All Cash is Not Created Equal: Detecting Fraudulent Cash Flows

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I. Introduction

Financial reporting shenanigans tend to be mostly associated with accrual-based earnings. Further, an important red flag to a forensic accountant is when cash flow does not move in the same direction as revenue, accounts receivable, and net income. Many financial statement users and some forensic accountants may believe cash flows are relatively immune to the accounting number games that aim to pump up earnings. Unfortunately, this misconception costs shareholders billions of dollars (Company Accounting Reform and Investor Protection Act, 2002). Just like with revenues and expenses, "savvy" managers can use a whole range of fancy verbiage and tricks to shed a more favorable light on themselves. WorldCom, once the second largest U.S. telecommunications giants and almost seventy percent larger than Enron in assets, shocked the investment community by its disclosure that it inflated not only its earnings but also cash flows for many fiscal quarters. Essentially, WorldCom improperly released certain reserves held against operating expenses. Further, it improperly re-characterized certain operating costs as capital assets. Neither practice was in conformity with generally accepted accounting principles (GAAP). Thus, the company placed the impact of the operating costs on the balance sheet rather than the income statement, and misclassifying operating cash flows as investing cash flows on the statement of cash flows. WorldCom announced on June 25, 2002 that it inflated cash flows by $ 3.8 billion via hiding expenses on the income statement (Romero and Berenson, 2002). Ultimately, the WorldCom fraud totaled $11 billion, and investors lost over $180 million in its collapse.

Unfortunately, the saga of cash flow manipulation still continues during recent years in spite of the enactment and enforcement of a series of regulations on financial reporting (e.g., Sarbanes-Oxley Act of 2002, Dodd-Frank Wall Street Reform of 2010). From Netflix's misclassification of inventory purchase costs, Trimble Navigation's manipulation of operating cash flows through repeatedly acquisition accounts, Parmalat Finanziaria SpA's misrepresentation of its liquid position, to the Diamond's Foods' stretching out its payables, these high-profile scandals changed the landscape from maneuvering earnings to both earnings and operating cash flows. Therefore, understanding the quality of cash flows becomes an urgent necessity.

Cash is the lifeblood of a business. The flow of cash in and out of an entity is depicted in the statement of cash flow. This flow is divided into three sections: operating, investing, and financing activities. According to the Statement of Financial Accounting Standards (SFAS) 95, the indirect

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and direct approaches are two methods for presenting the operating section of the statement. The direct approach is similar to an income statement, except that all listed items are only on cash basis; that is, it starts with cash sales and derives cash net income via subtracting cash only costs and expenses.

On the other hand, the indirect approach starts with accrual basis net income and then makes a range of accrual-to-cash basis adjustments to derive the net cash related to the operations of the business. The indirect method is commonly used approach, but the direct approach better serves the external users. One of the reasons for its popularity is that it allows the businesses make their own rough approximations of operating cash receipts and payments at a minimum level of detail.

At the time of promulgation by the Financial Accounting Standards Board (FASB), firms chose the low cost alternative as it required minimum changes to the computer systems. The FASB has expressed a preference for the direct method with a requirement for inclusion of an additional schedule reconciling net income to operating cash flow similar to the indirect method of reconciliation shown in the operating activities section. The indirect method reconciles net income to operating cash flow, and to that end, it helps to obtain insight into the income statement and the changes in the balance sheet. Thus, the indirect method helps to understand the cash tied up in or made available from current assets and liabilities. Of course, the tedious adjustments used for the reconciliation may confuse the users, but it provides mangers a leeway for manipulating the statement of cash flows. The direct method presents major categories of cash inflows and outflows, and to that end, it helps to understand the cash inflows from customers and outflows to suppliers and employees.

The statement of cash flows should be designed to provide confirmation that accrual-based earnings eventually will result into cash flows, as well as to reveal the sources and uses of that cash flows. Furthermore, if accrual-based earnings are not resulting into cash flows, then the reporting of cash flow should assist investors and creditors in determining the underlying sources of disconnect. The current source of the primary guidance on cash flow reporting is the Statement of Financial Accounting Standard No. 95. Although on the surface the statement appears to be very specific in its prescriptions for the measurement and reporting of cash flow, in reality, many differences seem to exist. In fact, both researchers and practitioners have noted many examples of measurement and reporting differences across companies that gave differing or, in some cases, misleading cash-flow signals. Firms have used the flexibility embedded in the GAAP to hide and communicate financial information that they want investors know. As Warren Buffet states, “not all earnings are created equal” (see Hagstrom [1994]).

