

**Research Article**

## **TEST OF COMPETITION IMPACT IN THE MARKET ON ACCOUNTING CONSERVATISM WITNESSES FROM STOCK EXCHANGE MARKET OF TEHRAN**

**Mahmoud Mahjour<sup>1</sup> and \*Mostafa Afshar<sup>2</sup>**

<sup>1</sup>*Department of Accounting, Takestan Branch, Islamic Azad University, Qazvin, Iran*

<sup>2</sup>*Department of Accounting, Nonprofit Institution of Higher Education of Molana, Abeik, Qazvin, Iran*

*\*Author for Correspondence*

### **ABSTRACT**

The present study tested the effects of product market competition on Accounting Conservatism: Evidence are from Stock Market of Tehran. The main objective of this study was to examine the effects of competition in the product market on accounting conservatism. The Period of the study is 10 years (2004-2013). Competition in the product market considers as an independent variable to calculate the Herfindal Herishman index. The dependent variable of this study is accounting conservatism by using Gioli and Hine (2000) model. The control variables are firm size, financial leverage, and SD current standard and asymmetric information. In this study, a sample of 122 companies was selected (1220 years), respectively. Regression model was used to test the hypotheses. To test his hypothesis, the Eviews software is also used. The results of the hypothesis test have positive and significant effect on competition in the product market accounting conservatism. In other words, with increasing competition in the product market accounting conservatism also increases. The result is a strategic argument that suggests a positive relationship between product market competition and conservative accounting is consistent and aligned.

**Keywords:** *Company Size, Product Market Competition, Information Asymmetry, Accounting Conservatism*

### **INTRODUCTION**

In this research, product market competition with accounting conservatism (asymmetric or timely detection of losses and timely recognition of economic losses attributed to the increase in revenues) is investigated. This is necessary to express views. The first view suggests that the relationship between product market competition and accounting conservatism is shaped by strategic considerations (Garcia *et al.*, 2009) that company reports its effects on the competitive consider. For example, few firms in the industry found that the timeliness of their usefulness will predict lower costs, To the extent that these issues discourage new companies to present their products to the market. This means that a company may be detected by loss reduction, to improve the status of competition in the inbound (volunteers) and existing competitors. The second view says it can conflict in the interests of managers and shareholders to reduce each of them. According to this view, the management can act as a benchmark in the presence of competing firms that should be evaluated. Fierce competition can also reduce administrative inertia, and force management to improve the company's productivity. The concept of this approach is that competition in the product market, asthenia (hypothyroidism) reduces management and monitoring improves subsequently reinforced unity in the interests of managers and shareholders. Therefore less likely accounting conservatism will exist as a regulatory mechanism. A disadvantage of this approach is that, for the benefit of competition in reducing conflicts, the costs will be ignored such as breach of contract costly due to the laxity of the company. The potential usefulness of the view is that shareholders can get when a company is in a monopoly position. Other arguments is regarding to the relationship between product market competition and accounting conservatism. For example, the monopoly on the political costs faces firms in competitive industries. There is a greater incentive for top companies in their industries than less competitive ones (less competitive industries) to detect losses.

An empirical relationship between product market competition and conservative accounting issues will cause errors. In particular, revenues from monopoly may not be reflected in the company's revenues while

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the return on equity take place (Garcia *et al.*, 2009) which could affect the relationship assessed in this study.

