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BANKSIM: THE BANK MANAGEMENT SIMULATION

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ABSTRACT

BankSim is an innovative educational program which combines the benefits of a bank management course with a sophisticated computer model. It fuses abstract theory and realistic experience to give the banker participant a unique learning opportunity. The computer simulation emphasizes effective management decision-making with each simulated bank deciding what kind of a bank it wants to be, what goals make up its operational plan and what strategies are necessary to attain these goals. This paper develops a brief description of the BankSim seminar and the administration necessary to effectively operate the program. In addition, the paper includes a section examining participant responses to the program.

BankSim, the Bank Management Simulation, is an educational program developed by the American Bankers Association and the Federal Deposit Insurance Corporation. It is a seminar based primarily on a highly sophisticated computer banking model. It creates a management simulation which combines bank management theory with practical management decision-making to give the participant a unique learning opportunity. BankSim has been limited in its initial years to the Graduate Schools of Banking and local American Institute of Banking Chapters. It is now available by application to colleges and universities. The BankSim model is a particularly interesting example of computer simulation and experiential learning because of its complexity and the degree to which the supportive materials have been developed. The BankSim package includes information on seminar administration, participant selection, and the use of instructors and guest lectures.

BANKSIM OBJECTIVES

The Bank Management Simulation was created in response to a need for management training in a realistic and complete sense for practicing bank personnel. The broad objectives of the simulation are:

1. To reinforce knowledge and skills learned at school and on-the-job,
2. To expose participants to current concepts of bank management and technical theory and as a result, to motivate them to acquire additional knowledge and skills,
3. To provide an overview of commercial banking and its management process.

BankSim is unique because it provides those in middle management and above an opportunity to improve their decision-making skills as well as test their ability to communicate management policy in a realistic group environment.

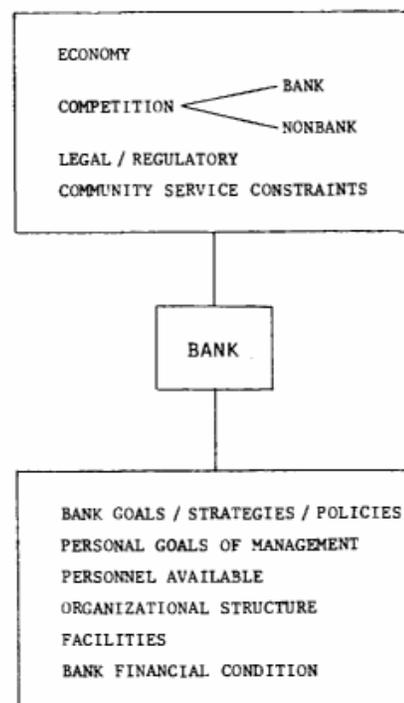
Participants in the bank management seminar are placed on management teams to operate \$500 million commercial banks in a competitive economy of three to five banks. The team

must deal with the same major banking problems faced regularly by senior officers in banks across the country. The bank decisions involve the following areas of concern:

1. Aggressive deposit and loan competition from other banks and nonbank financial institutions in the community,
2. The analysis of the position of the bank, the establishment of objectives and the determination of policies most likely to achieve the objectives,
3. Management must decide how best to use the people services and resources of the organization,
4. Management and direction of the bank investment portfolio, loan portfolio, deposit generation strategy, capital position, cash flow and profitability,
5. The bank is subject to review by the regulatory authorities and will be held accountable for violation of their rules and regulations.

The participants are involved in a realistic simulation of an actual bank's environment. The management decisions made by the teams create realistic competition and extensive output comparable to actual bank operating results. Figure 1

FIGURE 1
MANAGEMENT DECISION-MAKING ENVIRONMENT



demonstrates the decision making environment experienced by the management teams.

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The bank is clearly an operating force caught between the two environments and the bank officers must continually reassess their position in light of these constraints as they make their decisions for each quarterly operating period. [1]

BankSim clearly emphasizes effective management decision-making in operating and interpersonal areas. Each simulated bank must decide

1. What kind of a bank it wants to be;
2. What goals make up its operational plan;
3. What strategies are necessary to attain these goals;
4. What determines the bank's potential when it is faced with a shifting economy;
5. What sources of liquidity should be pursued, i.e., Fed Funds, CD's, time deposits;
6. What effect the cost of funds will have on its operating expenses;
7. What uses of funds are most profitable.

