## Cash Flow From Assets – Methods #1 and #2[1]
## In-Class Problem[2]

*The subject firm in this problem set is National Media Management, a Utah based LLC from 1994 through 1999. The Income Statement, Balance Sheet, and Other Financial Information used herein are also used in other In-Class Problems in support of building a body of Corporate Finance In-Class Problems.*

**Suppose that you're the CFO of a small media management firm, National Media Management (NMM)[3], with the attached balance sheet, income statement, and other financial data. You know that your CEO has been in talks with a major competitor regarding purchasing your firm and you've been asked to provide some important cash flow figures. The firm considering acquiring NMM will be backed by a private equity firm and you need to be as clear as possible with respect to what values should be reported based on traditional finance practices.**

**a. What is the cash flow from assets for this firm based on CFFA method #1?**

CFFA Method #1 = OCF – NCS - ΔNWC so we'll first need to identify these values.

- OCF = EBIT + Depreciation – Taxes, and since this includes EBIT, we actually need to define this value first. Depreciation and Taxes are already specified.
  - EBIT = revenues (sales) – expenses (COGS)
  - EBIT = 9,687,246 – 9,053,370 = 633,876
  - OCF = 633,876 + 145,734 – 190,009 = 589,601
- NCS = ending fixed assets – beginning fixed assets + depreciation
  - NCS = 1,457,343 - 1,351,384 + 145,734 = 251,693
- ΔNWC = ending NWC – beginning NWC
  - ΔNWC = (1,814,464 – 192,480) – (1,487,319 – 214,414) = 349,079

CFFA Method #1 = 589,601 – 251,693 – 349,079 = -11,171

**b. Why is depreciation added into the OCF and NCS formulas?**

Depreciation is a non-cash expense and these calculations are for express purpose of identifying some form of free cash flow from the subject investment asset; in this case through the OCF and NCS formulas in an effort to derive CFFA #1.

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[1] This problem and solution set is intended to present an abbreviated discussion of the included finance concepts and is not intended to be a full or complete representation of them or the underlying foundations from which they are built.

[2] This problem set was developed by Richard Haskell, PhD (rhaskell@westminstercollege.edu), Gore School of Business, Westminster College, Salt Lake City, Utah (2015).

[3] While National Media Management is the name of an actual firm incorporated in the State of Utah from 1994-1999, the values presented are not representative of actual firm values.

**c. What is the cash flow from assets of this firm based on CFFA method #2**

CFFA Method #2 = CF/CR + CF/SH

- CF/CR = interest paid – net new borrowing
  - CF/CR = (44,679 + 11,412 + 35,001) - (1,119,823 – 999,244) = -29,587
- CF/SH = dividends paid – net new equity
  - CF/SH = (25,317+20,000) – ((319,465-292,564) + (200,000 – 200,000)) = 18,416

CF/SH = -29587 + 18,416 = -11,171

**d. What is the relevance of cash flow from assets and why would both would be buyers and the private equity firm standing behind them be interested in these values?**

CFFA represents the cash flow the investment (asset) spins off based on its current capital structure and operation. Potential investors are interested in these value because they inform them of what the value of the firm should be based on some production value through IRR and/or NPV calculations. They also inform investors of what type of available cash the asset generates that might be used to pay off any debt created in acquiring the asset, or the amount of cash the asset might spin off for use in other investment projects.

**e. In the event that this firm adopted a more aggressive depreciation scheme, would it result in any change in CFFA?**

Yes, the firm's tax liability would decrease, thus increasing the operating cash flow (OCF) and the cash flow to shareholders (CF/SH).

**f. What is the change in retained earnings for this firm and how is it relevant in an investor's cash flow analysis?**

The change in retained earnings is the change in accumulated retained earnings from 2013 – 2014 and is the same value as additional to retained earnings on the 2015 income statement. It is only relevant in that it informs potential investors of fund that may be available for internal or external investment purposes. For example, a firm might choose to pay off debt, repurchase stock, invest in other projects, etc. with these accumulated funds.

## National Media Management
## Balance Sheet
### as of December 31

| | 2013 | 2014 | | 2013 | 2014 |
|---|---|---|---|---|---|
| Current Assets | | | Liabilitites | | |
| Cash | 213,960 | 243,850 | Accounts Payable | 214,414 | 192,480 |
| Accounts Receivable | 651,552 | 858,318 | Total | 214,414 | 192,480 |
| Inventory | *621,807* | *712,296* | | | |
| Total | 1,487,319 | 1,814,464 | | | |
| | | | Long Term Debt | | |
| Fixed Assets | | | Mortgages (interest only) | 271,700 | 285,300 |
| Buildings | 722,862 | 757,328 | Credit Line | 99,022 | 134,508 |
| Equipment | 378,522 | 425,015 | Bonds | 628,522 | 700,015 |
| Technology | 250,000 | 275,000 | Total | 999,244 | 1,119,823 |
| Total | 1,351,384 | 1,457,343 | | | |
| | | | Owner's Equity | | |
| Total Assets | 2,838,703 | 3,271,807 | Common Stock | 292,564 | 319,465 |
| | | | Preferred Stock | 200,000 | 200,000 |
| | | | Accumulated Retained Earnings | 1,132,481 | 1,440,039 |
| | - | - | Total | 1,625,045 | 1,959,504 |
| | | | | | |
| | | | Total Liabilities and Owner's Equity | 2,838,703 | 3,271,807 |

## Additional Financial Information

| | | | | | |
|---|---|---|---|---|---|
| Preferred Stock | | | Common Stock | | |
| Shares Outstanding | | 200,000 | Shares Outstanding | | 319,465 |
| 12/31 Price per Share | | 1.65 | 12/31 Price per Share | | 13.75 |
| Market Value (Market Cap) | | 330000 | Market Value (Market Cap) | | 4,392,644 |
| Bonds ($1,000 face value) | | | Beta | | 1.3 |
| Coupon Rate | 5.00% | | $R_M$ | | 12.00% |
| YTM | 7.00% | | $R_F$ | | 2.00% |
| Years Remaining | 20 | | | | |
| P/YR | 2 | | Book Value / Liabilities | | 1,312,303 |

## National Media Management
## Income Statement
### January 1 - December 31, 2014

| | |
|---|---|
| Sales | |
| Products | 7,535,221 |
| Services | 2,152,025 |
| Total Sales | 9,687,246 |
| | |
| Expenses - COGS | |
| Admin and Mgt | 852,873 |
| Production | 1,529,884 |
| Materials | 6,524,879 |
| Depreciation | 145,734 |
| Total Expenses - COGS | 9,053,370 |
| | |
| EBIT (Operating Income) | 633,876 |
| | |
| Non-Operating Expense | |
| Credit Line Interest Expense | 44,579 |
| Mortgage Interest Expense | 11,412 |
| Bond Interest Expense | 35,001 |
| Total Non-Operating Expense | 90,992 |
| | |
| Pre-Tax Income | 542,884 |
| Tax (35%) | 190,009 |
| Net Income | 352,875 |
| | |
| Distribution of Earnings | |
| Dividends (Common) | 25,317 |
| Dividends (preferred) | 20,000 |
| Addition to Retained Earnings | 307,558 |