Afak Ilmia Journal **ISSN:** 1112-9336
Volume: 13 / Number: 03 Year 2021 **p113-130**

Received: **15/11/2020** Accepted: **07/05/2021**
Published: **01/06/2021**

Interpretation Case of SONATRACH Group's Algeria

تحليل وتأويل مؤشرات قائمة سيولة الخزينة دراسة حالة مجمع سونطراك الجزائر

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Abstract

The objective of this study is to highlight the importance of cash flows statement witch become an integral part of financial reporting and acts as a bridge between the income statement and balance sheet, to determine the company strengths and weaknesses and to judge it financial performance. Cash flows statement provides new indicators and ratios to measure liquidity quality, solvency and its ability to change in assets, liabilities and equity. Otherwise, the study should to stress the importance of cash flows information for predicting financial failure and bankruptcy risk. The purpose of this study is to calculate and interpret the cash flow ratios by taking the case of SONATRACH Group's.

The results of study concluded that cash flows ratios absorbed by SONATRACH's company is good enough which indicates the higher and company's true performance, and the positive sign of financial flexibility.

Keywords: cash flows statement; cash flows ratios; financial analysis.

الملخص:

تهدف هذه الدراسة إلى إبراز أهمية قائمة سيولة الخزينة كجزء لا يتجزأ من التقارير المالية وتعمل كجسر بين قائمتي حساب النتيجة والميزانية لتحديد نقاط القوة والضعف في المؤسسة والحكم على أدائها المالي. توفر قائمة سيولة الخزينة مؤشرات جديدة لقياس جودة السيولة والملاءة المالية وقدرتها على التغيير في الأصول والخصوم. من جهة أخرى تؤكد الدراسة على أهمية المعلومات المستنبطة من جدول سيولة الخزينة للتنبؤ بالفشل المالي ومخاطر الإفلاس. الغرض من هذه الدراسة هو حساب وترجمة نسب التدفق النقدي من خلال دراسة حالة مجمع سونطراك.

خلصت الدراسة إلى أن مؤشرات التدفق النقدي المستخلصة من مجمع سونطراك جيدة بما يكفي مما يشير إلى الأداء الجيد والحقيقي للمجمع وعلامة إيجابية على المرونة المالية.

الكلمات المفتاحية: جدول سيولة الخزينة. مؤشرات التدفق النقدي؛ تحليل مالي.

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1. INTRODUCTION

This paper will focus on cash flows statement analysis as a modern and important management tool to judge the financial position of an company during a specific time period. This statement is a hidden chapter for cash basis accounting witch alerts financial statement users to increases and decreases in cash as well as to the reasons and trends for the changes.

We have been introduced to a few financial ratios that a financial analyst has in his toolkit. In this context, there are hundreds of ratios that can be formed using available financial statement data. This is why, the ratios selected for analysis depend on analysis type or company, you'll see in the next reading how to use these ratios to get an understanding of an company's condition and performance. The main aim of the paper is to answer the following question: **How to analyze and interpret cash flow statement ratios for financial analysis?**

1. Cash flows Statement Creation and Definition

1.1. Cash flows Statement Creation

It is the summary of several studies efforts that have passed through relatively long times, through which they have developed in form and content, and the statement has taken a model that meets the needs of its users, until it has settled on what it is now. This study will address the most important time-frame of cash flows statement as follows:

Phase I: The Funds Statement Perspective and Uses

Previously, companies had been required to present a statement of changes in financial position, often called the funds statement as list showing in some detail the various past financial flows in order to know the uses of funds and the way in which those uses were financed This phase began with a simplified analysis that includes only the increase and decrease in the budget lines of company. **(Mabing, 2002, p. 2)**

In 1963, a statement of source and application of funds was recommended in APB (Accounting Principles Board) to serve a list of sources and uses of funds to be presented as supplementary information to published financial reports. However, it does not have a mandatory offer status but gained strong support from all part of financial reporting community.

Phase II: Statement of changes in financial position

Realizing the Growing Benefits of the Funds Statement to Users, in 1973, Accounting Principles Board, demanded that this be reflected in shareholders' annual reports by adopting PDB Notice No. 19 “Reporting Changes in Financial Position” as a primary financial statement and a integral part of financial reporting included in Auditing report.

