

A Logical Approach To The Statement Of Cash Flows

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ABSTRACT

Of the three financial statements in financial reporting, the Statement of Cash Flows (SCF) is perhaps the most challenging. The most difficult aspect of the SCF is in developing an understanding of how previous transactions are finalized in this document. The purpose of this paper is to logically explain the indirect approach of cash flow whereby an understanding is established together with the mechanics of preparing the statement.

Keywords: Statement Of Cash Flows; FASB Statement No. 95; APB Opinion No. 19

INTRODUCTION

 Of the three financial statements in financial reporting, the Statement of Cash Flows (SCF) is perhaps the most challenging. The most difficult aspect of the SCF is in developing an understanding of how previous transactions are finalized in this document. That is, the SCF is very much the culmination point for most all of financial accounting. A knowledge of how to prepare the document or learning the mechanics is not highly complex. With the use of a basic worksheet and matrix, (later presented), the preparation of the operating activities section, the most difficult of the three areas included in the SCF, can be completed quite easily. That is, this section can be completed, for the most part, without having full comprehension or understanding of how initial transactions finally reach the SCF

In 1971, Accounting Principles Board Opinion No. 19[Reporting Changes in Financial Position] required a third statement in financial reporting referred to as the Statement of Changes in Financial Position. This document, like the SCF, included three sections: operating activities, investing activities and financing activities, very similar to the SCF. However, the operating activities section could be prepared on either a working capital or cash approach, at the discretion of the preparer of the statement. If the company's cash position was weak, the working capital approach could be used. This allowed for manipulation of certain accounts, such as converting short term debt into long term debt, which would enhance current position. This problem was resolved with the issuance of Statement No. 95[FASB Statement of Financial Accounting Standards No. 95-Statement of Cash Flows, 1988] establishing standards for cash flow reporting requiring the statement of cash flows to complete the full set of financial statements for all business enterprises. According to Statement No. 95, there was no longer a choice of cash or working capital in the preparation of the operating activities section. Only the cash approach would be allowed. In the operating activities section, there were two methods allowed, the direct method and the indirect or reconciliation method. The direct method shows major operating cash receipts and disbursements comprising net cash flow from operating activities, while the indirect method reconciles net income on accrual basis to net income on a cash basis. The indirect method, in the operations section, very much parallels the cash approach in the earlier required Statement of Changes in Financial Position.

The purpose of this paper is to logically explain the indirect approach of cash flow whereby an understanding is established together with the mechanics of preparing the document. Transactions affecting cash are first recorded in journal form. The journal entries in conjunction with account analysis provide the understanding of the SCF.

MECHANICS IN THE PREPARATION OF THE SCF

The SCF is comprised of three major sections: Cash flow from operating activities; Cash flow from investing activities; and Cash flow from financing activities. An explanation of the mechanics of these three sections follows.

The operating activities section includes three parts: (1) net income, (2) items affecting net income but not cash and (3) current assets and current liabilities.

- (1) Net income of \$58,000 is taken from the accrual based income statement (Exhibit I) and placed as the beginning point number in the operating activities section (Exhibit II), subsection 1. All items in parts, (2) and (3), that follow will either be added to or subtracted from the net income figure in determining the final number, cash flow or cash used from operating activities. This final number represents the converted number from net income on an accrual basis to net income on a cash basis.
- (2) Items affecting net income but not cash such as depreciation, amortization and depletion are found among other operating expenses in the income statement (Exhibit I). Depreciation of \$18,000 is taken from (Exhibit I) and placed into (Exhibit II), subsection 2. These non-cash expenses are either added to or subtracted from net income. Depreciation and depletion will always be added to net income; however, amortization expense can either be an addition to or a subtraction from net income. For example, if a bond premium is being amortized, interest expense is credited in the journal transaction, which reduces expenses, thereby increasing net income without providing cash. Therefore, the amount in this transaction would be treated as a subtraction from net income. Conversely, amortization of a bond discount, whereby interest expense is debited, would be added to net income.
- (3) Current assets and current liabilities are found in the balance sheet (Exhibit I). The increases and decreases in current assets and current liabilities are either added to or subtracted from net income. For example, using (Exhibit III), a supplement to (Exhibit II), all increases in current assets are subtracted from net income, all decreases in current assets are added to net income, all increases in current liabilities are added to net income and all decreases in current liabilities are subtracted from net income. Starting with accounts receivable, the increase of \$6,000 from the balance sheet Exhibit I, is placed in Exhibit II, subsection 3a as a subtraction. The inventory increase of 22,000 is treated as a subtraction in subsection 3b, while the \$4,000 decrease in prepaid expenses is treated as an addition in subsection 3c. The decreases of \$,8800 and \$600 for accounts payable and income taxes payable respectively, are included as subtractions in subsections 3e and 3f, while the increase of \$1,400 in accrued payables is included as an addition in subsection 3d. This completes the section on operating activities.