Competition in the product market creates strategic motives. There are two schools of thought differ in this regard. Examples include the threat of force and the threat of new entrants' replacement. In contrast, resource-based view suggests that firms are heterogeneous with source / competencies (Garcia *et al.*, 2009). Resource-based view, with a look at the inner (internal) side of the company and then focusing on how these resources can be combined will achieve a competitive advantage. Both views are relevant in the calculation of an intangible resource companies that have strategic values. To understand the strategic value accounting conservatism, it is used as a barrier to entry of new companies in the industry. With the entry of new firms it will lead to a weakened competitive position of a company, and bad news quickly discourage new entrants to the industry (Fee and Thomas, 2004). When the investment is reduced competitors, the company targets induce reduction (reduction in force) at the output of the competitors' products (Maguire, 2010). To the extent that timely disclosure of bad news with the leading competitor information is low, a fast detection and disclosure of bad news will happen. In other words, bad news by unaware competitors is as a result of reduced demand in the future interpretation. If the company can produce a shortage of supply demands will be less beneficial by competitors to the company (Garcia *et al.*, 2009). The strategic considerations can lead to the relationship between accounting conservatism and product market competition. As product market competition increases, companies recognize the benefits of irregular losses to their competitive position against competitors and new entrants will be improved. In addition, strategic considerations perspective predicts that industry follower's competitive industry; possibly provide additional accounting conservatism because these companies are more vulnerable to competitive pressures than industry leaders.

Competition in the product market can be indicated as an informal governance mechanism. The limitation of actions taken by managers those are contrary to the interests of shareholders. Expression of these two types of channels (causal) shows: First, competition can reduce administrative laxity and director of the company and improve efficiency (Alchyan, 1950). And intense competition can facilitate better monitoring of managers (Krishnan, 2005). Despite the competition, the profit of the company can be viewed as a criterion for evaluating the management. Thus, managers increase their profitability (Galbraith, 1952) Consistent with this reasoning Gazals nad Guadalpou (2006) found to what extent the benefits of private control over small companies connect with intensity of competition in product markets. Separately, Groud and Mueller (2010) found, while the anti-takeover provisions in the regulations (anti-seizure) has taken the market for corporate control, operational performance happened only for companies that have non-competitive industries. It is not a competitive industry. The concept is discussed that the product market competition plays the role of government, and hence the need to restrict the managers are less conservative. This argument predicts on average, there is a negative relationship between competition and accounting conservatism. Moreover, the effect is likely to be concentrated in the following industries as compared to industry leaders, faced with competitive pressures, and this will lead to restriction of managerial opportunism However, this is not expected to be established empirically for three reasons. First, accounting conservatism and competition play a distinct and complementary role in the management constraints (LaFond and Watts, 2008). Secondly Aschimet (1997) questioned the government has proposed to the view that given the low profit margins due to intense competition could undermine management efforts. The concept here is that the intensity of competition can exacerbate conflict manager and shareholder interests. Third, governance perspective highlights the companies that save money while ignoring the interests of the shareholders can receive as income monopoly. Thus, it is not clear whether competition can have a negative impact on conservatism or not. In addition to this view, there are issues of political spending, suggesting that companies recognize losses and profits for the monopolist to avoid regulatory scrutiny and sanctions.

Lara *et al.*, (2009) sought to increase the regulatory changes brought in accounting conservatism. The political costs show a negative relationship between product market competition and accounting conservatism. For example, it is expected to be more conservative in less competitive industries.

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Moreover, the political cost perspective predicts that the industry leaders in less competitive industries may develop more conservative as they may face sophisticated regulatory review. Thus, revenues from monopoly of problems caused by errors in the accounting conservatism tests (Beaver and Ryan, 2009). Since errors in product market competition issues variables using revenues from monopoly reduces revenues from the perspective predict a positive relationship between competition and monopoly accounting conservatism. The main argument here is the industry leaders when there is no competition, they have the ability to obtain additional revenues that are monopolistic. In summary, four views, contradictory predictions are considerable for the relationship between product market competitions and provide conditional conservatism. In particular, insights and strategic considerations predict that revenues from monopoly to competition in the product market have a positive impact on conservatism, while a negative view of sovereignty and political risks are predicted.

Thus, with regard to the expression above, the main research question is formulated as follow:

Do competitions in market Increase conservatism?