In this opinion the Board sought to establish guidelines for presenting such statements including the requirement that the statement be based on a broad concept of changes in financial position and recommended that the title of the statement be changed to Statement of Changes in Financial Position. However, under Opinion 19, the concept of funds could still be defined broadly, primarily either as cash, working capital, or a variation on working capital. (Fletcher & Ulrich, 2010, p. 16)

Phase III: Go to prepare Cash Flows Statement

By the mid-1980s, the takeoff waves that attracted the attention of accountants and began to pay serious attention to the cash list on the financial and monetary basis, especially after the bankruptcy of the US firm T, Grant .W, which shook shareholders of the company violently.

The statement of changes in financial position that were presented invariably showed the change in working capital rather than cash flows. In 1984, with the issuance of concepts statement, the Financial Accounting Standards Board advocated that a statement of cash flows should be included in the company's primary financial statement that reflects the company's cash receipts classified by major sources and its cash payments classified by major uses. (MULFORD & COMISKEY, 2005, p. 49)

According to International Accounting Standard (IAS 7), amended by the International Accounting Standard Committee in 1993, which replaced the previous standard of 1977. This statement is presented as an essential part of audited financial statements included in the annual reports issued by the participating companies. This standard has been recommended to be prepared in a way that discloses cash movement whatever is liquid cash, demand deposits or another equivalent.

1.2. The establishment of cash flows statement in Algeria

In aims to harmonize the accounting practices in Algeria, by procrastination the accounting system with the rules of international accounting standards. Algeria, had modified it accounting system by developing a new financial accounting system (Law 11/07 of 25 November 2007) (only in French) on the financial accounting system, which has ended the rule of the national accounting plan dating from 1975 This law, which is in force as of 2010.

New accounting standards largely based on these IFRS have been officially adopted. With an accounting structure includes: the balance sheet, the income statement, the cash-flow statement, the statement of change in shareholders' equity and an appendix. (Fethi, 2013, p. 135)

2. SONATRACH's Group Cash flows Ratios Analysis & Interpretation

2.1. SONATRACH's Group Consolidated Cash flows Presentation

The model (mentioned below) of Consolidated Cash flow of SONATRACH holding (2017-2018) is a primary part of Algerian financial statements constitute models which must be adapted to each company in order to provide financial information in response to the regulations (creation of new sections or sub-headings or deletion of non-headings significant and irrelevant to users Financial Statements). (Algerian.Government, 25/03/2009, p. 23)

Table 01 : Consolidated cash-flow SONATRACH's Group

(In millions of DZD)	**2018**	**2017**
PMV asset transfer	600 465	460 499
PMV asset transfer	469	2 374
Depreciation of intangible assets	587 845	666 541
Depreciation of tangible property	-65	450
Depreciation of intangible assets	12 984	14 660
Prov. for goodwill 88 -Other Provisions	26 814	10 717
Operating subsidy	36 289	208 257
Deferred taxes	4 951	144 071
Depreciation and provisions	**668 907**	**1 044 696**
income taxes	-129 809	-104 504
interest paid	91	-4
Cash flow from operating activities	**1 140 123**	**1 403 060**

Cash released from operational activities	-1 353	65
Cash flow before extraordinary items	-1 353	65
Stocks	-188 335	-35 657
accounts receivable	94 938	-172 592
Suppliers	66 887	47 191
Other - Operating WCR	-229 551	-353 612
Incidence of WCR var operat	**-256 061**	**-514 668**
Other - non-operational WCR	2 684	-4 726
Intra-group liaison accounts	45 159	14 879
Incidence of non var operat WCR	**47 843**	**10 153**
Revaluation JV Inst fin Derivatives	495	-111
Revaluation JV fixed assets - -Other non-cash operations	-	-
Other non-cash operations	**495**	**-111**
Cash flows from operating activities	**931 048**	898 499
acquisition of capital assets	-1 571 118	-1 367 939
Acquisition of intangible assets	-42 926	-81 899
Acquisition of financial assets	-386 804	-392 004
Acquisition of securities-self control	-43 320	-22 204
interest received	-250	15
Cash flow requirements	**-2 044 419**	**-1 864 030**
Disposals of property, plant and equipment	588 758	564 328
Disposals of intangible assets	8 820	57 148
Disposal of financial assets	769 981	537 309
Resources related to investments	**1 367 560**	**1 158 784**
Cash flows from investing activities	**-676 859**	**-705 246**
Capital increase	358 743	-79 578
Bonds issued	21 543	74 841
Loan repayments	-19 329	-43 952
Increase (decrease) in other CN	-10 043	122

