Australian Journal of Basic and Applied Sciences, 6(12): 115-122, 2012
ISSN 1991-8178

The Relationship between Intangible Assets and the Market Value; Metals Industry of Tehran Stock Exchange Case Study

[1]Mehdi Behname, [2]Mohammad Reza Pajoohi, [3]Mohammad Ghahramanizady

[1]Department of Economics of Ferdowsi University of Mashhad (FUM) Mashhad, Iran
[2]Department of Accounting, Shiraz University Shiraz, Iran
[3]Accounting Department, Islamic Azad University, Marvdasht Branch Marvdasht, Iran.

Abstract: In today's highly competitive economic, intangible assets are creating value for productive companies, but challenges faces accounting standards about measuring and reporting these assets. Present study aims to analyze the intangible assets and market value relationship in Metals industry of Tehran Stock Exchange. Therefore, financial information of mentioned test case companies collected from year 2001 to 2011. Pooled/Panel regression method and F-Limer, Hausman and Levin Lin Chu tests used to analyze data. Test results showed that reported intangible assets have significant positive relation with market value in Tehran Stock Exchange as in Metals industry of Tehran Stock Exchange. It seems an increase in intangible assets leads to an increase in market value of company in this industry. Also, result shows that there is positive and meaningful relation between abnormal earnings and market value in Metals industry of Tehran Stock Exchange.

Key words: Intangible Assets, Firms Market Value, Value relevance, Felthman & Olhson model

INTRODUCTION

Characteristics of the today's world includes economic globalization, mass production and excess capacity in most markets, time-based competition, mass volume of information and efficiency of communication, knowledge, information and increasing power of customers. All of these indicates that integration and complexity of global markets and dynamic nature of the environment which manufacturing and service firms and institutions are dealing with it.

If organizations were able to define their human perfectly, information and organizational resources, design suitable indices to measure them and finally align them with organizational goals and strategies, then they will be able to take advantages of the amazing results in order to increase profits and interests of stakeholders. As Kaplan and Norton (2004, 47) states: "an organization that is able to align its human assets such as the knowledge and skills of its employees with information assets such as human resource management information system and organizational assets such as teamwork and organizational culture. It will be able to create a strong competitive advantage that competitors cannot easily copy it".

Given the increasing importance of intangible assets in the "new economy", (due to potential problems of measurement), it can be discussed that all intangible assets (purchased or made by the firm) should be identified and reported in financial statements (fair value) in order to maximize the value relevance of these forms. The value relevance of a financial item is ability to verify or change in investors' expectations about firm value. Therefore, if the stock is popular among investors, the market prices should indicate a summary of collective expectations of investors about firm value. Therefore, the value relevance (and reliability) of financial statements could be determined by examining the relationship between a firm's market value and its accounting numbers. Note that valuation of stockholders' equity is the main purpose of the financial statements, but U.S. Securities and Exchange Commission and the Financial Accounting Standards Board focus is on the equity of investors.

From the mid 1980's, there were some discussions to the reliable assessment and quantification the value of intangible assets. With the advent of the dot-com scandal, these concerns were broader in the field of accounting and accountants are looking for a way to explain the differences between the "book value" of a firm and its market value.

Financial Accounting Standards Board states: "The traditional financial reports cannot display stimulus of value development for the New Economy. Traditionally, firms identify two types of assets: tangible assets and intangible assets. Although tangible assets (such as land, equipment, housing, etc.) assessment method are well developed, intangible assets are difficult to assess and are almost impossible to manage".

Some studies have concluded that in recent decades, the value relevance of accounting information reduced due to increase of unreported intangible assets (Brown *et al*, 1999, Dumontier, P, & Raffournier, 2002).

