Financial Accounting Measurement Concept, Asset Specificity, and the Application of Fair Value to Ecotourism Enterprises

Zhang Yongkui
School of Management, Xiamen University, Xiamen, China, zhykxm@xmu.edu.cn

Abstract
At present, the measurement attribute of financial accounting is undergoing a transformation from historical cost to fair value, the standard-setting body is trying to expand the application of fair value measurement to projects beyond financial instruments, and eventually establish a new accounting model centered on fair value measurement. The establishment of a new accounting model centered on fair value measurement would mainly depend on whether fair value is applicable to all types of assets. The paper explores the applicability of fair value from a unique perspective – the specificity of assets, and concludes that fair value is not a proper measurement attribute for specific assets, and therefore the future accounting model will not necessarily be dominated by fair value, rather, it is very likely to be a mixed measurement model incorporating historical cost, fair value, and value-in-use.

Keywords: Financial Accounting Measurement, Asset Specificity, Fair Value

1. Introduction
In February 2006, China promulgated a new set of Enterprise Accounting Standards. The biggest highlight of these new standards was the introduction of the fair value measurement attribute. Statistics show that the fair value measure attribute is used to varying degrees in 17 of the 38 accounting standards which have been promulgated [8]. As such, when it comes to fair value, the question is no longer whether fair value should be adopted, but how it should be applied. The idea of the standard-setting body is to first apply fair value measurement to financial instruments, then expand the application of fair value measurement to projects beyond financial instruments, and eventually establish a new accounting model centered on fair value measurement. At present, fair value measurement is primarily applied to financial assets; it is only used to a small extent in enterprises’ tangible and intangible assets. The paper is aimed at ascertaining if fair value is a measurement attribute which is applicable to all types of assets and whether it is possible to establish a new accounting model with fair value as the main measurement attribute.

To answer the above questions, the paper explores the applicability of fair value from a unique perspective – the specificity of assets, and concludes that fair value is not a proper measurement attribute for specific assets. In view of the special nature and strong specificity of the assets of ecotourism enterprises, the paper illustrates the potential applicability of fair value in the case of ecotourism enterprises.

2. Theoretical basis of fair Value
The increased use of fair value in recent years is largely attributable to its theoretical basis – the modern measurement concept of the presentation of accounting information. The presentation of accounting information has undergone significant changes, from the classical measurement concept to the information concept first and then to the modern measurement concept. According to the classical measurement concept, which thrived prior to the 1960s and 70s, accounting should be able to accurately measure each asset, liability and equity of an enterprise, thereby determining the enterprise’s “real income”, and therefore accountants should use the methods of accounting treatment which could bright accounting income as close to the “real income” in economics as possible. The classical measurement concept was based on the assumption that markets were perfect and complete. Real-world markets, however, are characterized by uncertainty and information asymmetry, and many enterprises could not find a market for their assets or liabilities, which thus had no fair market value. This rendered “real income” under the classical measurement concept inoperable. As the classical concept of measurement was based on overly idealized assumptions of market conditions which were
seriously mismatched with the real world, starting in the late 1960s, the classical measurement concept was gradually replaced by the information concept. In the information concept, information is useful only when it changes the investor’s decision-making behavior, and the usefulness of information can be measured by the magnitude of change of stock prices following the disclosure of the information. This viewpoint which equates the usefulness of information with the content of information is known as the information concept of the presentation of accounting information.

The information concept originated from the study of the relationship between accounting information and stock prices by Ball and Brown [1]. Under the classical measurement concept, since accounting information accurately reflects the true value of an enterprise’s assets and liabilities and its real income, it should be the primary source of information for investors and be able to give an adequate explanation to any change in stock prices. However, Ball and Brown’s research suggests that accounting information is rather inadequate in explaining changes of stock prices, and that accounting information is not the main source of information used by investors when making decisions. Proponents of the information concept argue that as complete and perfect markets assumed in the classical measurement concept do not exist in the real world, the “real income” concept based on this assumption is not definable or operable, and therefore accounting income in reality has a rather limited effect on investors. On the basis of the above viewpoints, the proponents further argue that due to market uncertainty and imperfection, the purpose of presenting accounting information is not to directly reflect the real income and true value of the enterprise, but to send “signals” about the enterprises’ real income to investors through the disclosure of all sorts of information. As to how this information can be used to determine the real income and true value of the enterprise, it’s entirely up to the investor. In terms of theoretical foundation, the information concept is built on the efficient market hypothesis [2], which holds that stock markets are “efficient” and that stock prices adequately reflect all information available. The implication of the efficient market hypothesis for accounting is that the key to the presentation of accounting information is not to change the cost measurement attribute, but to fully disclose all information outside of financial statements; in an “efficient” securities market, the information is naturally reflected in stock prices.

