The Effect of Cash Flow Shocks on Capital and Asset Structure
(Evidence from Tehran Stock Exchange)

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Abstract

The aim of this paper examines the effect of financial constraints on cash flow in Tehran stock exchange from 2005 to 2010. Sensitivity of cash flow is defined as "the ratio of changes in cash reserves to the changes in operating cash flows". This study is an applied, regression-descriptive research. Using three distinctive criteria of company size, payout ratio, and the ranking of the company, companies are classified divided, categorized into two categories of companies with financial constraints and companies without financial constraints in order to test the two hypotheses of study. Based on obtained evidence, the hypotheses were rejected. The research results showed that financial constraints do not affect sensitivity of cash flow.

Keywords: Cash Flow Sensitivity, Cash Flow Identity, Cash Reserves, Financial Constraints, Cash Inflow, Operating Cash Flow.

JEL Code: G31, G32

1. Introduction

This research documents the short and long term balance sheet and cash flow statement effect of cash flow shocks. Pioneered by Fazzari, Hubbard and Peterson (1988) (henceforth FHP), a large literature has developed on the usefulness of cash flow sensitivities in identifying financial constraints on investment. FHP argues that, ceteris paribus, a sensitivity of investment levels to cash flows indicates that the cost of internal finance is lower than that of external finance (Dasgupta and et al., 2010).

This difference might arise because external funding imposes additional costs, arising from increased agency conflicts, under investment incentives, or adverse selection, on firms. FHP document cash flow sensitivity and show that this sensitivity is higher for firms which seem more constrained a priori. They conclude that this evidence supports the financial constraint hypothesis (Dasgupta and et al., 2010).

FHP's research has lead to a great deal of scholarly debate. First, the ability of their proxy, measured Tobin's Q, to maintain ceteris paribus has been challenged on the grounds of measurement error (e,g, Erickson and Whited, (2000), Gomes (2001), and Alti (2003)).

Second, a monotone relation between the severity of financing constraints and cash flow sensitivity is not a general consequence firms being financially constrained. Thus, tests for differences in cash flow sensitivities based on a priori measures of financial constraint cannot confirm the financial constraint hypothesis (Kaplan and Zingales (1997, 2000)).

Different companies have different motivations in maintaining cash funds. For instance, difference between internal and external financing costs causes organizations to control how they borrow, invest, and save money in order to use internal cash funds when required. If a company, for any reason, cannot access needed cash, it is regarded as being financially constrained. In long-term, financial constraints may harm the company's profitability, growth, and financial status and even fall behind in competitions and being removed from the market. Thus, accessing to cash reserves (resources) is a critical for financially constrained companies. Therefore it is expected that fluctuations in operational cash flow affect cash reserves in financially constrained companies. This is referred to as "cash flow shocks". In other words, cash flow shock is the same effect that changes in operating cash flow exert on cash reserves. Cash flow shock is also called "sensitivity of cash flow". Sensitivity of cash flow is defined as "the ratio of changes in cash reserves to the changes in operating cash flows".

In this research we consider the following issues:

  (1) How firms allocate an additional dollar of cash in the short term.
  (2) How they allocate a dollar of cash in the longer term.
  (3) Whether financially constrained and unconstrained companies allocate differently.
The aim of this paper examines the effect of financial constraints on cash flow in Tehran stock exchange.

2. Literature Review& Background Research

The literature on sensitivity of cash flow started with Fazzari and et al., researches in 1988, According to whom when companies with severe financial constraints make investment decisions, they emphasize on cash flow. Fazzari, Hubbard, and Petersen (1988, 2000) use dividend as criteria for differentiating financially constrained companies from those without financial constraints. They found out that the financially constrained companies are more cash flow sensitive compared to companies without financial constraints. As a result, they interpreted high sensitivity of cash flow as an indicator of financial constraints. But their findings were challenged by Kaplan and Zingales, (1997) studies. Kaplan and Zingales, (1997) surveyed and analyzed a sample of 49 companies with low dividend which were recognized by Fazzari and et al., (1988) and classified those companies into three categories: companies with financial constraint, those possible financial constraints, and those without financial constraint. Their results indicated that sensitivity of cash flow should not be regarded as an appropriate measure of financial constraint because paying lower dividends (even if they could pay more dividends) does not necessarily imply that the company is financially constrained. Criticisms of Kaplan and Zingales, (1997) work are mostly made because of the small sample.

