Developments in Business Simulation and Experiential Learning, Volume 26, 1999 INTERACTIVE TOOLS USED IN APPLYING FINANCIAL CONCEPTS

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ABSTRACT

This paper addresses the need and use of interactive tools in teaching financial concepts. These tools were developed by the author for use in his classes. He is not a financial expert, but a practitioner who understands the need for such tools as an aid to student understanding and application. He has developed these tools as a result of his own experience as an engineer in a business curriculum

NEED FOR INTERACTIVE TOOLS

Not all students taking a class in financial management have an extensive background in accounting. Engineers and business students focusing on non-financial areas of business don't always appreciate the need for these courses. They require application of this material in order to be motivated to learn it. Tools that focus on enhancing decisionmaking promote transference as a result of learning these concepts. Understanding the relationships between variables stimulates learning. Skills-based, hands-on exercises provide these students with dynamic experiential opportunities.

INTERACTIVE TOOLS

This paper presents two tools that have been developed by the author as aids to understanding financial concepts. They are presented below.

Integrated Financial Statement Tool

This computer-aided exercise tool provides a vehicle for demonstrating the relationships between several entries on a set of interrelated financial statements. The financial statements

include an income statement, a consolidated balance sheet and two forms of cash flow statements. These statements are displayed on a single Excel worksheet that is programmed using Visual Basic macros. Figure 1 shows a picture of this worksheet.

The student may use this tool in two different applications. In the first application the computer highlights the items on the financial reports that relate to a specific process. Process selections include sales transactions. loan transactions and purchase transactions. Each process is color coded to highlight important issues that are addressed in exercises that accompany this tool. After selecting a transaction type the student focuses on specific changes in the statements related to that type of process. For example, when a sales transaction takes place, the question of which items are affected and how they are affected can be explored. The purpose of this feature is to help the student observe the inter-relationships between the items on the reports.

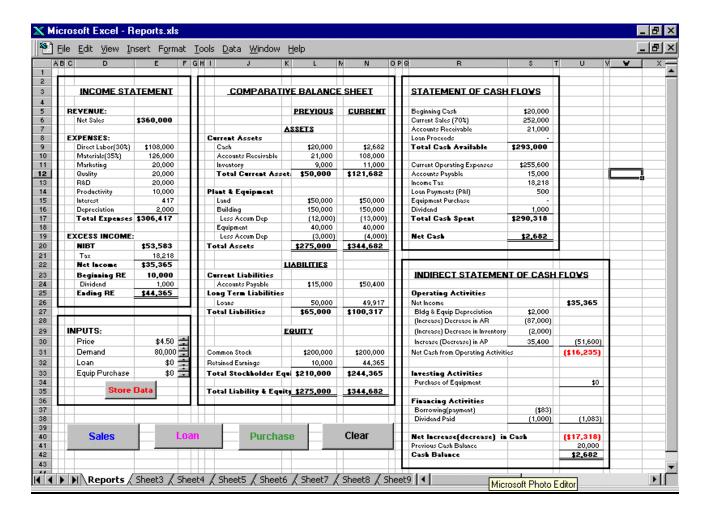
In the second application of this tool the student can explore the effect of certain decision variables on various outcomes. The student enters different values for the decision variables and observes the corresponding changes on the financial statements. Decision variable choices include changing price and/or demand. Outcomes provided include revenue, cash and retained earnings. The purpose of this feature is to help the student observe the effect of changes in decision variables relative to important managerial outcomes

Exercises have been developed that require the student to explore various concepts. For example, one exercise has the student compare

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changes in retained earnings and cash as a function of receivables. Students then develop graphs to display the relationships and discuss their observations.

FIGURE 1 INTEGRATED FINANCIAL STATEMENTS



Time-Value-of-Money Tool

This tool models the time-value-of-money equations using an integrated set of windows to display the information. The student selects from a variety of techniques, i.e. lump sum, uniform series, gradient series; and then is prompted for the necessary inputs. A unique feature of this tool is the drawing of the cash flow diagram. This diagram is a visual depiction of all the input/output parameters and provides an excellent summary of the time-value-of-money process. Students can

change any variable and observe the response in a "What If?" kind of environment. Students gain valuable insight into the dynamics of money changing value over time and begin to learn the effect of interest and time.

Exercises have been developed that allow the students to compare changes in decision variables to a variety of outcomes. These hands-on exercises provide valuable experiential learning opportunities.