Structural and Process Features of Boards on Financial Risk

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Abstract
The purpose of this research is to review the effect of board features (including structural and process features) on financial slack of quoted companies in Tehran stock exchange. The time period of this research is 2003-2011, and it is done on a sample of 158 companies. To examine research`s assumptions in all companies and different industries, we used multi-variable regression model in pooled (plan) mode and Eviews 6 program. In this research we used liquidity and financial slack variables as dependent variable of financial slack, we used board features(structure and process of board) as independent variable, and we used company features as control variables which are effective on financial slack including company size, growth opportunity, profitability, and also type of industry. It should be mentioned that we used questionnaire of McNulty et al. (2013) to measure board process features.Results indicate that if change in financial crisis is considered as financial slack, the followings will happen:The effect of board size on financial slack in all companies is positive and significant.The effect of duality of CEO responsibilities on financial slack in industry of automobile and automotive parts manufacturing, is negative and significant.And among process features of board, just the effect of using knowledge and skill on financial slack in all companies, is negative and significant.Moreover, if change in liquidity is considered as financial slack, the effect of board size in chemical products industry, and also the effect of growth in automobile manufacturing industry on financial slack, is negative and significant. Other results show that other board features have no effect on financial slack in all companies and different industries.

Keywords: *board structure, board process, company features, and financial slack.*

Introduction

According to general definition of corporate governance as a tool by which companies are controlled and directed, the position of company`s board as a directing institution, which has the responsibility to supervise the acts of executive managers in order to preserve interests of stock holders` ownership, is becoming more important (Mokarrami, 2006).

The main responsibility of board is to direct company tasks in accordance with interests of stock holders, and also to make balance in interests of other beneficiaries such as, customers, employees, investors, and local societies. In all board actions, directors are expected to make business decisions which they believe they are the best decisions for company (Tehran stock exchange Company, 2007). Board is the most direct mechanism to supervise management, which has an important role in supervising managers` operations, and it should include members who are dependent from company manager and main stock holders (Chen, 2008).

Collapse of Enron company in 2001, attracted the attentions to effectiveness of board`s not-required managers operations. From theoretical perspective, the presence of independent, not-required managers in companies` boards, and their supervisory operations result decrease in contradiction of existing interests between stock holders and company managers in board meetings. Of course we should note that executive managers of company have an important role in creating a proper combination of required and not-required managers among board members. The presence of such a combination is one of the main elements of an efficient and effective board; because when required managers provide valuable information about company activities, not-required managers judge their decisions professionally and neutrally. Therefore, company board is considered as a potential and powerful mechanism of corporate governance, by owning specialty, independency, and required legal power (Byrd &Hichman, 1992).

Financial crisis actually means defeat of risk management in business relations domain. Studies, done in USA by financial institutions, indicate that board features which are related to board decision-making, have a negative effect on slack management decisions (Muller-Kahle & Lewellyn, 2011; Lewellyn & Muller-Kahle, 2012). Finkelstein et al believe that recent research developments in the field of structure and process of decision-making of board requires more studies on the effects of board behaviors on organizational outputs.

This research is inspired by work of Forbes & Milliken (1999) in the field of board decision-making, and is inspired by work of Pettigrew & McNulty (1995) in the field of relations between required managers and not required managers, and it's also inspired by Zahra &Pearce (1989) in the field of relationship between board and company operations.

Actually, this relationship is ignored in developing countries, especially in Iran. So, this research is going to review the effect of board features on financial slack in Tehran stock exchange.

Review of literature

McNulty et al. (2013) by reviewing 140 companies in time period of 2008-2009, came to this conclusion that in companies which have more not required members in their board, and cognitive conflict is less in their board decision-making process, financial slack is less accordingly. They also concluded that in boards which own higher cohesiveness levels, cognitive conflict is less.

Minichilli et al. (2009) indicated that commitment of board members has positive effects on a collection of these members` service and control responsibilities.

Forbes & Milliken (1999) believe that there are 3 important processes for realizing board operations: board affairs, cognitive conflict, use of knowledge and skill.

