

The study of the effect of financing methods on EPS, DPS ratios of the companies admitted in Tehran stock exchange (TSE)

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Abstract: One way to standardize earning is changing it to earning per share. This importance has caused that calculation and real earning report of each share and its prediction according to the capital market rules become necessary. The general aim of the research is the study of the influence of each of financing methods on earning per share and cash dividend per share in Tehran stock exchange (TSE) or the study of the methods influence on earning per share and cash dividend per share changes of TSE companies. In the current research the followings are analyzed: The effect of stock emission on EPS, DPS, and the effect of debt on EPS, DPS and the effect of retained earnings on EPS, DPS. The data collection is field method of financial statements where written data and documents of stock exchange are used. This research is inductive, its statistical method is of inference type, and regression model and comparative tests are used to support the hypotheses. In the current research, the companies admitted in TSE are selected as statistical population. To this end, Dena Sahm and Tadbir Pardaz softwares with the data of financial statements of the companies admitted in stock exchange are used. Statistical population of the research is including all the companies admitted in TSE during the years 2001-2008. The research results at error level of 5% by pooled data method indicated that hypotheses 1, 2, 5 and 5 are supported and hypotheses 3 and 6 are rejected. Thus, financing methods by stock emission and getting loan in the admitted companies in TSE were effective on EPS, DPS, but financing through retained earnings is not effective on EPS and DPS.

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1. Introduction

Stock exchange is a formal capital market in which different kinds of companies stock or state bonds or bonds of other organizations are traded under special rules. In this organized market, different kinds of financial assets and securities are traded. Security (financial) is a document entitling the holder an income in future. The securities are divided into two types: negotiable securities and non-negotiable securities. Economical institutions to increase working capital, debt reimbursement, purchasing fixed assets and investing on profitable plans should find good and low-cost financial sources or try to innovate various and flexible financial instruments. Normally main financing sources are internal sources and external sources (Jahankhani, 1999). Some sources including cash flows resulting of operation, assets sale, retained earning and using currency depreciation provided by internal companies are called internal sources. External sources are used in case of non-adequacy of internal sources to meet the financial demands of the company attract capital by creating debt or stock emission. Among external sources, bonds and preferred stock are important instruments by which the companies can provide long-term financial sources. Although there are many

differences between two types of securities, they have something in common and that is fixed income of investing in these securities (Jahankhani and Parsaian, 1997). Common stock is a form of corporate equity ownership. Once common stock of a company is purchased, the buyer gets ownership right of the company and incomes and profits of the company are shared between them. In case of loss, the holder of common stock is at loss and the income of the holder is depending on profits of the company with high fluctuations with the passage of time. Most of the companies at global level use common stock for financing and in Iran stock, most of the trades are done on these financial assets and it can be the main financing method in the current situation.

The effects of capital context change on risk and return is done in the framework of financial leverage degree and EPS-EBIT analysis. Financial leverage aims to establish optimal balance between risk probability and expected return (Earning Before interest and Taxes (EBIT) and Earning per Share (EPS)). One of the common methods to assess the effect of financing methods on stockholders' earning is the analysis of the relationship between earning before interest and taxes and earning per share. Earnings per share (EPS) are obtained of dividing net

profit of common shareholders by the number of common stock. An EBIT-EPS graph shows the relationship between operation earning or EBIT and earning per common share of EPS for a definite program. If a company intends to use equal earning before interest and taxes, it is not important from profitability aspect to have which kinds of capital structure. Because earning per share is equal in both capital structure (Afshari, 2000). Modigliani and Miller criticized traditional theory of financing in 1958. In an article titled "The cost of capital, corporation finance, and the theory of investment", they proved that corporate cost of capital (K₀) is independent of financial leverage degree of the company and is fixed in all levels.

Also, in special conditions value of a company is equal without considering financing through loan or stock emission. Considering the role of market, we cannot increase the value of a firm by changing the structure of the capital. Indeed, M-M theorem is the revised net income approach and before this theory, traditional theorists believed that finance through load is cheaper than financing through share issuing because investors accept low risk in loan, so they expect less return. This continues until the debts of the institution increase, and shareholders and loan givers claim high return due to higher risk. In this condition, the cost of capital is increased. So, there should be in ratio debt-optimal equity or minimum cost between two finance limits (equity or debt) (Taqavi, 1993).