Upon completion of the operating activities section, the relevant items under the cash flow from investing can be established and placed under the appropriate subsections of Exhibit II. There were no sales of plant assets or investments. However, the \$50,000 purchase of plant assets is treated as a deduction in subsection 4.

The final section of the SCF is the cash flow from financing activities. Again, the relevant items are identified and placed into the appropriate subsection. The issuances of capital stock and debt are included as additions in subsection 5. There was no purchase of treasury stock or retirement of debt; however, in viewing the retained earnings statement in Exhibit I, cash dividends of \$30,000 can be found, which is appropriately placed in subsection 5.

The mechanics have been set forth; however, the why behind the how is yet to be presented. The discussion that follows will cover the understanding or the why behind the mechanics.

UNDERSTANDING THE PREPARATION OF THE SCF

Cash Flows From Operating Activities

Net income is the base point in the preparation of the SCF. It is important to understand that the objective in the operating activities section is to convert net income on an accrual basis to net income on a cash basis. The

first step is to identify items that affected net income but had no affect on cash. These non-cash items include depreciation, amortization and depletion.

In the above example, there was depreciation of \$18,000, which was included in subsection 2 “Add items that affected net income but not cash.” The journal entry to record the depreciation would be:

Depreciation expense	18,000
Accumulated depreciation	18,000

The entry shows an increase in an expense account, which would reduce income; however, there is no affect on cash. Therefore, the \$18,000 should be added back to net income in the process of converting accrual-based income to cash-based income.

The second part in the operating activities section is perhaps the most perplexing to understand. The mechanics can be easily memorized, from Exhibit III. That is, all decreases in current assets (exceptions include cash and notes receivable) and all increases in current liabilities (exceptions include dividends payable and notes payable) are added to net income in determining cash from operating activities. All increases in current assets (exceptions include cash and notes receivable) and decreases in current liabilities (exceptions include dividends payable and notes payable) are deducted from net income in determining cash from operating activities. An explanation of why these increases and decreases are added to or subtracted from net income in the conversion process of accrual-based income to cash-based income follows.

First of all, it is important to understand that all items in the conversion process have to, in some way, connect to the income statement. For example, accounts receivable connects to sales. Inventory connects to cost of goods sold. Salaries payable connects to salaries expense. Exceptions, such as dividends payable, notes receivable and notes payable have no connection to the income statement.

In the above example, Exhibit II, subsection 3, “Deduct increases in current assets,” accounts receivable increased \$6,000, subsection 3a. Credit sales increase net income and accounts receivable, but do not increase cash. Collections on account decrease accounts receivable and increase cash. Therefore, if the accounts receivable balance increased by \$6,000, sales on account had to exceed cash collections on account by \$6,000. Therefore, the increase in accounts receivable should be deducted from net income in the conversion process of net income to cash.

Journal Entry		Account Analysis	
Accounts receivable	10,000	Beginning accounts receivable	30,000
Sales	10,000	Sales on account	10,000
		Total to account for	40,000
Cash	4,000	Ending accounts receivable	36,000
Accounts receivable	4,000	Collections on account	4,000

A decrease in the balance of accounts receivable would be added to net income as follows:

Journal Entry		Account Analysis	
Accounts receivable	4,000	Beginning accounts receivable	30,000
Sales	4,000	Sales on account	4,000
		Total to account for	34,000
Cash	10,000	Ending accounts receivable	24,000
Accounts receivable	10,000	Collections on account	10,000

Also, in the above example, Exhibit II, subsection 3, “Deduct increases in current assets,” inventory increased by \$22,000, subsection 3b. The expired portion of inventory to cost of goods sold decreases net income but does not affect cash. The payment for inventory purchased increases inventory and decreases cash. Therefore, if the balance of inventory increased by \$22,000, cash purchases of inventory had to exceed the expired portion of inventory to cost of goods sold by \$22,000. Accordingly, the increase should be deducted from net income in converting net income to cash.