HasasYeganeh (2009)reviewed the role of board in corporate governance. For doing so, he reviewed reports and researches done in USA and England in the field of executive instruction of corporate governance structure and their effects. Some of objects reviewed in this research such as: separation of board chairman and CEO, the role of not required, independent managers in board and their supervisory activities as independent individuals, help decrease in conflict of available interests between stock holders and company managers in board meetings, and it is a potential mechanism in corporate governance structure.

Research hypotheses

1. Board features (structural features) on financial slack (change in liquidity) haveeffect in all companies.
2. Board features (structural features) on financial slack (change in liquidity) haveeffect in different industries.
3. Board features (structural features) on financial slack (change in financial crisis) haveeffect in all companies.
4. Board features (structural features) on financial slack (change in financial crisis) haveeffect in different industries.
5. Board features (process features) on financial slack (change in liquidity) have effect in companies being reviewed.
6. Board features (process features) on financial slack (change in financial crisis) have effect in companies being reviewed.

Research variables

The variables of this research are divided into 3 groups, in order to examine assumptions: independent variable, dependent variable, and control variable.

Independent variables

Independent variables used in this research are board's features, which include:

1. Board structure that below standards is used to examine it:

1.1. Board size (BS): we used the number of board members at the end of each financial year to calculate this variable.

1.2. Board combination (BC): in this research we used the ratio of not required members of board to all board members, as the combination of board.

1.3. CEO duality (DUAL): this variable is a virtual variable that when CEO and chairman of board is not a same person, its value is 1, and if they are the same the value is 0.

2. Board process: for calculating board process in decision-making, we used McNulty et al questionnaire which includes below standards:

1.2. Board effort (BE): This criterion includes questions about the number of board meetings, level of relationship with not required members of board, schedule of board meetings, etc.

2.2. Cognitive conflict (CC): This criterion includes questions about level of disagreements between board members in making key decisions, general goal and strategy of company, etc.

2.3. Knowledge and skill (KS): This criterion includes questions about the level that board members use knowledge and skill to help board responsibilities, the level of interference of board members in strategic and key decisions of company, level of active presence of not required members of board in board meetings, etc.

2.4. Cohesiveness (CO): This criterion includes questions about level of board members` freedom in performing board commitments, level of respect of board members in helping each other to perform company activities, level of influence of personal relations between members on formation of a coherent and integrated board, etc.

Dependent variables

Dependent variable of this research is financial slack, that we use 2 below standards to calculate it:

1. Change in liquidity (DL) that is calculated by below formula (McNulty et al, 2013, 64):

$$\Delta L_{it} = L_{it} - L_{it-1}$$

ΔL_{it}= change in liquidity in year t for company i

L_{it}= liquidity in year t for company i

L_{it-1}= liquidity in year t-1 for company i

Liquidity is calculated by below formula (McNulty et al, 2013, 64):

$$L_{it} = (Cash_{it} + SI_{it})/TA_{it}$$

$Cash_{it}$= level of cash in year t for company i

SI_{it}= short term investments in year t for company i

TA_{it}= all assets in year t for company i

2. Change in financial crisis which is calculated by below formula (McNulty et al, 2013, 64):

$$\Delta FS_{it} = FS_{it} - FS_{it-1}$$

ΔFS_{it}= change in financial crisis in year t for company i
FS_{it}= financial crisis in year t for company i
FS_{it-1}= financial crisis in year t-1 for comapny i
Financial crisis is calculated by below formula (McNulty et al, 2013, 64):

$$FS_{it} = (Cash_{it} + SI_{it} + 0.7 * REC_{it} + 0.5 * INV_{it} - PAY_{it})/NFA_{it}$$

$Cash_{it}$= cash level in year t for company i
SI_{it}= short term investments in year t for company i
REC_{it}= business receivable accounts in year t for company i
INV_{it}= account balances in year t for company i
PAY_{it}= business receivable accounts in year t for company i
NFA_{it}= fixed net assets in year t for company i

Control variables

Control variables used in this research as other effective factors on financial slack, includes:
A) Company size which is calculated by below formula:

$$SIZE_{it} = Ln(TA_{it})$$

$SIZE_{it}$= company size in year t for company i
$Ln(TA_{it})$= normal logarithms of all assets in year t for company i
B) GROW which is calculated by below formula:

$$GROW_{it} = (S_{it} - S_{it-1})/S_{it-1}$$

$GROW_{it}$= grow in year t for company i
S_{it}= sales level in year t for company i
S_{it-1}= sales level in year t-1 for company i
C) Profitability which is calculated by below formula:

$$ROA_{it} = (NI_{it})/TA_{it}$$

ROA_{it}= profitablility (asset efficiency) in year t for company i
NI_{it}= net incomes in year t for company i
TA_{it}= all assets in year t for company i
D) Industry type: This control variable means that research assumption as well as being reviewed in all companies is reviewed in the form of 2 major industries: automobile and automotive parts manufacturing, and chemical products.

