Review on the Loss Problem of the Listed Corporations Based on the Valuation

DU Yong

School of Economics and Management, Southwest University, Chongqing, China, 400715

CHEN Jianying

Financial Department, Southwest University, Chongqing, China, 400715

***Abstract*—The scope of the existing literatures about loss firms includes the value relevance of accounting earnings, the heterogeneity of the value of the loss companies, the value drivers and driving mechanism of the loss corporations and the relation between the loss reversibility and the value of the loss corporations. They found some perspectives and experiences which will benefit the valuation of loss corporations in China's capital market, which will help to enrich the theoretical system of assessing value of the company and to judge their reasonable value of the loss listed corporations on the context of China.**

Keywords——loss; accounting earnings; heterogeneity; loss reversibility

I. INTRODUCTION

Up to now, the scholars most focus on analyzing the reasons leading to the loss of the companies, the earnings management motivation and research methods on the issues of the problem of the loss listed corporations. The literatures involving the value of loss listing corporations are relatively small. Can the accounting earnings reflect the real value of loss listed corporations? Will the loss of continuity and the disclosure of the annual report of the various themes of events in loss listed corporations influence their value? If so, what is the mechanism of the effect? Foreign scholars have given some explanations about this question, such as abandoning option theory, adjusting the option theory, defaulting option theory, but these theories have some defects more or less. Based on this, this article is to review the results of the problems about the valuation of loss companies in the existing capital market and put forward to some enlightenment.

In recent years, foreign researchers and practitioners in financial theory pay enough attention to the problem of the valuation on loss corporations with the increasing number of the loss listed companies. The scope of the existing literatures about loss firms includes the value relevance of accounting earnings, the heterogeneity of the value of the loss companies, the value drivers and driving mechanism of the loss corporations and the relation between the loss reversibility and the value of the loss corporations. They found some perspectives and experiences which will benefit the valuation of loss corporations in China's capital market, which will help to enrich the theoretical system of assessing value of the company and to judge their reasonable value of the loss listed corporations on the context of China.

II. THE VALUE RELEVANCE OF EARNINGS OF THE LOSS COMPANIES

The related study of accounting earnings and stock returns are based on the assumption that the relationship between them is linearly for a long time by some scholar, such as Ball and Brown (1968), Beaver (1972), Beaver, Lambert and Morse (1980), Lipe(1986), Kormendi and Lipe(1987) and Collins and Kothari (1989).They all find that there is a positive linear correlation relationship between stock price earnings response level and earnings persistence or surplus time continuity, and that the reaction of the stock price to loss and profit is homogeneous. In fact, that is not the case. The correlation relationship between accounting earnings and stock returns in loss companies is weaker than profit companies. Hayn(1995) firstly found that phenomenon. And she found that the loss companies (ERC , earnings response coefficient) was significantly lower than the profit companies, and this is attributed to the liquidation option of the shareholders. She considered investors they will exercise liquidation option when they realized losses will continue once the company continues to operate. Therefore, the recessive liquidation option owned by the shareholders of loss companies will led to a lower response to earnings value of loss companies. Since then, Jan and Ou(1995), Samantha Sin and Edward Watts(2000) draw the similar conclusion to Hayn(1995) by using a variety of different regression models: there is a significant correlation between liquidation option and the information content of earnings and the stock value of loss companies.

Collins, Pincus and Xie(1999) further put equity book value as an alternative variable of the abandonment option of loss companies into the surplus capital model, found two aspects function about the equity book value in the interpretation of loss companies abnormal negative price-earning relationship:1)can be used as the control variable to the difference of companies' size; 2)can be as the substitution variable for expected future normal earnings. They think,

Burgstahler and Dichev(1997) regarded the equity book value as the surrogate variable of the adjusting value of the company, this value represents more extensive resources than abandoning option value. The expected surplus value is considered as a rescue value, which steams from the company's current business and technology application. The adjusting value represents that the company has rights to disposal assets (such as the sale, transfer, clearing or redeployment) through reconstruction and other more favorable way. Liquidation or abandon is just the extreme processing mode in the adjustment mentioned by Burgstahler and Dichev (1997). Therefore, liquidation value per share is only on behalf of the company's external adjustment value, and that just applies to the condition that the liquidation value is higher than the internal asset restructuring proceeds. On the other hand, if the company through internal capital adjustment income is higher than the liquidation value, then liquidation value per share as the adjustment value of alternative variables is not appropriate. Therefore, future research should absorb interior modulation value variables such as income, which can join the reconstruction variable to deal with the condition that interior modulation values is higher than the value of the external adjustment. Zhang (2000) also shows in his empirical study: (1) there is a positive correlation between accounting earnings and stock price of loss companies by use of a simple model of surplus capital, but their relationship is no longer significant when considering the impact of the equity book on stock prices after further controlling the company size and the proportion of shares in circulation; (2) there is a positive correlation between equity book value and stock price of loss companies, and support the hypothesis that equity book value represent the liquidation value of loss company. This agrees with the researching conclusion of Collins, Pincus and Xie (1999).