Corresponding Author: Mohammad Ghahramanizady, Accounting Department, Islamic Azad University, Marvdasht Branch Marvdasht, Iran.
Tel: +98 9177111599 E-mail: mgh@acc7.net

This study examines the intangible assets and the firms' market value relations in Tehran Stock Exchange market. It investigates the relationship between the intangible assets reported in the firm's balance sheet and their market value to answering following question:

"Do the intangible assets have value relevance?" In the other words, "is there any significant relationship between the intangible assets reported by the firms and the market value of their stocks?" or "Do investors consider the value relevance for intangible assets?" This means that whether they pay attention to intangible assets in this market for firm's valuation or not.

MATERIALS AND METHODS

Theoretical Principles:

Value Relevance:

Given that the decision making of the players of the capital market, particularly active investors in the stock market is carried out in an uncertain environment, they need information. On the other hand, the public default is that the accountant should be able to provide information relating to the stock valuation (Brennan, 1991, p.61). The importance of such a claim caused that many scholars test it over the past four decades and introduce a new branch of market-based research in accounting entitled "Value Relevance Studies".

The common aspect of the presented definitions of value relevance or relevance in terms of valuation in accounting literature is the existence of a statistically significant relationship between accounting data and market value of owners' equity (Beaver, 2002, p.459). On the other hand, given that this test first done by researchers such as Miller & Modigliani (1966) and Horrigan (1996), the term of "value relevance" was used by (Amir *et al*, 1993, p.230) for the first time.

According to Barth *et al* (2001), the main objective of researches in the field of value relevance is to increase the awareness level of the users of financial statements in terms of qualitative features of "relevance" and "reliability" of reflected accounting information in the market value of the owner's equity. The above qualitative features are two main criteria of Financial Accounting Standards Board to make best choice among various options. The value relevance test suggests an approach to make operating the previous definitions of qualitative features. The reason for the recent attitude is that the accounting items considered as relevant from the perspective of valuation in the case where they containing relevant information for the valuation of firm with sufficient reliability to reflect in its stock price (Barth *et al*, 2001, 80).

Feltham and Olson Model

Feltham and Olson (1995) proposed a model for the relationship between a firm's market value and accounting information of its operating and financial activities. They declared that the book value of financial activities is equal to its market value, but the book value and the market value of operating activities are not the same. It seems that the market value is equal to the net value of the expected divided dividend. According to clean surplus accounting, the market value defined as the net book value plus the present value of expected abnormal earnings (which is equal to accounting profit minus weighted average cost of capital).

A linear model determines the change of a bunch of information including book value and abnormal earnings of operating activities. The parameters of the model indicate the presence of abnormal earnings, growth and accounting conservatism. The model is simple enough to use the variables related to the market value, accounting data and other information.

Three types of analysis are possible using this model. The first analysis deals with the value related to the predictability of accounting data. The second analysis exactly examines the dependence of firm's value to simultaneous realize of accounting data. The third analysis examines the approximate relationships by comparing the market value, earning and the book value and investigates how earnings related with the book value at the beginning of the period.

Clean Surplus Accounting

The clean surplus accounting method presents the elements of a model that predicts the market prices as a function of expected returns and the variations of the book value.

The clean accounting surplus does not consider the relationship with shareholders (including distribution of dividends, buy back stock or stock options, etc.) in the calculation of the returns of an institution. The current accounting system necessitates the financial statements of the underlined balance sheet calculation as well as profit and loss account (earnings and book value). In addition, its format requires that the book value be equal to earnings minus distributed dividends (net of investment related to capital).

The main basis of the clean surplus accounting theory is estimating the value of a firm's stock (Unlike the discounted dividend methods or procedures related to cash flow). The other use of this theory is to replace CAPM to calculate the cost of capital.

The Olson theory of clean surplus accounting provides a framework according to the measurement view. MV (Market Value) of a firm (and thus the efficiency of its securities) can be calculated through some components of the BS (Balance Sheet) IS (Interest/Loss Statement). This theory considers the ideal conditions.

Market value of firm = NBV of firm's net assets + expected PV of future abnormal earnings (goodwill)

The market value of the firm is equal to the net book value (NBV) of the firm's net assets plus the expected present value (PV) of future abnormal earnings (goodwill).