Despite this, Modigliani and Miller stated that first, dividing the capital structure of the company between debt and equity or between other finance sources is not important. Because by issuing financial assets, the company sell its real assets to people and it is not important whether to sell its assets entirely or via issuing stock or divide them into smaller components and separately (as different financial sources) sell them to people, the sum of components should be equal to the total value. Due to this fact, value of a company is depending upon profitability and business risk (Miser, 1994). Second, the investors can replace their personal leverage instead of partnership company leverage and return every capital structure to its original form. If two companies are similar to each other in every aspect, except the structure, its value should be double. Otherwise, arbitrage is possible and this cause that the company stock is traded till the value of both are equal (Solomon, 1994).

Donaldson, Myers and Bradley (1961) carried out a research about the performance of financing in big companies and found that the management supports internal financing as a new cash source and ignores external sources and in case of being in need

of external financing use debt. Even when price to profit ratio is high and in spite of selling common stock, they were reluctant about issuing stock as they provided capital cost including investment on accounts and other current assets from internal sources. Korvar (1983), Asquith & mallins (1986), dann & mikkelson, vermalen, deangel, deangel & rice (1994) in their research found that on average, when companies issue stock, stock price is decreased and when they purchase it again, the prices sour. Masulis (1983) in his study showed that when the companies offer the exchange of debt with equity, equity price is increased and vice versa.

Long & malitz (2001) found that there is negative relationship between investing on advertisement, research and development on one hand and borrowing level on the other hand. Marsh (1998) in a study on English companies and their selection method of new debt issuing or new stock issuing, found that previous movements of stock price play important roles. Myers & majluf (1999) studied the effects of new stock issuing on real value of stock by asymmetrical information and found that the higher the price of stock, the less value for new stockholders.

Smith (1997) studied the effects of issuing stock on the price and return of stock and found that the mentioned event has negative effect on stock price. Healy & plepa (1990) experimentally studied the information content of new stock issuing and revealed that first; issuing new stock is including new information about future perspective of the company to investors. Second, the mentioned information is about systematic risk instead of being in future profit levels. Smith&watts (1992) collected some results about USA, indicating the negative relationship between leverage and development opportunities. Graham (2000) in a research titled "tax benefits of debt" estimated the ratio of debt benefits to the firms' value. He estimated that tax benefit of debt equals 9.7 % of firms' value.

Stluz (1999) in his research titled "Globalization of Equity Markets and the Cost of Capital" stated that by increasing globalization, the cost of capital is reduced because agency cost and bearing risk due to gaining more rewards is reduced gradually.

Jamal Shirazadeh (2002) studied the effect of capital structure on profitability of the companies admitted in TSE. The results of this research indicated that there is not significant relationship between capital structure and profitability of the companies admitted in TSE. Also, using debt and its effect on profit and performance of the mentioned companies based on the type of industry affects using debt. Aqayi & Delavari (1998) in their research studied the effect of uncertain financial methods on

return of equity. The results of the research showed that although the sum of assets to the ratio of equities (leverage ratio) for the companies receiving loan is significantly different from the companies with increasing capital, return on equity ratio and sale ratio to the sum of assets and ratio of net profit to the sale are not significantly different in two companies. In other words, receiving loan by active companies in TSE is not resulting into optimal financial leverage. Tehrani and Arabi (2003) studied the predicted reduction effect on stock price and found that if the previous investors are considered as a basis for future, by previous information we can guess what will happen to the company in future. But this is only a guess obtained by previous information, while the future is highly different from the past. In this case, relatively valid information about future will be of great importance and it seems that it is the best future information source for management users.

2. Research method

The current research done by the aid of the data in financial statements of the companies admitted in TSE is dedicated to the study of the relationship between financing methods and EPS, DPS ratios and it is based on semi-empirical research plan. This research is functional in terms of aim and is descriptive in terms of research method, investigating the correlation between variables and from the time aspect, it is EX- POST FACTO research. The research hypotheses are as the followings:

Hypothesis 1: There is significant relationship between financing with borrowing and EPS.

Hypothesis 2: There is significant relationship between stock issuance financing and EPS.

Hypothesis 3: There is significant relationship between financing with retained earnings and EPS.

Hypothesis 4: There is significant relationship between debt financing and DPS.

Hypothesis 5: There is significant relationship between stock issuance financing and DPS.

Hypothesis 6: There is significant relationship between financing with retained earnings and DPS.

Statistical population of the research is the companies admitted in TSE from the beginning of 2001 to the end of 2008 for 8 years, who were active in this period.

