

# **Using Library Resource Materials to Integrate Deep Information and Externality Impacts into Semi-Live Finance Case Course Analyses**

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*This paper focuses on the manner in which business library research can be integrated into an upper-level case course in financial management to allow students to study the impact of externalities and what shall be referred to here as “deep information” in examining business decision making. The case class discussed herein analyzes firms contemporaneously, i.e., those facing current financial and operating situations. This differs greatly from traditional case courses that focus instead on historical company situations. In particular, the approach developed at The University of Toledo in its Advanced Financial Management course is examined. Tangentially, the interaction with other courses in the finance curriculum is also discussed. More particularly, the incorporation into the case analysis of the impacts of various factors that are outside of the control of a firm’s management, but that strongly influence and channel its performance, is showcased. Examples of these external factors include the impacts of economic trends and conditions, demographics, international developments, competition, and industry effects. In addition to research on external factors, two other areas in which library assistance can aid in the analysis of concurrent case companies include -- finding data and information that delves more deeply into company activities, e.g., by using corporate and other databases, and utilizing EDGAR to study the footnotes of a firm to uncover obscure and often less comprehensible issues behind its activities and behavior. In doing this, focus is placed upon the manner in which the synergistic efforts of the librarian and case instructor can effectively present and integrate this information into these contemporaneous cases to enhance student learning experience.*

## **THE ROLE OF DEEPER INFORMATION AND EXTERNALITIES IN CASE STUDIES**

When students are first assigned a case to review and analyze, their initial step is to turn to information locations about which they are most familiar. If it is a closed, historical case that is either published in a casebook or purchased through an institutional publisher, e.g., a “Harvard Case”, they will most likely just dive into the information prepackaged therein. If it is one that is a non-packaged, contemporaneous case, their first step will probably be to “Google” the company, turn to Wikipedia, or to go to a familiar source that deals with such firms, e.g., the company’s annual report and/or Yahoo Finance or Google Finance. The next step would be to download the financial statements of the firm to carry out ratio and other traditional analyses of it, to find articles about recent events associated with the firm’s activities, and to locate stock market data about its financial performance. After that, they’re often stuck!

The interaction of library instruction and assistance with that of contemporaneous finance case course teaching can overcome both this sudden impediment and, at the same time, provide a means for finance students to learn to investigate more deeply case company performance and the causes of it. It provides an opportunity for them to become familiar with the practical aspects of researching and analyzing the financial and operating performance of ongoing companies well-beyond the limits of more traditional case course settings. It further produces two other important related benefits; it gives them an appreciation of the importance of searching for and incorporating externalities into the real world of financial

analysis and decision making and some practice in carrying out such tasks prior to the time of their actually having to do so as company employees on the job. In fact, one of the major benefits of this approach to case company investigations is that the resultant reports offer a vehicle for students to attract the attention of the company the group has researched and analyzed as well as that of its competitors. This can thus be an important tool in their quest for employment in their field.

In order to accomplish these objectives it is important that the business librarian and the finance case professor work closely together. It is the job of the library instructor to present and discuss how to use the various sources of the available materials in these areas. At the same time, it is the responsibility of the case instructor to educate his/her students as to the manner in which that material should be integrated into and analyzed as a part of each case company assignment. Coordination takes place in three informational areas (deeper information, footnotes, and externalities), each discussed below.

### **Deeper Information**

Typically, students in a contemporaneous case course will begin their search for financial performance data by first examining their assigned firm’s annual report. The data contained therein is often both limited and superficial. As an example, Table 1 below presents Deere & Co’s income statement (along with the prior statements for 2006 and 2007) as contained in its 2008 annual report. As highlighted therein, details of its revenue sources, some of its expenses,

**TABLE 1. Demonstration of Financial Statement Detail from an Annual Report**

DEERE & COMPANY			
<b>Statement of Consolidated Income</b>			
<b>For the Years Ended October 31, 2008, 2007 and 2006</b>			
(In millions of dollars and shares, except per share amounts)			
	<b>2008</b>	<b>2007</b>	<b>2006</b>
<b>Net Sales and Revenues</b>			
Net sales	\$25,803.50	\$21,489.10	\$19,884.00
Finance and interest income	\$2,068.40	\$2,054.80	\$1,776.80
Other income	\$565.70	\$538.30	\$487.00
Total	\$28,437.60	\$24,082.20	\$22,147.80
<b>Costs and Expenses</b>			
Cost of sales	\$19,574.80	\$16,252.80	\$15,362.00
Research and development expenses	\$943.10	\$816.80	\$725.80
Selling, administrative and general expenses	\$2,960.20	\$2,620.80	\$2,323.90
Interest expense	\$1,137.00	\$1,151.20	\$1,017.50
Other operating expenses	\$698.70	\$565.10	\$544.80
Total	\$25,313.80	\$21,406.70	\$19,974.00
<b>Income of Consolidated Group before Income Taxes</b>			
	\$3,123.80	\$2,675.50	\$2,173.80
Provision for income taxes	\$1,111.20	\$883.00	\$741.60
<b>Income of Consolidated Group</b>			
	\$2,012.60	\$1,792.50	\$1,432.20
Equity in income of unconsolidated affiliates	\$40.20	\$29.20	\$21.00
<b>Income from Continuing Operations</b>			
	\$2,052.80	\$1,821.70	\$1,453.20
<b>Income from Discontinued Operations</b>			
			\$240.60
<b>Net Income</b>			
	\$2,052.80	\$1,821.70	\$1,693.80
<b>Per Share Data</b>			
Basic:			
Continuing operations	\$4.76	\$4.05	\$3.11
Discontinued operations			\$0.52
Net Income	\$4.76	\$4.05	\$3.63
Diluted:			
Continuing operations	\$4.70	\$4.00	\$3.08
Discontinued operations			\$0.51
Net Income	\$4.70	\$4.00	\$3.59
Dividends declared	\$1.06	\$0.91	\$0.78
<b>Average Shares Outstanding</b>			
Basic	431.1	449.3	466.8
Diluted	436.3	455.0	471.6
Source: Deere & Company   2008 Annual Report			

