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AN EMPIRICAL STUDY ON CONDITIONAL CONSERVATISM AND VALUE RELEVANCE OF EARNINGS

KOŞULA BAĞLI İHTİYATLILIK VE KARIN GETİRİYE YANSIMASI ÜZERİNE AMPİRİK BİR ÇALIŞMA

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Abstract

Conservatism is one of the oldest concepts in accounting and has a great influence. However debates on accounting conservatism are as old as its existence. Significance of accounting conservatism also bases on being one of attributes of earnings that is a significant item in financial statements. While estimating quality of earnings, conservatism is taken into consideration. In this study it is aimed to contribute to literature on accounting conservatism with empirical research in Turkey. One of the motivations of this study is limited number of research on accounting conservatism in Turkey. Conditional conservatism which is one of two types of accounting conservatism is held in context of its impact on usefulness of accounting information for valuation. Value relevance of earnings is chosen as the proxy for usefulness of accounting information. Although accounting conservatism and value relevance of earnings or book values are very attractive research topics separately, the number of studies that analyzes the relation between these two concepts is not very high. It is

also aimed to contribute to this area in which mixed evidence has been obtained. As measurement methods for conditional conservatism and value relevance of earnings contain both financial accounting and capital market data, another contribution of this study is to Capital Market Based Accounting Research in Turkey. Empirical evidence provided using panel data statistical analysis on 106 manufacturing firms listed on Istanbul Stock Exchange indicates that conditional conservatism has a negative impact on value relevance of earnings. The findings of the study also support the decision of International Accounting Standards Board for the exclusion of conservatism from Conceptual Framework.

Key Words: Conditional Conservatism, Value Relevance of Earnings, Panel Data Analysis

Öz

İhtiyatlılık muhasebedeki en eski kavramlardan biridir ve büyük bir etkisi vardır. Ancak muhasebede ihtiyatlılık üzerine yapılan tartışmalar ortaya çıkışı kadar eskidir. Muhasebede ihtiyatlılığın önemi aynı zamanda önemli bir finansal tablo kalemi olan kazancın (karın) özelliklerinden biri olmasına dayanmaktadır. Kazanç kalitesi ölçülürken, ihtiyatlılık da dikkate alınmaktadır.Bu çalışmada muhasebede ihtiyatlılık üzerine olan literatüre Türkiye'de yapılan ampirik bir araştırma ile katkıda bulunmak amaçlanmaktadır. Bu çalışmanın motivasyonlarından birisi de Türkiye'de muhasebede ihtiyatlılık üzerine sınırlı sayıda araştırma olmasıdır. Muhasebede ihtiyatlılığın iki türünden birisi olan koşula bağlı ihtiyatlılık değerleme açısından muhasebe bilgisinin kullanışlılığı üzerindeki etkisi bağlamında ele alınmaktadır. Karın getiriye yansıması finansal bilginin kullanşılılığının göstergesi olarak seçilmiştir.Muhasebede ihtiyatlılık ve karın veya defter değerlerinin getiriye yansıması ayrı ayrı çok ilgi çekici araştırma konuları olmalarına rağmen, bu iki kavram arasındaki ilişkiyi inceleyen çalışma sayısı yüksek değildir. Bu çalışmada ayrıca farklı bulgular elde edilmiş olan bu alana katkıda bulunmak amaçlanmıştır. Koşula bağlı ihtiyatlılık ve karın getiriye yansımasının ölçülmesi için kullanılan yöntemler hem finansal muhasebe hem de sermaye piyasası verisi içerdiği için bu çalışmanın bir katkısı da Türkiye'de yapılan Sermaye Piyasasına Dayalı Muhasebe Araştırmaları'nadır. Panel veri istatistiksel analizi kullanılarak İstanbul Menkul Kıymetler Borsası'nda işlem gören 106 üretim şirketi için elde edilen ampirik kanıtlar koşula bağlı ihtiyatlılığın karın getiriye yansıması üzerinde olumsuz bir etkisinin olduğunu göstermektedir. Bulgular ayrıca Uluslararası Muhasebe Standartları Kurulu'nun ihtiyatlılığı Kavramsal Çerçeve'den çıkarma kararlarını destekler niteliktedir.

Anahtar Kelimeler:Koşula bağlı ihtiyatlılık, Karın Getiriye Yansıması, Panel Veri Analizi

Introduction*

Earnings have a great significance in accounting and finance theory and in real world practices due to being the major source of information among other items in financial statements. This property lies in its ability to summarize performance of a firm during a period of time. It plays an important role in valuation. This role bases on the usage of current earnings as a tool for forecasting future earnings. Additionally it is commonly used to measure performance under management compensation contracts and debt contracts.[1] Financial analysts prefer to refer to earnings rather than equity values or assets while they are making their analysis. Additionally it provides optimal resource allocation through signaling from point of view of economics theory.[2]

As a result of this important role, earnings have been the subject of many academic researches. One broad array of this research is earnings quality which examines the desirable attributes of earnings. Francis et. al (2004) determined seven attributes that earnings need to possess to be of high quality. Previous accounting research and description of accounting practice to portray required properties of earnings is used to make this determination. These earnings attributes are categorized into two groups as "accounting based" and "market based attributes". Accounting based attributes are constructed on cash flows and earnings and accounting information is used in measurement of these attributes. Accounting based attributes are accrual quality, persistence, predictability and smoothness. It is assumed in the construction of accounting based attributes that earnings provide the effective allocation of cash flows among reporting periods through accruals. Market based attributes are constructed on stock prices or stock returns and their relation with accounting figures. These attributes are value relevance, timeliness and conservatism. The implicit assumption of market based attributes is that economic income which is represented by stock prices or returns is reflected by earnings.[3]

Aforementioned study has been cited by many academic studies. In majority of these studies one or more of earnings attributes are analyzed in order to measure the quality of earnings treating these attributes as independent of each other. However Barton et. al (2010) indicates that in the tests of accounting theory,

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* Bu çalışma, Dr. Mehpare KARAHAN GÖKMEN'in Marmara Üniversitesi Sosyal Bilimler Enstitütsü İngilizce İşletme ABD'nda Prof. Dr. Cemal İBİŞ'in danışmanlığında hazırlanmış olan "The Impact of Conditional Conservatism on Value Relevance of Earnings: An Empirical Research in Turkey" adlı tezden üretilmiştir.