To achieve the valid results, the companies entered TSE after 2001 or exited from TSE during this period are excluded from the statistical population.

In addition the statistical population is restricted following these conditions:

1. The sample shouldn't be of financing, investment and insurance company.

2. Sample companies should have financial year leading into calendar year (29th Esfand).

3. Data of the research variable should be available for the mentioned companies.

Considering all these limitations, 142 companies had the necessary conditions for this statistical population. To estimate the sample volume as all the applied variables were of quantitative type, Cochran formula is used as the followings: (Hafeznia, 2004).

$$n = \frac{NZ^2 pq}{Ne^2 + Z^2 pq}$$

N= the number of the companies in the society

n=Sample volume

P= Success ratio, q=Failure ratio and each of

$$p = q = \frac{1}{2}$$

them is considered as

Z= Normal distribution standard variable (1.96)

e=Estimation error equal to 10%

Thus, the number of the samples according to the above formula is 57:

$$n = \frac{142(1.96)^2(0.50)(0.50)}{142(0.10)^2 + (1.96)^2(0.50)(0.50)} = \frac{136}{2.38} = 57.14 \approx 57$$

For better representation of the research sample on behalf of statistical population, the sample companies should be selected from different industries. Thus, the number of companies was selected based on ratio of each industry to the total society. Then, a sample was selected from each industry based on simple random sampling. The number of the existing industries and selected sample are shown in table (1).

Table 1- The number of samples in each industry

No	industry	Population	sample
1	Car	20	8
2	Basic metals	16	6
3	Cement	17	7
4	Food products	14	6
5	Machineries and Equipments	12	5
6	Chemical products	16	6
7	Pharmacological products	10	4
8	Electrical machines	16	6
9	Tile and Ceramic	12	5
10	Textile	9	4
	Total	142	57

The current research is including two dependent variables as:

1. Earnings per share are calculated by dividing net income by the number of common stock.

Equation (1) $EPS = \text{Net income} / \text{The number of common stock}$

2. Dividends per share are calculated by dividing dividend approved by stockholders general convention by the number of common stock.

Equation (2) $DPS = \text{The number of common stock} / \text{Approved stock share}$

The current research is including 3 independent variables as:

1) Financing with stock issuance calculated by the following equation:

$$\text{Equation (3)} \quad S = (C_1 - C_0) - A$$

In the above equation S denotes financing by stock issuance, C0 denotes the amount of capital before increasing capital, C1 is the amount of capital after increasing capital and A denotes the capital increase percent from the cash sources of stockholders.

2) Dept financing calculated by the following equation:

$$\text{Equation (4)} \quad D_t = d_t - d_{t-1}$$

In the above equation, Dt denotes debt financing at period t, dt is dept financing at t and dt-1 is dept financing at period t-1.

3) Financing with retained earnings calculated by the followings:

$$\text{Equation (5)} \quad E = (C_1 - C_0) - B$$

In the above equation, E denotes financing with retained earnings, C0 is the capital amount before increasing capital, C1 indicates the amount of capital after increasing capital and B is the percent of capital increase from the source of claims and accounts.

The theoretical basics of the current research are collected from library study and then by stock exchange site and Tadbir Pardaz software is used to collect the initial data of the companies directly from TSE and financial statements of the companies and it are used to calculate the independent and dependent variables. Thus, data collection method in the current research is of field research. During the research Excel and Eviews software are used to process data.

In this research considering the kind of data and the existing statistical analysis methods, econometric method of Cross-sectional data (Annual) and combinational data are used to estimate research parameters and reviewing hypotheses tests. To measure dependent variables, EPS, DPS equations (1) and (2) are used and to measure independent variables, financing by stock issuance, borrowing and retained earnings, respectively equations (3), (4) and (5) were used and for research hypothesis test, univariate regression was used.

Research hypotheses models to review the relationship between finance methods and EPS, DPS ratios are models No. (6),(7),(8),(9), (10) and(11) that are used respectively to review 1-6 hypotheses:

$$\text{Model (6)} \quad EPS_{i=1..n} = a_0 + a_1 S + e_{it}$$

$$\text{Model (7)} \quad EPS_{i=1..n} = a_0 + a_1 D_t + e_{it}$$

$$\text{Model (8)} \quad EPS_{i=1..n} = a_0 + a_1 E + e_{it}$$

$$\text{Model (9)} \quad DPS_{i=1..n} = a_0 + a_1 S + e_{it}$$

$$\text{Model (10)} \quad DPS_{i=1..n} = a_0 + a_1 D_t + e_{it}$$

$$\text{Model (11)} \quad DPS_{i=1..n} = a_0 + a_1 E + e_{it}$$

In these models, EPS, DPS are respectively indicating earning per share and the earning paid per share (dependent variables) and S, Dt, E are respectively showing financing with stock issuance, borrowing and retained earnings (independent variables).