Table 2a. Demonstration of Financial Statement Detail from a Proprietary Database

Deere & Co.	10/31/2009	10/31/2008	10/31/2007
As Reported Annual Income Statement			
Currency	USD	USD	USD
Auditor Status	Not Qualified	Not Qualified	Not Qualified
Consolidated	Yes	Yes	Yes
Scale	Thousands	Thousands	Thousands
Net sales	20,756,100	25,803,500	21,489,000
Finance & interest income	1,842,100	2,068,400	2,054,800
Revenues from services	418,000	421,000	314,000
Investment income	9,000	21,000	83,000
Securitization & servicing fee income	3,000	6,000	23,000
Other income	84,000	118,000	118,000
Total other income	514,200	565,700	538,300
Total net sales & revenues	23,112,400	28,437,600	24,082,200
Cost of sales	16,255,200	19,574,800	16,252,800
Research & development expenses	977,000	943,100	816,800
Selling, administrative & general expenses	2,780,600	2,960,200	2,620,800
Interest expense	1,042,400	1,137,000	1,151,200
Depreciation of equipment on operating leases	288,000	308,000	297,000
Cost of services	357,000	295,000	248,000
Other operating expenses	72,000	96,000	20,000
Total other operating expenses	717,400	698,700	565,100
Total costs & expenses	21,772,600	25,313,800	21,406,700
Income (loss) before income taxes - United States	756,000	1,730,000	1,601,000
Income (loss) before income taxes -foreign	584,000	1,394,000	1,075,000
Income (loss) of consolidated group before income taxes	1,339,800	3,123,800	2,675,500
Provision (credit) for current U.S. federal income taxes	3,000	559,000	484,000
Provision (credit) for current U.S. state income taxes	12,000	60,000	40,000
Provision (credit) for current foreign income taxes	273,000	402,000	354,000
Total provision (credit) for current income taxes	288,000	1,021,000	878,000
Provision (credit) for deferred U.S. federal income taxes	246,000	74,000	-2,000
Provision (credit) for deferred U.S. state income taxes	10,000	3,000	8,000
Provision (credit) for deferred foreign income taxes	-84,000	13,000	-1,000
Total provision (credit) for deferred income taxes	172,000	90,000	5,000
Provision (credit) for income taxes	460,000	1,111,200	883,000
Income (loss) of consolidated group	879,800	2,012,600	1,792,500
Equity in income (loss) of unconsolidated affiliates	-6,300	40,200	29,200
Income (loss) from continuing operations	-	2,052,800	1,821,700
Net income (loss)	873,500	2,052,800	1,821,700
Weighted average shares outstanding-basic	422,800	431,100	449,300
Weighted average shares outstanding-diluted	424,400	436,300	455,000
Year end shares outstanding	423,242.38	422,296.27	439,636.11
Income (loss) per share-from continuing operations-basic	-	4.76	4.05
Net income (loss) per share-basic	2.07	4.76	4.05
Income (loss) per share-from continuing operations-diluted	-	4.7	4
Net income (loss) per share-diluted	2.06	4.7	4
Dividends declared per common share	1.12	1.06	0.91
Number of full time employees	51,300	56,700	-
Total number of employees	51,300	56,700	52,000
Number of common stockholders	27,925	27,803	27,631

Source: Mergent Online, 2010

and data on a number of its other important performance elements are missing. On the other hand, Table 2 shows the same statements, but as presented in the Mergent Online (2010) database. A greater proportion of the data that is needed to more fully evaluate Deere's performance is presented there. Only the additional items in Table 2 are highlighted for comparison. Similar distinctions exist between the balance sheets from both sources. As well, these databases offer many other areas of information that are often missing from a firm's annual report. These include, but are not limited to: stock performance data, comparative competitive company data, recent related news information, insider and institutional holdings, cross-sectional domestic and foreign industry information, breakdowns of long term debt, and executive information including compensation.

Although the difference in the nature and degree of information detail differs from company to company and between that which is reported in their annual reports and in corporate databases, the added depth in the latter permits students to examine many more aspects of a company's performance than would otherwise be possible. As shown in Table 2 much greater detail as to Deere's revenue sources are provided therein. Elsewhere in the database are included breakdowns respecting product lines and country sources as well. This opens opportunities to explore diversification and international aspects of its sales. While cost of goods sold breakdowns are not provided anywhere, operating expense details are many times presented more definitively in database reports. This is especially the case respecting general expenses. This is an area of business activity that is often overlooked by students. This is because these are overhead expenses that are generally lumped together, often as "selling, general and administrative expenses". In many cases they represent large, poorly controlled elements of the cash outflow of firms, especially those that are in trouble financially. By being able to break out its components, students can assess the degree to which these outlays are out of control and where improvements could have and are not being made by the firm's executives. As will be seen in the next section on footnotes, breakouts dealing with elements such as research and development (shown unusually in both Deere's annual report and Mergent Online's income statements), executive salaries and benefits, depreciation and other non-cash expenses, bad debt, and advertising and marketing expenses can be focused upon directly and examined with the use of such databases. Similarly, deeper information can also be found in these databases dealing with components of a firm's balance sheets. These include receivables; inventories; property, plant and equipment; other assets; payables; accruals; debt and capital leases; and other liabilities. With this information students are then able to perform more fundamental analyses of turnover and aging, leverage, and breakevens as well as more detailed vertical and horizontal assessments of its financial statements.