Equally significant, the first step of the bank management simulation is the effective organization of the resources. Team members must spend the first two to three hours of the program in assessing their strengths and weaknesses, developing the initial goals and strategies of their bank, and clearly assigning duties and responsibilities. The interaction of management team members is a crucial element to the successful operation of BankSim. Interactions among team members have been assessed participants as a critical factor.

Decision Sequence

A summary of tasks performed by the BankSim management team is best provided in the following chronological order:

1. Analyze the present position of the bank that the participant is about to take over.
2. Organize the team by breaking management tasks into individual areas.
3. Select the chief executive officer and assign team members to oversee each management area.
4. Select objectives for the bank.
5. Specify strategies which will achieve the objectives.
6. Make operating decisions each quarter based on the strategies and the outcome of the prior quarter's results.
7. Prepare statements of the bank's policy.
8. Prepare a report summarizing the results of the team efforts including a comparison between team goals and achievements.

BankSim is a realistic bank simulation based on a composite of actual banks around the country. The BankSim experience is unique because the participants are placed in a new environment in which they must assess, understand, and respond if they are to be successful. The management team that successfully evaluates this new environment carefully and demonstrates flexibility will have the most possibility of reaching its goals. There is no winner in BankSim. All participating teams can be judged successful if they are successful in achieving their goals. The marketing structure of the economy and the bank environment are such that multiple goals are possible and each bank is capable of meeting its own goals and the demands of its stockholders.

Decision Inputs

Inputs for the BankSim program are complex and involve four major areas. Decisions are made in the areas of loans, deposits, securities and administrative policy. Each of these

decisions concerns itself with services offered, pricing, staffing requirements, sources and uses of funds, investments, loan strategies and administrative policy areas in the area of staffing and supervision, and facilities management. In a second version of BankSim designed exclusively for use at the Graduate Schools of Banking, additional decision input involves analyzing correspondent banking relationships, loan commitments and a more in-depth planning and objective setting program.

Computer Requirements

The BankSim computer program is compatible with IBM 360/370 equipment. The program requires 150 K of core and one tape unit. Each community's quarterly run uses approximately 6 minutes of CPU time, reads approximately 200 cards and prints approximately 7500 lines. The BankSim program is a FORTRAN IV program delivered to users in load module form. BankSim operating procedures are provided in detail for computer operators. Experience with the BankSim program has shown that a sophisticated computer operator is essential for smooth operating of the seminar.

ADMINISTRATION

Administration of the Bank Management Simulation is unique in that the seminar runs a concentrated format involving several administrative roles. Clarification of these roles is easily made by comparing it to the model of administrator roles developed by Schreier [2]. There is a basic role of the ADMINISTRATOR, defined by the following:

The ADMINISTRATOR is concerned with the "Clerical" operations of the simulation or experiential exercise. He or she is active describing the nature of the game, the format of the input data, the times at which data must be submitted and when the result will be returned to the teams. The participants of the experience view the ADMINISTRATOR primarily as the person who makes the computer work. The ADMINISTRATOR is the person "to whom we give our data." He or she is not concerned with the learning that is taking place as much as the fact that the team number is entered on every sheet. In noncomputer based games, the ADMINISTRATOR comes to class prepared with stacks of paper containing background information, scoring sheets, role play descriptions, and name tags. The primary concern expressed is collecting all materials after the game is over. The ADMINISTRATOR is knowledgeable about how the exercise works, knows all the rules, and enforces them throughout play. [3]

In addition, a role is defined as that of an Instructor. This role is similar to the role defined by Schreier as the CONSULTANT.