### **Research Background**

Dehaliva *et al* (2014) did a study titled "product market competition, and accounting conservatism". The results indicate a significant positive relationship between product market competitions based on accounting conservatism. did a study entitled "The competition in the product market, board structure and quality of disclosure". The results indicate a significant impact on the quality of competition. The results also suggest strengthening the structure of the board and exposing the quality of the competition.

Hui *et al.*, (2011) examined the relationship between bargaining power with suppliers and customers accounting conservatism. Results show a positive relationship between bargaining power with suppliers and customers accounting conservatism

Li (2010), did a study entitled "The impact of product market competition on the quantity and quality of voluntary disclosure period". Results showed an increase in the quality and quantity of voluntary disclosure that was the result of competition.

Ghorbani and colleagues (2013) in their study entitled "The competition in the product market, the Board and the quality of disclosure," stated the percentage of non-members of the Board that shall not reveal significant relationship quality and product market competition to improve and strengthen the relationship between these two variables.

examined the factors influencing conservative accounting practices. The results indicate a positive relationship between the degrees of operating leverage ratio of market value and book value of the company and the relationship between firm size and accounting conservatism was negative. in a paper examined the relationship between the ratio of market value and book value as the criteria discussed the conservatism. The results of this study showed a negative correlation between income reactions and good news with the aspect ratio of market value to book value of equity at the end of the period for a long time

## **MATERIALS AND METHODS**

### **Research Methodology**

The financial statements are required by harvesting information, software and Rahnavard website of new Exchange organization, all data collected is used to test the hypotheses. After selection and classification of sample companies in the industry, Excel software was used to do some calculations. Companies in different industries and categories are intended for grouping exchange. The need for data analysis, multivariate linear regression model was used for data analysis Eviews and SPSS software was used. Data fusion method was preferred. The next step is to select a model with fixed effects or random effects; the Hausman test was used according to the  $\chi^2$  statistic that is significant at the 1% level of error, panel data models with fixed effects was accepted. Finally, according to the results of the F test Limer and Hausman test this hypothesis is done through panel data using multiple regression analysis and generalizing least squares (GLS).

In this study, a sample of the target population after considering the following conditions and by using the screening method was selected.

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1. It shouldn't be a Component of service companies, investment and financial intermediaries.
2. The financial period shouldn't change to the end of March each year and during this financial year.
3. During the period of continuous activity in the stock of companies and their stock should be traded at least once within 6 months.
4. Information relating to the variables of annual reports of companies in the period 1382- 1391 is available.
5. Information on the range of  $\mu \pm 2\sigma$  variables is required.

Finally, after using the screening method 122 companies (1220 fiscal year) were selected for testing.

**Research Hypothesis**

In this study, according to the theoretical fundamentals it is expected to compete in the product market that has a significant influence on accounting conservatism. Accordingly, to check the accuracy of the predictions mentioned hypothesis is formulated as follows:

- first is accounting conservatism impact on competition in the product market.
- Conceptual model and research variables

In this study, a regression model was used to describe the relation (1).

Relation 1

$$\text{Conser}_{it} = b_0 + b_1\text{PMC}_{it} + b_2 \text{Size}_{it} + b_3\text{Leverage}_{it} + b_4\text{CFSTD}_{it} + b_5\text{Payout}_{it} + b_6\text{Spread}_{it} + \epsilon_{it}$$

**Calculating the research variables is as follow:**

**Dependant Variable**

Accounting conservatism (Conser): In order to measure conservatism, Gioly model and Hine (2000) is used. Gioly and Hine showed that with the passing of each year, the accrual of non-operational over the previous year is significantly negative (smaller). Accordingly, it was concluded that with the passage of time, it will be more conservative. The model Gioly and Hine, shows it's noteworthy that the magnitude of accruals lowers non-operational will be higher than conservatism.