One of the criteria used by Kaplan and Zingales, (1997) to classify companies into two categories of financially constrained and financially unconstrained was the credit lines. In response to Kaplan and Zingales model, Pratap, (2003) provided a model by which he showed that for certain organizations unused credit line can be equal to financial constraints. Such companies reflect a high level of sensitivity of cash flow. The findings of his model are as follows: 1- companies that report a high level of sensitivity of cash flow may have unused credit lines, 2- companies operating under severe financial constraints do not react to the improvement of financial position by increasing their own investments. 3) despite of access to external sources of funds, many companies emphasis on internal funds in order to increase their cash flow. So in his opinion, selection of credit lines cannot be a good criterion for classifying companies. However, confirmed Kaplan and Zingales results Cleary and et al, (2007). He used a large sample of American companies 1987 to 1994. Cleary showed that the companies with high credit power capacity (without financial constraints) have higher sensitivity of cash flow than the companies with low credit power capacity (with financial constraints). He attributed these findings to companies' interest inclinations (even in the case of financially unconstrained companies) in using internal funds for financing.

Kaplan and Zingales, (1997) and Cleary and et al, (2007) findings were supported by Erickson, Whited, (2000) and Alti, (2003). They relate Kaplan and Zingales and Cleary as well as their own findings to Tobin Q ratio. They didn't consider this ratio as an appropriate criterion for measuring growth opportunities.

If cash flows contain information about investment opportunities and potential profitability of existing assets, companies without financial constraints may decide for capital adjustments as a response to investment opportunities. Therefore companies without financial constraints would have higher levels of cash flows. Alti stated that cash flows may contain valuable information about investment opportunities. In other words, they argued that difficulties associated with Tobin Q can affect sensitivity of cash flow.

Allayannis and Mozumdar (2004) proved that Kaplan and Zingales findings are related to the small size of the sample. They found out that Kaplan and Zingales findings are highly sensitive to the inclusion of Coleco & Mohawk Date Science companies into the category of financially constrained companies and also highly sensitive to the inclusion of Digital & Date General companies into the category of financially unconstrained companies. They relate Cleary's findings to the negative cash flows. When they excluded companies with negative cash flow, it was observed that the difference between financially constrained companies and those without financial constraints, in terms of sensitivity of cash flow is not statistically significant. When cash flow deficit is high, companies approach financial crisis and they only can make fundamental investments. By definition, financially constrained companies have a limited access to external financing and will quickly reach minimum investment. Future decrease in investment as a response to reduction in future cash flow is impossible which causes financially constrained companies to have lower sensitivity towards cash flow. Allayannis and Mozumdar (2004) and Agca and Mozumdar (2008) also find that the investment-cash flow sensitivity has declined over time.

Specifically, in an influential set of papers, Francis, LaFond, Olsson, and Schipper (2004, 2005) argue that accrual quality affects the cost of equity. However, Core, Guay, and Verdi (2007) note that the returns-based tests reported by Francis, LaFond, Olsson, and Schipper are incomplete for the purpose of establishing a new pricing factor related to accrual quality. Both Francis, LaFond, Olsson, Schipper and Core, Guay, Verdi use the Dechow and Dichev (2002), *Measure* to measure accrual quality. The Dechow and Dichev *Measure* is estimated as the standard deviation of residuals from the regression of working capital accruals on past, current, and future operating cash flows, so that *higher* levels of the Dechow and Dichev *Measure* represent *lower* accrual quality. The Dechow and Dichev *Measure* is correlated with several characteristics that are likely associated with adverse cash flow news. therefore Dechow and Dichev *Measure* is negatively correlated with future cash flow shocks, i.e., firms with low *measured* accrual quality experience negative cash flow shocks in the future.

The Dechow and Dichev *Measure* is also negatively correlated with two direct proxies for future cash flow shocks, namely, the earnings surprise variable based on a simple model that assumes earnings can be predicted based on previous-year earnings, and the cash flow news proxy based on the revision in analysts' earnings forecasts constructed as in Easton and Monahan (2005).