The prevalence of the information concept led to an upsurge in the disclosure of information outside of financial statements. After the 1990s, however, because of inherent problems of the efficient market hypothesis and the residual income theory put forward by Feltham and Ohlson [4], the presentation of accounting information began switching from the information concept to the modern measurement concept. First, following the emergence of the efficient market hypothesis, many scholars tested the efficiency of markets and found that securities markets were full of “anomalies”, such as the function locking phenomenon, winner/loser effects, “momentum” effects, economies of scale, price-earnings ratio effects, hot stock effects, etc [5, 7]. These phenomena and effects indicate that stock prices are not always fully reflective of all information available, and securities markets suffer from a certain level of inefficiency. The large number of “anomalies” in the efficient market hypothesis shook the theoretical foundation of the information concept. Second, the residual income theory put forward by Feltham and Ohlson revived the measurement concept. The residual income theory provides a simple model for the market value of a company’s equity and accounting data, i.e. the market value of a company’s equity is equal to the book value of the company’s equity plus the present value of its future residual income. The implication of the residual income theory lies in that a measurement attribute (for example, fair value) which reflects the company’s real value should be introduced, so that the enterprise’s market value can be reflected as much as possible in the book value of equity, rather than in residual income, as the former is directly available from the statements while the latter requires forecasting by the investor himself. This is the modern measurement concept of the presentation of accounting information. According to the modern measurement concept, it is impractical under the information concept to fully disclose all sorts of information outside of the financial statements without changing the historical cost attribute, and the fair value measurement attribute which reflects the company’s real value should be used to the largest extent possible. As a matter of fact, it was under the influence of the modern measurement concept that FASB(Financial Accounting Standards Board) and IASB(International Accounting Standards Board) began to extensively use the fair value measurement attribute in the standards that they formulated.
3. Conflict between fair value and asset specificity

3.1. The meaning of fair value

As described earlier, the introduction of fair value can be attributed to the modern measurement concept arising from the residual income theory, but it is based on the hypothetic premise that the extensive use of for all items in the statements would naturally bring the book value of the enterprise’s equity close to its market value. The problem is that whether this assumption holds true is open to discussion. In order to find out if the assumption is true or not, first of all, we need to figure out the precise meaning of fair value; then we must find out the types of assets and whether the fair value of these assets can bring the book value of the enterprise’s equity closer to its market value.

At present, the latest and most authoritative definition of fair value can be found in FAS157 of FASB [3] and IFRS13 of IASB [6]. IASB adopted the definition of FAS157 in IFRS13 completely, so let us see the definition of FAS157, according to FAS157, fair value is the price that would be received to sell an asset or paid to transfer a liability in an orderly transaction between market participants at the measurement date. According to FASB’s definition, fair value can be understood from two aspects – the logic basis and the value basis [12]. The logic basis refers to from what perspective fair value is measured; it raises the question that whether the fair value of an asset would be different for each reporting entity; it also raises the question that whether fair value is a concept that must be tied to the specific reporting entity. Common types of logic basis include market basis and the entity basis. Market basis means that the reporting entity should measure fair value on the basis of the enterprise’s external markets, rather than the future use of the asset or liability. Entity basis means that the reporting entity should measure fair value on the basis of the future use of the asset or liability. The value basis of fair value refers to what pricing rules should be used to determine fair value; in other words, fair value refers to the value paid for a purchase, the value obtained from a sale, or the value obtainable from continued use, i.e. common types of value basis include purchasing price, selling price, and value-in-use. The logic basis and the value basis of are shown in Figure 1.

