

BankExec[®]

Participant Decision Manual



American
Bankers
Association[®]



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Your Bank and Its Environment

Introduction

The BankExec® simulation provides an understanding of financial management challenges in banks. Except for senior management, few individuals in a bank have the opportunity to be exposed to the range of operating decisions presented in this exercise.

The simulation allows you to understand the complexities of managing a bank in a dynamic economy and of the need for an integrated, consistent set of policies to maintain the growth, profitability, and safety of the organization.

This manual is designed to help you get started and provides a general description of the bank, the economic situation, and the technical material needed to participate in the simulation.

As a participant, you will act as a member of a management team responsible for the operation of a medium-sized bank. You will develop and implement policies in the areas of:

- Security markets: decisions to purchase or sell securities
- Loan decisions
- Deposit and business development (marketing) decisions
- Treasury: decisions to purchase funds, raise capital and other related items

You will face competition from other financial institutions operating in the same community and will be subject to changes in the economic environment.

Although the economic setting and competitive reactions are realistic representations, do not expect the situation here to correspond closely to the current local or U.S. Economy. Just as bankers from Cleveland can find banking to be different in Seattle, banking in this setting will be different from your own experience.

Successful management in this environment requires an understanding of the business of banking and its fundamental economics.

Your Bank

Your team is responsible for managing one bank in a community that includes up to as many as eight banks. The number of active competitors, managed by teams like yours, will be provided to you at the beginning of the exercise.

These banks—all identical at the start—compete directly with each other. Other banks and financial institutions also operate in this environment and this additional competition is reflected in the information provided to you about general national and local economic conditions. There may be other communities operating as part of your program; however, the banks in these communities do not compete for your customers and their actions have no impact on your markets for banking services.

In addition to the economic and competitive environment, your bank must operate within the guidelines determined by the Office of Bank Supervision, the bank's regulatory authority.

DECISION TIMELINES

- The simulation operates on the basis of quarterly decisions and reports (*Figure 1*)
- You will see reports at the end of each calendar quarter that describe the financial operations of your bank and conditions in the economy
- Based on this information, and any other provided by your instructor, you will make a set of decisions that will be in effect for one quarter of calendar time
- Decisions are submitted online and take effect on the first day of the next quarter
(**For example:** If your most recent quarter ended March 31, 2029, you will make decisions that go into effect April 1, 2029)
- Quarter 1 of year 29 begins January 1, 2029, and ends March 31, 2029
- Quarter 2 begins on April 1, 2029, and so on
- Information in the reports is often identified by quarter and year
(**For example:** 2/29 refers to quarter 2 of year 29)

Important: In most cases, if you do not change a policy or decision, it will remain in effect for the next quarter. Inaction on your part is a no change decision. Exceptions are indicated in the section of this manual describing the individual decisions available to you.

Figure 1. BankExec Report Structure

B00 series	General financial reports—e.g., B01 is the bank balance sheet
B10 series	Investment securities reports—e.g., B12 is the securities portfolio
B20 series	Loan reports—e.g., B24 shows loan decisions
B40 series	Deposits reports—e.g., B44 shows deposits decisions
B60 series	Purchased funds and capital reports—e.g., B64 shows decisions in this area
C90 series	Community activity reports are the same for all banks in the community—e.g., C91 shows balance sheets for all banks in the community at end of the current quarter

Figure 1: BankExec Report Structure. Information from forms and worksheets are included in the bank reports. [Appendix A](#) provides descriptions of the data contained in each report.

The reports are organized according to topic in a numerical series with the general topic being identified by the first digit:

- B identifies internal reports available to the bank's management (and instructors) only
- C identifies publicly available reports distributed to everyone in the community

The Economy

The community and region that is the normal market area of the bank has a well-diversified economy. Major industries/employers include:

- An automobile assembly plant (joint venture with a foreign manufacturer)
- Agricultural products processors
- Technology companies
- A variety of commercial and professional service firms

In addition, the community is headquarters for several national corporations; there is a substantial Treasury sector and a major national university with strong professional colleges (law, medicine, and business administration).

Recent trends in the local and national economy are summarized in the reports you receive at the beginning of your program. You will receive additional information about economic conditions in the form of quarterly reports (C91-C96).

Several bank reports (B12, B24, B44, and B64) also contain information about the prevailing interest rates for securities, loans, deposits, and purchased funds in the economy. These rates will hold throughout the upcoming quarter. In other words, you have excellent information on where market interest rates will be until the next time a decision must be made.

You will have less accurate information about where rates are heading for future quarters, but you may plot rates and observe trends to develop your own information. See Report C95 for charts of economic trends.

CURRENT ECONOMIC CONDITIONS

Regardless of national trends, the local economy is doing very well, fueled by increasing construction activity, and should continue to do so for several months. Loan demand at local banks is expected to remain high and deposit growth is expected to pick up somewhat.

Additional considerations include:

- The national economy is rebounding strongly from a recession that began early last year. The strength of the recovery is raising concerns that a significant increase in prices might be in store. Consequently, the central bank has tightened credit and pushed interest rates up sharply
- The local economy was not as affected by the recession compared to other areas of the country but is also participating in the upswing
- Local unemployment has fallen to a three-year low (seasonally adjusted) and area retailers reported record sales during the December holidays
- Loan demand is very good, but deposits have not kept pace

- For the first part of the year the outlook for the nation is for strong growth. There is a possibility of higher inflation rates in the opinion of several economic forecasters. This could produce a response by the central bank toward tighter money and higher interest rates. However, many members of the legislature and some economists view the current recovery as somewhat fragile and highly dependent on improving trade balances
- The dollar has been appreciating for the past six months due to the real growth in the economy. This has created some concern about the potential for deterioration in the trade balance, particularly a drop in exports, which could snuff out the recovery

The Community

The general economic structure of the community is reflected in the loan and deposit structure of your bank, which is representative of the community. However, you should be alert for failures by the previous management in servicing the needs of the community, as decisions made by previous management may not be desirable to maintain.

Many of your actions will be in response to the competitive decisions of the other banks in your community. Many of their actions will be in response to what you do.

For example, you may try to capture a larger share of a particular loan market by lowering the interest rate and increasing business development. However, this strategy may not succeed if other banks drop their rates and ease up on credit policies.

Information about community bank rates and other activities is provided in Report C93. When you compete directly with several banks that are financially your peers, analyzing competitive results and policies becomes very important to the success of your bank.

Actions of banks in the community may drive the community economy in directions that are not otherwise indicated by the general economic situation.

For example, loan volume in the economy may generally be poor, but aggressive reductions in interest rates below the national market by the banks in the community will attract more loans. Similarly, if community banks try to price their loans well above the prevailing rates, the community could experience a decrease in loan volume even though the economy was very strong.

You will manage a full-service commercial bank; however, the bank does not serve all the markets nor provide all the products and services you may be accustomed to seeing. This manual provides details on all products and services, but below is an overview:

Securities

There are six types of securities available for purchase by your bank:

1. Treasury bills
2. Treasury bonds
3. Agency bonds
4. Tax-exempt bonds
5. Variable rate swap
6. Fixed rate swap

You must decide on the amounts of these securities to purchase or sell at the beginning of each quarter. The bank may engage in interest rate swaps, shown as part of the securities portfolio. Swaps do not involve any immediate cash outlay and are not shown on the balance sheet. They may be used to manage the interest rate risk exposure of the bank.

If the bank has excess funds available during the quarter, they will be sold as federal funds. The bank's cash and reserve position will be maintained at the legally required amount plus cash required for operations; no surplus or deficit in required reserves or non-interest-earning cash positions can occur. No action by management is needed for this to happen.

Loans

There are nine potential loan products that may be offered by the bank that include a minimum of five standard products and four that may or may not be available (up to a maximum of seven).

- For business customers, you provide credit lines and term loans
- For individuals, you provide installment loans
- In addition, you provide commercial real estate loans and fixed-rate, 1–4 family, residential mortgages

While this manual describes all possible types of loans the bank might make, the precise package of loan products available from your bank will be explained by your instructor.

Deposits

The bank provides deposits services to two markets—businesses and individuals.

- Checking accounts, savings accounts, and time deposits are offered to both markets
- The bank may also acquire certificates of deposit (CDs) in the money market, but these do not involve a customer relationship

Treasury Management

Additional sources of funds available to the bank include:

- Federal funds that are automatically borrowed if needed to maintain the bank's legally required cash and reserve position plus cash required for operations. No action by management is needed for this to happen
- Borrowing through a repurchase agreements (repos)
- Borrowing via Corporate CDs
- Borrowing from the Federal Home Loan Bank
- Long-term debt issues (subordinated debt)
- Common stock issues

Except for servicing loans that have been sold, there are no non-balance-sheet-related fee services requiring management decisions.

The Bank's Management

Your team is a new management group brought in by the Board of Directors. Depending on the program, your Board may be very active or may give you free rein to run the bank for a period of time.

The Board may provide expectations regarding the performance of the bank and want to be involved in the development of a mission statement, goals, and strategies. Or, they may be non-participating, leaving both the development of general policies and the operating decisions to management.

Prior management has left the bank so there is no continuity within senior management. The Board has not assigned any specific responsibilities or functions to members of your group.

One of your first tasks is to organize your team and develop an operating style for your bank. During this process of organization, you should consider a range of possible operating styles, which are discussed further in [Bank Organization Details](#).

Note: Your instructors may serve as the Board of Directors and initial policy statements are provided in this manual where appropriate. These may be modified, based on discussion with management, as needed.

The Bank's Regulators

Your bank is expected to operate within a set of regulatory guidelines to ensure the safety and soundness of the banking system and your bank. The guidelines are established by the Office of Bank Supervision (OBS). OBS has instituted an initial set of rules and regulations as shown in *Figure 2*. All banks in the community are expected to comply with these regulations.

Figure 2. Rules and Regulations

1. Each bank shall maintain in proper chronological order its records and reports so that it may conduct its business on an orderly basis and provide adequate information needed for bank examinations.
2. The Office of Bank Supervision may, at its discretion, forbid the payment of any dividend if its payment is likely to affect unfavorably the overall condition of the bank. The Office may also, at its discretion, require prior written approval of any cash dividend to be paid by the bank.
3. Federal funds purchases in excess of 100 percent of total capital shall be considered prima facie evidence of unsafe and unsound banking practices. A bank found in this situation is subject to special examination and/or supervision. Capital for the purpose of this regulation is defined as outstanding subordinated debt plus owners' equity.
4. No bank may issue subordinated debt in excess of 35 percent of total capital. The percentage shall be based on total capital after issue.
5. Each bank will always maintain a ratio of total capital (consisting of owners' equity, subordinated debt and loan loss reserves) of at least 8.0 percent of risk assets. In addition, the ratio of owners' equity to total assets must be 4.0 percent or greater. For a bank to be considered well capitalized, the ratio of total capital to risk assets must exceed 10 percent and the ratio of owner's equity to total assets must exceed 6.0 percent. These capital ratios shall be calculated as reported in Report B05.
6. The Office of Bank Supervision may, after due warning and the issuance of an order to Cease and Desist, assess fines against the bank for failure to comply with regulations.
7. The Office of Bank Supervision is authorized to modify, suspend or change any of the above regulations as needed to meet changes in the financial markets and the economy and to maintain the health of the banking system. In addition, the Office is authorized to impose special rules or regulations on any bank that is found to be operating in a manner so as to constitute unsafe or unsound banking practices or to be in serious breach of its duty to provide banking services to the community.

Figure 2: Office of Bank Supervision (OBS) set of rules and regulations.

Depending on the program, OBS examiners may be highly active, and you may experience visits from them, or they may be relatively passive and you will not hear from them unless you fail to comply with the regulations.

The OBS has the power to modify existing regulations and add new ones at any time. Any changes in regulation will be announced in advance of their implementation. You may have the opportunity to comment on proposed changes prior to their going into effect.

Regulations 3 and 5 are very important restraints on bank management:

- Regulation 3 limits the amount of federal funds purchases (a form of borrowing) which is a major source of liquidity for the bank. [See Liquidity Management](#) for a discussion of liquidity management and how decisions affect the amount of borrowing.
- Regulation 5 regarding bank capital says essentially that you cannot increase the assets of the bank without increasing bank capital as well. This regulation forces management to consider carefully the impact of its decisions on the growth of the bank and to plan for adequate capital to support growth. [See Capital Management](#) for a discussion of this issue.

Bank Organization

Many teams begin operating as a management committee, jointly considering all decisions. This is very effective if there is sufficient time to meet and come to a consensus. This style promotes a high degree of job satisfaction among team members, however, there is often not enough time available to operate in this fashion and to consider all decisions that should be made.

When time is an important constraint, there is a temptation to adopt a very structured and specialized method of operating. In this style, most of the members of the team have specific, non-overlapping assignments. The CEO, and perhaps one other person, are responsible for overall management.

Specialized individuals can become highly proficient in their narrow areas; however, they do not obtain the full benefits of the exercise and may become discontent after three or four decision periods.

This management approach can be very efficient and effective in the short run but is not recommended unless the decision period is very short (less than 90 minutes, [see the discussion of Time Management](#)).

For all members of the team to benefit from the experience and for the team to operate effectively, some blended style of operation is usually preferable. The form it takes will depend on the strengths and tastes of the people involved. One or more of the following operating procedures may be adopted:

- After team members review their areas of responsibility, individually examine the relevant reports, ask for a summary of trends and conditions to be presented to the entire group so everyone is generally aware of what is going on throughout the bank
- Conduct a group meeting to review overall problems and policies before submitting the final decisions
- Conduct a group meeting to summarize expectations of bank operations for the coming quarter after all decisions have been submitted
- Rotate job responsibilities after three or four quarters
- Set up subgroups or committees to review general policy areas
- Rotate membership on policy committees

THE CEO

The choice of chief executive officer is very important to the type of organization and to the success of the team. The CEO serves as the overall leader of the group and the primary contact person for instructors and examiners. It is very rare for a group to change its CEO. If a poor choice is made, the group must usually live with it.

Surveys conducted among over 1000 participants in simulation exercises like this one provide some interesting insights into desirable leadership characteristics.

- At the beginning of the exercise, participants ranked 10 characteristics desired of the CEO and rated being “well-organized” and “getting results” as most important
- At the end of the exercise, organization and results were still important, but a good sense of humor, reliability, and being skilled at resolving conflict, were considered highly important as well

Choose your CEO carefully. Consider what the requirements for this position are and who in the group comes closest to meeting them. Keep in mind that there are two objectives for your team:

1. Enable all members to have an interesting, enjoyable, and effective learning experience
2. Operate successfully as a bank

The choice of CEO has a significant impact on the achievement of both objectives.

THE MANAGEMENT TEAM

Getting organized is the first step. During the time allowed for decision making, you may use this time wisely to evaluate the situation and to decide specifically how to meet your goals.

Many BankExec teams organize around the input forms in the exercise—securities, loans, deposits, and treasury. Including the CEO, this structure may be suitable for a five-person team.

The organization problem can also be viewed in terms of functions or activities that must be performed. An illustration of the activities and associated Input Forms, where appropriate, is shown in *Figure 3*.

Figure 3. Functional Activities and Input Forms

Functions/Activities	Input Forms
Securities portfolio management	Securities Purchase/Sale
Loan portfolio management	Loan Decisions
Deposit pricing	Deposit Decisions
Marketing budgeting	Deposit Decisions
Discretionary funding	Treasury Management
Capital management	Treasury Management
Planning and analysis	N/A
Risk management	N/A
Team coordination	N/A
General policy determination	N/A

Figure 3: BankExec functional areas and activities associated with the Input Forms (where applicable).

Someone must be responsible for each decision area, and it is important that all major activities be assigned. The precise assignments can be based on the size of the team and the preferences of its members.

As part of the job descriptions, relevant reports to each assignment are described below. A six-person team might organize with the following set of job descriptions:

- Chief Executive Officer: Sets policy, provides direction, coordinates the efforts of the team, and interacts with regulatory authorities.
Reports: B01-02, C91-92, C94-96
- Chief Financial Officer: Develops plans and forecasts of bank operations, determines the bank's liquidity and capital requirements. Works with other officers to control risk exposures.

Reports: B01-06, C91-96

- Investments Officer: Manages securities portfolio and prepares to meet the bank's liquidity requirements. Works closely with the Treasury Officer.

Reports: B01-06, B10-12, C94-96

- Lending Officer: Analyzes the previous quarter's lending activity, sets loan rates and other loan decisions, projects future loan volume, and performs any other assignments applicable to the lending function.

Reports: B01-02, B20-24, C91-96

- Deposit Officer: Analyzes the previous quarter's deposit reports, sets deposit rates and business development budgets, projects deposit flows, and prepares marketing studies and other projects pertaining to deposits.

Reports: B01-02, B40-44, C91-C96

- Treasury Officer: Arranges for discretionary funding sources and develops funding strategies. Manages the interest rate and foreign exchange risk positions of the bank in conjunction with the Investments Officer.

Reports: B01-02, B60-64, C91-92, C94-96

Your fundamental task is to manage your bank safely and profitably by serving the banking needs of your community. To perform this task, you must understand the decision choices available to you.

The next sections of this manual describe those choices. You will then find a discussion of several issues you will face in managing the bank. This material is important because it shows how the decisions you make in one area may affect other aspects of the bank's performance.

BANK NAME

Management may name their bank or change the name. The name is limited to 29 characters. Once named, the bank's reports show that name and remain in effect unless they are changed.

The Decision Process

Competition in your community will increase substantially during the simulation. Inactivity or indecisiveness on the part of your management can result in the undesired gain or loss of deposits and loans. If lost, these can be difficult to regain.

A set of decisions consistent in strategy from period to period can build momentum, which can increase the bank's ability to compete. Once this momentum is working in a bank's favor, the other banks must work significantly harder to catch up.

Of course, the bank that achieves an initial advantage does not necessarily have an insurmountable lead, but there is a measurable benefit from logical, consistent action.

TIME MANAGEMENT

Teams are given a limited amount of time to complete their decisions. You may receive the results of the prior period at the beginning of the next and have as little as 60 minutes to complete the next decision. You will have a substantial amount of work to complete within this period.

Time management under these conditions becomes an important problem for the team (*Figure 4*). It is especially important that each team take a careful and well-planned approach to this heavy workload.

Often teams establish a time schedule for each activity, perhaps appointing a timekeeper to keep the group on schedule.

