Investigation of effect cash flows on the capital structure of listed companies in Tehran Stock Exchange

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Abstract: For this study, multiple regressions were used. The study was conducted in the period 2003-2011 in the Tehran Stock Exchange. The data, the Excel folders desired design parameters and finally calculated using SPSS 18.0 software are processed. The results of this study indicate that models As expected, the relationship between domestic financing operating cash flow, cash retention rates, foreign Financing , Financing through stock and debt of companies listed on the Stock Exchange Tehran is significant.
[nazanin hosseini, somayeh papi, abdol hasan najafi, sayed ali miri. **Investigation of effect cash flows on the capital structure of listed companies in Tehran Stock Exchange.** *N Y Sci J* 2013;6(10):31-36]. (ISSN: 1554-0200). http://www.sciencepub.net/newyork. 6

Key words: cash flow, cash handling, capital structure.

Introduction

Large companies are in a constant state of agency crisis. A primary role of senior management is to counter agency problems through organizational structures and incentive systems. If you are selling technology to large companies, you need to understand the incentives of the decision makers. As you go higher in the organization, the incentives are more aligned with the firm's incentives. But knowledge and authority over operations often reside at lower levels. Deciding what level to target involves nuanced tradeoffs. Good sales people understand how to navigate these tradeoffs and shepherd a sale. The complexity and counter-intuitiveness of this task is why it's so difficult for inexperienced entrepreneurs to sell to large companies.

Directors, managers and employees of business corporations are supposed to use their delegated authority to maximize the total financial returns from the business to its owners, the shareholders. Physicians, nurses, clinical psychologists, teachers, lawyers, CPAs, financial advisors and other service-oriented professionals are supposed to use their specialized knowledge and skills solely in the best interests of the patients, students or clients who have placed themselves (and some of their resources) in professional hands in exchange for the professionals' promises to act on their behalf. Government officials, judges and politicians in countries embracing the concept of popular sovereignty are instructed to use the power granted them to make public policy decisions that further some reasonable concept of "the public interest" (usually conceived as the common interests of their constituents or of the country's citizenry at large). Trustees, managers, and employees of non-profit charitable institutions are supposed to use their control over their organization and its resources to promote the general purposes for which the institution was chartered and endowed. Yet if agents are really to perform consistently in the manner they are supposed to do (that is, in the interests of other people), they will need to be suitably motivated by some combination of material incentives, moral incentives, and/or coercive incentives that will make it seem worth their while to attend faithfully to their service obligations and fiduciary duties. The more autonomy that agents have to have in order to do their particular kind of work effectively and efficiently, the less useful coercive sanctions are likely to be, and the more important it becomes for agents' moral and material incentives to be appropriately aligned with their broader obligations to their principals. That is, organizations need to be structured in such a way so the agent will expect that diligently serving the interests of his or her principals will also be in his or her own long-run best interests. In order to accomplish this, the principals need to be reasonably clever in setting up the initial rules of the game that are set in the employment contract, sufficiently vigilant in keeping track of their agents' quality of performance over time, and willing to bear at least some minimum level of "agency costs" in order to provide the necessary incentives.

Examples of some techniques commonly used to overcome or alleviate the agency problem would include: (1) profit-sharing bonuses, contingency fees, sales commissions, merit raises, executive stock options and various other contractually specified methods of setting the amount of the agent's financial compensation in proportion to measurable results; (2) organizational hiring and promotion policies for people in responsible positions (agents) that emphasize identifying and selecting

candidates whose reputation (based ideally on past performance) indicate they are "well-motivated," "dedicated to the ethics of the profession," and generally "of good character" — i.e., people who feel a strong sense of moral obligation to do their best to do what they have promised to do, even when no one is likely to be watching; (3) institutional arrangements of accountability (such as boards of directors, auditing committees, inspector generals' offices, professional society ethics committees, and government regulatory boards) for detecting and then punishing extreme dereliction of duty, either by simply firing and disgracing (or perhaps de-licensing) the unworthy agent or possibly by aggressively pursuing civil or criminal penalties through the courts; (4) arrangements such as elections whereby the recent performance of the agent may be periodically scrutinized by his or her principals and competing candidates for the job may be allowed to make their case for replacing the incumbent agent by revealing his or her shortcomings and showing how performance might be improved through a change in command.

An agency cost arises whenever you hire someone else to do something for you. It arises because your interests (as the principal) may deviate from those of the person you hired (as the agent).