The results above the scholars about the value relevance of accounting earnings in loss companies are not entirely consistent. Some found there is weak positive correlation between accounting earnings and stock price when using the accounting earnings as variables to return on the stock price, some found there is no correlation between them, and others they found there is a negative correlation between them. Investigating its reason, it is possible that these studies did not take into account the heterogeneity among loss companies, on the contrary, all the loss companies were regarded as the same nature samples to study together, this is clearly not enough accurate to mistaken the same relations between accounting earnings and stock price correlations for all loss companies.

III. COMPARISON THE VALUE OF LOSS COMPANIES BASED ON THE HETEROGENEITY OF THE CLASSIFICATION

Despite the above scholars study on the value relevance of accounting earnings in loss companies from different angles and their theoretical explanations also are not identical, they almost believe that the basic reason which causes the instable relationship between the loss companies accounting earnings and stock price is missing some variables. Obviously, they ignore the possibility of the internal differences among loss companies. In fact, loss heterogeneity among samples selected by previous scholars to do empirical study may become the main reason that the instable relationship existed between the loss companies accounting earnings and stock price. This was first realized by Satin(1992). He first put forward to divide samples into the continuous operation of the company and the company going bankrupt in accordance that future loss number is less than two times or redundant two classifications after the current loss. He studied the value relevance of accounting earnings for all kinds of loss companies. Since then, scholars had done the in-depth aspects of study the concept, features and classification of the dimension of the loss heterogeneity.

Martikainen(1997) realized this loss may increase the risk of failure about the company's bankruptcy when the temporary loss becomes into a permanent loss. He found that some accounting earnings (such as permanent partial) reflected the information of the future cash flow and other information (such as transitory earnings) couldn't reflect the information of the future cash flow based on the research samples of American stock market. Therefore, the stock price only reflects the permanent earnings, not including the temporary earnings. Further, Martikainen(1998) selected the Finland stock market data and employed the event study method to compare the information content of accounting loss and profit between accounting earnings and stock returns, and he found the relationship between the existing accounting losses was weakened. Finally he draw a conclusion: if the market is rational and effective, it will not make price reaction to the temporary component of the accounting earnings because the temporary loss will not happen again in future years, and cannot enter the model of stock price of the discounted future cash flow of stock pricing. So the stock pricing will not be affected, however, the permanent losses continuing into the future will have a significant impact on stock prices. While low information content of the loss depends on the transient of the loss. Ashiq Ali and Paul Zarowin (1992) further thought, i.e. stronger non-expected earnings persistence was, higher the corresponding ERC was. Obviously, permanent earnings represent the company future sustained profitability, but temporary accounting earnings and accounting earnings without the relation with price not to bring future expected cash flow for the company. Therefore, in the information view (with a valid market premise), investors will be treated differently in different persistent earnings, i.e., more strong the company earnings persistence is in the same condition, more strong the market reaction to the company's stock will be.

Sustained loss allows investors to expect transient loss and permanent loss "heterogeneous", and then it affects the stock price of loss companies. Considering the heterogeneity of the loss, Jenkins(2003) divided the loss companies into four different kinds of ruin probability in accordance with the possibility of bankruptcy, and conducted regression analysis respectively. The result showed that with the increase of the probability of bankruptcy, the expected earnings of persistent earnings per share had a declined tendency. That is to say, there is significantly positive correlation between their persistent earnings and equity value for those expected surviving loss listed corporations; but there is more relevant between their liquidation value and equity value for those expected bankruptcy loss listed corporations. Then, Joos and

Plesko(2005) divided loss corporations into permanent loss and transient loss by using a loss reversal model. Those temporary loss companies have higher firm value due to the larger opportunities of loss reversibility and have a lower likelihood of executing the liquidation option; and the value of those permanent loss companies was decided by their liquidation value because they have real financial difficulties and have lower opportunities to reverse loss which resulted in that most of them exercised likely liquidation option. In addition, through the analysis of time series, Joos and Plesko found the increasing frequency of the occurrence of a negative cash flow and R & D expenditure component in loss firms with the passage of time during the value assessment of the persistent loss companies. This conclusion confirmed that the loss companies' value is a function about loss persistency and also developed the find of the Givoly and Hayn(2000) about "The falling profitability in USA Inc is not associated with the decline of the cash flow over the same period ", which thought that cash flow was the decisive factor in the growth of the intrinsic value of loss companies, especially for those persistent loss companies. Even though these studies consider the loss of heterogeneity, they didn't discuss some driving factors of their intrinsic value of the different types of loss companies from the eyesight of investor's expectancy.

