

THE RESEARCH ON THE RECOGNITION AND MEASUREMENT OF INTANGIBLE ASSETS FOR HIGH-TECH ENTERPRISE¹

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Abstract: The high-tech enterprise is a kind of economic entity undertaking one or more high-tech products' research and development, commodity transformation and manufacture. The high-tech enterprise intangible assets contain patents right, trade mark, no-patent technology, computer software, goodwill, information intergradations system, innovative human resource capital, and the intangible assets in high-tech enterprise has its particularity. Through analysis, according to the intangible assets' characteristics, this article put emphasis on the nature, classification, recognition and measurement of intangible assets, and provides the choice of recognition, measurement, and subsequent measurement, especially in high-tech enterprise research and development, the measurement of the purchased intangible assets outside.

Key words: high-tech enterprise; intangible assets; recognition, measurement

The high-tech enterprise is a kind of economic entity undertaking one or more high-tech products 'research and development, commodity transformation and manufacture. Their main feature is "high-tech", that is, advanced technology and innovative products. Their products have high technological content and high added value. Compared with the traditional enterprises, the status of intangible assets in high-tech enterprises increases, when the status of physical assets declines. The intangible assets in High-tech enterprises, such as patents, trademarks, proprietary technologies, containing more advanced technological content, can make more excess profit. Its importance role becomes more prominent. In addition, there may exist a large number of intangible assets that are not be accounted. For example, advanced management experience, innovation capability, knowledge and information systems, the degree of customer loyalty and so on. Therefore, the assessment of high-tech enterprises' intangible assets value must be different from the traditional assets, in order to manage effectively and make good use of intangible assets. Intangible assets have become the core competitiveness of high-tech enterprises. The enterprise uses tangible assets while it establishes intangible assets and become more intangible. In the high-tech enterprises, the enterprise scale and the

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number of physical assets are no longer the standard of measurement of a corporation value. An intangible asset has gradually become the principal part of an enterprise.

1. THE DEFINITION OF HIGH-TECH ENTERPRISES AND THE CHARACTERISTICS OF INTANGIBLE ASSETS

1.1 The definition of high-tech enterprises and the characteristics of technical economy

In accordance with the "In National High-Tech Industrial Development Zone, the Recognition and The Measures of High-Tech Enterprises" that was declared by Ministry of Science and Technology, the high-tech enterprises include 11 high-tech categories, such as electronic and information technology, bioengineering and new medicine, new materials and application technology, advanced manufacturing technology, aerospace technology, modern agricultural technology, new energy and efficient energy-saving technology, environmental protection technology, marine engineering, nuclear applied technology, and other new technologies. Their research can be summarized into the following eight areas. That are bio-engineering; information technology; high-tech and new materials; aerospace high-tech; marine high-tech; automated high-tech; high-tech environmental protection. The economic and technology characteristics are as followed: high intelligence; high input; high efficiency; high economic potential and relevance; high-risk. These unique characteristics of high-tech enterprises have decided their intangible assets' own characteristics. And the assessment theory and method of high-tech enterprises of intangible assets are also different from the general business.

1.2 The intangible assets characteristics of high-tech enterprises

High-tech enterprises usually have the follow characteristics: small scale, high-tech, rich in intangible assets, operating flexibility and risky. The second board market provides financing channels for small and medium-sized high-tech enterprises and venture capital firms. Second board market compared with Main Board has a clear distinction in the sponsor eligibility, financial profit, information disclosure and so on. Owing to not be strict with the Second Board listed company's financial situation, Hong Kong GEM market even permitted the loss company or the high proportion of intangible assets companies in. These requirements are very different from the basic requirements of listed companies of our "Company Law", "Securities Act". Therefore, the second board market have low threshold, high risks which decide higher standards of auditing and assessment of listed companies. Especially for the evaluation of high-tech enterprises' intangible assets, it proposes to the new requirements, because the high-tech enterprise intangible assets have its own high-yield nature. High-tech enterprises' intangible assets have no difference from the general enterprises'. It has obvious characteristic in its high uncertainty, timeliness, high yield and high percentage composition.