When you lend money to a business, you are allowing the stockholders to use that money in the course of running that business. Stockholders' interests are different from your interests, because you (as lender) are interested in getting your money back

Stockholders are interested in maximizing their wealth, in some cases; the clash of interests can lead to stockholders; investing in riskier projects than you would want them to; paying themselves large dividends when you would rather have them keep the cash in the business.

There are three types of agency costs which can help explain the relevance of capital structure.

- **Asset substitution effect**: As D/E increases, management has an increased incentive to undertake risky (even negative NPV) projects. This is because if the project is successful, shareholders get all the upside, whereas if it is unsuccessful, debt holders get all the downside. If the projects are undertaken, there is a chance of firm value decreasing and a wealth transfer from debt holders to shareholders.
- **Underinvestment problem (or Debt overhang problem)**: If debt is risky (e.g., in a growth company), the gain from the project will accrue to debt holders rather than shareholders. Thus, management has an incentive to reject positive NPV projects, even though they have the potential to increase firm value.
- **Free cash flow**: unless free cash flow is given back to investors, management has an incentive to destroy firm value through empire building and perks etc. Increasing leverage imposes financial discipline on management.

Capital Structure and Cash Flows

On one hand, operations of the company may help in forecasting of future cash flows but in addition to this, future cash inflows and out flows can also be accessed through company capital structure. A corporation may use different combinations of equity, debt, or mixture of securities to finance its assets which is termed as Capital Structure. Company's capital structure is basically the composition of its liabilities i.e. how much the company owes to its shareholders and how much to its creditors.

Stake holders can easily judge the management's mind-set, strategy of running business and business's future prospects. A company's value is affected by the capital structure it employs, therefore; while deciding capital structure, management has to consider different important factors like bankruptcy costs, agency costs, taxes, and information asymmetry.

Using Greater Amounts of Debt

Recall that the main benefit of increased debt is the increased benefit from the interest expense as it reduces taxable income. Wouldn't it thus make sense to maximize your debt load? The answer is no.

With an increased debt load the following occurs:

Interest expense rises and cash flow needs to cover the interest expense also rise. Debt issuers become nervous that the company will not be able to cover its financial responsibilities with respect to the debt they are issuing.

Stockholders become also nervous. First, if interest increases, EPS decreases, and a lower stock price is valued. Additionally, if a company, in the worst case, goes bankrupt, the stockholders are the last to be paid retribution, if at all.

In our previous examples, EPS increased with every increase in our debt-to-equity ratio. However, in our prior discussions, an optimal capital structure is some combination of both equity and debt that maximizes not only earnings but also stock price. Recall that this is best implied by the capital structure that minimizes the company's WACC.

Financial flexibility is concerned with the ability of a company to refinance its debt through

other financial institutions or the capital markets. For example, if a company has reached its debt capacity, its only external financing option may be the equity market. However, if for any reason the raising of funds through the equity market is unattractive, or not feasible, a company may find itself unable to raise funds to pursue the company's future strategy. There may be an argument, therefore, for raising funds from shareholders while the opportunity is available, so leaving the company with greater flexibility to refinance its obligations or raise new debt in the future.

The operational cash flow is the cash flow associated with the company in its normal course of business. This represents the powerhouse of the company, and is the 'quality' cash flow to which the analyst needs to pay particular attention.

■financing activities. This shows the cash flows from external sources of finance, including lenders and equity providers.

■net movement in cash and short-term investments. This is the final calculation, and the analyst should ensure that the results reconcile from the balance sheet and cash flow.

■cash flow analysis. It is an important principle of lending that each loan should have two independent sources of repayment (primary and secondary). The capacity to repay through cash generation (as opposed to a third-party guarantee) requires analysis in three different areas:

(1) operational cash flow strength and the funds generated from the sale of goods and services in the day-to-day operations; (2) financial flexibility, which, as we have seen, is the ability of a company to refinance its debt through alternative sources of finance; and (3) operational flexibility, which is the ability of a company to raise cash through the liquidation of an asset or make operational changes to increase cash flow.