The CONSULTANT is knowledgeable about various phases of the game or exercise, seems to know all about the market, the competition, and the proper strategy for success. The CONSULTANT either gives the information out to assure that certain things will happen in the game or charges the teams for advice to give the game more realism. The CONSULTANT performs the functions of the actual management consultant, assisting the teams in the performance of their

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roles and attempting to guide them without making their decisions for them. While the CONSULTANT gives advice, and often charges for it, the information is not given in an evaluative sense. In very few cases is there a cost other than a financial price. [4]

Each of these roles is clearly defined in the BankSim administrative materials and it would be difficult, if not impossible, for one person to carry out the roles. In addition, the administrative materials call for the optional use of bank examiners in an evaluator capacity to enforce the legislative structure of the banking community. The BankSim program for groups as small as is participants is difficult to administer without at least three people assuming the roles of the administrator and instructor. For larger classes, this number is increased, particularly in the instructional area with two instructors necessary for each community of five banks.

The BankSim program is typically operated in a management training setting which, unlike the typical college course framework, does not provide extensive periods of non-class time for computer processing. Even in those scheduling situations when the program is run over a four or five week period, some of the decision turnarounds need to be extremely short. This necessitates an extremely important relationship between the supporting computing center and the scheduled format of the decisions and lectures.

Lectures

A critical part of the BankSim program is the inclusion of instructional material in the form of lectures. In many cases, this material is essential for the participation in BankSim as the teams must be provided with certain information concerning the setting of goals and strategies, loan policy and asset and liability management. In addition, lectures are used to fill the time available while waiting for computer processing. In the BankSim setting, lectures are typically provided by local bank officers and, in many cases, by individuals who have participated in previous BankSim programs.

In the early sections of the Bank Management Simulation, the lectures are strongly course-related. In later sessions, during the closing quarters, for example, topics related to more general banking issues like the economy in general or the future of banking or the pros and cons of a particular banking service are usually explored. In addition, these sessions can be used to foster the team spirit which is highly encouraged in the BankSim program. In one particular application of the BankSim package, one of these sessions was used to do an interpersonal communication and motivation exercise, assessing each of the participants' behavioral style. This exercise, originally intended to be a time-filling but interesting and somewhat relevant experience, turned out to be one which was rated as extremely relevant and highly effective for the interpersonal relationships of the team members. The members found that some aid to understanding the personal goals and motivation of their fellow participants contributed significantly to their ability to effectively make decisions during the simulation.

Stockholder Meeting

The Bank Management Simulation concludes with a stockholder meeting in which the participants of all the bank teams, the administration staff, the instructors and the guest lecturers all act as stockholders of each of the competing banks. Banks are given additional information at the end of

each simulated year and are presented with a series of guidelines for policy presentation and analysis of their results. During the last segment of the simulation and particularly during that time in which the teams await the results of the eighth decision period or the end of the second year, participants are expected to prepare for the stockholder meeting. When the final output is available some additional time is made for the team to finish and polish their presentations which usually begin in approximately an hour.

The stockholder meeting format simulates that part of a bank's reporting process in which the bank management team is responsible to the owners of the bank for its performance. In a realistic experiential approach, each bank is allotted a time to present an overview of its goals, strategies and operating results and must then respond to questions from the stockholders to justify its success or lack of success in developing the bank that they started to manage two simulated years ago. Because of the competitive nature of the simulation, the active participation of the owners of the competing banks as stockholders is usually quite rigorous and penetrating. The stockholder meeting functions similarly to the policy level programming at the college level. In individual sessions, certain functional areas are focused on. In the stockholder meeting, the teams are expected to be able to summarize and integrate their results into a uniformed presentation. It serves as a unique capstone to the entire learning program.

EVALUATION

Evaluation of the BankSim program has been conducted in two seminars by the author. This evaluation was based on the reactions of the participants to the seminar, its administration, and its relationship to the individual goals of the participants. The evaluation of the Bank Management Simulation by the participants has been extremely favorable in these applications. The overall ranking of the experience in BankSim program included comments like "BankSim is truly a powerful learning tool" and "Tremendous experience on how an entire bank operates". Individual participants attended BankSim in an attempt to get an overall feeling as to how pieces of a bank interact and to gain additional, practical skills and objective management insight. Their purposes were achieved, in their opinion, with strong comments in terms of their satisfaction with the course and their confidence in the decision-making that resulted. One participant responded that his purpose of understanding the interrelationships of banking decisions was achieved very well and that "decision-making was difficult due to the many interactions that could result from any one specific decision".