With the increasing of loss companies in the stock market, it is very important to understand the characteristics of loss companies and how to evaluate the loss companies for investors. Raul, Francisco and Pablo(2006) assess the future profitability of loss companies and determine whether the loss firms are supported by investors or not according to analysts' forecast. In order to measurement the degree of investors' support for the loss companies, they construct five dummy variables based on the analysts' forecast data: (1) the variable to measure that the target price of the loss companies was higher or lower than the actual price. They assumed that those firms that the target price was higher than the actual price would be supported by the analysts. So those firms would be expected to be improved and would be very likely profitable in the near future. (2) the variable to measure that whether the mean of loss companies' anticipated earnings is positive. They assumed that those companies who were supported in a short term were those companies which were expected to have positive earnings last year. (3)the variable to measure the relations among the quality and quantity by analysts' recommendation, and they were assumed that those companies which were recommended for holdings or buying by analysts were better than those recommended for selling or reduction. (4)the variable to measure that whether the composite score of analysts' recommendations exceeds the critical point of the mean. They classified all loss firms according to their value and summarized and scored all analysts' comments to various loss firms. They didn't only consider how many recommendations the analysts put forwards, but also takes into account the intensity of analysts' recommendations. (5)the variable to measure that whether the market-book ratio exceeds the critical point of the mean. They assumed that those firms that there is a big difference between the market value and book value would be considered to improve their earnings in the future by investors, while those firms whose the price-to-book ratio is very close to one were not considered to be optimistic by investors. Eventually, they set a variable to summarize the support degree by analysts and investors, and whereby the loss companies were grouped to study. Considering the difference of the support degree among several groups from completely not support to fully support, the loss companies should be evaluated using various methods.

Similarly, considering of the expectancy of investors to the persistence of losses, Kevin (2010) divided loss companies into various types in accordance with the size of expected seasonal surplus. The group with the lowest persistence of the seasonal earnings was expected as permanent loss group, and the group with the highest persistence of the seasonal earnings was expected as transient loss group. His results showed that investors will not completely distinguish the differences in loss persistence identified by the model. On the contrary, they seemed to assume that all losses would be transient. Therefore, investors were surprised at the disclosure of future negative earnings predicted by the model for persistent loss companies, these companies had significant negative abnormal return in the following four quarter, but the abnormal returns were almost zero for those transient loss companies. The reason was that the investors underestimate the persistence of losses, not to panel the loss companies with poor performance up to most.

Thus, scholars' studies based on the loss heterogeneity on the value of loss companies were still at a preliminary stage, especially on the concept of loss heterogeneity, and most scholars only focus on the loss heterogeneity in one or two dimensions.

IV. DRIVING FACTORS AND DRIVING MECHANISM OF THE VALUE OF LOSS COMPANIES

Accompanied the deeply study on loss heterogeneity of loss firms by the scholars, the explanations for changing in value of loss companies seeking by the people has become more comprehensive and rich. Early scholars mainly analyze the impact on the loss company's value from some driving factors on internal perspective including the dividend policy, loss occurrence frequency and the companies' size. For example, Harry Deangelo, Linda Deangelo and Douglas J. Skinner (1992) think the information that whether the dividends was cut or not will enhance the ability of the company to predict future earnings according to the current earning when the company occurs to make a loss, because the signal transfer mechanism will eventually lead to the fluctuation of the stock price for this kind of companies. Teppo Martikainen, Juha-Pekka Kallunki and Jukka Perttunen (1997) think that the different methods of earnings measurement will affect the frequency of the occurrence to make a loss, and then change the relationship between profit and returns. This shows that the frequency of loss will influence the value of the companies. And the higher the frequency, the amplitude of the fluctuations in the value of loss companies is greater. Rayburn (1987) found that many special elements (such as the size of the company, the growth and debt risk) can cause the value change of the loss companies. Easton and Zmijewski (1989) and Collins and Kothari (1989) also found that there is a positive correlation

between the value relevance of accounting earnings and corporate size and growth, and there is a negative correlation between the value relevance of accounting earnings and the beta coefficient. Internal factors can explain why the value of loss companies will change to a certain extent, but it cannot explain the phenomenon why those loss firms facing the liquidation will still exist market value.