financial debts		
Increase (decrease) in other financial liabilities Ct	-331 016	90 052
Dividends paid	-161 345	-47 053
Cash flows from financial activities	**520 586**	**-5 568**
unexplained differences-conv differences	361	4 536
unexplained differences - var meth conso	-121 151	-6 912
unexplained differences - reclassification	-114	-68
unexplained differences- merging	-37	-
-unexplained differences - perimeter entry	17 093	10 879
unexplained differences	**-103 847**	**8 435**
Cash - movement (calculated)	**670 928**	**196 119**
Cash - closing (calculated)	1 722 928	1 051 999
Cash - opening	1 051 999	855 880
Change in cash	**670 928**	**196 119**

Source : Sonatrach Group's, Consolidated Financial Statements Financial Year 2018,Algeria,2018, p20.

2.2. Definitions of terms

Cash, cash on hand and demand deposits with banks or other financial institutions.

Cash equivalents, short term highly liquid investments that are readily convertible into known amounts of cash and which are subject to an insignificant risk of changes in value, treasury bills, commercial paper, and money market funds are all examples of cash equivalents. (Epstein & Jermakowicz, 2010, p. 122)

Cash flows; are inflows and outflows of cash and cash equivalents.

Direct method; a method that derives the net cash provided by or used in operating activities from major components of operating cash receipts and payments.

Financing activities; are activities that result in changes in the size and composition of the owners' capital (including preference share capital in the case of a company) and borrowings of the enterprise.

Operating activities; are the principal revenue-producing activities of the enterprise and other activities that are not investing or financing activities.

Investing activities; are the acquisition and disposal of long-term assets and other investments not included in cash equivalents.

Indirect (reconciliation) method; a method that derives the net cash provided by or used in operating activities by adjusting profit (loss) for the effects of transactions of a non-cash nature, any deferrals or accruals of past or future operating cash receipts or payments, and items of income or expense associated with investing or financing activities.

2.3. Ratios For Financial Analysis

Cash flows have better predictive power than traditional based ratios (Suborna & Anup, 2015, p. 233). However, the results indicate that cash flows ratios are sometimes providing the better and accurate picture of the companies. According to the table below, we will show all the traditional and cash flows statement ratios.

2.3.1. Traditional Ratios

Table 02: Traditional data ratios

Ratio		Components
Quality Earning	Operating index	Cash generated from operations / profit before investment income, interest and taxation or, Operating cost / net sales
	Reinvestment	Capital investments/ (Depreciation + sale of assets)
	Capital investments per dinar of funds	Capital investments/total sources of funds
	Funds flows adequacy	Funds from operations / (Capital investments + inventory additions+

		dividends+ debt uses)
Financial Management	Funds sources component percentages	Individual sources / Total sources of funds
	External financing index	Funds from operating/ total external financing sources
	Productivity	Funds from operation / capital investments
Mandatory Funds Flows	Mandatory Funds index	(Funds for operations + funds applied to long –term debt)/ total sources of funds
	Long –term debt payment	Funds applied to long-term debt / Funds supplied to long-term debt
	Percentage funds sources required for long- term debt	Funds applied to long-term debt / Total sources of funds
	Short / long term	Current debt sources or long –term debt sources / total debt sources
Discretionary Funds Flows	Discretionary Funds index	Discretionary Funds uses / Total sources of funds
	Discretionary Uses	Individual discretionary uses (e.g dividends)/ Total discretionary uses
	Dividend payout of funds from operations	Dividends/ Funds from operations

Source: Adapted from jooste(2004), Suborna& Anup(2015), Rao(2011), KOEN & OBERHOLSTER(1999), Bhandari & Iyer (2013), Alostaz(2015), AMUZU(2010).