The purpose of our study is to provide an important stepped-approach to assist in the estimation of earnings and cash impact, and thereby enhance the understanding of reconciliation and fairness of the financial statements. Our conversions are accomplished easily and quickly, and this approach should help educators and practitioners follow our easy-to-follow illustrations. Also, our stepped-approach assists the conversion of an indirect method into a direct method, specifically in the operating section of the statement of cash flows. Since the 2008 financial markets crash, the academic community has placed emphasis on teaching ethics to prevent fraudulent financial reporting, and we hope that our study will be useful in these efforts. Section II reviews the literature; Section III discusses our methodology; Section IV examines the impact of the accounting transactions on cash flow; and Section V provides the conclusions.

II. Literature Review

Clinch, Sindhu, and Sin (2002) have examined the usefulness of both the direct and indirect cash flow disclosures. Cheng and Hollie (2008) support the merits of the direct method specifically for use by the external users. In addition, Krishnan and Largay (2000), and Orpurt and Zang (2009) have discussed the predictive ability of the direct method, including the operating earnings. Broome (2004) points out that a common belief exists that the statement of cash flows cannot be manipulated if it follows the GAAP guidelines. He discusses a number of real-world situations of cash flow manipulation, including Tyco International, Dynergy, Qwest Communications International, Adelphia Communication Corporation, and WorldCom. Brahmasrene, Strupeck, and Whitten (2004) have discovered that many times some of the adjustments in the indirect method do not match with the actual changes in the balance sheet. The CFA institute extends its support for the use of the direct method.

Although accrual-accounting concepts underlying the accrual-based earnings reflect the measurement and reporting issues of the Generally Accepted Accounting Principles (GAAP), it does not diminish the importance of accounting issues of cash flow. The FASB clearly states this point of view: "The primary focus of financial reporting is information about an enterprise's performance provided by measure of earnings and its components. Investors, creditors, and others who are concerned with assessing the prospects for enterprise net cash inflows are especially interested in that information" (Statement of Financial Accounting Standards No. 95, Statement of Cash Flows, FASB, 1987). Hence, from the perspective of the FASB, reporting cash flow serves as a support for the other accrual-based statements. Drtina and Largay (1985) argue that FASB should refine the meaning of operating activities and require firms to show the cash provided by operations in a schedule of cash receipts similar to the direct method. Sender (2002) points out the pitfalls in not carefully examining the cash flow statement.

III. Methodology

The FASB states that the role of financial reporting in the economy is to provide transparency in flow of financial information that is useful to creditors, potential investors, and others for making rational decisions. The income statement utilizes accrual-based accounting. The balance sheet is static and provides a viewpoint at a specific point in time. Therefore, one needs to examine the statement of cash flow, and specifically, the operating activities section as if it is the engine or core of the firm's source of sustainable cash flow. Financial reporting should help the users of statements assess uncertainty related to amounts and timing of future cash flows. The analysis of cash flows helps to evaluate a firm's earnings information and understand its liquidity or solvency. The accounting activities are used by managers to boost short-term earnings and have been discussed in the literature, but the cash flow statement also provides flexibility to the managers in their accounting activities to maneuver the operating, investment, and financing activities. These accounting activities may broadly be classified in the areas of revenues, expenses/costs, and capital.

The operating section of the statement of cash flow provides insights into a firm's core business. Any shortfall of operating cash flow forces a firm to obtain funding from the capital markets. The analysis of the operating cash flow may indicate that a firm's core business operations are robust and may sustain. The analysis of the operating cash flow also helps to facilitate the investment activities. Finally, the evaluation of these two categories of activities on a standalone (as well as in a

combination thereof) will help a firm to examine the financing activities of the firm. That is, drainage in cash position and backfilling it from financing (either due to mismanagement of operations or investing) help the well managed operations.