Give up the option theory, the option to give up or liquidating owned by shareholders will increase its current value of loss firms. Hayn (1995) firstly applied the theory of abandon option into the valuation of loss firms. It is assumed that the loss will not continue because the shareholders of the company have the right to transfer their stocks in the second securities market. According to this hypothesis, the shareholders will not easily give up their stocks even if the listed corporation is in the loss situation as long as the market value of the loss listed Corporation is not less than the liquidation value. The market value of loss listed corporation includes two parts. One part is related with accounting surplus value, and another part is its liquidation option value. The shareholders will perform abandonment option when the value of loss listed corporation fallen down into liquidation value due to a loss. Then the value of the company is only decided by its liquidation value. The theory of abandonment option considers the value of the loss listed corporations is determined not only by the accounting earnings but also by the existing hidden option, but it only takes into account an extreme case that bankruptcy and liquidation occurred in the loss companies. The liquidation value per share proposed by Hayn is only on behalf of the company's external adjustment value, and it is useful only when the liquidations value of loss firm is higher than the internal assets adjusted earnings. In other words, if the internal assets adjusted earnings are higher than the liquidation value, then it is not appropriate to use the liquidation value per share as the alternative variables of the adjustment value. In fact, it is possible to save the company by transferring, recombinating and other more common way when the listed corporation makes a loss. These phenomenons can apparently not be explained by the abandonment option theory.

Burgstahler and Dichev (1997) reconstructed the value evaluation model of loss listed corporation in which they took book value as the surrogate variable of the adjusting value of loss listed corporation. The model considered the value of loss listed corporation to be composed by two complementary value, one is Recursion Value, which is the sum of the present value of future earnings from continuing operations assuming to be in accordance with the current fashion (dependent on current business and technologies), another is Adaptation Value, which produced when the resource independent of the current business and technology is changed (including the assets of interior modulation and external adjustment) , Adaptation Value is on behalf of the right owned by the company to disposal various assets by reconstructing(such as sale, transfer, clearing or reconfiguration etc.). The liquidation or giving up referred by Hayn (1995) is only the extreme processing mode in the adjusting situation mentioned by Burgstahler and Dichev(1997). The valuation model takes into account more extensive option value including the value of adjustment option and it also pays attention to the internal adjustment value and external adjustment value, which makes it suitable for the valuation of loss firms that interior modulation value is higher than the external adjustment value. From this point of view, the adjusting option theory overcome the defects of abandonment option theory which can only be used for the valuation of those be liquidated. It can be simultaneously used to assessment normal values produced by the expected earnings for valuation of loss companies in continuous operation state and the internal and external adjustment value when changing in the use of assets. Collins, Pincus and Xie (1999) use the equity book value as an alternative variable of the abandonment option and predict future normal surplus, and they found there is a negative correlation between stock price of the loss company and earnings per share. And it is an unreasonable negative correlation between the market price and earnings per share when removing the influence of equity book value. This suggests that liquidation option theory and adjust option theory proposed by previous scholars cannot fully explain the market value of loss companies.

When the company makes a loss or transient earning, the information about earnings has a great influence on the possibilities of the violation of debt contract in view of investors and has a little influence on the economic value of the company's assets. For example, when R & D product in a medicines-producing company success to go through the certification of drug administration, the disclosure of the information will set up the confidence of investors and greatly reduce the possibility of the violation of debt contract. The company’s equity market value will be promoted. The change occurring in the equity optional value form the change of the possibility is called “contract” effect by default option theory, this effect is obvious for those who are large likely to default(including loss companies and transitory earning companies especially). Core and Schrand (1999) considered the possibility of the violation of debt contract and set up a model of executive option rights to the companies with the liabilities. The model provides not only the information about current and future expected cash flows but also the information of the possibility of violation of debt contract. The empirical study shows that the response of stock price to earnings would be enhanced when the company was going to debt default, and there is a significant positive correlation between loss or transient earnings and stock returns in those companies with lower assets. These earnings significantly alter the likelihood of default, but do not provide the information about future cash flow. It shows that the company's equity value is a nonlinear function of earnings and book value. But it is the premise of the possibility of the violation of debt contract in loss companies. In view of this, the default option theory is powerful to explain the value of loss listed corporations with a debt contract, but it is powerless to the value of loss listed corporations without a debt contract.