In order for students to make the most beneficial and efficient use of these large databases, they must become familiar with their content and structure. To accomplish this it

is critically important that both the case professor and the business librarian work together in combining their foci as well as their teaching expertise. The library instructor should focus upon educating students as to the content of and accessibility into each database. The case instructor should focus upon the ways in which the students can use this information and data to analyze more deeply the financial and operating performance of their assigned company. In combining their expertise in this way students gain exposure into these databases, to their unique features and details, and to the manner in which reports and exhibits can be generated from them. These will primarily be functions that the business librarian will carry out. It is then up to the case instructor to integrate this knowledge into the content of his/her class lectures as to the methods of analysis and utilization of this material and as to the manner in which it should be integrated into the case presentations and reports. The case instructor needs to be clear as to what is expected from them in using these data and information in their analyses and should tie these together with the lectures that were given by the library instructor. In this regard it is often quite beneficial for the two instructors to be present in each others' classes when this material is being covered and to integrate their presentations at this time.

#### **Footnotes**

The notes to a firm's consolidated financial statements are found in the 10-K report required to be filed annually with the Securities and Exchange Commission (SEC) by each publicly traded company doing business in the United States. These filings can be accessed directly through the SEC's Electronic Data-Gathering, Analysis, and Retrieval (EDGAR) system. Footnote information can sometimes also be found in the back of the annual reports of some firms. It is one of the most critical areas students should study in preparing their analyses of a company's activities, performance, and potential. This is because this information greatly expands upon and explains more deeply the financial aspects of a firm's underlying actions and activities. However, it is perhaps one of the least understood areas of financial analysis in that the subject of footnote analysis is generally not covered in finance classes. It is, however, sometimes focused upon in financial accounting courses. Therefore, finance students will only have knowledge of this area if they have taken this intermediate level accounting course.

In any case, the primary purpose of a firm's footnotes to its financial statements is to clarify and to expand upon the contents of those statements. In accomplishing this, they serve a number of important purposes. One of the most significant of these is to provide explanations of the principles of accounting used in the preparation of a company's financial statements. These explain the manner in which these are used to determine the amounts reported in those financial statements. The notes also provide breakdowns and analyses of certain accounts, and in that sense are sources of more detailed information. They also contain disclosures that are not included in the firm's financial statements. Some of the

most important of these is information dealing with performance by products, subsidiaries, and/or countries; regulatory infractions; lawsuits; and pending settlements of various financial issues. There are also breakdowns of sources of financing, tax issues, and what is commonly referred to as "off balance sheet" items. Thus, all of these, as well as others, make it critically worthwhile for case students to take the time to review them as part of their preparation of their reports. In doing so, they will gain critical insights into the company's true financial status as well as the potential consequences and effects of events reported therein.

While there is no standard format for the notes to a firm's financial statements, there are some general categories of information and disclosures that can be found in all of these. The form and content of the notes will vary from one company to the next, and if one is looking at the financial statements of a non-U.S. company, one may find disclosures that apply in that particular company's circumstances in the U.S. versus its country of origin.

In general, it is the task of the finance professor to present this information to his/her students. However, the business librarian can assist in this process by guiding students through the procedures necessary to locate the EDGAR site directly on the Internet and indirectly through the interactive databases that contain access to this site.

### **Externalities**

Briefly defined in the context of this paper, externalities represent events that although they take place outside of a firm, have a serious impact upon it, and which are beyond the control of its executives. These include trends, conditions, or incidents that directly affect the performance of the case company, of which its executives may or may not be cognizant, but against which the executives can take no direct actions. Changes in economic trends and/or conditions, climatic events, disasters, regulatory decisions, changes in the political atmosphere, and international occurrences are just a few examples of such factors. Unlike the two areas discussed above which the case professor is more likely to introduce and discuss in terms of firm impacts, externalities are often best presented and discussed by the business librarian. By the very nature of their training and exposure, a librarian with a business and economics subject specialization has much wider exposure to data and information regarding these events. This is because of their education, training and the fact that they regularly provide assistance across campus disciplines to educators and researchers that request help in identifying and locating such details. Such information is often transferable among these specialties. These librarians are also much more knowledgeable as to where externality data and information can be found among research media sources, how it is presented therein, what methods and strategies can be used to locate and access such document and database sources, and as to the limits to which it is available and/or can be interpreted.

However, the case professor still plays a critical role in his/her working relationship with the librarian and with the students in the class. It is distinctly up to that person to provide the guidelines as to what type of externalities should

be focused upon in the library lectures and, to the students, why these topics are of special and/or critical importance to their analyses of their assigned case companies in assessing the impacts of these outside factors on the performance of them. Each type of industry is impacted by different sets of these external influences and in different degrees. These need to be pointed out by the teacher so as to clarify the unique nature and type of impact that students might expect a class of externalities to have upon their assigned company. However, it should be left to the students to search out and to delineate the specific factors and their influences upon their company's performance. Table 3 below provides examples of some of these externalities and the information sources that might be used by students to uncover such information. It also provides very brief examples of the type of impact each selected example might have upon an assigned case company. At the end of the paper in Exhibit 1 is an example of the handout that the UT library's business subject specialist hands out to students in the finance case class to guide them as to where to search for each type of externality by database or other information source.

### **METHOD AND PHILOSOPHY OF CASE COURSE IMPLEMENTATION IN THIS ENVIRONMENT**

To achieve the goal of student exposure to and implementation of externality effects, a formal program within the finance case class structure has been developed. Students are first introduced to the concept of externality impacts as part of the overall case analysis lectures. At approximately the midpoint of the course, each student enrolled in the case course is required to attend a full lecture during class time on the sources and uses of externality data and information. This topic is taught in the library so that online resources can be easily accessed and hard copy reference sources can be passed around for the students to examine. Attendance is mandatory, and unexcused absence is penalized heavily. Exposure to the library's resources and to the research process teaches students to locate information and data. This assists them in defining the nature and uncontrollable effects of these externalities both in the past and potentially in the future. It also helps them to delineate their suggestions as to their assigned firm's future course(s) of action in the face of these. To do this successfully further requires a close and continuing interaction between the business librarian and the case finance professor who teaches these courses.