Research population

This research population includes all quoted companies in Tehran stock exchange in 2003-2011time period (9 years). By using screening (emissive) method, we selected companies that have all the following requirements:
1. They are quoted in Tehran stock exchange until the end of March of 2002, and their financial year is ended at the end of March.
2. Companies have not changed their financial year in mentioned period.
3. They have presented financial information needed for this research, between 2004 and 2011.
4. They are not investment companies, banks and financial intermediation.
Considering above mentioned requirements, we selected 158 companies.

Research method and data collection

Since this research is seeking to appoint the relationship between board features and financial slack, it is a correlation research. Moreover, since appointing the relationship board features and financial slack can be used by many individuals who use company financial information, it is an applicable research. To implement this research *after event approach* is used. After event approach is used when researcher reviews the issue after the event happens, moreover, when changing independent variables is not possible (Namazi, 2000).

In this research, data and variables have been collected through referring to financial statements of quoted companies, and their explanatory notes, by using RahAvardNovin and questionnaire.

Data analysis and assumption examination method

In this research we first review the relationship between board features (board structure) and financial slack. For designing regression model to examine financial slack, once we used change in liquidity and once we used change in financial crisis. We used following pooled/plan regression models in all companies and different industries (McNulty et al, 2013, 67):

$$FR_{it} = \beta_0 + \beta_1 BS_{it-1} + \beta_2 BC_{it-1} + \beta_3 DUAL_{it-1} + \beta_4 SIZE_{it-1} + \beta_5 GROW_{it-1} + \beta_6 ROA_{it-1} + \varepsilon_{it}$$

FR_{it}= level of financial slack in year t for company i which 2 standards are used to measure it: change in liquidity, and change in financial crisis.

BS_{it-1}= board size in year t-1 for company i

BC_{it-1}= board combinations in year t-1 for company i

$DUAl_{it-1}$= CEO duality in year t-1 for company i

$SIZE_{it-1}$= company size in year t-1 for company i

$GROW_{it-1}$= company growth opportunities in year t-1 for company i

ROA_{it-1}= company profitability in year t-1 for company i

Sectional data (pooled data) and its usage necessity, is done mainly for increasing view numbers, increasing freedom level, decreasing dissonance of variance, and decreasing linearity between variables.

To review the relationship between other board features (that is; board process obtained through questionnaire) and financial slack and other effective factors on financial slack (company features) in companies which had no change in their board in the last 2 years of this research, we used following formula in all companies:

$$FR_{it} = \beta_0 + \beta_1 BE_{it} + \beta_2 CC_{it} + \beta_3 KS_{it} + \beta_4 CO_{it} + \beta_5 SIZE_{it-1} + \beta_6 GROW_{it-1} + \beta_7 ROA_{it-1} + \varepsilon_{it}$$

BE_{it}= the affairs of board in year t for company i

CC_{it}= cognitive conflicts in year t for company i

KS_{it}= usage of knowledge and skill in year t for company i

CO_{it}= cohensiveness in year t for company i

Other variable are described before.

Hypotheses testing in structural features level

Reviewing descriptive statistics of research variables

Descriptive statistics of research variables in all companies and automotive and parts manufacturing and pharmaceutical products industries, is shown in table 1.

By comparing coefficient of variation (calculated by dividing standard deviation on average) of independent and dependent variables of research, we concluded that dependent variables (standards of financial slack) have very more coefficient of variation than independent variables (board structure). That is; board structure is more stable than financial slack. So, we can conclude that financial slack of companies being reviewed, in addition to board structure should be influenced by other factors in all companies and different industries. We used some of these factors as control variables in this research.