Journal Entry		Account Analysis	
Inventory	50,000	Beginning inventory	56,000
Cash	50,000	Cash purchases	50,000
		Total to account for	106,000
Cost of goods sold	28,000	Ending inventory	78,000
Inventory	28,000	Cost of goods sold	28,000

A decrease in the balance of inventory would be added to net income as follows:

Journal Entry		Account Analysis	
Inventory	28,000	Beginning inventory	56,000
Cash	28,000	Cash purchases	28,000
		Total to account for	84,000
Cost of goods sold	50,000	Ending inventory	34,000
Inventory	50,000	Cost of goods sold	50,000

In Exhibit II, subsection 3 “Add decreases in current assets,” prepaid expenses decreased by \$4,000, subsection 3c. The expiration of prepaid expenses decreases net income, but has no affect on cash. The payment for the purchase of prepaid expenses decreases cash and increases prepaid expenses. Therefore, if the balance of prepaid expenses decreases, expirations of prepaid expenses have to exceed cash payments for prepaid expenses. Accordingly, the \$4,000 decrease in prepaid expenses should be added to net income in converting net income to cash.

Journal Entry		Account Analysis	
Prepaid expenses	10,000	Beginning prepaid expenses	8,000
Cash	10,000	Purchase of prepaid expenses	10,000
		Total to account for	18,000
Expired prepaid expenses	14,000	Ending prepaid expenses	4,000
Prepaid expenses	14,000	Expired prepaid expenses	14,000

A change in prepaid expenses resulting in an increase would be deducted from net income as follows:

Journal Entry		Account Analysis	
Prepaid expenses	14,000	Beginning prepaid expenses	8,000
Cash	14,000	Purchase of prepaid expenses	14,000
		Total to account for	22,000
Expired prepaid expenses	10,000	Ending prepaid expenses	12,000
Prepaid expenses	10,000	Expired prepaid expenses	10,000

In Exhibit II, subsection 3, “Deduct decreases in current liabilities,” accounts payable decreased \$8,800. The payment for purchases of goods and services expense on account increases accounts payable but does not increase cash. The payment on account decreases accounts payable and cash. Therefore, if the balance of accounts payable decreases, payments on account have to exceed expenses incurred on account. Accordingly, the \$8,800 decrease in accounts payable should be deducted from net income in converting net income to cash.

Journal Entry		Account Analysis	
Goods and services expense	20,000	Beginning accounts payable	18,000
Accounts payable	20,000	Purchase of goods and services	20,000
		Total to account for	38,000
Accounts payable	28,800	Ending accounts payable	9,200
Cash	28,800	Payments on account	28,800

If the purchase of goods and services on account exceeds the payments of goods and services on account, the balance of accounts payable would increase. This increase should be added to net income in the conversion process as follows:

Journal Entry		Account Analysis	
Goods and services expense	28,800	Beginning accounts payable	18,000
Accounts payable	28,800	<u>Purchase of goods and services</u>	<u>28,800</u>
		Total to account for	46,800
Accounts payable	20,000	Ending accounts payable	26,800
Cash	20,000	<u>Payments on account</u>	<u>20,000</u>

In subsection 3, “Deduct decreases in current liabilities,” income tax payable decreased by \$600. The accrual of income tax expense increases income tax payable and decreases net income but does not reduce cash. Payments on account reduce income tax payable and cash but have no affect on net income. Therefore, if the balance of income tax payable decreases, payments on account have to exceed accruals of income tax expense on account. Accordingly, the decrease of \$600 should be deducted from net income in converting net income to cash.