To determine the type of model used in panel data, some tests including Chow, Hausman and L M test are used.

3. Results

As it was said in chapter 3, independent variables of the research, financing with stock issuance, borrowing and retained earnings are calculated by the aid of equations (12), (13) and (14) for 57 sample companies during the years 2001-2008 and they were drawn and classified in Excel software. Dependent variables of the research, the ratio of EPS and DPS ratio are calculated by the help of equations (15), (16) for 57 samples companies during the years 2001-2008.

$$\text{Equation (12)} \quad S = (C_1 - C_0) - A$$

$$\text{Equation (13)} \quad D_t = d_t - d_{t-1}$$

$$\text{Equation (14)} \quad E = (C_1 - C_0) - B$$

In the above equations, S denotes financing by stock issuance, Dt denotes dept financing and E denotes financing with retained earnings. Before testing research hypotheses, descriptive statistics of the applied variables is evaluated and it is presented in table (2).

As it is shown in table (2), the average of financing by stock, borrowing and retained earnings are respectively 18000, 70000 and 8000 million Rls. These figures indicate that during the years 2001-2008, the managers of the tested companies used three financing methods considerably. In addition, according to the above table, EPS ratio median is 978 Rls and the max and min are respectively 105, 2760 Rls that indicate the studied sample is various.

Median, min and max of DPS ratio confirm this fact. Correlation equations between research variables are presented in table (3).

Table 2- The results of descriptive statistics of research variables

Explanation	EPS (RIs)	DPS (RIs)	S (Million RIs)	Dt (Million RIs)	E (Million RIs)
Median	978	957	18000	70000	8000
Mean	1100	1150	15000	55000	5000
SD	534	481	8410	46000	6400
Min	105	35	0.00	0.00	0.00
Max	2760	2340	42000	120000	20000

To test the first hypothesis and reviewing the relationship between financing by stock issuance and EPS ratio the following model is used:

$$\text{Model (17)} \quad EPS_{i=1...n} = a_0 + a_1 S + e_{it}$$

Table 4- The result of first hypothesis test at annual level (Cross-sectional)

Explanation	2001	2002	2003	2004	2005	2006	2007	2008
t statistics (p-value)	10.52 (0.005)	4.27 (0.1540)	11.01 (0.000)	12.31 (0.084)	14.04 (0.000)	22.31 (0.001)	10.10 (0.011)	7.97 (0.041)
Coefficient	-0.71	0.19	-0.37	-0.28	-0.88	0.63	-0.28	-0.97
Adjusted R-squared	0.491	0.218	0.784	0.368	0.674	0.551	0.841	0.407
Supporting or rejecting the hypothesis	Supported	Rejected	Supported	Rejected	Supported	Supported	Supported	Supported

According to model (17), if S coefficient is positive, financing with stock issuance is in direct relationship with EPS ratio and if the coefficient is negative, it will have inverse relationship.

As it is shown the results of the research in different years are different. According to the information in table (4), first hypothesis in the years, 2001, 2003, 2005, 2006, 2007 and 2008 is supported with confidence level of 95% and its is rejected in 2002 and 2004.

To test the second hypothesis and reviewing the relationship between financing with borrowing and EPS ratios the following model is used:

The results of first hypothesis test for the years 2001-2008 (Annual method) are presented in table (4).

Table 3- Correlation coefficients between research variables

Correlation coefficient p-value	EPS	DPS	S	Dt	E
EPS	1				
DPS	0.0121 0.718	1			
S	-0.0850 0.012	-0.017 0.740	1		
Dt	-0.0860 0.014	-0.0121 0.0720	0.0570 0.000	1	
E	-0.0008 0.960	-0.0190 0.605	0.0085 0.014	0.0095 0.674	1

$$\text{Model (18)} \quad EPS_{i=1...n} = a_0 + a_1 D_t + e_{it}$$

The results of second hypothesis test for the years 2001-2008 (Annual method) are presented in table (5).