Where:

1 - The actual earnings calculated based on the clean surplus that identifies all income and expenditures in the interest and loss account. This means that the identified interest or loss recognized at the interest and loss account considering the fair value.

2- The difference between actual operating earnings and expected operating earnings (which defined as abnormal operating earnings) that called goodwill.

3- The expected operating earnings are equal to the equity value of the firm at the beginning of period multiplied by the firm's cost of capital (similar to the accretion discount rate of the firm).

4- Net book value of the firm plus estimated goodwill is equal to the firm's market value. It means that the firm's market value can be calculated using the book value and accounting procedures.

The main advantage of this method is the relatively fast calculation of the firm's market value. The valuation method that used in discounted dividend and cash flow model can use. Feltham and Olson model can used for estimating the value of firm's stock and to compare with the actual market value of the stock. Frankel and Lee's study shows that the estimated value of the stock to real value of stock can be a good indicator for predicting stock returns in 2-3 future years.

Literature Review:

Eckstein (2004) has investigated the accounting standards related to the intangible assets in U.S., England and International Accounting Standards Committee in an article entitled "the measurement and identification of intangible assets". She declared that an advance in financial reporting is very dependent on progress in the identification and reporting intangible assets.

Recent research conducted in the U.S. indicated that reported earnings of U.S. firms' relationship have almost no value relevance. Therefore, Goodwin and Ahmed (2006) suggested that the lack of identification of intangible assets by these firms is the main reason for loss of value relevance of earnings in U.S. firms. They calculated the value relevance of earning of Australian firms to prove their reason. In Australian firms, identification of intangible assets had not prohibited. Using several models, their results showed that there is an insignificant effect of decrease in the value relevance of earnings in an average firm. However, the firms that invest the intangible assets have growing stronger value relevance. They calculated the difference between the value relevance of firms that invest intangible assets with those firms that do not invest intangible assets. They concluded that this difference has been growing in the late 1990s.

Oliviera *et al* (2010) have studied the value relevance of identified intangible assets according to international standards that had adopted recently by Portugal. They concluded that the reported goodwill and other intangible assets that significantly related to stock price of the firm. However, the value relevance of intangible assets has reduced after the adoption of international standards.

Boulerne *et al* (2011) conducted a study entitled "Do the International Standards of Financial Reporting provide better information about intangible assets in Europe? ». They compared the results of international standards of financial reporting / international accounting standards and local GAAP in the firms engaged in the European exchanges markets. Their results showed that intangible assets that had reported under International Standards of Financial Reporting have more information to explain stock prices and returns than intangible assets that had reported under local generalized accepted principles. In addition, the intangible assets that reported on the balance sheet contain more information for shareholders in France and Italy than unreported intangible assets or those intangible assets that reported in the goodwill account. Generally, their study showed a slight difference between local standards and International Standards of Financial Reporting.

Research Hypotheses:

In the present study, a main hypothesis proposed as follows to achieve the research objectives based on research questions. The hypotheses examined for all firms:

Main hypothesis: There is a significant positive relationship between intangible assets and the market value of firms listed on the Tehran Stock Exchange.

Hypotheses Model:

Following model chose for the study by developing the model of Fetlman and Olson (1995).

$MVE_t = \alpha_1 + \alpha_2 (NOA - INT)_t + \alpha_3 GW_t + \alpha_4 ID_t + \alpha_5 NFA_t + \alpha_6 AOE_t + \varepsilon$

According to this model, the variables of this study divided into three groups including independent dependent and control variables to test the hypotheses.

Variables:

Independent Variable:

In this study, the independent variable is the annual identifiable intangible assets of the firms that extracted from annual audited financial statements.

Identifiable intangible assets are the sum of reported intangible assets according to accounting standards of the firm (net of amortization and goodwill).

Dependent Variable:

The dependent variable is the market value of the firm that calculated by multiplying the price of each share on the last day of the fiscal year and the number of shares in the same year.

Control Variables:

Some of observable features of the firm will considered as "control variables" to control other effective factors contributing the market value of the firm. Therefore, operating assets, operating liabilities, financial assets, financial liabilities, the inflation rate, normal and abnormal operating earnings used as "control variables".