Journal Entry		Account Analysis	
Income tax expense	1,200	Beginning income tax payable	2,600
Income tax payable	1,200	<u>Accrual of income tax payable</u>	<u>1,200</u>
		Total to account for	3,800
Income tax payable	1,800	Ending income taxes payable	2,000
Cash	1,800	<u>Payments on account</u>	<u>1,800</u>

If the accrual of income tax expense exceeds the payments on account, the balance of income tax payable would increase. The increase should be added to net income in converting net income to cash.

Journal Entry		Account Analysis	
Income tax expense	1,800	Beginning income tax payable	2,600
Income tax payable	1,800	<u>Accrual of income tax payable</u>	<u>1,800</u>
		Total to account for	4,400
Income tax payable	1,200	Ending income tax payable	3,200
Cash	1,200	<u>Payments on account</u>	<u>1,200</u>

Cash flows from operating activities resulted in “net cash flow from operating activities” of \$44,000.

Cash Flows From Investing Activities

In this section, there are essentially two types of transactions: (1) inflows resulting from the sale of property, plant and equipment or investments, and (2) outflows resulting from the acquisition of property, plant and equipment or investments.

In the SCF (worksheet), Exhibit II, subsection 4, “Add the sale of plant assets” and “Add the sale of investments”, there was no activity. However, in this same subsection, “Deduct the purchase of plant assets,” plant assets were purchased for \$50,000. The journal entry would be:

Plant assets	50,000
Cash	50,000

In this transaction, cash decreased by \$50,000.

Since the only transaction in this section was a cash decrease of \$50,000, cash flows from investing activities, would result in “net cash used by investing activities” of \$50,000.

Cash Flows From Financing Activities

In this section, there are essentially four types of transactions: (1) inflows resulting from the issuance of debt, including the issuance of bonds payable ; (2) inflows resulting from an increase in stockholders’ equity such as the issuance of capital stock; (3) outflows resulting from transactions that reduce debt, such as the retirement of

bonds; (4) outflows resulting from transactions that decrease stockholders' equity, such as payments for cash dividends or the buy-back of capital stock, commonly known as treasury stock.

In the SCF (worksheet), Exhibit II, subsection 5, "Add issuance of capital stock," common stock of \$10,000 was issued. The journal entry would be:

Cash	20,000
Common stock	20,000

Cash increased by \$20,000 in this transaction.

In subsection 5, " Add issuance of debt," bonds of \$40,000 were issued. The journal entry would be:

Cash	40,000
Bonds payable	40,000

Cash increased by \$40,000 in this transaction.

In subsection 5, "Deduct purchase of treasury stock," and "Deduct retirement of debt," there was no activity; however, in this same subsection, "Deduct payment of cash dividends," there was a \$30,000 payment of cash dividends. The journal entry would be:

Dividends payable	30,000
Cash	30,000

Cash decreased by \$30,000 in this transaction.

Cash flows from financing activities resulted in "net cash flow from financing activities" of \$30,000.

Finally, the sum of the three sections, operating activities, investing activities and financing activities resulted in a net increase of \$24,000 which reconciles with the change from beginning cash in 20x3 of \$14,000 to ending cash of \$38,000 in 20x4 as presented in the balance sheet in Exhibit I.

SUMMARY

The reader should find this logical approach to preparing the indirect method statement of cash flows reasonably understandable and useful. The purpose of this paper has been to logically explain the indirect approach of cash flow whereby an understanding is established together with the mechanics of preparing the document. The advantages of this approach include: (1) an acceptable means to logically and analytically understand the statement of cash flows; (2) a manageable level of retention; and (3) eliminating the reliance on cumbersome worksheets which add confusion and complexity to completing the statement of cash flows.

An analysis, completed from a brief to an extended time period, can provide useful insight into firm operations. However, by separating cash flow from operations and income from operations, a new dimension of the firm is added. Cash flows from investing and financing activities add even more to the final analysis of the business, well beyond the solely required balance sheet and income statement in financial reporting.

While our focus has been on the indirect method for converting net income to cash from operations, there is evidence that the FASB could require the direct method in the future. Perhaps the one account when converting from accrual to cash that would be better understood using the direct method would be the cost of goods sold account. Under the indirect method, it is necessary to consider changes in both the inventory account and the accounts payable to vendors account to understand what cost of goods sold would be on a cash basis. It is not explicitly expressed under the indirect method.