Brown and Petersen (2009) find that the physical investment-cash flow sensitivity has declined and largely disappeared but they argue that R&D is an important form of investment. If R&D is included in the investment, then the investment-cash flow sensitivity is still strong, particularly for firms with positive cash flows. The standard approach is to use an observable measure of Tobin's q as a proxy for marginal q, which should be the only determinant of investment according to q theory. Erickson and Whited (2000) and Cummins, Hassett, and Oliner (2006) tackle this issue by implementing alternative methodologies that deal with the measurement errors in q and show insignificant cash flow effects. Their findings suggest that cash flow does not matter for investment when measurement error in q is addressed.

Not many empirical studies in the related literature have treated the firm as the basic unit. Brown, Fazzari and Peterson (2008) who study the effect of financial variables on R&D, exclude from their mayor empirical analysis firms whose sum of (over the sample period) cash flow-to assets ratio is negative. They argue that these firms are very small startup companies and that their number is trivial in relation to their whole sample of firms. Lyandres (2007) and Hovakimian (2009) show the nonlinearity of the relationship between financial constraints and investment-cash flow sensitivity by both theoretical model and empirical evidence. With positive excess cash flows, firms can either save cash or repay debts. If cash is "negative debt" (Acharya, Almeida, and Campello, 2006), the firm and its creditor should be indifferent between the two choices.

In line with theory, the results show that the impact of cash-flow on investment is larger for firms with higher information asymmetries (Kadapakkam, Kumar and Riddick, 1998).

However, this variable should be approached with caution in the sense that cutting dividends for the sake of liquidity may also have adverse signaling effects for the firm's stock in the market (see, e.g., Healy and Palepu, 1988). Almeida and Campello (2007) examine the interaction term between cash flow and asset tangibility of a firm. They find that asset tangibility increases investment-cash flow sensitivity of financially constrained firms, while asset tangibility does not have a significant impact on the investment-cash flow sensitivity of financially unconstrained firms.

Pulvino and Tarhan (2006) simultaneously estimate a system of nine equations where each of the nine dependent variables is a particular use or source of cash and add up to the firm's cash flows. Some of the evidence in Pulvino and Tarhan (2006) is similar to what we find for short-term cash flow sensitivity. Like us, that paper also finds that the most important immediate uses of cash flow are retirement of debt and addition to cash balances, and the response of capital expenditure to cash flow shocks is small. However, while we find a non-trivial response of investment (which includes expenditure on acquisitions as well as the conventional capital expenditure studied in the literature), they find no sensitivity (Dasgupta and et al., 2010).

Hovakimian, A. and Hovakimian, G. (2009) have determined cash flow sensitivity is related to both underinvestment when cash flows are low and overinvestment when cash flows are high.

Recently, Almeida, Campello and Galvao (2010) scrutinize the Erickson and Whited (2000, 2002) methodology and find it to be prone to provide inefficient and biased estimates. Almeida, Campello and Galvao (2010) and Erickson and Whited (2010) report significant cash flow effects. The findings in Erickson and Whited (2010) are different than those in Erickson and Whited (2000) who report insignificant investment-cash flow sensitivities on their dataset.

3. Research Hypotheses

Considering the previous studies, the hypothesis of this research is formulated as follows:
H_1-Financial constraints influence the sensitivity of cash flow in the short-term.
H_2-Financial constraints influence the sensitivity of cash flow in the long-term.

4. Research Methodology

This study is deductive-inductive in which the theoretical foundations of research is obtained through library studies in an inductive manner method and relevant information are collected by observing the financial statements and notes accompanying financial statements in a deductive manner. This study empirically examines the effect of financial constraints on cash flow of companies that are accepted in Tehran Stock Exchange. Therefore it is an applied study and descriptive-regressive.

4.1 The Effect of Cash Flow Shocks on Asset Structure and Equity

4.1.1 Criteria for Financial Constraints

In this research we use three criteria for separating financially constrained companies from those without financial constraints:

Company size - Companies that are small in size compared to the average of other companies are classified as financially constrained; otherwise they will be classified as financially unconstrained. Natural logarithm of company's assets has been used to measure the company size.

Payout ratio - dividend payout divided by operating income. Every year companies are classified according to their payout ratio of the previous year. On this basis, companies with payout ratio is higher than average are considered as financially unconstrained companies, as opposed to the companies with payout ratio is lower than the average are considered as financially constrained companies.

Ranking of the company- "Index of corporate dividend" has been used to rate companies, i.e., a company is financially constrained if its index of dividend is lower than its index of dividend within the relevant industry. Otherwise the company will be regarded as being financially unconstrained.