[1]Patricia Dechow, S.P. Kothari, Ross L. Watts, "The Relation between Earnings and Cash Flows", **Journal of Accounting and Economics**, No.25, 1998, p.133.

[2]Baruch Lev, "On the Usefulness of Earnings and Earnings Research: Lessons and Directions from Two Decades of Empirical Research", **Journal of Accounting Research**, Vol.27, Current Studies on the Information Content of Earnings, 1989, p.155.

[3]Jennifer Francis, Ryan LaFond, Per M. Olsson, Kathrine Schipper, "Cost of Equity and Earnings Attributes", **The Accounting Review**, Vol.79, No.4, 2004, pp.967-969.

interaction between earnings attributes should also be considered. For instance one of these interactions that is analyzed in the study is between persistence and predictability. Predictability captures the ability of earnings to predict itself and persistence captures the ability of earnings to sustain its performance over time. The interaction is measured with the magnitude of the error term in the first order auto regressive model. The mean shock may be very large or small. In the former case the firm may have unpredictable earnings that are very persistent and in the latter case earnings may be predictable however they may not be persistent.[4]

Barton et. al (2010) performed a principle components factor analysis test in order to detect the relation between earnings attributes on 46 countries, including Turkey. The factors included in the model are sustainability and the articulation with cash flows. Authors suggest that incorporation of earnings attributes in a research requires much attention consistent with the evidence obtained in the study. Results of the study indicates that value relevance of performance measures enhanced when they are more timely, unbiased and accruals are more uttered with the cash flows and value relevance of performance measures decrease when they are smoother, more persistent and predictable and less conservative.[5] The intuition behind Barton et. al (2010)[6] study constitutes the motivation of this study.[7] Findings of Barton et. al (2010) for value relevance and conservatism are mix. It is stated that biased information decrease the value relevance of performance measures and additionally it is stated that less conservative which are by definition less biased measures are less value relevant. Francis et. al (2004) states that conservatism do not enhance the value relevance of accounting information.[8] It should also be noted that against many studies which states conservatism to be one of the desirable attributes, there some studies that suggest a decrease would be observed in earnings quality due to bias introduced in earnings through conservatism. These are making this topic appealing to investigate.

The relation between conservatism and value relevance of accounting information may be founded on the two uses of financial reporting: contracting and valuation. Depending on the extensive literature on both earnings attributes, it can be concluded that contracting use of financial reporting is consistent with conservatism, specifically conditional conservatism while value relevance of accounting information is consistent with valuation use. The question is whether these two uses alternatives

[4] Jan Barton, Thomas Bowe Hansen, Grace Pownall, "Which Performance Measures Do Investors Around the World Value the Most - and Why?",**The Accounting Review**, Vol.85, No.3, pp.756-757.
[5]Jan Barton, Thomas Bowe Hansen, Grace Pownall, "Which Performance Measures Do Investors Around the World Value the Most - and Why?",**The Accounting Review**, Vol.85, No.3, 2010, pp.753-789.
[6]Jan Barton, Thomas Bowe Hansen, Grace Pownall, "Which Performance Measures Do Investors Around the World Value the Most - and Why?",**The Accounting Review**, Vol.85, No.3, 2010, pp.753-789.
[7]Distinction of that study and this study beside the research design lies in the time period analyzed and number of firm-year observations included.
[8]Jennifer Francis, Ryan LaFond, Per M. Olsson, Kathrine Schipper, "Cost of Equity and Earnings Attributes", **The Accounting Review**, Vol.79, No.4, 2004, pp.974.

or they are compatible indicating a positive or a negative relation between conservatism and value relevance. Gassen (2008) examines whether contracting and valuation uses are alternative or compatible. Evidence indicates that they are alternatives. As these uses are alternatives, the requirement of them would also be alternatives; indicating a negative relation between value relevance and conditional conservatism.[9]

In the same context Ball, Robin and Sadka (2005) perform a similar research. They shed light on the issue using debt and equity markets. It is stated that contracting explanation for conservatism majorly stems from debt markets and literature on conservatism and debt contracting support this suggestion (debt hypothesis). Alternative view is the value relevance view which states the objective of financial reporting as providing information to the share markets (equity hypothesis). These hypotheses are tested for conditional conservatism with the size of the market. Test of hypothesis on 22 countries indicate while there is relation between conditional conservatism and debt market size, there is no such a relation is available for equity markets.[10] Evidence provided in the study can be interpreted as different markets require different earnings attributes which are serving for distinct purposes. Therefore it can be concluded distinct uses such as valuation and contracting may be the reason of probable negative relation between conservatism and value relevance.

A comprehensive description of relation between conservatism and value relevance is set forth by Balachandran and Mohanram (2011). There are two view stated about this relationship. According to first view previously documented decrease in value relevance over time is attributed to another documented fact; increase in accounting conservatism. This view is supported by the increase in R&D cost and their accounting treatment. In case of conservatively expensing these costs, value relevance of earnings tend to decrease.[11]

The second view states that conservatism constrains the opportunistic behavior of management to overstate the earnings and provides more reliable and relevant accounting information which results in increase in value relevance of accounting information.[12]

This study attempts to provide evidence for this relationship between conservatism which has been a controversial concept accounting and value relevance

[9]Joachim Gassen, "Are Stewardship and Valuation Usefulness Compatible or Alternative Objecitves of Financial Accounting?", **Humboldt Universitat zu Berlin Working Paper**, 2008.
[10]Ray Ball, Ashok Robin, Gil Sadka, "Is Accounting Conservatism Due to DDebt or Share Markets? A test of "Contracting" and "Value Relevance" Theories of Accounting", **University of Chicago Working Paper**, 2005.
[11]Sudhakar Balachandran, Partha Mohanram,"Is the Decrease in Value Relevance of Accounting Driven by Increased Conservatism?", **Review of Accounting Studies,** No.16, 2011, pp.275-276.
[12]Sudhakar Balachandran, Partha Mohanram, "Is the Decrease in Value Relevance of Accounting Driven by Increased Conservatism?",**Review of Accounting Studies,** No.16, 2011, pp.275-276.

of earnings which is the proxy for usefulness of earnings in economic decision making. Additionally the findings would shed light on the exemption of conservatism from the IASB's Conceptual Framework in order to encourage neutral financial reporting. As decision usefulness is one of objective of financial reporting according to Conceptual Framework, determination of a negative relation would support the action of IASB. Lastly it is aimed to contribute to conservatism literature with empirical evidence in Turkey. The number of studies on conservatism is limited and also these studies suffer from some deficiencies which are not inherent in this study.