![Figure 1. The logic basis and the value basis of fair value](image)

On the logic basis and value basis, FASB uses market-based selling prices in its definition of fair value, i.e. fair value refers to the possible selling price of an asset or liability of a reporting entity as estimated from the perspective of market participants (rather than the reporting entity). According to this definition, fair value is independent of unique information of the reporting entity and the intents of the use of the asset by the reporting entity; thus, certain special advantages enjoyed by the enterprise in using assets or liabilities, such as managers’ skills and synergistic effects, will not be reflected in the measurement of fair value. FASB opted for market-based selling prices on the grounds that the market basis is sufficient verifiable while the entity basis is overly subjective; selling prices conform to the definition of assets and liabilities within FASB’s conceptual framework. According to FASB’s selection of the logic basis and value basis of fair value, if a project is used exclusively by the enterprise and there is no external market for the project, then the project has a fair value of zero, though the project is
useful for the specific enterprise. More often than not, a project may have an external market, but its market price may be lower than the value that the enterprise can obtain from the continued use of the project (i.e. value-in-use); in this case, the project’s fair value remains its price in the external market. The above discussions indicate that, if the value-in-use of certain assets of an enterprise is higher than their market-based selling prices, using fair value to measure these assets would cause the equity’s book value to deviate from, rather than be brought closer to, its market value. Such fair value measurement is clearly out of line with the original intents of the modern measurement concept.

3.2. The difference of fair value and the value-in-use in terms of Asset specificity

Then, what kind of assets has a value-in-use higher than its fair value? Currently, in financial statements, the assets of an enterprise are classified into tangible assets, intangible assets and financial assets. This classification system does not help us understand the difference of fair value and the value-in-use of assets [10]. We believe that this problem can be resolved by classifying enterprise assets from the perspective of asset specificity. Asset specificity refers to the extent to which an asset can be devoted to alternative purposes and replaced by other users without sacrificing its productive value [11]. The definition of asset specificity indicates that the higher level of specificity an asset has, the more value it will lose in a market transaction and the larger gap will occur between its fair value and value-in-use. Using fair value in lieu of historical cost to measure specific asset will enlarge the gap between the book value and market value of the enterprise’s equity. On the basis of the above discussions, we believe that fair value is only applicable to an enterprise’s general-purpose assets, such as goods to be sold at great volume, general-purpose equipment and financial assets. For assets with a higher level of specificity, theoretically, using value-in-use in measurements will bring the book value of equity closer to its market value; however, considering the high level of subjectivity of value-in-use measurements, preference should be given to historical cost, and if the value-in-use is adequately reliable or if the asset lacks identifiable historical cost, measurement with value-in-use may be considered. On the basis of the above analysis, the level of asset specificity and the selection of measurement attribute are shown in Figure 2.

![Figure 2. The level of asset specificity and the selection of measurement attribute](image)

4. Applicability of fair value to the assets of ecotourism enterprises

4.1. The high specificity of the assets of ecotourism enterprises

The above analysis shows that measurement attributes actually selected is closely tied to asset specificity. To determine what measurement attribute should be used for a certain type of assets, first of all, the level of the specificity of the assets should be ascertained. The lower level of specificity, the more fair value should be used; conversely, the higher the level of specificity, the more historical cost or value-in-use should be used. Unfortunately, the accounting community has devoted scant attention to the research of the levels of specificity and types of enterprise assets, and thus discussions of
measurement attributes are poorly grounded. As such, in this era of changes where measurement attributes are switching from historical cost to other measurement attributes, it’s imperative to study the specificity of enterprise assets. As the levels of specificity and types of enterprises in different industries can be vastly different, it’s necessary to study the specificity of assets in each industry. In view of the high levels of specificity of the assets of ecotourism enterprises, the following analysis will focus on the specificity of assets of ecotourism enterprises and the possible scope of applicability for enterprises in the ecotourism industry.

Eco-tourism refers to tourism activities which efficiently combine the protection of the ecological environment and public education with the promotion of local socio-economic growth. It is oriented towards the absorption of knowledge of history and culture and intended to minimize the adverse impact on the ecological environment and ensure the sustainable utilization of tourism resources. Since the creation of the “eco-tourism” concept in 1983 by Héctor Ceballos-Lascuráin, ecotourism has been expanding by 20 percent annually on average, becoming the fastest-growing part of the tourism industry. The robust growth of ecotourism is largely attributable to the core competitive strengths of ecotourism enterprises. The core competitive strengths of ecotourism enterprises are primarily manifested in three areas [9]: First, the strong appeal of the scarcity of natural resources in pristine conditions and the uniqueness of well-preserved cultural resources of tourists; second, advanced marketing models, managerial practices, and corporate culture; and third, commitment to the protection of tourism resources for sustainable development, which is in line with public demand for the protection of resources and the environment and conducive to the growth of the long-term value of ecotourism enterprises.