4.2 Cash Model

After dividing companies by means of abovementioned criteria, we set out to investigate nature of cash using model (1). Model (1) which in fact is the company's cash balance is as follows:

Ocf= ΔCash holding + Investment + Dividend – External Finance   (1)

The left side of the model (1) involves four important applications of cash resources. Cash resources are initially used for increasing cash balance, performing investments activities, paying dividend, and reducing external financing. Ocf in the left side of the model (1) is Operating Cash Flow which can be considered as a source of company cash, because one of the primary objectives of this research is to propose a method by which a company allocates its accrual cash flow to the four elements noted in the left side of the model (1).

In order to further examine the cash balance, this research applies the following regressions:

Δ Cash holding $_{i,t}$ = $\alpha_{1,i}$ + β_{11}Ocf$_{i,t}$ + β_{12}Ocf$_{t,t-1}$ + β_{13}Ocf$_{i,t-2}$ + β_{14}Q`$_{i,t}$ + β_{15}Cashholding$_{i,t-3}$ + $\varepsilon_{1,i,t}$ (2)
Investment = $\alpha_{1,i}$ + β_{21}Ocf$_{i,t}$ + β_{22}Ocf$_{t,t-1}$ + β_{23}Ocf$_{i,t-2}$ + β_{24}Q`$_{i,t}$ + β_{25}Cashholding$_{i,t-3}$ + $\varepsilon_{1,i,t}$ (3)
Dividend $_{i,t}$ = $\alpha_{1,i}$ + β_{31}Ocf$_{i,t}$ + β_{32}Ocf$_{t,t-1}$ + β_{33}Ocf$_{i,t-2}$ + β_{34}Q`$_{i,t}$ + β_{35}Cashholding$_{i,t-3}$ + $\varepsilon_{1,i,t}$ (4)
External finance = $\alpha_{1,i}$ + β_{41}Ocf$_{i,t}$ + β_{42}Ocf$_{t,t-1}$ + β_{43}Ocf$_{i,t-2}$ + β_{44}Q`$_{i,t}$ + β_{45}Cashholding$_{i,t-3}$ + $\varepsilon_{1,i,t}$ (5)

Each equation represents a specific use of cash as a function of cash flow and Tobin Q.

Q indicates growth opportunities and is equal to the ratio of book value of total liabilities (book value of total assets minus book value of equity) plus book value of equity to the book value of total assets.(In other words, market value of assets divided by book value of assets).

Here Q'$_{i,t}$ is the average of Qs in the years t , t-1 and t-2 . Main independent variables which are operating cash , Ocf $_{i,t}$, Ocf $_{i,t-1}$ and Ocf $_{i,t-1}$ constitute cash resources. Equations (2) to (5) have been prepared on the basis of two sources of data. In the first source, data have been collected through the information of balance sheets:
Cash holding**:** same as cash and cash equivalents which can be extracted from balance sheet.

External financing: total net liabilities and equity issues.

Dividend: common stock plus preferred stock.

Operating cash flow: operating cash flow which is shared between balance sheet data and statements of cash flows.

In this group of data all of the data is extracted from balance sheet. These data are called "balance sheet data" for simplicity.

In the second source the data are classified as follows:

Investment: Data pertaining to this variable is directly obtained from statement of cash flow. This group of data is called "statement of cash flow data" for simplicity.

All of the variables on the left as well as the right side of the aforementioned equations have been compared with one another using book value of assets. Selection of three cash maintenance periods which represent the effect of cash flow can be perceived from t-3.

Coefficients of cash flows in two previous periods influence the sensitivity of cash flow in the previous period. This matter reflects the issue of how –assuming other conditions are constant- one excess Rial in cash flow in current year influences a specific application of cash flow in the next year or in the next two years. For instance while in the equation (3) coefficient of the last year, β_{22}, is interpreted as "the effect of one excess Rial in cash flow on current year's investment", it could simultaneously be interpreted as: "if a company has surplus cash in the current year, how much of it will the company spend for investment in the next two years?". Similarly, the coefficient of two years ago, β_{23}, can be interpreted in this way: "if a company earns an additional Rial from cash flow, how much of it will the company spend for investment in the next two years?" In other words, total sum of coefficients of cash flow in three consecutive years is the amount spent from surplus Rials of cash flow in current year for investment in the next three years, including the current year. Consider the following equation:

'Υ$_i$=$\sum_{j=1}^{3} \beta ij$, i= 1, 2, 3, 4, 5

Therefore we could define 'Υ$_i$ as the long-term (3 periods) sensitivity of cash flow.