Empirical Studies on the Relation between Conservatism and Value Relevance of Accounting Information

Despite the extensive independent studies on both accounting conservatism and value relevance of accounting information; number of studies that have examined their relationship is relatively limited. The following table summarizes studies relationship.

Table 1 Summary of Empirical Studies on the Relationship between Conservatism and Value Relevance of Accounting Information

Author(s)	**Sample**	**Model - Conservatism**	**Model – Value Relevance**	**Finding**
Easton –Pae (2004)	U.S. 1988-2002	Incorporated in valuation model	Association study	Incorporation of conservatism results in enhanced value relevance of earnings.
Brown et. al (2006)	20 countries 1993-2004	Basu (1997) Ball-Shivakumar (2005) BTM ratio	Portfolio method	Higher level of conservatism induces a higher level of value relevance of earnings in countries with higher accrual intensity.
Choi (2006)	U.S. 1988-2004	Basu (1997)	Association study	Value relevance of earnings increase when there is an increase in the level of conservatism due to bank dependence.
Suijs (2008)	Proof	Bases on Basu (1997)	Information content study	Conservatism increases the value relevance of accounting information.

Jenkins et. al (2009)	U.S. 1980-2003	Basu (1997)	Association study	There is a positive relation between conservatism and value relevance of current earnings and negative relation with value relevance of future earnings within the context of business cycles.
Kousenidis et. al (2009)	Greece 1989-2003	Basu (1997)	Association study Portfolio method	While relevance of earnings increases under conservatism, excessive implication of it decreases the value relevance of earnings.
Barton et. al (2010)	U.S. 1996-2005	Ball-Shivakumar (2005)	Association study	Value relevance decrease with a decline in conservatism.
Balachandran Mohanram (2011)	U.S. 1975-2004	Beaver- Ryan (2000) Penman-Zhang (2002)	Association study Portfolio method	No significant association is detected.
Author(s)	**Sample**	**Model - Conservatism**	**Model – Value Relevance**	**Finding**
Manganaris et. al (2011)	U.K. German France Greece 1999-2008	Basu (1997)	Association study	Conservatism decrease value relevance of earnings (except for Germany)
Wang – Trimble (2011)	U.S. 1999-2008	An extension of Basu (1997)	Association study	Value relevance of nonrecurring gains decreases while value relevance of nonrecurring losses increases with an increase in conservatism.

Hypotheses Development

The research question for this study is the impact of conditional conservatism on the value relevance of earnings. In order to construct the hypothesis for the research question, existence or non-existence of conservatism in the sample should be determined. Related hypothesis can be stated as follows:

H_1 : Firms in the sample apply conditional conservatism in preparation of financial statements.

After the determination of existence or non-existence of conservatism in financial statements, the relation between conditional conservatism and value relevance of earnings is investigated in accordance with the following hypothesis:

H_2 : Conditional conservatism has a negative impact on value relevance of earnings.

The evidence on the relationship between conservatism and value relevance of accounting information is mixed with a slight dominance of positive relationship. However theoretical background directs towards a negative relationship rather than a positive relation. One reason depends on the different uses of accounting (i.e. contracting and valuation). If conservatism and value relevance of accounting information are treated as an indicator of these uses, conflicting relation between them may result in a negative association. Additionally possible bias introduced by accounting conservatism into financial information would reduce the decision usefulness. A positive relation can be found according to theory through increase in reliability of accounting information with application of conservative accounting policies and consequently an increase in value relevance of accounting information may be observed.

Research Design

Consistent with research question of the study an appropriate research designed should be constructed in order to test the hypothesis. The research question is twofold. Firstly firms in the sample are separated depending on whether they are conservative or non-conservative. Then value relevance of earnings for each group of firms are measured to conclude whether conservatism has an impact on it.

Discrimination of firms as conservative or non-conservative are made using Basu (1997)[13]. The model is run for each firm in the sample to determine the sign of conservatism coefficient using times series analysis. Then it is necessary to employ the same model for conservative and conservative firms as a group. Because Basu (1997) is a firm-year measure of conservatism. Interpretation of test results for individual firms may provide erroneous conclusions. This is overcome with the second time employment of the model on firm-year basis.

[13]Sudipta Basu, "The Conservatism Principle and Asymmetric Timeliness of Earnings", **Journal of Accounting and Economics**, No. 24, 1997, pp.3-37.

After identification conservative and non-conservative group of firms, value relevance of earnings is measured. Again this measurement is made on firm-year basis. There are two methods that are used to measure value relevance: association method and portfolio method. Control of market volatility with portfolio method is reason for using it besides association study which the most commonly used method recently. The valuation method that is incorporated in the association study is Easton-Harris (1991)[14]. Portfolio method is used following Alford et. al (1993)[15].

All firm-year measures are tested using "Panel Data" statistical analysis method in contrast to "Pooled OLS (Ordinary Least squares)" statistical analysis method which commonly employed in empirical research in accounting. More reliable results can be obtained using panel data analysis because panel data methodology focus on firm-specific heterogeneous variability. While under Pooled OLS methodology this point is ignored and all observations are treated as serially uncorrelated for a given firm and exhibits homoskedasticity errors across firms and time periods.[16]

Models

In this part models that are used for measuring conditional conservatism and value relevance of earnings are explained respectively.