Gioly and Hine said a measure of conservatism was estimated in the following model:

Relation 2  $\text{ACC}_{it} = (\text{NI}_{it} + \text{DEP}_{it}) - \text{CFO}_{it}$

Relation 3  $\text{OACC}_{it} = \Delta(\text{AR}_{it} + \text{I}_{it} + \text{PE}_{it}) - \Delta(\text{AP}_{it} + \text{TP}_{it})$

Relation 4  $\text{NOACC}_{it} = \text{ACC}_{it} - \text{OACC}_{it}$

Relation 5  $\text{CSVT}_{it} = 1 / (1 - \text{OACC}/\text{ACC})$

**Table 1: How to calculate the conservative model variables**

CFO of cash flows	ACC aggregate accruals
AP payables	I Inventories
OACC operating accruals	NI unexpected net profit before items
TP taxes payable	AR accounts receivable
NOACC accruals non-operational (optional)	DEP depreciation
CSVT direct indicator of conservatism	P Prepayments

**Independent Variable**

Competition in the product market (PMC): In this study, the independent variable is the product market competition.

The most commonly used measure of competition in the product market, is Herfindahl - Hirschman (HHI) index that shows the higher the index value indicates a more focused and less competition in the industry, and vice versa.

Relation 7

$$HHI = \sum_{i=1}^n S^2_{ij}$$

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Sij is the market share of firm i in industry j. For each company, its market share on net sales belongs to total net sales in this industry. Market share is the sum of the squares for each industry. The above calculation is done for each year and for each industry. HHI values imply less competition in the market and many companies are close. While higher values indicate that the market share are concentrated in the hands of a few large companies.

**Controlled Variables**

- Size: is equal to the natural logarithm of the market value of equity
- Financial leverage: is equal to the product of the total debt divided by the sum of Non-Current Assets
- Cash Flows (CFSTD): is equal to the standard deviation of operating cash flow over three years Total assets
- Dividend payment (Payout): is equal to the product of the total assets divided by total dividend payment
- The bid price difference between buying and selling stocks (information asymmetry (Spread): information asymmetry is calculated from the following equation.

Relation 8

$$Spread = \frac{(AP - BP)}{(AP + BP) \div 2} \times 100$$

**Table 2: How to calculate the variables of information asymmetry**

The magnitude of the difference between the price of an offer to buy or sell shares	<i>Spread</i>
Year of	<i>t</i>
Firm	<i>i</i>
The average price offered for sale shares of firm i in period t	<i>AP</i>
The average price of an offer to buy shares of firm i in period t	<i>BP</i>

According to the model, the range shows the difference between the prices offered for buying and selling stocks higher number indicates higher information asymmetry. In hypothesis testing, the absolute number of the model was used.

**RESULTS AND DISCUSSION**

**Research Findings**

In this study the hypothesis test, descriptive statistics and Pearson correlation coefficients of variables are examined. And then Hausman and Limer tested linear regression to determine the most appropriate of all companies and ultimately test the research hypothesis.

As shown in Table 2 (descriptive statistics variables) with the coefficient of variation (standard deviation divided by the product of the mean) the dependent variables are observed independent and in control of the entire company we found that the dependent variable is conservative.

**Table 3: Descriptive statistics of variables**

Variables	Conservatism	Competition in the product market	Company Size	Financial Leverage	Cash Flow Operations SD	Dividends paid	Information asymmetry
Average	0.755658	0.173743-	12.4705	0.078086	0.071879	0.069402	11.04559
Middle	0.602678	0.163146-	12.24192	0.056887	0.058751	0.041483	6.019675
Maximum	4.40258	0.04149-	18.23902	0.613312	0.347133	0.571411	57.11347
Minimum	1.431902-	0.90626-	8.921057	0.000996	0.147688	0	2.7676
Standard deviation	1.215091	0.103022	1.493526	0.069815	0.057835	0.082559	12.24959
Coefficient of Variation	1.607990652	0.592956263-	0.119764725	0.894078324	0.804616091	1.189576669	1.109002778

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As shown in Table 5 (Pearson correlation coefficients variables), see above. Pearson correlation coefficient of the matrix shows the correlation between the variables that is weak. This is defined as the dependent variable has a positive correlation with the hypothesis that product market competition, ie, with increasing competition in the product market, accounting conservatism increases. It also has a positive correlation with a standard deviation of operating cash. Accounting conservatism has a negative relationship with firm size, financial leverage, dividend payments and asymmetry of information.