5. Research Models

5.1 Statistical population

Statistical population of this paper is companies accepted in the Securities exchange of Tehran and the sample was selected from those companies. The following items have been considered in the selection of sample:

1. Information required for the research and notes accompanying the financial statements of the company for the term of 2005 to 2010 must be available.
2. The sample must not include investment companies, financial intermediary firms, and monetary and banking institutions because their activities are different.
3. Companies must be accepted in Exchange Capital Market from 2005.
4. Companies must have been active from 2005 to 2010.
5. Companies must not be removed from the list of stock companies during research period.
6. Companies must not have operational capital cash flow during research period.
7. Balance sheet of the companies must have cash holding for at least 3 consecutive years.

Considering these constraints, 57 companies from different industries were studied (table1).

Table 1- examined Companies

Industry	Subcategory Industry	No.
Non-metallic minerals	Other non-metallic minerals, glass, cement, lime, gypsum, tile, ceramic	12
Chemical and Pharmaceutical	Chemical and Pharmaceutical products	17
Oil	Coke construction, Products derived from oil refining, and nuclear fuel.	3
Food except sugar	Food products	4
Sugar	Sugar products	1
Rubber and plastics	Rubber and plastic products	1
Textiles	Textile products	1
Tile and ceramic	Tiles and ceramic products	7
Automobile	Automobile products	5
Machinery and equipment	Machinery and equipment products	3
Basic metals	Basic metal products	3
Total sum		57

5.2 Data Collection Method

In this paper audited financial statement of companies (balance sheet and cash flow statements) and notes accompanying the financial statements within relevant time period, as well as Tadbir and Rahavarde Novin (Iranian software) software have been used in order to collect data. Also in some cases we used financial statements of companies available in www.rdis.com, a website belonging to the Research and Development Islamic Studies of Tehran Stock Exchange.

6. Results

6.1 Descriptive Statistics

We used 57 companies whose shares have been exchanged during 3 periods (from 2005 to 2010) in order to test the research hypotheses. Afterwards, the data of these companies were examined by Spss.

Data analysis in descriptive statistics was conducted through computing central indexes such as mean, median, and dispersion indexes including standard deviation, skewness, and kurtosis for each industry as well as for all industries. Afterwards, simple linear regression analysis was used to analyze the model through the least squares method. Finally, Pearson and Spearman correlation was used for variables and comparison with similar cases.

6.2 Test of Hypotheses

The first hypothesis was developed to test the effect of financial constraints on cash flow shocks for the two groups of financially constrained and financially unconstrained companies in short-term. Afterwards three criteria were used to measure the extent of companies' constrain: company's size, payout ratio, and rating. Considering these three criteria, the first hypothesis of this study was not confirmed. In other words, according to the findings of the study there is no correlation between cash flow shocks and financial constraints in short-term. Regarding tables 2, 3, and 4 and considering that 46% of sample companies have size constraint, 60% have payout constraint, and 100% have rating constraint, the idea that the three criteria of company size, payout ratio, and rating cannot be regarded as representation of financial constraints in Iran is reinforced.

The second hypothesis examines the effect of financial constraints on cash flow shocks in long term. As mentioned before, cash flow shock in long-term is defined as total sum of cash flow shocks in short-term. Since the first hypothesis was not confirmed, it is not advisable to consider short-term cash flow shocks as a basis for determining long-term cash flow shocks. Therefore the second hypothesis of this study is not confirmed. In other words, based on the findings there is no correlation between cash flow shocks and financial constraints in long-term (see tables 2, 3, 4)**.**

7-Conclusion

In present study how to deal with cash surplus in companies which have the financially different positions than each other have been tested. Main goal of carrying out the study when a company has obtained one penny as cash surplus through operational activities is to consider what uses does the cash surplus have? Does it spend to reduce amount of borrowing or have been the company applying it to develop investment opportunities? Moreover, the mentioned deeds would not be done and the company decides to save the cash surplus. But what are the consequences of these decisions for the company? In other word, what impacts have decision policies on short and long term perspectives in that company?

The given subjects contribute to four hypotheses and on the base of these hypotheses, three discriminate criteria or financial limitations have been established. They are size limitation, payment limitation and rank limitation for the companies. After testing the hypotheses, it was determined that there is no correlation between short and long term allocation of the cash surplus in companies and financial limitations.