Asymmetrical Timeliness Model Used for Measuring Conditional Conservatism

Conditional conservatism is gauged using the model developed by Basu (1997). Despite a large body of criticism against this model, it is the most widely employed model.

The model of Basu (1997) is constructed on the interpretation of conservatism as tendency to require of a higher degree of verification in recognition of good news relative to bad news in the financial statements. Therefore under conditional conservatism which also called as "earnings conservatism" bad news are reflected in earnings sooner than good news. While earnings are used as the dependent variable in the model in which good and bad news are reflected, annual stock return is used as the proxy for good and bad news.[17]

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[14]Peter D. Easton, Trevor S. Harris, "Earnings As an Explanatory Varaible for Returns", **Journal of Accounting Research**, Vol.29, No.1, 1991, pp.19-36.

[15] Andrew Alford, Jennifer Jones, Richard Leftwich, Mark Zmijewski,"The Relative Informativeness of Accounting Disclousers in Diffrent Countries", **Journal of Accounting Research**, Vol.31, Studies on International Accounting, 1993, pp.183-223.

[16]Christos A. Grambovas, Begona Giner, Demetris Christodoulou, "Earnings Conservatism: Panel Data Evidence from the European Union and the United States", **Abacus**, Vol.42, No.3/4, 2006, p.356.

[17] Sudipta Basu, "The Conservatism Principle and ASymmetric Timeliness of Earnings", **Journal of Accounting and Economics**, No. 24, 1997, pp.4-6.

Accordingly the model is constructed as in the following[18]:

$$\frac{EPS_{it}}{P_{it-1}} = \alpha_0 + \alpha_1 DR_{it} + \beta_0 R_{it} + \beta_1 R_{it}{*}DR_{it}$$

where;

EPS_{it}: Earning per share for firm i in fiscal period t

P_{it-1}: Price per share at the beginning of period

R_{it}: Return for the period

DR_{it}: dummy variable; =1 if $R_{it} \leq 0$, =0 otherwise

β_1 coefficient in the model captures the sensitivity of earnings to bad news. Therefore it is the measure of conservatism. A significantly positive β_1 indicates the existence of conservatism in the sample.[19] Otherwise the sample is attributed to be non-conservative.

Association Model for Measuring Value Relevance of Earnings

Easton and Harris (1991) construct this model in order to detect the relevance of earnings levels for evaluating earnings/return relation. The motivation for the study lies on the relation between book value and market value (as level) which are named to be "stock" variables indicating the wealth of the firm's equity. Such a relation is expected between earnings and stock return which are name to be "flow" variables. Additionally it is suggested that relevance of earnings in explaining return do not diminish the importance of change in earnings. Change in earnings is also incorporated in the model.[20]

Both book value valuation model and earnings valuation model are used to derive the relation between earning and change in earnings with return. While book value valuation model is used for deriving the relation with earnings, earnings model provides the inclusion of change in earnings into the model.[21]

[18]Sudipta Basu, "The Conservatism Principle and Asymmetric Timeliness of Earnings", **Journal of Accounting and Economics**, No. 24, 1997, p.13.
[19]Sudipta Basu, "The Conservatism Principle and Asymmetric Timeliness of Earnings", **Journal of Accounting and Economics**, No. 24,1997, pp.11.
[20]Peter D. Easton, Trevor S. Harris, "Earnings As an Explanatory Varaible for Returns", **Journal of Accounting Research**, Vol.29, No.1, 1991, pp.19-20.
[21]Peter D. Easton, Trevor S. Harris, "Earnings As an Explanatory Varaible for Returns", **Journal of Accounting Research**, Vol.29, No.1, 1991, p.21.

The association between price and book value is stated as in the following in accordance with the book value valuation model[22]:

$$P_{it} = BV_{it} + u_{it}$$

Where;

P_{it}: price per share for firm i at time j

BV_{it}: book per share for firm i at time j

If first difference of variables is taken, the equation will be:

$\Delta P_{it} = \Delta BV_{it} + u_{it}$

In order to incorporate earnings in the model the following general equation is used:

$$\Delta BV_{it} = EPS_{it} - d_{it}$$

where; EPS_{it} is earnings per share for firm i for period t.

Replacing the last equation in the second equation and dividing each variable by price per share for the beginning of the period yields the following Equation (1):

$$\frac{\Delta P_{it} + d_{it}}{P_{it-1}} = \frac{EPS_{it}}{P_{it-1}} + u_{it}$$

Secondly earnings valuation model is used to derive the relation between change in earnings and return. This derivation is based on Ohlson (1989) who determines the following equation depending on Miller and Modigliani (1961) dividend irrelevance proposition[23]:

$$P_{it} + d_{it} = \mu EPS_{it} + u_{it}$$

Taking the first difference yields the following Equation (2):

$$\frac{\Delta P_{it} + d_{it}}{P_{it-1}} = \mu\left[\frac{\Delta EPS_{it}}{P_{it-1}}\right] + u_{it}$$

Combining Equation (1) and Equation (2) provides the construction of the regression model that relates earnings and change in earnings to return.

[22]Peter D. Easton, Trevor S. Harris, "Earnings As an Explanatory Varaible for Returns", **Journal of Accounting Research**, Vol.29, No.1, pp.21-22.
[23]Peter D. Easton, Trevor S. Harris, "Earnings As an Explanatory Varaible for Returns", **Journal of Accounting Research**, Vol.29, No.1, p.22.

$$R_{it} = \alpha_{1t} EPS_{it}/P_{it-1} + \alpha_{2t} \Delta EPS_{it}/P_{it-1} + u_{it}$$

Easton (1999) interprets this regression model and suggest that it can be derived from Ohlson (1995) the well known valuation model that depends on clean surplus accounting[24]:

$$P_{it} = \alpha_0 + \alpha_1 BV_{it} + \alpha_3 EPS_{it} + u_{it}$$

Taking the first difference yields the same equation obtained in Easton and Harris (1991). Therefore it can be concluded that even this model is named to be an earnings model in value relevance literature, it is consistent with Ohlson modeling which was explained in the second chapter of this study.