Despite the abandonment option, adjustment options and debt default option are able to weaken the positive correlation between the market rights and earnings, but it cannot be reduced to a negative correlation. The negative correlation in

the reality of the existence indicates the current larger amount of loss will reverse to larger profits at a specified date in the future. Apparently, it is inadequate to explain the negative correlation between market value and earnings by previously option theory factors. Therefore, subsequent scholars further put forward their opinions on this problem from the conservative accounting methods. Amir and Lev (1996) found the value of intangible assets of loss companies in the wireless communications industry can be evaluated by non-financial indicators (such as the total number of staff in the service industry, market permeability and so on). Securities market considers administrative expenses, sales expenses and depreciation expenses to be an investment other than current expenditure as in conservative accounting methods, so that it will not reduce the company's value. Hand (2003) studies suggest there is a relation between the equity value in a biotechnology company and their development costs and non cash assets. Masako Darrough and Jianming Ye (2006) 's research shows that earnings (or equity book value) may not be sufficient to represent the company's future potential, and the distortion of current accounting data maybe leads to the negative correlation between the value of loss companies and the root of the current earnings. Abandoning options and restructuring the option theory posit that loss companies may bankruptcy or reorganization. In fact, this is only a probable status for loss companies and some loss companies also will still continue to live. Bankruptcy, liquidation, merger, acquisition by loss companies' executive abandonment option or reconstructure by external forces and so on, those will make the company forever. But some loss companies will survive if the companies conduct the internal restructuring options. He divided the loss companies into different groups in accordance to the intensity of R & D (= R & D expenditure / Sales) and study each group separately. The result shows that those companies having more investment on R & D bigger are more likely to survive. Many loss companies have a huge investment on R & D, their losses were largely due to the accounting conservative principle, and namely, they often put research and development expenditure into current expense. They think those loss companies who continued to operate for many years have four potential value driving factors: very spending, R & D, growth strategy and the probability of survive. These variables assumed that current poor performance indicates the future potential profit opportunity, namely current losses will become the future earnings, so the market has a good evaluation for this kind of loss companies, which leads to the high value of the loss listed corporation.

It is obvious that previous scholars' research focus on how to interpret the weak correlation between accounting earnings and stock price from the above all kinds of valuation theories about loss listed corporations. Wherein, abandon option theory, adjust the option theory and default option theory pays more attention to the investors' behaviors after making a loss, and focuses the point from the effects of interior modulation method of the investor only to the effect of external adjustment method from the option pricing models used by them. These effects were considered to be a variety of options of loss listed companies by these theories, and these options add the value of loss listed corporations. Sales pricing theory and accounting conservatism theory focus on the whole value of loss listed corporations, mainly analyze the value from the reasons why they make a loss. And they consider sales growth, market development costs, development costs and expenses to be main reasons and build the model to evaluate the loss companies based on these reasons. These theories can explain the changes in the value of loss listed corporations to certain extent, but they has failed to fully and clearly explain and evaluate the integrity value of loss listed corporations.

V. LOSS REVERSIBILITY AND THE VALUE OF LOSS COMPANIES

Because there is a correlation between the absolute level of earnings and earnings persistence, abnormally large or small earnings may mean less persistent, i.e. earnings exist a reversal phenomenon. Based on the liquation theory, investors will delay the implementation of liquidation option behavior when they think loss companies may be improved in the future. Especially for some better listed corporations, investors are likely to give managers an opportunity to reverse the loss when they make a loss. Then, the management can cut costs, strip non-profit items and expand sales and other methods in order to improve their performances or management can accumulate the post-annual loss to current period one-time by taking a "big bath", so that loss companies have a more possibility of loss reversibility in the future. Watts (1986) further recognized that this reversal possibility make the value relevance of accounting earnings of the loss companies become very weak, and more the reversal possibility is, the negative effect of loss on the stock price of loss listed corporation is less. Samantha Sin and Edward Watts (2000) chose listed companies from 1983 to1993 in the Australian Stock Exchange as samples, and they studied the company with financial health. They found the weak earnings response coefficient to loss depended on the expectations of the shareholders on future earnings and loss reversal because shareholders think these potential companies can achieve profitability through the behavior of their management. In addition, David Ashtona, Chen Limb, Mark Tippettc and Brian Wrightb (2005) thought the value of loss companies will be affected by the potential real options related to the capabilities of business reconstruction. And capabilities of business reconstruction determine the possibility of loss reversal.

Apparently, scholars are able to recognize loss reversibility is an important factor leading to the changes of the value of loss companies. Most of the value driven factors affect the value of loss companies by the transmission of the intermediary variable of the loss reversibility. However, the understanding of the existing research on the loss reversibility is not comprehensive. Most scholars only focus on the probability of loss reversal of loss companies, while neglecting the degree, authenticity, timeliness and other more important characteristics of loss reversal. They are mainly embodied in the methods to measure the loss reversibility. There are three kinds of methods to measure the loss reversibility in the present research as following:

The first method is to use the indicator variable to measure whether listed corporation occur loss reversal. This method is adopted by most scholars (Joos and Plesko, 2005; Jiang and Stark, 2006) currently. They are all through the establishment of two kinds of random walk model to predict the loss reversibility. Usually loss reversibility was set as indicator variable, and defined as: when loss companies profit in the next period, the variable value is 1; when they continue to loss in the next period, the variable value is 0. This article thinks that the method is primarily concerned whether listed company will reverse in the first accounting period after loss, without considering the possibility of loss reversal in the second period, third period even longer after loss. In fact, loss reversal period of many listed companies is not in the first period after loss, but in the longer period. Furthermore, setting loss reverse as indicate variable only recognized whether loss companies occur loss reversal in the next period, did not measure the degree of loss reversal. But in fact, the differences of profitability ability will lead to different degrees of their loss reversed. Therefore, the method of setting loss reversibility as indicator variable only is obviously insufficient to analyze listed companies' loss reversal degree in-depth.

The second method is to use the ratio of sum of earnings of all the loss period and the loss amount of the first loss year to measure loss reversal probability of listed companies. The method was proposed by Chambers (1996). They used the ratio of sum of negative earnings' present value of listed companies until loss year and the loss amount of the first loss year to express the sustainability of listed companies' first loss. Negative earnings' present value of loss period is discount calculated by average bonds interest rate disclosed by Moodier Company. According to this method, the first loss sustainability of single loss period equal to 1, and the first loss sustainability of multiple loss period is larger than 1. Therefore, smaller the first loss sustainability is, the degree of loss reversal is greater. The article thinks, this method pay attention to single loss period and multiple loss period at the same time, but with all the loss of negative surplus value and the first loss annual amount of loss ratio of said first loss in the continuous method more accurately measure only, who only made its first loss of listing Corporation and occurrence of multiple losses but many subsequent losses for the first time since the start of continuous losses occurred, but if listing Corporation multiple losses since its first loss since is discontinuous situation occurred, the measuring method can not truly measure the first loss of continuity. In fact, multiple loss of most listed companies is not continuous, but is often interrupted (Hany, 1995; Jiang and Stark, 2006). Particularly in the security market of China, previous research of scholars (Zhang Xin,2008; Xue Shuang,2009) showed that, because company's management has strong motivation exempting from delisting and behavior tendency of earning management, listed company is often loss at first and then profit, and loss and then profit, and have been reciprocating. Therefore, the method is not suitable for Chinese listed companies' loss reversal measurement.

The third method uses the earnings of next quarter to measure company's loss reversibility. The method was proposed by Kevin (2010). He chose quarterly earnings to predict future earnings of loss companies, and judge the loss reversibility of the company by predicting future earnings. He thought quarterly earnings forecast model was better than two random walk model and the model assuming that all loss are transient. It greatly reduced the prediction error. The reason is that the predicted earnings contain both information of loss reversal and future earnings information. Despite the predicted earnings and estimated loss reversal possibility are highly correlated (Pearson correlation coefficient is 0.760), but the predicted earnings contains more information about the future performance of the loss companies. This paper argues that, compared to the first loss reversal method, quarterly earnings forecast model has two advantages. First, quarterly earnings forecast value can intuitively reflect the loss reversibility of listed company, which answered whether it can reverse. Second, quarterly earnings forecast value itself reflects the degree of loss reversal or loss continuity of listed company. If the predicted value is positive, then its size reflects the reversal degree of loss of listed company and illustrates its profitability ability; if the predicted value is negative, then the size reflects the persistence degree of loss of listed company and illustrates the severity of loss. The prediction method adopts rolling prediction, therefore, it can be applied to the situation of Chinese listed company, which appears first loss then profit and loss and profit and such reciprocating intermittent loss, so that makes up for the insufficiency of the second measure method of loss reversibility.

VI. ENLIGHTENMENT CHINA CAPITAL MARKET

Along with our stock market becoming mature, domestic and international competition becoming fierce increasingly, loss listed companies are unabated. Achievements of foreign scholars in the value assessment of loss companies enrich the company value assessment theory system, perfect China's delisting system and the information disclosure system of listed company, guide investors and government to carry out reasonable value judgment of the loss of listed company.

A. Correctly understanding the heterogeneity of loss companies

Study of loss heterogeneity is a new financial research field and still in the initial stage. Especially scholars each airs his own view on the connotation of the concept of loss heterogeneity, and most scholars only saw the loss heterogeneity in one or two dimensions. Inconsistencies of concept of loss heterogeneity will lead to scholars' study losing transverse comparable platform. Therefore, it should be established on the basis of clearing the connotation of concept of loss heterogeneity in order to promote the theoretical research and practical application of loss heterogeneity. So, it puts forward clearly concept of loss heterogeneity: loss heterogeneity study is to analyze and discuss the scale, industry attributes, loss history, loss reversal probability of various loss companies and the resulting differences on loss information content, loss sustainability, the degree of asymmetric information of investors, analysts predict, managerial compensation and loss companies' value, and so on. Of course, the connotation of this concept still needs follow-up

researchers enriching and expanding constantly with the diversification of loss type and the complex of loss companies' environment, to adapt to the needs of new environment and practice application.