1. **Operating Activities (OCF)**

   The OCF is calculated as:

   Net Income (NI)

   + Depreciation (DEP)

   - Change in Net Operating Working Capital

   - Gain (non-operating or non-continuing)

   + Loss (non-operating or non-continuing),

   where, the change in net operating working capital is defined as change in current assets (except cash and cash equivalents) less change in current liabilities (except notes payable); the loss and gain are non-operating or non-continuing items, which decrease or increase net income respectively. A few differences may exist for non-operating activities, including acquisitions, reclassifications, and currency translations.

2. **Investing Activities (ICF)**

   ICF is calculated as:

   Net Capital Spending (NCS) + change in the marketable securities

   NCS represents the long-term capital investment in property, plant, and equipment or proceeds from disposal of them. If the ICF is negative (positive), then it represents cash outflow (inflow). The NCS may be calculated in three different ways:

   (1) Purchase of or capital spending on property, plant, and equipment

   (2) $NCS = \Delta GFA = GFA_{end} - GFA_{beg.}$ The Δ represents change in values

   (3) $NCS = \Delta NFA_{end} + Dep.$ Or $NCS = (NFA_{end} - NFA_{beg.}) + DEP$

3. **Financing Activities (FNCF)**

   FNCF is calculated as:

   + Increase in notes payable

   - Cash dividends

   +Increase in external common stock.

   The common equity has three subsections: common stock at par, additional paid-in capital, and retained earnings. The sum of the first two subsections (common stock at par and additional paid-in capital) is also known as common stock or external common equity. The third subsection is retained earnings, and it is also known as internal common equity (as it originates from the income statement and is accumulated in the balance sheet). The change or additions of retained earnings is not explicitly included in financial activities, because it is already embedded in the net income (which is a part of cash flow from operation).

   With the help of some examples, we now compare GAAP accounting practices with non-GAAP-conforming practices in accounting transactions using our stepped-approach, which dispels the myth about sustainable operating cash flows, and provides warning signals if a company is masking-up its cash flows.

III. A. Impact of Revenue Related Accounting Transactions on Cash Flow

1. Timing of recognition

The FASB guidelines recommend that the revenue should be recognized and recorded upon completion of the earnings process and the exchange of services or goods or an asset such as cash. However, managers may not strictly follow these guidelines and instead recognize the revenues on the books when future services are still outstanding or in presence of significant uncertainty. They may ship goods prior to the finalization of the sale (even when there is a significant chances that the customers may not pay or the goods will be returned) and record the revenues in the books. The use of percentage-of-completion method even with an existence of a long-term contract is viewed as an aggressive accounting practice. A transfer of an ownership to the buyer requires the buyers to assume the risks and gain the benefits of ownership. If a sale is contingent upon uncertainty in a buyer's financing situation, then the seller should not record revenues related to this transaction. If a transaction involves a buyer's payment upon certain contingencies, then the seller should not record revenues until the resolution of these contingencies. When the future services from the seller are expected, the seller should recognize it as a liability. That is, any firm that receives a significant up-front fees or payment should not record the entire amount as revenues (also known as front-end loading). Instead the recognition of the revenues should follow the GAAP principles. The following scenario illustrates the impact of accounting transactions related to the timing of recognition of revenue on cash flow.

If a firm receives $100,000 with an expectation of completion of future services, then the non-GAAP accounting practices are:

Case 1a

Increase:	Cash or Accounts Receivable	$100,000
Increase:	Sales	$100, 000

A firm may record the transaction as shown above and overstate the net income via overstating the sales, and understating the liabilities. However, the GAAP accounting practices for this transaction are:

Case 1b

Increase:	Cash	$100,000
Increase:	Unearned revenue	$100,000

Note: the cash account is an asset, and the unearned revenue is a liability. Upon the completion of the service, a firm should convert the unearned revenue into revenue.