During each simulation, you will need to:

- Evaluate the results of the last period's decisions
- Suggest improvements in strategies or operations
- Consider decisions related to future operations
- Prepare decision input forms for the next quarter
- Complete any problem assignments

Figure 4. Team Decision Process

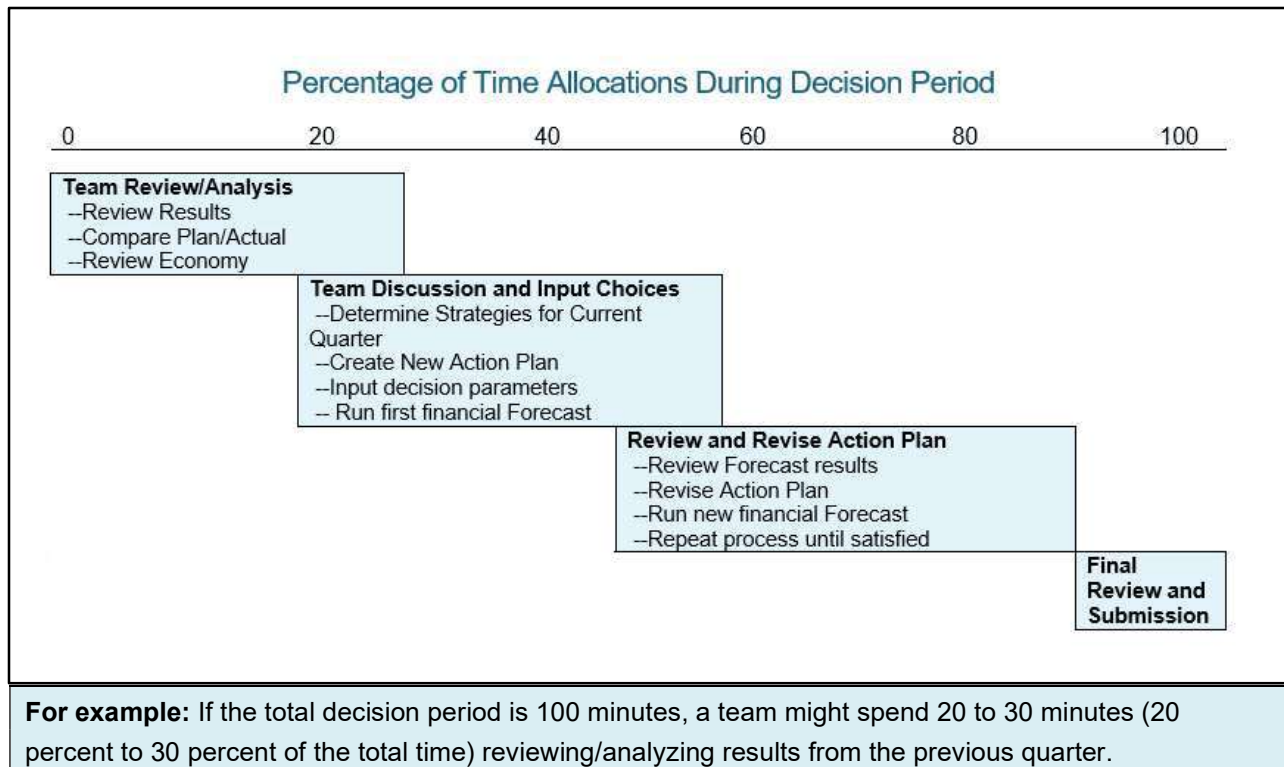


Figure 4: Approximate percentage of time allocations for team activities. Allocations overlap to indicate a range of possible time spent.

The time allocations are only suggested guidelines that you may choose to change as needed. The time spent on each area will likely differ across groups and change as your progress through the simulation. Groups may also address each task differently.

For example, some teams may ask individuals to review specific areas and then discuss them with the group. Other teams may choose to review all areas together.

The key is that all tasks need to be completed in an efficient manner to ensure that the Action Plan is complete by the submission deadline. Based on past simulations, there are several key points to consider:

- Understand the amount of time allowed for you to complete your Action Plan and have someone monitor your progress throughout the period
- Begin the simulation session by reviewing the most recent results. Compare your bank's actual results to your forecasted results. Evaluate competitor information from the previous quarter. Review the economy and consider its future direction
- Use your overall goals for the bank to help you decide where you are trying to take the bank this quarter and what actionable choices will get you there. The key is to be decisive. Your goal should be to run your first financial Forecast within the first 50-60% of the decision period

- Examine the financial Forecast results. What worked? What did not? What changes will logically lead you to better results? Now, create an additional revised Action Plan and run a new financial Forecast. Repeat the process until you are satisfied with your projected results. Always consider the cost of the next Forecast and the time remaining for you to complete your plan
- Take a few minutes to review your final plan to ensure that you have not forgotten important inputs. For example, did you forecast earnings and consider your dividend payout? To complete the session, submit your final plan

It is important that decisions in each area be made with care. It is equally important that the bank be managed as an entity and decisions in each area are consistent with the overall goals and strategies of the management team. When debating a specific choice, always ask yourself if it will help you take the bank where you plan to go.

Using BankExec

OVERVIEW

The BankExec simulation puts you in the middle of the action as a team of bank executives. This unique learning experience is designed specifically to provide participants a real-world banking experience. You must compete for profitability in a simulated economy and simulated market.

The BankExec simulation allows for:

- Online, real-time access
- Instant reporting
- Multi-user departmental decision making
- Full graphics and reporting of bank's position and comparison to peers
- Simulation previews that allow participants to explore Financial Forecast scenarios before final decision submissions
- As needed reporting, which gathers and presents information when required

ACCESS THE BANKEXEC PORTAL

Using any supported internet browser (Firefox, Chrome, Edge), navigate to the BankExec website:

Version 2.0: <https://abaBankExec.aba.com/>

Version 3.0: <https://bx30.aba.com>

To ensure your system (device and browser) is compatible, run a system check at:

<https://content.aba.com/support/tools/bankexecsyscheck/>

RESET YOUR PASSWORD

At login, click **Forgot Password** and enter the email address associated with your BankExec program. A default password is sent to that email address.

Return to the login page and enter your username (email address) and your new default password. You are required to change the password once your login is successful (*Image 1*).

Your password must be a minimum of eight characters in length, with one capital letter, one number and one special character. It cannot contain your first or last name.

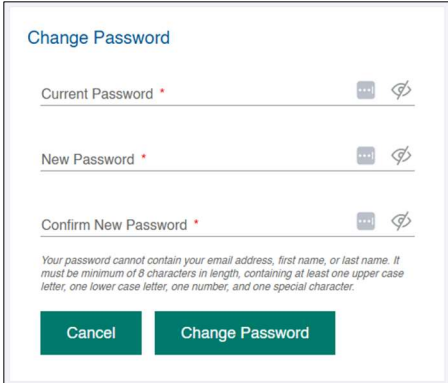


Image 1: Change Password

BASIC NAVIGATION

When you login to BankExec, you land on the Home Page (*Figure 5*). Use the hamburger menu at top left of page to navigate to Home, Action Plan Dashboard, Bank Reports, Change Password, and Logout.

Figure 5. BankExec Home Page

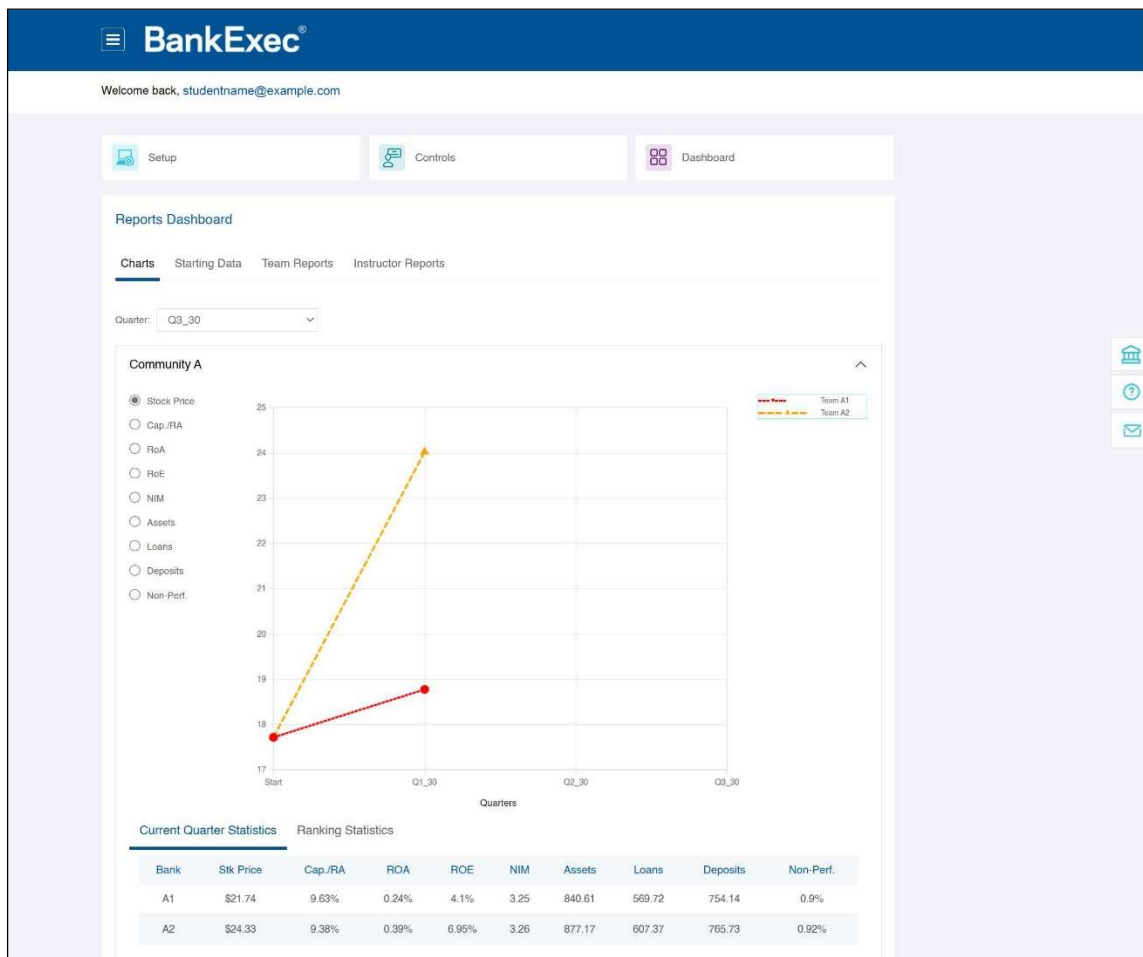


Figure 5: Student Home page with overview of simulation results.

BankExec Input Decisions

As you navigate BankExec, your team will make decisions to determine how your bank will perform financially in the given economy and market conditions. The simulation requires you to enter decisions in four functional areas: securities, loans, deposits, and treasury management. This set of decisions is called the Action Plan.

CREATE ACTION PLANS

The Action Plan you submit represents the quantitative input in the four functional areas and allows you to change how your bank is working in each of the four functional areas listed above.

Note: Failure to Submit the Action Plan by the time deadline set by your instructor means your Action Plan is NOT CHANGED from the prior period or quarter. Your final submission **might not** be the last Action Plan you were working on! See [Submit Your Action Plan](#) for more information.

Create Your First Action Plan

The first time you access the Action Plan Dashboard, you will create an Action Plan by entering a name for the plan in the box above the Create New button (*Figure 6*). Click **Create New** to save.

Figure 6. Create an Action Plan

Create/Change Action Plan ✕

An Action Plan consists of all inputs in the Securities, Loans, Deposits and Treasury Management forms. You can test your Action Plan by running "Forecast" Simulations. You can create additional Action Plans to test the impact of different decisions. When you are ready, you will Submit for Final Competition. Before Submitting, be sure the Action Plan you want is the "active" set on the Action Plan Dashboard, noted as "Current Action Plan." Check that you've adjusted your dividends and EPS in Treasury inputs before submitting.

Create New Action Plan:
Enter a Name and click Create New. Your Action Plan will be based on your final Action Plan inputs in the preceding Quarter.

Plan 2

Create New

Save Current As:
Enter a Name and click Save Current As to create a new Action Plan for the current quarter based on the inputs of the currently active Action Plan. This allows you to leverage those inputs to make a new Action Plan. You can make changes to that Action Plan and preserve both Plans.

Save Current As

NOTE: Any saved Action Plan may be reopened by clicking "Change/New" on the Quarter Status page and then selecting the desired Action Plan name from the Switch Action Plan list.

[Switch to Existing Action Plan: \(Refresh\)](#)

• Plan 1

Figure 6: Create/Change Action Plan pop-up screen accessed from the Action Plan Dashboard.

Create Additional Action Plans

You have the option to create and save multiple Action Plans. Additional Action Plans are usually created after running a financial Forecast to preserve the current Action Plan inputs and financial Forecast results.

If you do not create an Action Plan with a different name *before* modifying your inputs, the original plan will not be saved.

To create a new/additional Action Plan using the current plan's inputs as the starting point:

- Click the **Change Plan** icon to open the pop-up window
- Enter a new name in the box above the Save Current As button, then click **Save Current As**.

This new plan allows you to leverage the previous inputs to make changes and run additional financial Forecasts.

If you instead wish to “start over” (use last quarter's inputs as the starting point), enter a new name in the Create New box and click the button. This choice is only recommended if you feel the current plan is not worthy of modification.

VIEW ACTION PLAN DASHBOARD

Use the hamburger menu and select **Action Plan Dashboard** to access the Input Forms for Securities, Loans, Deposits, and Treasury.

The dashboard shows how much time remains until the deadline for final submission of your Action Plan. You can also see the status of the Input Forms, change the name of your bank team, and print your Input Forms if needed.

More than one team member can edit an Action Plan at one time, HOWEVER, there are several rules to follow, as discussed later in this manual.

EDIT ACTION PLANS

Important: We recommend that only one team member edit one page of the Action Plan (Securities, Loans, etc.) at a time. If multiple team members edit the same Action Plan form, you will likely write over each other's entries.

Each team can make operating decisions in the following areas:

Securities: Security markets: purchase and security sale decisions

- Reports B10 & B12

Loans: Loan decisions

- Report B24

Deposits: Deposit and business development (marketing) decisions

- Report B44

Treasury Management: Treasury decisions: purchased funds, capital and other decisions

- Report B64

It is critical that each team member edit the **same** Action Plan so multiple team members do not edit previous Action Plans.

These areas are interdependent in many cases; for example, decisions regarding securities and loans need coordination with deposits and treasury management decisions. The general characteristics and decisions associated with each area are discussed later in this manual.

Each quarter your team can review results from the previous quarter and decide whether to add new, or change, values in each of the four areas. You may submit only **one** Action Plan per period!

Each Input Form is a section of a bank report. For example, the Deposit Input Form is taken from Report B44. The number of the Input Form (44) matches the report number.

Descriptions of the decisions below refer to the Input Forms; however, keep in mind that the information on an Input Form is also found in the corresponding report, which includes other useful information in making your decisions.

Specific instructions for each form are provided in each decision area. General rules to follow in the decision process include:

- Most decisions represent policies that remain in effect until changed by submission of a new value. All prices, budgets, and policy conditions are of this sort
- For a decision that remains in effect, the current value is shown in the space on the Input Form where a new value can be entered. If 0.0 is shown, it means the current value is 0.0 and this value will remain in effect until changed
- If you leave a decision area blank, no entry is made for that decision. Any policy decision remains in effect
- Follow the input format shown on the form. For example, if the current value of a loan interest rate is shown as 8.50 and you wish to change the rate to 8.0 percent, enter 8.0 not .08!
- If no value for a current decision is shown (a blank space in the decision entry area), then a new value must be entered each quarter that a decision is desired
- Review your decisions for reasonableness in a banking context. Be especially careful if you are making a large change from the current value. Talk with your instructor prior to input if you have any questions
- Save (and approve before final submission) all Input Forms even if there are no entries on one or more of them

RUN A FORECAST

You may run a financial Forecast to see the projected results for your bank based on your Action Plan inputs. Before running a Forecast, enter your choices for all Action Plan input screens.

Just as in the real world, financial analysis requires staff time and resources so there is a charge for running financial Forecast simulations. Your instructor will let you know the cost structure for financial

Forecasts. Also, the simulation will show the Overhead Charge Total and Next Overhead Charge on the Simulation Options screen when you click on the Forecast button.

To run a financial Forecast, ensure that you are in the correct Action Plan. Next, click on the Forecast button. The Simulation Options screen will appear (see *Figure 7*).

Figure 7. Financial Forecast Simulation Options

BankExec®

Welcome back, studentname@example.com Team: Team A1 307: 51: 07

Simulation Options

Current Quarter Set :

You can run a "Forecast" analysis of your current quarters. The "Forecast" will forecast your results for the next quarter based on the quarters you have input. Please note the cost of each Forecast.

Overhead Charge Total: \$

Next Overhead Charge: \$

Before submitting your quarter set for a "Forecast" simulation, you must enter Treasury rate forecasts for the end of the next quarter and forecast the average change your competitors will make to their loan and deposit rates.

Enter the expected end-of-next-quarter Treasury rates for the following maturities (1.00 = 1%).
 (Enter the actual expected rate, not the expected change in the rate. If the current 1-qr rate is 3.0% and you expect it to rise to 3.25%, enter 3.25%.)

1-Quarter Maturity:

3-Quarter Maturity:

120-Quarter Maturity:

Enter the average expected change competitors will make in their loan and deposit rates.
 (This is the average expected change across all loan and all deposit products. It represents the average expected change from the rates competitors entered last period to the rates you expect them to enter this period. Report C93 shows all bank's rates from last quarter and the change in market rates over the quarter.)

Competitor's Average Expected Loan Rate Change (1.00 = 1% increase):

Competitor's Average Expected Deposit Rate Change (1.00 = 1% increase):

Run "Forecast" Simulation

Figure 7: Simulation Options appear when Forecast is selected from the Action Plan Dashboard.

Before running a forecast, you must input two sets of information:

- First, you must enter your estimates for interest rates at the end of the next quarter. Note that current Treasury rates are available in Report B10.
- Second, you must enter your estimates for the average changes competitors will make to their loan and deposit rates. Report C93 contains interest rate information that can be used to help you develop competitor rate change expectations.

After entering the required rate information, click **Run "Forecast" Simulation**. It may take a few minutes for the forecast simulation to run. The output data appears at the bottom of the page.

APPROVE ACTION PLANS PRIOR TO FINAL SUBMISSION

Once you have completed your decisions, click **Approved** on the Action Plan Dashboard for each Input Form (Figure 8). This is required prior to final submission.