B. Unifying dimensions of loss heterogeneity type

Because dimension of loss heterogeneity type is not consistent, it may lead to phenomenon. of overlapping and omitting samples. Franzen (2002) presented loss companies may be divided into investment loss, transient loss, reversible loss and liquidation loss of four class based on loss sporadic and loss reversibility. A careful analysis can discover the investment loss will be two kinds of results: profit and loss, which the former essentially contains partially reversible loss and the latter essentially contains some of liquidation loss. The overlapping heterogeneous types will make the final conclusion of the study is not exact and reliable. In addition, bilateral logic model used by many scholars divided loss companies into continuous loss and transient loss of two categories based on loss reversibility. But it ignored the third states, namely the deleted samples from the database in the subsequent year due to bankruptcy. Because of missing the loss company types lost in later years when estimating loss reversal model, therefore, the model's accuracy and usefulness will be overestimated. Therefore, future loss heterogeneity research is necessary to establish in the uniform dimension. Of course, it needs scholars to do further theoretical analysis and empirical research about division loss heterogeneity being based on a single dimension, two dimension or multiple dimensions.

C. Reasonable selection of measurement method of loss reversal.

Based on the above comparative analysis of three metric methods about loss reversal of the of the of capital market in China, considering the particularity and Zhang Xin (2008)、Kevin (2010) mentioned quarter earnings forecast method superiority, as well as most companies in the loss after the first quarter will be more obvious and behavior, this paper argues that it can choose the difference between quarterly earnings of the first quarter after loss after assets standardization and annual net assets of the loss year after assets standardization to illustrate the extent of the loss reversal. The larger value shows the possibility and the extent of loss reversal of loss listed company are greater. In addition, because cash flow can more truly reflect listed company's loss status, many scholars' study found that profit capacity of listed company whose cash flow is more is stronger. It can also choose net operating cash flow per share Net operating cash flow per shareNet operating cash flow per shareNet operating cash flow per share and net cash flow per share in the loss year as auxiliary variables reflecting loss reversal degree. In addition, taking into account the information timeliness of the quarterly cash flow, as well as the exclusion of possible defects of accrual measuring rate of return on assets on the measurement of loss reversal degree, we can use the difference between net operating cash flow per share Net operating cash flow per shareNet operating cash flow per shareNet operating cash flow per share and net cash flow per share in the loss year, between net operating cash flow per share in the first quarter Net operating cash flow per shareNet operating cash flow per shareNet operating cash flow per share after loss and net cash flow per share in the loss year to show the authenticity of loss reversal. Such, we can comprehensively measure the loss reversal of the company from loss reversal degree, timeliness, truthfulness, for the foundations of better study about the relationship between loss reversibility and firm value.

6.4 Paying attention to the influence of investor's expectation factors to the value of loss company

The former company value assessment is often limited to the use of the earnings per share, net asset per share, operating cash flow per share and other traditional financial index, but neglects the analysis to the liquidation value of listed company, restructuring, significant related party transactions, equity division, debt delay or reconciliation and other non-financial information. It is possible to make the investors lose good investment opportunities. For the judgment of loss listed company's value, investors should change the traditional investment philosophy just looking at the sum of the present value of future cash flows of its existing business, and pay more attention to the sum of present value of its future investment opportunities. These future investment opportunities in essence are real option of company holding, which will increase the loss companies' value, thus raise the stock price of loss listed company. In China's unique system background, loss listed company often has many special trade arrangements, which changes the expectations of investors, gives new value" selling point" of the loss listed company, thus affecting the stock price of loss company. Therefore, to price for the stock of loss listed company, we should not consider single one or several aspects of factors, but should stand in the angle of investor, considering various expected factors to explore the driving path for all kinds of heterogeneity of loss listed company, thereby make a reasonable assessment on the value of loss of listed company.

ACKNOWLEDGEMENTS

The authors are grateful for financial support from the fund of the China National Social Science Fund Project (13CGL050) and the authors would like to thank to the funding by the Ministry of education of Humanities and social sciences research Youth Project (11YJC630243,12YJC630010,13YJC630027),Central University basic research funds in Southwest University (SWU1309116、SWU1309202).

REFERENCE

[1] Ball, R. and P. Brown, An Empirical Examination of Accounting Income Numbers , Journal of Accounting Research, 1968, 6：159-178.

