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Bank accounting and cost control

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Thesis
BANK ACCOUNTING AND COST CONTROL
by
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INTRODUCTION

Bank Accounting and Cost Control was chosen to be the subject of my thesis because of its importance and significance in the present day business world. Despite the fact that it is an important phase of accounting, the subject has been only passively taught as an essential element of accounting. Hence, the purpose of this thesis was to study an important phase of accounting that is not often treated definitely as subject matter for a college course and to trace the development and recent trends in bank accounting practices.

Bank accounting is relatively easy to understand and has been explained by many capable men such as Kniffen, Langston, Potts, and others. Hence, in this thesis, the details of bank accounting were sacrificed for the broad principles of such practice. This served as a foundation for understanding cost control. Indeed, ordinary bank accounting is an important element of cost control and is therefore necessary to the understanding of the subject.

Cost control as a scientific study has grown slower in our bank than in any other phase of present day business. As a matter of fact, it was not until the spring of 1933 during the bank holiday that bankers really felt the need of analyzing costs with the point in view of studying all expenses and stopping free services which were effecting bank losses.

There are two excellent books on this subject, Benjamin Young's, Bank Cost Control, and E. S. Woolley's, Obtaining
Bank Costs. Other banking books mention the subject in an off-hand manner while some might devote a chapter to it. The Bankers Magazine and other current publications of that nature have printed many articles which were valuable to this paper. Hence, the bulk of the material was taken from periodicals and published books while some was taken from classroom lectures, from interviews, and from observation.

It is not intended that this disquisition be a panacea for the ills of banking. This is mainly a study of what experienced men in the field have to say about the subject. I think it interesting to point out that much of the material found was in principle synonomous with the work of others; hence, there seems to be a general agreement among those who are experts in the work.

It should be emphasized here that it would be impractical to apply this study to any one bank or any group of banks. Kniffen makes the statement that there are no two banks which are the same in all their details; yet, the broad principles of bank accounting apply to all banks. For this reason, it should be remembered that the value of a study of this kind lies in the thought it might stimulate rather than any techniques it advances.
CHAPTER I
THE NATURE OF BANKING

Banking is one of the most significant single factors of our present day economy. The subject is closely allied to money because of the fact that bank actually create money in the form of their own promises to pay or in deposit currency. Roy Westerfield asserts that for every dollars worth of business transacted with cash, there are twelve dollars transacted with bank credit. Nevertheless, there is a distinction between the monetary functions of banking and banking itself. The latter will be briefly discussed in this chapter since it is the function in which we are the more interested.

The Banking Functions.—Present day society tends to call almost any sort of financial activity banking. The large modern bank with its diversified departments is in a large manner responsible for this conception. However, there are many financial transactions closely enough related to banking to be carried on under the same roof which are not in themselves banking functions. There are differences of opinion of this point which leads to many different definitions for banking. Webster says:

"The business of banking originally was that of money changing: present banking, in general, consists of taking money on deposit subject  of check or draft, and bills, issuing drafts, and any other associated form of general dealing in money or credit. One or more of these operations if carried on with the public in general may be construed as banking."

Contrast that definition with Bradford's:
"We may define banking as the process of pooling deposits and then lending or investing them, together with those functions which are incidental but essential to the fulfillment of that process."\(^1\)

Mr. Frank A. Vanderlip, in his Columbia University lecture on the "Modern Bank", gives a more complete idea of what a bank really is. He says:

"The business of a bank is not in the main the reception of money and its safekeeping, nor is it the lending of money. The money transactions of a bank are, under ordinary conditions, comparatively insignificant; almost its entire business consists of receiving, from its customers, their evidences of indebtedness, which have a narrow currency, and giving to these customers in exchange the bank's evidences of indebtedness which have a wide currency. These evidences of a bank's indebtedness are then transferred from one individual to another and from one bank to another. And in that way, the credits created serve the purpose of a medium of exchange, by which perhaps ninety-five per cent of the exchange transactions of commerce takes place. It is a misconception to suppose that a bank first accumulates deposits and then loans them out to borrowers. The operation is the reverse. The bank first makes a loan to the borrower, and in so doing creates a deposit. The borrower exchanges his evidence of indebtedness for the bank's credit, a deposit balance. The creation of these credits has relation to production; their liquidation is related to consumption. If production increases, the demand for this exchange of individual credit for bank credit increases; and the indebtedness incurred is liquidated as the articles upon which the financial credit was based enter into consumption."\(^2\)

This latter definition fits the present day banking situation more closely and concretely than either of the others. A large percentage of bank customers imagine that their deposits are kept inside the bank in huge vaults or money bags. The truth of the matter is, that taking the United States as a whole,

2. Harris, Ralph S. Practical Banking. pp. 15-16.
most of the customers' deposits are kept on a sheet of paper. By this is meant that the average deposit is no more than figures on the credit side of a ledger. This is true because of the manner in which deposits originate.

Contrary to popular opinion, most bank deposits arise from bank loans. The average person thinks of a bank loan in terms of the borrower going to the bank and getting cash for a specified period of time. This is an exceptional type of loan. Most loans are facilitated by the bank merely crediting the borrower's deposit account. Thus the bank promises to honor any checks written against that deposit. If the borrower does write a check on the bank, it is probable that the receiver of the check will pass it in for credit to his account. Hence, the final result of the payment is simply an accounting entry which debits the deposit of the payer and credits the account of the payee. Should the payee patronize a different bank, the transaction would be adjusted through the clearing house. This introduces a more complex procedure, but if one considers the fact that the payer bank probably has identical claims against the payee bank, he can see that there is no difference in the net result of the transaction.

By expanding Vanderli's definition further, it is easy to see that the relation of credits to production and consumption is a natural force. The manufacturer borrows the bank's credit in order to meet the expenses of producing his commodity. Upon completion of the commodity a consumer purchases it. The proceeds of the sale will be appropriated to the liquidation of the debt. This expansion and contraction of bank credit is
one of the most important functions of banking. Unfortunately, our complex economic system has made the control of this expansion and contraction quite difficult; however, this paper is not concerned with any elucidation of that difficulty. It is concerned primarily with the banking process per se.

Thus, from what has been said, it is plain that banks do not have cash to hold against the total of bank deposits. Demands for cash are met by the maintenance of reserves against the total of all deposit liability. The minimum reserve is set by law. Although state and national requirements differ, the idea is the same. National banks usually keep the larger part of their reserves on deposit with one of the central reserve banks. Thus, in times when they need cash, it is possible to secure it from the central bank. Moreover, in times of emergency, it is possible for the member banks to get loans from the central bank. Of course, if every depositor demanded cash from the bank at the same time, many banks would fail because it would be impossible for the banks to convert their assets into immediate cash. The likelihood of this is remote, however, and skillful bankers have by their experience built up an idea of how large a reserve they need to forestall such a bank run.

The following table shows the number of bank and their total deposits as of June 30, 1938. Inter-bank deposits have been deducted. It is interesting to note that for these 52,103 million dollars of deposits, there was at that same time only 6,461 million dollars of money or currency in the entire country.
Even if the banks did control all of this cash, there would still be over eight times as much bank credit as there is cash.  

**BANKS AND DEPOSITS**  
**June 30, 1938**

<table>
<thead>
<tr>
<th>Class of Bank</th>
<th>Number of Banks</th>
<th>Deposits (In Millions)</th>
</tr>
</thead>
<tbody>
<tr>
<td>National</td>
<td>5,242</td>
<td>22,553</td>
</tr>
<tr>
<td>State</td>
<td>1,096</td>
<td>12,193</td>
</tr>
<tr>
<td>Mutual Savings</td>
<td>563</td>
<td>10,326</td>
</tr>
<tr>
<td>Other non-member Banks</td>
<td>8,386</td>
<td>7,153</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>15,287</strong></td>
<td><strong>52,195</strong></td>
</tr>
</tbody>
</table>

Through the depository and loaning functions of the bank, another great function is facilitated—selective utilization of funds. This function comes about chiefly by the depositing of surplus funds to be loaned by the bank. Quite naturally the bank officers will attempt to place these funds at the most productive point. This process tends to keep our surplus re-invested to the best advantage. Obviously, the sociological benefits of this force rests primarily upon the common sense and ethics of the members of the banking profession.

Another bank function is the collection of time items such as maturing notes and drafts of customers. The clearing house is the machinery that makes this service a nation-wide service.

Then, too, banks usually act as fiscal agents for the government. This function is not a new one. It is merely an extension of the same service to the government that customers receive.

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2. Ibid.
As stated before, there are many services rendered by our so called banking institutions which are not primarily banking functions. Activities in the trust department, safe deposit department, bond department, etc., should be classed in this category of non-banking functions. Nevertheless, these services have become so much a part of the activity of our large banks that it is necessary that they be mentioned.

The Departments of a Bank

We will turn now from this introduction of banking functions and services in general to the specific departments of a bank. It is well to point out here that it is impossible to find a "typical" or "average" bank due to the fact that no two banks operate in exactly the same manner. A bank is a profit organization and is therefore adjusted to meet the needs of the community it serves. Fundamentally, however, banking functions are the same in all banks. The small bank may have only three employees, but these three perform the same functions, on a small scale of course, as the hundreds of employees of any large New York bank. The difference lies in the details of accomplishing these functions. Since there is no standard departmental classification, Langston's classification which he used in his recent text, *Bank Accounting Practice*, was borrowed.¹

Functions of Receiving Tellers Department.—As the name implies, the receiving teller takes all demand deposits which are brought to the bank, verifies the accounts, and makes the necessary entries for his record of the transaction. This

department is probably the busiest of all departments due to the fact that demand deposits are usually the largest single item in the banks business and these are mostly made through the receiving teller.

The Mail Tellers Department.--In point of similarity, the mail teller's duties are closely related to the receiving teller. He receives deposits by mail or express. It is often true that he will receive other types of mail which will be sorted and dispatched to the proper department. His problem is to sort the mail, provide records of what he received or dispatched, and forward all mail to its proper destination.

Paying Tellers Department.--The main duties of the paying teller are to pay checks drawn on his bank and presented over the counter, to certify checks, take care of signature cards, keep a record of stop payments, and to make shipments of cash to correspondent banks or to customers for payroll purposes, etc.

Certification Department.--The work of this department is usually cared for by the paying teller. However, due to the prevailing custom among stock brokers to pay off balances with certified checks, some banks find it necessary to maintain a separate department for this service.

The Clearing Department.--All checks and credit instruments that are collected through the clearing house are first sorted into batches by the clearing department. The proper entries are made, credit tickets are made out, and the instruments are then sent out for clearing.
Transit Department.--Into this department come all items that are payable out of town. The proper entries are made and collections are effected. The difference between this department and the collections department lies in the fact that all items going to the transit department are considered cash while the items going to the collections department are not so considered until they are collected.

City Collections Department.--The name implies the function of this department. It receives all items that are to be collected in the city and then secures payment. It usually does not handle clearing house items.

Country Collections Department.--Location determines whether items will be collected by this department or the one last mentioned.

Coupon Collections Department.--This department exists to serve corporations and the government by acting as their coupon paying agents. It handles local bond coupons and those which come to it from correspondents. Thus, nearly all bond coupons are drawn into the large city banks for collection as they mature.

The Note Tellers Department.--The name of this department is derived from its function of collecting notes other than those which the bank secures in connection with its loans and discounts. Besides this, the note teller usually does any miscellaneous teller work such as handling telegraphic transfers, special deposits, etc.

Savings Department.--As the title indicates, the duty here
is to care for time deposits and withdrawals. It naturally falls to this department to compute interest on deposits and make the necessary adjustments on the customers' ledger sheets.

The Discount Department.—Takes care of discounts of all kinds. This department receives acceptances, pays for them, computes the earnings, and collects for them at maturity. It also falls to this department to handle rediscounts and borrowings at the Federal Reserve bank.

The Loan Department.—This department functions much the same as the discount department excepting for the fact that it handles loans instead of discounts. Besides computing earnings, collecting for notes at maturity, etc., it takes care of collateral margins, partial payments, and so on which are all a part of the loaning function.

The Bond and Securities Department.—Handles the bonds and securities of the bank. Its work involves the recording of sales and purchases, interest, earnings, profit and loss, etc.

Personal Trust Department.—The activity of this department is quite diversified. It might be said in general that it cares for all fiduciary relationships with the customers of the bank. Hence, the nature of their duties would be the caring for customers' securities, administrating estates, etc.

Corporate Trust Department.—A separate trust department for corporation exists only when the work can not be handled efficiently by one single department. It secures bond issues, acts as a depository under re-organizations, etc. It is not uncommon for this department to do fiscal agency work for corporations. This includes coupon paying, registrar of securities, dividend
payments, transfer agent, etc.

Foreign Exchange Department.--The duties of this department depend upon the policy of the bank. Some banks maintain such a department for profit while others maintain it merely as a service to customers. At any rate, the duties involve the buying and selling of foreign exchange and the management of incidental details.

Check Desk Department or Check Teller.--To this department come all checks from the clearing house payable by his bank. The teller sorts these checks, makes a record, and then sends them to the proper department of the bank.

The Bookkeeping Department.--The chief task of the bookkeeping department is to keep the general ledger of the bank. It should be pointed out, that bookkeeping is done in every department of the bank. However, uniformity and efficiency demand that there be a central department which records the financial transactions for the entire organization so that the various data from all departments can be readily understood and interpreted. This bookkeeping department is one of the most important of all departments because it is in a position to furnish facts, comparisons, and other data without which banking would be hopelessly lost.

Since the World War, an increasing number of people of this nation have availed themselves of the many services which banks offer to the public. This custom has increased the use of bank credit, checks, etc., with the result that the payment and collection of charges and credits has become mostly
a matter of bookkeeping procedure. Hence, the necessity for accurate bookkeeping is of primary importance.

The Auditing Department.--Auditing involves a review, analysis, and verification of financial transactions and value fluctuations and the presentation and certification of statements disclosing financial condition, profit and loss outcome, and other pertinent facts. Since this subject will be treated more fully in a later chapter, it will suffice here to merely emphasize that auditing in banks is or at least should be a more exact and detailed process than in any other line of business. The fiduciary nature of banking requires the elimination of either intentional or unintentional errors as well as a strict control over the financial policies and transactions of the institution.
CHAPTER II
BANK ACCOUNTING

Purpose of Bank Accounting.—Accounting deals specifically with the recording and presentation of facts involving the acquisition, production, conservation, and transfer of value. This definitions holds for either financial or mercantile organizations. If this definition is amplified, it is found that the purpose of bank accounting is threefold; first, to show a chronological record of the transactions which effect an increase or decrease in values; secondly, to determine the financial position at any specified time; and thirdly, to determine the profit or loss for any period as well as any other facts which should be known.

The accounting records should show what is woned by the institution and what the institution owes. It should show how items were acquired and from whom as well as to whom items are owing. The records should omit nothing that properly belongs there and anything that does belong there should not be recorded. Then, too, the records should be regular. By regular we mean that transactions have been recorded according to the accepted standards of the profession and consistent with the by-laws of the corporation.

Another important purpose of accounting is to keep a history of transaction in chronological order so that in the future matters to be attended from day to day will not be overlooked. For example, the bank has to have some record of the maturity dates for notes. Hence, it keeps a maturity tickler
which provides information which shows what notes fall due, when, and the amount.

**General Characteristics of Bank Accounting.**—The nature of banking, discussed in the first chapter, makes it clear that bank accounting is different from other types of bookkeeping. Moreover, banking is an old and well established profession dating back to seven centuries before the birth of Christ. Hence, one would expect custom to introduce a certain number of peculiarities. Besides this, banking has been slow to adopt modern methods of recording and presenting financial facts. This can be attributed to the conservative banker, who, because of his fiduciary position, hesitates to be among the first to experiment with new ideas.

A bank's materials are different from the usual business organization. The inventory of a bank consists of cash, bonds, stocks, commercial paper, and other credit instruments rather than merchandise such as the manufacturer, wholesaler, or retailer finds in his stock. The great value in small bulk of this inventory is also a peculiarity and one that therefore requires strict accounting and infallible system.