Important: To implement your bank's changes for the quarter using the Action Plan that provided satisfactory forecast results, **you must submit that Action Plan as your Final Plan** for competition.

Figure 8. Action Plan Dashboard

The screenshot shows the BankExec Action Plan Dashboard. The top navigation bar includes the BankExec logo and a welcome message. The main content area displays the 'Action Plan Dashboard' with a table showing the status of four input forms: Security Inputs, Loan Inputs, Deposit Inputs, and Treasury Inputs. Each form has a green checkmark in the 'Approved' column. To the right of the table, the 'Current Action Plan' is set to 'Quarter 1' with a value of 'Bank of ABA'. There is an 'Update' button next to the current plan. At the bottom, there are buttons for 'Print Input Forms', 'Forecast', and 'Submit Final Plan'.

Figure 8: Action Plan Dashboard with input form status indicated. The Approved button is clickable.

SUBMIT YOUR ACTION PLAN

You must submit your **final** Action Plan for competition. Before proceeding, ensure that the current Action Plan is the one you want to submit. Next, click **Submit Final Plan**, then click **OK** on the resulting pop-up window.

You may wish to confirm with your instructor that the Action Plan submitted correctly.

Note: If you do not submit your Action Plan by the quarter's deadline, the simulation will use your Action Plan from the previous quarter.

Securities Decisions

Purchases and sales of securities are entered on the Securities Input Form. The available securities are Treasury Bills and Bonds, agency bonds, tax exempt municipal bonds, and interest rate swaps.

All securities transactions—purchases, sales, calls, and receipts from maturing securities—occur on the first day of the quarter in which the transaction takes place.

The securities portfolio represents investments that provide a source of income, liquidity, and safety for your bank. Since there are no customer relationships involved in the purchase and sale of securities, decisions in this area can be based only on financial considerations.

However, there is one complication, federal funds. The bank can choose to sell securities or not to buy securities with excess funds and let these funds be sold in the federal funds market. Therefore, management should consider federal funds as an alternative investment to securities.

Depending on the organization of the bank, the securities officer may be given the responsibility to manage federal funds as part of the bank's investments. See the discussion on [Liquidity Management](#).

Also see the discussion of the issues in [managing the securities portfolio](#) and the relationships with other aspects of bank financial management.

SECURITY PURCHASES

Securities are purchased in \$ millions of par (maturity) value. Fractional values such as \$2.5 million are not allowed—you must choose either \$2 million or \$3 million (*Figure 9*).

Figure 9. Securities Purchase Decisions

The screenshot shows a web interface for purchasing securities. On the left is a sidebar with navigation links: Action Plan Dashboard, Security Inputs, Loan Inputs, Deposit Inputs, and Treasury Inputs. The main area is titled 'Purchase Securities' and contains three input sections. The first section is for Treasury Bills, with a dropdown set to 'Treasury Bills', a value of '10' in a text box, and a maturity of '1' in a dropdown. The second section is for Treasury Bonds, with a dropdown set to 'Treasury Bonds', a value of '8' in a text box, and a maturity of '30' in a dropdown. The third section is for Agency Bonds, with a dropdown set to 'Agency Bonds', a value of '2' in a text box, and a maturity of '5' in a dropdown. Below these are buttons for adding (+) and removing (-) items. A 'Tax Exempt Bond Information' box shows '\$5 million available', '60 quarters maturity at 4%', and 'Taxable-equivalent yield is 5.92%'. A note at the bottom states: 'Note: Maximum bill maturity is 4 quarters. Commercial Paper Rate is 4.26 percent.' To the right is a table of yields for various maturities.

Maturity	Treasuries	Agency	Swaps
1	4.50	4.59	
2	4.73	4.82	5.24
3	4.88	4.98	5.39
4	4.98	5.08	5.50
6	5.11	5.22	5.64
8	5.18	5.36	5.72
10	5.23	5.41	5.78
12	5.25	5.45	5.81
20	5.31	5.54	5.91

Figure 9: Illustrates the purchase of \$10 million of one-quarter bills, \$8 million of 30-quarter bonds, and \$2 million of 5-quarter agencies.

Use the  button to add a line to purchase additional securities. Use the  button to change your decision and not purchase a security you previously entered.

The current interest rates for all securities are shown on Report B10. The reports shows market yields only for selected maturities; therefore, you must estimate the yield for any maturity that is not shown. A graph of yields plotted against maturities may be used for this purpose. This sort of graph is called a yield curve and is provided for you on the Home Page of the Simulation Interface as well as Report C95.

Treasury Bills and Bonds

Treasury bills (BL) have maturities of one, two, three, or four quarters only. Since bills do not pay coupon interest, they are acquired at a discount from their face value, and interest is accrued quarterly on a straight-line basis. They are carried on the bank's books at purchase cost plus accrued interest.

Treasury bonds (BD) are available with maturities ranging from one quarter to a maximum of 120 quarters (30 years). Any maturity within the range, one-quarter to 120, may be purchased.

Bonds pay quarterly interest equal to their annual coupon rate divided by four. All bonds are purchased at their face value and have a coupon rate equal to the market yield at the time of purchase. Note that the interest rate on a Treasury bond is the same as the interest rate on a Treasury bill with the same maturity.

Treasury bills and bonds may be used to support borrowing through repurchase agreements.

Agency Bonds

The bonds issued by government agencies (AG) are like Treasury bonds; however, agencies are callable whereas Treasury bonds are not. Agency bond yields are higher than those on Treasury bonds with the same maturity. This is due, in part, to the call feature.

The bank buys these securities at par from the issuer. All agencies with an initial maturity of eight quarters or more are callable (redeemable) at par by the issuer four quarters after issue and only at this time. If an agency bond is not called on the call date, it will be redeemed at par at maturity.

The decision to call an agency bond (made by the issuing agency) is based on a comparison of the current market yield for a comparable non-callable bond with the coupon rate on the existing bond. If the issuer could replace the bond with a comparable one at a lower interest rate, the issuer would call the bond.

An agency bond that is called will show a maturity of 0 in the Portfolio Report (B12) and the par value will be paid to the bank on the first day of the next quarter. *Figure 9* shows a decision to buy \$2 million of five-quarter maturity agencies.

Tax Exempt Municipal

Bonds issued by state and local governments are referred to as municipal bonds, or tax-exempts (TE). The interest income from these securities is not taxed.

They are available for purchase in limited amounts each quarter with a single maturity as shown on B10 and the Securities Input Form. Otherwise, they are like Treasury bonds.

Yields for bonds may be stated in several ways—pre-tax, after-tax, and taxable-equivalent. To compare interest rates from tax-exempt securities with others that are fully taxable, such as Treasury bonds, taxable-equivalent yields are calculated and shown on B10 and Securities Input Form (for purchases) and

B12 (for securities owned by the bank). Although the interest income from these bonds is not taxed, the interest deduction associated with carrying them is limited.

The tax-exempt bonds available for purchase by the bank are known as bank-qualified because they have a special tax treatment for banks that invest in them. Twenty percent of the interest expense attributed to carrying these securities is not allowed as a tax-deduction. (Regular tax-exempt bonds are not very interesting to banks because all the interest expense of carrying them is not deductible which substantially reduces their taxable-equivalent yield and, therefore, are not included in BankExec.)

The formula for the taxable-equivalent yield on a bank-qualified bond is the pre-tax yield minus 0.2 times the bank's average interest cost of funds times the tax rate, all divided by $(1.0 - \text{tax rate})$. The interest cost of funds is simply the bank's total interest expense divided by its total liabilities plus equity.

For example, suppose that the coupon rate on a bond to be purchased is 5.0 percent. The tax rate is 40 percent and the bank's interest cost of funds is 3.0 percent. The taxable-equivalent yield would be calculated as $(5.0\% - 0.2 \times 0.4 \times 3.0\%) / (1.0 - 0.4) = 7.93\%$. This 7.93 percent can then be compared with the rates on other, fully taxable securities available.

Note the taxable-equivalent yield for one bank may be different for another bank for the same security if cost of funds is different for the two banks. A bank with a low cost of funds will find tax exempts relatively more attractive than a bank with a high cost of funds.

Each bank in the simulation has the same opportunity to invest in these securities.

Interest Rate Swaps

Interest rate swaps are included as part of the securities portfolio; however, they are significantly different from other securities.

There are two types of swaps available—fixed-rate swaps (SF) and variable-rate swaps (SV). In a fixed-rate swap, the bank will receive a fixed coupon amount each quarter and pay a variable amount based on the one-quarter maturity commercial paper rate and the notional amount of the swap.

- The level of the commercial paper rate for the coming quarter, as well as the fixed rates that apply to new swap purchases, is shown in Report B10 and the Securities Input Form
- The fixed rates applying to swaps in the bank's portfolio are shown as the Fixed Coupon in Report B12

The amount of interest paid and received is based on the applicable interest rates times the notional amount of the swap. Only the net interest is paid or received.

For example, suppose that the notional amount of a fixed-rate swap is \$10 million, the fixed rate is 6.0 percent, and the current value for the commercial paper rate is 4.0 percent. For the quarter, the bank would receive \$50,000 $(0.06 - 0.04) / 4 \times \10 million). If commercial paper rate rose to 8.0 percent on the same swap, the bank would pay \$50,000 per quarter.

A variable-rate swap works the same, except that the bank receives interest based on commercial paper rate and pays the fixed coupon. Therefore, with a \$10 million variable-rate swap, a fixed coupon of 6.0 percent and commercial paper rate at 4.0 percent, the bank would be paying \$50,000 in a quarter. If the commercial paper rate went to 8.0 percent, it would receive \$50,000 net interest.

- The net interest for all swap positions is shown in Report B02.

Swaps are acquired by selecting the appropriate swap in the drop-down box and entering the desired notional amount and maturity on the Securities Input Form. No cash is involved in the purchase of a swap, only interest for the notional amount is swapped.

Swaps are available for any maturity from two quarters to 80 quarters. Maturity refers to the term of the swap contract—no cash is received at maturity except any final interest due.

All or part of any swap in the bank's portfolio may be sold. The market value of each swap is shown as part of the portfolio data. The sale amount is the notional value.

The market value of a swap reflects any difference between the fixed coupon on the swap and the current (fixed) market rate for a swap of the same maturity as the remaining term of the swap.

A useful way to think of a swap is that it consists of two securities—a long position in one and a short position in the other:

- In a fixed rate swap, the long position is a fixed income security, and the short position is a variable income security
- In a variable rate swap, the long position is in a variable income security and the short position is in a fixed income security

If the market rate is lower than the fixed coupon on the swap, the fixed rate security has a higher value than when it was acquired. A long position in the fixed income security (fixed rate swap) will show a gain and a short position in the fixed income security (variable rate swap) will show a loss.

The variable income security is always at face value. Since swaps have zero book (and market) values when they are acquired, the gain or loss on the position equals the market value of the swap.

The primary use of swaps is to manage interest rate risk exposure. Suppose, for example, that the bank sees a market opportunity in five-year fixed rate loans; however, the available funding source for an increase in these loans of \$10 million is three-month CDs. This funding would expose the bank to the risk that interest rates rise. The bank might choose to make the loans, fund them with CDs, and enter a long-term \$10 million variable-rate swap. If interest rates rise, the bank will pay higher interest on its CDs; but it should also receive higher interest payments from the swap thereby reducing the risk.

Information about the overall interest-rate risk exposure of the bank, including its swap positions, is provided in Report B05. On B05, the long swap positions are shown as positive amounts equal to the notional values of the swaps; short positions show as negative amounts equal to the notional values. The net value of swaps across all maturities is always zero as the long and short positions cancel out.

The Board of Directors has established a policy, after discussion with bank regulators, to restrict the use of swaps to the management of interest rate risk.

No swap transaction is permitted for purposes of speculation. Swap transactions will be monitored and any transaction that might be considered speculative should be presented to the Board for prior approval.

Failure to conform to this policy may be considered as a departure from safe and sound banking practices and could subject the bank to financial penalties imposed by bank regulators or restrictions on the authority of bank management to engage in any future swap transactions.

SECURITY SALES

Security sales are entered in the Sell Securities section of the Security Input form. The amount to be sold is entered in millions of par value (no fractional entries) in the column to the right of the security number. Sale amounts may be any whole number from 1 to the par value. Maturing and called securities (maturity of 0) cannot be sold since the bank will automatically receive the par value in cash on the first day of the coming quarter.

The Sell Securities section of the Security Input form shows the maturity, par value, market value, and book value for bank owned securities. The Security Portfolio Report (B12) provides further data on the securities and a summary of transactions during the most recently ended quarter.

Tax exempt securities are implicitly considered to be held-to-maturity, so these securities are carried on the balance sheet at par value and their unrealized gain/loss does not impact owners' equity. (Note: Tax exempt securities may still be sold at any time unless the simulation administrator places restrictions.)

All securities other than tax exempts are assumed to be available for sale and are marked-to-market each quarter so that they are carried on the balance sheet at their market value. This means the unrealized gain/loss on the security portfolio excluding tax-exempt securities is directly reflected in the owners' equity. For example, consider a bank that at the beginning of a quarter has a security portfolio with a book value of \$65 million consisting of \$45 million in Treasury and Agency securities and \$20 million in Tax Exempts. Initially, the portfolio market value is equal to its book value. Over the quarter, interest rates rise causing the value of the security portfolio to fall to \$64.565 million (\$44.891 million in Treasury and Agency securities and \$19.674 million in tax-exempt securities). The \$0.109 million loss in value of the security portfolio excluding tax exempts reduces the bank's owner equity by the same amount.

Report B12 contains individual security values and shows total portfolio gain/loss and the gain/loss excluding tax exempts near the bottom of the page. Report B10 shows the impact of the security portfolio gain/loss on owners' equity. Owners' equity for the past two quarters is divided into common stock and retained earnings and the gain/loss on the security portfolio excluding tax exempts.

The gain or loss on a security is not recorded on the income statement until the security is sold. When sold, the gain or loss from the security sale is recorded on the income statement as the difference between the book and market values. Gains are treated as ordinary income and losses are treated as expenses in determining the bank's income taxes.

Figure 10: Securities Decision Summary

Product	Market	Comments
Federal Funds	Maturities: One day unlimited amounts available at market rate	Federal funds only sold if there is excess cash and not under direct control of the investments officer

Product	Market	Comments
Treasury Bills	Maturities: on to four quarters unlimited amounts available at market rate Maximum purchase is 99 million face value	Bills do not pay coupon interest; they are purchased at a discount Book value includes accrued interest
Treasury Bonds	Maturities: 1-120 quarters unlimited amounts available at market rate Maximum purchase is 99 million face value	Quarterly interest paid at coupon rate
Agency Bonds	Maturities: 1-120 quarters maximum (may be less) unlimited amounts available at market rate Maximum purchase is 99 million face value	Quarterly interest paid at coupon rate Callable four quarters after purchase if initial maturity is eight quarters or more
Tax-Exempt Bonds	Maturity and Amount: limited as shown on B10 and Security Input Form	Quarterly interest paid at coupon rate. Interest is tax exempt, but interest expense deduction is reduced
Variable Rate Swaps	Maturities: 2-80 Quarters maximum. Unlimited amounts available at market rate is 99 Maximum purchase million (notional) CPR Bank receives quarterly, pays fixed interest rate set at purchase	Only net interest is paid or received. All or part of a swap may be sold. Sale amount is notional value, but bank receives market value. Fixed rates at purchase are shown on Report B10
Fixed Rate Swaps	Maturities: same as variable rate swap unlimited amounts available at market rate is 99 Maximum purchase million (notional) Bank receives fixed rate set at purchase, pays CPR quarterly	Same as variable rate swaps

Loan Decisions

LOAN PRODUCT OPTIONS

There are nine potential loan products that may be offered by the bank. They include a minimum of five standard products and four optional products. The simulation displays a maximum of seven products.

The five standard loan products are:

- Business Term Loans
- Business Credit Lines
- Commercial Real Estate Loans
- Fixed Rate (FR) Residential Mortgages
- Consumer Installment Loans

Optional loan types include Agricultural Loans, Variable-Rate Mortgages, Home Equity Credit Lines, and Credit Cards.

The current values of the decisions are shown on Form B24 and the Loan Input Form. These values remain in effect unless changed by management. There are additional decisions, unique to some products, that will be discussed with the product.

Figure 11. Basic Loan Decisions and Standard Products

Loan Policies							
	Int. Rate	Mkt. Rate	Credit Policy	Bus. Dev.	Max. Outstand.	Max Mat. (Quarters)	Rate Adj. Period
Business Credit Lines	6.50	7.66	3 ▾	M ▾	200		
Business Term Loans	7.00	7.95	3 ▾	M ▾	200		
Commercial Real Estate	6.80	8.19	3 ▾	M ▾	200	40	4
Residential Mortgage (FR)	5.25	5.86	3 ▾	M ▾	200		
Home Equity Credit Lines	6.50	6.97	3 ▾	M ▾	50		
Installment Loans	7.00	8.81	3 ▾	M ▾	198		
Credit Cards	13.17	15.60	3 ▾	M ▾	50		Annual Fee 25

Figure 11: Loan decisions are entered on the Loan Input Form which show up to seven products, including 2 optional loan types for Agricultural Credit Lines and Credit Cards.

BASIC LOAN DECISIONS

Interest Rate

The interest rate is the annual percentage rate charged for loans made in the coming quarter. Follow the format shown on the Loan Input Form. For example, a rate of 7.5 percent is entered as 7.50.

The interest rate decision sets an average rate that applies to customers who are acceptable to the bank as indicated by the bank's credit policy. Individual loans may carry higher rates or lower rates than the average depending on the credit risk involved.

There are differences in the credit risk of borrowers in the market and the bank charges rates accordingly based on the average rate set by the interest rate decision. Interest income on all loans is received quarterly.

Credit Policy

The credit policy of the bank is a numeric value of 1, 2, 3, 4 or 5 that represents the credit policy of the bank regarding loan customers.

A credit policy of 1 represents a restrictive policy of lending only to customers who are of very high credit quality or loans that are extremely well secured (for example, secured by deposits in the bank). Such customers represent about 20 percent of the available market. There is no appreciable credit risk for loans made under a credit policy of 1.

At the other extreme, a credit policy of 5 is a liberal policy that permits credit to be extended to all customers with reasonable prospects of repayment. The only customers excluded from consideration under this policy are ones who would find it difficult to borrow from a bank under any circumstances.

Decisions regarding the interest rate and credit policy should be made together. The more liberal the bank's credit policy, the higher the average interest rate can be to attract a given volume of loans.