Table 1: Measurement Method of the Variables

Variable	Description	Definition/Measurement
NOA	Net Operating Assets	= Operating Assets-Operating Liabilities Operating Assets=Current Assets-Cash Flows-Short-term Investments+(land, property and equipment- relevant accumulated depreciation)+long term Investments with special value method+ possible income taxes benefits Operating liabilities = total debt + preferred stock - financial liabilities Financial liabilities=long-term debt+ current portion of long-term +preferred stock
NFA	Net Financial Assets	=Financial Assets-Financial Liabilities Financial Assets=Total Assets-Operating Assets
AOE	Abnormal Operating Earnings	$= OE_t-(R*NOA_{t-1})$ OE_t=Operating earnings of the year t; the reported net profit after subtracting the taxes of parent firm+ interest expense after taxes-interest earnings after taxes r= weighted average cost of capital (discount rate) NOA_{t-1}=the Net Operating Assets for the year, t-1

Statistical Population:

The statistical population of firms listed on the Tehran Stock Exchange selected as the successor of statistical population of the present study.

Sampling Method and Sample Size

In this study, sampling does not carry out; but the statistical population of the study, namely the firms listed on the Tehran Stock Exchange are limited based on the following criteria:

- Given the study period (from early 2001 to late 2011) and considering the required information for a year before the examined year, the firm must be listed on the Tehran Stock Exchange before 2000 and the required information must be available.
- In order to increase comparability and integration of the selected firms, the financial year should be to the end of March of each year. The firm should not altered activity or financial year change during the study period (2001 to 2001).
- The selected firms must be manufacturer firm to achieve similarity in terms of items and their classification in the financial statements. The selected firms should not be banks and financial institutions (investment firms, financial intermediation, holding and leasing firms).

After acquiring the sample size requirements, the sampling size reached to 128 samples. The data related to the years 2001 to 2011 collected for these firms.

Data Collection Method:

In this study, the desk study used to collect data and information. For the desk study, theoretical principles of the research collected from specialized Latin and Persian books and journals. Based on the definitions of variables and the measurement methods, the required data for this study include some accounting items extracted from the audited financial statements of the firms. Accordingly, the required data for the research collected through data collection, documents, and sample firms by referring to the financial statements, explanatory notes, weekly reports, Stock Journal, Library and the website of Tehran Stock Exchange as well as using the comprehensive statistic software of TadbirPardaz, Rahavard Novin and Sahra companies.

Methods for Data Analysis and Hypothesis Testing:

Several statistical methods were used which will be described in more detail. In this study, following data collection, the descriptive statistics of the variables are calculated. These statistics include the mean, median, standard deviation and other required information. The most important statistical tests of this study include the Limer F -test, Houseman test and Levin, Lin and Chu test. The significance of the models and assumptions of regression including independence and normality of errors, the normality of the dependent variable and linearity had studied through these tests. The collected data initially was stored in a database. Then, data was transferred EXCEL and EVIEWS 6 for analyzing the data and their results.

Results:

Reliability of Variables:

The reliability of variables presented in Table 2. The Levin, Lin and Chu test used to determine the reliability of variables. The results of test indicate that the independent, dependent and control variables were in reliable level during the research period, because the P-Value is less than 5% for the test.

Table 2: The Reliability Test of Variables

The test/Variables	The statics of Levin, Lin & Cho	The probability of Levin, Lin & Cho statics
The Market Value of the Firm	-27.38	0.0000
Identifiable Intangible Assets	-18.39	0.0000
Net Operating Assets expect the Intangible Assets	-6.72	0.0000
Net Financial Assets	-9.42	0.0000
Abnormal Operating Earnings	-14.01	0.0000

Descriptive Statistics of Variables at Level of Entire Firms:

Descriptive statistics for study variables presented in Table 3.