Descriptive statistics of other effective factors on financial slack in all companies and different industries, shown in table 1, indicates that among control variables, growth opportunity variable has the most level of scattering and the lowest level of stability as a result, and company size variable has the lowest level of scattering. Nevertheless, since company size variable is obtained from normal logarithm of assets, its stability is not very reliable.

Table 1: descriptive statistics of research variables

	Dependent variables (financial slack)	**Independent variables (structural features of board)**	**Control variables**

Variables / Level and standards		Change in liquidity	change in financial slack	Board size	Board combination	Duality of CEO	Company size	Growth opportunity	profitability
In all companies	Number	1422	1422	1422	1422	1422	1422	1422	1422
	Average	-0.003	-0.07	5.38	0.61	0.95	13.001	0.20	0.12
	Mean	-0.001	-0.01	5	0.60	1	12.84	0.16	0.1
	Maximum	0.37	10.33	7	1	1	19.62	2.97	0.63
	Minimum	-0.39	-10.89	5	0	0	0.58	-0.79	-0.32
	Standard deviation	0.06	1.31	0.77	0.18	0.22	1.45	0.34	0.12
	Coefficient of variation	20	18.71	0.14	0.30	0.23	0.01	1.7	1
Automotive and parts manufacturing industry	Number	216	216	216	216	216	216	216	216
	Average	-0.003	-0.06	5.43	0.57	0.96	13.90	0.26	0.09
	Mean	-0.003	0.01	5	0.60	1	13.50	0.19	0.08
	Maximum	0.37	5.1	7	1	1	19.62	2.68	0.35
	Minimum	-0.28	-10.85	5	0	0	10.71	-0.51	-0.20
	Standard deviation	0.07	1.44	0.80	0.20	0.20	1.79	0.38	0.08
	Coefficient of variation	23.33	24	0.15	0.33	0.21	0.13	1.46	0.89
Pharmaceutical products industry	Number	135	135	135	135	135	135	135	135
	Average	-0.01	-0.14	5.19	0.58	0.97	12.91	0.18	0.15
	Mean	-0.001	-0.01	5	0.60	1	12.61	0.15	0.12
	Maximum	0.27	3.71	7	7	7	16.17	2.16	0.48
	Minimum	-0.27	-6.56	5	0	0	19.72	-0.34	-0.07
	Standard deviation	0.07	1.23	0.56	0.20	0.17	1.22	0.27	0.12
	Coefficient of variance	7	8.79	0.11	0.33	0.18	0.09	1.5	0.80

It should be mentioned that among 158 companies being reviewed in this research, we just reviewed 2 macro industries: automotive and parts manufacturing industry and pharmaceutical products industry (39 companies in total).

Final review of research variables

Final results of research variables are shown in table 2. According to unit root tests from Levin, Lin, & Chu test, since P-Value is less than 5%, all independent, dependent and control variables in research period has been in stable level. Being stable means that average and variance of variables in research time period and also covariance of variables in different years, has been stable. Since performing stability test has no meaning in duality of CEO variable, we did not present it.

Table 2: stability test of variables in research time period

Tests / Variables	Value of Levin, Lin and Chu test	Probability of Levin, Lin and Chu test
Change in liquidity	-19.77	0.0000
Change in financial slack	-12.72	0.0000
Board size	-5.14	0.0000

Board combination	-21.71	0.0000
CEO duality	---	---
Company size	-16.65	0.0000
Growth opportunity	-37.93	0.0000
Profitability	-12.40	0.0000

Regression models of effect of board structural features on financial slack in all companies and different industries

Before examining 4 assumptions of research in all companies and different industries, we started to select proper pattern for regression models by using F Limer and Hausman tests.

If F Limer test value is less than 5%, we cannot use pooled data method. Unless, using pooled data method is suitable. If pooled data method is not selected against random data, we use Hausman test in order to select fixed effects pattern against random effects pattern. If Hausman test value is less than 5%, we have not sufficient reasons to reject fixed effects pattern, and we should use this pattern to examine research assumptions. Unless, using random effects pattern is suitable.

Regression models of effects of board structural features on different aspects of financial slack in all companies and different industries, is shown in tables 3 and 4.