Business Development

The Business Development drop down establishes business development priorities as High (H), Medium (M), Low (L), and None (N).

Business development priorities are relative and the decisions in the loan area are affected by business development decisions in the deposit area.

For example, setting all business development priorities in the loans and the deposits area to High has the same impact as setting all decisions in both areas to Low.

The decisions allocate business developments budgets set on the Deposits Input Form and are discussed in the [Deposit Decisions](#) section. If all the decisions are the same, then the budgets are allocated equally to each product; however, none means zero regardless of the budget levels set.

The budgets are allocated to products as follows:

- None has a value of 0
- Low has a value of 1
- Medium has a value of 2

- High has a value of 4

Therefore, if you decide to have a high business development value on a product, that product will have a budget that is four times that of a product where you decide on a low business development value. The actual amounts involved depend on the level of the budget decisions.

Choosing “None” means that no money will be spent on this product. There will be no advertising or promotion of the product and loan officers will devote all their time to servicing existing customers. No time will be spent on developing new accounts.

Maximum Outstanding

This represents the maximum amount of total loans of this type that management wishes to have outstanding, expressed in millions. The limit in the simulation:

- Does not apply to credit line draws under existing commitments
- Does not affect the pattern of repayments of outstanding loans
- Can affect the amount of new loans booked

For example, a value of 120 for commercial RE loans sets an intended ceiling of \$120 million outstanding for this loan type.

If the current balance is below 120, new loans will be limited if they cause the total balance to exceed 120.

If the current balance exceeds 120, new loans are limited (possibly forced to zero), but it may take several quarters to achieve the lower maximum total loan balance as outstanding loans are repaid (or sold).

STANDARD LOAN PRODUCTS

Business Loans

The bank offers two loan products to businesses with these major differences:

Credit lines	• Does not require any principal payments prior to the expiration of the line—its maturity • A maximum maturity of 12 quarters
Term loans	• Requires regular principal payments equal to the initial amount of the loan divided by the initial maturity • A maximum maturity of 20 quarters from origination

A credit line Usage (loans outstanding) under credit lines averages about 50 percent of the total commitments outstanding and is somewhat seasonal with the first quarter of the year having the lowest usage and the fourth quarter having the highest.

Customers may choose shorter maturities if they prefer. There is some demand for four-quarter credit lines and eight-quarter term loans.

The bank earns a 1.0 percent annual maintenance fee on credit lines. The bank's interest rate and credit-quality decisions apply only to the loans made in the quarter for which the decisions are in effect. The bank earns a 1.5 percent origination fee on all new business loans.

For credit lines, this fee is based on the amount of the commitment made, not the amount of the loan initially drawn down by the customer.

Information on the amount of commitments extended is provided in Report B20.

The interest rate charged on both business loans is tied to the prime rate as reported in Report C96. The interest rates specified as the bank's current decisions set spreads relative to the current prime rate.

For example, if the bank's decision rate is 7.0 percent and the prime rate is 6.25 percent, the spread is +0.75 percent. As the prime rate changes each quarter, business loans in the bank's portfolio are charged an annual interest rate equal to the original spread on the loan plus the current prime rate. So, if the prime rate at the beginning of the next quarter is 6.50 percent, loans made with a spread of 0.75 percent would have a new annual rate of 7.25 percent. Therefore, business loans are inherently one-quarter variable rate loans. The interest paid each quarter is one fourth of this annual interest rate times the average balance outstanding on the loan.

Credit lines and term loans are relatively close substitutes from the perspective of the bank's business customers although there are preferences for one over the other for many customers.

There is more demand for credit lines than for term loans; but the bank's policies can influence the choice made by customers for these two products. For example, if the bank offers unusually attractive terms on its term loans relative to its credit lines, many customers will choose term loans. Therefore, management should consider both products together in their approach to this market.

Commercial Real Estate Loans

Commercial real estate loans are secured by real property used by a business or for other income-producing purposes, for example, office buildings, gas stations, warehouses, rental apartments, and hotels.

New loans have a 2.0 percent origination fee, and these loans may be sold.

In addition to the four standard, there are two decisions that apply only to these customers:

- Maximum maturity
- Rate adjustment period

Maximum Maturity

Management can specify the maximum maturity of the loans made in each quarter. The maturity decision is in quarters and can be any value from 01 to 99 quarters.

The maturity decision applies only to loans made in that quarter. No adjustment can be made to the terms of loans made in prior quarters.

The maturity decision affects the type of loan made:

- Loans of eight quarters or less are used for purposes such as construction of new buildings or the purchase of land to be used in development. The entire balance of these loans is due at maturity and the customers will normally seek to re-finance the loan on a longer-term basis
- Loans with maturities between eight quarters and 21 quarters will be amortized (quarterly payments of principal and interest) over a period of 40 quarters with the balance due at maturity. There is some demand for these loans from borrowers with special needs
- If the maximum maturity is 21 quarters or more, loans made with the maximum maturity will be amortized over 80 quarters with the remaining balance due at maturity. Such loans can be considered normal commercial real estate loans

Since all three types of loans may be in demand, if the maximum maturity decision is 20 quarters or less, the bank is limiting the type of borrower to which it is willing to lend. If the bank sets the maximum maturity decision greater than 20 quarters, all types of customers can be accommodated; however, some customers will prefer a longer maturity than 21 quarters if it is offered.

A maximum maturity decision of 40 quarters will meet the needs of all customers, and very few customers are willing to borrow at a maturity of less than four quarters.

Rate Adjustment Period

Management can specify how long it will be before the interest rate on a real estate loan may be adjusted. The decision is in quarters and can be any value from 01 to 99 quarters.

When a real estate loan is made, a spread is calculated against the rate on a Treasury bond with the same maturity as the rate adjustment period for the loan—the index rate. The borrower is then charged the bank's decision rate until the rate adjustment period expires. At that time, the original spread is added to the value of the index rate.

For example, suppose that rate adjustment period is four quarters. If you make a loan today at an interest rate of 9.0 percent and the current four-quarter Treasury bond rate is 7.0 percent, the spread on the loan will be 2.0 percent. The annual interest rate on the loan will be fixed at 9.0 percent for the next four quarters.

Four quarters from now, a new rate will be established for the loan. If the four-quarter Treasury bond rate at that time is 7.50 percent, the loan will have a new interest rate of 9.50 percent that will remain fixed for the following four quarters.

If the rate adjustment period is one quarter, real estate loans will change with the same frequency as those for business loans. All these loans will have variable earning rates. If the rate adjustment period is equal to the maximum maturity decision, the bank is making fixed rate commercial real estate loans. A one-quarter rate adjustment period produces loans that have stable market values.

A rate adjustment period greater than 20 quarters produces loans whose market values will vary significantly with changing interest rates.

Fixed-rate Residential Mortgages

Fixed-rate residential mortgages are made at the current interest rate decision of the bank and have maturities of 60 quarters (15 years) and 120 quarters (30 years).

They are repaid in equal quarterly installments of principal plus interest. These loans are all secured by 1–4 family homes and tend to be the safest loan made by the bank.

Borrowers may repay ahead of schedule, especially if interest rates decrease significantly.

The bank earns origination fees of 2.0 percent (two points) on all new residential mortgages and these loans may be sold.

Installment Loans

Consumer installment loans are fixed rate, level payment, and amortized loans. They are predominately secured by consumer durable goods such as cars, boats, and appliances.

They carry initial maturities of eight quarters to 20 quarters. The demand for these loans is rather seasonal in that new loan demand is about 20 percent lower during the first quarter of the year compared to future quarters.

Additional Loan Types

There are four other types of loans that could be available to the bank depending on the program focus—agricultural loans, variable-rate residential mortgages, home equity credit lines, and credit cards. Your program administrator decides which loans your bank may offer.

Agricultural Loans

Agricultural loans are credit lines to the agricultural industry—loans to farmers and farming companies. The distinguishing feature of these loans is their dependency on the time of year.

These loans are credit lines with a commitment of one year on origination. They are like credit lines for business firms with some differences.

Initial commitments and credit line draw on agricultural loans follow a seasonal pattern. Most of the initial commitments are made in the winter and spring quarters; that is, from January through June.

Draws (actual loans made) take place most heavily in spring and summer quarters, March through September. Therefore, these loans usually reach their maximum level at the end of September, then decrease to relatively low levels at the end of December and the end of March.

The activity in these loans and the current level of commitments are shown in Report B20.

Agricultural credit lines carry an interest rate that varies with the prime rate, the base rate for business loans. Also, they are not extended for more than four quarters. They all have an initial maturity of four quarters.

The bank earns a 1.50 percent origination fee on new credit lines extended. The fee is based on the size of the commitment, not the amount initially loaned. The fees earned in the current quarter are therefore one and 0.50 percent of the amount of new commitments shown in Report B20.

Variable-rate Residential Mortgages

Variable-rate mortgages appeal to a somewhat different customer than fixed-rate mortgages although these two products are substitutes; that is, both products serve the needs of the 1-4 family financing market.

The interest rate posted by the bank sets a spread against the four-quarter (one-year) U.S. Treasury rate. Each year, on the anniversary date of the mortgage, the interest rate is re-set to be the current rate on four-quarter U.S. Treasuries plus the spread.

These mortgages are re-amortized when the rate changes to avoid negative amortization from an increase in interest rates. Variable-rate mortgages have original maturities of 60 and 120 quarters.

Home Equity Credit Lines

From a marketing perspective, home equity credit lines should be considered a form of consumer lending, even though they are secured by real estate and classified as such on the balance sheet.

Borrowers who qualify for these loans can use them as a substitute for other types of consumer credit, primarily installment loans. Home equity loans carry a variable interest rate based on the one-quarter Treasury rate—the bank's decision sets the spread on new loans.

Home equity lines have a minimum principal payment equal to the current balance divided by the quarters to maturity based on an original maturity of 20 quarters.

Usage rates on home equity credit lines depend on the current level of interest rates on other types of consumer debt in comparison with the rates currently being charged on the credit lines. Typical usage rates are 25–35 percent.

These loans pay a 2.0 percent origination fee on new credit line commitments and a \$25 annual fee.

Credit Cards

Credit cards do not mature in any meaningful sense. Customers in good standing have their cards renewed at expiration dates that range from four to eight quarters. Therefore, the balances and outstanding credit card lines (commitments) tend to be ongoing.

Each customer has a credit limit like those established for business credit lines. The total amount of these limits for existing customers is shown as Credit Card Commitments on Report B20.

Credit cards have an additional decision—an annual fee may be charged. An annual fee is a fee charged to credit card customers entered in \$ per year; for example, a decision of 15 is a fee of \$15 per year per account. Credit card fees are assessed annually on each account at the current annual fee charged. Roughly 25 percent of continuing old customers will pay the fee each quarter. New customers pay the fee in the quarter when their account is opened.

The bank earns interest only on credit card accounts that are not paid in full each month. The total balance outstanding reflects both current balances and balances earning interest.

In addition, the bank receives income from merchant discounts at a rate of 1.50 percent of credit card billings (new loans) for the quarter. The interest rate applicable each quarter to those accounts paying interest is the current decision rate.

A change in the rate charged applies to all accounts except those of customers who pay their entire balance monthly. A summary of the income received from all sources is shown in Report B22.

Credit cards tend to have the highest charge-off rate of any loan that is made by the bank. Some customers may pay off the bank entirely during the quarter. The decision by customers to substantially reduce or eliminate their credit card balances is sensitive to the interest rate charged by the bank relative to alternatives available in the market.

Remember, most credit card customers carry more than one card, and many have alternative loan sources such as home equity credit lines.

Loan Sale Decisions

Individual residential mortgages and commercial real estate loans currently in the bank's portfolio may be sold in pre-set packages that are shown on Report B24 and the Loan Input Form and illustrated in *Figure 12*. The bank will receive the market value of the package on the first day of the quarter in which it is sold. Sale of part of a package is not permitted.

Figure 12. Loan Sale Input Form (lower part)

Loans Available for Sale

	Book Value	Market Value	Gain-Loss	Sell
Commercial Real Estate				
201	7.477	7.486	0.010	☐
202	9.836	9.814	-0.022	☐
203	6.944	6.922	-0.022	☐
204	9.937	9.915	-0.022	☒
Residential Mortgage (FR)				
205	8.989	8.726	-0.263	☐
206	9.181	8.438	-0.743	☐
207	9.026	9.197	0.171	☐
208	9.824	9.643	-0.180	☐

Save Changes

*Figure 12: Illustrates the sale of package 204. To sell a package, click the **Sell** checkbox and save changes.*

There are never more than eight loan sale packages and the packages available change each quarter. For example, some of the loans that are in Package 201 this quarter might be in Package 202 next quarter.

Sales are made without recourse to the bank, but only performing loans may be sold. Loans that are non-performing at the time of sale are not included in the sale packages.

The market demand for the packages is sensitive to maturity, and the price offered depends on the credit quality of the loans. Customers for these packages require a due diligence examination of the loan documents and an assessment of the borrowers' credit risk. Longer maturities are usually more acceptable.

The bank retains the servicing on all loans sold and earns an annual fee of 0.8 percent of the outstanding balance for this service. The income and expenses associated with servicing loans that have been sold are shown in Report B20.

Provision for Loan Losses

The provision for loan losses on the bank's income statement is determined by a regulatory requirement that the bank maintain a loan loss reserve (on the balance sheet) of at least 1.0 percent of total loans.

Since sale of loans is without recourse, the bank is not required to include these loans in the calculation of the required reserve. When loans are increasing, the loan loss reserve will be exactly 1.0 percent of total loans. If loans increase by \$50 million, the loan loss reserve must increase by \$0.5 million.

Loan charge-offs (actual loan losses) are deducted from the reserve each quarter. Therefore, the provision for loan losses will equal any required additions to the reserve plus charge-offs. In a quarter when loans increase by \$50 million and charge-offs are \$0.3 million, the provision for loan losses is \$0.8 million ($0.8 = 0.5 + 0.3$).

The accounting rules for the bank do not permit negative provisions for loan losses. If loans are decreasing and charge-offs are small, the provision for loan losses may be zero, and the reserve for loan losses may be greater than 1.0 percent of total loans. No additional provisions will be required in this situation until the loan loss reserve is reduced to 1.0 percent.

Figure 13. Loan Decision Summary

Product	Market	Comments
Business Credit Lines	Maturities: 4–12 Quarters Rate: Spread against prime rate Rate may vary each quarter	Standard bank product, large volume Bank receives 1.5 percent fee on new loans plus 1.0 percent per year for lines
Business Term Loans	Maturities: 8–20 Quarters Rate: Spread against prime rate Rate may vary each quarter	Bank receives 1.5 percent fee on new loans Customers may substitute for credit lines if rate is attractive
Agricultural Loans (Option)	Maturity: 4 Quarters Rate: Spread against prime rate Rate may vary each quarter	Bank receives 1.5 percent fee on new loans Highly seasonal

Product	Market	Comments
Commercial Real Estate Loans	Maturities: Maximum set by bank. Rate: Spread against Treasury bonds set by bank Rate adjustment period set by bank	A maximum maturity of 40 quarters will meet the needs of all potential customers Bank receives 2.0% fee on new loans These loans may be sold without recourse
Fixed-rate Residential Mortgages	Maturities: 60 & 120 Quarters Rate: Fixed	Bank receives 2.0 percent fee on new loans These loans may be sold without recourse
Variable-rate Residential Mortgages (Option)	Maturities: 60 & 120 Quarters Rate: Spread against Treasury set by bank	Bank receives 2.0 percent fee on new loans These loans may be sold without recourse
Home Equity Credit Lines (Option)	Maturity: 20 Quarters Rate: Spread against one-quarter Treasury bill rate set by bank	Bank receives 2.0 percent fee on new loans and \$25 annual fee
Installment Loans	Maturities: 10–20 Quarters Rate: Fixed for life of loan	No fees involved Secured by consumer durable goods
Credit Cards (Option)	Maturity: Indefinite, normally renewed every four or eight quarters Rate: Current decision rate set by bank applies to new and outstanding loans	Customers pay an annual fee set by the bank Bank receives merchant discounts of 1.5 percent

Deposit Decisions

PRODUCT TYPES

The bank acquires deposits from two types of customers—businesses and individuals.

There are a variety of customers with differing account characteristics. For example, some customers keep relatively large deposit balances with the bank, others keep relatively small balances.

There are three primary deposit products available to bank customers:

1. Checking accounts (Business and Individual)
2. Savings accounts
3. Fixed maturity savings certificates (retail time accounts) with either variable or fixed interest rates

These deposit sources are considered core deposits in that a customer relationship is based on factors other than just price and these customers often use more than one product or service offered by the bank.

For example, roughly 75 percent of business checking deposits will come from customers who also borrow from the bank. Business customers also keep time and savings deposit accounts with the bank. Individuals may also be borrowers and are likely to keep more than one type of deposit account at the bank.

The bank may also issue large, negotiable certificates of deposits (CDs); but these are more properly considered purchased funds and are described in the section on Treasury Management.

Figure 14. Deposit Decisions

Deposit Pricing

	Monthly Fee	Item Charge	Interest Rate	Mkt. Int. Rate	Business Dev.	Minimum Balance
Business Checking	10.00	0.05	2.00	3.34	H	
Individual Checking	0.00	0.10	1.50	2.98	M	1000
Individual Savings	0.00		2.10	2.51	M	
Premium Rate			3.45	3.76		1000

Retail Time Accounts	Maturity			Max Issue
Variable Rate	4	3.40	4.23	20
				M
Fixed Rate	2	4.00	4.49	20
	8	4.50	4.95	20
	12	4.90	5.02	20

Business Development Budgets

Salaries:
300
Advertising and Promotion:
150

Save Changes

Figure 14: Core deposit products decisions are entered on the Deposit Input Form as shown.

If no new decisions are made, current decisions will be carried forward to the next quarter. The interest paid on deposit accounts is credited to the account and accrued each quarter.

Direct cash payments to customers are treated as withdrawals. The amounts of interest accrued, and cash withdrawals are shown in the Deposit Activity and Performance Report B40.

Checking Accounts

The bank offers checking accounts separately to businesses and individuals with separate pricing policies.

The level of *business* checking accounts depends in part on the business loan policies of the bank and the specific deposit decisions. The level of *individual* checking accounts depends primarily on the deposits decisions—there is little impact from individual loan policies.

The five decisions for checking accounts are discussed below.

1. Monthly Fee

The monthly fee is in dollars per month and is assessed against each account during the quarter.