1st. Concealment and uncertainties. High-tech enterprises in the initial stage of the patent right is difficult to find and eventually become intangible assets. There is great uncertainty in the gain of High-tech enterprise intangible assets or the cost and investment when that is innovated, as well as economic benefits that enterprise brings. Intangible assets and tangible assets combined create the value of enterprises, and the value created by intangible assets in enterprises is hard to tell with the value created by tangible assets.

2nd. Timeliness. Timeliness is strong. And once the scientific and technological progress, then it would be failure. High-tech enterprise is a high competitive industry. Today's high-tech, and in future it may not. Now the intangible asset can obtain excess profits, however it may quickly disappear in ability creating excess profit when more advanced intangible assets appears.

3rd. The characteristics of the carrier. Intangible assets in High-tech enterprise are always combined with people. The intangible assets with knowledge form have an absolute advantage in intangible assets of the high-tech enterprise. Knowledge have natural dependent on personal, and it is correct realization

of human beings, and the crystallization of the wisdom. Therefore, in the high-tech enterprises the intangible assets mostly have these characteristics.

4th. Intangible assets has larger proportion in total assets.(1) The high-tech enterprise assets has more and more proportion of intangible assets, and the smaller proportion of tangible assets.(2) enterprise pay more and more in the research and development.(3) human resources and knowledge capital of enterprise input more and more than before. The form of knowledge in intangible assets formed high-tech enterprise core competitiveness. High-tech enterprise by increasing the proportion of knowledge form of intangible assets improves its quality in order to obtain the dominant position in the market, and then gain more progress and development.

5th. High yield. The self-established intangible assets in High-tech enterprise or purchased one, in use process, can not only transfer but also increase its value, and often bring higher returns than other assets or excess profit. It is not only an important feature of intangible assets in high-tech enterprise, but also the common enterprises’.

2. THE RECOGNITION OF INTANGIBLE ASSETS IN HIGH-TECH ENTERPRISES

The recognition of intangible assets under new accounting rule

In the new code of intangible assets, the intangible asset is a physical form, identifiable, and non-monetary assets which owned or controlled by enterprise.

Intangible assets can be recognized only in the following two conditions

1st. The economic benefits that generated by intangible assets are likely to move to the enterprise. As a intangible assets project that is confirmed by an enterprise, it must has the basic condition that economic interests are likely to flow into the enterprise. In practice, to identify whether the intangible assets could create economic benefits flowing into the enterprise, it needs professional judgment. In the implementation of the judge, you need to consider the factors. For example, enterprises have sufficient human resources, quality management team, related hardware equipment, raw materials and other related factors that can cooperate with intangible assets creating economic interests. Of course, the most important factor should be focusing on external influence.

2nd. The cost of the asset can be measured reliably. Cost that can be measured reliably is a basic condition for asset confirmation. The conditions for intangible assets are very important. Enterprise achieving goodwill is included in the definition of intangible assets, but the expenditure created by achieving goodwill is difficult to measure, so it can not be confirmed as the intangible asset of an enterprise. For example, some high-tech enterprise scientific and technological personnel, assuming they signed the contract with the enterprise and in certain period they cannot provide services for other enterprises. In this case, although this technological knowledge within the prescribed time are expected to create economic interests for enterprises, yet these technical talents’ knowledge is not easy to identify, and the expenditure in forms of these knowledge is hard to measure, so they can not be treated as the intangible asset of an enterprise. Enterprise achieving goodwill and internally generated brand name, newspapers, should not be recognized as an intangible asset. In the accounting practice, the purchased goodwill outside can be identified as intangible assets.

3rd. The confirmed scope and time of self-established intangible assets in High-tech enterprise

The recognition time of intangible assets should be in accordance with the standards of general provisions in High-tech enterprise. For self-established intangible assets, it should treat the start time of asset expenditures as the starting time of initial recognition, and then have the confirmed self-established intangible assets assessment, and confirm its value. Considering the instability of intangible asset value, it should be periodically evaluated. If it was expected to fail, or not in accordance with the standards, all expenses in development process would be dealt with as expenses during processing.

In addition, in knowledge economy century, intellectual resources and the knowledge capital have both become assets of enterprises, therefore, it is necessary to improve traditional accounting pattern. It should not only account the outsourcing intangible assets, but also self-established intangible assets. Not only the patent, trademark, etc recognizable intangible assets should be accounted, but human resource and illegible intangible assets should choose appropriate methods to account.