The case course philosophy within the finance department is that it serves as the capstone course for its undergraduate finance majors. (It is not a requirement for financial services majors.) Thus, its purpose is to bring together and to integrate all of the subject matter to which students have been exposed in their previously enrolled finance courses, both required and elective. It also serves as the mechanism by which they are exposed to and are expected to apply these teachings in real world settings just prior to their graduation into it. Thus, this course also serves as a transition vehicle for students in their final semesters to move from their long, almost exclusive exposure to the straight forward world of academic education

to the opposite world of open-ended pragmatic decision making; from a world where there are only specific, “right” answers to problems to one in which most of the time there are not; and from where there are specific courses of action to be taken to reach those specific conclusions to one in which the avenues to be taken are, at best, unclear and, at worst, unknown.

As a result, their transference from the academic settings in which most of their prior learning has taken place to that of its real-world application critically requires that students be exposed to and to learn to deal with the impacts of various elements of business environments that are not under the control of its managers.

This atmosphere and philosophy create situations in which the theoretical world of finance must be modified in several ways. First, within firms themselves, students must deal with the substantial difference between the relatively simple, straightforward structure of archetypal financial statements to the true complexity of the statements actually prepared within operating companies. Second, both within and without such firms, they must deal with a variety of pragmatic issues not covered in most finance courses. These include, but are not limited to, contingent obligations; regulatory requirements; and legal, environmental, securities, and tax restrictions. Third, they must take into consideration various business operating and financial philosophies and policies that may be inconsistent with the basic tenets of finance theory, e.g., non-traditional agency decisions, bankruptcy considerations, and non-optimizing behavior. Finally, they must give regard to the effects of externalities upon a firm’s performance and to the decision making of businesses and the executives that run them.

Much of what students learn elsewhere in financial analysis classes in the program is rigorous and up to date, but often does not explicitly incorporate the direct impacts of the specific external forces that influence and temper the application of these tools of financial management in business situations. This is not to say that this creates weaknesses in the program or that there is any fault with this approach. Course curricula must remain focused on finance and finance-related topics within each class in order to achieve the learning goals of its programs efficiently and effectively. And it must do so within the credit-hour limits set forth by the governing bodies of the finance department’s college and university. It is then one of the purposes of The University of Toledo’s Advanced Financial Management course to introduce and bring together, just prior to their graduation, the nature and influences of these external factors with the other elements of finance to which students have been exposed and are expected to have mastered, at least in part, in these other finance courses. Thus, the professor teaching this course must necessarily anticipate that students entering into his/her finance case class are generally not equipped to locate information dealing with externalities and their impact upon a firm’s financial and operating performance and the decisions that its business leaders must make.

## **FOCUS AND DESIGN OF THE FINANCE CASE COURSE USED AT THE UNIVERSITY OF TOLEDO**

It is with these understandings in mind that the case course used in the finance department at The University of Toledo has been designed. As a result, its focus is very specific -- to concentrate on the practical applications of the concepts, theories, and methodologies taught in the rest of the finance curricula to real world business situations. This necessarily requires that this course make strong use of library instruction to achieve this goal. As part of this process the course professor and the business librarian must work together to develop strategies for choosing various types of data and information by which to analyze and forecast a case company’s performance as well as strategies for locating the sources of these relevant data and information to do this.

The course, itself, is “semi-live” in nature. That is, the case companies that are selected are examined contemporaneously in that they are evaluated “as they stand” today. However, unlike “live cases”, there is no direct involvement of the assigned case companies, and the executives who work for them play no role in the students’ assessments of the firm’s actual situations and performance.<sup>1</sup> However, students are encouraged to contact both the company and its executives directly, on their own, to ask questions and to request information they desire as they prepare their cases. This approach is very different from the traditional case approach in which historical cases are used in the course and taken from either casebooks or pre-prepared purchased cases available from institutional providers such as Harvard University or the University of Virginia.<sup>2</sup> The contemporaneous focus of these assignments necessarily creates a condition in which the case company outcomes are both unknown and evolving even as the case is being analyzed. In this way, neither the professor nor the students in the class know the eventual outcome of a case company’s situation. This makes the situations faced by the students realistic respecting the actual situations they will face and the decisions they will have to formulate for the rest of their professional careers. It also precludes the case professor from guiding the students toward predetermined objectives as almost always happens when traditional, historic cases are assigned in such classes. Nevertheless, historical data analyses are still required in this semi-live format. This is necessary in order to evaluate the past performance of the case company and the strengths, weaknesses, positive decisions and errors, as well as the outside factors that appear to have put the firm into its current state of affairs. These collectively allow each student team to determine the fundamental problems (strengths minus weaknesses) that their assigned firm must resolve in the future. Students are also required to formulate predictions of the future performance of their assigned firm using their recommendations for future corrections based in part on their analyses of the past and current information and data as well as their predictions of future trends in its performance. Importantly included in both of these assessments are the impacts of external factors on the firm’s performance.