For example, a 10.00 fee of \$10 per month per account. When a new fee is charged, it applies immediately to all accounts.

2. Item Charge

The item charge is in dollars per item and applies immediately to all accounts. Each check processed through the account is an item; therefore, an item charge of .08 is a charge of \$0.08 per check processed. The maximum item charge is \$0.99.

3. Interest Rate

The interest rate is stated as an annual percentage rate. For example, a decision of 2.50 provides customers with annual interest of 2.5 percent of the average balances in their accounts. Interest is computed quarterly at the annual rate in effect for the quarter divided by four.

Business checking accounts are not paid explicit interest; the interest rate for them is a credit against service charges. Therefore, the service charges shown for business accounts on report B40 are net of the credits. Individual checking accounts that exceed the minimum balance (see this decision below) are paid interest, which is shown separately in Report B40.

4. Business Development

The business-development decision for deposit accounts is the same as that for loans. It sets a priority for the business development budget. The choices available are High (H), Medium (M), Low (L), and None (N). This decision is described in detail in [Basic Loan Decisions](#). Loan and deposit business development decisions should be coordinated.

5. Minimum Balance

The minimum balance decision for individual checking accounts determines whether an account will earn interest. Accounts that do not meet minimum balance requirements during the quarter do not earn interest. The minimum balance decision is in dollars. An input of 500 is a minimum balance requirement of \$500 in a customers' account for that account to earn interest.

Increasing the minimum balance limits the pool of customers who might qualify to receive interest. Customers have some normal level of balance they are willing and able to maintain in checking accounts. Although customers may increase their balances somewhat to earn interest, a customer who, for example, normally keeps a minimum balance of \$200 in checking is unlikely to increase the amount to \$500 to receive interest.

Savings Accounts

While there is no longer a regulatory limitation on transfers from savings accounts, some banks may limit certain types of withdrawal transfers. For this reason, they are not a good substitute for checking accounts for most individuals. Some businesses will use these accounts for a liquid, interest-bearing investment.

The bank may charge a monthly fee for this service and there is a business-development decision with the same characteristics as the comparable decisions for checking deposits.

The interest rate paid on this account, however, may depend on the minimum balance in the account. Therefore, there are two interest rate decisions as shown on the Deposits Input Form in *Figure 14*.

1. Interest Rate

The minimum interest rate is the amount of interest paid on all accounts for the quarter. The decision is entered as an annual percentage rate. A decision of 2.50 indicates that interest will be paid during the quarter at an annual rate of 2.5 percent, or 0.825 percent per quarter. Interest is paid quarterly on all accounts at the current rate in effect for the quarter that is applicable to each account.

2. Premium Rate

The premium rate is the interest rate that applies to the entire balance for accounts that maintain the specified minimum balance, entered as the annual percentage rate. If this rate is less than the interest rate on the account, the decision has no effect.

3. Minimum Balance

The minimum balance is the amount required to qualify the account for the premium interest rate. The decision is in dollars. For example, a decision of 1000 means that the minimum balance required is \$1000. A minimum balance of 0 means that all accounts receive the premium rate.

See the Checking minimum balance information above regarding the impact of this decision on customers.

A breakout of the accounts receiving the standard interest rate and the premium rate is shown in Report B40, lower right (*Figure 15*).

Figure 15. Standard and Premium Interest Rates on Report B40

Annual Rate										
Retail Time Accounts Maturities							Savings Accounts Analysis			
	Next Quarter	Quarter Two	Quarter Three	Quarter Four	Over 1 Year	Total		Ending Balance	%	Intrst Expns / Avg Bal
Variable Rate	10.5	13.7	7.9	2.8	19.4	54.2	Standard	35.179	15	2.0%
Fixed Rate	8.1	6.1	0.0	23.2	142.2	179.7	Premium	206.073	85	3.5
Total	18.6	19.8	7.9	26.0	161.6	233.9	Total	241.252	100	3.3

Figure 15: Example of rate information on Report B40.

Time Deposits

The bank can offer two types of time deposit accounts, variable-rate and fixed-rate. There are four decisions that apply to these deposits: business-development priority (a single decision applying to all time deposits), interest rate, maturity, and maximum issue.

Business development and interest rate decisions are entered like those for the other deposit accounts.

1. Maturity

Maturity is the original maturity of the deposit in quarters, which may be any value from 1 to 99. For example, a decision of 20 provides a certificate with a 20-quarter maturity. There is currently a regulatory maximum maturity of 40 quarters for bank time deposits.

Use the Clear Row icon  to no longer offer that type of product.

Time deposits are paid out at maturity—there is no automatic renewal or rollover of these accounts.

Time deposit customers tend to shop around for the best rates available in the market somewhat

more than for the other deposit products. Therefore, management must be careful about the pricing of these accounts when there are large amounts maturing in the coming quarter.

Report B40 shows scheduled maturities for future quarters and the overall liquidity position of the bank is shown in Report B05.

2. Maximum Issue

The maximum issue is the amount of new deposits in a certificate that the bank wishes to accept in the quarter in millions of dollars, for example, a decision of 10 is \$10 million. The amount entered may be any number from 1 to 99 million.

Use the Clear Row icon  to indicate the bank is not willing to accept any certificates of this type during the quarter.

A decision of 99 means that the bank will accept all that is offered. It is highly unlikely that the possible deposits in a single certificate will ever exceed \$99 million.

Maximum issue limits the amount of new deposits issued in a single certificate. Management may choose to limit the amount when they are offering an unusually attractive interest rate to new depositors.

Any time the bank offers depositors interest rates on new certificates that are above the same maturity Treasury bond or bill and are significantly higher than competing banks, relatively large amounts of deposits from individuals and firms who are not normally customers may be attracted to the bank.

Once the deposits are received, the bank cannot pay them off before maturity. Consequently, management should carefully consider the amount of such high-interest rate deposits the bank can afford to obtain. The market for high-interest rate deposits is for maturities of one to four quarters. The preferred maturity is four quarters.

Note: The maximum issue can be set to 0 as a convenient way to temporarily suspend the offer of a certificate rather than eliminating it more permanently. If 0 is entered for the interest rate or maturity decision, it means that the certificate will not be offered—does not exist. However, a decision of 0 for maximum issue retains the existing values for maturity and rate, but the bank will not accept deposits of this type during the quarter. Customers know that the bank is not accepting deposits in the certificate; therefore, the decision has the same impact on customer behavior as eliminating the certificate.

3. Variable-rate Time Deposits

Variable-rate time deposits pay a rate of interest that is indexed to the interest rate on one-quarter Treasury bills (T-bills). The spread on new deposits, which can be positive or negative, is set by the bank's interest rate decision for these accounts. Thereafter, until maturity, the interest paid quarterly is one-fourth of the current annual rate on the T-bill plus the spread that was set at the time the deposits were made.

For example, suppose that the bank's interest rate is set to 4.25 percent, and that the T-bill rate is 5.0 percent. The spread set on new deposits during this quarter will be -0.75 percent, a negative number. These deposits will carry an annual interest rate that is always 75 basis points—0.75 percent—less than the T-bill rate each quarter. However, note that if the T-bill rate in the next quarter falls to 4.0

percent and the bank makes the decision to keep their interest rate at 4.25 percent, all new deposits made in that quarter will carry a spread of +0.25 percent.

The bank will pay interest on these deposits at an annual rate that is 25 basis points greater than the T-bill rate in future quarters. Therefore, the interest rate must be changed whenever the T-bill rate changes if the bank wishes to keep a constant spread on these accounts. Use the Clear Row icon  to indicate the bank is not willing to offer variable-rate time deposits.

Variable-rate time deposits remain with the bank until their maturity as established by the maturity value at the time they were received. Once issued, the maturity of a deposit cannot be changed by the bank or by the customer. There are no early withdrawals from these accounts.

4. Fixed-rate Time Deposits

The bank can offer up to three different fixed-rate time deposit certificates each quarter. Since management has a great deal of flexibility with this product, the rules for entering decisions must be followed carefully.

If no entry for maturity or interest rate is made, whatever decisions were in effect for the prior quarter are carried over. However, any change to the certificates offered must be made according to these rules:

- If there is a zero value for last quarter's decision on a line, both maturity and interest rate decisions must be entered to have a valid certificate.
- If a zero is entered for maturity or rate, no certificates of this type will be offered in the quarter.
- If one or more of the decisions for a certificate are left blank, the values for the last quarter will remain in effect.

Although the bank cannot change the maturity date of a fixed-rate certificate once it is issued, the customer may choose to withdraw the money prior to maturity. Such an early withdrawal carries a penalty in the form of a reduction in the interest rate on the certificate. Therefore, the customer will not receive all the interest accrued in the account.

Any penalties of this sort are accounted for as an offset to interest expense in the quarter a withdrawal is made. The amount of early withdrawals for time deposits is shown in the Withdrawals column in Report B40.

Early withdrawals may occur for several reasons (the customer may have an unexpected need for money), but large withdrawals are most likely when there has been a large increase in market interest rates. For example, suppose the bank has been able to attract fixed-rate time deposits by paying 4.5 percent per year on 20-quarter maturity certificates while Treasury bonds of the same maturity had an interest rate of 5.0 percent. If the interest rate on 20 quarter Treasury bonds increases to 8.0 percent, the owners of 4.5 percent certificates with 12 or more quarters remaining to maturity might find it worthwhile to pay the penalty and withdraw to invest in Treasury bonds or bank time deposits paying a comparable rate.

Figure 15. Deposit Decision Summary

Product	Set by Bank	Comments
Checking		
Business Checking Accounts	Monthly fee Item charge Interest (credit) rate	Business deposit customers are usually borrowers as well Net interest is not paid
Individual Checking Accounts	Monthly fee Item charge Interest rate Minimum balance for interest	There is limited substitution between checking accounts and the other deposit products for individuals
Savings		
Savings Accounts	Monthly fee Interest rate Premium rate Minimum balance	Interest rate is the minimum rate paid Premium rate is only paid on accounts with balances greater than the minimum balance
Fixed maturity savings certificates (retail time accounts)		
Variable-Rate Time Deposits	Maturity—regulatory maximum of 40 quarters Interest rate: Spread against one-quarter Treasury bills set by bank when deposit is made	All interest is accrued and there are no early withdrawals Product can be eliminated by entering 0
Fixed-Rate Time Deposits	Maturity—regulatory maximum of 40 quarters Interest rate—fixed until maturity of deposit	Three different certificates may be offered All interest is accrued Early withdrawals may occur with penalty assessed on customer A certificate can be eliminated by entering 0

OTHER DECISIONS

Three other decisions are also entered on the Deposit Input Form:

- Business development salaries

- Advertising budget
- Bank name

These decisions have a variety of impacts, some of which are more appropriately discussed elsewhere in the manual. *Figure 16* shows the fields in the Deposit Input Form where salaries and advertising budgets are entered.

Figure 16. Deposit Input Form: Business Development Budgets

The image shows a screenshot of a web form titled "Business Development Budgets". Below the title, there are two input fields. The first field is labeled "Salaries:" and contains the number "300". The second field is labeled "Advertising and Promotion:" and contains the number "150".

Business Development Budgets

The two amounts in business development budgets provide resources that are allocated by the business development priorities in the loans and the deposits areas. The basic allocation rule was explained when the priority decision was introduced in [Basic Loans Decisions](#).

Both decisions set quarterly budgets and are entered as thousands of dollars. For example, a salaries input of 300 represents a business development salaries budget of \$300,000 per quarter. An advertising and promotion budget of 100 represents a budget of \$100,000 per quarter. The maximum possible expenditure for the budgets is \$9,999,000—an input of 9999.

Both budgets are allocated by the same decision rules. All products with a *High* business development priority will be allocated the same amount of salaries and the same amount of advertising and promotion. These allocations are included as product costs in the relevant reports, B22 for loans and B40 for deposits.

The Advertising and Promotion budget sets the total amount spent on these services and therefore shows up as a line item on the income statement of the bank, Report B02. This budget contains all expenditures made to non-employee individuals and firms for services such as media advertising (newspapers, TV, etc.), signs and billboards, memberships in organizations involving customer contacts, travel by employees, advertising agency fees, coffee in the bank's lobby, gifts to customers, etc.

The value of such activities depends on the kind of product being promoted. For example, time deposit customers are relatively price-sensitive and are unlikely to be affected a great deal by advertising. You may wish to place a relatively low priority/budget for this product. Checking account customers are less price-sensitive and more service conscious. They are more likely to respond to business development activities.

The salaries budget provides additional staff to support business development activities. This budget is included as part of the salaries and benefits line item on the income statement, Report B02, and is in addition to the basic staffing required to run the bank's business. A general discussion of bank staffing and cost control is provided in the section [Controlling Operating Expenses](#).

The business development salaries budget provides both direct and indirect support for the business development efforts of the bank.

- Direct support is provided by marketing staff. A zero budget would imply no marketing personnel employed by the bank—all such services would have come from outside vendors paid from the advertising and promotion budget.
- Indirect support takes the form of having enough employees in an area to make free time for some or all of them to engage in business development activity. For example, if no business development is allocated to business credit lines, the loan officers in this area will be forced to spend all their time on existing customers and accounts. They will never have any time available to solicit new business.

A zero value for the business development salaries budget will shut down the solicitation of new accounts and customers for the bank's services by the bank's employees. This is unlikely to be a good decision unless the bank wishes to shrink its size significantly and as quickly as possible.

Treasury Management

SOURCES OF FUNDS

The primary function of treasury management is to obtain cost-effective funding for the bank's assets in a form to control interest rate and liquidity risks. The bank has five discretionary sources of funds available to it:

1. Repurchase agreements
2. Certificates of deposit
3. Federal Home Loan Bank borrowing
4. Subordinated debt
5. Common stock

Subordinated debt and common stock are sources of capital for the bank. These sources are used infrequently. See the discussion of [Capital Management](#). The other sources are regarded as purchased funds or discretionary liabilities and require quarterly management.

The decisions regarding these sources are entered in the Treasury Input Form each quarter as shown in *Figure 17*. The same information is provided in Report B64.

Figure 17. Purchased Funds Decisions

Bank Asset Funding						
Source	Desired Amount (\$Millions)	Available Amount	Maturity	Available Rate	Current Maturing	Current Balance
Fed Funds Borrowed	Auto	N/A		4.36	40.5	
Repos		10		4.25	0	
CDs					0	
1 Quarter		43		5.10		0
2 Quarter		32		5.35		0
3 Quarter		10		5.52		0
4 Quarter		21		5.64		
FHLB Debt		116			0	0
Subordinated Debentures and Common Stock						
Amount	Issue			3 - 5 Million	6 - 10 Million	12 - 16 Million
	Subordinated Debentures: Interest Rate			5.59	5.59	5.62
	Common Stock: Price per Share			19.97	20.09	20.14

Figure 17: Shows decisions regarding Treasury Input for each quarter; also provided on Report B64.

The purchased funds decisions made in the last quarter do not carry forward. New decisions must be made each quarter.

There is an additional source of funding, federal funds, purchased as needed to balance the bank. Federal funds purchases are not under the direct control of management as discussed in the section on [Liquidity Management](#).

Repurchase Agreements

Management may acquire funds by entering into repurchase agreements or repos. The desired amount is entered as millions of dollars, and the amount borrowed from this source will be continuously outstanding during the quarter.

In *Figure 17*, \$10 million in repos is being requested. All repurchase agreements are based on Treasury securities as collateral. The maximum amount that can be obtained is the market value of the Treasury portfolio at the beginning of the quarter after all securities transactions have been completed.

If the decision entry is greater than the maximum available, the actual amount will be this maximum. In *Figure 17*, the amount shown as available is the current market value of the Treasury securities in the

bank's portfolio that are not maturing this quarter. The actual amount that will be available is the value shown *plus* any purchases *less* any sales.

Certificates of Deposit (CDs)

CDs may be issued in maturities of one, two, three, and four quarters. The amounts and rates available are shown in Report B64. The amounts shown are absolute upper limits. Requests for CDs above those amounts will not be honored, and the maximum available is issued.

The amount desired for each maturity is entered as millions of the currency desired and may be any amount in even millions up to the maximum shown. For example, if \$43 million of one-quarter CDs are available, the bank could request \$8 million and receive that amount. Fractional amounts (for example, 8.5) are NOT acceptable decisions. If a space is left blank, no CDs of that maturity will be issued.

Each bank will have a unique schedule of CDs available. The rates and amounts will depend on the following:

- The size of the bank (large banks will have more available than small banks)
- Past issues (the potential total amount outstanding is limited)
- The market's assessment of the risk of the bank as indicated by its credit rating shown in Report C94, which will affect both rates and volume available to the bank

Once issued, CDs will remain until maturity. Interest is accrued quarterly with the entire principal and interest payment made at maturity.

FHLB Debt

The bank is currently a member of the Federal Home Loan Bank (FHLB). To remain an FHLB member the bank must maintain at least 10 percent of total assets in residential mortgages. Failure to maintain this ratio can result in the withdrawal of membership, which would eliminate future advances. The bank regulatory agency is responsible for overseeing compliance with FHLB rules.

Membership entitles the bank to have available fixed-rate financing in any maturity from one to 40-quarters at relatively attractive rates that are not dependent on the credit rating of the bank. The rate on a borrowing contract is priced as a spread added to the current rate on US Treasury bonds for the contract maturity. The spread equals 25 basis points plus two basis points per year to maturity.

For example, the spread on a 20-quarter (five year) contract would be 35 basis points. If the current rate on 20-quarter US Treasury bonds is 5.5 percent, the bank could obtain 20 quarter fixed rate financing from the FHLB for 5.85 percent.

The FHLB limits the amount of borrowings that can be outstanding based on the credit rating of the bank and the number of residential mortgages held by the bank in its portfolio at the end of each quarter. Residential mortgages are used to secure the debt. Therefore, the amount of new borrowing available depends on the current outstanding amount, the credit rating, and the size of the mortgage portfolio.

A bank with a credit rating of C or below cannot borrow new funds from the FHLB although existing debt does not have to be repaid prior to its maturity. The maximum number of new advances under the program is shown on Report B64.

FHLB Borrowings are now noted in Reports B01, B05, B06 and B64.

Subordinated Debt

The bank may raise capital by issuing long-term debt in the form of subordinated debt or common stock. These decisions are also entered in the Treasury Input Form as shown in *Figure 18* below.