According to model (18), if Dt coefficient is positive, financing with borrowing method is in direct relationship with EPS ratio and if the coefficient is negative, it will have inverse equation.

As it is shown in table (5), the results of the research in different years are different. Also, this hypothesis in the years, 2001, 2002, 2003, 2005, 2006, 2007 and 2008 is supported with confidence level of 95% but it is rejected in 2004.

Table 5- The results of second hypothesis test at annual level (Cross-sectional)

Explanation	2001	2002	2003	2004	2005	2006	2007	2008
t statistics (p-value)	10.35 (0.000)	12.70 (0.021)	10.10 (0.000)	6.31 (0.075)	14.31 (0.000)	12.01 (0.004)	8.75 (0.000)	14.42 (0.011)
Coefficient	-0.57	0.45	-0.25	-0.17	-0.89	0.67	-0.91	-0.82
Adjusted R-squared	0.461	0.384	0.651	0.352	0.245	0.652	0.420	0.742
Supporting or rejecting the hypothesis	Supported	Supported	Supported	Rejected	Supported	Supported	Supported	Supported

To test the third hypothesis and reviewing the relationship between financing with retained earnings and EPS ratios the following model is used:

$$\text{Model (19)} \quad EPS_{i=1..n} = a_0 + a_1 E + e_{it}$$

The results of third hypothesis test for the years 2001-2008 (Annual method) are presented in table (6).

Table 6- The results of third hypothesis test at annual level (Cross-sectional)

Explanation	2001	2002	2003	2004	2005	2006	2007	2008
t statistics	11.21	13.25	11.41	12.24	10.46	24.31	10.71	8.06
(p-value)	(0.032)	(0.006)	(0.000)	(0.000)	(0.000)	(0.001)	(0.000)	(0.000)
Coefficient	-0.45	-0.78	0.58	-0.96	0.85	0.65	-0.67	-0.79
Adjusted R-squared	0.351	0.298	0.468	0.624	0.347	0.854	0.984	0.144
Supporting or rejecting the hypothesis	Supported	Supported	Supported	Supported	Supported	Supported	Supported	Supported

According to model (19), if E coefficient is positive, financing with retained earnings method is in direct relationship with EPS ratio and if the coefficient is negative, it will have inverse equation. As it is shown in table (6), this hypothesis was supported during 2001-2008 years with confidence level of 95%.

To test the fourth hypothesis and reviewing the relationship between financing with stock issuance and DPS ratios the following model is used:

$$\text{Model (20)} \quad DPS_{i=1..n} = a_0 + a_1 S + e_{it}$$

The results of fourth hypothesis test for the years 2001-2008 (Annual method) are presented in table (7).

As it is shown, this hypothesis is supported in the years 2001,2004,2005,2006, 2008 with confidence level of 95% and it is rejected in the years 2002, 2003 and 2007.

Table 7- The results of fourth hypothesis test at annual level (Cross-sectional)

Explanation	2001	2002	2003	2004	2005	2006	2007	2008
t statistics	11.52	4.12	1.01	11.14	12.20	20.25	2.21	7.95
(p-value)	(0.000)	(0.682)	(0.095)	(0.001)	(0.021)	(0.030)	(0.421)	(0.042)
Coefficient	0.71	0.04	-0.21	-0.38	-0.87	-0.87	-0.12	-0.63
Adjusted R-squared	0.702	0.213	0.304	0.368	0.653	0.864	0.742	0.421
Supporting or rejecting the hypothesis	Supported	Rejected	Rejected	Supported	Supported	Supported	Rejected	Supported

To test the fifth hypothesis and reviewing the relationship between financing with borrowing and DPS ratios the following model is used:

$$\text{Model (21)} \quad DPS_{i=1..n} = a_0 + a_1 D_t + e_{it}$$

The results of fifth hypothesis test for the years 2001-2008 (Annual method) are presented in table (8).

According to model (21), if D_t coefficient is positive, financing with borrowing method is in direct relationship with DPS ratio and if the coefficient is negative, it will have inverse equation. As it is this hypothesis was supported in all the years except 2008 with confidence level of 95%.