The results of effects of board structural features on financial slack (change in liquidity) in all companies and different industries, showed in table 3, indicate that among board structural features, just the effect of board size in pharmaceutical products industry on financial slack (change in liquidity), is negative and significant. It means that in mentioned industry, by increasing number of board members, change in liquidity and financial slack will decrease.

Other results show that in all companies, profitability has negative and significant effect on change in liquidity. It means that in companies being reviewed, by increasing company profitability, change in liquidity and financial slack will decrease. Moreover, in automotive and parts manufacturing industry, just growth opportunity has negative and significant effect on change in liquidity. It means that in mentioned industry, by increasing company growth opportunity (change in sales level), change in liquidity and financial slack will decrease. It indicates that in automotive and parts manufacturing industry, 2 different standards of slack (financial slack resulting from change in liquidity and business slack resulting from change in sales) are not linear. It could be a result of credit sales and delay in payment in mentioned industry.

Since the effect of board structural features on financial slack (change in liquidity) in all companies is not significant, the first assumption of research is not approved.

Moreover, the effect of board structural features on financial slack (change in liquidity) except for board size in chemical products is not significant. So, the second assumption is approved.

Table 3: the effect of board structural features on change in liquidity

Tests / Level-model and variables		**Coefficient of Regression**	**T test value**	**T Probability value**
All companies-pooled model	**Fixed amount**	0.03	1.30	0.1937
	Board size	-0.003	-1.59	0.1229
	Board combination	-0.004	-0.49	0.6209
	CEO duality	-0.01	-1.51	0.1305
	Company size	0.0004	0.32	0.7492
	Growth opportunity	-0.0005	-0.1	0.9205
	Profitability	-0.03	-2.53	0.0115
	Coefficient of determination	**Adjusted Coefficient of determination**	**Probability of F test**	**Durbin-Watson test**
	0.008	0.004	0.0705	2.32
Automotive and	**Fixed amount**	0.04	0.63	0.5294

parts manufacturing industry- pooled model	**Board size**	-0.002	-0.28	0.7787
	Board combination	0.02	1.03	0.3048
	CEO duality	-0.03	-1.19	0.2363
	Company size	-0.001	-0.38	0.7031
	Growth opportunity	-0.03	-2.20	0.294
	Profitability	0.05	0.82	0.4103
	Coefficient of determination	**Adjusted Coefficient of determination**	**Probability of F test**	**Durbin-Watson test**
	0.04	0.01	0.2654	2.49
Chemical products industry- pooled model	**Fixed amount**	0.18	1.69	0.0943
	Board size	-0.03	-2.26	0.0258
	Board combination	-0.03	-0.88	0.3787
	CEO duality	-0.03	-0.67	0.5028
	Company size	-0.001	-0.14	0.8907
	Growth opportunity	0.02	0.81	0.4176
	Profitability	-0.03	-.061	0.5422
	Coefficient of determination	**Adjusted Coefficient of determination**	**Probability of F test**	**Durbin-Watson test**
	0.05	0.01	0.3424	2.29

The results of effects of board structural features on financial slack (change in financial crisis) in all companies is shown in table 4, which indicates that board structural features has no effect on financial slack (change in financial crisis). So; the third assumption is not approved, and effect of board size on financial slack (change in financial crisis). It indicates that in all companies, by increasing the number of board members, change in financial crisis and financial slack will increase.

The results in other industries also show that among board structural features, just the effect of CEO duality in automotive and parts manufacturing industry onfinancial slack (change in financial crisis), is negative and significant. It indicates that in mentioned industry, by separating CEO duality responsibility from board chairman responsibility, change in financial crisis and financial slack will decrease. Therefore, other board structural features has no effect on financial slack (change in financial crisis) in different industries, and the forth assumption is not approved.

Other results indicate that in all companies and different industries, none of control variables has effect on change in financial crisis.