Portfolio Method for Measuring Value Relevance of Earnings

Portfolio method is developed by Alford et. al (1993) in an international study in which usefulness of earnings is measured. The basic idea under the method is whether foreknowledge of accounting information provides to obtain positive returns. If such a return can be obtained, it is concluded that "accounting information" is value relevant.[25]

Initial step in this method is to calculate the market adjusted return for each firm in the sample. Market adjusted return is the return of the firm for the period less market return for the period. Market return is equal to the return of equally weighted portfolio composed of all firms in the sample.[26]

Second accounting information is used to rank firms. Then two equally weighted portfolio are formed with the highest 40% and lowest 40% of the ranked firms. Lastly return that can be obtained by taking a long position with the highest accounting information number and taking a short with the lowest accounting information number. Both magnitude and the sign of the accounting information are taken into consideration. The return on this strategy is named to the accounting information (in Alford -1993; earnings) based hedge portfolio cumulative (market adjusted) return. Significantly positive return on the hedge portfolio indicates the value relevance of accounting information.[27]

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[24] Peter D. Easton, "Security Returns and the Value Relevance of Accounting Data", **Accounting Horizions**, Vol.13, No.4, 1999, pp.402-403.

[25]Andrew Alford, Jennifer Jones, Richard Leftwich, Mark Zmijewski,"The Relative Informativeness of Accounting Disclousers in Different Countries", **Journal of Accounting Research**, Vol.31, Studies on International Accounting, 1993, pp.196-197.

[26]Andrew Alford, Jennifer Jones, Richard Leftwich, Mark Zmijewski,"The Relative Informativeness of Accounting Disclousers in Different Countries", **Journal of Accounting Research**, Vol.31, Studies on International Accounting, 1993, p.196.

[27]Andrew Alford, Jennifer Jones, Richard Leftwich, Mark Zmijewski,"The Relative Informativeness of Accounting Disclousers in Different Countries", **Journal of Accounting Research**, Vol.31, Studies on International Accounting, 1993, p.197.

Francis and Schipper (2004) suggest that portfolio method is more preferable than association study. While market volatility is controlled under portfolio methods, under association studies no such a control is possible. Volatility in the market may cause misinterpretation under association studies, because even there is no change in the explanatory power of accounting information, uncontrolled volatility may imply that there is a change in the level of value relevance of accounting information.[28]

Sample

This study is designed as a CMBAR. Therefore firms listed in ISE are used. Another reason for choosing listed firms is the audit of their financial statements. Audited financial statements provide more reliable accounting information; subsequently increasing the reliability of the results that are obtained in the study.

Model which is used for measuring the degree of conservatism –Basu (1997)- uses good and bad news as an indicator of conservatism. This specification brings a threat to the inferences that are made depending on this measure. Because it is implicitly assumed that all economic event would affect earnings. However, putting the level of conservatism applied by the firm apart, some economic events do not affect earnings for the current period or even there is an effect it may be limited. Receipt of a new long term contract, increase in interest rates that does not affect the cost of existing debt, a new regulation, change in future tax rates, approval or disapproval of a newly developed drug, a new invention or designation of CEO are some examples of this kind of events. These economic events do not have major effect on earnings but they influence stock returns. The level of conservatism may be affected by predominance of such events in financial reporting. This influence may be less pronounced between firms in the same industry because they are facing similar circumstances.[29] Following Givoly et. al (2007) it is decided to select firms from the same industry. As number of firms is much larger in manufacturing industry relative to other industries, sample is selected among manufacturing industry.

Sample period is determined as 2006-2010 period. Application of inflation accounting until 2005 prevent using data before this year in panel data due to decay in comparability of the data. 2005 should be excluded because all variable are not at level, some of them are defined as change and requires data of the current and the previous year.

Another constraint that is imposed by the conservatism model is the use of quarterly data. Although majority of the studies employed yearly data Givoly et.

[28]Jennifer Francis, Kathrine Schipper, "Have Financial Statements Lost Their Relevance?",**Journal of Accounting Research**, Vol.37, No.2, 1999, p. 321.
[29]Dan Givoly, Carla K. Hayn, Ashok Natarajan, "Measuring Reporting Conservatism", **The Accounting Review**, Vol.82, No.1, 2007, pp.77-78.

al(2007)[30] suggest that inferences made on quarterly data would yield more robust results. Detection of conservatism with aggregation of earnings and cumulative returns for a year may provide erroneous conclusions. Test with quarterly data is suggested to diminish this "aggregation effect". Therefore for measuring conditional conservatism quarterly data is used. For measuring value relevance of earnings yearly data is employed.

Lastly firms are selected for the sample which are listed for six consecutive years in order to have balanced panel structure. In accordance with the restrictions above 106 listed manufacturing firms whose quarterly data can be gathered reliably are included in sample.

Variables

There are three models used in the hypothesis testing. Variables incorporated in Basu (1997) and Easton and Harris (1991) are described in the following two tables. Two variables are employed in portfolio method, which are annual return and price deflated change in earnings. As they are same with the ones in Easton and Harris (1991), descriptions in Easton and Harris (1991) can be referred.

Earnings data is gather from ISE, published financial statements. Monthly return and price data is available on ISE web site. Definition of monthly price and return data is as in the following[31]:

Price: The closing price of a stock with a nominal value of 1 TL on the last trading day of the month unless stated otherwise. If the stock is not traded during the month, it is the last trading price of the stock.

Monthly return: The monthly return of a stock is calculated according to the following formula:

$$G_i = \frac{F_i * (BDL + BDZ + 1) - R * BDL + T - F_{i-1}}{F_{i-1}}$$

G_i: Return for the month i

F_i: The closing price of the stock on the last trading day of the month i

BDL: The number of rights issues received during the month

BDZ: The number of bonus issues received during the month

R: The price for exercising rights (i.e. subscription price)

[30]Dan Givoly, Carla K. Hayn, Ashok Natarajan, "Measuring Reporting Conservatism", **The Accounting Review**, Vol.82, No.1, 2007, pp.69-70.