Clearly, the core competitive strengths of ecotourism enterprises are mainly manifested in natural resources and intangible assets which cannot be traded in the market. These assets are the main assets of ecotourism enterprises and are highly specific. This also explains why the paper studies the applicability of fair value in the case of ecotourism enterprises.

4.2. Applicability of fair value to the assets of ecotourism enterprises

In terms of types of assets, the assets of ecotourism enterprises also include financial assets, tangible assets, and intangible assets. As financial capital circulation and industrial capital circulation are independent of each other, financial capital can barely produce synergistic effects with industrial capital. As such, an enterprise’s financial assets are typically classified as general-purpose assets and therefore can be measured with fair value. This approach is applicable to all industries, including the ecotourism industry.

The tangible assets of ecotourism enterprises mainly include inventories for sale, fixed assets, and natural resources. Inventories for sale include consumable biological assets, tourism products and tourist souvenirs with local features. As these assets are intended for sale, they don’t have any specificity, and their fair value in sale is their value-in-use. Therefore, theoretically, this type of assets can be measured with fair value. Fixed assets mainly refer to the infrastructure facilities at the scenic spot, including hotels, shops, roads, bridges, tunnels, and network structures. We believe that the fixed assets of ecotourism enterprises have a certain level of specificity, and that fair value should be used with caution. As the fixed assets of ecotourism enterprises are built in support of the scenic spot, there may exist the specificity of physical resources or synergistic effects in value growth with the scenic spot. For example, bridges which have been built specifically in line with the special terrains of scenic spots have no external market for trading. Without the special terrains of the scenic spots, these bridges would be valueless. Clearly, these bridges have the characteristics of the specificity of physical resources. The natural resources of ecotourism enterprises have a high level of specificity, as natural resources produce synergistic value as an integrated whole. Natural resources are either untradeable individually or would fetch much lower prices than their value-in-use in an external transaction; therefore, they cannot be measured with fair value. In the 1970s, for instance, a lion and an elephant in the Amboseli National Park in Kenya generated annual revenue of US$ 27,000 and US$ 61,000, respectively. If these lions and elephants were tradable, their selling price would be insignificant compared to the revenue they had generated.

The intangible assets of ecotourism enterprises include cultural resources, brands, goodwill, enterprise management systems, marketing models, business models, planning capabilities, and corporate culture. These intangible assets, along with natural resources, form an enterprise’s core
competitive strengths. Clearly, such intangible assets of an enterprise are largely untradeable and have high levels of specificity, and therefore should not be measured with fair value. For example, the cultural value of eco-scenic spots built on the basis of local cultural resources is mainly manifested in their ability to demonstrate the cultural background and lifestyles of the local community, and therefore these scenic spots can be regarded as the highlights of ecotourism. On one hand, these cultural resources are untradeable; on the other hand, divorced from the local context, these cultural resources would become worthless.

In summary, the specificity of the assets of ecotourism enterprises and the applicability of fair value to the assets are as follows: financial assets and inventories in tangible assets have no specificity and can be measured with fair value; fixed assets in tangible assets have certain levels of specificity and fair value measurement should be used with caution; natural resources and intangible assets have high levels of specificity and should not be measured with fair value; if the value-in-use of natural resources and intangible assets has an adequate level of reliability, measurement with value-in-use can be considered.

5. Conclusions

The introduction of fair value can be attributed to the modern measurement concept, according to which, a measurement attribute which reflects the company’s real value should be introduced, so that the enterprise’s market value can be reflected as much as possible in the book value of equity. However, there is an intrinsic conflict between fair value and asset specificity, using fair value to measure specific asset will enlarge the gap between the book value and market value of the enterprise’s equity. Therefore, the future accounting model will not necessarily be dominated by fair value; rather, it is very likely to be a mixed measurement model incorporating historical cost, fair value, and value-in-use.

6. References