Table 8- The results of fifth hypothesis test at annual level (Cross-sectional)

Explanation	2001	2002	2003	2004	2005	2006	2007	2008
t statistics	10.04	14.25	16.20	12.00	21.25	20.36	10.62	6.97
(p-value)	(0.000)	(0.032)	(0.016)	(0.000)	(0.021)	(0.000)	(0.000)	(0.240)
Coefficient	-0.28	-0.86	0.24	-0.54	-0.85	0.45	-0.28	0.12
Adjusted R-squared	0.368	0.421	0.875	0.215	0.865	0.642	0.620	0.342
Supporting or rejecting the hypothesis	Supported	Supported	Supported	Supported	Supported	Supported	Supported	Rejected

To test the sixth hypothesis and reviewing the relationship between financing with retained earnings and DPS ratios the following model is used:

$$\text{Model (22)} \quad DPS_{i=1..n} = a_0 + a_1 E + e_{it}$$

The results of sixth hypothesis test for the years 2001-2008 (Annual method) are presented in table (9).

According to the information in table (4), this hypothesis in the years 2001, 2003 and 2006 are supported with the confidence level of 95% but in the years 2002, 2004, 2005, 2007 and 2008, it is rejected.

Table 9- The results of sixth hypothesis test at annual level (Cross-sectional)

Explanation	2001	2002	2003	2004	2005	2006	2007	2008
t statistics (p-value)	11.18 (0.000)	30.27 (0.182)	11.27 (0.012)	1.31 (0.752)	4.21 (0.074)	11.31 (0.000)	9.42 (0.410)	7.23 (0.133)
Coefficient	-0.76	0.24	-0.24	-0.31	0.24	0.63	0.04	-0.34
Adjusted R-squared	0.642	0.310	0.784	0.324	0.021	0.367	0.16	0.201
Supporting or rejecting the hypothesis	Supported	Rejected	Supported	Rejected	Rejected	Supported	Rejected	Rejected

In this section, to review the relationship between dependent and independent variables, models (17) to (22) are used by panel data method. To select the best method to estimate the mentioned models in different periods of panel data, partial-F test (Chow) is used. If F statistics is bigger than the critical value, null hypothesis is rejected and Fixed Effect Model is accepted. The fixed effect model is acceptable when the difference between the companies is explained by the differences of intercept. In case of the presence of similar intercept,

Pooled data method is used for hypotheses test. The results of Chow test are presented in table (10).

As it is shown in table (10), the results of Chow test null hypothesis of this test based on similarity of intercept in all the periods are supported strongly. Thus, the pooled data estimation method to estimate research hypotheses models is the best choice. According to this method, all the data are combined with each other and are estimated by Ordinary Least Square Regressions (OLS).

Table 10- The results of Chow test (partial-F)

	F statistics	Critical quantity	p-value
Chow test to evaluate model (17)	0.53	5.12	0.74
Chow test to evaluate model (18)	0.16	5.12	0.98
Chow test to evaluate model (19)	0.42	5.12	0.79
Chow test to evaluate model (20)	0.21	5.12	0.88
Chow test to evaluate model (21)	0.26	5.12	0.81
Chow test to evaluate model (22)	0.58	5.12	0.63

After selecting the best estimation model, we should be ensuring of the reliability of variables, and correctness of regression. Reliability of the research variables means that the mean and variance of the variables are fixed during the time and variables covariance in different years is fixed. Thus, using these variables in the model doesn't create false regression (Namazi, Kermani, 2008).

To review reliability of the variables during the research period, LL (2002) & IPS (1997) Tests are used. Applying method of these tests is explained in chapter 3. In these tests, null hypothesis indicates the existence of unit root or non-reliability of the variables. The results of unit root test of panel data are in table (11).

Table 11- The results of reliability tests of research variables

Variable	Test	EPS	DPS	S	Dt	E
LL		-38.61	-6.45	-14.04	-34.14	-30.05
	p-value statistics	0.000	0.000	0.007	0.028	0.000
IPS		-17.51	-7.14	-10.18	-15.31	-1.68
	p-value statistics	0.000	0.000	0.010	0.000	0.045

According to null hypothesis in both tests LL, IPS, the existence of unit root for all the variables is rejected. Because the calculated statistics value is more than critical value at 0.05 level. Thus, the

variables during the research period were at reliable level.

After determining a good model for hypotheses test and reviewing the reliability of research

variables, the relationship between dependent and independent variables is review by models (17) to (22) by pooled data method. The results of the

estimation of the mentioned models by Ordinary Least Square Regressions (OLS) are shown in table (12).