Table 3: Descriptive statistics of variables at the level of entire firms

Criteria/Variables	Number	Mean	Median	Max	Min	St. Deviation	Variations coefficient
The Market Value of the Firm	110	397374.7	229275	6690255	38912	716411.3	1.8
Identifiable Intangible Assets	110	10240.17	4210	64472	100	16490.3	1.61
Net Operating Assets expect the Intangible Assets	110	198509.5	140117	1305771	-17576	218575.7	1.1
Net Financial Assets	110	26583.18	-23558	141478	-287400	84286.68	3.17
Abnormal Operating Earnings	110	-255.04	3659	948738	-1190775	176767	693.1

Discussion:

The main hypothesis: there is significant relationship between the intangible assets and the market value of listed firms in Tehran Stock Exchange.

The model of fixed effects used for testing the hypothesis. The results presented in Table 4 that shows that influence of identifiable intangible assets on the market value of entire firm is equal to +2.97, which is significant given the T-statistics possibility (0.0021). The other results suggest that the effect of net operating assets, expect intangible assets on the market value of firms is significant and negative at the entire firms' level. In contrary, the effect of abnormal operating earnings on the market value of firms is significant and positive.

The results of F-statistics also show the model was significant in general. According to Durbin-Watson statistics, the model does not suffer the autocorrelation problem. Moreover, the results of the adjusted determination coefficient show that during the whole period of study, about 77% of the changes in the market value of the entire firms are affected by identifiable intangible assets and control variables, particularly net operating assets except intangible assets and abnormal operating earnings.

Given the insignificance of the effect of identifiable intangible assets on the market value of the entire firms, the main hypothesis of the study confirmed.

Table 4: The impact of identifiable intangible assets on the market value of entire firms

Statistics/Variables	Regression Coefficients	t-statistics	The probability of t-statistics
Constant Value	-10517.14	-0.19	0.8469
Identifiable Intangible Assets	2.97	3.04	0.0021
Net Operating Assets expect the Intangible Assets	2.1	10.31	0.0076
Net Financial Assets	1.49	2.72	0.0000
Net Abnormal Operating Earnings	1.11	4.68	0.0000
Determination Coefficient	Adjusted Determination Coefficient	The probability of F-statistics	The Durbin-Watson Statistics
0.8	0.77	0.0000	1.78

Conclusion:

In accordance with Lu and Sogianis (1996), Niels Joachim and Henry (2000), Won Choi *et al* (2000), Eckstein (2004), Goodwin & Ahmed (2006), Dehmash *et al* (2009) and Lydia Oliviera *et al* (2010) results, the present study could not find any relationship between the market value of firms and their reported intangible assets. Although the intangible assets and the market value of listed firms in the stock market have a significant and positive relationship at the confidence level of 90%, but the relationship confirmed at the confidence level of 95% between entire firms and industries. Perhaps, the most important reason for this is not proving the efficacy of the Tehran Stock Exchange even low efficiency level.

In addition, this could be due to differences in accounting standards which led to recognizing and therefore not reporting important part of the investment in the intangible assets (Boulern and others, 2011; Zeqal and Malvel, 2011).

Suggestions:

According to the main hypothesis, the intangible assets have a direct relationship with the market value of all firms listed in Tehran Stock Exchange. Therefore, this study recommend to stock investors that pay attention to the amount of reported intangible assets of firms at the time of investment.

Given the value relevance of intangible assets, this study suggest that managers and accountants of the firms listed in the Tehran Stock Exchange pay attention to the amount of reported intangible assets of their own firm for preparing financial statements to prevent decrease of the market value of their own firm.

Given the possible abuse of managers from intangible assets to lure investors, the auditors also recommended that have necessary accuracy in auditing intangible assets.