Lie (2006) believes that survival of a company is one of the first considerations and cash is one of the most important factors in survival of any company. Only can companies survive that are profitable and able to supply their financial needs. Understanding a company's ability to pay is one of the necessities and profit does not provide clearly this information, while cash flow statement provides clearly this information. Brochet et al (2008) to predict future cash flows examined the role of cash components and accounting accrual of profit. They predicted future operating cash flows as well as market value of equity as dependent variables and found that on average accruals relative to current operating cash flows improve prediction of future cash flows. They also reviewed determinants of predictive power of accruals to predict future cash flows and found that the probability of contribution of positive accruals was more in predicting future cash flows, contribution of accruals in cash flow volatility increased and it is reduced in domain of discretionary accruals and special items. Whatever has been researched about stock returns and value of firm have been mainly variables that shareholders noticed them and seen from this perspective. While a variable such as operating cash flow that is calculated based on accounting information to variables such as accruals that are more based on company policies, is less dependent on management policies and in this respect is largely immune of management interference and manipulations.

Gombola and Ketz (1983) and Bowen, Burgstahler, and Daley (1986) demonstrated that CFFO and its proxies were distinct and that each had different information content. This generated research investigating the information content of cash flow and accrual information in a number of traditional areas such as the capital market studies. While these studies show that cash flow and accrual information are not highly correlated, that is, they do not measure the same construction; results on the predictive ability and incremental content are mixed. For instance, Bowen *et al* (1987) found that when cash flow data was added to an accrual model, cash flow data enhanced the ability of accrual data in explaining security price changes. When accrual data was added to a cash flow model, they observed that it also improved the explanatory power of the cash flow model in explaining security price changes. Murdoch and Krause's (1989) investigation of the predictive power of accrual and cash flow data in forecasting operating cash flow indicated that accrual data possess incremental predictive ability beyond that provided by cash flow data and that cash flow data is not useful for forecasting cash flow. In a subsequent study employing time series data, Murdoch and Krause (1990) found support for cash flow data containing incremental information content over accrual data in predicting future cash flows. In explaining dividend changes Simons (1994) concluded that cash flow data do not contain information beyond that provided by accrual information. Most of these comparative studies however relied on reconstructed measures of CFFO. Reconstructing CFFO may not capture the real CFFO. Recently, Austin and Bradbury (1995) demonstrated that even the best mechanical rules for reconstructing CFFO produced large errors.

Therefore, these studies and in particular, prior failure prediction studies that have employed mechanical reconstructions of CFFO may not have tested the power of real CFFO. This contention was raised earlier by Watts and Zimmerman (1986) in

relation to capital market research and by Gombola *et al* (1987) in relation to predicting company failure. These authors questioned the validity of prior studies employing proxies that were remote from the "real" thing. In acknowledgement of the possibility of errors in their estimation of CFFO, Gombola *et al* (1987) encouraged replication of their study when cash flow data is available through company annual reports. Another implication of mechanical reconstruction is that prior studies have employed a diversity of methods for measuring CFFO therefore no firm cross-sectional conclusions can be made regarding the ability of cash flow information to predict corporate failure.

Methodology

Classification scheme based research study in terms of the type of applied research. Applied research is the study of the theory, Laws, principles and techniques for solving real problems. The present study uses analytical correlation is emphasized.

This study in terms of data collection, is descriptive and non-experimental research and aimed to examine the relationship between variables and the significance of the model to explain the dependent variable, and used the regression analysis.

Research hypothesis

According to the theoretical literature mentioned above assumptions, the following is recommended:

Research hypotheses:
Hypothesis 1:
Financing sources outside the company is cash flow positive correlation.
Hypothesis 2:
  Cash flow of the company during the financial year had a significant relationship Financing through debt.
Hypothesis 3:
Cash flow from investment by the company during the financial year had a significant relationship financing.
1)   ΔCASHHOLDING   INVESTMENT-EXTERNALFINANCE = OCF

The left side of equation (1) consists of three major use of funds in the company. Funds are mainly used in Investing Activities, held in bank accounts and reduce external financing is used. OCF in the right side of equation (1) represents the operating cash flows, and can be considered as a source of funds (for example, see Bushman et al

(2011)). OCF as the source of funds used in this study because one of our primary goals is to recognize that a typical company to allocate additional accounts to which one of the three items on the left side of equation (1) refers to.