Figure 18. Capital Issue and Other Decisions

Subordinated Debentures and Common Stock				
Amount	Issue	3 - 5 Million	6 - 10 Million	12 - 16 Million
	Subordinated Debentures: Interest Rate	5.59	5.59	5.62
	Common Stock: Price per Share	19.97	20.09	20.14

Figure 18: Raising capital with Subordinated Debt and Common Stock is entered on the Treasury Input Form; also shown in Report B64.

Subordinated debt pays a fixed rate of interest quarterly and has a single principal payment due 60 quarters from the date of issue. If management wishes to issue subordinated debt, they may choose from a range of amounts as shown in Report B64 and the Treasury Input Form.

Only one issue of subordinated debt may be made in any quarter. The interest rates the bank will pay for any amount within the range are shown in the reports.

The amount desired is entered as millions of dollars. Do **not** enter fractional amounts. The amount entered must be within the range of amounts shown. Any decision that does not match is not allowed, and no issue will be made.

For example, in *Figure 18*, the choices are 3-5 million, 6-10 million, and 12-16 million, decisions of 1, 2, 11, or greater than 16 are not accepted and will result in no issue.

Interest rates on subordinated debt issues are the effective rates after issue costs and reflect both the financial soundness of the bank and capital market conditions. Therefore, the rates available depend on the credit quality of the bank.

The market for note issues may be limited in amount. If N/A is showing for the interest rate, it means that amounts in this range are not available.

Common Stock

The bank may also issue common stock for amounts within the ranges shown in Report B64 and the Treasury Input Form. The rules regarding the amount of common stock to be issued are the same as those for subordinated debt described above.

Only one amount can be entered, and it must match one of the amounts shown. The issue price per share reflects the net proceeds to the bank after all expenses and can be used to determine the number of shares that must be issued to raise a given amount.

For example, suppose that you wish to raise \$5 million in common stock and that the issue price for an issue of \$5 million is \$25.00 per share. The number of shares that will be issued is \$5 million divided by \$25, which equals 200,000 shares. The variation in the issue price per share for different issue amounts is due to two partially offsetting factors. First, the market absorbs small issues more easily than it does large issues. Second, the costs of issuing stock decline as a percentage of the amount issued as the amount issued increases.

CAPITAL ISSUE DECISIONS

Subordinated debt and common stock are external sources of bank capital. The other source of capital is retained earnings generated by the bank's operations, an internal source.

A decision to raise new capital from external sources should not be taken casually and should be made considering the bank's strategic plan. See [Strategic Planning](#) and [Capital Management](#) for additional considerations.

It is possible to issue both subordinated debt and common stock in the same quarter; however, if you wish to issue both types, it may be advantageous to do them in sequence.

For example, a stock issue should reduce the leverage of the bank, which could reduce the interest rate on a subordinated debt issue in the next quarter.

OTHER DECISIONS

Two other decisions are included in the treasury management area—dividends per share and management's forecast of earnings per share for the coming quarter as shown in *Figure 19*.

Dividends per Share

The prior value of dividends per share remains in effect unless changed by management decision. The dividend is entered as dollars per share; for example, a decision of 0.25 is a dividend per share for the coming quarter of \$0.25. The cash dividend payment will be made at the end of the quarter for which it was declared.

Generally, bank managers are wary of cutting the dividends per share. Reductions in dividends often result in a decline in the price of the bank's stock, but reductions can help alleviate capital deficiencies.

EPS Forecast

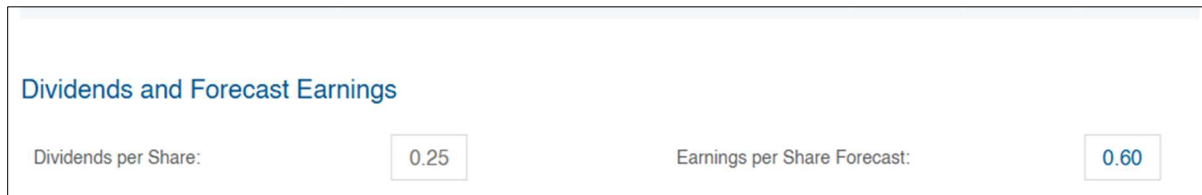
A forecast of the earnings per shares of common stock (EPS) for the next quarter is required before submitting your Action Plan for competition. Unless changed, the EPS forecast used for the prior quarter (quarter just ended) will be used. The amount should be entered as dollars.

For example, a forecast of 0.60 is \$0.60 per share. To show that a loss of that amount is expected, place a minus sign in front of the figure. The forecast is communicated to analysts and used by investors in the bank's stock to evaluate the ability of management.

Poor forecasts will adversely affect the price of the bank's common stock, especially if the forecast is much higher than actual EPS.

Note that the Financial Forecast income statement shows the forecasted EPS based on the decision inputs. Generally, the EPS forecast entered on the Action Plan should be relatively close to the preferred Financial Forecast. Over time, your bank may consider tracking the difference between the Financial Forecast EPS forecast and actual EPS.

Figure 19. Treasury Decisions: Earnings Per Share



The screenshot shows a web form titled "Dividends and Forecast Earnings". It contains two input fields: "Dividends per Share:" with a value of "0.25" and "Earnings per Share Forecast:" with a value of "0.60".

Dividends and Forecast Earnings	
Dividends per Share:	0.25
Earnings per Share Forecast:	0.60

Figure 19: Dividends per share and forecast of earnings per share for the coming quarter.

Strategic Planning

In BankExec your management team has the ability to determine the goals and strategies for the bank. In some situations, you will receive guidance from your instructors acting as the bank's Board of Directors; however, it will be your job to determine the direction you wish to take the bank.

You need to consider the size of the bank, the markets you want to focus on, and what levels of profitability and performance your team aspires to reach. In other words, you need a strategic plan for the bank.

SITUATION ANALYSIS

The planning process usually begins with an analysis of the current situation. You may have completed an exercise in advance of the program that provided you the opportunity to look at the financial situation of the bank you are taking over. You should also consider the strengths and weaknesses of your management team to complete the process.

Your team may be given a formal assignment to complete which asks for a consensus analysis and evaluation of the situation of the bank. A standard approach is called SWOT analysis as you are asked to identify:

- **S**trengths
- **W**eaknesses
- **O**pportunities
- **T**hreats

In SWOT analysis, first look inside your bank and identify its strengths and weaknesses. This includes financial condition, market position, and organizational aspects of the bank.

Next, look outside the bank and assess opportunities and threats. This includes the competitive, regulatory, and economic environment. The following section regarding Financial Management presents most of the elements of a situation analysis.

Mission Statement

The next step in the planning process is usually the development of a mission statement for the bank. The mission statement should set out the bank's purpose and values.

It is a management tool to provide a strong sense of direction for the development of the strategic plan in a form that can be clearly communicated to all members of the organization.

It is not enough to say that the bank's mission is "to be profitable and grow by providing a high level of customer service in the community" or "to enhance stockholder value." These could be statements for any bank.

The mission statement should clearly and succinctly state the business your bank is in. It needs to articulate what makes your bank different from its competitors. Banks can differentiate themselves on

products, customers served, pricing, technology, and image, among other factors. The mission statement should indicate the values expressed by the bank's corporate culture and the philosophy of senior management.

While this may be difficult for your team to formulate at first, you will see how these elements influence your decision-making throughout the exercise. The values of your management team are expressed in part by your choice of organizational structure and management style. The mission statement should also guide operating decisions.

Goals

The situation analysis identifies where the bank is now. The mission statement indicates the overall direction of the bank for the future. The next step is to translate the general mission statement into specific targets or goals for where you want to be in a specified future time.

For example, suppose your mission statement states that you wish to enhance stockholder value. To do this, you might set a goal of achieving a rate of return on equity of 20 percent in your first year of operations.

The goals you set must be realistic, capable of being achieved. Goals should be based in part on your analysis of the bank's situation. It is unlikely that a goal of doubling the size of the bank in one year is achievable if the economy appears to be headed down or only growing at a rate of 2.0 percent per year.

Since it is common to have more than one goal, you should check for consistency with each other. For example, a goal to achieve a significant increase in profitability may not be consistent with another goal to substantially increase the bank's size at the same time. Goals should have a hierarchy or ranking indicating which are more important.

Finally, they must be measurable—everyone should be able to tell whether the goal was reached or not. A goal to be a profitable bank is ambiguous; a goal to achieve 1.50 percent return on assets can be clearly assessed and progress toward the goal can be evaluated on a quarterly basis.

You may find the [financial ratios](#) discussed to be a useful source of goals that can be easily measured. Goals should be realistic, measurable, consistent with each other, and ranked in importance.

Strategies

The final stage of the planning process is to determine the strategies you will use to reach your goals—how you plan to get from where your bank is now to where you wish it to be. Strategies are concerned with the acquisition and allocation of resources. They are expressed as policies and actions.

This is the step where rates are set, and business development budgets are determined. Strategies should be linked specifically to goals and should be consistent with each other—both financially and operationally. Strategies may change from quarter to quarter as you are forced to react to changes in the economic environment and the actions of your competitors.

Most of your decision-making involves strategies and the section of this manual dealing with the Action Plan provides examples of strategic choices. You need to understand how to implement your strategies through your decisions, which requires an understanding of the impact of the decisions.

FINANCIAL MANAGEMENT

Your management team's ability to formulate a plan and stick to it is often a key to the successful performance of the bank.

In the spirit of competition, it is easy to get caught up in price wars and other highly competitive responses to what other banks are doing. It is harder, but often more profitable in the long run, to set your bank on a steady course toward sound financial management.

Financial management begins with financial analysis. Bank financial analysis focuses on the performance of the bank and its exposure to risks. It gauges the degree of success managers have in running the bank and can answer different questions including:

1. How do we compare with our competitors?
2. Are we keeping pace with community growth?
3. Is stockholder value increasing?
4. How would bank regulators evaluate our performance?
5. How do we compare with our competitors?
6. Are we keeping pace with community growth?
7. Is stockholder value increasing?
8. How would bank regulators evaluate our performance?

Measures of earning power form the framework of financial analysis. A key performance measure is return on equity or ROE. This is the net income of the bank, divided by owners' equity expressed as an annual percentage rate. It reflects the amount of earnings per dollar of stockholder investment. High and increasing ROEs are normally interpreted as positive performance.

Another measure of bank profitability is return on assets, or ROA. This is net income divided by total assets expressed as an annual percentage rate and reflects the amount of earnings per dollar of assets. ROE and ROA are the most important simple measures of bank earning power or profitability.

These ratios are based on accounting data presented in the bank's balance sheet and income statement. Shareholders, managers, creditors, and regulators are all interested in measuring and analyzing bank performance; but their interests are different.

Shareholders are very interested in the bank's stock price, dividends, and earnings, whereas regulators and creditors are very interested in the bank's safety. Managers must worry about everything. This topic is discussed in more depth in the section on [Performance Measurement](#).

Bank Management Topics

There are a variety of issues that involve the management of the bank and its profitability. In this section, you will review the management of bank assets and liabilities and then look at managing the bank's income statement.

MANAGING INTEREST RATE RISK

The difference between the interest income of the bank and its interest expense is called net interest income (NII).

The level of net interest income earned by the bank is a major determinant of its profitability. Changes in interest rates would affect net interest income if the interest earned on the bank's assets does not move in tandem with the interest paid on the bank's liabilities.

Changing interest rates also affect asset values. The value of securities held by the bank decreases when interest rates rise and increases when they fall. This is also true of loans available for sale.

Management should consider strategies to protect the bank from undue exposure to interest rate risk. Here, the discussion will focus on the net interest income of the bank, but you should not forget about the effects on asset values.

To manage interest rate risk, you need a system to measure the bank's exposure to it. Report B05, part of which is shown in *Figure 20*, shows the interest rate sensitivity of the bank's assets and liabilities.

The critical concept here is repricing. An asset is said to reprice if the interest rate earned on the funds invested in the asset changes within a stated time period. This is easy to see in a variable-rate loan for which a new rate is set each quarter depending on the one-quarter bill rate in the economy. Such an asset is repriced quarterly and therefore is rate-sensitive for one-quarter.

Then, consider what happens when the bank receives payment on the principal amount owed on a fixed-rate loan. The money received will normally be reinvested immediately to earn the current interest rate. The principal payment to be received three quarters from now is repriced in three quarters. The same concept applies to liabilities.

Suppose the bank has many more liabilities repricing next quarter than assets. If interest rates go up, the bank's interest expense will likely increase more than its interest income causing a decrease in net interest income.

If interest rates drop, the bank's interest expense will likely fall more than its interest income resulting in an increase in net interest income. If the bank has more assets repricing than liabilities, the opposite impact will occur.

The application of this concept results in the measurement system called interest rate-sensitivity gap or just gap for short (*Figure 20*). The gap is the difference between the amount of assets repricing over a given period and the amount of liabilities repricing over that period.

Figure 20. Interest-Rate Sensitivity Gap

Summary Positions										
Net Balance Sheet Position (A - L)		6.8	38.0	35.6	34.5	108.1	-107.9	-25.7	14.6	
Fixed Rate Swaps		0.0	0.0	0.0	0.0	0.0	0.0			
Variable Rate Swaps		0.0	0.0	0.0	0.0	0.0	0.0			
Interest Rate Gap		6.8	38.0	35.6	34.5	108.1	-107.9			
Interest Rate Gap / Assets (%)		0.8	4.5	4.2	4.1	12.9	-12.9	Equity / Risk Assets		7.31 %
								‡Total Capital‡ /Risk Asst		9.33 %

* Interest rate sensitivities for checking, and savings are estimates.
Total Capital consists of equity (50.3) plus loan loss reserve (6.9) plus subordinated debentures (7.0).

Figure 20: Report B05 shows the interest rate sensitivity, or gap, of the bank's assets and liabilities. The bank's 1 Qtr Gap is \$38 million which represents 4.5% of total assets.

In Report B05, the gap is measured for one, two, three and four quarters, for one year (one to four quarters), and for over one year. Most of the focus is on the one-quarter gap as changes in the composition of bank's assets and liabilities over time can significantly change the gaps that are more distant into the future.

A bank that has a positive interest rate gap is asset sensitive which means that during that time more assets are repricing than liabilities. A bank that has a negative interest rate gap is liability sensitive (as in *Figure 20*) which means that during that time more liabilities are repricing than assets.

An asset-sensitive bank will have higher net interest income if interest rates rise and lower net interest income if rates fall. A liability sensitive bank will have lower net interest income if interest rates rise and higher net interest income if rates fall. A smaller absolute size gap (positive or negative) results in less impact on the bank's net interest income by changing interest rates.

As a rough guideline, a gap of less than 10 percent (absolute value) of assets can be considered small—changing interest rates will not affect bank profits very much. A gap of more than 25 percent (absolute value) of assets can be considered large—changing interest rates will have an appreciable impact on bank profits.

Banks often manage their gap based on management's forecasts for interest rates. If the bank has a positive gap and rates are expected to rise, no action may be taken. However, if rates are expected to fall, management would try to reduce the bank's exposure by using interest rate swaps or making other adjustments to the bank's assets or liabilities.

For example, a positive gap can be reduced by investing in long-term securities while raising money from one-quarter time deposits.

Many financial managers consider liability sensitivity to be more dangerous than asset sensitivity of the same magnitude. A liability sensitive bank experiences profit pressures when interest rates rise. Rising interest rates also reduce the value of fixed-rate assets of the bank, which can result in losses if the assets are sold. This is a bad combination; however, the basic rule still applies: Small gaps are safe; large ones are risky.

LIQUIDITY MANAGEMENT

Compared with actual banking situations, there is no real liquidity problem in this simulation exercise.

Banks have liquidity problems when their depositors and money market creditors lose confidence in them. Funds are withdrawn, and sources of new funds dry up.

Without support from the Federal Reserve, a bank in this situation will fail. In BankExec, funds are always available at a price. The prices (interest rates) may be high, but the money will be there.

While banks do not fail, they can get into enough financial trouble such that, if they were a real bank, they would either be closed or require a government bailout.

To control the liquidity position of the bank, management must understand the timing of cash flows. On the first day of the quarter the following cash transactions occur:

Cash inflows: Maturing securities

- Proceeds from sale of loans and securities
- Funds purchased (repos, CDs, and FHLB debt)
- Federal funds sold
- Capital issues

Cash outflows: Purchases of securities

- Maturing CDs and FHLB debt
- Federal funds borrowed
- Repos outstanding
- Maturing subordinated debt

If cash inflows on the first day are greater than cash outflows, the net inflow will be invested through sales of federal funds. If cash outflows are greater than cash inflows, the net outflow will be financed through purchases of federal funds.

Since all cash inflows and outflows on the first day are either given from the end-of-quarter position of the bank or the result of management decision, management should know whether the bank will sell or buy funds on the first day.

Figure 21 shows the current liquidity position of the bank considering the known flows as of the end of the quarter such as maturing securities or CDs.

Report B05 shows the first-day situation if management does not take any actions that would change it. In *Figure 21*, the first day position is -\$25.7 million. In other words, if management does not take any action, the bank will sell \$25.7 million in federal funds

The actions or decisions that affect first day cash flows are:

- The purchase or sale of securities
- FHLB borrowing

- Issuing CDs or capital

To predict the actual first-day position, management decisions must be included. During the quarter, deposits will turn over, loans will mature, and new loans will be made.

The funds position at the end of the quarter will depend on the net flows from loans and deposits plus the position on the first day.

Management should forecast the funds movements for the coming quarter to ensure that excessive borrowing will not be needed or that excessive amounts will not be invested in federal funds.

When interest rates are relatively high, borrowing in the federal funds market is usually the most expensive source of funds. In addition, borrowing rates also depend on the bank's credit rating, which is shown in Report C94. High rated banks (A or better) can borrow at significantly lower rates than low rated banks (B or worse). When interest rates are relatively low, federal funds are usually the least profitable investment.

Management must monitor funds movements and adjust to changing economic conditions to maintain the profitability and liquidity of the bank.

Figure 21. Liquidity Positions

Liquidity	
First Day	2 - 90 Days
0.0	
0.0	
	32.5
	12.4
	19.2
	0.0
0.0	64.1
15.5	
0.0	
0.0	
10.2	
	25.4
	24.0
25.7	49.4
-25.7	14.6

Figure 21: Report B05 shows the current liquidity position of the bank taking into account the known flows as of the end of the quarter.

SECURITIES PORTFOLIO MANAGEMENT

The securities portfolio plays an important role in managing liquidity and interest rate risk because securities can be purchased or sold to quickly change the bank's positions. The management of the investment portfolio requires addressing three interrelated issues.

1. **Size:** How much money should be invested in the portfolio?
2. **Composition:** What assets should be held in the portfolio?
3. **Maturity structure:** What should the maturities of the assets in the portfolio be?