Table 12- The results of hypotheses test by pooled data method

Year	Model	\bar{R}^2	The number of observations	t statistics (probe)	Coefficient	Result
2001-2008	$EPS_{i=1..n} = a_0 + a_1 S + e_{it}$ (17)	0.49	456	10.24 (0.000)	-0.89	Supporting hypothesis first
2001-2008	$EPS_{i=1..n} = a_0 + a_1 D_t + e_{it}$ (19)	0.34	456	11.03 (0.000)	-0.92	Supporting hypothesis second
2001-2008	$EPS_{i=1..n} = a_0 + a_1 E + e_{it}$ (17)	0.28	456	6.51 (0.157)	0.29	rejecting hypothesis third
2001-2008	$DPS_{i=1..n} = a_0 + a_1 S + e_{it}$ (19)	0.61	456	9.34 (0.042)	-0.64	Supporting hypothesis fourth
2001-2008	$DPS_{i=1..n} = a_0 + a_1 D_t + e_{it}$ (17)	0.32	456	16.12 (0.010)	-0.76	Supporting hypothesis fifth
2001-2008	$DPS_{i=1..n} = a_0 + a_1 E + e_{it}$ (19)	0.53	456	3.09 (0.241)	-0.51	rejecting hypothesis sixth

The results of research hypotheses support first, second, fourth and fifth hypotheses, third and sixth hypotheses are rejected. In the review of the results of first hypothesis, t statistics of the model at error level of 5% is generally significant the equation is inversed. Thus, the results of the research by pooled data analysis support fits hypothesis. In other words, financing by stock issuance reduces EPS ratio.

Statistics of t-test of the model for second phase is significant at level 5%. Thus, the results of the research by pooled data analysis support second hypothesis. In other words, financing with borrowing, reduces EPS ratio. In reviewing the results of third hypothesis test, t-test statistics of the model at error level of 5% is not significant in general. Thus, the research results reject third hypothesis. T-test statistics of fourth and fifth hypotheses at 5% error is significant generally. Thus, research results by pooled data analysis method support fourth and fifth hypotheses. The relationship is inversed. T-test statistics of the model related to sixth hypothesis at error level of 5% is not significant. Thus, the research results reject sixth hypothesis. In other words,

financing with retained earnings is not associated with DPS ratio.

4. Conclusion

To test research hypotheses, pooled data estimation method is used by applying a sample of 57 companies admitted in TSE, in the years 200-2008. For research hypotheses significance test, OLS regression is used.

The result of first hypothesis test

It was expected that financing with stock issuance had significant relationship with EPS ratio. The model of the first hypothesis test is as the followings

$$\text{Model (23)} \quad EPS_{i=1..n} = a_0 + a_1 S + e_{it}$$

In this model, dependent variable indicates earning per share and independent variable shows financing with stock issuance.

The results of first hypothesis test for 8 years period of the research by pooled data method are shown in table (13). As it is shown t- test statistics of the model at 5 % error is significant and the relationship is inversed. Thus, the research results by pooled data analysis method support first hypothesis.

Table 13- The results of first hypothesis test by pooled data method

Year	\bar{R}^2	The number of observations	t statistics (probe)	Coefficient	Result	Type of equation
2001-2008	0.49	456	10.24 (0.000)	-0.89	Supporting the hypothesis	Inversed

The results of the findings of this hypothesis are consistent with the results of the researches of Myers & majluf (1990), Smith (1997) and Ebadi (2003). According to the Cross-sectional (Annual), data in years 2001, 2003, 2005, 2006, 2007 and 2008 it is supported at confidence level 95% and it is rejected in years 2002, 2004.

The result of second hypothesis test

It was expected that financing with borrowing had significant relationship with EPS ratio. The model of the second hypothesis test is as the followings:

$$\text{Model (24)} \quad EPS_{i=1..n} = a_0 + a_1 D_t + e_{it}$$

In this model, dependent variable indicates earning per share and independent variable shows financing with borrowing.

The results of second hypothesis test for 8 years period of the research by pooled data method are shown in table (14). As it is shown t- test statistics of the model at 5 % error is significant and the equation is inversed. Thus, the research results by pooled data analysis method support second hypothesis.

Table 14- The results of second hypothesis test by pooled data method

Year	\bar{R}^2	The number of observations	t statistics management (probe)	Coefficient	Result	Type of equation
2001-2008	0.34	456	11.03 (0.000)	-0.92	Supporting the hypothesis	Inversed

The results of the findings of this hypothesis are consistent with the results of the researches of Smith (1997) and Ebadi (2003). According to the Cross-sectional (Annual) data in years 2001, 2002, 2003, 2005, 2006, 2007 and 2008 it is supported at confidence level 95% and it is rejected in 2004.