[2] Beaver, Dukes. Interperiod tax allocation, earnings expectation, and the behavior of security prices. The Accounting Review. 1972 (3): 320- 333.

[3] Beaver, Lambert , and D. Morse., The information content of security prices, Journal of Accounting and

Econmics,1980, 2: 3-28.

[4] Lipe, R. ,1986, The information contained in the components of earnings, Journal of Accounting Research 24: 37-68.

[5] Kormendi, R. ,and R. C. Lipe, Earnings innovation , earnings persistence, and stock returns, Journal of Business, 1987,60: 323-345.

[6] Collin. W. and S.P. Kothari, An analysis of intertemporal and cross-sectional determinants of earnings response coefficients, Journal of Accounting and Economics, 1989 , 11: 143-181.

[7] Hayn,C. The Information Content of Losses[J]. Journal of Accounting and Economics, 1995(20), l25-l53.

[8] Jan, C. L. and Ou, J. , The Role of Negative Earnings in the Valuation of Equity Stocks, 1995, Working paper

[9] Samantha Sin and Edward Watts, The Information Content of Losses: Shareholder Liquidation Option and Earnings Reversals. Australian Journal of Management, 2000, Dec, Vol. 25 Issue 3: 327-338.

[10]Collins, D. W., M. Pincus, and H. Xie., Equity valuation and negative earnings: The role of book value of equity. The Accounting Review, 1999(4): 29-61.

[11] Burgstahler, D., and I. Dichev, Earnings, adaptation and equity value, Accounting Review,1997, 72: 187–215.

[12]Zhang,G., Accounting Information , Capital Investment Decisions, and Equity Valuation : Theory and Empirical Implications'. Journal of Accounting Research Autumn, 2000, 27 1-295.

[13] Satin, D., Accounting information and the valuation of loss firms, Ph.D. dissertation, University of California, Berkeley, 1992.

[14] Martikainen , M. , Accounting losses and earnings response coeddicients: the impact of leverage and growth opportunities, Journal of Business Finance and Accounting, 1997,24(2): 277-291.

[15] Martikainen , M. , The information content of losses around earnings announcements in the Finnish stock market, Applied Economics Letters , 1998, 5: 343-346.

[16] Ashiq Ali and Paul Zarowin, The Role of Earnings Levels in Annual Earnings - Returns Studies [J]. Journal of Accounting Research, 1992, 30: 286 - 295.

[17] Jenkins, David S., The Transitory Nature of Negative Earnings and the Implications for Earnings Prediction and Stock Valuation[J]. Review of Quantitative Finance & Accounting, 2003, Vol. 21 Issue 4,379-404.

[18] Peter Joos and George A.Plesko. , Valuing Loss Firms[J]. The Accounting Review, 2005, 80: 847-870.

[19] D. Givoly, Carla Hayn, and R. Lehavy, "The Quality of Analysts' Forecasts of Cash Flows", ... Journal of Accounting and Economics, 2000(29): 287-320

[20]Raul.iniguez , Francisco poveda, Pablo J.vazquez,Revising the role of book value of equity in valuing loss firms : what can be learned from analysis ? 2006(3): 1-23

[21] Harry, Linda, Douglas, Dividends and Losses. By:. Journal of Finance, 1992, 47 (5): 1837-1863.

[22] Martikainen, Teppo; Kallunki, Juha-Pekka, Perttunen, Finnish earnings response coefficients: the information content of losses. European Accounting Review, 1997, Vol. 6 Issue 1: 69-81.

[23] Rayburn, J., The association of operating cash flow and accruals with security returns, Journal of Accounting Research Supplement, 1986, 24:112-133

[24] Easton , P., Zmijewski, M., Cross-sectional variation in the stock market response to accounting earnings announcements, Journal of Accounting and Economics, 1989, 11:117-141

[25] Collin. W. and S.P. Kothari, An analysis of intertemporal and cross-sectional determinants of earnings response coefficients, Journal of Accounting and Economics, 1989(11), 143-181.

[27]J.E. Core and C.M. Schrand. The effect of accounting-based debt covenants on equity valuation[J]. Journal of Accounting and Economics, February, 1999(27) : 1-34.

[28]Amir, E. and B. Lev , Value-Relevance of Nonfinancial Information: The Wireless Communications Industry[J], Journal of Accounting and Economics, 1996 : 3-20.

[29]Hand, J.R. , The value relevance of financial statements within and across private and public equity markets[J]. Working Paper.

[30]Masako Darrough and Jianming Ye, Valuation of Loss Firms in a Knowledge-Based Economy[J], March 2006 , work papers.

[31]Watts R L , Zimmerman J L. 1986.Positive Accounting Theory[M]. New York: Prentice Hall, Inc