Then, too, nearly every transaction requires some entry. The average mercantile concern has need for less accounting entries in a week than a bank requires in a single day. Therefore, the problem in a bank is to secure the accurate recording of a great number of entries. Happily, the theory involved in making these entries is not a complicated process. Hence, repetition of similar transactions makes it possible to standardize records, forms, and methods so that the accounting can be quickly
and efficiently accomplished.

Since banking requires such very accurate bookkeeping, we find that despite the fact that there are so many entries to be made, there are usually two or more sets of entries covering the same transaction. By installing this method, the one set of entries acts as a check against the other. Since the theory and procedure of making most entries is relatively simple, there is very little likelihood of the two entries both being wrong in the same detail. Moreover, the temptation to steal is greater in a bank than in nearly any other organization. Hence, if two or more sets of entries are made by two or more persons in different parts of the bank it will be difficult for any dishonest person to steal and go undetected for very long.

When a bank is departmentalized, as most banks are, the bookkeeping is designed so that each department must balance with the central bookkeeper. Hence, when an error is made, and it might be well to say here that errors will be made regardless of the calibre of either the system or the employees, it can be worked on separately by each department. It is often possible to tell in just what department the error was made. Moreover, most accounting systems provide for a "batch" system of checking with the internal department. This facilitates the breaking down of the day's work into units and the finding of errors before a great number of entries have been made.
Most business organizations have accounting periods which vary from a month to a year. At the end of each period, the books are closed and statements are drawn up. The banker's fiscal period is a single day. The books are closed and balanced each day and a statement of condition is drawn up. Moreover, it is often necessary to close the books in the middle of the day or within an hour after the bank has opened. This is caused by the strict regulation which is enforced on all banks. The examiner might come in at any time and ask for the statement of condition. Therefore, it is necessary that the system be kept right up to date and almost up to the very minute.

Another reason for speed in caring for the bank's books is due to the importance of time in banking. A bank is a profit organization and its profits come chiefly from earned interest which is based on time. Hence, it is necessary that transactions be handled in the shortest time possible and at the same time be error proof. Besides this saving of time, laws concerning the collection and payment of credit instruments are very strict. Notes, drafts, etc. must be tendered at definite times, installment and part payments involve legal implications. An accounting system that does not keep up with such a multitude of details would be of little value.

In the ordinary business enterprise, the bulk of the accounting work pertains to assets—accounts receivable, inventory, cash receipts, etc.; in banking, the opposite is true. Most of the accounting personnel is busy recording the liabilities—chiefly deposits. This situation is peculiar to the American
financial institutions because we do business mostly in credits. Europe, on the other hand, does its business in debits. So far as accounting is concerned, however, neither system is more difficult because the units of work to be done would be the same under either system.

Organization for Accounting.--As was previously said, accounting is allocated or split up between the various departments of the bank. The accounting is not done at any one particular place or department—each department does its own bookkeeping which is controlled by a central bookkeeping department or the auditing department. The greatest volume of the accounting is done in the regular operating departments who do the bookkeeping along with their other routine services. Hence, a bank's organization for accounting can be broken up into four essential elements:¹

1. Making original entries and keeping preliminary and subsidiary records.
2. Keeping customers' or depositors' accounts.
3. Keeping the general books.
4. Auditing the work done in the previous three steps.

General Uniformity in Banking Procedure.--It has already been mentioned that bank systems must have readily available materials that will make possible statements which the government requires of all banks. The custom of sending in bank examiners has conditioned the accounting systems and has determined

¹. Langston, L. H. Bank Accounting Practice. p. 3.
the kind of accounts that are kept. The result of this has been a tendency for the banks to have almost uniform systems even though the government does not require them or specify account titles. The bank examiners, however, as they travel from bank to bank, carry information and make suggestions which tend to bring about this uniformity.

It is not intended to convey the idea that the amount of work in banks is essentially the same. The bank is systematized according to the purpose for which it was organized. It logically follows that the purpose of the organization would be conditioned by the needs of the community. For this reason, the activities of banks are lopsided; that is, their business is usually greatest in some certain form of banking such as Savings, Trust, Foreign Exchange, Loaning, etc. Nevertheless, the accounting procedure and system is relatively uniform.

**Accounting Fundamentals the Same in All Banks.** — "The fundamentals of bank accounting are alike, differing only in the methods of accomplishing these fundamentals. Although no two banks are exactly alike in their details, the fundamental work, for all practical purposes, can be said to be standardized."¹

The difference between banks lies not in what is done nearly so much as in who does it. Thus we find that in a small bank three or four persons might do nearly all the work, while in a large city bank, there might be a dozen persons employed to perform exactly the same function. As banks grow in size

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it is necessary to subdivide the work and to attain specialization in the various tasks. Since the most difficult accounting problem is the successful recording of similar transactions, it is apparent that as the number of transactions increases, the need for specialization grows until we find the accounting system of the large city bank organized as effectively as a complex piece of machinery. However, close scrutiny of such a situation will reveal that this seemingly complex machine involves no more accounting theory than the ordinary small town bank that is run by three or four employees.

It seems logical then, that a paper of this kind, should proceed with a discussion of accounting theory in any "average" bank. Unhappily, however, no such organization exists. There are no two banks that are exactly alike. As a matter of fact, banks are so different insofar as banking is concerned that no one could say just what an "average" bank was. The difference is one that is related, however, to banking theory rather than accounting theory.

Kniffen, Langston and others maintain that accounting fundamentals are the same because it is necessary to have available in the records a picture of the financial transactions of any bank. The keeping of these records in theory is essentially the same in all banks. Therefore, if the accounting for a large bank is understood, it is natural that the procedure in other banks will be understood.

In describing bank accounting, one can devote himself to all of the various minor details of recording bank transactions,
However, if the nature and intent of the work is once in mind, the details necessary to accomplish that work are easily found. A detailed explanation of the minute details of bank accounting would lead to confusion. One could take each banking operation and describe it fully—the objective, the entries, the books of entry, forms to be used, etc. Such an undertaking would, however, be merely a repetition of what others have written many times before, and it would involve so much simple explanation that the entire work would be detailed and confusing. A person interested in such detail should not expect to understand it from reading; he should go to a bank and examine the records and watch the progress of a day's work. In this manner, he will get a concrete idea of the many transactions as well as a concept of how banks manage to account so exactly for each transaction. Therefore, the remainder of this chapter will be devoted to an explanation of the broader concepts of the accounting work.

Banking Records.—The records of a bank can be broadly divided into two classes. First, the corporate records, which consist of the minute book, the stock ledger, the stock certificate book, and the stock transfer book; and secondly, the financial records which consist of the general journal, the many subsidiary ledgers, and the general ledger which functions as a summation and control of all the data in the other records.

The following is a list of the records, corporate and financial, that one might expect to find in any large bank. It should be remembered that these records are often subdivided
so that more than one person can work on them at the same time.

The Books of Record

1. Minute Book
2. The Stock Certificate Book
3. Stock Register and Transfer Book
4. Stock Ledger
5. General Cash Book or Journal
6. General Ledger
7. Daily Statement Book
8. Certificate of Deposit Register
9. Cashier's Check Register
10. Register of Drafts Issued
11. Individual or Dealers' Ledgers
12. Check and Deposit Scratchers
13. Discount and Loan Registers
14. Maturity Ticklers
15. Liability Book
16. Offering Book
17. Note Ticker
18. Collection Register
19. Tellers Statement Book
20. Dividend Book and Payroll
21. Voucher Register

The uses of these books to the logical mind, are apparent from their names. At this time, a detailed explanation of the form and use of all these would be confusing. The specific uses of those not explained will be readily understandable after the
broader aspects of the accounting procedure are explained.

The Minute Book.—The minute book, as the name implies, is a record in chronological order of the activities of the directors of the bank. It should contain all the resolutions of the board of directors and is therefore a necessary part of the accounting system. It is in this book that the policies of the bank are recorded. Each banking officer derives his authority from the board of directors. His duties and powers which are usually definitely fixed, would be found in the minute book. Compensation of officers, amendments to the by-laws, issue of capital, declaration of dividends, ratification of loans, and all other matters handled by the board of directors are recorded here. It can readily be seen, therefore, that because of the nature of bank transaction—the possibility of fraud, the seriousness of errors, etc.—the necessity for this specific allocation of responsibility and statement of policy is of vital importance to the accountant.

Stock Certificate Book and Stock Transfer Journal.—The stock certificate book is, as the name implies, a record of the ownership of stock. Anyone familiar with the nature of a corporate form of organization can readily see the necessity for such a record. In banks whose stock is actively traded on the exchange, it is necessary to keep a stock transfer journal which evidences the sale of stock and recognizes the new stockholder. Thus, it is from these records that the bank, as a legal entity, keeps in contact with its stockholders. The information contained within these books is necessary for
the distribution of dividends, bank reports, and announcements of stockholders' meetings. Then, too, there used to be a time when the owners of a bank were under double liability in case of the failure of their institution. Due to the legal expense and difficulty of enforcing this rule, it was dropped. It seems that the large holders usually had enough money to drag their cases through the courts and stall off any payments, while the small holders were without protection. Moreover, recent legislation has provided for a better protection to take care of this double liability rule.

Stock Subscriptions Register.—When a bank is first organized, the capital stock of the new organization is usually first subscribed for and then paid by installments. It is not unusual, either, for a subscriber to sell his subscription or his right to subscribe to some other party who is interested in the undertaking. Such transactions are handled in a subscription book which is a record of the stock subscribed, transferred, and the amount paid.

The Dividend Register.—The fact that the government regulates the banks more strictly than any other organization necessitates the keeping of a strict account of dividends. Before dividends are declared, all expenses and accruals must be considered and a certain percentage of the remaining surplus must be set aside to meet government regulations concerning the protection of the liabilities of the bank. Moreover, conservative banking practice prohibits any declaration of dividends that will reduce the surplus to the very margin prescribed by the law. The supervisory government officers
therefore usually check the bank's policy in regard to the
declaration of dividends. This register, in order to fulfill
its function, should present information which will disclose
the amount of the dividend, the amount of each check sent to
the individual stockholders, and the number of checks which
are paid off or outstanding. From this record then, superv-
isory authorities can check the bank and the auditor can
maintain a conservative policy which will protect both the
bank and its depositors.

The Accounts of a Bank.—The accounts of a bank differ
from the accounts of the usual business organization because
nearly all of the transactions involve cash or some other
credit instrument. There are no merchandise inventories for
which to account, no accounts receivable because nothing is sold,
and there are no return sales and purchases. Moreover,
it is obvious that the very nature of a bank's transactions
involve a bookkeeping system that is an exact science. Each
transaction, calculation, and entry must be checked and double
checked in order to keep the records as mechanically perfect
as is possible.

Despite these differences in the accounts of a bank and
the usual mercantile organization, there is a similarity of
reasoning which can be applied to show how the accounts used
do perform the same functions in a bank as they do in a mer-
cantile organization. The accounts payable of a bank are the
deposits which customers have trusted to the bank's care.
The inventory of a bank consists of bonds, stocks, mortgages,
and other securities which customers have pledged for loans. And so, the same reasoning that is applied to determine what should be debited or credited in a mercantile organization can be applied to banking. The difference lies in the subject matter rather than in the reasoning.

The accounts of a bank can be classified under three broad headings; namely, the accounts with persons and corporations; the accounts with property, real and personal; and the nominal accounts.

The first large class concerns deposits of customers and these accounts measure the bank's indebtedness to depositors. The second class involves the property of the bank; such as, notes, investments, transit items, etc. The nominal accounts include the expense accounts, the income accounts, interest accounts, etc. One thing is common to all these accounts— they either specifically or remotely represent some form of cash or some credit instrument which in turn is closely related to cash.

Accounting Procedure Broadly Stated. As stated before, there are three main financial records kept by banks. The first is the general journal whose form varies to suit the different needs and details of segregated banks. This book is a record in chronological order of each banking transaction as it occurs. The journal is seldom one book; as a matter of fact, it is usually a very specialized record broken up so that each type of transaction has its own journal. The second financial record is the ledger. It too is subdivided as the needs for specialization within the bank increases. In large banks, each separate
department has its own ledger which is controlled by an account in the general ledger. The bank ledger is perhaps more exactly pictured as a summation or collection of journal entries classified and placed in logical accounting sequence. The last broad accounting record is the statement book. The name of this record implies its function and use. Now then, this paragraph very briefly explains the functioning of the financial accounting records. We see first the happening which is journalized; then these journal entries are classified into the subsidiary ledger and also the general ledger; from the general ledger the information is found for any statements which the bank desires to publish. The most important fact to be remembered about this accounting system is the fact that it is carried on with the object of having available at the end of each day information for bank statements. Those familiar with mercantile and manufacturing systems, know that the books are closed only at the end of a fiscal period; this is true of a bank, but its fiscal period is a day. Some banks even go so far as to close and balance each department twice a day. The reason for this is self evident. Material handled are very valuable, hundreds of transactions occur every hour—all this makes it necessary to check for errors before so much work has been done that it would be impossible to detect them. Furthermore, the fact that a bank must have the trust of the public makes it necessary that every practical effort be utilized to maintain that trust and confidence. Repeated mistakes in the accounts of the customers would soon depreciate the ranks of the customers.
Original entries are made in the operating departments. These departments not only make original entries but along with their other duties they also keep the subsidiary ledger. Hence, the receiving teller in a commercial bank will check the deposit tickets to see that they are properly made out and that all the information needed is included. He then, takes the customer's deposit card and makes the proper entries to record the transaction. After the cash is counted, he will place the deposit ticket and any other information in a basket near the door of his cage. At regular intervals a clerk from the interior bookkeeping department will collect the information that is in the basket and take it to the bookkeeping department where entries for the general ledger will be prepared. Hence, we have two sets of entries for each transaction. At the end of the day, the teller will count his cash and reconcile his department with the chief bookkeeper. It might be, that by the use of machines, the teller can give the clerk a balance for his work each time the deposit tickets, etc., are collected. Hence, the checking for errors will be reduced to smaller batches and the work made much simpler.

The following is a list of the asset accounts that would probably be found in the general ledger of a present day bank. It is important that these accounts be understood. The other accounting processes are merely a matter of logic, detail, and safety which are necessary for the adequate maintenance of financial control. The liability and capital accounts will be considered later.
Loans and Discounts.---Persons familiar with banking know that the chief earning asset of a bank is its loans and discounts. The distinction between loans and discounts lies in the method of collecting interest. When a loan is made, the bank advances the full amount of the face of the note. Then, when the
customer liquidates the loan, the face of the note plus interest at an agreed rate must be paid. In making a discount the procedure is modified somewhat. Instead of giving the customer cash or credit for the face value of the note, the amount of interest is calculated and the customer is given the difference between face value and the interest. At maturity, the customer pays only the face value of the note. It is a mistake to say that the difference between a loan and a discount lies in the fact that on a discount the bank collects its interest in advance. This is a common misconception in general texts on banking and accounting. The interest is neither collected or earned until the face of the note is paid. Therefore the real difference between a loan and a discount lies in the calculation and method of payment rather than in any time element. The advantage of using discounts can readily be seen. The person doing the borrowing knows just what he must pay at the date of maturity and the note can be transferred as a negotiable instrument much easier if the interest rate has already been calculated in advance.

For administrative purposes, the loans and discounts might be subdivided; however, such subdivision presents no accounting problem. When a loan or a discount is made, the account is charged and the customer's account is credited with a deposit. After the customer liquidates his obligation, this account is credited and a charge is made to some asset such as Due from other Banks or Bankers or Cash. Hence, the difference between the debits and credits to Loans and Discounts represents the outstanding credit through this medium.
Overdrafts.—Overdrafts are very similar to loans differing largely in the manner in which they originate. The nature of the asset is implied in its title. "When a customer overdraws his account, he becomes indebted to the bank—this of course depends on whether the bank is willing to advance him the money under the circumstances. The account is shown by a charge to Overdrafts and a credit to either Cash or to Due Other Banks or Bankers. "When the account is paid, the Overdrafts account is credited and the Cash account is increased.

It is logical to ask why this account is not listed as a loan since that is what it essentially is. There are two reasons for its being listed separately, the first is that overdrafts are looked on with disfavor by domestic bankers of this country and it is desirable to show the amount overdrawn. Besides this, banks dealing in foreign exchange, do most of their business in Overdrafts; hence it is desirable to keep them separated.