3. THE MEASUREMENT OF INTANGIBLE ASSETS UNDER THE NEW ACCOUNTING STANDARDS

From the perspective of accounting, the proportion of intangible assets in social assets increased significantly. In some high-tech enterprise, the intangible assets with knowledge and wisdom, such as trademark right, patent right, even have more proportion than the fixed assets in enterprises. How to measure the intangible assets in high-tech enterprise, and establish completed accounting method and system, has an important theoretical significance and an application value in future.

3.1 The initial measurement of intangible assets

3.1.1 The expenditure during research and development phase of enterprises

Internal research and development expenditure of enterprise shall differentiate research expenditure and development stage expenditure. Research is a creative and planned investigation in order to acquire and understand new scientific or technical knowledge. Development refers to make the results of the study, or any other intellectual applied to the design and plan before commercial production or use, in order to produce new or substantive improved materials, equipment, etc.

In order to keep enterprises' competitiveness, high-tech enterprise actively engaged in research and development activities, resulting in research and development spending soared. The reasonable use of research and development expenditure is an important enterprise management decision, which is related to long-term and sustainable competitive ability and profitability in high-tech enterprise. With research and development expenditure greatly increased, research and development expenditure accounting has become the focus of accounting research.

The measurement of self-developed intangible assets in research and development

Expenditures of internal research and development phase should be included in the current period profit and loss at the time (Management costs). Development expenses of internal research and development phase that are eligible for capitalization of intangible assets can be included, and that cannot meet the conditions of capital could be included in the current period (Management costs) (First of all it can be included in the development expenditure, and at the end of it can carry over costs into management costs).

Expenditures that can not be distinguished from the research stage and development should be included into R&D expenditures in the current period (management costs).

Expenditures occur: By: R&D expenditure - the cost of spending

- Capital expenditure of

Credit: bank deposits, etc.

At the end of the carry-over: By: management fees

Intangible assets

Credit: R&D expenditure - the cost of spending

3.1.2 The initial measurement of intangible assets should be in accordance with costs

Outsourcing intangible assets, including the cost of the purchase price, the relevant taxes and the other expenditures that directly attributable to make the asset to the expected purposes. The purchase price of intangible assets is delayed beyond the normal credit conditions, which has financing nature, should be accounted by the current value of the purchase price. You should debit "intangible assets", according to the amount of subjects, credited with "long-term account payable fees ", according to the balance, you should debit "the unrecognized financing charges" subjects.

3.2 The subsequent measurement of intangible assets

1. Enterprise should analyze the service life of intangible assets when it obtained it. The service life of intangible assets shall be limited to the service life, so the enterprises should estimated the service life or the number of production or constitutes life such similar units; etc. The intangible assets with unforeseen economic benefits life for enterprise shall be deemed to be intangible assets with uncertain service life.

2. The intangible assets with limited service life shall be amortized within reasonable system. Enterprise amortizes intangible assets, beginning with the initial use as the intangible assets and finishing at the time of not being confirmed as the intangible assets. The intangible assets amortizing method for the enterprise shall be reflected on the realization method of the expected economic benefits. When you are unable to determine the reliable method, you should use the straight-line method to amortize. Intangible assets amortizing amount shall generally be included in the current profits and losses, and under other accounting standards, the enterprise should stick to it.

3. When the service life and amortization method of intangible assets is different from the previous estimate, it should change the amortize deadline and amortization method. Enterprise during each accounting period should check the intangible assets with uncertain service life. If there is evidence that the service life of intangible assets is limited, amortization costs should be deducted from the amount of its residual value

4. Intangible assets with uncertain service life shall not be amortized.

5. The impairment of intangible assets should be in accordance with "the accounting standards for enterprises no. 8 - asset impairment".

6. An enterprise shall, at least at the end of each year, check the intangible assets with limited service life and amortization method. When it is the estimates of its service life, and is treated according to these standards.

3.3 Influence factors of intangible assets in high-tech enterprises

In the era of knowledge economy, the profits relying on intangible assets' increase has a geometric growth year after year. The intangible assets have become the main part of the assets in high-tech enterprises, and the position is quite important. And, the core technologies' advantages in market competition is becoming more and more serious, the research fees gradually become the influence factors of intangible assets in high-tech enterprises.

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