**Table 4: Correlation coefficients of variables**

Variables	Conservatism	Competition in the product market	Company Size	Financial Leverage	The standard deviation of operating cash flow	Dividends paid	Information asymmetry
Conservatism	1						
Competition in the product market	0.007453	1					
Company Size	0.0579-	0.1286-	1				
Financial Leverage	0.0015-	0.07803-	0.0611	1			
The standard deviation of operating cash flow	0.231063	0.120003	0.0291	0.1032	1		
Dividends paid	0.04565-	0.067062	0.0237	0.0988	0.004729	1	
Information asymmetry	0.03107-	0.038366	0.1594	0.0441	0.02809-	0.0437	1

**Testing the Level of All Companies**

Before the research hypothesis the consolidated data model against accidental data model is discussed by using the F test Limer. F Limer test results are presented in Table 6, since the probability of F statistics of Limer is less than 5%, test the research hypothesis, data fusion method will eliminate it.

**Table 5: Results of the F test of Limer**

Probabilities test statistic	Degrees of freedom	Value of the test statistic	Type of test
0.014	(120 and 368)	1.367	F Limer

The rejection of data fusion model for random data, the Hausman test was selected for the fixed effects model. Hausman test results are presented in Table 7. The significance level of Hausman statistic is less than 5% probability and sufficient reason will reject the random effects model.

**Table 6: Results of the Hausman test**

The probability of the test statistic	Degree of freedom chi-square	The chi-square statistic	Type of test
0.003	6	19.227	Hausman

We have examined this hypothesis in Table 7. The effect of product market competition is examined on accounting conservatism. Competition in the product market is defined as a significant influence on accounting conservatism. The product has a significantly positive effect on accounting conservatism. In

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other words, with increasing competition in the product market accounting conservatism increases. So with regard to the impact of product market competition on accounting conservatism, the research hypothesis is accepted.

The results of the test control variables, firm size, financial leverage, operating cash flow diversion architecture, dividend payments and information asymmetry, suggest a negative relationship with conservative accounting firm size and asymmetry of information, and a positive correlation with a standard deviation of operating cash flow Accounting conservatism is 95%. Between financial leverage and dividend payments with accounting conservatism there was a significant relationship of 5% error level.

The result of the overall model was significant F statistics that show the camera parameters according to Watson have no problem of autocorrelation. The results of the adjusted coefficient of determination indicate that a total of about 9/66 of a conservative change is influenced by variables of the study.

**Table 7: Results of hypothesis regression**

Variable	The regression coefficients	The t-statistic	T-statistic probability
Constant	1.08418	13.80496	0
Competition in the product market	0.498347	3.244267	0.0013
Company Size	0.055503-	-10.96014	0:00 0
Financial Leverage	0.362861	1.781284	0.0755
SD Vhvh operating cash flow	4.727339	13.3061	0:00 0
Dividends paid	0.666313-	-1.862523	0.0631
Information asymmetry	0.00584-	-2.442533	0.0149
The coefficient of determination	0.673448	F statistics	167.7336
Adjusted coefficient of determination	0.669433	Statistics camera Watson	- 2.043176
Probability of F statistics		∞∞∞0	

**Conclusion**

This study examines the relationship between product market competitions and accounting conservatism. The results of hypothesis testing, show a significant positive relationship between product market competition and accounting conservatism. It also provided the theoretical fundamentals, these findings argue with political risks (negative relationship between product market competition and conservatism) that were inconsistent, And also by reason of corporate governance (intense competition due to the limitation of managers and administrators are not acting conservatism) is inconsistent too. Instead, according to the results of research it indicates excessive conservatism due to competition in the product market and Support the strategic vision (conservatism more intense competition) was strengthened. And led to general acceptance of this argument in the Tehran Stock Exchange of companies, the results of the research study of are consistent. Control variables, the results reflect negatively related to firm size and asymmetry of information with accounting conservatism and it has a positive relationship with the standard deviation of accounting conservatism. The results showed a significant relationship between financial leverage and dividend payment of accounting conservatism.