Cases 1a and 1b will have distinct impacts on financial statements and are shown below:

Table 1: Summary of Impact on Financial Statements for Cases 1a and 1b

Case	**Income Statement** Revenue- Expenses = NI	**Balance Sheet** Assets = Liabilities + Equity	**Statement of CF** OCF -ICF+FNCF= NCF
1a	+100,000 +100,000	+100,000 + 100,000	+100,000
1b		+100,000 +100,000	+100,000

The transactions in cases 1a and1b result in the same amount of OCF; yet further examination shows a different picture. Comparing the two cases, we observe that case 1a overstates revenue and therefore net income by $100,000 in the income statement; the case 1a also understates liability by $100,000 and therefore, overstates equity by $100,000 in the balance sheet. In addition, the ensuing constructs of operating cash flows in the statement of cash flow are flawed. That is, while the total amount of operating cash flows in cases 1a and 1b remain the same, the OCF in case 1a comes from the overstatement of net Income, when in fact it should come from an increase in non-cash current liability (i.e., unearned revenue). This result is because OCF = NI + DEP – Change in Net Operating Working Capital. The case 1a overstates the first component in deriving OCF (i.e., net income) by $100,000 and understates the third component (i.e., current liability) by $100,000. Thus, users of financial statements may be misled by the erroneous sources of operating cash flows, which in turn, may lead to misinterpretation about sustainability of its earnings from operating activities.

2. ***Recognizing phony revenues/gains***

The quarterly and annual preparation of financial statements require management to estimate dollar amount related to refund from suppliers for returned goods, sales returns by customers, and the useful life of the plant and equipment, and in turn boost revenues. According to the GAAP guidelines, no gain or additional revenues should be recorded related to transactions which really are not sales but could be, for instance, an exchange of similar assets. Managers may make phony estimates during the preparation of quarterly and annual financial statements.

Suppose a firm exchanges equipment with a book value of $100,000 and a market value of $250,000 for similar equipment. Managers may use this transaction to create phony book entry as in case 2a.

Case 2a

New Asset is $250,000:

Old Asset	$100, 000
Gain	$150, 000

Note: the gain is similar to revenue which boosts the net income.

The entry based on GAAP practice should be:

Case 2b

New Asset $100,000:

Old Asset $100,000

Note: both are book values.

Both cases 2a and 2b will have distinct impacts on financial statements:

Table 2: Summary of Impact on Financial Statements for Cases 2a and 2b

Case	**Income Statement** Gain - Expenses = NI	**Balance Sheet** Assets = Liabilities + Equity	**Statement of CF** OCF -ICF+FCF =NCF
2a	+150,000 +150,000	+250,000 +150,000 – 100,000	+150,000 -150,000
2b		+100,000 -100,000	

Since this transaction is an exchange of assets in the amount of $100,000, it does not affect the income statement and the statement of cash flow, and new asset replaces old asset in the balance sheet as shown in case 2b. Comparing the non-GAAP accounting practices of case 2a with the GAAP accounting practices of case 2b, we can see the case 2a overstates gain and therefore net income by $150,000 in the income statement. The case 2a also overstates assets, and therefore equity by $150,000 in the balance sheet. This result leads to an erroneous statement of cash flows. When deriving OCF from the indirect method, the first component is the net income. The $150,000 of gain (which is non-operational) is summed up in the net income along with income from operation. However, the current GAAP states that a gain does not belong to continuing operating activity; therefore, we subtract the gain from the net income in calculation of the OCF. But, the gain should not affect operating cash flows as this an exchange transaction illustrated in case 2b. Again, this approach may mislead the users of financial statements who use the operating cash flows to confirm the accrual-based earnings.

3. ***Improve Earnings with One-Time Gains***

Managers may overstate the net income by including non-operating and non- recurring related earnings along with operating earnings. The non-continuing activities are generally reported separate from the operating activities and include earnings from extraordinary gains or losses (versus investment income from continuing operations), discontinued operations (versus income from continuing operations), and the cumulative effect on earnings from any changes in accounting principles (versus income from restructuring costs reported in the income from continuing operations).

A manager may retire debt and use this transaction to increase earnings. To accomplish this objective, the manager may replace the old retired debt with a new debt at higher interest rate, even though it will exacerbate the interest expense in the future. Suppose a firm has $100 million debt outstanding with an interest rate of eight percent. Its market value is $80 million. Then the firm may misrepresent the following incorrect transaction to increase its earnings.