Suggestions for Future Studies:

It seems that it is essential to conduct research in the following areas:

1 – The relationship between various kinds of reported intangible assets and the market value of the firm

2 - The relationship between intangible assets and the market value of firms in other industries

3 - The relationship between intangible assets and the market value of OTC firms

4 - The relationship between intangible assets and the market value of firms in different time intervals, especially case studies

5 - The relationship between intangible assets and the market value of firms in the shorter periods and closer to the present

The relationship between intangible assets and performance measurement criteria

Research Limitations:

Some of the major obstacles in the way of conducting this study were as follows:

1 – Information unavailability for some firms that caused removal of them from sample

2 – Un-identification of the generated goodwill by the business unit accounting to accounting standards (Accounting Standard No. 17, Revised in 2007) which lead to elimination of goodwill from the model and in general lead to not identifying a value relevance factor from the financial statements of the firm.

REFERENCES

Amir, E., T.S. Harris, and E.K. Venuti, 1993. "A Comparison of the Value-Relevance of U.S. versus Non-U.S. GAAP Accounting Measures Using Form 20-F Reconciliations", Journal of Accounting Research, 31(3): 230-264.

Barth, M.E., W.H. Beaver and W.R. Landsman, 2001. "The Relevance of the Value Relevance Literature for Financial Accounting Standard Setting: Another View", Journal of Accounting and Economics, 31(1-3): 77-104.

Beaver, W.H., 2002. "Perspectives on Recent Capital Market Research", Accounting Review, 77(2): 453-474.

Boulerne, Sandrine, Sahut, Jean-Michel and Teulon, Frederic, "Do IFRS Provide Better Information aboutIntangibles in Europe ?" (February 7, 2011). Review of Accounting and Finance, 10(3), 2011. Available at SSRN: http://ssrn.com/abstract=1756578

Brown, S., K. Lo, & T. Lys, 1999. "Use of R2 in accounting research: measuring changes in value relevance over the last four decades", Journal of Accounting and Economics., 28: 83-115.

Claire Eckstein, 2004. "The measurement and recognition of intangible assets: then and now", Accounting Forum, 28: 139-158.

Dahmash, Firas N., Robert B. Durand, John Watson, 2009. "The value relevance and reliability of reported goodwill and identifiable intangible assets", The British Accounting Review, 41(2): 120-137.

Dumontier, P., & B. Raffournier, 2002. Accounting and capital markets: a survey of the European evidence; European Accounting Review.,11(1): 119-151.

Farid, D., Gh. Bordbar and H. Mansouri, 1387. "Measurement of low performance form of Tehran Stock Exchange in determining the stock price (Case Study: Investment firm of Insurance Industry)", Insurance Industry, Autumn and Winter., 91 and 92: 37-76.

Ghalibaf Asl, H. and M. Nateghi, 1385. "The low-level performance in Tehran Stock Exchange, Fiscal Studies, 22: 47-66.

Goodwin John, Kamran Ahmed, 2006. "Longitudinal value relevance of earnings and intangible assets: Evidence from Australian firms", Journal of International Accounting, Auditing and Taxation, 15(1): 72-91.

Horrigan, J., 1966. "The Determination of Long-Term Credit Standing with Financial Ratios", Journal of Accounting Research, 4(3): 44-62.

Joachim Hùegh-Krohn, Nils E and Kjell Henry Knivsfla, 2000. "Accounting for Intangible Assets in Scandinavia, the UK, the US, and by the IASC: Challenges and a Solution", The International Journal of Accounting, 35(2): 243-265.

Kaplan, R. and D. Norton, 2004. "Strategy maps, converting intangible assets into tangible outcomes", Harvard Business School Press, Boston.

Lev, B., 1989. "On the Usefulness of Earnings and Earnings: Lessons and Directions from Two Decades of Empirical Research", Journal of Accounting Research, 27: 153-202.

Lídia Oliveira and Lúcia Lima Rodrigues and Russell Craig, 2010. "Intangible Assets And Value Relevance: Evidence From The Portuguese Stock Exchange", The British Accounting Review, 42: 241-252.

Miller, M.H., and F. Modigliani, 1966. "Some Estimates of the Cost of Capital to Electric Utility Industry 1954-57", American Economic Review, 56(3): 333-391.

Namazi, M. and Z. Shooshtarian, 1994. "The performance evaluation of the Tehran Stock Exchange", Journal of Financial Research, 2nd Year, 7(8): 82-104.