**Table 3. Examples of Externalities**

<b>Class of Externality</b>	<b>Externality Examples</b>	<b>Source of Data/Information</b>
Economic Trends & Conditions	Employment	Stat-USA
	Monetary Statistics	Federal Reserve Bulletin
Demographic Trends	Population Characteristics	Census of Population Demographics USA
	Consumer Trends	Consumer Expenditure Survey GMID
Semi-External, Footnoted Effects	Mergers & Acquisitions	EDGAR
	Factored Receivables	
	Contingencies & Lawsuits	
Industry Effects	Industry Growth	IBISWorld
	Demand Forecasts	S&P Industry Surveys
	Cost Elements	Frost & Sullivan
Competition	Competitors & Brands	Mergent Horizon
	Suppliers & Customers	GMID
Legislative & Regulatory Decisions	SOX 2001	ViewsWire
	Healthcare Changes	
	Clean Air and Water Regulation	
Political Impacts	Federal & State Party Changes	Wall Street Journal
	National Elections	Barron's
International Trends & Conditions	Exchange Rates	ViewsWire
	Monetary Changes	OECD Publications
Climactic Trends & Conditions	Precipitation (rain, snow), Temperature, Wind & Related, Storms	NOAA
Securities Markets Performance	Stock, Bond, Other Securities Prices and Volumes	Wall Street Journal
	Securities Exchange Indices	Barron's
		FINRA
General Resource Materials	Background Company & Industry Information	Business Source Complete
* Exhibit 1 lists and describes each of the sources in Column 3 above.		

The use of external data and information is directly channeled into the student analyses in two ways. In the first half of the course students develop a “weighted SWOT analysis” of both the internal as well as external elements that they feel primarily impact the performance of their assigned company. This SWOT analysis is designed to begin to channel their team’s focus on these elements and to organize them in an orderly manner so that both the nature and degree of their effects on their assigned company’s performance is identified. While SWOT analyses are informal in nature, the weighting aspect provides a mechanism for each team to begin to quantify the specific impacts of each of these elements on their assigned company.

In the second half of the course, students carry out formal regression analyses that tie together those externalities that they feel directly impact various elements of the internal performance of their assigned companies. Each regression relationship is examined and several statistical tests are used to eliminate those factors whose impacts are weak. It is from these, in part, that each team develops its forecasts of its assigned firm’s future financial and operating outcomes.

The final stage of the course involves compilations of the results of the findings and recommendations into valuations of the firm’s performance. Included are both historical findings (based on the first half of the course results and suggestions for improvement) and future projections (based on the second

half of the course and forecasts for the firm and the application of the first-half recommendations). Each of these are prepared as separate net present value assessments of the value of their assigned firm, one based on its historical performance and the second based on that of expected future results. These are then compared to the firm’s current market capitalization to offer a decision as to whether or not the case course professor’s mythical private equity firm should make an offer for all or a portion of the company and at what price and market capitalization to do so. Table 4 below provides a timeline summary of the scheduled assignments required in the UT finance case course.

The class is largely open-ended as to the manner in which student teams are to assess and make recommendations to improve the financial and operating performance of their assigned case companies. As shown in Table 4 below, while general subject guidance is given to students, specific strategies for analyzing their companies are not. They must research and study their assigned company to determine what issues they must consider and the manner in which they feel

company executives should deal with them. Assigned companies are examined in their actual, concurrent operating environment. Thus, as a part of this process, students must locate and examine the very latest financial and operating data available (i.e., latest quarterly information) for these companies. In addition, they must analyze its historic data in order to assess the nature and quality of past performance in their roles as pre-determinants of its current situation. Finally, they are required to develop a three-year forecast of their assigned firm’s future performance based in part on their recommendations for specific improvements in and control of their financial, operating, and other related activities. The overall semester focus is for each group to develop and support an acquisition recommendation and offer price, if at all, for their assigned firm to be presented to the executive board of a mythical private equity fund, viz., the course professor. A critical, congenital part of this process is their assessment of the impacts of specific externalities that are beyond the control of their firms’ executives, but that affect those businesses in important ways.

**Table 4: Case Study Timeline, Historical-Current Analysis**

<p><b>I. Historical - Current Analysis of Semi-Live Case Company</b></p> <p>a. Groups choose three companies from a predetermined industry list of firms.</p> <p>b. Students visit library for initial instruction in locating information resources for internal and external economic, demographic, etc. analyses.</p> <p>c. Groups create a weighted SWOT analysis of internal and external factors of their assigned firm.</p> <p>d. Groups develop estimates of current performance from reported quarterly performance data.</p> <p>e. Groups carry out ratio analyses and more advanced analyses of their assigned company.</p> <p>f. Each group develops recommendations for the current actions and improved future performance of their assigned company.</p> <p>g. Groups submit Project I report and present findings to class.</p>
<p><b>II. Current - Future Analysis and Valuation of Assigned Semi-Live Case Company</b></p> <p>a. Students visit library for follow up and more advanced instruction in information resources respecting the future performance of their assigned companies.</p> <p>b. Groups perform formal regression analyses and statistical tests on external factors’ impacts on company internal performance parameters</p> <p>c. Groups conduct other forecasting methodologies combined with recommendations to complete forecast of company future performance.</p> <p>d. Groups determine their firm’s historic and current costs of capital and market capitalizations.</p> <p>e. Groups produce net present valuation assessments of their assigned firm’s historical and forecasted future performance.</p> <p>h. Groups submit Project II report and present findings to class. These include recommendation of mythical private equity firm (the professor) to purchase whole, portion, or none of the company.</p>

**DIRECT APPLICATION OF EXTERNAL DATA**

As briefly discussed above, externalities are incorporated into the analysis of each assigned case company in two ways. In the first half of the class students prepare a weighted SWOT analysis that includes an evaluation of the impacts of various relevant external factors on each of these firms. The second half utilizes regression analysis to assess these impacts

more directly and with respect to the internal elements that they affect. This section reviews both of these processes and the role and interaction of the business librarian in accomplishing these assignments.