Case 3a

Decrease:	Old Debt	$100M
Decrease:	Cash	$80M
Increase:	Gain	$20M

Note: the old debt is a liability, and it will decrease. The cash is an asset which will also decrease. Since the gain is similar to the revenue, it will boost the net income.

In accordance with the GAAP practice, the journal entry should be:

Case 3b

Decrease:	Old Debt	$100M
Decrease:	Cash	$100M

Table 3: Summary of Impact on Financial Statements for Cases 3a and 3b

Case	**Income Statement** Gain- Expenses = NI	**Balance Sheet** Asset = Liability + Equity	**Statement of CF** OCF -ICF+FCF =NCF
3a	+20M +20M	-80M -100M + 20M	+20M -80M -20M
3b		-100M -100M	-100M

By boosting earnings with one-time false gains, we can see that case 3a overstates the gain and therefore net income by $20 million in the income statement. It also overstates assets and therefore equity by $20 million in the balance sheet. This approach leads to misrepresentation of operating cash flow and overstatement of the financing cash flow, and of course, the change in net cash flows. In case 3a, the first component in the calculation of OCF is NI. The NI is incorrectly inflated by the false gain of $20 million. However, the gain is not from continuing operation, therefore we need to offset it by subtracting $20 million from the OCF. In addition, the correct amount should be a reduction of $100 million of cash to retire the debt. In summary, these gains should be examined carefully when a firm reports a low operating profit.

III. B. Impact of Expenses, Liabilities, and Capital Related Accounting Transactions on Cash Flow

4. Shifting current expenses to a later period

The decisions involving the length of period for amortization of leasehold improvements, writing off any impaired assets, and a decision to capitalize or expense are made at management's discretion and can influence short-run profit by moving current expenses in the future periods. A firm derives benefits from the use of assets, such as inventories that are sold, and property, plant, and equipment deployed in the business. A portion of the asset is transferred to an expense account in a manner or a rate similar to the derivation of the benefits. Upon sale, the inventory is moved into cost of goods sold expense category.

The following example illustrates the transactions related to a decision to change the length of period for depreciation of an asset. The depreciation of one million dollars of equipment over a ten- and five-year periods will lead to the following accounting records:

Case 4a

Under aggressive accounting, the company chooses ten- year useful life of the equipment.

Increase: Depreciation Expense $100,000

Increase: Accumulated Depreciation $100,000

Case 4b

Under conservative accounting, the company chooses five-year useful life of the equipment

Increase: Depreciation Expense $200,000

Increase: Accumulated Depreciation $200,000

Table 4: Summary of Impact on Financial Statements for Cases 4a and 4b

Case	Income Statement Rev. – Exp. = Net Income	Balance Sheet Asset = Liability + Equity	Statement of CF OCF -ICF+FCF =NCF
4a	-100,000 -100,000	-100,000 -100,000	-100,000 +100,000
4b	-200,000 -200,000	-200,000 -200,000	-200,000 +200,000

The difference arising from cases 4a and 4b on financial statements is obvious.

Case 4a understates operating expense, and therefore overstates net income by $100,000 in the income statement. Case 4a also overstates book value of assets and equity each by $100,000 in the balance sheet. Furthermore, the lower rate of depreciation in the second case leads to higher book values of PP&E and net worth' and it also boosts the net profit due to lower expenses. This approach can lead to obsolete equipment in the long-run, particularly in an industry with a rapid change in technology. Moreover, the components to reconcile operating cash flows are muddled up, as depreciation is a non-cash expense, and has no impact on the statement of cash flow. In case 4a, the first component (i.e., NI) is overstated in the calculation of operating activities (OCF). The second component of OCF is the depreciation expense, and it is understated. The off-setting entries cancel each other out in the calculation of the net cash flow, even though the values of the individual component are erroneous. However, case 4a creates the perception that the firm earns higher income than case 4b, and it better manages its assets than case 4b since it reports lower depreciation.