Bond Investments.—Banks often invest in certain "legal" bonds as a means of protecting deposits by good investment and at the same time earn interest on money that would otherwise be idle in the vault. It is the universal practice to carry bonds at their book value. This custom is one of the reasons why the banks had such a difficult time during the 1929 depression. The book value of bonds was much higher than the market value which had the "short run" effect of overstating assets and thereby causing huge paper losses. Banks able to hold well selected bonds would not lose, but there were
few banks of this calibre. Naturally, the financial strain of the depression had to be borne chiefly by the banks.

Hence, securities including these bonds were "dumped" on the market. In order to protect themselves, bankers everywhere subscribed to guarantee funds supported by their own collateral. This difficulty, protecting depositors and at the same time making profits, is the major problem of banking which is further accentuated by the abnormal times and changing conditions.

**Mortgage Loans.**—In banking circles, well-selected mortgage loans are considered to be good loans; however, there are no particular emphasis on the word "good". The chief drawback is that they are slow and in times such as the recent depression it is difficult to convert them into cash. The accounting for a mortgage loan is very similar to other loans excepting for the fact that it is slightly more involved. In making such a loan it is necessary that the real estate be examined, appraised, insured in favor of the bank, and that the necessary legal papers be regularly recorded.

The advantage of mortgage loans lies in the fact that the bank has less risk to take. Moreover, if the debtor defaults that bank is certain to realize at least a part of the value of the loan.

**Banking House and Real Estate.**—It is a matter of custom and general policy for banks to own the building in which they do business. The theory behind this is that by owning its building, the bank builds up an atmosphere of security in the
community in which it operates. The customers of the bank believe the bank is going to continue to operate indefinitely else the banking property would be rented. Furthermore, banks generally are not permitted to own property in excess of the bank building. Of course, real estate acquired by foreclosure is owned but it is not supposed to be held indefinitely. The length of time such property can be held is determined by law which has its elasticity in the fact that the bank can get an extension of time from the proper authorities.

Most bank building are larger than is necessary for the immediate needs of the bank. For this reason, the vacant part of the building is rented out to suitable tenants.

The value at which the bank building will be carried on the books is usually determined by the board of directors who also decide the proper depreciation of the asset. The accounting technique here is much the same as that in any mercantile business. The asset is charged on the books at cost. A valuation reserve is then set up to care for the depreciation. The problem of allocating this expense between the bank and its tenants will be taken up in the chapter on Cost Accounting.

Other Real Estate Owned.—Real Estate owned is an asset that is frowned upon in most banking circles because of the cumbersomeness and difficulty of liquidating such an asset. Moreover, a bank is essentially a financial institution: not a real estate agent. One of the difficulties encountered during the last depression and somewhat during the recession (common usage is the authority for differentiation between
these two business slumps.) was the fact that many banks discovered that they were rapidly becoming landlords. The constant care and nature of such assets constitute a burden to the bank and they are therefore disposed of as soon as it is profitable or practicable. It might be said, however, that such loans well placed and well cared for often come through a business slump better than other types of securities. Nevertheless, a general rule to keep clear of real estate exists.

Furniture and Fixtures.--Furniture and Fixtures are common to all businesses. It includes bookkeeping machines, typewriters, adding machines, and other office equipment such as desks, chairs, etc. Formerly, it was common for banks to charge the above items directly to an expense account thus eliminating the carriage of this asset. However, due to the fact that the federal income tax law prohibits a deduction to be taken for such expenses all in one year, it is advisable to charge these items to an asset account and amortize their cost over a pre-determined period of years.

Due from Federal Reserve Bank, Reserve Account.--The Federal banking law requires that each member bank maintain a reserve with the Federal Reserve bank that is equal in amount to a designated percentage of the bank's deposits. This reserve is kept as an asset of the bank; however, the bank is not permitted to draw anything from this legal reserve. Moreover, most banks consider it expedient to keep a larger reserve than the law requires. The difference in banking conditions would naturally condition the size of this reserve.
Due from Federal Reserve Bank, Collection Account.--Member banks have several ways which they can use to maintain adequate reserves. The most current method is to send checks and other cash items to the Federal reserve bank for deposit. The Federal reserve bank accepts such items on a deterred credit basis. In other words, these items are not available as a reserve until a certain period of time has elapsed. The length of the period depends entirely on the amount of time necessary for the Federal reserve bank to collect for the checks and other cash items. For this reason, the member bank first credits these items to the Collection Account and then transfers the entry when the time limit expires to the reserve account.

Cash in Vault.--In banking circles, cash is either currency or gold bullion on hand and in the vault. In state banks, cash in the vault may be considered as a reserve, but the National banks do not. Any foreign currency on hand is maintained in a separate account as is any cash which the bank has in any place other than the vault. It might be said that the cash carried in the vault is usually a very small items as compared to the amount of other asset items. There are several reasons for this; the first place, there is not as great a use of cash in business today as there used to be; moreover, it is safer to keep the cash with the Federal reserve bank and besides, cash in the vault is not earning money and therefore is an expense to the bank.

Due from other Banks and Bankers.--Due from Other Banks and Bankers should not be confused with the previously mentioned
account, Due from Federal Reserve Bank. The two accounts are entirely different. Due from Other Banks and Bankers cannot be used as a reserve except in a very few states where the law does not prohibit such a practice. The account represents a deposit balance which this bank maintains with other banks. The need for such accounts is self-evident especially when one considers the nature of foreign exchange. Moreover, small banks find it necessary to keep deposit accounts with large banks in the metropolitan areas so that they can give credit to the business men of their own areas. The procedure is much the same domestically as it is in foreign exchange.

Cash Items.--Cash Items compares with the Petty Cash Fund's of the ordinary mercantile organization. Even in the banks, this account is treated with little regard for accounting principles. Many banks are guilty of the practice of considering I. O. U's., memo-checks, etc. as cash. The only items that should be listed in this account are checks cashed after the teller closes his books, coupons, and petty cash itself. Care should be taken to keep the account clear of any questionable items.

Exchange for the Clearing House.--The title of this account explains its nature. All checks received during the day on other banks that can be collected at the clearing house are charged to this account and subsequently collected. Checks on banks not members of the clearing house might be charged to this account, but it is the current practice to keep such items separate.
Accrued Interest.—Banks hold various amounts of bonds, securities, and mortgages depending, of course, on the size and purpose for which the institution was organized. Nevertheless, as a general rule, there is at all times a large amount of interest carried but not yet due. Since it is necessary to know the exact condition of the bank, this interest must be shown as an asset like any receivable. Obviously, it would be awkward and expensive to stop each day and figure the amount of interest accrued on each separate item. Moreover, it is a comparatively simple process to prepare a schedule which shows the accrued interest from day to day. As each credit instrument is acquired, a schedule can be made showing the amount of interest that instrument earns from day to day. If these schedules are then fused together, the amount of accrued interest in total can be ascertained at a glance. Besides the service of this system, there is a minimum of work required because the calculations can be speedily arrived at by the use of charts and calculating machines and the work need be done only once.

Due from Customers on Account of Acceptances.—The Federal Reserve Act gave to member banks acceptance powers. Thus, when a bank makes an acceptance, it has an obligation to pay the holder. This obligation is off-set by the amount due to the bank from the person for whom the acceptance was made. The profit for the bank lies in its interest charge. It might be that the bank will take a promisory note as concrete evidence of such a receivable or it might be that it will merely make an agreement with the customer. Bank statements show
that this account and the liability account, Acceptances Outstanding are always the same in amount.

U. S. Bonds to Secure Circulation.—Quite naturally, this account is limited to National Banks. Moreover, note circulation is quite strictly regulated by the Federal Reserve Act. Before a bank can issue notes it must purchase United States bonds of certain issues and deposit them with the Treasury Department in Washington. The Treasury Department sends engraved notes to the bank which in turn issues them for the loans it makes with its customers. For the bank there is a two fold profit. It gets approximately 2 per cent interest on the bonds plus whatever interest is earned on the loans. The expense of engraving the notes plus a tax makes the cost of such issues around 1½ per cent. It is interesting to note that on September 30, 1938, 4,215 million dollars of the total 6,822 million dollars in circulation was Federal Notes making this the most popular type of currency.1

Redemption Fund from U. S. Treasurer.—In order to take care of the redemption and re-issue of used bank notes, every issuing bank is required to maintain a reserve equal to 5 per cent of the total issue with the U. S. Treasurer in order to provide a clearing fund. Thus any old notes that are cancelled pass through this fund and new notes are then sent to the bank for re-issue. It is easily seen that this fund, an asset of the bank, for accounting purposes, is always in the same

1. Federal Reserve Board Bulletin. Sept. 30, 1933
amount and therefore presents no accounting difficulty.

Due from Foreign Banks.—This account arises only in those banks dealing in foreign exchange. Langston says:

"From the accounting viewpoint there is no such thing as foreign exchange. A purchase of exchange amounts to a purchase of a bill of exchange which is immediately remitted and charged to a foreign correspondent for the purpose of building up balances due to this bank. A sale of foreign exchange is nothing more than a sale of a draft of some kind drawn against these balances."

It is the current practice to quote bills of exchange in terms of dollars and cents; this custom has therefore lightened the accounting difficulty of recording such transactions.

With this discussion of assets, we will now take up the liability and capital accounts. It is not intended to give the idea that either of these lists include all of the accounts that one might find in a bank. The impossibility as well as the uselessness of such an undertaking is not only self-evident from the nature of banking but is also evidenced by the multitude of different books and published opinions on the subject.

Liability and Capital Accounts

1. Capital Stock
2. Surplus Fund
3. Undivided Profits
4. Circulating Notes Outstanding
5. Due Federal Reserve Bank

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6. Due Other Banks and Bankers  
7. Individual Deposits Subject to Check  
8. Savings Deposits  
9. Certificates of Deposit  
   a. Time Certificates  
   b. Demand Certificates  
10. Certified Checks Outstanding  
11. Cashier's Checks  
12. Dividends Unpaid  
13. Christmas Club  
14. Rediscounts 'Bills Payable'  
15. Reserve for Taxes, etc.  
16. Unearned Discounts  
17. Acceptances Outstanding  
18. Interest Accrued Payable

**Capital Stock.**—The capital stock account of a bank performs the same function as does this account in any other business enterprise. The amount in this account shows the stock issued and outstanding. Preferred and other classes of stock would each be separately listed.

**Surplus Fund.**—The surplus account of a bank is one of its most important accounts because it indicates the strength of the bank. Hence, this account is built up as much as possible and is made up of stock premiums, donations, and earnings. The one peculiarity of handling surplus lies in the fact that banks, unlike other enterprises, make no distinction between donated, paid-in, or earned surplus.

**Undivided Profits.**—The undivided profits account corres-
ponds to the profit and loss account of a mercantile enterprise. It is a clearing account for all the nominal accounts. To it are credited all items of income; the charges are for operating expenses and losses. From time to time, excess credits are transferred to the surplus account or are distributed to the stockholders as dividends.

The three foregoing accounts make up the capital structure of the bank. It is from these three accounts that the book value of the stock is determined.

_Circulating Notes Outstanding._—The nature and need for this account was explained under the corresponding asset, U. S. Bonds to Secure Circulation. Circulating notes are no more than bank promises to pay which circulate at par value because of the nature of the security behind them.

_Due Federal Reserve Bank._—This account is closely related to the asset account, Due from Federal Reserve Bank. As was explained there, the reserve bank accepts checks on a deferred credit basis. The member bank credits these items until the scheduled time has expired to this Due Federal Reserve Bank account. Then, when the time elapses, this deferred amount is transferred to the asset account, Due from Federal Reserve Bank. Hence, Due Federal Reserve Bank is in the nature of a deferred credit to income and as such appears as a liability on the bank statement.

_Due Other Banks and Bankers._—Since most banks have funds on deposit with correspondent banks, there are banks who in turn have money on deposit with it. Usually these
accounts represent reciprocal agreements whereby each correspondent agrees to serve the other's customers in his own locality. Hence, we find the banks in the larger cities do a large volume of business as bankers' banks.

**Due Foreign Banks.**--This account arises from dealing in foreign exchange and represents the amount in dollars and cents which a domestic bank owes to a foreign bank because of exchange which this latter house holds against the domestic banker. The custom of foreigners to quote foreign exchange in terms of the other country's money, and the custom of our bankers to quote in terms of dollars and cents simplifies the accounting for foreign exchange in banks of the United States. We are the only country in the world that has this custom of quoting exchange in terms of our own currency.

**Deposits Subject to Check.**--This item is usually the greatest single liability of a bank except in those cases where savings deposits are a majority. Deposits subject to check are demand deposits and the bank will honor any checks properly made out against the account unless fraud is suspected. Savings deposits are almost universally kept separate from demand deposits due to the fact that a larger reserve must be maintained for demand deposits.

Demand deposits may originate from various sources—United States Deposits, State deposits, deposits from individuals, deposits by other banks, deposits from businesses, and deposits arising from loans. Why most deposits arise from loans was explained in the first chapter.

The efficient handling of demand deposits is the greatest
problem in most banks today because small accounts are just as costly to maintain as the large ones. This factor together with the increased use of banking services by the average man has opened a new field of accounting endeavor—cost accounting in banks. This subject will be taken up in detail in later chapters.

**Savings Deposits.**—These, too, are a large liability item in many banks. Due to the fact that interest is paid on practically all savings deposits, the banks are careful to maintain and enforce rules regulating the making of deposits, withdrawals, and interest payments. Usually, the right is reserved to refuse a depositor his entire account unless notification has been duly rendered according to the bank's pre-determined policy which must be printed in the depositor's pass book. The amount of this account is represented in both the depositor's pass book and in the bank's record with each depositor. In order to protect themselves from dishonest practices and errors, most banks have the rule that the deposit book is merely for the customer's convenience and in no way an official evidence of liability.

**Certificates of Deposit.**—Many banks issue certificates of deposit instead of passbooks. The most common use of these certificates, however, concerns special deposits which carry interest under special arrangements. Hence, certificates of deposit are of two kinds, time and demand, depending on the reason for their issuance. Their use is especially prevalent in banks that have definite rules as to the length of time a savings deposit
must be in the bank before it is eligible to receive interest.

Certified Checks Outstanding.--A certified check differs from other checks in that the bank accepts the responsibility for its payment. The usual transaction is cared for by charging the customer's account with the amount of the check and crediting the liability account, Certified Checks Outstanding.

Cashiers Checks.--Cashiers checks are those which are made out by the bank in payment of some liability. They are usually drawn by the officer of the bank and frequently are used in place of certified checks. The proper use of these two instruments is very profitable. Because of the nature of their security holders do not rush to cash them. Therefore, the bank has use of the funds represented in the check as well as the funds which it has set aside to redeem the check. Hence, the bank has a double use of funds during the interval that the cashiers or certified checks circulate.

Dividends Unpaid.--When dividends are declared, a liability, Dividends Payable, is set up by charging Surplus or Undivided Profits and crediting the liability. The liquidation is usually by check to stockholders. The total of these outstanding checks is represented by the balance of the account.

Christmas Club.--It is hardly necessary to more than mention this account which has in the past few years grown to be so popular. The total amount in this account is like a time deposit in a savings account. During each December, the account disappears from the ledger and a new account takes its place the following January.
Rediscounts.—There are two ways that a bank can secure funds when it reaches the point that it can lend no more money without impairing its legal reserve. It can borrow funds from another bank like its own customers borrow from it, or it can rediscount its own notes by selling them on the open market or to the Federal reserve bank. If the first method is used, a liability, Bills Payable, is set up: the second method is represented by the term Rediscounts. The principle involved is the same but the separation is customarily provided in order to show exactly what has happened.

Reserves, Liability.—Reserves to meet future expenses are maintained in banks as well as in mercantile organization. The amount of the reserves varies according to the discretion of the banking officers who must be careful to set aside a sufficient amount for losses which are always incurred even in the best of banks. Moreover, reserves for taxes, contingencies, wasting assets, trust funds, etc., have to be provided.