The ratios set out in Table02. Will be explained below:

- ***Quality earnings ratios***; compare cash generated by operations with reported income and shows how the company generates income realized in cash relying on non funds items.

Operating ratio shows the percentage of net sales which is used by operating cost. The higher the operating ratio .the less favorable is to the company since it leaves small margin. It is considered the norm of operating efficiency. (RAO, 2011, p. 132) Reinvestment in assets should at least be equal to depreciation to ensure sufficient replacement of assets.

- ***Financial Management ratios***; indicate how company relies on internal/external financing for operations, growth and productivity.

- ***Mandatory funds flows ratios***; these ratios reveal the liquidity and solvency of an company, ability to meet obligations.

Cash flows ratios Analysis & interpretation

***- Sufficiency & Efficiency Ratios*;** Sufficiency ratios are used to assess the adequacy of cash flows to meet business needs, while efficiency ratios are used to determine how well a company is in comparison to other years or other institutions by generating enough cash. (KOEN & OBERHOLSTER, 1999, p. 27). It can be noticed that Sonatrach's company has Achieved a cash flows sufficiency ratio equal to 0.82 and has not gained a adequacy ratio more than 1 which depicts the company has a lesser sufficiency .

- ***Efficiency Ratios*** ; Cash flows to sales 0.36has increased in the year 2018 but it remains a minimal value due to longer payment term to customers.
- ***Operating index ratio;*** the Income from continuing operations (Operating result) has increased in 2018 (1183117); 2017(857767) from the consolidated income statement. The result from the above ratios has been decreased from (1.87) 2017 to (1.79)2018, that indicate a positive sign and diminution of operating expenses.
- ***Cash flows to assets;*** (0.13)2017, (0.16)2018 the above noted ratios indicates a lower efficiency of the company.
- ***Liquidity and Coverage ratios;*** Provide information on the number of cash outflows associated with interest, debt, and dividend obligations. can be covered by cash flow from operations. In this case study, the cash coverage indicates (0.33) 2017, (0.38) 2018; This ratio does not equal 1.0, which indicates that the company is less efficient in terms of debt. Second, the liquidity ratio for cash flow (0.39) 2017, (0.47) 2018, less than 0.5, this indicator is low, which means that the company cannot meet its short-term needs.

***- Quality of income ratios*;** How much cash does each Dinar of net income generate? This ratio will help you answer this question. It measure the cash-to-income ratio and the portion of income that was generated in cash. All other things being equal, a higher quality of income ratio indicates a greater ability to finance operating and other cash needs from operating cash inflows. A higher ratio also indicates that it is less likely that the company is using aggressive revenue recognition policies to increase net income. When this ratio does not equal 1.0, analysts must establish the source of the difference to determine the significance of the findings. There are four potential causes of any difference: (Limited, p. 245)

1. The corporate life cycle (growth or decline in sales). When sales are increasing, receivables and inventory normally increase faster than accounts payable. This often reduces operating cash flows below income, which, in turn, reduces the ratio. When sales are declining, the opposite occurs, and the ratio increases.
2. Seasonality. seasonal variations in sales and purchases of inventory can cause the ratio to deviate from 1.0.
3. Changes in revenue and expense recognition. Aggressive revenue recognition or failure to accrue appropriate expenses will inflate net income and reduce the ratio.
4. Changes in management of operating assets and liabilities. Inefficient management will increase operating assets and decrease liabilities, which will reduce operating cash flows and reduce the ratio. More efficient management will have the opposite effect..

- ***In SONATRACH's Group case,*** quality of income***;*** (4.17)2017, (3.92)2018 is more than 1 this prove that earning are mainly the results of actual sales of goods or services.
- ***Quality of sales*** ; (0.85)2017, (1.05)2018; The company is able to generate enough cash to support its business. Sales growth does not directly reflect cash flow due to the managerial efficiency.

- Performance Ratios**;** to predict the ability of the company to generate cash flows from its existing resource base. Exactly it shows the cash flows per share, assets or debt by comparing the earning generated with the figure calculated above. Investors can determine a cash realization ratio. Or measuring the return on assets or debt utilized. According to SONATRACH's company results, cash return on assets decreases from 0.17 to 0.14 in 2018 and cash return on debt and equity, 0.16 to 0.13 in 2018 it is observed that company generally cannot use their assets and equities in a profitable way.