Capitalizing costs

If a business incurs costs that produce benefits over many years then the business should capitalize these costs. In absence of benefits in the future years beyond the current year, these capitalization costs should be treated as expense. Advertising and administrative costs, start-up costs, and R&D costs should be treated as expenses. In addition, managers may portray costs as an asset, which is not consistent with the GAAP. For example, the capitalization of start-up costs as inventory rather than as an expense will result in an incorrect book-keeping as in case 4c:

Case 4c

Increase: Inventory $100,000
Decrease: Cash $100,000

Note: the inventory increases and the cash decreases. Both are asset accounts. The above transaction records the exchange of one asset with another. Since the transaction does not include an entry for any expense, capitalizing rather than expensing leads to an increase in current year's net income,

Upon sell of inventory, the transaction is recorded as:
Increase: Expense $100,000
Decrease: Inventory $100,000

This transaction will understate the next year's net income due to the incurred expenses, and the inventory will show a decrease. To begin with, the start-up costs should have been recorded as an expense as shown in case 4d.

Case 4d

Increase: Expense $100,000
Decrease: Cash $100, 000

Table 5: Summary of Impact on Financial Statements for Cases 4c and 4d

Case Yr0	**Income Statement** Rev. – Exp. = Net Income	**Balance Sheet** Asset = Liabilities + Equity	**Statement of CF** OCF -ICF+FCF =NCF
4c		+100,000 -100,000	-100,000
4d	-100,000 -100,000	-100,000 -100,000	-100,000

A comparison between cases 4c and 4d suggests that case 4c understates the expense by $100,000 and therefore overstates the net income by the same amount. By erroneously capitalizing the cost, case 4c overstates the assets (i.e., inventory) and therefore equity by $100,000 in the balance sheet during the current year. Although the amounts of operating cash flows in cases 4c and 4d are the same, case 4c muddles up the individual components of the operating cash flows as case 4c overstates the first component (i.e., NI), and the third component of the change in net operating working capital (i.e., increase in inventory).

Write-off of accounts receivable

According to the GAPP if a customer is in financial distress, then the accounts receivable value should be recorded at its net realization value. The amount of default is called bad debt.

Accounts Receivable	$10M
Less: Allowance for uncollectible	$2M
Net realization value	$8M

Note: Accounts Receivable is an asset.

The allowance for uncollectible is a contra-asset account. The net realization value is an asset. Managers may underestimate the default rate, resulting in underestimation of the bad debt expense, which will overstate assets and earnings. In the case below assume a company estimates its bad debt expense of two million dollars instead of three million dollars. Then the accounting entries are:

Case 4e

Increase: Bad Debt Expense	$2M
Increase: Allowance for Uncollectible	$2M

Case 4f

Increase: Bad Debt Expense	$3M
Increase: Allowance for Uncollectible	$3M

Table 6: Summary of Impact on Financial Statements for Cases 4e and 4f

Case	**Income Statement**	**Balance Sheet**	**Statement of CF**
	Rev. – Exp. = NI	Asset = Liability + Equity	OCF -ICF+FCF =NCF
4e	-2M -2M	-2M -2M	-2M +2M
4f	-3M -3M	-3M -3M	-3M +3M

Upon comparison of cases 4e and 4f, we observe that case 4e understates expenses and thereby, overstates the net income by $1M in the income statement. It also overstates both assets and equity by $1M in the balance sheet. This muddles up the components of operating cash flow, though the total amount of operating cash flow is not affected. In calculation of the OCF, the first component is NI. Therefore, in case 4e, the OCF will go down by $2M. The third component of OCF involves the change in net operating working capital. Since the accounts receivable decreases by $2M, the net change in operating working capital will go up by $2M. In a nutshell, the first and third components of OCF cancel each other out. The correct construct of OCF should reflect accounting

entries of $3M rather than $2M for both the first and third components. In this case, the net change in OCF masks the impact on earnings. Therefore, it is imperative for financial analysts and forensic accountants to examine the impact on all financial statements, and not just the income statement and the balance sheet.

*5. **Not recording or disclosing all liabilities***

Managers may not disclose long-term purchase commitments, pending lawsuits and other obligations in the balance sheet. If a transaction involving a liability is not reported in the financial statements, then it is kept off the books also known as off-balance sheet financing. If a firm has received payment in cash from its customers, but has not delivered an asset or services then it should report it as a liability of unearned revenue and not as revenues.