Reserves in the sense just described are liabilities as distinguished from the legal reserves with the Federal reserve banks which are assets. This apparent ambiguity in the use of terms is one of the peculiarities of bank accounting which time and custom have sanctioned.

Unearned Discounts.—Unearned discounts is a liability caused by a book entry for the collection of interest which has not yet been earned. The theory for the setting up of this liability involves the same principle as the setting up of the asset for accrued interest receivable that is not yet due.
For instance, suppose a $1,000, 60-day note bearing interest at 6% is discounted for Joan Doe at the bank. The bank gives John Doe only $990 while it retains his note for $1,000. This ten dollar differential should not appear on the books until the sixty days have passed. For this reason, a credit is made to Unearned Discounts which off-sets the overstated asset. Many texts explain this liability on the basis of its off-setting interest collected in advance on such discounts. However, nothing has been collected and it does not seem logical that an accounting entry should be considered as anything more than a claim to an asset. The very reason that it is only a claim necessitates the off-setting entry.

Acceptances Outstanding.—Acceptances were discussed quite fully under the asset item, Due from Customers on Account of Acceptances. Therefore, it only is necessary to mention that the liability a bank assumes when it makes acceptances is stated in this account.

Interest Accrued Payable.—Interest Accrued Payable is related in theory to Discounts Unearned. Interest accrued, in this instance, pertains to interest owed but not yet due on such items as Saving Deposits, Certificates, and other accounts which draw interest. The fact that this is one of the heavy liabilities of the bank requires the preparation of accrual schedules which show that the bank is owing. These schedules are prepared in the same way as the accruals receivable which were explained under the asset, Interest Accrued Receivable.
Journal Entries.—Thus far the discussion has been limited to the subsidiary and general ledger. This procedure was adopted for the sake of explaining the final effect of various transactions. The general ledger is not, however, a book of original entry. All entries to the general ledger are first journalized in the general journal or a subdivision of it. Thus, the totals from the records of the savings department, the loans and discounts department, trust department, etc., are carried, usually in total, to the general journal where the proper entries are made to give the effect of transactions in that department. These entries are then posted to the general ledger. The general journal performs the same function in a bank as it does in a mercantile organization. It is a chronological presentation of the accounting facts.

Quite naturally, we find the general journal used differently in various banks. It is the practice in some banks to have one journal in charge of a clerk who makes all the entries; other banks subdivide the journal so that more clerks can work on it at the same time. Another reason for subdivision is to permit the keeping of journal entries in each department along with the other duties. However, these are merely differences in technique and therefore have no effect upon the accounting principle involved.

The journalizing of bank transactions differs from the usual mercantile method. It is in reality much simpler. For instance, suppose we found from the daily deposit slips that we had 7500 dollars. Deposits would be credited for this amount—while technically cash would be charged. However, since nearly
all transactions involve cash, it is unnecessary to make a separate entry because the credit to deposits indicates the debit to cash. Therefore, there is no journalizing as it is generally known; the bank's general journal is more like a cash journal of a mercantile business.

Forms

Due to the fact that an explanation of all the various banking forms would be of little more value than the taking up of a few more pages, the subject has been omitted with one exception—the Boston Ledger. Moreover, forms vary from bank to bank and are constantly being changed in order that they can be adapted to the use of machines which simplify and speed up the work of recording. Besides this, it was stated earlier that this paper was interested in the broader aspects of the accounting procedure rather than the details which are incidental to their accomplishment.

The Boston Ledger.—The Boston Ledger plays such an important part in Bank Accounting and still is used enough to warrant an explanation of the technique involved. Beach says:1

"In the United States the old style of bound ledger with one or two accounts to the page is almost extinct. Banks of the present day, in their bookkeeping departments, may be divided into the user of the Boston pen ledger, loose-leaf pen-posted ledgers, and machine-kept ledgers.

"In New York, New England, and in banks within this sphere of influence, the Boston ledger has many advocates. The Boston ledger permits carrying many accounts in a compact space, each page can be balanced as a unit, and there is a daily trial balance of the ledger. Where most of the accounts move daily and trained bookkeepers are available, the Boston Ledger has proven satisfactory.

### THE BOSTON LEDGER

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#### Boston Ledger Sheet used By the National Park Bank of New York City

**Explanation:** "Part of the Boston ledger sheet used by the National Park Bank of New York City. The full sheet has lines for twenty nine accounts. Across two pages there are twelve double columns--room for two week's work. As used by the National Park, the double column is headed with the date. The balances are forwarded with lead pencil into the right-hand or credit column. A total of these lead pencil figures is a trial balance. Checks coming from the Clearing House are posted in the debit column in red ink. On the page as reproduced here, the entries in lead pencil are indicated by heavy figures and the red ink by light figures. Certified checks, in black under the lead pencil balance. All other credits are posted the same but in black ink. "Here there are a number of checks to the same accounts, a list is made and only the total entered. The new balance of each account is computed mentally and extended in lead pencil to the credit side for the next day's double column."

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"This ledger has one line for each account, possibly carrying from 20 to 40 accounts to a page. The names are either written in by the bookkeepers or are printed. Where printed, it is customary to leave them standing in type so that it is necessary only to set the new account and take out the closed ones at the next printing. Address plates may be used for this same purpose. Accounts opening between the printing dates have to be written in by the bookkeepers, space being left for this purpose so that the new accounts will not be too far out of their alphabetic order.

"Under the true Boston ledger system the balances are brought forward every day. In a bank which has a considerable proportion of accounts which move only occasionally, the bookkeepers must still handle these inactive accounts. To overcome this objection to the Boston ledger, all accounts with habitually less than four or five moves a month may be transferred to an inactive ledger. This ledger is kept on cards or on loose-leaf forms. A separate control is kept of inactive accounts. If a check comes in on an account in this group, it is charged against the inactive ledger control and posted to the particular customer's card. Should the card show signs of material increase in activity, the account should be transferred back to the Boston ledger.

"Even with the assistance of such a supplementary ledger, the Boston form is not very suitable for an institution which has many small accounts. The loose-leaf ledger here comes into its own as it is necessary only to handle the accounts which have moves. A few bankers have seriously opposed the introduction of loose-leaf methods fearing that through the subtraction or substitution of ledger sheets manipulation would be rendered relatively easy. While there are some cases on record, experience generally has not borne out their fears. The probability is not great enough to warrant the additional expense and inconvenience of bound records. Further, proper auditing furnishes a greater protection than could ever be secured merely by the use of bound books without such auditing."

The advantage and disadvantages of the Boston ledger are easily seen. Quickness of posting and daily proof are the outstanding advantages. The chief disadvantage lies in the fact that the space for accounts is estimated thereby leaving open the difficulty of not being able to easily work in the details of
very active accounts. This difficulty can be overcome by listing the details on an adding machine tape, attaching the tape, and then recording the total of the details.

The Boston ledger has been loosing in usefulness of late. Due to the monotony of keeping such a record, the work is easily adapted to the use of accounting machines. Moreover, it is desirable to eliminate such work due not only to the savings which machines give, but also to the tension and monotony of which the clerks are relieved. Therefore, the importance of the Boston ledger today is largely historical even though some banks still use this older method.

**Internal Check and Proof.**—One of the most essential parts of the accounting system of any bank is the daily proof of the general ledger. It is not intended that errors go undetected to the ledger. Far from it! The entries of every department forego the test of at least one check. In order to show the care that is taken, a detailed description of Savings Department Bookkeeping will be given. There are various methods used to attain an internal check; yet, the principle involved is the same and will be understood by the following explanation.

**Savings Department Bookkeeping.**—The almost universal practice for the savings ledger is the use of a card file arranged numerically. Each depositor is given an account number. This number on his ledger card corresponds to the number on his pass book. The practicalness of this system is self-evident. A number is easier to find than a name and is easier to file. Moreover, poor writing of names on the passbook is eliminated.
by the substitution of a printed number. The greatest advantage lies in the speed of posting by a number. Machines can be used which automatically charge or credit the depositor's passbook leaving the balance. In this same operation, many machines can handle the posting to the ledger kept by the bank thus eliminating the element of human error and making fraud more difficult.

In order to check entries made in the passbook and the ledger cards, the cards are not placed back in the file but are put either in a different tray or in a space provided in the back of the original tray. Then the posting for the day is completed, all of the debit and credit slips are sorted according to their control account and the totals of these debits and credits are posted to the control cards. It is possible for this proving to go on at designated intervals throughout the day, but that is a matter of individual taste.

It is now apparent that we have two sets of entries on ledger sheets as well as the totals on the machines. Hence, the posting to the control accounts can be proved by checking the old and the new balances on the individual depositors' ledger cards. Besides this check, the machine on which the posting was done can be checked and the posting further verified.

Now then, there is yet an element of error. Suppose the wrong depositor's ledger card were used? This is an error that will not occur very often, but it can easily be checked every day. The account numbers on the debit and credit slips can be added numerically; then, the account numbers on the depositor's ledger cards can be added. The total should be the same; if
it is not, then the process of checking back through the cards would be necessary. This would be a troublesome procedure, but it can readily be seen that the probability of such errors is very slight.

In large banks where there might be too many transactions to wait until the end of the day to do the posting, a method is used whereby small batches of transactions are posted and checked at a time. Thus, some other person can take all the ledger cards, the debit and credit slips, the machine reading, and then make and check the posting to the individual cards and the control account. There profitable, this system is certainly advantageous because it makes the tracing of errors a simple process due to the relatively small number of transactions checked at a time. Besides, the work of these internal bookkeepers can be regulated between departments so that they are kept busy at all times.

A trial balance of the depositors' ledger cards may be taken once a month, at the semi-annual interest period, or preferrably, over a period of time. The latter method is preferred because it makes possible the utilization of the spare time of the employees and eliminates long hours of overtime work at certain periods. A section of the depositors' ledger can be checked at one time, another section at another: then, the sum of these balances can be checked against the control ledger to ascertain the trial balance.

While the system of Savings Department Bookkeeping which has been explained is a typical system, it should be stated here
that there is not any "one best way". Large institutions that have a great number of depositors often divide the customers' ledger cards alphabetically. Thus, one teller has cards A-D, another E-J, and so on. Each window is marked so that the customer can tell the one to use. This facilitates quick service to the customer and also breaks down the ledger thereby making the taking of a trial balance and the tracing of errors an easier task.

Accounting for Interest

Rules governing interest are immaterial to the purpose of this paper and vary with different banks. The mechanical work of figuring interest is a tedious process since each account must be figured separately. One method provides special interest columns on the ledger sheet. Just after a period has closed, the interest is figured for the next period and entered in this special column. Then, as the customer withdraws, the interest lost is calculated; and, if the customer makes a new deposit, the interest on that deposit is ascertained and shown in this special memorandum column. Thus at the end of the period the mechanical work of figuring interest has already been completed leaving only the extending of this figure to the body of the account. The only objection to this method lies in the fact that there is nothing to which to check. Therefore, it is necessary to carefully check these figures to see that no errors creep in. One method of check used is to recruit as much help as possible towards the end of the period, a trial balance of the interest credits is taken and entered on a check sheet. After this is done, the ledger
cards are divided up into batches and the interest is again figured. The second calculation of interest is placed in the second column of the sheet. Thus an analysis of the two columns will reveal any discrepancies. These differences can be checked and the interest thus correctly ascertained. The posting to the control account can be made directly from these sheets or can be made from the cards and checked against the amount arrived at from the recapitulation.

Handling Checks

Checks which are drawn on the bank are first handled by the paying teller. He keeps a personal list of all money paid out on checks which he proves against the checks themselves. He then sends the checks to the check desk where they are sorted into groups corresponding with the various deposit ledgers.

For instance, all the checks that effect the A-I ledger are sorted into one package, J-N in another, O-Z in a third. After this has been accomplished, the checks are sent to the bookkeeper in charge of each respective ledger. He, of course, takes each check and charges the appropriate customer's account with the amount.

After each check has been accounted for, it is necessary that the amounts charged to customers agree with the total of the paying tellers list. As in handling deposits, the bookkeeper puts each card posted in a separate tray or in some specially designated file where the cards can be proved. By running a tape of the amounts charged, he can easily tell if he agrees with the paying teller. In most banks the procedure is simplified by the use of posting machines which build up the total after
each transaction. The saving of time is worth the expense of the
machine because, if no mistakes are made, the proving can be
completed in a very few minutes. Since errors are the exception,
this method is very satisfactory.

The posting to the general ledger is made from the checks
themselves. The advisability of this is readily seen because
provision for a third proof on both the paying teller and the
subsidiary ledger bookkeeper is facilitated. Internal check,
as has been stated, is the most important objective of a
bank accounting system. For that reason, the bank takes every
profitable opportunity afforded to maintain a constant proof
of all transactions.

Bookkeeping Errors

The work of the bookkeeper is routine and involves a
great many transactions of the same kind rather than a variety
of entries. Hence, there are few unintentional errors of
principle. The speed with which transactions must be handled
causes many errors of technique. Langston and Whitney observed
that banking errors could be grouped into four main classes:\(^1\)

1. A charge item may be posted to the column for
   credits or vice versa.

2. A charge or credit item may be posted to the
   wrong account; thus, a check against John Brown's account
   might be charged to James Brown's account.

3. An error may be made in posting the amount
   of either a check or deposit.

4. In computing the new balance to be brought

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down, an error in addition or subtraction may be made.

The bank meets this probability of error by providing for detailed internal check in each department similar in principle to that described under Saving Department Bookkeeping and Handling Checks. Thus, for every transaction there are usually two sets of entries which are further checked by the controlling accounts in the general ledger.

**Monthly Statements**

A further proof of the depositors' ledger is made possible by the custom of sending monthly statements to each depositor. These statements are often made along with the other daily work of the bank. A separate ledger is kept in looseleaf form which has the same entries as the general ledger. Since the information comes from the same source but is recorded by two different persons, the agreement of their totals makes another check. Then, at the end of the month, the information in the duplicate ledger is mailed to each depositor. Naturally, this check is final and if the customer does not object, it is fairly reasonable to expect that the accounts have been properly kept. After all, the only positive check would depend upon a liquidation of the bank. Another advantage of the statement system lies in the fact that such a system keeps vouchers from accumulating and protects the bank and depositor against the practice of forging checks. Without the monthly statement system, accounts might go on for months without being authenticated. This would give dishonest persons ample time to forge checks and escape undetected.

No doubt many would question whether the advantages of
this practice are adequate to compensate for the expense of keeping the duplicate ledger. The answer to this expense is found in the adaptation of machines to the work which provide the statement with a minimum of work and expense. Besides, the fact that most of these machines are rented saves the bank its investment in another fixed asset and at the same time leaves it in a position to take advantage of the latest developments in bookkeeping machines.

Other Records.--It is impossible to name all the records that a bank might make use of. Most banks have a bond ledger which is a record of each block of bonds arranged alphabetically. The information shown includes the name of the security, cost, par value, book value, market value, interest rate, interest date, date of maturity, interest for one day, interest at maturity, and so on.

Another ledger provides a record of all collateral loans. It shows the name and address of the borrower, rate, list of securities, maturity and so on. Similar to this record is the mortgage register which is a detailed record of all mortgages held.

Modern banking necessitates the keeping of a statistical record. Of course, not every bank keeps such a record and the statistics kept varies with the different banks. If the information collected—amount of deposits and drafts, number of deposits received and checks paid in each department, number of checks sent to each correspondent bank, number of transactions in each department, etc.—is properly analyzed,
it can be of use in the formulation of future policies of the bank. However, it is too often true that such records merely serve to appease the conscience of the managers and make them think that they are following modern methods of business by keeping such a record. The value of the records rests not in the statistics themselves but in the use which the management makes of them. Progressive banks find such information a profitable guide in the establishment of sound cost control and bank regulations. This will be discussed in detail in subsequent chapters.

Expenses.—Most banks pay their expenses with a voucher check which not only authorizes the payments but also serves as a basis for the proper classification of the expense. Some banks pay with cash or with a cashier's check using the receipt as a basis of entry. It is easily seen that the former method is to be preferred because it makes possible a systematic classification of expenses and a detailed record of what has been paid and what is yet owing. Moreover, the voucher system allocates the responsibility for payments and gives the control of expenses to a responsible officer of the bank.