- *Investing Financial Ratios*; Operating investing activity ratio and non-operating investing activity ratio provide information about the support base for future cash flows from operations. The failure of management to replace fixed assets as consumed may reduce the potential for long-term cash flows owing to an inadequate basis for operating assets.

Investors and creditors may question the extent to which debt and equity are used to finance operations. This information is needed when evaluating the risk of a loan or the potential rate of return on an investment. The debt activity ratio and the equity activity ratio are cash flow based measures of financing activities They indicate the nature of and the changes in the financial structure. (Jooste, 2004, p. 104)

- *New Cash Flow Ratios;* called Operating cash flow ratio, is an indicator of the number of times a company repays its current debt in cash during a period. Reflect a company's ability to meet obligation or generate cash flows from operations in relation to its interest payment obligations. (Jooste, 2004, p. 108). Several figures indicate that the company generates more cash than is needed to repay its current liabilities.

- ***Cash flows to total debt ratio,*** it indicates how much of a company debt could be paid off if all CFFO devoted to payment of a total debt, in SONATRACH's Group case, noted ratios are (0.38) and (0.33) quites low which indicates the fluctuation in the repayment of debt and high risk position.
- ***The cash flows to operating income ratio,*** measures Dinars of cash flows from operating activities per Dinars of operating income & indicates the percentage of cash flows from operations represented in operating income. Should this ratio deviate consistently and significantly from 1, it may indicate that operating income is not measuring an company's true performance over time. A consistent figure less than 1 may indicate that expanding receivables or an understatement of payables generates sales. An understanding of this ratio is a key component in evaluating an company's true economic performance. By the way, the ratios absorbed by

SONATRACH company are good enough (1.79) 2017& (1.87) 2018 which indicates the higher and company's true performance.

- ***Re-Calculated Traditional Ratios*;** by using cash flows statement data. When comparing these ratios with the traditional ratios we determine the importance of operating cash flows ratios to measure the cash generating ability of an company, the ability to meet obligations and to reinvest in productive assets. Furthermore, the reinvestment ratio is important, as an company has to at least maintain its current asset base to enhance its ability to generate future earnings.

In SONATRACH's group case, Cash flows to sales and Cash flows return on assets ratios were previously covered by explaining the precedents ratios. According to Cash flows to total debt (0.41)2017and (0.34) 2018, less than 0.5 it indicates a low ability of the company to meet its obligations and the company debt couldn't be paid off if all CFFO devoted to payment of a total debt.

- ***Predict Business Failure Ratios*;** According to Bhandari, it presents the latest example of several discriminant analyzes to include insolvent companies, financial ratios derived from cash flow statement as independent variables, and to construct a predictive failure model. (Bhandari & Iyer, June 2013, p. 667)

Using Accounting Ratios to Predict Financial Failure, One objective of ratio analysis is to try to make a judgment about a particular business's ability to survive and to prosper. and to test the predictive ability of the cash flows statement ratios concerning corporate failure through developing a mathematical model using financial ratios information Independent variables include mostly cash flows ratios which are as follows: (Alostaz, 2015, p. 51)

- Operating cash flows on current liabilities (CFFO/Current Liabilities).
- Cash flows coverage of interest (CFFO + INTREST + TAX/INT).
- Operating cash flows margin (CFFO /Sales).
- Operating cash flows return on total assets (CFFO /Asset).
- Earning quality (EBIT/ CFFO).
- Quick ratio or acid-test ratio (Current Assets -Inventory)/ Current Liabilities.
- Operating Cash flows on Equity (CFFO /EQUITY).

- Operating Cash flows on Net Income (CFFO /Net Income).
- Operating Cash flows on Current Assets (CFFO /Current Assets).
- Free Cash Flows on Current Liabilities (CFFO / Current Liabilities).
- Operating Cash flows on Free Cash Flows (CFFO / Free Cash Flows).