**WEIGHTED SWOT ANALYSIS**

The weighted SWOT analysis (Strengths, Weaknesses, Opportunities, and Threats) used in the case course has been

modified to include a separate, fifth quadrant so as to deal directly with the unique impacts of external factors on a company's performance and their interactions with the other four quadrants. Accordingly, this fifth quadrant is identified as the "Unique External Impacts" quadrant. Included herein are such non-diversifiable impacts as economic recessions, changes in the demographic characteristics of the population, changes in the political atmosphere, and international developments. Although SWOT traditionalists might well include these as part of their Opportunities or Threats quadrants, the items included in this fifth quadrant are all more global in their widespread impacts upon all firms that are exposed to them. Overall, the SWOT approach provides a means for students to directly inject the impacts of these external influences into the preparation of their case company analyses. In general, SWOT analysis is not covered in most finance classes. However, it is regularly presented and developed in strategy courses in management departments. But as presented therein the content of the discussion is mostly anecdotal and without direct application. As a result, students learn there to introduce only lists of outside factors in their SWOT analyses. The weighted SWOT analysis approach, instead, forces students to formally and quantitatively assess the effects of both internal and external factors on the financial and operating performance of their assigned case companies. The ultimate goal in developing their laboratory evaluations is to begin to formulate recommendations as to how management should have handled these as part of their financial resolutions. Thus, in the case course, students get a chance to apply SWOT analysis more formally to finance case situations and, at the same time, to focus more specifically upon the impact of various externalities in the evaluation of their assigned companies.

The process by which this is accomplished is that teams can select no more than six items per each quadrant of their SWOT analysis. They are then required to weight these in terms of their relative importance within their respective quadrant with the sum totaling 100 percent. They then use a modified Likert Scale to rank the performance of their company respecting each of these components on a continuum from zero (total lack of performance) to five (full performance). The ranks are then multiplied by the weights for each and then summed. This provides opportunities by which to compare the overall weighted totals for each sector and to examine the relative effectiveness of each of their components to those in another of the remaining four quadrants. In this manner, SWOT analysis becomes an important tool in quantitatively assessing a firm's performance from a variety of less traditional and often qualitative perspectives.

### **REGRESSION ANALYSIS**

Regression analysis provides an even stronger, statistical test methodology for evaluating the role of external factors in the internal performance of an assigned case company than does SWOT analysis. Thus, in the second half of the course, students employ this approach to examine the strength of historical relationships between each of the identified external

SWOT quadrant members and the performance outcomes of specified internal elements of their target firm's financial statements. Because income statements reflect the current activities of a firm, their components are much more sensitive to trends and changes in external conditions than are those in a firm's balance sheets. Among the most affected elements of income statements are sales revenue, cost of goods sold, and interest expense. It is in part from these resultant regression equations that forecasts of future firm performance can be generated by student teams.

A generic example of this is shown in equation (1) below. The maximum number of variables allowed, based on sampling theory, is five. Accordingly, this sample equation presents a typical set of variable classes from which the students conduct their regression tests for a sales revenue dependent variable.

Students conduct definitive statistical tests on the quality of specific variable relationships using t-tests, F-tests, adjusted R2 tests, tests for multicollinearity, and Durbin-Watson tests for serial correlation. Those variables and/or equations that fail to meet these statistical tests are eliminated. Thus, the results that are produced have been carefully examined and the quality of impacts linearly specified. These are then used by the students to produce forecasts of the future impacts of these variables on the performance of their firm.

### **EQUATION 1**

$$\begin{aligned} \text{Sales} = & \alpha + \beta_1(\text{Economic Variable}) \\ & + \beta_2(\text{Demographic Variable}) \\ & + \beta_3(\text{International Variable}) \\ & + \beta_4(\text{Merger \& Acquisition Dummy Variable}) \\ & + \beta_5(\text{Other External Variable}) \end{aligned}$$

### **FINANCE-RELATED INFORMATION AND THE INTERACTION WITH THE BUSINESS LIBRARIAN**

There are a number of unique differences and/or requirements involved in library instruction to students enrolled in a finance case course versus to those enrolled in other types of courses and/or disciplines. These require that the business librarian prepare differently in supplying data and information to them. Three fundamental considerations must guide the process. First, they must recognize that such finance students necessarily require much more quantitative data and information to prepare analytical assessments of their assigned case firms than do other students who often primarily seek journal articles and other qualitative information to support their research assignments. Second, these librarians implement generally accepted learning principles and promote the goals of information literacy, which The Association of College and Research Libraries (ACRL) promulgates. Business librarians, furthermore, are also very aware as to how information literacy standards fit into the broader general knowledge standards specified by The Association to Advance Collegiate Schools of Business (AACSB). Finance case students must stretch their analytic skills, one of the standards advanced by both organizations, much more than most students when searching for information. They have far more options to consider when looking for data on independent variables.

Finally, resource availability, including proprietary information to which the library subscribes and free information on the Internet, necessarily shapes the list of resources to which students are introduced. The danger of information overload, a particular problem with the many potentially useful resources available to finance case students, is guarded against. Thus, in working with finance case students the business librarian must devote a substantial effort to dealing with these considerations.

### **DIFFERENCES BETWEEN FINANCE CASE CLASSES AND OTHER USERS OF LIBRARY INFORMATION**

The finance case classes that attend library research sessions require unique forms of information. Most students who arrive for a class at academic libraries seek academic journal literature and, perhaps, specialized texts. For example, both freshman English classes and graduate research classes require such materials. As might be expected, the graduate requirements are at a higher and more rigorous level. On the other hand, business students, most of whom are management and marketing majors, primarily use the library to find trade journals, industry reports, and other forms of information that are uniquely relevant to their needs. Finance students in such courses as financial institutions, international finance, and small business finance generally seek company financial statements and descriptive materials dealing with theoretical, operational, and/or regulatory issues to elaborate upon concepts learned in their classes.