For petty cash items, it has been found that the imprest system works best. A columnar petty cash book makes possible the classification of expenses which ties in with the voucher idea.

Purpose of Records.—So far, the discussion has been confined to the broader aspects of recording the financial transactions of banks. The information recorded per se would
would mean little except to an accountant or a person familiar with financial records. For several reasons then, these facts are analyzed and arranged to form a "statement of condition" which is, briefly, a statement of the real accounts. The statement serves several purposes. It goes to the comptroller of the currency, state officials, the public, and serves as a guide to the management.

The management usually requests a statement of the general ledger. Such a statement is not only a guide for the bank's future policies but is also a test of the balancing of the books. The entire work of the bank is tied intrinsically to the accounting records; hence it is essential that they be in balance at all times. Nevertheless, any reasonable man knows that it is impossible to handle the volume of transactions that a bank faces each day without errors. How could any bank teller handle cash day in and day out without at some time over- or under-paying some customer? For this reason, it is necessary to maintain an account that absorbs these errors—the Over and Short Account. Over-payments are represented in this account by charges while under-payments make up the credits. If this account becomes very large, it is closed into the Profit and Loss Account; however, there are usually enough errors over and short to keep the account pretty well in balance.

Keeping up with Accounts.---The cost of opening an account is usually the bank's greatest single expense in so far as the average account is concerned. Therefore, it is important that changes in accounts be brought to the attention of
responsible officers; this is especially true of closed accounts. Due to the cost of securing the account, it should not be lost without a good reason. Moreover, if there is an error or a misunderstanding, it should be corrected. Some bank even keep information of the names, amounts, and number of checks of other bank coming through their own house. With this information as a guide, they can outline a more intelligent plan for increasing the number of their depositors.

In the early part of this chapter it was stated that the accounting records, if properly kept, will show what the concern owns on the one hand and what it owes on the other. So far, the work has been directed to an explanation of the principles and fundamentals of bank accounting without involving the minor details of the accomplishment of these principles. It was hoped that this work would be of interest to persons who were concerned with banking and accounting and that it would serve as a foundation for the understanding of the discussion of cost control which follows. Since the recent depression and recession cost control in banks has been given a new impetus and has been a fertile field for the extension of accounting activity. The fact that work in this field is still in its infancy, makes it a more interesting and challenging subject than the ordinary operating accounting which is, however, indispensable to successful banking.
CHAPTER III
COST ACCOUNTING

Objective.--Cost accounting generally has not been considered to be important to bank accounting. One usually thinks of a cost system in connection with manufacturing organizations such as shoe factories, auto plants, and so on. We shall see, however, that its application to banking is just as sound and reasonable as in any other type of organization.

The main objective of cost accounting is to arrive at a measure of the costs of producing each class of income. The difficulties encountered are self-evident. In the first place, the expenses of a bank are, for the most part, indirect costs: that is, they cannot be applied to any specific earned income. It naturally follows, then, that to install a system that will correctly allocate these expenses will involve a great amount of detail and analysis which might make the system expensive to operate. It would be foolish to carry the analysis so far that the amount spent in distributing expenses would waste more profits than the information was worth.

In this connection Beach says:

"Cost accounting is a study which in its application to a particular situation requires an analytical mind, common sense, and a broad enough viewpoint so that one's sense of proportion insures the cost accounting system fitting into the needs of the business and paying a profit above the cost of its operation."

From this common sense deduction, it naturally follows that in discussing cost control we cannot be too specific or dogmatic.

1. Beach, F. Bank System and Accounting, p. 304.
in saying just what should be done and what should not be done. However, the general objectives and principles of a good cost system and their application to the banking situation is possible. I have found that there is no general agreement even theoretically when it comes to the question of applying cost accounting to a banking system. As we shall see, however, the differences concern themselves with minor theories; the objective—arriving at a measure of the costs of producing each class of income—is the same in every situation.

It is natural that there would be differences in theories concerning the present subject. No two banks are organized for the same purpose and therefore any system of cost accounting would have to be adjusted to meet the needs of the bank. Moreover, the reasoning of experts in the field is naturally affected by their own environment. However, as Beach says, the person with an analytical mind, common sense, and a broad viewpoint can, if he has a thorough accounting knowledge, make a cost system work under the conditions presented in his own surroundings. He is guided by the broad principles of cost accounting which must be adjusted to suit the bank's organization as well as the demands of the management.

Need for Cost Control.---The very nature of banking requires that the bank set up every reasonable, expedient safeguard against its failing. The old adage, "A doctor buries his mistakes, while the banker goes to prison for his," represents better than anything the present attitude of the public towards banking. As we saw in the last depression during the bank holidays of
of March 1933, the success of a bank or a system of banks depends upon the confidence of the people. Therefore, we are forced to consider the fact that there are other objectives of banking besides the showing of a handsome profit. A well developed cost system is a valuable guide for the administrators of the bank's policies. A good system reveals unprofitable operations and puts into simple language the effect of a great mass of details which otherwise might cover a multitude of sins.

Then too, taking banking in general, we find that there is much room for improvement in so far as the practical value of cost accounting data are concerned. John I. Millet points out: 1

"During the last forty years, as shown by reports of the comptroller of the currency, although the gross earnings of banks have kept pace with the general increase in business, the percentage of net earnings on capital and surplus have remained almost stationary. The extra gross profits which have been earned have been consumed, for the most part, by increases in taxes, expenses, interest to depositors, and losses. This lack of increase in net earnings is more surprising when it is considered that the ratio of deposits to stockholders' capital has increased immensely during that period."

From these facts it appears that there is a definite place for cost control in the policies of our banking institutions. It has been suggested by Langston that bankers might supplement their intense attention to credit and investment with some thought towards the preservation of a larger part of these gross profits.

It should be remembered that cost accounting in itself

is of no value. Its value lies in the dollar-and-cents increase in profits which directors and managers can effect by the intelligent utilization of data presented by the cost system. One reason for skepticism lies in the fact that too many executives have the attitude that the mere maintenance of a cost system is all that is necessary to guarantee greater profits and insure the bank's solvency. If the policies and banking practices are not conditioned as the cost system directs, then it is foolish to incur the expense of furnishing such information. After all, why keep unnecessary records?

Bankers of late years have been forced to concern themselves as much with the problem of how profits come about as how much the profits were. In finding out how profits come about, information leading to the disclosure of losses is also made possible. As a matter of fact, the real problem has been losses and expenses rather than profits. Even though losses are prevalent in all businesses and especially in banking, it is essential that these losses be known so that there will be a conscious effort to eliminate them and provide adequately for those that cannot be foreseen. Hence, we find the need for emphasizing cost control and cost accounting.

Ordinary Control.--Every bank has cost control to a certain extent. It is the degree of control that varies. The ordinary accounting or bookkeeping system is the basis of a more detailed and analytical control. The preceding chapters have been devoted to an explanation of the characteristic of this fundamental phase of the work. We have seen how the many thousands
of transactions which affect the accounting system are handled in detail in the subsidiary records and then posted to the proper controlling account in the general ledger. Such a plan gives the full effect of every entry in the general ledger of the bank; yet, the facts are simplified and classified so that they present a picture of the entire work.

Such a double entry system makes it possible to prove each day's work. The general bookkeeper makes his entries to adjust and close the books for the day. Since the general books contain the control accounts, each subsidiary account must be in agreement with its control and a summary of the cash on hand must agree with the summation of the work for the period. It is essential to cost control that these general records be accurately and consistently kept. Each bank should strive to maintain a general system which always reflects the true totals of the subsidiary records. Since conditions are different in every bank, the details of this accomplishment will vary; the objective, however, is essential to all and, as Beach says, knowledge of the general principles along with common sense will insure success.

In order to develop a cost system, it is important that there be more than just a general control of the books. Cost accounting is analytical in nature. It breaks down the general into units. Since cost control has these same characteristics, it logically follows, then, that this general system should also provide a system of control for each department similar in its objective to the system of bookkeeping employed in the
savings department which we described in an earlier chapter. The purpose of the description was to give an idea of the detailed work common to every department as well as to show how internal check, an essential element of control, is achieved. The general system should provide for the breaking down of the daily proof so that the total debits and credits of each department are shown. Such a departmental proof serves as a logical starting point for the uncovering of errors which were made during the process of completing the day's transactions. In general, a satisfactory accounting system for banks will accomplish the following points:¹

"(1) It will produce results that are pleasing to the bank's management and to the bank's customers; (2) it will be simple to operate and reasonable in cost; (3) it will lend itself readily to audit control and will contain all possible safeguards against error and dishonest manipulation."

Classifying and Distributing Expenses.--In order to arrive at a measure of the costs of producing each class of income, it is necessary that expenses be allocated and recorded in a way that will readily lend itself to a later distribution to the several classes of income.

"Cost records should be so designed as to shed light upon obscurities such as these: rates of interest to be paid on deposit balances—especially time deposits, average balance requirements for commercial accounts, free banking services, carrying charges for accounts, profitableness or unprofitableness of branches and functions, direction or expansion or curtailment of activities."²

If we are to accomplish the objectives mentioned above, it is necessary that the classification of expenses be finely

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¹ Young, B. E. Bank Cost Control. p. 20.
² Langston, L. H. Bank Accounting Practice. p. 437.
drawn so that generalities are minimized. Thus the classification of expenses necessitates painstaking efforts and studies of individual transactions. Next, it is important that a plan be drawn for the proper distribution of these expenses when they are paid. After this has been accomplished, the predetermined plan should be strictly adhered to in order to make a scientific test of the system and to provide a uniformity of method which lends itself to concrete criticism and check. Naturally expenses should bear a relation to the function responsible for its creation. This is in essence, the fundamental purpose of the classification of expenses—to relate items of expense to their related income.¹

Mr. E. H. Ensell of the National City Bank, New York, advances the theory that only the direct expenses should be classified and that administrative expense should be considered as generally existing for all departments. Therefore, he believes that the income from the investment of stockholders should off-set this expense. In contrast to this idea we have "oolley's statement that the theory presented above would permit the bank to sell its commodities for less than cost. Naturally, if we throw out certain costs, the stockholders will have to absorb the difference. He maintains that the practical must supercede the theoretical in the ultimate determination of the basis for cost analysis. Furthermore, he believes that every cost can reasonably be classified in a way that lends itself to a distribution to some certain type of income. It is

¹ Langston, L. H. Bank Accounting Practice. P. 438.
Woolley's contention that the banker like the manufacturer, must cover all expenses by his "sales" income. It is admitted that there is no "royal road" to cost finding. "Those who hope to find costs by having a 'magic wand' will only succeed in obtaining meaningless figures." It is therefore necessary to begin with a finely drawn classification of expenses and follow up the sequence of the work until unit costs are found for each transaction.¹

Another school of thought on this subject first classifies income. It works on the broad theory that capital funds, that is, the investment of the entrepreneur, is to provide a fund which will provide building, equipment, and earn enough to cover the general expense incurred with this function. The other items of income are drawn from the outside. They consist of funds to invest which make up the income from loans, fiduciary fees, foreign exchange profits, etc. Thus, this classification of income serves as a basis for the classification of expenses. Expenses incurred in drawing funds from the outside are apportioned to the latter class of accounts while general expense and overhead is considered to be an expense which the income from capital funds must defray.²

In contrast to this, we have the most popular school of thought which does not place so much emphasis on the philosophy behind income. It considers the expenses of operating a department such as the savings department as an expense of operating the enterprise as a whole rather than considering it as an

². Ibid.
expense of accumulating and keeping funds to invest.¹

One could go on from here with a greater discussion of theories of classification. Every source of material presents different theories; however, as said before, the different theories represent generally different banking conditions. This particular conflict serves to further emphasize the fact that the cost control of a bank must be in the hands of a competent, well trained person who has the initiative and creative ability necessary to suit the system to the bank. He must have enough judgment, common sense, and forethought to overcome the individual obstacles which he encounters. The weight of authority as expressed by Langston, Woolley, North, The American Bankers Association Journal, and others, follows the attitude of expense classification which Woolley and Langston both advocate--a painstaking study of each transaction and bank activity which reveals just what expenses are incurred and then apportions them to that specific transaction. In other words, an attempt is made to cover all expenses together with a fair profit on each transaction with customers. Hence, as Woolley says, the bank will pay for its maintenance out of its "sales" income like any other manufacturing or mercantile organization.

The relation of income to some particular function is not always an easy matter to determine. As a matter of fact, it is not possible to classify every expense in such a way that it can be definitely apportioned to some function. However,

the difficulty of certain obscure items is offset by the fact that most banks are organize according to functions. Thus, this specialization and departmentalization lends itself easily to the distribution of the greatest percentage of the expenses. There are always, in any business, expenses that apply to the establishment as a whole.

Before expenses can be classified they must first be carefully analyzed. A good general accounting system will provide for the classification of a large percentage of these items. Most banking institutions use the voucher system which lends itself readily to a classification of expenses. Despite the fact that most general accounting systems provide for such a classification, it is probable that this classification would not be fine enough to serve the purposes of cost accounting. The better the breakdown of expenses, the more efficient will be the cost system. Costs improperly classified are worse than meaningless because they serve to distort the true picture of the organization.

Therefore, in order to get a finely drawn classification of costs, it is desirable to make analysis sheets for each department. The analysis sheet should be complete in every detail and should provide space for every expense. There is a tendency in analysing expenses to have a column for miscellaneous data. Examination of these data will usually disclose a multitude of sins. It is agreed that such a classification is necessary, but the amount should be small and the items there should be those of infrequent occurrence;
such as, laundry, ice, periodicals, food, and so on. If regular recurring items, ordinary routine costs, are included as miscellaneous, then the control of these expenses is hidden because no one knows what the expense was.

In order to save the time of detailed analysis every period, the system should provide for classification as soon as the expense is incurred. Thus the expense voucher should indicate the department and the expense in the department to which the charge should be made. Distribution, however, cannot be properly made without first having a proper classification of the expenses.

**Appportioning Expenses.**—The problem of distribution, then, specifically necessitates the distribution of the three broad classes of expenses which apply to all banks: namely, direct, indirect, and administrative. Direct expenses are not difficult. The direct expenses of the Commercial department are the salaries of the tellers, the light by which he works, upkeep of machinery, and other expenses that are directly allocable to him.

Indirect expenses arise from supervisory activity which is necessary for the success of the direct efforts of the operating divisions within a given department. In the commercial department, this expense would include the salaries of officers who serve customers, the department's share of rent, light, and services for the lobby, etc.

Administrative expenses are even more remotely connected with each department. They include the salary of the president,
legal expenses, audit fees, director's fees, and other similar expenses. It is the distribution of this last type of expense that causes the most argument and disagreement.

The general accounting system serves as a starting point for the distribution of expenses. In order to serve a cost system, this distribution must be developed to the point that all expenses of the department and of its divisions represent the total costs of that department. In order to accomplish this purpose, the expenses are posted to divisional cost sheets in such a manner that a recapitulation of these sheets will represent the total expenses of the department. Salaries and wages are charged to their appropriate division, charges for rent are made on the basis of floorspace; so are light, heat, and other services. The cost of machines used as well as the depreciation of any wasting asset must also be considered. The information on these departmental sheets is then posted to the expense ledgers.

Hence, information in the expense ledger is now classified and usable for reports desired by the management. The reports would probably consist of separate statements showing the expenses of each department. Then by utilizing the statistical data concerning each transaction, the bank can determine its unit operating costs which serve as a basis for determining service charges and the profitableness of accounts.

As an explanation of the probable procedure, a plan suggested by Young in his *Bank Cost Control* will be given here. The author does not intend that this be a model of expense classif-
ication or that it is the "one best way"; it is merely a practical presentation of the principles which can be applied to the usual banking situation.1

The plan is to set up a chart which consists of a listing of the expenses of each single department. Each of these expenses is then analyzed and classified according to the type of expense which it is—direct or indirect. Thus, for example, the chart of the Commercial Banking Department will contain a classified list of all the direct and indirect expenses. After the expenses are classified, they must be merged into direct expense items. Here, as in the classification of expenses, a number of ways might be used. It is therefore necessary to arbitrarily choose which method of apportioning will give the most effective and accurate results.

