Assets

The Difficulties in Defining and Calculating the Excess Returns of Intangible Assets. The main causes of this problem are: First, the individual intangible assets generally do not necessarily produce any benefits, so to cooperate with other assets of the enterprise will produce benefits. Therefore, in the assessment of intangible assets, the recurrence of the synergistic assets of the benefits arising from the separation, to find belong to assessed the intangible assets directly generate the benefits that is excess returns. [5] Such a definition must make it difficult to assess the intangible assets, if not effectively deal with the original which does not belong to the proceeds of the intangible assets as its proceeds, and thus the value of the intangible assets overvalued. On the contrary, it will not only exclude the gains from the intangible assets, but also reduce the value of the intangible assets, so that the effectiveness of the assessment of intangible assets is reduced. Because the internal and external factors will affect the excess returns of intangible assets. The economic life of intangible assets, the performance of intangible assets, the degree of monopoly and the transfer of intangible assets are its internal factors and political factors, market factors, legal factors and macroeconomic environment and other factors are external factors.

The Choice of Discount Rate is very Difficult. The valuation process is often used in the process of valuation of intangible assets, and the valuation is affected by the discount rate. Its subtle differences will bring tens of thousands of differences to the valuation value, but how to choose discount Rate is also a very big difficulty. Mainly because the discount rate is converted to the present value ratio or the future limited period of income, it is essentially the return on investment.

Market Method Need to Pay Attention to the Problem

Intangible assets are often not very high or very low in terms of their unique characteristics due to their unique characteristics. And the development of financial Securitization of intangible assets market did not start, which caused the the transaction data of intangible assets is not perfect and historical information can not be a reference. Thus, although the market method is internationally recognized as a commonly used enterprise value assessment method, but because of our current stock market is relatively low level of positioning, so in our current enterprise value assessment project using market method is subject to great restrictions. The difficulty of applying the market method is not the complexity of the calculation, but the difficulty of obtaining the data and finding the reference enterprise on the market.

Cost Method to Assess the Intangible Assets Need to Pay Attention to the Problem

As the intangible assets can be used by many people at the same time, the calculated cost of intangible assets should be shared by many people. In the calculation of the rate of assessment, it is difficult to allocate as the weight of the actual use of intangible assets, Scale for weighting. For some
intangible assets, due to the use of other people, so that the main property rights such as market share reduction, increased competition and other losses, the loss also requires compensation in its transfer price, which formed the opportunity to transfer the cost of intangible assets. The so-called opportunity cost is due to the choice of the transfer of intangible assets and thus the loss of intangible assets may benefit from other opportunities arising from the formation of the price. It includes losses due to a variety of factors such as increased market competition and falling product prices, as well as additional research and development expenses necessary to keep the market. This opportunity cost should also be included in the valuation.

Measures for the Determination of Intangible Assets

Measures to Solve the Problem of Intangible Assets Assessment Risk

To Improve the Specifications of the Assessment. By improving the rules of the norms of evaluation will not only reduce the risk of intangible assets to assess the object, but also can significantly enhance the management of the risk assessment of the object. Especially for goodwill and brand of such intangible assets should be more detailed and specific. With the increasing emphasis on the assessment of intangible assets, we have introduced many effective norms to continuously improve the evaluation criteria.

To Choose a Scientific Assessment Method. Whether the method of selection is scientific and reasonable directly affects the results of the assessment.

To Establish a Sound Assessment of the Monitoring Mechanism. There is a need for a supervisory mechanism to ensure the adequacy of the assessment work and the reliability of the assessment conclusion. As long as the assessment of the work done to the bit, the assessment agencies and assessors can be more diligent to do the assessment work in accordance with the assessment criteria for the assessment of intangible assets in order to reduce the assessment of distortion and errors.

Measures to Solve the Application of Income Method

Determination of Excess Returns and Calculation of the Choice of Intangible Assets. We should pay attention to the following aspects of excess returns: To pay special attention to the future profitability of intangible assets. The excess return can also be called future earnings, because future earnings determine the value of the transfer of intangible assets. Its amount of income must be brought by intangible assets. In practice, the individual intangible assets will not produce income. [6] Cost is an important factor in the return of intangible assets. Because the forecast of the amount of income is often referred to the past earnings situation, therefore, the current year because of the use of intangible assets arising from the benefits of is the main factors affecting the amount of revenue. For the initial transaction which is not used in the intangible assets are mainly affected by its cost Impact. In the forecast of the amount of income, we must give full consideration to the national industrial policy on the intangible asset industry. In the forecast of the amount of income, we should fully consider the forecast period of the market competition, sales plans, the trend of changes in costs, intangible assets of their own advanced and similar, similar to the intangible assets of the alternative and competitive.

Discount Rate Selection and Determination. The discount rate can be replaced by the expected rate of return. The discount rate consists of two parts, the risk-free rate of return and the investment risk return rate. The parameters of the discount rate consists of two parts, namely, the normal return on investment and the investment risk rate of return on intangible assets, which we call the risk-free rate of return. Risk-free rate of return that We generally use the same period treasury bills interest rates or the same period the bank deposit interest rate. We often call the risk-free rate of return above the rate of return which is called the risk rate of return, and the calculation has some difficulties. The
risk-reward rate is the ratio of the risk compensation to the venture capital. We can use the risk accumulation method to obtain the risk-reward rate, which is to quantify all the risks in front.

**The Market Method for the Assessment of Intangible Assets Need to Pay Attention to the Application Conditions**

From the basic conditions of use of market method, we should conduct a comprehensive analysis. The basic conditions of use of the market method include two: first, to have an active public asset market. As long as such a market exists, we can from the market to find reliable information on the assessment of assets, which is the most basic and basic application of the market conditions. Second, there are comparable assets and related trading activities in this open market. If such a public market does not exist, then we can not find a reasonable basis for the basis of the market method. So other relevant information must be taken into account. Such shortcomings have greatly limited the assessment of intangible assets.

**Measures to Solve the Application of the Cost Method**

After analyzing the cost of replacement of intangible assets, the loss of performance, the cost of transfer and the opportunity cost of transfer, it is more complete to use the cost method to evaluate the basic elements of intangible assets, and the combination of these elements in a certain way can be invisible Valuation of assets. From the technical point of view of the cost method, the use of cost method to assess intangible assets is not necessarily the most effective method, but also in the use of historical data of intangible assets, book costs and other conditions. Because of the characteristics of intangible assets, its value is not mainly depends on its the amount of "materialization", but according to the amount of economic benefits. Therefore, the use of cost method to assess the fundamental premise of its value, it is still necessary to ensure that the estimated intangible assets do have excess profitability.

**Summary**

Intangible assets assessment, as a practical work, involving a wide range of objects, a variety of different intangible assets have their own characteristics. To accurately assess, is not an easy task.

Asset development in China is not a long time. Coupled with the impact of the planned economy for many years, the degree of attention to intangible assets is not enough. The theoretical research of evaluation there are more deficiencies. Since the reform and opening up, the property rights trading activities involving intangible assets have been increasing, so how to determine the fair value of intangible assets according to scientific and reasonable standards has become an important subject.

**References**