[31]http://ise.org/Data/fiyat_getiri_aciklama.aspx?sflang=en (31 March 2012)

T: The amount of net dividends received during the month for a stock with nominal value of 1 TL

F_{i-1}: The closing price of a stock on the last trading day of the month "i-1"

Table 2 Description of Variables in Basu (1997)

Model : $\frac{EPS_{it}}{P_{it-1}} = \alpha_0 + \alpha_1 DR_{it} + \beta_0 R_{it} + \beta_1 R_{it}{}^* DR_{it}$	
$\frac{EPS_{it}}{P_{it-1}}$	Earnings per share for the quarter deflated by price of the stock at the beginning of the quarter
R_{it}	Quarterly compounded monthly return
DR_{it}	Dummy variable; =1 if $R_{it} \leq 0$, =0 otherwise

Table 3 Description of Variables in Easton and Harris (1991)

Model : $R_{it} = \alpha_0 + \alpha_{1t} EPS_{it}/P_{it-1} + \alpha_{2t} \Delta EPS_{it}/P_{it-1} + u_{it}$	
R_{it}	Yearly compounded monthly returnOne year period is started after the 3rd month and ended with the 3rd month of the coming year. (April-March period is taken for representing 1 year period.)
$\frac{EPS_{it}}{P_{it-1}}$	Earnings per share for the year deflated by price of the stock at the beginning of the year
$\frac{\Delta EPS_{it}}{P_{it-1}}$	Change in earnings per share for the year deflated by price of the stock at the beginning of the year

Descriptive Statistics for Variables

Descriptive statistics for variables used in Basu (1997) and Easton-Easton Harris (1991) are provided in Table 4, Table 5 and Table 6. Descriptive statistics for variables in portfolio method are same with Easton and Harris (1991). Therefore they are not tabulated separately. Discrimination of conservative and non-conservative firms is made in the following section. However it is found useful to provide them with the descriptive statistics of whole sample.

One outstanding property in descriptive statistics of variables is dispersion in quarterly earnings for conservative firms. This situation can be observed in all firms sample accordingly. Similar dispersion is available for change in earnings number in

yearly data. (Table 4 and Table 6). When descriptive statistics for dummy variable is analyzed, it can be concluded that positive returns, which are indicator of good news, are dominant in the data. (Table 5)

Table 4 Descriptive Statistics of Quarterly Variables in Basu (1997)

	Model : $\frac{EPS_{it}}{P_{it-1}} = \alpha_0 + \alpha_1 DR_{it} + \beta_0 R_{it} + \beta_1 R_{it}{}^{*} DR_{it}$					
	Variable	Obs.	Mean	St. Dev.	Min.	Max.
Conservative	Earnings	1320	-0.0165	0.4545	-6.5537	7.8116
	Return	1320	0.0109	0.0962	-0.3109	0.9822
Non-Conservative	Earnings	800	0.0164	0.0796	-0.6012	1.4620
	Return	800	0.0157	0.0875	-0.2726	0.5066
All Sample	Earnings	2120	0.0004	0.3625	-6.5537	7.8116
	Return	2120	0.0127	0.0930	-.3109	0.9822

Table 5 Descriptive Statistics of Dummy Variable in Basu (1997)

	Model : $\frac{EPS_{it}}{P_{it-1}} = \alpha_0 + \alpha_1 DR_{it} + \beta_0 R_{it} + \beta_1 R_{it}{}^{*} DR_{it}$					
	Conservative Firms		Non-Conservative Firms		All Firms	
	Frequency	%	Frequency	%	Frequency	%
Dummy =1	611	46.29	355	44.38	966	45.57
Dummy=0	709	53.71	445	55.63	1,154	54.43

Table 6 Descriptive Statistics of Yearly Variables in Easton-Harris (1991)

	Model : $R_{it} = \alpha_0 + \alpha_{1t} EPS_{it}/P_{it-1} + \alpha_{2t} \Delta EPS_{it}/P_{it-1} + u_{it}$					
	Variable	Obs.	Mean	St. Dev.	Min.	Max.
Conservative	Return	330	0.0094	0.0500	-0.1430	0.2646

	Earnings	330	-0.0425	0.5890	-6.7708	2.3915
	Change in Earnings	330	0.0619	0.5770	-2.4841	5.1457
Non-Conservative	Return	200	0.0142	0.04822	0.0923	0.1744
	Earnings	200	0.0623	0.1424	-0.6731	0.9907
	Change in Earnings	200	0.0158	0.1649	-0.5149	1.7067
All Sample	Return	530	0.0112	0.04937	-0.1430	0.2646
	Earnings	530	-0.0029	0.4753	-6.7708	2.3915
	Change in Earnings	530	0.0445	0.4666	-2.4841	5.1457

Hypothesis Testing

In this section hypothesis that are developed in the previous section are tested using the explained models and then results of tests are interpreted with the possible limitations. Firstly existence and non-existence of conservatism are tested using Basu (1997). Later value relevance for each group of firms is tested using Easton and Harris (1991) and portfolio method in order to reach a conclusion about the second hypothesis.

Results of Tests for Conditional Conservatism – Basu (1997)

Basu (1997) is a firm-year measure of conditional conservatism. Therefore this model is not used for hypothesis testing on firm basis. However in this study it is needed to discriminate firms as conservative and non-conservative. Therefore initially the model is used on individual firms in order to determine whether the tested firm is included in conservative or non-conservative group. As there is no intend to make a prediction, the coefficient of conservatism is used without taking significance levels into consideration. And results for time series tests are not reported.

After discrimination process, Basu (1997) is used to detect the existence or non-existence conservatism in each group using panel data estimation models in order to test H1. Fixed effect and random effect estimation models are used for the sample. Then Hausman specification test is used to compare fixed effect and random effect under the null hypothesis that random effect is consistent and efficient.

For conservative group Hausman test statistics is large (pro > chi^2 = 0.0362), accordingly null hypothesis is rejected and fixed effect estimation model is used. For

non-conservative group null hypothesis rejected (pro > chi² = 0.0000), and it is concluded that it is appropriate to use fixed effect estimation model. Test results for appropriate estimation models are reported in Table 7.