2) EXTERNALFINANCE$_{i, t}$ = y1, i +y2OCF$_{i, t}$ +y3SIZE$_{i, t}$+ y4LEVERAGE$_{i, t}$ +y5ZSCORE$_{i, t}$+ ε1, i, t,

3) EQUITYFINANCE$_{i, t}$ = y1, i+ y2OCF$_{i, t}$ +y3SIZE$_{i, t}$ +y4LEVERAGE$_{i, t}$ +y5ZSCORE$_{i, t}$ +ε1, i, t,

4) DEBTFINANCE$_{i, t}$ = y1, i +y2OCF$_{i, t}$+ y3SIZE$_{i, t}$, t+ y4LEVERAGE$_{i, t}$+ y5ZSCORE$_{i, t}$ +ε1, i, t,

EQUITYFINANCE: financing through the issue of shares, the Company issued stock to raise capital and to finance. That is the specific amount of the capital increase during the fiscal year t.
DEBTFINANCE: through debt financing, the company's long-term debt to raise capital and debt financing goes. Which is equal to the sum of long term debt during the year by subtracting long-term debt in fiscal year t and t-1 is obtained.
OCF: operating cash flows as a source of funds used, because one of our primary goals is to recognize that a typical company which accounted for their Rails 3 account surplus items left equation (1) refers.

Leverage ratio (LEVERAGE). Leverage ratios of firms is likely to be associated with the use of company funds (Faccio, Lang, and Young (2001)). Indicator of financial distress. Companies are faced with financial turmoil may use the cash to spend sensitivity (Allayannis and Mozumdar (2004)). We use the score - Z Altman as a control to determine the state at time t will use the company's financial distress.

Firm size (SIZE). Studies on the determinants of cash holdings to firm size as a proxy for the scale of operations used (Opler, Pinkowitz Stulz and Williamson (1999), Almeida et al (2004)). Information asymmetry as a representative of the company, so it is likely affect that investment and insurance activities. Logarithm of the book value of the assets of our Company as at the end of the financial period is defined.

The results

Table 1 contains descriptive statistics of the variables for the years 2004-2011. Table 2 presents the Pearson correlation coefficients between the main variables.

Table 1. Descriptive statistics and Pearson

		OCF	Debt Finance	Equity Finance	Z-Score	LnSize	leverage
Mean		233609.79	22623.37	228270.94	.7038	13.1227	.4934
Mid		43262.00	89.002	60000.00	.6819	13.0429	.0226
SD		9.20394E2	324223.276	.72992E22	.71110	1.20392	1.91493
Percentile	22	11022.00	-6897.00	24120.00	.4019	12.2634	.0211
	02	43262.00	89.002	60000.00	.6819	13.0429	.0226
	72	123838.00	14224.00	188234.20	1.0127	13.9316	.1882

Table 2. Pearson covariance:

		Ln OCF	Ln External Finance	Ln Equity Finance	Z-Score	LnSize	Ln Leverage
Ln OCF	Pearson Correlation	1	.327[**]	.639[**]	.086	.024	.444[**]
	Sig. (2-tailed)		.000	.000	.107	.642	.000
Ln External Finance	Pearson Correlation	.327[**]	1	.721[**]	-.003	.087	.300[**]
	Sig. (2-tailed)	.000		.000	.923	.077	.000
LnEquity Finance	Pearson Correlation	.639[**]	.721[**]	1	-.002	.191	.283[**]
	Sig. (2-tailed)	.000	.000		.986	.067	.000
Z-Score	Pearson Correlation	.086	-.003	-.002	1	-.008	-.124[*]
	Sig. (2-tailed)	.107	.923	.986		.873	.013
LnSize	Pearson Correlation	.024	.087	.191	-.008	1	-.222[**]
	Sig. (2-tailed)	.642	.077	.067	.873		.000
LnLeverage	Pearson Correlation	.444[**]	.300[**]	.283[**]	-.124[*]	-.222[**]	1
	Sig. (2-tailed)	.000	.000	.000	.013	.000	

Hypothesis testing hypothesis 2: "Financing operating cash flow through investment companies are correlated during the fiscal year."
Model 3:

3) EQUITY FINANCEi, t = γ1, i + γ2CFi, t + γ3SIZEi, t + γ4LEVERAGEi, t + γ5ZSCOREi, t + ε1, i, t,

Table 3 present the regression results obtained from the models below.

Table 3. regression results obtained from the models

Model		Non-standardize		standardize		
		B	Std. Error	Beta	T -stat	Sig.
3	(Constant)	.711	1.307		.244	.288
	Ln OCF	.224	.072	.288	3.246	.001
	Z-Score	-.076	.128	-.032	-.483	.630
	LnSize	.670	.114	.488	2.866	.000
	LnLeverage	.227	.069	.708	7.293	.000

a. Dependent Variable: LnEquityFinance

Hypothesis testing

Hypothesis 3: "Cash flow from operating financing corporate debt during the fiscal year had a significant relationship."
Model 4:

4) DEBT FINANCEi, t = γ1, i γ2CFi, t γ3SIZEi, t γ4LEVERAGEi, t γ5ZSCOREi, t ε1, i, t,

Table 4 present the regression results obtained from the models below.