One method is to assign indirect expenses to direct operating divisions in the ratio of each division's direct salaries to the total salaries of the department. It might be that for different indirect expenses, different methods of apportioning will be used. Nevertheless, some reasonable method must be chosen and it must be one that lends itself to consistancy else the cost records will not furnish an accurate basis for comparison.

Administrative expenses are even more difficult to apportion than indirect expenses. However, the apparent difficulty is largely due to thinking in terms of isolated cases and instances rather than to the general run of conditions. The

common sense and skill of the accountant must compensate for these details. After all, it is impossible to set up a set of rules or steps to be followed and then contentedly say, "There it is, men, just follow the simple rules and your cost control is assured." It is suggested, since administrative expenses must be considered, that their ratio to the total direct expenses of the bank be determined and that each item cost, when determined, be increased by that stated percentage in order that it may carry its share of the administrative expense. If this plan is followed, each expense, indirect or direct, will receive a portion of administrative expense when it is incurred. The difference, over- or under-applied, will be given effect in the financial statements.

The most important thing to remember in apportioning expenses, is to include every expense that is direct under direct expenses. For instance, if one of the officers of the bank spends all of his time in the Loans and Discounts department, then his salary should all be given to that one department rather than distributed to all of the departments. Failure to consider such details as this causes inefficiency and unfairness to customers. If the savings department is carrying part of the burden of the Loans and Discounts Department, then it naturally follows that the customer who exclusively use that department are paying for a service which is being rendered to customers of another department. Moreover, it might be that the Loans and Discounts department is actually a losing proposition and that its apparent profit comes from
other departments. Hence, all indirect and administrative expenses should be critically analyzed in order to make sure that there is no possible way to directly connect them with some transaction or division of the bank.

One of the difficulties of expense distribution is the distribution of salaries. This is especially true in small banks where one man might work in any number of different departments. This difficulty can be overcome most accurately by using time clocks to keep the time of each employee. Different coloured cards for departments assures a minimum of time being spent in punching the clock. Each employee is instructed to punch the "start" and "finish" time of every change. Thus, at the end of the week, the salary distribution can be posted to the cost records directly from the time cards.

There are other good methods of keeping time which deserve to be mentioned. Although the time clock system is the most accurate, the expense of the clock is sometimes considered to be prohibitive. If such be the case, time cards can be provided to each employee which provide spaces for recording the identical information that a time clock will give. The card is arranged in columnar fashion with each half hour listed in the first column. Departmental columns are then provided out to this side. Thus, the employee can place a check which shows the time he spent in each department. The weakness of this system lies in the possibility of the employee checking the card at a guess. The time clock is, therefore, felt to be the best answer to this difficulty.
In considering salaries, it should also be remembered that just as the classification of Miscellaneous Expense covers a multitude of sins, so can the classification of General and Administrative Expenses. The salaries of officers can often be distributed to specific departments by keeping time checks on the officer as well as the employee. Where such a distribution is possible, it should be carried out. The only items which should be included in General and Administrative Expense are those that are absolutely incapable of any other classification. The classification should be painstaking enough to keep up with the exact amount of time active officers spend in each department. Hence, if a certain officer spends \( \frac{1}{3} \) of his time in the Foreign Exchange Department, \( \frac{1}{3} \) in the Savings Department, and the last \( \frac{1}{3} \) at general administrative tasks, the charges for his salary should be made accordingly rather than considering the entire expense as administrative.

**Volume of Transactions.**—In order to work out figures for cost finding, it is necessary that statistics disclosing the volume of transactions in each department be available. Take, for instance, the Commercial Banking Department which is one of the most active departments in most large banks. The expenses of that department can be allotted to two main functions: "(1) securing, maintaining, and servicing deposits, and (2) employing funds and servicing investments in which they are employed."\(^1\)

The first classification involves the expense of handling checks for deposits, paying checks on the bank, calculating

\(^1\) Young, B. E. *Bank Cost Control*. p. 194.
charges, and any of a number of other functions which the teller and bank officer performs. Now, the costs of this department per se mean nothing unless the number of transactions involved, the number of customers served, the numbers of checks handled, and their classification, the number of deposits made, and so on are known.

The second classification requires this same type of statistical information before any rewarding use can be made of the cost data. Moreover, each department must be analyzed in a similar manner in order to arrive at figures which will give the involved costs significance; that is, the costs should be broken down to represent so much per transaction.

**Activity Count on Collection Items.**—It is often possible and advisable to couple the task of activity on collection items with the accounting for float. Since an analysis is made of the items in accounting for float, it is an easy matter to provide space on the deposit form for the listing of the number and kind of collection items as well as the amount. This original information is posted to a permanent record which shows the distribution of these items for each account.

**Activity of Checks and Deposits.**—This information, too, can easily be secured by the mere inclusion of a step in the regular accounting routine. The practice of sending to customers monthly statements of their accounts is a common custom in the United States. This work has been facilitated by the use of machines which readily assimilate the desired information. It is from this monthly statement that an accurate count of
checks against the account and deposits can be ascertained. Moreover, the count is classified by the names of customers as well as the amounts of their deposits.

**Extent of Count.**—Due to the simplicity and ease of collecting these data, it is not considered costly to keep data on every customer's account. Moreover, it is rather difficult, if not impossible to find an average account. For instance, two accounts of 400 dollars each may not present similar cost problems. The one account might be relatively inactive; hence, the cost to the bank would be less than an account of the same amount which was highly active. Therefor, in order that the count will be of significance, it must be detailed and all inclusive. In most cases, activity data can be secured with no more cost than that attributed to forms or supplies which is, after all, a slight item.

The count in other departments can be secured just as easily as it can in the Commercial Department. A few minutes each day are all that are necessary to accurately determine the number of transactions. Here is an example of how a department can collect these data. The daily proof and regular accounting methods require adding machine tapes which show, item for item, the transactions within a department. One tape will show collection items, on other items received in the mail, etc. By comparing these tapes to another tape that has the numbers from 1-100 on it, it is possible to get a speedy and accurate count of every transaction within the department. This report from each department can be classified
in detail just as easily as it can be shown in one total.

Before dispensing with the collection of statistical data relative to the volume of transactions, it should be pointed out that it is necessary to differentiate between the handling of different transactions by the same department or person. For instance, a bank teller might serve some three or four hundred persons a day. It might also be that one hundred of these customers have deposits to make while the other three hundred have checks to cash. Now then, if it takes the teller as long to serve the one hundred depositors as it does to serve the three hundred who wish to have checks cashed, it logically follows that the teller's expense should be applied with three times the weight to each deposit as to cashing of individual items.

This simple explanation is given to show that the expense of each transaction must be apportioned on the basis of effort and time as well as the number of transactions. If these two considerations were disregarded in the previous illustration, the bank would find itself charging too much for cashing checks and, on the other hand, paying proportionately too much interest on deposits. To be sure, the costs would all be covered, but one class of customer would be at an advantage over the other. In order to arrive, then, at an accurate and fair common denominator, it is necessary to analyze the operations necessary to the accomplishment of each type of transaction and assign unit values on the basis of this showing. In order to accomplish this analysis, time studies of each type of operation are necessary. Hence, the charge for making a deposit or for cashing a check will be ascertained in the light of time spent
in completing the transaction rather than on the sole basis of activity.

At this stage, then, we have a basis for apportioning our direct and indirect cost directly to each transaction. This cost is the base cost of each transaction within the department. In order to make cost all inclusive, the administrative expenses should be added to give the completed cost per transaction.

The process of cost accounting just described is not recommended as anything more than food for thought and is intended merely to be an explanation of a feasible application of cost accounting principles to banking. Nearly every writer on this subject admits that there is more than one way of handling and using cost data. The procedure just explained utilized the broad theory of apportioning all the direct and indirect expenses of the department to each transaction in order to arrive at the cost within that department. To this figure is added a proportion of administrative expense based on the ratio of this cost to direct expenses. It is upon this last step that the greatest difference of opinion exists. There are other valid theories of disposing of administrative expense. One theory is to disregard the apportioning of this cost on the assumption that each function of the business be adjusted and managed so that it will produce a profit large enough to absorb its share of administrative expense. In other words, it is felt that the apportionment of direct and indirect expenses is a sufficient basis for the foundation of policies and for cost
control. The objection to this method naturally is that the
cost of each transaction is not complete. Moreover, the person
making use of such cost data is forced to consider the adminis-
trative expense either mentally or in a more concrete way.
Since this is true, why not consider the costs of administration
in the aforesaided manner and thereby have everything included?

Another theory of apportionment of administrative expense
is to assess such costs against the resources of the bank.
Thus, they are allocated at so much per thousand dollars of
actual deposits and capital. While it is agreed that administ-
trative costs increase as the size of deposits to be invested
increases, it does not follow that the increase is propor-
tionate. This theory assumes that it is. For this reason the
substantial depositor is at a disadvantage to the small in-
ductive customer. Moreover, it seems logical that administrative
costs apply to all transactions. No one can dispute this
assumption. Therefore, it seems only fair that each transaction
bear its proportion of such an expense.

Although we are not interested in the history or the
political significance of this subject, it is interesting to
note that the intense interest in bank cost control came about
through the attempt to establish fair codes of doing business
in banking. These fair codes were a part of the famous N. R. A.
I think this paper indicates why such codes would be almost
impossible. Later, when the results of several cost analysis
are shown, it will be seen that costs of doing business in
banks vary greatly due to different conditions. Therefore,
The establishment of uniform operating regulations or service charges is virtually impossible. Besides, neither bankers nor accountants agree on any "one best way", and, besides, the efficiency of a bank depends too much on the personality and individuality of the personnel which brings in another variable factor that is incapable of being adjusted.
CHAPTER IV
ACCOUNTING FOR FLOAT

The word "float" is a newcomer to banking circles. The meaning can best be understood by explaining the origin. It used to be that when a customer gave a check for deposit, his account was immediately credited for the amount. This increased the bank's liability but the corresponding asset was not increased until after that check had been collected. Hence, the bank was deprived of the funds represented in a check until they actually were at their disposal. This loss of the use of funds may extend itself from one to ten days depending upon the time necessary for collection. From this loss came the word float.

In a commercial bank it is not uncommon for the float to average from 10-20 per cent of the total deposits. The reason for the bank's interest in the effect of float on its general operations is better appreciated in the light of this fact.

Float originated with the Federal reserve system. Member banks send checks to the Federal reserve bank for collection. The Federal reserve bank does not credit these checks to the account of the member bank as soon as they are received. The checks are credited according to a pre-arranged schedule which already has been explained in a previous chapter on "Bank Accounting" under the heading of the account, Due from Federal Reserve Bank. Now then, if the checks in the above illustration are on a three-day schedule, the account of

the member bank is not credited for three days. For these intervening days the items are float. In other words, such items, insofar as earnings are concerned, are neither fish nor fowl. This peculiar situation requires the attention and control of the banking officers.

It would be ideal if the banks could handle items in float for the customer in the same way that the Federal reserve bank handles items in float for its members. However, the realization of the ideal is impeded here by the number of depositors and by the great expense involved in handling each customer's float in this manner. The principle involved, however, is essentially the same.

**Float Analysis.**—In making analyses of float, the accounts of the bank are often divided into two major classes: first, those accounts which are stable and require little attention, and secondly, those in which a daily check on uncollected funds is necessary.

Some accountants are skeptical of the advisability of making a float analysis of each deposit. Naturally, there is a cost involved, but it is felt that the end justifies this expense. In the first place, it is impossible to accurately review the effect of banking operations without float data. Moreover, it is a certainty that the bank would lose considerably if it ignored float altogether. This statement is not denied. Since it would be difficult to pick out the accounts on which cost data were wanted, the inclusion of all deposits is advisable. Besides these two reasons, banking and especially
bank accounting is a routine process. The personnel is usually not a very skilled or highly educated group. To work into a system a procedure that would affect some accounts and not others might prove to be more puzzling and difficult than the slight saving would warrant. For these reasons, it is felt that complete float data should be kept on all deposits. Of course, it is possible to classify the accounts so that the large accounts with good average balances are accounted for with a minimum of expense and effort. This is usually the procedure in most banks.

Analysis of Stable Accounts.—The object of the analysis in this instance, is to determine the customer's total float for one month, while in the other instance, it would be advisable to maintain a daily check. It should be mentioned, however, that many banks consider it advisable to analyse float on all accounts regardless of their size. We will consider first, however, a method of keeping up with accounts on a monthly basis.

Due to the fact that these accounts are considered good, and there is little fear of uncollected item, it is not necessary that the float analysis be made of each individual item. All that is necessary is to arrive at an average of the float of all the items—that is, all items appearing in accounts under an arbitrary amount; such as $300 dollars. If this be the rule, then, it is necessary to establish the average float for these small items. Such an average can be arrived at by an analysis of the individual items for any one month and
then adopting the same float schedules that the Federal reserve bank uses. It is better however, to average these items and apply self-ade schedules which fit the situation more exactly than those prepared by the Federal reserve bank.

The float average will probably run from a minimum of one day to a maximum of five days depending largely upon the location of the bank. If the average float is found to be two days, the payment out of deposited funds must be deferred for two days.

The float on items over $300 dollars would be figured separately on each individual item so that its availability would not be possible until funds for the deposit were actually collected and on hand.

After this deferred period has been determined, it has been found to be convenient to make a record of float on the back of each deposit ticket. The deposit ticket can be provided with a float form already printed on the back of the bank can furnish rubber stamps which will impress the proper form.

After the deposit ticket has been stamped and the preliminary information recorded, the deposit ticket goes to the general bookkeeper who enters the deposit information accordingly. From the general bookkeeper, the ticket is sent to a designated person who makes the necessary entries in the permanent float register. The permanent record would be a continued analysis of float in that account for the entire month. Moreover, it is possible to tie in the float analysis
with other cost analysis so that the work common to both can be done at the same time and by the same person. Hence, it is probable that float would be a part of the ordinary cost records.

It is possible to work convenient short cuts into the procedure just discussed. For instance, the original analysis under some banking conditions can be computed by the bank teller. This is just one method of cutting down the expense of keeping float records as well as making the procedure a part of the ordinary bank routine. Another possibility is to induce large depositors to split their deposits into float and non-float items. The expense of keeping such records depends upon the personnel and administration of the bank. If common sense and ingenuity are applied to the situation, it can be handled with a surprisingly small net cost. As we shall see later, most banks that keep up with cost data of this kind, report increased profits and business.

**Detailed Float Analysis.**—Under the previous heading, we considered those accounts of customers which the bank felt that there need be no check against collection. Small items in such accounts were therefore averaged over the month rather than handled in a day to day procedure. Unfortunately there are some accounts in which it is desirable to know the amount of float each day. It is not intimated that such accounts are undesirable. As a matter of fact, the accounts which need detailed float analysis are often those of good customers with highly active accounts. It is this very activity that warrants the more rigid control.
The procedure in these detailed analyses is exactly the same as previously mentioned with the exception of the permanent record. The original analysis is made of the back of the deposit ticket. The deposit ticket then finds its way for entry in the permanent cost record. The permanent record is ruled to provide a column showing amounts subject to immediate draft. Items subject to deferment are entered so as to show the amount uncollected each day. As the record is carried forward, the amounts which mature are dropped. Another column shows the ledger balance. Thus, by deducting the amounts shown to be outstanding on any particular day from the ledger balance, the amount available can be determined.

Analysis forms vary from bank to bank. As an example one shown in the December 1928 Bankers Magazine was selected. It should be remembered that the information on this form is taken from the deposit tickets. A close examination of the analysis which appears on the following page reveals that it includes all the necessary information and would be in practice a simple and inexpensive proposition.

Float records are essential to a bank for several reasons. In the first place, they provide necessary information to the officers in charge of the bank's investments. Secondly, the activity of the business can be more accurately measured if float records are kept. Activity and float are so closely related that the keeping of one facilitates the keeping of the other. Besides these reasons, it is necessary to take
### ANALYSIS OF FLOAT

#### Transit Float Account of A. B. Z. Corporation

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float into consideration when making interest payments on deposits or in setting up service charges.