According to Basu (1997) the null hypothesis that conservatism is present in the data is accepted with a significantly positive conservatism coefficient (β_1). Otherwise null hypothesis is rejected. Results that are obtained from panel data analysis are consistent with discrimination made according to time series analysis. Conservatism coefficient (β_1) is significantly positive for conservative firms and it is significantly negative for non-conservative firms. Results are provided in the following table (Table 7).

Table 7 Results of Test for Conditional Conservatism – Basu (1997)

	Model : $\frac{EPS_{it}}{P_{it-1}} = \alpha_0 + \alpha_1 DR_{it} + \beta_0 R_{it} + \beta_1 R_{it}{*}DR_{it}$			
	α_0	α_1	β_0	$\boldsymbol{\beta_1}$
Conservative	-0.0031695 (-0.14)	0.0382391 (1.08)	-0.0332571 (-0.16)	**1.037262** **(2.77)***
Non-conservative	0.0068409 (1.25)	0.0019612 (0.24)	0.120728 (2.16)**	**-0.26156** **(-2.75)***

Note: Test statistics are given in parenthesis. *,**,*** shows the significance level at 1%, 5% and 10% levels respectively.

Results of Tests for Value Relevance of Earnings – Easton and Harris (1991)

In the second stage of the analysis, value relevance of earnings is measured for each group of firms using Easton and Harris (1991). Like in the previous analysis panel data analysis is used with fixed effect and random effect estimation models. Hausman test is used to determine with model is appropriate.

For conservative group Hausman specification test null hypothesis is accepted (pro > chi² = 0.3161) and random effect estimation model which appropriate for this model is used. Hausman specification test result indicate that fixed effect estimation method is appropriate for non-conservative group (pro > chi² = 0.0790). Test results for appropriate estimation models are reported in Table 8.

The approach employed in interpretation of test results of value relevance of earnings is a "relative association study". Therefore comparison between two groups of firms is made depending on R^2 of regression models. R^2 indicates the explanatory power of earnings and change in earnings for return for the period. Test results indicate that value relevance of earnings is higher in non-conservative firms relative to conservative firms. If significance of coefficients is compared as proxy for value

relevance, same results can be obtained for level of earnings with 1% significance level. Conversely change in earnings are more value relevant for conservative firms.

Table 8 Results of Test for Value Relevance of Earnings – Easton and Harris (1991)

	Model : $R_{it} = \alpha_0 + \alpha_{1t}EPS_{it}/P_{it-1} + \alpha_{2t}\Delta EPS_{it}/P_{it-1} + u_{it}$			
	α_0	α_1	α_2	**R^2**
Conservative firms	0.0091087 (3.28)*	0.0053537 (1.15)	0.0104967 (2.20)*	**0.0514**
Non-conservative	0.0042349 (0.90)	0.1642264 (2.72)*	-0.0168667 (-0.38)	**0.1218**

Note: Test statistics are given in parenthesis. *,**,*** shows the significance level at 1%, 5% and 10% levels respectively.

Results of Tests for Value Relevance of Earnings – Portfolio Method

In addition to association study which is employed in the previous section, value relevance of earnings is measured also with portfolio method. As it is mentioned in the previous sections, in portfolio method foreknowledge of accounting information is used to determine whether any excess return can be obtained with the hedge portfolio.

To construct an accounting information based hedge portfolio, an accounting information by which firms are ranked should be determined. In this study following Francis and Schipper (1999)[32] sign and magnitude of change in earnings is selected as the criteria for ranking. Then an earnings based hedge portfolio is formed which is composed of highest 40% and lowest 40% change in earnings number (both sign and magnitude are taken into consideration) for each group of firms. Lastly return of the earnings based hedge portfolio is calculated for each year. Comparison of value relevance of earnings is made according to the level of return gained from each portfolio. Group of firms with the higher return is attributed to be more value relevant. Results for the portfolio method are given in the following table (Table 9).

Conservative group is able to provide higher return only in two of five observation years. In remaining year non-conservative group outperforms them. Additionally average of earnings based hedge portfolio is higher for non-conservative group than conservative group. These findings indicate that value relevance of earnings is higher for non-conservative firms in comparison to conservative firms.

[32]Jennifer Francis, Kathrine Schipper, "Have Financial Statements Lost Their Relevance?",**Journal of Accounting Research**, Vol.37, No.2, 1999, pp. 319-352.

Table 9 Results of Test for Value Relevance of Earnings – Easton and Harris (1991)

	Conservative Firms	**Non-Conservative Firms**
	Hedge Portfolio Return (%)	**Hedge Portfolio Return (%)**
2006	1.61	0.27
2007	1.79	0.90
2008	0.21	1.55
2009	0.42	3.09
2010	1.93	3.02
Average	**1.19**	**1.85**

Interpretation of Test Results

In this part results obtained through tests of hypothesis are interpreted in comparison with prior research on the same subject. Firstly results obtained from Basu (1997) are analyzed. Basu (1997) measures conservatism with coefficient β_1 under null hypothesis that conservatism is present in the data is accepted with a significantly positive coefficient β_1. According to results of hypothesis $\beta_1$determined as 1.037262 (significant at 5%) for conservative group and -0.26156 (significant at 1%) for non-conservative group. Consistent with H1 conservatism is found in the data for conservative group of firms. For the other group H1 is rejected indicating the nonexistence of conservatism in financial statements. It can be suggested that as one group is conservative, the other group would be "aggressive". However level of coefficient β_1 is close to zero. Then it would be appropriate to name the group as "neutral" rather than "aggressive".

At the second stage of analysis value relevance of earnings is measured for each group. Association study methodology is employed initially for measuring explanatory power of level and change of earnings per share for return of the stock. Test results indicate that R^2 is 0.0514 for conservative group and 0.1218 for non conservative group. These results are consistent with H2 suggesting a negative impact of conservatism on value relevance of earnings. Additionally coefficients for earnings and change in earnings are significant at 1% for non conservative group, only change in earnings is significant at 5% for conservative group. This conclusion also provides support H2.