Table 4: the effect of structural features on change in financial crisis

Tests / **Level- model and variables**		**Coefficient of regression**	**T test value**	**Probability of T test**
All companies- pooled model	**Fixed amount**	-0.34	-0.74	0.4605
	Board size	0.09	2.03	0.0426
	Board combination	0.20	1.06	0.2891
	CEO duality	-0.18	-1.14	0.2537
	Company size	-0.01	-0.55	0.5811
	Growth opportunity	0.002	0.01	0.9886
	profitability	-0.1	-0.34	0.7363
	Coefficient of determination	**Adjusted Coefficient of determination**	**Probability of F test**	**Durbin-Watson test**
	0.005	0.001	0.2612	2.04
Automotive and	**Fixed amount**	0.02	0.01	0.9887

parts manufacturing industry- pooled model	**Board size**	0.19	1.52	0.1290
	Board combination	-0.02	-0.04	0.9701
	CEO duality	-1.26	-2.53	0.0122
	Company size	0.002	0.04	0.9692
	Growth opportunity	-0.53	-1.96	0.0511
	Profitability	2.3	1.71	0.0887
	Coefficient of determination	**Adjusted Coefficient of determination**	**Probability of F test**	**Durbin-Watson test**
	0.07	0.05	0.0135	1.85
Chemical products industry- pooled model	**Fixed amount**	1.96	1.06	0.2891
	Board size	-0.11	-0.55	0.5848
	Board combination	-0.02	-0.04	0.9662
	CEO duality	-0.17	-0.25	0.8015
	Company size	-0.11	-1.18	0.2404
	Growth opportunity	-0.45	-1.11	0.2693
	profitability	0.57	0.60	0.5467
	Coefficient of determination	**Adjusted Coefficient of determination**	**Probability of F test**	**Durbin-Watson test**
	0.02	0.004	0.7952	2.05

Examination of assumptions in board process features level

Reviewing descriptive statistics of research variables

Since using questionnaire is needed to collect information about board process features, so for distributing questionnaire we used companies that their board members has remained unchanged in years 2010-2011. The number of these companies is 60 that their information is presented in Table 5.

Independent and dependent variables of this research in all companies, is determined by comparing coefficient of variation. Financial slack criteria (change in liquidity and change in financial crisis) have very more coefficient of variation comparing to independent variables of research (board process). That is; board process is more stable than financial risk standards. So, it can be concluded that financial slack of companies being reviewed should be influenced by other factors as well as board process; in this research we used some of these factors as control variables.

Descriptive statistics of other effective factors on financial slack in all companies is shown in Table 5. Among control variables, profitability has the most scattering and the lowest stability as a result, and company size variable has the lowest scattering.

Table 5: descriptive statistics of research variables

Variables / Criteria	**Change in liquidity**	**Change in financial slack**	**Board affairs**	**Cognitive conflict**	**Usage of knowledge and skill**	**cohesiveness**	**Company size**	**Growth opportunity**	**profitability**
number	60	60	60	60	60	60	60	60	60
Average	0.02	-0.81	3.84	2.99	3.85	3.87	13.39	0.17	0.09
Mean	0.03	-0.35	3.87	3.00	3.83	3.92	13.13	0.16	0.07

maximum	0.22	1.95	4.33	3.43	4.50	4.42	18.14	1.29	0.38
minimum	-0.27	-7.16	3.00	2.57	3.22	3.25	10.65	-0.30	-0.32
Standard deviation	0.09	1.67	0.26	0.18	0.29	0.26	1.41	0.24	0.13
Coefficient of variation	4.5	2.06	0.07	0.06	0.08	0.07	0.11	1.41	1.44

The regression models of effect of board process features on different aspects of financial slack (change in liquidity and change in financial crisis) are shown in Tables 6 and 7.

The results of effect of board process features on change in liquidity, shown in Table 6, indicate that the effect of none of board process features on financial slack (change in liquidity) in not significant. It means that in companies being reviewed, board process features have no effect on change in liquidity.

Other results indicate that in companies being reviewed, none of control variables have effect on change in liquidity. Since none of board process features have effect on financial slack (change in liquidity), the fifth assumption of research is not approved.

