

SIMPLIFYING AND ENHANCING FINANCIAL ANALYSIS IN CASES AND SIMULATIONS

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ABSTRACT

In 20 years of teaching business policy courses and using total enterprise simulations, I have been continuously unimpressed with the ability of many business students to intelligently discuss and use financial data as contained in formal financial statements. Except for accounting and some finance majors, accounting and corporate finance courses seem to have been “take, endure, and forget” courses. While many of these students may have some knowledge of standard financial ratios, their use and interpretation of these measures seems alchemical. In requiring students to analyze and discuss financial data, I became frustrated to the point of deciding to take action. However, rather than rehash standard approaches to financial analysis, I have tried to develop a more common sense approach focusing on essentials but not getting buried in technical issues. This paper presents my approach to reviewing those essentials.

INTRODUCTION

I have been teaching business policy courses for about 20 years. In that time, I have been repeatedly saddened and disillusioned by the inability (or perhaps unwillingness) of the majority of business students to make sense out of and effectively use financial data in cases and simulations. Although these students have studied financial and managerial accounting and have completed corporation finance courses, they typically seem lost in the numbers. To combat this, I have prepared a brief presentation in which I remind them of the fundamentals they have already learned and offer some thoughts on how they might attack and interpret financial data. What follows is a description and discussion of that presentation.

THE FINANCIAL ANALYSIS PRESENTATION

I begin the presentation with a quick review of fundamental financial statements:

FUNDAMENTAL STATEMENTS

- BALANCE SHEET (STATEMENT OF FINANCIAL POSITION)
- INCOME STATEMENT
- STATEMENT OF CASH FLOWS

I start with the Balance Sheet because I want to remind students that the business accumulates assets that can be used (I refer to these as the “sandbox and its toys”). These come from two sources, owners and lenders. I point out that both are appropriate sources because there are some people willing to take the higher risks associated with ownership and there are some people who desire to invest under less risky conditions. I mention this, in particular, because, many students seem to view debt as consummate evil and virtually demand its abolition. This always strikes me as a bit bizarre because the first stop for most of them after graduation will be a financial institution for a loan to buy an “ego-mobile.” I also want to remind them that the balance sheet discloses the organization’s capital structure, and I want them to be able to describe and discuss that topic intelligently in case work and when playing the simulation.

BALANCE SHEET

- $A = L + OE$
- A AND L ARE CLASSIFIED AS ‘CURRENT’ AND ‘LONG-TERM’
- SHOWS FINANCIAL POSITION AT A SPECIFIC POINT IN TIME
- USEFUL IN PREDICTING AMOUNTS (AND TIMING) OF FUTURE CASH FLOWS

In discussing the income statement, I want, above all, to make them comfortable with three terms (gross profit, income from operations [operating earnings], and net income. I want them to understand what each of these tells us. I am also concerned that students understand the relationship of this statement to the company’s financial condition (i.e., profits increase assets and the value of ownership while losses do the opposite). In my discussion, I will make these points:

1. Gross profit provides insight into the efficiency of those processes used to create the product(s).

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- Income from Operations (a.k.a. operating earnings and as EBIT, earnings before interest and taxes) allows us to evaluate expenditures for marketing of the product(s) and for overall administration and gives us additional insight into our efficiencies in these areas. Operating earnings also are useful in assessing the performance of various units of diversified companies.
- In going from Income from Operations to Net Income, it is important to consider the impact of interest expense on the firm, and this provides additional insight into the appropriateness (or lack of) of the firm's financial structure.

INCOME STATEMENT

- PURPOSE:** SUMMARY OF OPERATING ACTIVITIES OVER A PERIOD OF TIME
- RELATION TO BALANCE SHEET ($A = L + OE + REV - EXP$)
- BASIC FORMAT:**
 $Revenues - Expenses = Net Income$
- EXPANDED FORMAT:**
 - Gross Profit = Sales – Cost Of Goods Sold
 - Income From Operations = Gross Profit – Operating Expense
 - Net Inc. = Inc. from Operations +/- Other Items – Inc. Taxes

One of my regrets is that cash flow is not addressed in most cases. One of the great benefits of total enterprise simulations is that they force students to comprehend and manage cash over a relatively broad spectrum of activities. Unfortunately, most business students don't appreciate the importance of cash in commerce—except, perhaps when they can only make minimum payments on their credit cards. In this part of the discussion I emphasize the imperative of generating the bulk of cash in-flows, over time, from the normal operating activities of the business, and I relate investing and financing actions to the simulation they are playing.