The answers to these questions result in policies that guide the securities manager in making operating (quarterly) decisions and need to be considered by the management team. Let's look at each of the three issues in order.

Size of the Portfolio

The amount of money invested in the securities portfolio is closely related to the amount of loans the bank has. For many banks, the amount of money invested in securities is a residual.

The answer to the question of size is: *Given the funds available, invest the money that is not loaned.*

If the bank has lots of deposits and not much loan demand, the investment portfolio increases in size. If the bank does not have many deposits and makes a lot of loans, the securities portfolio decreases in size. Under a pure residual policy, the portfolio may even be zero—no federal funds are sold, or securities held.

This policy, then, suggests that liquidity is not an important concern of management. There may be some difficulty with regulators if the bank follows a pure residual policy. A less risky or more regulator-responsive approach is to follow a residual policy in general but set some minimum size for the investment portfolio to satisfy liquidity requirements. The minimum size may be based on expected future loan demand relative to deposit flows or to provide flexibility in funding.

Another answer to the question of size is: *Invest in securities (or federal funds) when it is more profitable to do so than to loan the money.*

This approach focuses attention on earnings rather than liquidity. It requires a careful analysis of loan profitability, especially the profitability of new loans and the costs of increasing the size of the loan portfolio.

The profitability of an investment of \$10 million in securities is much easier to assess than the profitability of increasing business credit lines by \$10 million. A residual policy contains the implicit assumption that loans are more profitable than securities in the long run.

This may be true, but at times management may find it more profitable to invest in securities. Also, recall that the capital requirements for the bank depend on the relative amounts of loans as compared to securities. If the choice is between increasing capital and investing in securities rather than loans, investing in securities may be the best answer.

The policies consider securities to compete with loans for a given volume of funds available; however, the bank also has some control over the amount of funds to be invested or loaned. If the returns available on securities are high relative to the cost of obtaining additional deposits or other funds, the bank may wish to take advantage of the opportunity to acquire additional funds and invest them. Securities can be purchased quickly in whatever amounts management wishes; loans are not so easily increased.

For most banks, the final answer is that the size of the portfolio should be based on liquidity, profitability, and market conditions. It cannot be determined without considering the other decision areas of the bank.

Composition

The composition question asks about the mix of assets in the portfolio, the relative amounts of federal funds sold, Treasury securities, agencies, and tax-exempts.

If liquidity is a primary consideration, federal funds should be a component. Federal funds sold at the beginning of the quarter are available to fund any net fund's needs (new loans minus new deposits)

during the quarter. If the bank ties up all extra money in securities, any net funding needs will be financed with federal funds purchases.

For longer-term liquidity needs, all securities held in the portfolio are available for sale each quarter and therefore are potential sources of liquidity. The maturity structure discussed in the next section becomes a consideration here.

In addition, Treasury securities provide a means of securing repurchase agreements; therefore, holding these securities increases the amount of funds available to the bank each quarter.

The mix of Treasury securities and agencies involves a trade-off between the higher yields available on the agencies versus the liquidity from secured borrowing and the uncertainty of the call on the agencies. The problem with agencies is that, if interest rates drop, an agency will be called whereas a Treasury will have a gain that may be taken on sale.

Imagine buying both a 20-quarter Treasury bond and a 20-quarter agency. The initial yields are 5.20 percent for the Treasury and 5.60 percent for the agency. Four quarters later, the yield dropped to 4.0 percent for the (now) 16-quarter maturity Treasury and 4.40 percent for the (now) 16-quarter maturity agency. The agency will be called, and the bank will get the par value in cash. The Treasury can be sold, and the bank will get the par value in cash plus a nice gain on the sale since the market value of the Treasury will be well above par. Another option is for the bank to keep the Treasury and continue to earn 5.20 percent whereas the cash from the called agency can only be reinvested at a lower rate.

The choice between the taxable bonds (Treasury and agency) and tax-exempt has several dimensions. The basic trade-off is the relative taxable-equivalent yields—the higher, the better. However, a bank could have so much tax-exempt income from its bonds that its taxable income goes to zero, especially if its earnings are poor. At this point, tax-exempt bonds with their lower pre-tax yields become less profitable than taxable bonds.

Another aspect is community service. Bank-qualified munis are most often issued by small communities, school districts, and the like. Banks are the main purchasers; therefore, the bank may consider that it has some obligation to support their local community through purchases of these securities.

A final aspect is the limited supply. The bank may wish to take as much advantage of the issues available as it can since these securities can only be purchased in limited amounts each quarter. On the other hand, the maturities available tend to be rather long for a bank and the interest rates are fixed. Investing heavily in long-term, fixed rate bonds can cause problems for banks when interest rates rise sharply. This takes us to the problem of maturity structure.

Maturity Structure

The maturity structure of the portfolio is the amount of securities scheduled for maturity in future time periods. There are four general structures—short, long, balanced, and barbell:

- A pure short portfolio contains only securities that will mature relatively soon. For example, all securities mature within the next four quarters. Management must decide what they mean by soon—two quarters, four quarters, or what?

- A pure long portfolio contains only securities that will mature a long time from now. For example, all securities will mature more than 40 quarters from now. Here again, management must decide what a long time is for them.
- A pure balanced (often called laddered) portfolio has equal amounts maturing every quarter for several quarters into the future. Thus, it is possible to have a relatively long balanced portfolio or a relatively short balanced portfolio. The idea of a balanced portfolio is that maturity is spread out more or less evenly.
- A pure barbell portfolio is half short and half long with no maturity in between. Each type has features that may make it preferred over the others.

Short Portfolio

The advantages of short portfolios are liquidity and safety. Since the securities in a short portfolio will mature soon, they will provide cash that can be used for other purposes.

The prices of short-term securities do not fluctuate very much with the level of interest rates. This means that you are not likely to have losses if interest rates rise and you sell the securities before maturity. The extreme versions of a short portfolio are keeping all funds in the federal funds market or owning only one-quarter maturity securities.

The disadvantage of a short portfolio is earning power. Usually, the shorter the maturity of an investment, the lower its interest rate. Furthermore, if interest rates fall, you will be reinvesting the receipts from maturing securities at lower interest rates. Also, you will not obtain significant price appreciation from lower interest rates.

Long Portfolio

A long portfolio is a mirror image of a short portfolio; its advantages are the disadvantages of the short one. Its earning power will usually be greater as long-term interest rates are usually greater than short-term interest rates. Long portfolios will experience significant price appreciation when interest rates fall. Also, when interest rates fall, you retain the higher current income from the portfolio because the securities are not maturing.

Of course, the disadvantages are liquidity and safety. Rising interest rates can create large losses in long portfolios that will impact the bank's profits if the securities need to be sold for liquidity reasons. A long portfolio does not generate much cash for use elsewhere in the bank. Note that over time, the maturities in a long portfolio shorten. To keep a long position, you must sell securities from time to time.

For example, suppose the only security owned is a 10-year bond. After one year, that bond will have a nine-year maturity. To keep a 10-year long position, you would have to sell the bond and reinvest in a new one with a 10-year maturity.

Long portfolios, left unmanaged, turn into short ones eventually.

Balanced Portfolio

A balanced portfolio provides a compromise between the extremes of the short and the long portfolios. By having some securities maturing regularly, the portfolio provides liquidity.

The cash from maturing securities, if not needed elsewhere, is reinvested at the long end of the portfolio. This portfolio provides earning power from the longer maturity securities in it and because there are always short maturity securities available, safety and liquidity.

Balanced portfolios are easy to manage and are frequently recommended by regulators.

Barbell Portfolio

An example of a barbell would be to have 50 percent of the funds invested in one-quarter maturity securities and the other 50 percent in 10-year maturity securities.

Obviously, a barbell is a simple combination of a short and a long portfolio and would appear to offer the same advantages as the balanced portfolio. The difference is in the management of the portfolio.

Barbells are often the choice of an active manager. With the short portion maturing regularly, the portfolio manager is constantly reinvesting and not necessarily completely back into the short position. The barbell manager could increase the percentage in the long position if the manager believes that this is desirable.

Also, to maintain the long portion of the portfolio, the manager must, from time to time, sell the long securities. At this time a portion can be reinvested short, if the manager believes this is desirable.

Barbell portfolios are usually chosen by active, experienced managers.

CAPITAL MANAGEMENT

The primary problem in managing the bank's capital is the maintenance of sufficient capital relative to regulatory requirements. A conservative management may wish to keep substantially more capital than required; an aggressive management may try to maintain the minimum.

However, you should be aware that the level of capital is an element in credit market risk ratings. A thinly capitalized bank will pay more for money than a well-capitalized bank, all other factors being the same.

Regulation 5 sets the basic rules, and the current values of the capital ratios referred to in the regulation are shown in Reports B05 and C94.

Board Policy: Capital Adequacy

The Board of Directors established a policy to maintain the capital of the bank at a level such that the bank is considered well capitalized under bank regulatory guidelines.

This policy is intended to promote the safety and liquidity of the bank and to assure that funding sources will be available under adverse economic conditions. However, this policy does not restrict management from deviating temporarily from a well-capitalized position to take advantage of growth opportunities that may arise.

The most likely reason the bank's capital condition might go out of compliance with the regulations or bank policy are inadequate earnings or excessive dividends relative to the growth of the bank's assets. Therefore, if management has aggressive growth goals, they should be aware of the need to monitor capital positions and take appropriate action to stay in compliance. These actions can be as simple as issuing new capital or more difficult and complex, such as increasing profitability.

Capital Ratios

The action taken should reflect the problem. Under the Board policy shown above, the requirement for equity capital is that it is greater than 6.0 percent of total assets.

This capital requirement is usually referred to as the leverage ratio. The requirement for total capital (equity, subordinated debt, and loan loss reserve) is that it is greater than 10 percent of risk assets.

If you are about to go out of compliance with respect to the leverage ratio, you have several actions you can take. In the short run, you can issue common stock or, if the bank is liquid enough, reduce assets by paying off borrowings or maturing CDs. In the long run you can slow asset growth, improve profitability, pay lower dividends, or some combination of these.

If your problem is the capital to risk asset ratio, there are more options including the ones just mentioned. You can issue subordinated debt to increase total capital, or you may try to restructure the bank's assets to reduce risk assets.

Risk Assets

Risk assets for a bank are a weighted sum of the assets of the bank where the weights are supposed to reflect the risk potential of the assets. For example, cash is considered riskless; therefore, it has a weight of zero and is not included in risk assets.

Asset categories and weights are shown in the following table:

Category 1 (0 percent weight):	• Cash and cash items • Treasury bills • Treasury bonds
Category 2 (20 percent weight):	• Federal funds sold • Agency bonds • State and local government bonds
Category 3 (50 percent weight):	Residential mortgages
Category 4 (100 percent weight):	All other assets
Total Risk Assets:	Sum of Categories 1-4

Report B05 shows the risk assets for the bank by balance sheet category. If you examine the table shown above, you will see that all assets on the balance sheet are included, but cash and Treasury bills are given a zero weight.

In managing the capital position of the bank, it is possible to change capital to risk asset ratios by changing the asset mix of the bank. For example, selling \$10 million of commercial real estate loans and investing the proceeds in \$10 million Treasury bills, will reduce risk assets by \$10 million since the weight on the loans is 100 percent whereas the weight on the bills is 0 percent.

A reduction in risk assets with no change in capital will increase the capital/risk assets ratio. If the bank has \$510 in risk assets and total capital of \$50, its capital/risk asset ratio is 9.80 percent (50/510). A reduction of \$10 million in risk assets would increase the ratio to 10 percent (50/500).

Tax Management

Tax management in BankExec is simpler than that for the typical bank. Taxes are calculated quarterly on the year-to-date taxable income of the bank at the rate shown in Report C95.

The taxes owed (or credit to be received) for the quarter are determined by the difference between year-to-date taxes owed and taxes paid in prior quarters. For example, suppose that year-to-date taxes owed are \$400,000 at the end of the third quarter. Taxes paid during the first two quarters were \$250,000. The taxes owed for the third quarter will be \$400,000 minus \$250,000, or \$150,000.

Alternatively, suppose that the bank paid \$250,000 in the first two quarters, but had a loss in the third quarter. If taxes owed are \$200,000 through the third quarter, the bank will have a tax credit of \$50,000 for the third quarter. Losses for an entire year cannot be carried back to prior years or forward to future years, however.

Taxable income for the bank equals taxable revenues (including gains on asset sales) less taxable expenses (including losses on asset sales). For further review, consult the discussion on tax exempt [Securities Available for Purchase](#).

Although minimizing taxes may not result in maximum profits for the bank, management should be aware of the tax consequences of asset sales. Tax planning is an important part of managing the bank.

Controlling Operating Expenses

In BankExec management has limited direct control over operating expenses. Salaries and other operating expenses are primarily determined by the overall amount and composition of the bank's business and the amount and type of new loans and deposits being generated.

If there is rapid growth in loans and deposits, the bank will require more personnel than if there is slow or no growth. Personnel requirements are more strongly impacted by accounts with large numbers of transactions such as credit cards and checking accounts than other types.

To get an understanding of operating expenses associated with a particular type of loan or deposit account, look at the expenses for the accounts shown in Reports B22 and B40.

Salaries are also affected by the bank's business development budget (for more details see [Business Development Budget](#)) and the rate of inflation. If the rate of inflation is high in the economy, the bank must pay higher salaries to retain employees. Other things being equal, salaries will increase at a rate that is somewhat less than the overall rate of inflation in the economy as shown in Report C96.

Occupancy expenses are based on the premises of the bank, which increase slowly and are not currently under the control of management. Advertising and promotion expenses are set by management decisions regarding business development. Other operating expenses depend on the activity of the bank and as was true of salaries, vary with the size and growth of the bank.

The Bank's Stock Price

Investors in the bank's stock are concerned primarily with the future earnings and dividends (per share) of the bank. In assessing future prospects, investors and stock analysts evaluate the current condition of the bank and its history. They look at many of the same aspects of the bank that a bank regulator or a creditor will examine but assess the importance of these aspects differently.

For example, regulators and creditors find high levels of bank capital to be appealing—the more capital, the better. Investors prefer capital to be adequate, but not excessive—more capital is not necessarily better from the perspective of investors in the bank's stock. Some ratios that can be used to assess the bank's financial condition are shown in the section on Performance Measurement that follows.

In addition, conditions in the economy and the financial markets will affect the stock price in ways that are not a result of management's actions. Consequently, the bank's stock price provides an overall assessment of the bank's performance but is not a perfect guide to management's ability or the success of its strategies.

A more sensitive measure of the bank's performance as perceived by investors is the market-to-book ratio, which is shown in Report C94.

If the market value of the bank's equity is greater than its book value (market-to-book greater than 1.0), investors are saying that management has created value for the bank's stockholders by retaining earnings. If the market value is less than the book value (market-to-book less than 1.0), investors are saying that management has destroyed value by retaining earnings.

Trends in stock price and market-to-book ratios provide management with an ongoing external assessment of its policies and actions.

Performance Measurement

There are many ratios and other measures that management can use to compare their performance with other banks, and which are used by financial market analysts and regulators in assessing the bank's financial condition and performance.

Factors used in evaluating the bank's condition may be summarized by the acronym CAMEL:

- Capital
- Asset quality
- Management
- Earnings
- Liquidity

Although CAMEL was developed as a regulatory rating system, it is used here to remind us of the things that should be considered.

Add an O for **O**ther factors that are important to investors, such as dividends and growth, but are not so important to regulators.

Some useful measures are shown below organized in the CAMELO scheme. These are intended to be representative of the measures that can be used to evaluate bank performance and are not all-inclusive.

There are several ratios shown in Reports C91 and C92 that are not included here but also provide insight into the comparative performance of banks in the community.

Note that, except for the interest rate sensitivity gap, the measures shown below are all reported as public information for the banks in the community and can be found in the following reports.

- B01: Balance Sheets
- B02: Income Statements
- B05: Risk Management Summary
- B06: Funds Management
- B10: Security Maturities and Portfolio Activity
- B12: Security Portfolio
- B20: Loan Activity
- B22: Loan Profitability and Performance
- B24: Loan Decisions
- B40: Deposit Activity and Performance
- B44: Deposit and Marketing Decisions
- B64: Treasury Management, Dividends and Forecast Earnings
- C91: Bank Balance Sheets
- C92: Income Statements
- C93: Community Loan and Deposit Markets
- C94: Community Bank Capital Activity
- C94A: Capital Ratio Requirements
- C95: Economic Charts
- C96: Economic Reporter

Stockholders like growth in earnings and dividends per share and dislike volatility in them—C94 and B02. This completes the description of the decision points available and some concepts of how your bank can be managed.

The Appendices that follow provide supplementary information including a description of the reports provided to management to aid in decision-making.

Appendix A:

Guide to Management Reports

This appendix provides explanations of the management data reports that you have access to each quarter.

Note: NMF means *not meaningful figure*. You may see this when a ratio contains a zero or negative number in the denominator.

B01 BALANCE SHEET

B01 shows the bank's balance sheet in general categories. Detailed breakdowns of the major items—securities, loans, deposits, borrowed funds, long-term debt and owner's equity—are shown in other reports.

The data to the left of the headings are the averages for the previous four quarters and for the current calendar year to date. The data to the right displays end-of-quarter figures for the past four quarters.

Assets

- Cash Items include currency, required reserves, and items in the process of collection. The bank operates with the minimum amount possible in this account. Any excess cash is invested as federal funds sold.
- Federal Funds Sold are short-term loans to banks outside the community. There is no credit risk on these assets and there is no limitation on the volume sold. See Report B06 for more detail.
- Securities are shown in more detail in B10 and B12. Securities are carried at market value.
- Loans are shown in more detail in B20 and B24. Agricultural loans are shown as Other. Loan Loss Reserve is maintained at a minimum of one percent of total loans. See the discussion on loan loss reserve in the [Provision for Loan Losses](#) section.
- Premises are shown net of accumulated depreciation. The bank will invest in premises as needed given its volume of business.
- Other Assets arise from the operations (activity) of the bank and are not under direct management control. The larger the bank is in terms of loans, deposits, and personnel; the larger the other asset account.

Liabilities and Equity

- Deposits of bank customers are shown in detail in B40 and B44. Certificates of Deposit (CDs) are considered purchased funds and are shown in B64.
- Borrowed Funds include Repurchase Agreements and federal funds purchased. See Reports B06 and B64.