- Solvency, Liquidity Ratios;

- ***Operating cash flows ratio***; Operating cash flows relates to cash flows that a company accrues from operations to its current debt. It measures how liquidity a company is in the short run since it relates to current debt and cash flows from operations. In SONATRACH's case, we observe (0.39)2017 and (0.47)2018 less than 1.0. the company is not generating enough cash to pay off its short-term debt which is a serious situation. It is possible that the company may not be able to continue to operate.
- ***Funds flows coverage ratio***; which excludes interest and taxes from the numerator, highlights an company's cash generating ability to meet interest and taxes.
- ***Debt Coverage ratio***; estimates the number of years to repay debt at the current level of cash flows. (Jooste, 2004, p. 114)
- ***Cash interest coverage***, indicates (0.38) in 2017 and (0.43) in 2018 less than 1 runs an immediate risk of potential interest default. The company will have to raise cash externally to make current interest payments. We observe an inability to make interest payments on its entire debt load. A highly leveraged company will have a ratio with a low value and an company with a strong balance sheet will have a high value.

- Ratios to measure Financial Health; A financially strong company should be able to finance growth. The capital expenditure ratio measures the capital available for internal reinvestment and payment on existing debt.

- ***Capital expenditure ratio*;** (0.86)2017, (1.04)2018 with a capital expenditure (1864030)in 2017 and (2044419) in 2018 refer to funds that are used by a company for the purchase, improvement, or maintenance of long-term assets to improve the efficiency or capacity of the company. A ratio of more than 1 indicates that SONATRACH's company has enough funds available to meet its capital investment with cash to spare to meet debt requirements.

- ***The cash flow to total debt ratio,*** is of direct concern to credit-rating agencies and loan decision officers. This ratio indicates the length of time it will take to repay debt, assuming all cash flow from operations is devoted to debt repayment. A low ratio means that an company has less financial flexibility and is more likely to face problems in the future. (Jooste, 2004, p. 115) this ratio is already explained in previous ratios.

- Net Free Cash Flows Ratios; the process is one of the most detailed in the determination if the cash flows of a particular company is enough to meet current commitments, particularly in the area of asset acquisition payout of dividends and payment of financial obligations (AMUZU, 2010, p. 174). Any positive free cash flow is available for additional capital expenditures, investments in other companies, and mergers and acquisitions, without the need for external financing. While free cash flow is considered a positive sign of financial flexibility, it also can represent a hidden cost to shareholders. Sometimes managers use free cash flow to pursue unprofitable investments just for the sake of growth or for perquisites for management use (such as fancy offices and corporate jets). In these cases, the shareholders would be better off if free cash flow were paid as additional dividends or used to repurchase the company's shares in the open market.

Conclusion

The study displays the importance of cash flows statement's ratios analysis and interpretation. This statement provides informations through the extracted ratios and its role in assessing of profits quality, liquidity and financing policies for companies, as well as its financial flexibility in addition to measure Financial Health by detecting bankruptcy risks and financial distress.

We try to applicate the above theoretical acquisitions by calculating cash flow ratios for SONATRACH's group, the backbone of the Algerian economy, as a leading holding company in the field of hydrocarbons. According to the study results:

- Cash flows statement ratios and traditional ratios could be used to optimum advantage of an company as these ratios complement each other.

- Operational cash flows allow measuring cash resulting from the activity to be made, as the company survival is linked to its ability to generate and find a cash surplus activity.

- The cash flow statement can also be useful to the company cash manipulation. By comparing the components of operating cash flow it will give further insight on the relationship between liquidity and financial distress.

-SONATRACH's spa has a several figure which indicates the fluctuation in the repayment of debt and high risk position and inability to make interest payments on its entire debt load. But the situation remains under control, as long as the largest lender in the group is the public treasury.

- A higher quality of income that was generated in cash indicates a greater ability to finance operating and other needs from operating cash inflows;

- The company is less efficient in term of debt and cannot meet its short-term needs;

- SONATRACH's group is using aggressive revenue recognition policies to increase net income;

Finally, Financially SONATRACH's Group is a strong holding able to finance growth with big capital expenditure, higher and true performance.

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Afak Ilmia Journal **ISSN:** 1112-9336
Volume: 13 / Number: 03 Year 2021 **p113-130**