Cash Flow Statement

- PURPOSE:** SUMMARIZE CASH RECEIPTS AND CASH DISBURSEMENTS FOR A SPECIFIC TIME PERIOD
- BASIC FORMAT:**
 - CASH FLOWS FROM OPERATING ACTIVITIES
 - CASH FLOWS FROM INVESTING ACTIVITIES
 - CASH FLOWS FROM FINANCING ACTIVITIES
- USED TO ASSIST DECISION MAKERS EVALUATE LIQUIDITY, SOLVENCY, AND FINANCIAL FLEXIBILITY

At this point the reader is probably somewhat frustrated and is muttering under the breath, "So what is so special or unique about this—it's just a summary of basics?" The reader's sensibilities are correct. The meat of what I am trying to get across is contained in the next two parts of the presentation addressing financial health and financial ill health. In these two sections I want the student to step back from cold and mechanical ratios and develop a common sense approach to financial data analysis. However, before they do this, they must understand the basic structures and contents of the fundamental statements, as I have outlined above. However, these statements, over time, aided by creating and viewing simple line graphs, can paint often insightful pictures of what is going on. One can argue that effective financial management is present if a firm is growing sales and profits, if there is evidence of cost control for important cost elements, if cash flows are managed logically, and if debt is used in a sensible way.

WHAT MAKES A FIRM FINANCIALLY HEALTHY?

- SALES GROWTH
- PROFITS (PREFERABLY GROWING)
- REVENUE GROWTH > COST GROWTH
- POSITIVE (NET) CASH FLOWS (MOSTLY FROM OPERATING ACTIVITIES)
- EFFECTIVE AND EFFICIENT CASH MANAGEMENT
- COST REDUCTION AND EFFICIENCIES
- SENSIBLE USE OF DEBT

On the other hand, one can argue that the firm may be headed in the wrong direction if sales and profits are stagnant or declining, if there is evidence of cost acceleration, if cash flows are poorly managed (especially if there is too much borrowing to sustain liquidity), if debt is out of control and overly costly. Again, simple line graphs can be used to do the analysis.

WHAT MAKES A FIRM FINANCIALLY AT RISK?

- SALES DECLINES
- PROFIT DECLINES
- COST GROWTH > REVENUE GROWTH
- NEGATIVE (NET) CASH FLOWS
- INEFFECTIVE AND INEFFICIENT CASH MANAGEMENT
- COST INCREASES AND INEFFICIENCIES
- EXCESSIVE USE OF DEBT

For most students, comprehending these relationships will provide them with very useful information, albeit not in the most sophisticated ways. At the very least, students are not tempted to look and financial data in a Homer Simpson manner and mutter, "Ummm, numbers!"

Let me close with a few additional concerns and comments. Some of these are, perhaps, a bit more esoteric,

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but any business student should be able to comprehend why these issues are important. Additionally, by this time in the discussion, they should begin to see ways in which they can ask and answer substantive questions that require the use of financial data. My hope is that, regardless of major, my students understand that financial realities are vital to business success, that every member of the organization has an impact on those realities, and that understanding financial information will help them perform their responsibilities more effectively.

OTHER CONCERNS

- MANAGING RECEIVABLES
- MANAGING PAYABLES
- ACCURATE COST ANALYSES
- How to create common size statements
- What common size statements may disclose
- Timely and accurate analyses of business units
- Reliable and ethical audits (internal & external)
- Awareness of and sensitivity to trends

A FEW MORE THOUGHTS

- SPECIAL ITEMS (ON THE INCOME STATEMENT) SHOULD BE CLOSELY EXAMINED BECAUSE THEY DO NOT REPRESENT ONGOING BUSINESS ACTIVITY
- COMPANIES SHOULD HAVE SUFFICIENT RESERVES AND ALLOWANCES FOR BAD DEBTS AND DEFECTIVE MERCHANDISE
- INCOME FROM OPERATIONS (AND CASH FLOWS FROM OPERATING ACTIVITIES) TELL A GREAT DEAL ABOUT CORE BUSINESS PROCESSES, EVEN MORE ABOUT THE PERFORMANCE OF DIVISIONS

CONCLUSION

I wish I could say that my use of this presentation has “turned on the lights” and created wonderfully better-educated business students. I can’t make that claim. However, I do not let students off the hook. There are some things I require of them so that they will get engaged in the processes I have outlined. For example, having illustrated the power of simple graphs, I include a number of specific requirements for their use (especially in case presentations and simulation reports). In simulation reports I am quite specific in requiring students to prepare and use a number of graphs to illustrate specific relationships (e.g., sales and profits over time, sales compared to various cost factors, etc.). I regularly give quizzes on case content, and I almost always include a financial question, of some sophistication. Additionally, in the simulation reports I go beyond graphs and require the use of common-size statements, correlations, and even multiple-regression to help them more effectively understand costs and relationships in the elements of

decisions. However anecdotal it may be, I do have some evidence that my students are at least coping, intelligently, with financial data and its analysis. I hope that people who teach business policy courses, but who feel a bit weak on the financial side, may find what I have said in this discussion to be useful. For those who may wish to pursue financial interpretation a bit more deeply, the chair of the accounting department at my school, whom I consulted in developing the presentation, recommends this paperback:

REFERENCES

Tracy, John A. *How to Read a Financial Report*, 6th ed. Hoboken, NJ: John Wiley & Sons, Inc., 2004