

CASH - FLOW ANALYSIS MODEL

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Abstract. In the paper the authors show a new method of computing and a system of indicators in order to analyze the cash-flow statement of a company.

Key words: cash-flow, current assets, debts, current liabilities

1. Introduction

The cash flow statement is made by analyzing the effects of each transaction on cash. Because of the large number of transactions made by a company and registered in accounting, even for a short period of time, this procedure is seldom used. However, the statement of cash-flow is usually made by comparing the values from the balance sheet for the beginning of the year and end of the year and analyzing the changes in monetary assets account that occurred during that period.

2. Method and Results

The aim of the cash flow statement is of showing the nature of the cash changes occurring throughout the year. A change in cash equals the net change in all the balance sheet accounts, others then cash. This can be shown by transforming the basic accounting equation, as below:

Basic equation:

$$\underbrace{(N + AC + AI)}_{\text{Assets}} - \underbrace{(DTS + DTL)}_{\text{Liabilitie}} = \underbrace{SN}_{\text{Net}}$$

From which the transformation: $N = SN + DTS + DTL - AC - AI$

So:

Cash flow statement will be: $\Delta N = \Delta SN + \Delta DTS + \Delta DTL - \Delta AC - \Delta AI$

where:

N = cash

AC = current assets other then cash

AI = non current assets

DTS = short term debts

DTL = long term debts

SN = net statement

The last equation demonstrates that a change in cash (the left part of the equation) equals the net change in all the balance sheet accounts, others then cash (the left part of the equation). It can be noticed that, besides the changes in current assets, others then cash and the changes in non current asstes, each component from the right side of the equation is preceded by plus „+”. The sign minus „-”, associated to the changes in assets, others then cash, show the fact that these changes are opposed as direction to the changes in cash. (for example, an increase of investments in real estate notes generates a cash decrease). On the other hand, the changes of all the other components from the right side of the equation (shareholders’ equity and debts) have the same direction as cash changes.

Indicator	2002	2003		2004		2005	
	Sume	Sume	Dif.	Sume	Dif.	Sume	Dif.
Cash and cash equivalents	6 582 479	3 600 671	-2 981 808	6 138 998	2 538 327	5 310 029	- 828 969
Shareholders' equity	86 545 935	123 204 887	36 658 952	150 607 746	27 402 859	146 207 167	-4 400 579
Short term debts	67 486 896	61 361 149	-6 125 747	105 624 076	44 262 927	129 975 666	24 351 590
Long term debts	29 730 177	28 603 328	-1 126 849	33 712 286	5 108 958	29 594 985	-4 117 301
Circulating assets + advance payments	46 989 157	62 864 017	15 874 860	103 130 449	40 266 432	120 732 335	17 601 886
Non current assets	130 191 372	146 704 676	16 513 304	180 674 661	33 969 985	179 735 454	- 939 207
Flows	x	x	-2 981 808	x	2 538 327	x	- 828 969

Table 1 - The Evolution of Cash –Flow at SC FELEAC SA

From the data presented in table 1, there results that negative cash flows in 2003 were due to certain decreases in both short term and long term credits, while the increase of share capital was not able to finance all the increases in non current assets and current assets, other then cash. As a result, between 2002 and 2003 there were recorded negative cash flows of 2,981,808 RON.

During 2003-2004, the financing sources of asset increase recorded a higher level then theirs, a fact that led to the obtaining of positive cash flows of 2,538,327 RON.

During 2004-2005, the decrease of shareholders' equity and long term financing was not able to compensate for the increase of current assets, thus generating negative cash flows of 829,939 RON.

Besides the indicators presented above, in the analysis of cash flows there can also be used other indicators:

1. Cash flows per share;
2. Cash flows from operational activities as percent from the total cash flows;
3. Cash flows from operational activities as percent from long term debts;
4. Cash flows from operational activities as percent from investment expenditures.

RON

No.	Indicator	2003	2004	2005
	Cash flow	- 2 981 808	2 538 327	- 828 969
	Number of shares	9 246 102 000	9 246 102 000	9 246 102 000
1	Cash flow per share	-0.0003	0.0003	-0.0001
	Operational cash flow	10 994 557	4 601 201	16 557 837
	Total cash flow	- 2 981 808	2 538 327	- 828 969
2	% Operational cash flow/total	-368.72	181.27	-1997.40
	Operational cash flow	10 994 557	4 601 201	16 557 837
	Long term debts	29 730 177	28 603 328	33 712 286
3	% Operational cash flow /DTL	36.98	16.09	49.12
	Operational cash flow	10 994 557	4 601 201	16 557 837
	Investment expenditures	9 084 494	35 307 180	16 482 427
4	% Operational cash flow / Investment expenditures	121.03	13.03	100.46