Due to the fact that the float deductions cannot be proved along with the bank's regular proof, it is necessary that competent persons be in charge of deductions and calculations. Too great deductions would adversely affect the bank's customers, while too small deductions or absolute disregard for float would effect a bank loss which would not show itself in any particular account.
In the chapter on "Cost Accounting", it was stated that cost data were useless. The profitableness of these records lies in the increased profits which the proper elucidation of the cost information will effect. Hence, accounts are analyzed at various intervals in order to make known to the bank's management what accounts are profitable, what accounts are unprofitable, and why accounts are in their present status.

After cost and departmental data are once collected, it is possible, then, to arrive at significant costs in the analysis of individual accounts. The problem of determining the profit from an account can be segregated into three parts. The first consists of finding the average daily balance of the account. The second problem is determining the gross profit which the bank was able to earn on this daily usable balance. The last consideration deals with the costs of handling the account which must be deducted from the gross earnings in order to ascertain the net profit or loss of handling the account.

Finding the Average Daily Balance.—The average daily balance is easily procured by summarizing the daily balances for the month and dividing by the number of days in that month. From this amount, two items are deducted, reserve and float. Float, sometimes called the daily average in process of collection, is the daily average of uncollected items which is ascertained by an analysis of float which was shown in the
preceeding chapter. (Many banks find it convenient to continue account analysis and float analysis on the same form.) The reserve is found by applying the percentages which the bank maintains. (This is not necessarily the legal reserves but should be the actual percentage of reserves to resources.) After float and reserve have been deducted, the amount left represents earning funds. Since it is impossible and impractical to attempt to identify the profits from these exact funds, it is reasonable to apply the month's average earning rate to this amount in order to arrive at the gross profit on the account. From this is deducted operating costs like activity, size, maintenance, and other miscellaneous expenses such as special checks and books. If the final result is negative, the bank has suffered a loss on the account and is entitled to a remuneration for its services. This procedure explained above can be more fully appreciated by analyzing the following example.

One who analyses this account closely will observe that after cost has been deducted, there is a further deduction for overhead. It was suggested in the chapter on "Cost Accounting" that methods of applying overhead differ from bank to bank. In this illustration we see that it is distributed at a rate based on the thousand dollar deposit. Then a flat charge of twenty seven (27) cents as charged for maintenance. This process might work alright for some banks but the weight of authority as expressed in particular by Woolley, Young, and Langston holds that overhead should be applied to each transaction.
ACCOUNT ANALYSIS

Name..........................John Doe..............................

Month......................February......................

ANALYSIS OF ACCOUNT

Average daily balance.................................896
Daily average in process of collection..............840
12% reserve in vault and 1st bank.....................107.447
Average balance subject to earning..................449

Income

Interest on available balance at 5%....................449.187

Cost

Number of checks deposited @ .02
Number of checks paid @ .04
Special check books furnished

76
78
89

Overhead

For size $890 @ .31 per M per mo....................26
For maintenance @ .27 per mo......................27

Profit...............
Loss.............5.74

Remarks..........................................................

Hence, to take an example, suppose two customers each have accounts with daily balances as above, $890. Now then, suppose John Doe's account remains just as it is in the illustration but suppose the second customer had no activity in his account whatsoever. In other words, he neither added nor withdrew funds. It stands to reason, then, that if this second customer pays as much of the overhead as John Doe, he

is not being treated fairly. Since it is obvious that the activity of accounts varies between wild extremes, then it seems unfair to have a flat overhead charge for each customer. For this reason, the application of overhead to each transaction is preferred.

The analysis on the next page is taken from Bank Management, published by the American Institute of Banking. It is emphasized that in this illustration overhead charges are based upon item costs "in the proportion that the expense allocated to these classes bears to the total of all expenses allocated." Every item cost is loaded with its share of overhead. It is admitted that there are some instances where this method might be improved upon, but in the long run, it best serves the purpose.¹

¹ Applying the Analysis.--In some circumstances it would not be advisable to analyze each account every month. Such a procedure would involve endless work and needless repetition of effort. The deciding factor lies in this question, "Do the results compensate for such a detailed analysis?"

In considering a different plan, one of the first steps is to find the average balance which represents a profit to the bank at all times. Suppose, for example, that individual analyses of accounts of $800.00 and over discloses that such accounts always carry a profit. If such is the case, then it is not necessary to continue analysing accounts of this amount

ACCOUNT EARNINGS AND EXPENSE STATEMENT

Ledger Balance (Average) ........................................ 12,000.00
Deduct Uncollected Items (Float) ........................................ 2,000.00
Collected Balance ..................................................... 10,000.00
Deduct Reserve (15%) on $10,000* ...................................... 1,500.00
Available Balance ...................................................... 8,500.00
Earnings $8,500 @ 5½% .................................................... 467.50

Expense:
  Account Cost ......................................................... 3.00
  Items, 2, 70 @ $.3383 .............................................. 76.40
  Investment Cost $8,500 @ 2.37 per M ................................ 20.15
  Interest 2½ on $10,000 .................................................. 300.00

Extra Charges
  Special Check Books ................................................. 10.00
  Handling Currency .................................................... 40.70
  349.55

Net Earnings (1.18%) ................................................... 117.95

"*Some confusion seems to exist as to whether this deduction should be made from the collected balance or from the average ledger balance; hence, a word of explanation is in order. In a bank which has large amounts due to banks, items in the process of collection may be deducted from due to banks on the theory that they are in effect due from banks. In such a bank the reserve deduction shown is appropriately made from the net-collected balance. In many banks, however, the amounts due to banks are not sufficient to enable the bank to treat its items in the process of collection as a deduction, and such banks therefore must carry a reserve on the full ledger balance including the float. Their deduction for reserve in such case would thus properly be based on the amount of the average ledger balance before deduction of float."

or more except for an occasional check to insure the correctness of calculations and to adjust for any increases in bank expenses.

Since a large number of a bank's accounts would be elim-

inated from scrutiny by this disclosure, it is possible to proceed with analysis of the accounts that are or might be unprofitable.

It is advisable to set up a system that will lend itself to a quick and efficient analysis. Since the accounts are relatively small, it is possible to make out a statement which shows the cost of carrying the account with a minimum of effort. Consideration must be given to the maintenance or the "dead carrying cost". Added to this would be the costs of the various transactions which would be obtainable from the activity records. After the cost have all been ascertained it would be necessary to deduct the bank's income on the net balance of these accounts. It is here that a short-cut can be taken. These accounts probably will not have an appreciable float balance nor will the reserve deductions for idle funds be highly significant. It is therefore possible to set up standards for deductions for idle funds for accounts within the brackets set up. The net result of this would be a figure of how much usable balance per one-hundred dollars or per dollar the bank would have from the customer's deposit. Applying this percentage to the customer's balance would give the gross profit on the account. The gross profit deducted from the cost would give the net carrying charge or net loss to the bank.1

Administrative Value of Analysis.—What to do about the results of account analysis is more a matter of banking theory than it is of accounting theory. However, it might be well to consider the administrative advantage of having available an-

alytical information concerning the bank's accounts with its customers. In the first place, the procedure discloses unprofitable accounts. There are several ways to eliminate interest allowances. Moreover, excessive use of banking privileges and services can be discouraged. As a last resort, the customer can be charged for these excess services.\(^1\)

Despite the aforementioned methods of eliminating bank losses on accounts, it is well to remember that the purpose of a bank is to earn profit from the investment and lending of funds. Therefore, if an account proves, year after year, to be a loss to the bank, it is best to eliminate that account entirely. Such accounts merely add to the work of the bank. True, service charges keep them from being losses, but the fact that there is no possibility for profit should be the deciding factor.

Perhaps the greatest advantage of account analysis is the information it gives which is vital to the formulation of future policies of the bank. The old adage, "an ounce of prevention is worth more than a pound of cure", is especially adaptable to the banking situation. It is somewhat difficult to eliminate bad accounts that the bank already has. Time, study, and money are consumed in establishing the necessary facts. Therefore, any bank does well to consider the probable cost of new accounts. Future business should be considered in

\[^2\] Ibid. pp. 311-334.
the light of its potential profits which can be estimated quite accurately if sufficient cost data are accessible. 1

Services for Which a Bank is Entitled for Compensation—

1. Maintenance of accounts
2. Float on out-of-town items.
4. Stop payment orders not reinstated in 30 days.
5. Closed out accounts.
6. Deposit made to open account for temporary purpose.
7. Supplies—checks, stamps, etc.
8. Savings accounts (Charges taken care of by rules governing the payment of interest).
9. Certified checks
10. Cashing checks for out-of-town firms
11. Travelers' checks
12. Telegraphic transfer of money
13. Coupons received over the counter for credit or collection.
14. Making change
15. Checks left for collection
   a. By customers
   b. By non-customers
   c. In-town and out-of-town.
16. Notes and drafts on out-of-town points
17. Bonds taken for collection
18. Exchanging bonds
19. Notes and drafts received from individuals, firms, and corporation.
20. Installment, principal or interest payments
21. Guaranteeing signatures on registered bonds, stock certificates etc.
22. Bonds and securities purchased or sold.
23. Payment of taxes
24. Safe deposit box rentals
25. Credit reports
26. Stock transfers in corporations other than bank.

The famous N. R. A. gave a new impetus to the importance of the service charges. Attempts to establish fair and equitable service charges revealed many interesting facts. The

following chart is a typical example of the type of service charge schedule adopted by many bank. The weakness of the scheme lies in the fact that these charges were intended to be "standard" for each group of banks that signed a code.

MINIMUM BALANCE SCHEDULE

With Allowance Based on Activity on All Checking Accounts with Average Balance During Month of Less than $500 Charge as Follows:

<table>
<thead>
<tr>
<th>Average Daily Balance Between:</th>
<th>Flat Base Payment per Mo.</th>
<th>Number of Dr. Items Allowed</th>
<th>Additional Dr. Items</th>
</tr>
</thead>
<tbody>
<tr>
<td>1¢ and $49.99</td>
<td>$.50</td>
<td>5</td>
<td>7¢</td>
</tr>
<tr>
<td>$50 and 99.99</td>
<td>none</td>
<td>5</td>
<td>3¢</td>
</tr>
<tr>
<td>100 and 199.99</td>
<td>none</td>
<td>10</td>
<td>3¢</td>
</tr>
<tr>
<td>200 and 299.99</td>
<td>none</td>
<td>15</td>
<td>3¢</td>
</tr>
<tr>
<td>300 and 399.99</td>
<td>none</td>
<td>20</td>
<td>3¢</td>
</tr>
<tr>
<td>400 and 499.99</td>
<td>none</td>
<td>25</td>
<td>3¢</td>
</tr>
</tbody>
</table>

Cost of Account Analysis.—The cost of analysing accounts is best exemplified by actual reports taken from recognized periodicals on banking.2

"The Union Bank and Trust Company, Los Angeles, has had an exceptional record in the efficient handling of account analysis work. The system is described by the assistant vice president, on the basis of two years operation.

"It is interesting to note that it is the policy of the Union Bank and Trust Company to analyse every commercial account in the bank. From the time they first began analysis to date of this report, the volume of analysis has increased five times; yet, the cost of maintaining this detailed analysis system has increased only one and one half times.

"How this system cuts cost:

1. Analysis department operation is synchronized with that of the credit department for greatest efficiency. The work of these two departments is similar in so many techniques that it is obviously foolish to continue the expense of two separate departments.

2. Files of the two departments were combined and handled by one clerk.

3. Visible index files are used for the analysis cards to increase speed and accuracy.

4. "Hit cards are used for detailed analysis accounts; pink for $100 flat charge accounts.

5. Colored signal tabs indicate unprofitable account borrowers, special savings accounts and so on.

6. These tabs make possible a monthly list of broker's accounts for the investment department.

7. Tabs also classify accounts according to types of business.

8. Color of ink (on average balance entries) designates the type of account (commercial, special, savings, and so on.)

9. All accounts consistently using uncollected funds are analysed on a detailed float sheet.

10. Other less involved accounts are figured on more simplified sheets on a 1-day basis.

11. Float and deposit items are figured direct from deposit slips.

12. Average balances are figured from a stub of the statement sheet.

13. Cards on service-charge accounts are summarized at the end of each two years and the resulting average carried forward to new cards.

"In conclusion Mr. Neary says, 'These advantages alone have more than justified the time, effort, and expense we have put into the development of this system. However, there is added profit in the fact that through this system we have steadily built up our averages on accounts here, were it not for this system, we might otherwise have taken a loss. Far from regarding our analysis department as an operating department, we know definitely that it is an income producer.'"

As stated many times before, conditions vary so greatly between banks that attempt to set "standard" service charges

have been futile. R. H. Brunkhorst, Comptroller of the Harris Trust and Savings Bank, Chicago, made an interesting study of loan costs between different banks. He points out the need for a service charge to cover loan costs. The minimum discount charge of 50 cents which was recognized by the N. R. B. banking code is too low. Below is a schedule of loaning costs in seven middlewestern banks varying in size according to deposits from $900,000 to $12,000,000.1

<table>
<thead>
<tr>
<th>Size of bank (Deposits)</th>
<th>Cost per Loan</th>
</tr>
</thead>
<tbody>
<tr>
<td>3,000,000</td>
<td>.50</td>
</tr>
<tr>
<td>900,000</td>
<td>.75</td>
</tr>
<tr>
<td>6,700,000</td>
<td>.75</td>
</tr>
<tr>
<td>4,100,000</td>
<td>.95</td>
</tr>
<tr>
<td>3,300,000</td>
<td>.96</td>
</tr>
<tr>
<td>1,800,000</td>
<td>1.07</td>
</tr>
<tr>
<td>1,500,000</td>
<td>1.32</td>
</tr>
</tbody>
</table>

"Examination of this chart reveals the ever present difficulty of inconsistent conditions in various banks and therefore obviates the possibility of arriving at charges which are standard or uniform for all banks. The inconsistency in loan costs is caused by differences in administrative costs, records kept, and so on.

The importance of such charges is emphasized when we consider that if banks do not have information for such charges, then they certainly must not know what loans are profitable and what ones are not profitable. In such banks, the taking of loans is entirely left up to the judgment of a loaning officer who will probably be wrong most of the time. Even when an officer is presented with cost data which indicate the profit lines, they will many times take loans below the standard due to a belief that in the future the loss will be offset. It is obvious, however, that if we present him with a statement showing the profit line from time to time, he will be bound to consider this element in making his judgments which after all is the purpose of a cost system—to provide management with data that will be useful to them in operating the business."

With reference to account analysis, H. S. North says:

"The ultimate aim of any cost system, whether it be used in a bank, a department store, or a factory, is rather to ascertain the component parts that make up each factor involved in all phases of the business; and then to use these figures intelligently as a basis for management control. The determining value of any cost system is not to be found in the fact that costs are uncovered, but in the use to which the cost system is put. Knowledge of costs is one thing, control of costs is another. A good cost system will reveal any constant drain of profits and locate the leaks. A good cost system will provide useful information with respect to overhead, and the amounts entering to each item of overhead. It forms the basis for budgetary control, with emphasis on the work control. A mere statement of estimated income and expenses is not a budget in the full sense of the word, and has no practical value unless it forms the basis of action by management. The application of a service charge system is a practical illustration of budgetary control—a control of deposit costs."

Mr. Gordon Jones, in his The Service Charge on Demand Deposits concludes the book by pointing out the advantages of service charges to the banker, the depositor, and the general public. There is much to be said for his contentions which follow in outline form:

"The Service Charge and the Banker.—To the banker, the service charge means:
   a. Decrease in small checking accounts.
   b. Increase in total demand deposits.
   c. Profitable balances
   d. Reduction in overdrafts
   e. Decrease in overhead costs
   f. Source of quick revenue
   g. Reduction in interest paid and not earned.
   h. Education of depositors to bank costs
   i. Increased earnings

"The Service Charge and the Depositor.—To the depositor, the service charge means:

1. Jones, G. The Service Charge on Demand Deposits. p. 43."
a. A new appreciation of the value of checking account service.
b. Education as to bank costs.
c. A disposition to be fair.
d. Better service from his bank
e. Appreciation of the value of a substantial balance which:
   1. Builds his credit
   2. Meets his emergencies
   3. Creates confidence in him
   4. Earns prestige for him.