Further analysis for measuring value relevance of earnings is performed with portfolio method. Market adjusted return of hedge portfolio is computed and compared for sample groups and ranking criteria is determined as the sign and the magnitude of change in earnings. Results are majorly consistent with previous results of association study. Only in 2006 and 2007 conservative group is able to outperform non conservative group. In the remaining three years foreknowledge of earnings information provide a higher return for non-conservative group. Moreover average return of all years is higher for non-conservative group relative to conservative group.

In conclusion it is found that value relevance of earnings is higher for non-conservative group indicating a negative impact of conservatism on usefulness of accounting information in context of valuation for manufacturing firms. This result is consistent with the evidence provided by Mangaranis et. al (2011) which concluded that increase (decrease) in conservatism cause a decrease (increase) in value relevance of earnings in Greece, France and UK. Regression models used in that study is same with the ones used in this study.[33] Also result of this study is partially consistent with the results reported by Kousenidis et. al (2009) which indicate an increase in value relevance of earnings with a moderate level of conservative however a decrease is evidenced with high level of conservatism.[34]

On the other hand result of the study is inconsistent with Brown et al (2006)[35], Jenkins (2009)[36] and Barton (2009)[37] which indicate a positive relation between value relevance of earnings and conservatism and Balachanran and Mohanram (2011) who fail to find a significant relation between conservatism and value relevance of accounting information. The reason for the conclusion obtained in Balachanran and Mohanram (2011) may be due to research design. Because in the study the relation between unconditional conservatism and both value relevance of earnings and book values is investigated.[38]

Furthermore result of the study may be found useful in analyzing the exemption of conservatism from IASB's Conceptual Framework as a qualitative characteristic. Evidence of the study supports the decision taken by IASB about conservatism. Lastly conservatism may be one of the reasons in decrease in value relevance of accounting information over time which is documented in empirical research due to increase in level of conservatism applied by firms over time and the negative impact of conservatism on value relevance of earnings.

These findings should be interpreted with some possible limitations. First limitation is survivorship bias. In order to have a balanced panel structure only firms that are listed for six consecutive year between 2005-2010 are included in the data.

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[33]Panayotis Manganaris, Jordan Floropoulos, Irini Smaragdi, "Conservatism and Value Relevance: Evidence form the Europrean Financial Sector", **American Jornal of Economics and Business Administration**, Vol.3, No.2, 2011, pp.259-269

[34]Dimitrios V. Kousenidis, Anestis C. Ladas, Christos I. Negakis, "Value Relevance of Conservative and Non-Conservative Accounting Information", **The International Journal of Accounting**, No.44, 2009, pp.219-238.

[35]William D. Brown, "Conditional Conservatism and the Value Relevance of Accounting Earnings: An International Study", **European Accounting Review**, Vol.5, No. 4,2006, pp.605-626.

[36]David S. Jenkins, Gregory D. Kane, Uma Velury, "Earnings Conservatism and Value Relevance Across the Business Cycle", **Journal of Business Finance and Accounting**, Vol.36, no.9&10, 2009, pp. 1041-1058.

[37]Jan Barton, Thomas Bowe Hansen, Grace Pownall, "Which Performance Measures Do Investors Around the World Value the Most - and Why?",**the Accounting Review**, Vol.85, No.3, 2009, pp.756-757.

[38]Sudhakar Balachandran, Partha Mohanram, "Is the Decline in Value Relevance of Accounting Driven by Conservatism?",**Review of Accounting Studies**, No.16, 2011, pp.272-301.

Therefore companies which are unlisted during this period are excluded from data which introduces survivorship bias.

Another limitation is the market efficiency. While measuring value relevance of accounting information, it is assumed that markets are at least semi-strongly efficient; so that all publicly available information incorporates into the stock prices. Consequently any market condition that impedes the market efficiency would affect the inferences made depending on the evidence obtained.

Conclusion

Accounting conservatism is one of the most controversial topics in accounting. In this study, it is attempted to contribute the accounting literature on this debatable subject with conservatism's effect on value relevance of accounting. Conditional conservatism, which fundamentally captures conservatism in earnings, is analyzed rather than unconditional conservatism. Hence value relevance of earnings is selected as a proxy for usefulness of accounting information. The research question of the study appears as "the impact of conditional conservatism on value relevance of earnings"

The hypothesis is tested on 106 listed manufacturing firms in Istanbul Stock Exchange. The reason for choosing listed companies depends on measurement methods and reliability of the audited financial statements presented by listed companies. Both methods that are used for measuring value relevance and conservatism incorporates market information besides financial accounting information. In this sense this study contributes to the Capital Market Based Accounting Research in Turkey.

The impact of conservatism on value relevance of earnings is captured by dividing sample as conservative and non-conservative. Existence of conservatism in each group is gauged with the most commonly used model, Basu (1997). Then value relevance of each group is measured using two different methods; association study approach (Easton and Harris -1991) and portfolio method.

Evidence provided exhibits that incorporation of conditional conservatism in financial statements decrease the value relevance of earnings in manufacturing firms in Turkey. This finding is inconsistent results with the majority of the evidence provided in prior research that document a positive relation between accounting conservatism and value relevance of accounting information. However it should be noted that the limited number of firms included in the study may have an effect on the results found.

One of the contributions made by this study is on the exemption of conservatism from International Accounting Standards Board Conceptual Framework. The evidence of the research support the action of International Accounting Standards Board. Emphasize on neutrality rather than conservatism may

cause an enhancement in value relevance of earnings which makes earnings more useful for decision makers.

Finding of this study should be interpreted within its limitations. Survivorship bias is one of the limitations of the study. In order to have a balanced panel structure firms which are listed for six consecutive years between 2005-2010 period are included in the sample. Therefore firms which are unlisted during this period are excluded which introduced survivorship bias into the data. Another limitation is market efficiency. One of the assumptions of value relevance research is the semi-strong form of efficiency. Under semi strong form of efficiency it is suggested that prices reflect all relevant publicly available information (i.e. earnings.) any departure from semi strong form of efficiency towards weak form of efficiency would impede the results of this study.

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