The case course finance students' needs stretch much farther. As with management and marketing students, they require trade articles and industry reports to explore their assigned companies' environments. Additionally, they need company financial statements, as is the case with accounting and other finance students. However, they take another step and mine additional resources in order to carry out the deeper financial analyses required in a case course. Finance case students require specialized raw data for modeling and analysis. This often extends their searches for information to government and trade association data, preferably in a time series format. Only the finance case study students regularly require both the qualitative data found in trade articles and industry reports and the quantitative information found in financial statements, library databases, and government datasets. This is especially important in a semi-live case where current data must be unveiled.

### **INFLUENCE OF PEDAGOGY AND STANDARDS FOR INSTRUCTION**

On the surface, the librarian's goals may appear simple: to introduce students to library resources and to support faculty teaching. However, general teaching methodologies and concepts of information literacy and life-long learning, as postulated by the ACRL, guide the librarian's approach to teaching students. Librarians differentiate instruction by addressing multiple learning styles, including visual, auditory, and kinesthetic. Visual learners respond well to text and pictures, which are seen in the resource guide (See Exhibit I) and when resources are demonstrated in the library lecture

session. Screenshots of primary resources are included in the handout to support the text and to aid visual learners. Auditory listeners are assisted not only by the lecture, but by the librarian and the case finance professor asking questions and encouraging small groups to work together. Many business school assignments, including those involving finance case studies, lend themselves to an auditory learning style. Kinesthetic learners learn by doing. For these types of learners providing computers and time for students to conduct searches on their assigned companies during the library session increases opportunities for learning and retention of information.

The stages of information literacy start with recognition of an information need, proceed to finding information to fulfill it, then to analyzing the usefulness and authority of the information itself, and conclude with the use of the information to satisfy that need.<sup>3</sup> Table 5 below compares the AACSB's recommended general knowledge and skill learning experiences (2010, pg 70) with that of the ACRL's information literacy standards for higher education (2000, pg 2-3). Both lists therein are as presented in each of the organizations' policy guides. Categories were matched as closely as possible for comparison purposes. Though the ACRL's information literacy standards are narrower than the AACSB's general knowledge standards, these concepts complement each other. Thus, the AACSB's requirement of analytic skills could be seen to include the ACRL's desire for students to determine the extent of information needed and the evaluation of the information and its sources. However, the analytic skills of finance case students are more extensively tested than are other students when conducting library research. Finance case students have far more information resources to consider and must weigh the appropriateness of the available data against the case challenges which they must face. Utilizing library databases could be considered as meeting the AACSB's information technology tool standard that students need to master. As well, incorporating selected information into one's knowledge base, an ARCL standard, can be seen as meeting the AACSB's reflective thinking skill requirement.

Communication abilities, or using information to accomplish a specific purpose, can certainly include preparing a written report and delivering an oral presentation. Ethical understanding is demonstrated by citing sources used in their reports. There are, however, two AACSB standards, multicultural and diversity understanding and the dynamics of the global economy, that do not relate directly to the ACRL's information literacy standards. With these complementary goals, it is crucial that the case teacher and the librarian together guide students to meet both sets of standards.

As the AACSB standards focus on students being prepared for future positions in business, librarians help them to develop skills for life. While in school, library resources are a tool for completing a classroom assignment, but they also represent real world information and sources that students can access forever. As such, library instruction moves students beyond the limited world of the textbook to offer them a special opportunity to develop research skills that are highly

valued both by the business world and by the dynamic society in which they will live for the rest of their lives. To examine the internal operations of a company and the external factors that act upon it, students use many of the same information resources and analytic tools that they will use during their careers. In an ideal situation, students will develop an understanding of information needs, the organization of information, and their varying reliability. This will enhance their ability to apply research skills outside of the structured environment of the classroom, where textbooks and classroom professors are far less, if at all, available to them.

**RESOURCE AVAILABILITY**

The multitude of available resources, even without expecting students to purchase information, can be overwhelming. It should be noted that low funding and steadily increasing costs have restricted collection development at many universities across the nation. Nevertheless, libraries continue to acquire a targeted amount of periodical literature, company and industry information, and data. Library presentations often feature proprietary information which is purchased with class assignments in mind and goes far beyond what students are likely to find in a Google or other online search. Even when students do

discover a good source in Google, its interface can be difficult and confusing to use without some initial instruction. The content of specialized databases is often hidden behind complex search pages with no clear indication of the kind of information that might be available. Moreover, in many cases the Google recommended site is only accessible at a high cost because the library does not subscribe to it. Unfortunately, Internet searches often lead students to sites that lack authority. Some resources, especially historical data, are only available in print. However, electronic resources are rapidly replacing print. As a result, electronic resources have become the focus of instruction. They have done so, as well, because of their convenience, ease of use, and acceptability to students.