**Research Proposals**

1. The standard-setting bodies should develop specific standards for the industry to take note that this is also one of the factors that require conservative, debate competition. If the goal of policy is an attempt to provide fair information, Standard competition should result in biased information (conservatism more than usual) to be neutralized.

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2. As Porter (1980) pointed out, the nature of competition in an industry depends on five basic elements, customers, suppliers, potential competitors, alternative products and competitors in the industry. In this study, the relationship between product market competitions and accounting conservatism is studied. It is suggested that future studies will examine the relationship between each of the other factors to be dealt with conservatism.

3. to measure conservatism, the model of Gioly and Hein was used and suggested that future studies of other models will measure conservatism, the same as Basu's model (1997) and Khan and Watts Models (2007).

### **Research Limitations**

In the process of scientific research, there is a set of circumstances beyond the control of Researcher, but potentially could affect the study results. Some of these inherent limitations are due to environmental conditions and time limits. Scientific research is necessary to take into account the limitations of the analysis. The limitations of this study are as follows:

1. To calculate the competition Herfindahl and Heryshman index single product market is used. We have used variable indexes to calculate the product market competition as a factor of Tobin's Q index results.

2. To test the hypotheses of this study, the Tehran Stock Exchange member firms are used; While OTC companies have significant impact on competition in the product market and could limit the generalization of findings.

3. In this study, to measure conservatism, Hine and Gioly model is used. it is possible to use other methods such as the standard measure of conservatism Basu, and different results will be followed.

### **REFERENCES**

**Alchian AA (1950).** Uncertainty, evolution, and economic theory. *Journal of Political Economy* **58**(3) 211–221.

**Ali A, Klasa S, Beaver WH and Ryan SG (2009).** Risky debt, mixed-attribute accounting, and the identification of conditional conservatism. Working paper, New York University.

**Dan Dhaliwal, Shawn Huang and Inder K Khurana (2014).** Product market competition and conditional conservatism. *Review of Accounting Studies*, DOI 10.1007/s11142-013-9267-2.

**Fee CE and Thomas S (2004).** Sources of gains in horizontal mergers: Evidence from customer, supplier, and rival firms. *Journal of Financial Economics* **74** 423-460.

**Galbraith JK (1952).** *American Capitalism, the Concept of Countervailing Power* (Boston: Houghton Mifflin Co.).

**Garcia Lara JM, Garcia Osma B and Penalva F (2009).** The economic determinants of conditional conservatism. *Journal of Business Finance & Accounting* **36**(3–4) 336–372.

**Hui KW, Klasa S and Yeung PE (2012).** Corporate suppliers and customers and accounting conservatism. *Journal of Accounting and Economics* **53**(1–2) 115–135.

**Krishnan GV (2005).** The association between big 6 auditor industry expertise and the asymmetric timeliness of earnings. *Journal of Accounting, Auditing and Finance* **20**(3) 209–228.

**LaFond R and Watts RL (2008).** The information role of conservative financial statements. *The Accounting Review* **83**(2) 447–478.

**Li X (2010).** The impact of product market competition on the quantity and quality of voluntary disclosers. *Review of Accounting Studies* **15**(3) 663–711.

**Maguire K (2010).** Sourcebook of Criminal Justice Statistics [Online]. Bureau of Justice Statistics, Table 5.41.2010, Available: <http://www.albany.edu/sourcebook/pdf/t25412010.pdf>.