First hypothesis was not accepted in regard to the given criteria including size, payment and rank of the companies. In other word, obtained information from the study has not confirmed there is a correlation between cash flow shocks and short-term financial limitations. Because selected companies as sample have had 46% of size limitation, 60% of payment limitation and 100% of rank limitation, an idea would have been reinforced which size, payment and rank of those companies could not be indicated that there is financial limitation in our country.

Because the first hypothesis was not accepted short-term cash flow shocks could not be supposed as the basic of determining long-term cash flow shocks. As for these descriptions, the second hypothesis has not been accepted. On the other hand, the obtained information from the study has been indicating that there are not any documents to confirm the correlation between cash flow shocks and long-term financial limitations. Therefore, it cannot be certainly said that any changes in cash reserves for changes in cash flows are different between the companies with short and long term financial limitation.

Table 2: The Summary of Estimation Models for Size Limits

Item	Limited size								No Size Limit							
	Sig		R square		Adj- R		Durbin-Watson. St		Sig		R square		Adj- R		Durbin-Watson. St	
	Balance Sheet	Turning Statement	Balance Sheet	Turning Statement	Balance Sheet	Turning Statement	Balance Sheet	Turning Statement	Balance Sheet	Turning Statement	Balance Sheet	Turning Statement	Balance Sheet	Turning Statement	Balance Sheet	Turning Statement
ΔCash holding	0.343	0.098	0.391	0.550	0.087	0.199	1.618	2.093	0.043	0.000	0.366	0.593	0.377	0.514	2.553	1.888
Investment	-	0.078	-	0.385	-	0.223	-	2.018	-	0.005	-	0.456	-	0.351	-	1.920
Dividend	0.903	0.000	0.130	0.745	-0.305	0.678	2.079	2.871	0.418	0.000	0.293	0.609	0.021	0.534	2.157	2.614
External financing	0.828	0.552	0.172	0.172	-0.242	-0.188	1.931	2.268	0.820	0.281	0.142	0.204	-0.040	0.051	1.985	2.210

Table 3: The Summary of Estimation Models for Constraint of Payment

Item	Limited size								No Size Limit							
	Sig		R square		Adj- R		Durbin-Watson. St		Sig		R square		Adj- R		Durbin-Watson. St	
	Balance Sheet	Turning Statement	Balance Sheet	Turning Statement	Balance Sheet	Turning Statement	Balance Sheet	Turning Statement	Balance Sheet	Turning Statement	Balance Sheet	Turning Statement	Balance Sheet	Turning Statement	Balance Sheet	Turning Statement
ΔCash holding	0.719	0.512	0.264	0.139	-0.195	-0.020	2.030	2.245	0.002	0.034	0.681	0.462	0.575	0.313	2.596	1.930
Investment	-	0.004	-	0.453	-	0.352	-	1.934	-	0.091	-	0.387	-	0.217	-	1.612
Dividend	0.811	0.001	0.215	0.532	-0.276	0.445	2.073	2.374	0.708	0.000	0.164	0.777	-0.114	0.715	1.575	2.430
External financing	0.003	0.143	0.863	0.252	0.777	0.113	2.952	2.399	0.677	0.027	0.175	0.479	-0.101	0.334	2.036	1.221

Table 4: The Summary of Estimation Models for Constraint on Ranking

Item	Limited size								No Size Limit							
	Sig		R square		Adj- R		Durbin-Watson. St		Sig		R square		Adj- R		Durbin-Watson. St	
	Balance Sheet	Turning Statement	Balance Sheet	Turning Statement	Balance Sheet	Turning Statement	Balance Sheet	Turning Statement	Balance Sheet	Turning Statement	Balance Sheet	Turning Statement	Balance Sheet	Turning Statement	Balance Sheet	Turning Statement
ΔCash holding	0.029	0.008	0.336	0.256	-0.221	0.183	2.011	1.888	-	-	-	-	-	-	-	-
Investment	-	0.001	-	0.320	-	0.254	-	2.118	-	-	-	-	-	-	-	-
Dividend	0.799	0.000	0.076	0,665	-0.086	0.632	2.276	2.448	-	-	-	-	-	-	-	-
External financing	0.0926	0.487	0.440	0.083	-0.120	-0.009	2.258	1.725	-	-	-	-	-	-	-	-

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