Of particular note, the U.S. government publishes large amounts of information, especially as datasets and databases. For example, various government agencies compile data on such things as population and demographic trends and changes, consumer spending habits, measures of business and economic performance, and international development and growth. In addition, they publish less well known data dealing with various aspects of the weather and climatic change. Once students are made aware of the free and ready accessibility of government data and of its broad scope, it will benefit them both now and after graduation. The free Internet also offers

**Table 5. A Comparison Of ACRL Information Literacy Standards With AACSB General Knowledge Standards**

<b>ACRL Information Literacy Standards</b>	<b>AACSB General Knowledge Standards</b>
Determine the extent of information needed	Analytic skills
Access the needed information effectively and efficiently	Use of information technology
Evaluate information and its sources critically	Analytic skills
Incorporate selected information into one’s knowledge base	Reflective thinking skills
Use information effectively to accomplish a specific purpose	Communication abilities
Understand the economic, legal, and social issues surrounding the use of information, and access and use information ethically and legally	Ethical understanding and reasoning abilities
---	Multicultural and diversity understanding
---	Dynamics of the global economy

access to state government research, limited trade association data, and in some cases provides a peek at the expensive information offered by for-pay services. Thus, with some persistence, students are able to find information that matches or substitutes for the data they seek. Table 6 highlights some of the resources used by most finance case students. To assist them in this process, each student attending the special library class is given a resource guide that describes a variety of suggested information sources (see Exhibit I online at [www.jfcr.org/jitf.html](http://www.jfcr.org/jitf.html)). One of the most difficult challenges of information gathering for students enrolled in the semi-live case course is information overload. With every team researching a

different situation, an attempt to present a sufficient variety of resources of potential value to each case can result in an overwhelming number of resources confronting them. Thus, the business librarian must be vigilant in researching the sources needed by the students each semester. The librarian must work closely with the case professor to determine which sources are relevant and to carefully include new ones as they are acquired by the library. As well, they must pare down those that are no longer available. Thus, continued evaluation and coordination is necessary in order to match students’ core needs with their time constrained capacities to absorb and utilize these sources.

Table 6. Highlighted Resources

Resource	Focus
Mergent Online	Provides business information, including financial reports
Thomson One Banker	Offers access to quotes, earnings
StatUSA (from the U.S. Department of Commerce)	Contains economic, business, and
U.S. Census Bureau Surveys	Brings together U.S. demographic and economic data, including population
Consumer Expenditure Survey (from the BLS)	Shows buying habits of Americans
Econstats, Economagic	Provides economic statistics from U.S. government agencies and other sites.
Business Statistics of the United States	Offers comprehensive historical government economic data.
Federal Reserve Bulletin, and various publications from the regional FR banks	Provides monetary information and data.

The problem of information overload exists in the context of both libraries (Reichardt and Cox, 2006) and the business world (Eppler and Mengis, 2004). Bawden and Robinson (2004) offer solutions for taking control of the information environment. Some of their solutions include time management, critical thinking, information presentation, information organization, use of filters, and satisficing (rationally deciding which pieces of information will be good enough to complete the assigned project). Huett and Sims (1997) offer practical advice for library sessions for business students, including splitting library sessions and short exercises to increase retention of information. Librarians try to present quality information sources in an organized format and to demonstrate the sources' internal filters to limit information overload. By suggesting a limited number of potentially valuable options and demonstrating their functionality, librarians attempt to reduce the time students need for research and to promote successful acquisition of information.

## CONCLUSION

In this paper we have attempted to show how information that is largely exogenous to a company, but that impacts its performance, can be effectively introduced to students assigned in a case course to incorporate it. We have further indicated how important this material is to the full and proper financial and operating analysis of a company's management going through the everyday process of successfully guiding its activities and performance. The integration of externalities into the case learning process is especially relevant where semi-live cases are utilized because of the propinquity and immediacy of their impact. The successful accomplishment of this goal necessarily requires the close coordination of the finance case professor and the business librarian. They are especially challenged because students enrolled in finance case courses must deal with the unique task of applying

textbook learning to real, current situations where outcomes are unknown and there are no "right answers"; something that they will probably not have faced before in an earlier class. The finance faculty member and the business librarian face the challenge of guiding students through making that connection and ultimately dealing with this relationship throughout their professional futures.

In semi-live cases there are no historically prepared authored outcomes to look back upon in guiding the students' research, analyses, and conclusions. While these can be founded to some extent upon past trends and results from the assigned company and others, each current situation is based on new perspectives and somewhat different environments. This is what graduating students will face throughout their professional lives and, therefore, what necessarily challenges those teaching this type of case course. Therefore, a good rule for both the case professor and the business librarian to follow in this educational process is as follows: *students that have enrolled in the case course up to this time will have spent their first 21 - 25 years in an academic classroom setting. They will spend the next 50 years in the real world setting of business.* Accordingly, it is important that these two educators collaborate closely with this tenet in mind.

## NOTES

1. For incisive discussions of the use of "live cases" versus that of historical ones, see Simpkins (2001) and Johnson & Helm (2008).
2. While there is no specific discussion of the concept of "traditional cases" in the literature, a number of authors discuss them in terms of "teaching applications" and "structuring". (See, for example, Trahan, 1993; Booth, et.al., 2000; Nunnally and Evans, 2001; and Klebba and

Hamilton, 2007). Nunnally and Evans go even further and define “‘Harvard’ type cases as being quite open-ended and offer[ing] students the opportunity to analyze a financial decision situation in the context of several pertinent factors ...”.

3. Authority is a term regularly used by librarians to refer to the reputation and/or respect of an author or publisher. A source that has high authority is more highly trusted than is one with low authority. Librarians spend a large portion of their time training students to locate and evaluate the authority of information sources. In this way the quality of the research is promoted.

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## **Managing the Free-Rider Effect in a Top-Down Security Analysis Course**

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*As an example of managing the free-rider problem, we report our experiences related to integrating group work associated with the top-down approach to fundamental analysis. Using group projects and sharing information with other groups and students is an effective method to reduce the work load for each individual student, while maintaining the scope of the top-down approach. By changing the composition of the groups at each level of the top-down approach, we are able to reduce the free-rider effect inherent in group projects. Overall, our methodology accomplishes the following three objectives: (1) reducing student workload, (2) sharing information, information sources, and analysis, and (3) reducing the free-rider problem. We find that 88% of the students agreed or strongly agreed that the top-down approach “had more educational value as a group project than as an individual project.” We also find that 82% of the students agreed or strongly agreed that changing the group composition helped reduce the free-rider problem.*