Nasrallahi, Z., 1992. "The performance of Iranian Stock Exchange", Economic Events, 34: 28-31.

Ohlson, J.A., 1995. "Accounting Earning, Book Value and Dividends in Equity valuation". Contemporary Accounting Research, 11 n2, Spring, pp: 661-687.

Rasekhi, S. and A. Khan Alipour, 2009. "Empirical analysis of variations and the informative performance of the stock market (Case Study: Tehran Stock Exchange)", Iranian Economic Research, 40: 29-58.

Samadi, S., Z. Nasrollahi and A. Zahedmehr, 1386. "The performance test and price bubble in the Tehran Stock Exchange using the filter rule and CAMP pattern", The Value Economics (Former Economic Reviews), 4(4): 91-114.

Sarmad, Z., A. Bazargan and E. Hejazi, 1385. "The research methods in the behavioral sciences" 12th Ed., Tehran: Agah Publications.

Won, W. Choi, and Sung S. Kwon and Gerald J. Lobo, 2000. "Market Valuation of Intangible Assets"; Journal of Business Research, pp: 35-45.

Zéghal, Daniel, Anis Maaloul, 2011. 'The accounting treatment of intangibles – A critical review of the literature'. Accounting Forum, 35: 262-274.

Appendices

Table 1: Measurement Method of the Variables

Variable	Description	Definition/Measurement
NOA	Net Operating Assets	= Operating Assets-Operating Liabilities Operating Assets=Current Assets-Cash Flows-Short-term Investments+(land, property and equipment- relevant accumulated depreciation)+long term Investments with special value method+ possible income taxes benefits Operating liabilities = total debt + preferred stock - financial liabilities Financial liabilities=long-term debt+ current portion of long-term +preferred stock
NFA	Net Financial Assets	=Financial Assets-Financial Liabilities Financial Assets=Total Assets-Operating Assets
AOE	Abnormal Operating Earnings	$= OE_t-(R*NOA_{t-1})$ OE_t=Operating earnings of the year t; the reported net profit after subtracting the taxes of parent firm+ interest expense after taxes-interest earnings after taxes r= weighted average cost of capital (discount rate) NOA_{t-1}=the Net Operating Assets for the year, t-1

Table 2: The Reliability Test of Variables

The test/Variables	The statics of Levin, Lin & Cho	The probability of Levin, Lin & Cho statics
The Market Value of the Firm	-27.38	0.0000
Identifiable Intangible Assets	-18.39	0.0000
Net Operating Assets expect the Intangible Assets	-6.72	0.0000
Net Financial Assets	-9.42	0.0000
Abnormal Operating Earnings	-14.01	0.0000

Table 3: Descriptive statistics of variables at the level of entire firms

Criteria/Variables	Number	Mean	Median	Max	Min	St. Deviation	Variations coefficient
The Market Value of the Firm	140	646280.8	199604	7532800	24121	1214551	1.87
Identifiable Intangible Assets	140	65451.91	1060056	1134509	209	182262.1	2.78
Net Operating Assets expect the Intangible Assets	140	549649.5	154429	5352043	11532	1006077	1.83
Net Financial Assets	140	60155.19	-31742.5	2992170	-1465280	766948.2	12.74
Abnormal Operating Earnings	140	12620.97	2172	1356242	-5417481	50550.8	14732

Table 4: The impact of identifiable intangible assets on the market value of entire firms

Statistics/Variables	Regression Coefficients	t-statistics	The probability of t-statistics
Constant Value	0.83	12.69	0.0000
Identifiable Intangible Assets	1.2	1.66	0.0982
Net Operating Assets expect the Intangible Assets	-0.58	-3.78	0.0002
Net Financial Assets	0.08	0.46	0.6461
Net Abnormal Operating Earnings	2.62	18.48	0.0000
Determination Coefficient	Adjusted Determination Coefficient	probability of F-statistics	Durbin-Watson Statistics
0.69	0.66	0.0000	1.81