If we stay with the three prong approach as endorsed by FAS 95, there are two issues that need additional research. First, consider the purchase and sale of equity and debt instruments as investment activities. It seems logical that the dividends and interest payments received while holding these securities should also be considered cash flows from investing activities. This would require another adjustment under the indirect method involving a deduction from net income and reclassifying it as an inflow of cash within the investing activities category. Second, FAS 95 currently leaves interest expense in the operating activities category. Similar to dividends being a return to stockholders, interest is a return to the creditors, and therefore it seems that interest expense would be more appropriately classified as financing activity along with dividends. The authors intend to pursue research addressing these two issues.

AUTHOR INFORMATION

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EXHIBIT I:
STANDARD COMPANY
 Income Statement and Statement of Retained Earnings for the year ended December 31, 20x4

Sales		\$560,000
Cost of goods sold		360,000
Gross Profit		200,000
Wages Expense	\$84,000	
Depreciation Expense	18,000	
Other Operating Expense	32,000	
Income Tax Expense	10,000	142,000
Net Income		\$ 58,000
Beginning retained earnings		72,000
Cash dividends		30,000
Ending retained earnings		\$100,000

STANDARD COMPANY
 Comparative Balance Sheets
 December 31, 20x4

	20x4	20x3	Increase (decrease)
Cash	\$ 38,000	\$ 14,000	24,000
Accounts Receivable (net)	36,000	30,000	6,000
Inventory	78,000	56,000	22,000
Prepaid Expenses	4,000	8,000	(4,000)
Plant Assets	200,000	150,000	50,000
Accumulated Depreciation	(60,000)	(42,000)	18,000
Total Assets	\$ 296,000	\$ 216,000	
Accounts Payable	\$ 9,200	\$ 18,000	(8,800)
Accrued Liabilities	4,800	3,400	1,400
Income Tax Payable	2,000	2,600	(600)
Bonds Payable	40,000		40,000
Common Stock	140,000	120,000	20,000
Retained Earnings	100,000	72,000	28,000
Total liabilities and Stockholders' Equity	\$ 296,000	\$ 216,000	

EXHIBIT II
STATEMENT OF CASH FLOWS
 (Worksheet)

Cash Flow From Operating Activities:

1. Net Income (loss)\$58,000

2. Items Affecting Net Income But Not Cash:

Add: Depreciation18,000

Add: Amortization

Add: Losses

Deduct: Gains

3. Current Assets & Current Liabilities:

Add: Decreases in current assets

Deduct: Increases in current assets

Add: Increases in current liabilities

Add: Decrease in current liabilities

a. Deduct: Increase in accounts receivable6,000

b. Deduct: Increase in inventory.....22,000

c. Add: Decrease in prepaid expenses4,000

d. Add: Increase in accrued liabilities1,400

e. Deduct: Decrease in accounts payable.....8,800

f. Deduct: Decrease in taxes payable.....600

Net Cash Flow (Flow or Used) From Operating Activities.....\$44,000

4. Cash Flows From Investing Activities:

Add: Sale of plant assets

Add: Sale of investments

Deduct: Purchase of plant assets.....50,000

Deduct: Purchase of investments

Net Cash Used (Flow or Used) From Investing Activities.....(\$50,000)

5. Cash Flows from Financing Activities:

Add: Issuance of capital stock.....20,000

Add: Issuance of debt.....40,000

Deduct: Purchase of treasury stock

Deduct: Retirement of debt

Deduct: Payment of cash dividends.....30,000

Deduct: Payment of

Net Cash Flow (Flow or Used) From Financing Activities.....\$30,000

Net Increase (Decrease) In Cash.....\$24,000

EXHIBIT III
(Matrix)

	<u>Current Assets*</u>	<u>Current Liabilities**</u>
Increase	Deduct: the increase from net income	Add: the increase to net income
Decrease	Add: the decrease to net income	Deduct: the decrease from net income
	* Except: Notes Receivable	** Except Notes Payable Dividends Payable