Table 6: the regression model of effect of board process features on change in liquidity

Variables	**Regression coefficient**	**T rest value**	**Probability of T test**
Fixed amount	0.10	0.30	0.7661
Board affairs	-0.05	-0.91	0.3649
Cognitive conflict	0.03	0.37	0.7103
Usage of knowledge and skill	0.01	0.21	0.8669
cohesiveness	0.02	0.33	0.7437
Company size	-0.005	-0.60	0.5515
Growth opportunity	-0.009	-0.19	0.8471
Profitability	-0.16	-1.65	0.1040
Coefficient of determination	**Adjusted coefficient of determination**	**Probability of T test**	**Durbin-Watson test**
0.08	0.05	0.7445	2.43

The results of effect of board process features on change in financial crisis, shown in Table 7, indicates that among board process features, just the effect of knowledge and skill usage on financial slack (change in financial crisis) is negative and significant. So, the sixth assumption is not approved either. It means that in companies being reviewed, by increasing the belief of board members in using knowledge and skill for helping CEO responsibilities, the interference level of board members in decision-making and strategic processes of company, the association level of not required members of board on board meetings, change in financial crisis and financial risk, will decrease.

Other results indicate that in companies being reviewed, none of control variables have effect on financial crisis.

Table 7: The regression model of effect of board process features on change in financial crisis

Variables	**Regression coefficient**	**T rest value**	**Probability of T test**
Fixed amount	8.14	1.33	0.1886
Board affairs	-0.36	-0.36	0.7224
Cognitive conflict	-2.30	-1.83	0.0734
Usage of knowledge and skill	-1.98	-2.10	0.0410
cohesiveness	1.99	1.85	0.0699

Company size	-0.06	-0.36	0.7205
Growth opportunity	-0.04	-0.04	0.9646
Profitability	-0.16	-0.09	0.9253
Coefficient of determination	**Adjusted coefficient of determination**	**Probability of T test**	**Durbin-Watson test**
0.14	0.12	0.3387	1.57

Discussion, conclusion and recommendations

The purpose of this research is to review the effect of board features (including process and structural features) on financial slack of quoted companies inTehran stock exchange. This research is done on 158 companies and the time period is 2003-2011, in all companies and 3 macro industries (in total 58 companies). To examine research`s assumptions in the level of board structural features, we used pooled regression models by considering the result ofF Limer test in research time period. It should be mentioned that we used the companies that their board members have remained unchanged in two last years of research, to examine research assumptions in the level of board process features.

The abstract of results of this research is listed below:

1. by considering the negative and significant effect of board size on change in liquidity in chemical products industry, it seems that in the years that board members have been at its maximum point, change in liquidity and financial slack has been at its minimum point in this industry. So, we recommend stock holders of chemical products industry to consider the positive effects of more board members in order to reduce financial slack.
2. By considering the negative and significant effect of CEO duality on financial crisis in automotive and parts manufacturing industry, it seems that in the years that CEO responsibility has been separated from chairman of the board, change in financial crisis and financial slack has been at its minimum point. So, we recommend stock holders of automotive and parts manufacturing companies to consider the positive effects of the number of CEO responsibilities separation from chairman of the board in order to reduce financial slack.
3. By considering the negative and significant effect of growth opportunity on change in liquidity in automotive and parts manufacturing industry, it seems that by increasing growth opportunity of company (change in sales level), change in liquidity and financial slack will decrease in mentioned industry. It indicates that in this industry, 2 different standards of financial slack (financial slack resulting from change in liquidity, and business slack resulting from change in sales level) are not linear. It can be a result of high credit sales and delay in payment in mentioned industry. So, we recommend stock holders of this industry to consider different aspects of company slack when evaluating them.

Some limitations of this research are listed below:

1. This research has been faced with inherent limitations of questionnaires to collect data related to evaluation of board process features. For example; questionnaire cannot measure comments and ideas completely. To remove this limitation, interview method can be used.

Recommendations for future researches

On researcher`s opinion, there are still different subjects in this field for future researches. So, it is recommended that more subjects be reviewed in future researches in order to make maximum use of this research results and also to unfold the relationship between board features and different aspects of slack in future.

1. Reviewing other slack standards (business, currency fluctuations and…) in reviewing the relationship between board features and company slack.
2. Repetition of this research for loss-making companies comparing to profit-making companies by using virtual variable in future researches.
3. Repetition of this research by using more time pauses of board features, and reviewing the effect of increasing pauses on improving the expectation of company slack model.

4. By considering high fluctuations in economic, cultural and political factors which are governing companies in our country, it is recommended that nonlinear regression model be used to determine the relationship between board features and company slack, in future researches.

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