- Other Liabilities include such accounts as taxes payable and accrued expenses. This account arises from the activity of the bank and is not under direct management control.
- Long-term Debt includes borrowing from the FHLB and subordinated debt. FHLB debt is not considered capital for regulatory purposes whereas subordinated debt is part of Tier 2 capital. See [Regulation 5](#) and B05.
- Owner's Equity reflects the capital contributed by stockholders. It is increased by net income and stock issues and reduced by dividends. It also reflects any gains or losses in the securities portfolio since the securities are carried on the balance sheet at their market value. The value of owner's equity shown consists of common stock, retained earnings, and the net gain (loss) in the securities portfolio as reported in B12.

Ratios (%)

The ratios at the bottom of B01 provide bank performance data that is provided for other banks in the community in C91. All ratios are shown in percentages. Some titles are abbreviated in the report; they are spelled out below. Note that some ratios use numbers that are obtained from other reports.

- Net Liquid Assets/ Assets: This ratio is a liquidity measure that is used by regulators and financial market analysts. Net liquid assets = federal funds sold plus securities with maturities of one year or less minus borrowed funds.
- Loans/Deposits: A ratio that may be used as a measure of liquidity or risk and as a bank policy variable. Banks of this size usually have loan/deposit ratios between 60 and 80 percent.
- Loans/ Core Deposits – A ratio that may be used as a measure of liquidity or risk. The ratio removes Corporate CDs from the deposits value to focus on deposits from relationship driven customers.
- Non-performing Loans/ Loans: Non-performing loans are the sum of non-accrual and past-due loans. This ratio is calculated using end-of-quarter figures and is a measure of the quality of the loan portfolio. See B22.
- Charge-offs / Average Loans: The historical loan losses of the bank. See B22.
- Earning Assets / Total Assets: The interest earning assets of the bank are federal funds sold, securities, and loans.
- Core Deposits / Total Assets: Core deposits are defined here as total deposits less certificates of deposit. Note that a bank could have non-customer accounts included in its time deposits that should not be considered core deposits; however, the level of such deposits is not known.
- Interest Bearing Liabilities / Total Assets: The interest-bearing liabilities of the bank are all deposits except demand deposits, borrowed funds, long-term debt and subordinated debt.
- Borrowed Funds / Total Assets: A measure of liquidity and interest rate risk. High ratios are considered unsafe.
- Federal Funds Purchased / Total Capital: A liquidity measure, see [Regulation 3](#).

- Owners Equity/ Total Assets: A measure of capital adequacy—the leverage ratio. See [Regulation 5](#).

B02 INCOME STATEMENT

B02 summarizes the major income and expense categories for the bank. Detailed reports on income and expenses for securities, loans, deposits, and purchased funds are provided later.

- Interest on Loans includes all interest and fee income associated with the loan portfolio except servicing fees for loans that have been sold, which are included in other income.
- Income from Securities consists of the coupon interest from Treasury bonds and Agencies plus the accretion of discounts on Treasury bills.
- Service Charges and Other Income contains the revenues from service charges on deposit accounts and servicing fees from loans that have been sold.
- Provision for Loan Losses is determined as the amount needed to be added to the loan loss reserve to maintain it at a minimum of one percent of total loans.
- Salaries and Benefits is based on the level of activity of the bank and the decisions made around business development budgets.
- Occupancy Expense includes the cash expenses associated with bank premises plus depreciation.
- Advertising and Promotion expenses result from decisions made to increase or decrease business development.
- Other Operating Expenses include all expenses that are not contained in one of the categories above. Any fines levied against the bank by regulatory authorities will be charged to this account.
- Gains/Losses on Asset Sales results when securities or loans are sold. The figure is the net result of sales. B10 and B20 show the details of any sale decisions.
- Income Taxes are determined at the tax rate shown in C96 and are applied against operating earnings plus gains/losses from asset sales. See the discussion regarding [Income Taxes](#).

Ratios (%)

The ratios shown in B02 are also shown for other banks in the community in C92. All values are expressed as annual percentage rates. Several headings on the report are abbreviated. They are presented in full here.

- Interest Income / Earning Assets: This is the average interest rate earned on those assets that earn interest—sometimes referred to as the *yield on earning assets*.
- Interest Expense / Average Interest-bearing Liabilities: A measure of the average interest cost for those funding sources that have an explicit interest payment.
- Spread: The difference between the two ratios above—the yield on earning assets minus the cost of interest-bearing liabilities. The spread is an important measure of the profitability of the banking business.

- Net Interest Income / Earning Assets (NIM): Another important measure of the profitability of the banking business—usually referred to as *net interest margin*. The net interest margin depends on the spread and the extent to which the bank's assets are financed with non-interest-bearing liabilities.
- Efficiency Ratio: Operating Expenses / (Net Interest Income plus Non-Interest Income). Percentage of each revenue dollar that is used to cover operating (non-interest) expenses.
- Net Interest Income / Total Assets: Another way to calculate net interest margin. This ratio can be more directly compared with the expense ratios calculated relative to total assets.
- Operating Expenses / Total Assets: This ratio indicates how successfully the bank is managing its expenses.
- Net Non-Interest Expense / Total Assets: Net non-interest expenses equal operating expenses minus service charges and other income. This shows the extent to which operating expenses are offset by fee income.
- Operating Earnings/ Total Assets: A measure of the profitability of the bank from normal operations.
- Net Income / Total Assets: [Return on Assets \(ROA\)](#)
- Net Income / Owners Equity: [Return on Equity \(ROE\)](#)

B05 RISK MANAGEMENT SUMMARY

B05 contains three types of risk management information— interest rate sensitivity, liquidity position, and the basis for capital/risk assets ratios.

The interest rate sensitivity section breaks out the assets and liabilities of the bank according to their interest rate sensitivity as of the end of the quarter. All maturing securities and CDs are shown as rate-sensitive in the first quarter; non-maturing items will be shown as rate sensitive according to maturity.

- For example, a CD maturing one quarter from now will be shown as rate-sensitive in Quarter 2 when it matures. For real estate loans, the first quarter figure includes variable rate loans whose rate will be reset in that quarter plus any other loans that are maturing in the next quarter.

The interest rate gaps are summarized at the bottom of the report. Note that the bank's position can be modified significantly by its decisions. (See the discussion of [Interest Rate Risk Management](#).)

The right-hand side of the report shows the bank's liquidity position, and the risk assets used to determine capital ratios. (See the discussion of [Liquidity Management](#) and the discussion of [Capital Management](#).)

B06 FUNDS MANAGEMENT

B06 shows the sources and uses of funds for the bank for the current quarter. Note the First Day Activity column and the items showing a number. These transactions occur on the first day of the quarter.

You will find a summary of the federal funds sold and borrowed during the quarter at the bottom of the B06, in addition to the income and expenses of funds bought and sold.

B10 SECURITY MATURITIES AND PORTFOLIO ACTIVITY

B10 shows a breakdown of the maturity distribution of the bank's security portfolio in total and by type. See the discussion of [Portfolio Management](#) for the relevance of this information.

The lower right section shows the changes that have occurred in the portfolio during the past quarter. Activities that affect the portfolio are maturities, sales, purchases, and accrual of interest on Treasury bills. The gains or losses shown on the last lines show realized gains and losses from the sale of securities.

B12 SECURITY PORTFOLIO

B12 lists all securities currently owned by the bank, including those maturing on the first day of the coming quarter.

- Par Value is the face or maturity value of a block of securities purchased by a single decision.
- Market Value is the current amount the block could be sold for.
- Book Value is the amount being carried on the bank's books for the block.
- Gain/Loss is the market value of the block minus the book value.
- Maturity is the number of remaining quarters until maturity.
- Call Quarters is the number of remaining quarters until an agency security may be called.
- Coupon Rate is the annual rate of interest being received by the bank. One fourth of the coupon is received each quarter.
- Yield to Maturity is the market yield to maturity at the end of the quarter associated with the market value shown.
- Call/TE Yield: For agencies, this column shows yield to call. This is based on the quarters to call (Call Qtrs.), assuming the bond will be called, and the current market price. A high yield to call relative to the yield to maturity is an indication that the bond is unlikely to be called. A low yield to call relative to the yield to maturity indicates that the bond is likely to be called. For tax-exempt bonds, this column shows the taxable-equivalent yield.
- Duration is a measure of the average maturity of the cash receipts (coupon interest and principal payments) from the security based on the market values of those receipts. The change in market value of a security for a given change in interest rates (yield to maturity) is proportional to its duration.

B20 LOAN ACTIVITY

The top half of B06 shows the activities causing changes in balances for all loan categories.

- New Loans shows the extensions of credit under new loan contracts. Note that this figure represents cash received by loan customers—not the total commitment to lend.
- Net Principal Payments is the difference between repayments of existing loans and draws on existing commitments.

Market Shares of new loans made by the bank are provided on the right. If the bank's pricing and other loan policies are competitive in a loan market, its share of that market will be 10 percent.

The bottom half of the B06 provides data on loan commitments and the servicing portfolio. Typical average usage rates for business credit lines are around 50 percent and usually vary during the year by plus or minus 5.0 percentage points. For other loan types, see their descriptions.

B22 LOAN PROFITABILITY AND PERFORMANCE

B22 shows the income and expense associated with each loan type and a variety of profitability and performance measures. It includes details on the current quality of the portfolio as represented by charge-offs, past-due, and non-accrual loans.

Salary & Benefits include salaries devoted to business development, loan originations, and needed to service existing loans in the bank's portfolio. Expenses associated with loans that have been sold are shown separately in Report B20.

Net Earnings are the difference between total income and total expenses.

In calculating income, charge offs, expenses, and earnings as a percentage of average balances, the results are expressed as annual percentage rates. Past-due loans are accruing interest whereas non-accrual loans do not accrue interest but are included in reported loan balances. The change in balance as a percentage of beginning balances after (post) sales provides an indication of growth (or decline) in the portfolio resulting from the bank's marketing and credit decisions.

B24 LOAN DECISIONS

B24 shows current values for all loan decisions and provides a work area for planning new entries for the Loan Input Form. In the absence of any change, the decisions shown will remain in effect. Any changes should be entered into the Loan Input Form. For a detailed discussion see [Basic Loan Decisions](#).

The right-hand side of the report shows useful information regarding the current loan portfolio and current rates in the market. Note that these rates do not reflect decisions made by other, directly competing, banks in the community; however, they do show prevailing rates in the market for high quality loans (credit rating of 2) that will be in effect for the coming quarter.

At the bottom of the report, you find information regarding loan packages that are available for sale. Each package is priced separately, and any sale involves the entire package. Loan sales decisions are entered into the Loan Input Form. Information regarding the servicing of past sales is shown in B20.

- Book Value is the value carried on the bank's balance sheet.
- Market Value is the cash value if sold.
- Gain/Loss is the difference between market and book values.

The market value is determined by the discounted present value of the contractual cash payments from the package taking into account any scheduled rate adjustments but with no changes in current market interest rates. The discount rates used are the current rates in the secondary market for loans of the

credit quality in the package. Secondary market rates for high-quality loans (a credit policy of 1 or 2) are lower than the current rate on new loans shown above.

- Book Yield is the average current contractual rate on the package.
- Market Yield is the average market rate that applies to each package.
- Average Maturity is measured in quarters and is an average for the package. Maturity is the time to final payment on the loans.
- Average Rate Adjustment Period is measured in quarters and is an average for the package. It is the time until the next rate change on the loans.

B40 DEPOSIT ACTIVITY AND PERFORMANCE

B40 shows the activities causing changes in balances for all customer (core) deposit categories.

Deposits show the deposits withdrawn from the bank during the quarter. These figures represent accounts closed. For time deposits, the values shown are the amount of maturing time deposits.

Market Shares of new deposits received by the bank are provided at the right. If the bank's pricing and other policies are competitive in a market, its share of that market will be 10 percent.

Deposit Cost Analysis

The lower section provides a cost analysis of the deposit accounts. It shows a breakdown of income and expenses associated with these accounts for which the bank has discretionary pricing. At the very bottom is a projection of maturing time deposits and a breakout of savings accounts receiving the standard and premium interest rates.

- The level of Salaries and Benefits depends on the activity in the accounts and business development budgets.
- Advertising and Promotion is the portion of the business development budget allocated to these accounts from the business development priority decision shown in B44.
- Other Fees is fee income from services provided to customers other than the service charges set by management decision. The amount of other fees is not under the direct control of management and is based on the characteristics of the bank's customers.
- Net Cost is the difference between Total Expenses and Service Charges + Other Fees and is shown in \$ millions for the quarter and as an annualized percentage of the average total balance in the account.

B44 DEPOSIT AND MARKETING DECISIONS

Report B44 shows the values for the deposit decisions that were in effect for the last quarter and provides a work area for new determining if changes are desired. Actual new values should be entered on the Deposit Input Form. The format for decision entry is shown under the headings of each item. For a full discussion, see the [Deposit Decisions](#) section.

All the decisions shown on this report and entered on the Deposit Input Form remain in effect unless changed.

On the right-hand side of the report, information regarding the current interest rates in the general market for the bank's deposit products is shown. These rates do not reflect decisions made by directly competing banks but are in effect for the coming quarter.

The bottom part of the report is a work area for other decisions that are entered on the Deposit Input Form.

B64 TREASURY MANAGEMENT, DIVIDENDS AND FORECAST EARNINGS

B64 shows the amounts and rates available for purchased funds and capital. Decisions on these funding sources must be entered into the Treasury Input Form each quarter. See the discussion of the [Treasury Input Form in the Treasury Management section](#).

The amount shown as available for borrowing through repos reflects the book value of Treasury bills and bonds in the bank's portfolio that will remain after securities mature on the first day of the coming quarter. The actual amount available may differ from the amount shown if the bank buys or sells any Treasury securities. Therefore, the limit shown is only a guideline since it cannot reflect bank decisions that take effect on the first day of the quarter.

For CDs, the amount available and the interest rate depends on the credit rating of the bank as shown on C94. A low credit rating will severely limit the bank's access to these funds.

The report provides information on the end-of-quarter balances and maturing amounts of repos and certificates of deposit plus the maturity distribution of CDs. The balances shown include accrued interest. The interest rate on certificates of deposits is fixed at their original issue rate.

C91 BANK BALANCE SHEETS

The end of quarter balance sheets for all banks directly competing in the community are provided on C91. This information is identical to that provided to each bank on Report B01 and are valuable in assessing the impact of competition and the strategies of the other banks in the community.

C92 INCOME STATEMENTS

Income statements for each bank over the last quarter are provided. The individual bank data were taken from Report B02. An analysis of competing banks' income and expenses can reveal information about the success or failure of their policies and can provide clues as to improvements that can be made in your bank's operations.

C93 COMMUNITY LOAN AND DEPOSIT MARKETS

This report shows the decisions that were in effect for each bank in the community for the past quarter. It is useful both in evaluating why your bank had the results it did and as an aid to decisions for the coming quarter. Careful analysis of this information coupled with market share data found in Reports B20 and

B40, comparative data on other community banks in Reports C91 and C92, and the general economic data in Reports C95 and C96 can be very useful in evaluating the success of pricing strategies.

C94 COMMUNITY BANK CAPITAL ACTIVITY

C94 provides capital market data for all banks in the community. In the upper left corner, the report shows the current stock price, the value at the end of the prior quarter and the percentage change in price.

The PE ratio is the ratio of the current stock price to the past four-quarters' earnings per share (four-quarters net income divided by the current number of shares outstanding). The market/book ratio is the ratio of the current stock price to the current book value of common stock per share. A market/book ratio of greater than 1.0 is considered an indication of good performance by the bank from a stockholder's perspective.

Note that each bank's earnings forecasts are public information. The dividend yield is calculated as the current quarter's dividend per share divided by the current stock price expressed as an annual percentage rate.

A bank's credit rating can vary from AA to D with AA being the highest and is a measure of the financial market's evaluation of the safety of the uninsured short-term debt instruments issued by the bank such as CD's and federal funds purchases.

C94A CAPITAL RATIO REQUIREMENTS

This report contains additional capital measures. For example, the Tier 1 Risk-Adjusted Capital Ratio measures the core equity assets of a bank relative to its risk-adjusted assets. The Tier 1 Equity Ratio measure the core equity relative to the bank's total assets.

C95 ECONOMIC CHARTS

The economic charts are provided to show trends in key economic variables and as an aid to decision-making. The yield curves plotted in the upper left corner indicate the rates that are currently available on securities of different maturities and provide a sense of the relative spreads between them.

C96 ECONOMIC REPORTER

C96 provides general information on the economy, national and local. Note that forecasts of new loans and deposits are provided. These reflect up-to-date information on conditions in the economy and are at least as reliable as those provided in practice. As a rough rule, a bank that is competitive in its pricing and policies should expect to have about 10 percent of the total market demand shown.

Starting Position Reports Review and Bank Evaluation

The purpose of this evaluation is to introduce you to the bank you will be managing. You have a separate set of financial statements that represent the beginning condition of your bank (Starting Position).

Answer each question below to the best of your ability. If you have questions about the data in these reports, see [Appendix A](#) of the *Participant Decision Manual*.

1. Looking at the bank's balance sheet (Report B01), what is your assessment of its overall situation? Do you observe any trends that appear especially favorable or unfavorable?
2. Examine the bank's income statement (Report B02). What are the trends in operating earnings and net income? What are the return on assets and return on equity of the bank for the year to date? What is your evaluation of these facts?
3. Report B05 contains a lot of information. What seems to be the purpose of this information? (You will need some practice using these reports.)
4. Reports B10 and B12 provide information on the securities portfolio of the bank. What is your assessment of the condition of the portfolio? What does Gain/Loss mean?
5. Reports B20 and B22 provide information on the loan portfolio of the bank. What is your assessment of the bank's loan portfolio?
6. Examine the current loan decisions of the bank as shown in Report B24. Compare the interest rates being charged with those prevailing in the economy that are also shown here. Do you have any recommendations for changes in loan decisions?
7. Report B40 provides information on deposits of the bank. What is your assessment of this area?
8. Examine the current deposit decisions on Report B44. How do the bank's interest rates compare with current market rates? Are there any changes you would recommend?
9. Report B64 provides information on purchased funds and capital. Does the bank seem to have sufficient funds available from these sources? How do the interest rates compare with the rates on customer time deposits?
10. Review Reports C91, C92, C93 and C94. Given the number of banks you will compete with, what will these reports tell you next quarter, after your first decision?
11. Review Reports C95 and C96. What type of information do they provide?
12. Provide a general summary of any specific strengths or weaknesses of the bank that you have observed. If you were in complete charge of this bank, what is your highest priority for action?