Table 4 The regression results obtained from the models

model		Non-standardize		standardize		
		B	Std. Error	Beta	T -stat	Sig.
4	(Constant)	-301930.093	182188.520		-1.627	.098
	Ln OCF	.024	.017	.128	3.160	.002
	Z-Score	-33771.272	23222.749	-.070	-1.424	.147
	LnSize	24492.520	13696.226	.090	1.788	.074
	LnLeverage	31942.236	8631.432	.189	3.701	.000

a. Dependent Variable: Ln Debt Finance

Conclusions and practical proposals and suggestions for future research

Table 2 shows the Pearson correlation coefficients of variables. Table 2 shows the regression results obtained from the model, as expected, the operating cash flow for companies listed in Tehran

Stock Exchange for Foreign Financing positive (the coefficient 28934.119) and significant (the coefficient is 0.047 significant) is. Thus, Hypothesis 1 is based on original research "operating cash flow of the company had a significant relationship with Financing resources" are recognized.

Regression results obtained from the model in Table 3 indicate that, as expected, the relationship between equity and cash flow from operations Financing for companies listed in Tehran Stock Exchange positive (the coefficient 0.224) and significant (the coefficient significant 0.001) is that the first sub-hypothesis-based research "Financing operating cash flow during the fiscal year of the company's debt is a significant relationship" to confirm.) And significant (0.002 significant factor because of the significant level of 0.02 is expected to take less than the second sub-hypothesis) is that it makes the assumption that 'operating cash flow financing the company during the fiscal year debt significant relationship "is OK.

Applied research proposals

1. Financing resources in terms of operational adjustments to your decisions.

2. Accounting and capital market conditions in the country to determine.

Suggestions for further studies

In order to perform further studies on this research, the following topics are suggested:

1. It can be the subject of study in various industries and is expected Due to the nature of the companies operating in different industries, different results are obtained.

2. This research is investigating the use of models with continuous independent variables.

3. Study period (2004-2011) to cover. The topic for the course of the study suggest - different times longer than the other and be done with further increase the validity of the observations and the results of the present study is to compare the results.

4. The relationship between the amount of work holders, and its impact on operational cash flow.

5. The relationship between the amounts of cash flow during the period of delay in reporting the audited financial statements.

9/2/2013

References:

1. Gombola, M. and E. Ketz (1983), A Note on Cash Flow and Classification Patterns of Financial Ratio, The Accounting Review, Vol. 57, pp. 105–14.

2. Bowen, R., D. Burgstahler and L. Daley (1986), Evidence on the Relationships between Earnings and Various Measures of Cash Flow, The Accounting Review, Vol. 61, pp. 713–25.

3. Dechow, P. (1994), Accounting Earnings and Cash Flows as Measures of Firm Performance: The Role of Accounting Accruals, Journal of Accounting Economics, Vol. 18, pp. 3–42.

4. Dechow, P., R. Sloan and A. Sweeny (1995), Detecting Earnings Management, Accounting Review, Vol. 70, pp. 193–226.

5. Glen, J.D., Y. Karmokolias, R. Miller and S. Shah (1995), Dividend Policy and Behaviour in Emerging Markets: To Pay or Not to Pay, International Finance Corporation Discussion Paper 26, World Bank.

6. Inanga, E.L. and C. Emenuga (1997), Institutional, Traditional and Asset Pricing Characteristics of the Nigerian Stock Exchange, African Economic Research Consortium Research Paper 60.

7. Izedonmi, O.I.F. and O.P. Eriki (1996), Determinants of Dividend Policy in Publicly Quoted Companies ICAN News October/December, (Nigeria) pp. 15–19.

8. Watson, I. (1996) 'Financial Distress - The State of the Art in 1996', *International Journal of Business Studies*, Vol. 4, No. 2, pp.39-65.

9. Watts, R. and Zimmerman, J. (1986) *Positive Accounting Theory*, New Jersey: Prentice- Hall.

10. Kochanek, R.F. and Norgaard, C.T. (1988) 'Analyzing the Components of Operating Cash Flow: The Charter Company', *Accounting Horizons*, March, pp.58-66.

11. Kuhn, T.S. (1970) *The Structure of Scientific Revolutions*, The University of Liverpool Press: Liverpool.