Table 2 - The Evolution of Indicators at SC FELEAC SA

Cash flow per share

Since 1973, the Commission for Securities and Exchange from USA has forbidden companies the reporting to the number of shares of cash flows. The committee believes that the investors accustomed to the data supplied according to earning per share, could be misled to considering the cash flows based on shares as a measure of the companies welfare. Today, the position of FASB is the following: the reporting of cash flows per shares will incorrectly indicate the fact that cash flows, or one of its components, equals or is even higher than earnings as indicator of the performance or alternative of earnings per share.³²

Limits of indicator "cash flow per share". The high concern of market analysts and investors with the cash flow per share does not imply the fact that this replaces profit in measuring the performance of a company. Both of them are important for financial analysis and their importance depend on certain circumstances. As previously noticed, the cash flow generated by operational activities excludes, in the case of the direct method, amortization and the transactions made but not cashed or paid. As a result, the harmonization of expenditures and incomes made according to the traditional method (which uses as starting point in earnings forecast) can not be found in the calculation of cash flows. Many companies obtain, during certain time intervals, negative cash flows that are not necessarily important in the future. High tech companies such as IBM or XEROX usually have, during the first years of activity, negative cash flows (caused by the intensive research and development expenses) that are not relevant for the future cash flows generated by operations.

In the case of SC FELEAC S.A., there can be noticed negative values of the indicator in 2003 and 2005 and positive values in 2004.

Cash flows from operational activities as percent from the total cash flows

When a significant part of the cash flow derives from other sources than operational activities (share issuing, long term debts or non current assets sale), the liquidity of the company is doubtful. Thus, a low percent of the cash flow resulting from operational activities usually signals a serious financial crisis. In fact, in 2003 and 2004, SC FELEAC SA the recorded negative levels of the indicator were close to triggering company's bankruptcy.

Cash flows from operational activities as percent from long term debts

The cash flows from operational activities as percent from long term debts is usually called covering debts. It is a key indicator of liquidity used in appreciating shares and long term bank loans and shows the necessary time interval in which current cash from operational activities should cover long term debts. The balance sheet of SC FELEAC SA shows on the 31st of December 2003 long term debts of 29.7 million RON, while the cash generated from operational activities was of 10.9 million RON. As a result, the required period of time for covering the debt was 2 years and 7 months. In 2004, the required period of time for covering the debts was 6 years and 2 months, and in 2005 the period of time for covering the debts was 2 years.

Cash flows from operational activities as percent from investment expenditures

On long term, a company has to generate sufficient funds from operational activities in order to finance the development and renewing activity and to satisfy shareholders. Even on short term, when development expenses are beyond the funds generated by operational activities, the liquidity problem can be solved. From the analysis made at SC FELEAC SA, we noticed that the development expenses of the company were, in 2003 and 2005, 60.7 million RON, while the funds resulting from operational activities were 32 million RON (52.7% from capital). This means that the company had enough funds from financing investments.

3. Conclusions

Cash flow statement is a report in order to help foreseeing the company's capacity to sustain (or to increase) the cash from current operations. For this purpose, the statement provides several objective information ob:

³² *The plan of exposing the statements proposed by FASB, „Cash Flow Statement”*

- the capacity of a company to generate cash flows from the operational activities;
- tendencies in the components of cash flows and the investment and financing decisions consequences over cash;
- Management’s decisions regarding the critical areas as well as the financial policy, dividend policy and investments for obtaining the economic growth of the company.

Both cash flow statement and profit and loss account alone contain enough information in the process of decision making. The data from the profit and loss account and from the balance sheet have to be combined with cash flows in order to create a profound analysis of the company’s capacity of investing in assets basing on reported profits and of paying the debts resulting from the engaged expenses and, thus, to help the analyst in introducing other relevant evaluation measures.

The data contained in cash flow statement may be used for:

- Over viewing the individual elements of cash flows for the analytical significance of cash movements;
- Examining the tendency of different cash flow components in time and their relation to elements corresponding to the profit and loss account;
- Considering in time the relation between cash flow components;

Generally speaking, cash flows from operational activities should be positive and to increase over time, since they provide resources for covering debts, for investing in assets and for remunerating shareholders.

Even if the profit and loss account and the balance sheet are imposed as parts of financial statements, cash flow statement is not required in many countries.

Cash flow analysis represents, in our opinion, an important instrument for international comparisons, due to the significant accounting differences among countries. Cash flows are less susceptible than profit to variations resulting from the differences in accounting methods. Nevertheless, the differences in accounting methods influence the classification of cash flows. Thus, comparison on international scale requires the adjustment of reported cash flows.

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