Another significant area in the BankSim evaluation was how the participants felt that BankSim would support them in their job. The common reaction to this area of evaluation was that BankSim would help them understand the decisions in the areas that they are not involved. In addition, it was felt that BankSim was excellent preparation for increased management responsibility in the future. It also provided some participants with a clearer idea of their career alternatives and the implications of their career decisions. Another area of evaluation was the participants' reactions to the interaction among team members as an important ingredient in the simulation. The following comments emphasize the importance of this element in this computer based simulation:

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“The interaction among the members was important for consistent and favorable results. The interaction in our group was excellent and I feel it made BankSim just that much more educational.”

“Probably the most valuable part of the experience. Computer simulation was merely the vehicle or catalyst.”

“Re-emphasis of the idea that group decision-making can and does work when the right chemistry between individuals exists. A well organized group will perform swiftly and efficiently in regard to decision-making.

“I found myself analyzing my associates on our bank team, picking out their strong points and their weak points, trying to understand their personalities and in fact, relating this to what I might look for in my own bank and its people.”

Overall, BankSim was rated by its participants as a program of extreme interest and value both to the participants personally and to their banks. The BankSim program achieved extremely high evaluations in all areas.

CRITIQUE

BankSim, the Bank Management Simulation is an extremely complex, effective management teaching simulation. Its complexity is in some ways its biggest weakness. In comparison to other computer based simulations with which the author is familiar, BankSim is clearly one of the most sophisticated computer models. One of the results of this sophistication is that the participants, when presented with the initial financial package and subsequent output from quarterly decisions, are overwhelmed by the amount of data provided by the computer model. Similar to the amount of data available in the real world, one of BankSim's weaknesses and one of its major strengths is the data overload which the participants feel in the beginning and throughout the seminar. At no point do participants feel that they are comfortable with the amount of the data. There are so many relationships presented in the output that it would be possible for the teams to analyze the results for periods of time ranging from two hours to two days. The decision-making framework is an excellent application of Parkinson's law. It does expand to fill up the time available for its completion. If the teams are given 90 minutes to prepare a decision, they usually make the deadline. If they are given two hours and thirty minutes they also use all of that time, many requesting in both situations for an additional five minutes. In both applications of the Bank Management Simulation discussed above, three of the decisions occurred with a time break of one week. Several teams were meeting without encouragement over the weekend to discuss and analyze their outputs in more detail.

A second weakness of the BankSim program, and again something which partially testifies to its strength, is the constantly changing nature of the program. BankSim originators and specialists have been working since the inception of the program to change calculations and improve reporting information and correct several bugs which have

turned up in the program. The complexity of the simulation and the massive amount of calculations that are performed create the necessity for extremely competent instructional staff. This requires that the roles of the instructors be taken by knowledgeable bankers who have participated in the BankSim program. It is not a program which could be conducted by an instructional staff that did not have practical banking experience. The role of the administrator, however, is one which requires insight into the administrative process and a good understanding of the educational process in which BankSim is conducted. The importance of the simulation environment and the interaction of participants requires extreme sensitivity to the interpersonal aspects of the program.

A third and probably the most significant weakness of the BankSim program is the current lack of information on the affects of BankSim on the career paths of the participants. There have been published re-ports on the reaction of participants to the BankSim program, particularly the advanced seminar BankSim II which is used extensively in the Graduate School of Banking. One could hypothesize that because the participants are in graduate school, their advancement in the bank hierarchy is supported. Consequently, it is difficult to assess the impact of the BankSim program itself. In future years, it will be important to assess the value of the BankSim program to its participants over several years.

CONCLUSION

The Bank Management Simulation is an excellent example of a comprehensive computer-based simulation clearly integrated with the behavioral aspects of many experiential exercises. The development of extensive support materials in the form of administrative manuals demonstrates the sophistication that is possible in organizational applications of simulation materials which do not face some of the same constraints as simulations in the educational environment. BankSim is truly an outstanding educational process and many of its weaknesses are also strengths of the program and building blocks for future development and improvements.

REFERENCES

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