Suppose a firm receives $100 million for delivery of its products and it ships these products. However, it requires a process of installation service which constitutes, say $20 million of the sale. The firm may boost its earnings by making the following falsified entry:

Case 5a

Increase:	Cash	$100M
Increase:	Revenue	$100M

In accordance with the GAAP practice, the journal entry should be:

Case 5b

Increase:	Cash	$100M
Increase:	Revenue	$80M
Increase:	Unearned Revenue	$20M

Note: an increase in cash leads to an increase in assets, but the unearned revenue of $20 million is a liability. The impact of cases 5a and 5b on financial statements is shown below:

Table 7: Summary of Impact on Financial Statements for Cases 5a and 5b

Case	**Income Statement** Rev.–Exp.=Net Income		**Balance Sheet** Asset = Liability + Equity			**Statement of CF** OCF - ICF + FCF = NCF
5a	+100M	+100M	+100M		+100M	+100M
5b	+80M	+80M	+100M	+20M	+80M	+80M + 20M

To report the payments received by a firm entirely as revenues, the firm should earned the payment. Otherwise, revenues and net income are overstated by $20 million each, liabilities are understated by $20 million, and equity is overstated by $20 million in case 5a. As a result, though the total amount of operating cash flows remains the same, the case 5 muddles up the components of OCF. The first component in calculating the OCF is the net income, therefore, in case 5a, the OCF will go up by $100 million. But there is no impact on the third component of OCF, namely, the change in net operating working capital. In case 5b, the first component of OCF is NI and it goes up by $80 million. The third component of OCF is the change in net operating working capital, which excludes cash and it will go up by $20 million due to the increase in the current liability, namely, the unearned revenue of $20 million. Case 5a misrepresents the net income and the change in net operating working capital as it falsifies the unearned revenues as revenues.

IV. Conclusions

In the statement of cash flows, the cash flows from operations are calculated starting with net income. This net income is accrual based and is adjusted to reflect cash basis with addition of noncash expenses such as depreciation and the net of changes in net operating working capital. If the net income is high but cash flow from operations is low, then there is a need for a forensic accountant to scrutinize the quality of the net income with particular attention to the type of industry and the life cycle of the firm. However, growing companies may have both a low net income and a high investment in net operating working capital. If both net income and cash flow from operations are high then the chances are that the net income is probably less subject to any manipulation. The high net income does not guarantee a high cash position, and therefore, investors and forensic accountants need to evaluate each component of the cash flow from operations. Of course, managers may prepare fake financial statements by recording false transactions.

The importance of sustainable cash flows backboned by sustainable earnings is paramount to both equity holders and creditors. Our study proposes a stepped approach to identify relations among the components of income statement, balance sheet, and statement of cash flows. Although there is less flexibility than reporting of earnings, the financial reporting of cash flow offers a surprising flexibility. Some firms may exploit this latitude, especially by manipulation of various components of the operating cash flow. We identify practices through which financial reporting are susceptible to manipulation, including timing of revenue recognition; recognition of phony revenues/gains; improving earnings with non-recurring items; shifting current expense to future; and not recording contingent expense. Forensic accountants must be aware of how firms may manage earnings and balance sheet accounts concurrently by muddling up the components of cash flows, but in the process may expose the disconnections between earnings and cash flows.

In the wake of the high-profile cash flow frauds (e.g., WorldCom, Netflix, Trimble Navigation, Parmalat, Diamond Foods, General Electronic, Delphi, Auto Zone, Pep Boys, and Advance Auto Part), investors and forensic accountants must carefully examine the cash flow statement. Our study shows that analyzing the components of cash flows is essential for understanding a company's financial health. Further, examinations of operating cash flows provide a check into the quality of the earnings in the income statement as well as the quality of accounts in the balance sheet. In addition, our approach reveals how certain accounting shenanigans could artificially inflate reported operating cash flows, which may not be sustainable in the long-run. Our study contributes towards the efforts to improve transparency in financial reporting. Finally, the FASB needs to provide more guidance to discourage cash flow management and provide opportunities for independent auditors to identify and prevent such a harmful behavior by firms.

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