The result of third hypothesis test

The model of the third hypothesis test is as the followings:

$$\text{Model (25)} \quad EPS_{i=1..n} = a_0 + a_1 S + e_{it}$$

In this model, dependent variable indicates earning per share and independent variable shows financing with retained earnings.

The results of third hypothesis test for 8 years period of the research by pooled data method are shown in table (15). As it is shown t- test statistics of the model at 5 % error is not significant and the equation is inversed. Thus, the research results by pooled data analysis method reject third hypothesis.

Table 15- The results of third hypothesis test by pooled data method

Year	\bar{R}^2	The number of observations	t statistics management (probe)	Coefficient	Result	Type of equation
2001-2008	0.28	456	6.51 (0.157)	0.29	Rejecting the hypothesis	-

The results of the findings of this hypothesis are consistent with the results of the researches of Myers & majluf (1990). According to the Cross-sectional data in all years of 2001-2008 is supported at confidence level 95%.

The result of forth hypothesis test

It was expected that financing with stock issuance had significant relationship with DPS ratio. The model of the fourth hypothesis test is as the followings

$$\text{Model (26)} \quad DPS_{i=1..n} = a_0 + a_1 S + e_{it}$$

In this model, dependent variable indicates earning per share and independent variable shows financing with stock issuance.

The results of fourth hypothesis test for 8 years period of the research by pooled data method are shown in table (16). As it is shown t- test statistics of the model at 5 % error is significant and the equation is inversed. Thus, the research results by pooled data analysis method support forth hypothesis.

The results of the findings of this hypothesis are consistent with the results of the researches of Myers & majluf (1990), Smith (1997) and Ebadi (2003). According to the Cross-sectional data in all years of 2001, 2004, 2005, 2006, 2008 is supported at confidence level 95% and is rejected in years 2002, 2003 and 2007.

Table 16- The results of fourth hypothesis test by pooled data method

Year	\bar{R}^2	The number of observations	t statistics management (probe)	Coefficient	Result	Type of equation
2001-2008	0.61	456	9.34 (0.042)	-0.64	Supporting the hypothesis	Reversed

The result of fifth hypothesis test

The model of the fifth hypothesis test is as the followings

$$\text{Model (27)} \quad DPS_{i=1..n} = a_0 + a_1 D_t + e_{it}$$

In this model, dependent variable indicates earning per share and independent variable shows financing with borrowing.

The results of fifth hypothesis test for 8 years period of the research by pooled data method are shown in table (17). As it is shown t- test statistics of the model at 5 % error is significant and the equation is inversed. Thus, the research results by pooled data analysis method support fifth hypothesis. According to the Cross-sectional data, fifth hypothesis is supported in all the research years except 2008 with the confidence level of 95%.

Table 17- The results of fifth hypothesis test by pooled data method

Year	\bar{R}^2	The number of observations	t statistics management (probe)	Coefficient	Result	Type of equation
2001-2008	0.32	456	16.12 (0.010)	-0.76	Supporting the hypothesis	Reversed

The result of sixth hypothesis test

It was expected that financing with retained earnings had significant relationship with DPS ratio. The model of the sixth hypothesis test is as the followings

$$\text{Model (28)} \quad DPS_{i=1..n} = a_0 + a_1 E + e_{it}$$

In this model, dependent variable indicates earning per share and independent variable shows financing with retained earnings.

The results of sixth hypothesis test for 8 years period of the research by pooled data method are shown in table (18). As it is shown t- test statistics of the model at 5 % error is not significant and the equation is inversed. Thus, the research results by pooled data analysis method reject sixth hypothesis.

Table 18- The results of fourth hypothesis test by pooled data method

Year	\bar{R}^2	The number of observations	t statistics management (probe)	Coefficient	Result	Type of equation
2001-2008	0.53	456	3.09 (0.241)	-0.51	Rejecting the hypothesis	-

According to the Cross-sectional data in all years of 2001, 2003, 2006 is supported at confidence level 95% and is rejected in years 2002, 2004, 2005, 2007 and 2008.

The results of the research at error level of 5% by all pooled data method indicated that first, second, fourth and fifth hypotheses are supported but third

and sixth hypotheses are rejected. Thus, financing methods by stock issuance and borrowing in the companies admitted in TSE are effective on EPS, DPS ratios but financing with retained earnings was not effective on EPS, DPS ratios.

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