"The Service Charge and the Public."--To the public the service charge means:
   a. Stronger bank through increases in deposits and earning.
   b. More education and a knowledge of the banking profession.

"Conclusion.--The service charge on demand deposits, as a remedy for unprofitable checking accounts, at least deserves the consideration of every banker. The facts herein presented indicate a strong case for the proposition. Many banks have already installed the charge and it is producing the desired results and it will only be a few years before the service charge on demand deposits will become a uniform practice among banks throughout the country."
Bank costs and accounting are controlled either by the auditing department or by some officer who performs the functions of such a department. Professor Bornhoff gives to his auditing classes this definition:

"Auditing is that part of accounting that deals with a review, analysis, and verification of financial transactions and value fluctuations and the preparation and certification of statements disclosing financial condition, profit or loss outcome, and other ascertained facts."

More generally stated, the auditing department checks the accounting work of the other departments, verifies assets and liabilities, and aims to constructively improve the bank's safety by suggestions for improving the work procedure and policies of the bank. Finally, the statements are prepared, and ratios and other facts are presented so that the management will know definitely the position and trend of the bank's position.

Since there is a greater responsibility on the directors of banks than on the directors of other profit organizations, the work of the auditing department is indispensable. This is true as a matter of law. Although the bank officers or directors cannot efficiently cover the work of the auditing department, they are held liable for irregularities because of their legal position as the guardians of bank funds.

The auditing department can best serve its function by being detached from the administrative affairs of the bank.
Once can readily see that if the ordinary banking routine is done in part by this department, the effectiveness of its check is immediately minimized. In small banks this difficulty must be met with reason. It is obvious that a separate auditing department or even a full time auditor might prove to be an uneconomical burden.

Authority of the Auditor.—The head of the auditing department, sometimes called the comptroller, must have unlimited powers to probe into any and all of the affairs of the bank.

"It should be realized that for any auditing department to function properly, it is incumbent on the board of directors of the institution to give to the auditor full authority to check any and all of the transactions, of any kind whatsoever, of any department, individual, or official of the institution, at any time he sees fit, and without interference by any one. It is also essential that the auditor in charge be a man possessed of unusual tact and that he be endowed with common sense in a high degree. Where changes are necessary, he must be able to bring them about without striking a jarring note in the organization. This means he must not only be a diplomat but that he must be practical, studying the problems of the bank from the broadest possible standpoint and not from the standpoint of any one department or individual. While he must at all times work with various executives, his responsibility should be directly to the board of directors, through the president or the chairman of the board. His attitude should be one of critical disinterestedness."

Work of the Auditor.—The work of the auditor is conditioned to a great extent by the adequacy or inadequacy of the general accounting system. If the system has good internal check, it is possible for the auditor to do his work with a

minimum of difficulty. On the other hand, conditions might be such that the audit procedure would be difficult. Moreover, absolute verification in the technical sense is virtually impossible in a going concern; absolute verification depends upon liquidation. Therefore, the details and effectiveness of the audit depend to a great extent upon the discretion and skill of the person in charge.

Kinds of Audits.—The most common kind of audit is the continuous audit which differs little in theory from internal check. The regular transactions of the bank are checked as soon as they are made. Hence, this procedure requires an active department whose routine duty is to verify transactions as they are made.¹

Another type of audit is known as the spot audit. This too, is going on all the time. It is a complete examination of any one of the operating departments. The force doing the work goes to the department unannounced and at irregular intervals. The intensity of the check depends upon the discretion of the auditor who writes a report of the work and in certain cases passes the report on to the management for definite action.

It should be stated here that the detection of fraud is not the only nor even the most important function of the auditor. He prepares reports for the management which reveal weaknesses in the bank's policies. Moreover, his duties put him in a position where he can detect operating losses and

and control necessary expenditures.

**Purpose of the Continuous Audit.**—The purpose of auditing each transaction is to ascertain whether entries are made correctly, whether instruments have been issued in accordance with accepted practice, whether proper authority for transactions is available, whether accounts have been fraudulently altered, and whether the transactions are "regular". We mean by regular that transactions and recording were in good faith and carried out according to accepted practices within the business and according to the by-laws of the organization. In banking, this implies a most important function if we consider the host of laws which our bankers are forced to heed.

Another purpose of the continuous audit is to supply management with pertinent reports which are needed at all times—reports covering important matters such as investments, reserves, etc. Then, too, this practice of auditing each transaction serves to deter the activities of any person that might be inclined to be dishonest. An efficient auditing department has a strong moral effect upon the other members of the staff. It is rather easy to be honest if one is reasonably sure that any dishonesty will be detected.¹

**The General Audit.**—Large banks make audits from time to time which are similar in nature to those made by private accounting firms. The purpose of this type of an audit is to verify from time to time the accuracy and regularity of all the accounts of the bank.

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This type of audit calls for the taking of an inventory of all cash, stocks, bonds, and other securities. The auditor must be constantly on guard against the substitution or the borrowing of funds to make up for shortages. Besides this, all of the stated assets must be verified until every asset is reasonably accounted for.

In banking the most difficult work is involved in the verification of liabilities. The deposit accounts of customers provide the greatest amount of work. This situation is usually met by test-checking customers' accounts in rotation and providing for an internal system of check that will disclose errors and obviate fraud.

Hence, the general audit extends to every item, including the verification of income and expense accounts. This entire work is then coherently and significantly presented in the form of a report which a progressive bank's management can utilize towards profitable ends.

The report would properly include an average balance sheet, profit and loss statements, statistical reports, and cost reports.

Cost and Statistical Reports.—Cost reports are highly significant and deserve to be emphasized. It is too often true that banks keep such records without taking advantage of the profits which intelligent utilization of such data will provide. Then, too, the value of cost data is often lost because of the fact that the reports are so confused and involved that little can be understood from them. Responsib-
ility for cost reports falls upon the auditor whose skill and understanding either gives profit to the cost system or makes it an unnecessary expense. The cost report should properly be a reflection of the information found in the cost records. A good report might take the form of schedules of cost for each department compared to costs for the previous year. We would expect to find float analysis, activity reports, loans and discounts reports, earning on securities and so on. The presentation of comparisons and ratio analysis are also characteristic statistical reports—stockholders' investment to deposits (ratio of protection), earnings on capital, ratio of earnings to stockholders' capital, ratio of gross earnings to deposits, ratio of time and demand deposits to total deposits, ratio of interest expense to deposits, ratio of expenses to deposits and taxes to deposits, ratio of earnings to deposits, ratio of loans and discounts to deposits, ratio of stocks and bonds to total assets and to deposits, and other deposit ratios. The adoption of a sensible procedure which suits the particular banking situation gives helpful and significant information to the management and lends itself to a profitable control of expenses.1

Control can be further promoted by comparing conditions within the bank to other banks. In order that the comparison mean something, it is well to remember that practices in banks differ to a great extent. Hence, it is important either to

find a very similar bank or to create similar circumstances by comparing both banks to some common unit of measurement. However, too much emphasis should not be put on comparisons between banks because factors are too different. Nevertheless, effective control requires the utilization of every possible check and indicator which might help to build a more successful organization.

The following quotations is a summary of current thought with reference to the subject of auditing tasks and responsibilities taken from a publication of the American Institute of Banking. This summary serves to emphasize the most important of the many details which an auditor must consider.¹

"Under the old methods it was the work of the auditor to find discrepancies after they had been made, but the auditor of today and tomorrow must lead the way to better precautionary methods.

"The auditor must strive for the happy medium between the mechanical and the human elements. All improved methods of doing things originate in the human element.

"The auditor's duties involve a thorough understanding of the federal income tax law, the National Bank Act, the Federal Reserve Act, the Federal Farm Loan Act, and other legislation such as the Uniform Bills of Lading Act, the Uniform Warehouse Receipts Act, and so forth.

"A fundamental of auditing that takes its toll of the auditor's time is that of systematizing the various departments in the bank—increasing efficiency and at the same time conserving both man power and expense.

"A good auditor makes regular surveys to see that all clerks are employing the most efficient methods in handling their work. A survey follows a definite plan and is confined to the specific object mentioned. In effect, it constitutes a check upon the managerial ability of the department heads. In addition, it serves to measure

the efficiency with which the routine operations as a whole are being managed and controlled by the chief clerk or by the assistant cashier or other officer charged with this responsibility. This applies to the small as well as to the large bank. "The auditor must devise for his institution a system which fits its particular needs, having in mind, of course, that certain fundamental methods and principles can be applied universally. "It is a policy of the management in many banks to require the auditing department to check every entry to the general ledger, as this practice tends to keep the auditing department in constant touch with the bookkeepers and facilitate examinations. Careful consideration should also be given to the individual ledger; wherever the bookkeeper carries controls on his own books, these controls should be compared with the general controls more often than examinations are made. "The savings ledgers represent a real problem, largely, because they are the home of more or less dormant accounts. How to safeguard against falsification is a real problem, and many preventive schemes are being tried. Some auditors make a practice of checking the balances of the last examination with the new balances and running down the withdrawals to see if they are regular. "There is no set rule or formula which the auditor can follow in acting as "Watch Dog" for the adviser to the chief executive. He must be a keen observer, able to see beyond the figures himself to be constantly on the alert for those things which the chief executive ought to know. He should focus his attention on opportunities for developing internal systems in keeping with progressive banking practice and procedure, on maintaining organization morale and efficiency on the highest plane (in cooperation with the personnel director), on safeguarding customer goodwill, and, above all, on seeking opportunities for increasing the bank's profits. "When the auditor is satisfied with existing methods because they are "workable, he shows a tendency to stagnation. Inadequate or defective systems provide fertile ground for defalcations, and although it is chiefly the auditor's duty to uncover irregularities, his greater responsibilities are to establish safeguards against them. Looseness in operation necessarily increases handling costs and thus causes a constant shrinkage
of profits. Flow of items should be constantly watched to avoid unnecessary handling. When frequency of handling can be curtailed, the possibility of error is reduced in proportion.

"All commercial customers, even those who do not often visit the bank, are reached through monthly statements. When these statements are rendered in an incorrect or slovenly fashion, they are certain to create dissatisfaction. Discrepancies, of course, are inevitable. They may be insignificant when compared with the volume of work handled, but when their recurrence is sufficient to annoy or inconvenience the customer an 'endanger good will, they are costly. The degree of efficiency with which the bank operates is partially manifested to the auditor by the number of complaints which come to him and his department. With this situation placed automatically before him, he is supplied with the means not only of preserving efficiency, but, when the occasion presents itself, of offering to the chief executive or to the board of directors valuable advice and counsel for the maintenance of customer good will.

"Comparative statements are an invaluable aid in judging the bank's progress. Wherever practicable, it is well to use graphs or charts to dramatize the actual figures and to bring to light facts which might otherwise be overlooked or underestimated.

"Because his duties put him in a position to scrutinize the work of the various departments, the auditor's advice is often sought relative to personnel. He enjoys the advantage of an impersonal point of view and there are cases in which the auditor may not think of suggesting. In this way the auditor can aid the management materially in maintaining organization morale and efficiency.

"Although custom varies widely as to how bank insurance matters are handled, two points are obvious: (1) The subject is one which should receive the management's most searching scrutiny to the end that no essential coverage is omitted or allowed to lapse; (2) Policies and contracts should be checked most carefully at periodical intervals, and a comprehensive report, covering every aspect of importance including costs, should be drawn up and submitted to the executives. In many banks this duty evolves upon the auditor; in the small banks the responsibility is held by an officer............. Among the desirable forms of essential insurance available, which are briefly described in this booklet, may be
listed the following: fidelity bonds; burglary and robbery; messenger robbery; safe deposit box burglary and robbery; registered mail; forgery and alteration, consisting of a limited forgery and alteration policy and a blanket forgery and alteration policy; securities blanket bond; bankers blanket bond; fire; explosion, riot, and civil commotion; public liability; boiler; elevator; compensation; automobile; and windstorm. In addition, many banks carry group insurance."

Hence, from this we get an authoritative idea of an auditor's tasks, responsibilities, and problems. It is easier to understand now why the auditor is called "controller". His duties take him further than the mere checking of entries and caring for the ordinary banking routine. In our present banking situation with our great surplus of depositor's funds, the necessity for rigid audit control becomes apparent.
CHAPTER VII

TRUSTS AND LOANS

Trusts and loans present a cost problem that is somewhat younger and less developed than experiments and practices with cost accounting in the other departments of the bank. At the present time, there is considerable controversy as to whether or not Trust Departments pay. The Loan Department, too, has been known to exist upon the earnings of other profitable banking departments.

Trust Department

Objective of Cost Accounting.—According to Young, the objectives of cost accounting in the Trust Department can be classified into two divisions: 1

"(1) To find out what effect the operation of each division has on the department's income, expense, and net earnings.

"(2) To set up, within each division, standards of cost for the performance of each operation, both to facilitate the internal control and to guide the judgment of the trust officer in assessing fees when fees are not set by law."

Trust Services.—A Trust Department primarily performs four services: custody service, escrow service, trust and estate service, and corporate service. 2

Income for the above services consists primarily of fees assessed for services rendered. Then there is an element of interest income on investments which the bank makes for its customer. This income, however, is usually paid over to the customer in accordance with whatever agreement exists between the parties.

1. Young, B. E. Bank Cost Control. p. 27.
2. Ibid. pp. 377-379
Expenses are naturally involved in the performance of these services. We find direct, indirect, and administrative costs here as we did in the commercial and other departments of the bank. In chapter III the problem of distributing costs has already been discussed. Hence, following the reasoning in that section, we would find this department broken down into its four division according to the function of each—custody service, escrow service, trust and estate service, or corporate service. Then within each division of this department a detailed record of all costs for each operation would be kept. This would include all direct and indirect expenses plus a fair distribution of the administrative costs.

Problem of Accurately Determining Cost.—According to Young, detailed cost analyses in this department presents some very difficult problems, yet the establishment of standards of cost for each operation is necessary for the success of the department. Moreover, the nature of transactions involves personal services which provides an opportunity for expensive operation. Despite these problems, however, most of our banks have issued fee schedules in operation without regard to the costs involved. As a matter of fact, many of the fees are regulated by law; yet, the lawmakers nor any agency of the government has ever secured accurate cost data on Trust Department operations.

From a cost accounting viewpoint, one of the practical problems presented in this department lies in the fact that it is impossible to apply unit costs to all operations. There
are, however, routine services such as accounting for securities and valuables to which unit costs can be applied. On the other hand, a typical service to which unit costs cannot be applied is trust fund investment. This type of investment is unlike bank-fund investment which has been placed on a per-thousand-dollar basis or some similar basis. The cost of investment of a thousand-dollar fund may outweigh the costs of a ten-thousand-dollar fund depending upon restrictions placed in the one case and not in the other.¹

Therefore, in applying costs to the trust accounts, Young suggests three methods:²

"(1) A maintenance or per-account charge to cover dead carrying cost of each account, regardless of activity.

"(2) Item or operation costs for all services or a routine nature.

"(3) Special service costs for all services of an unusual or occasionally recurring nature. Tests show that a figure per hour of time expended, made up of 160 per cent of the salary of the person or persons rendering the service, is sufficient to pay the cost of maintaining and supervising a trust operator in an operating capacity."

Applying the analysis.—The examples which follow show the form of analyses Young would apply to the accounts of a Trust Department. The first form, which follows on the next page, is a simple form for the analysis of a custody account. It should be pointed out that this plan is based upon "personal service" plus "responsibility" rather than so much per $1,000 of securities held in custody.³

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¹ Young, B. E. Bank Cost Control. p. 280.
² Ibid. p. 281.
"A" BANK AND TRUST COMPANY

Trust Department

Analysis of Custody Account No. of for the year 1930.

Income

Year's fees accrued (see Fee Card).............................. $100

Expense

Routine services:
   Security deposits(.....at $.....)........... $0
   Security releases(.....at $.....)......... 0
   Coupon service (.....at $.....).......... 00

Special services:
   Investment service(....hours at $.....)........... 0

Account maintenance........................................... 00

Net Profit.................................................. $100

"A" BANK AND TRUST COMPANY

Trust Department

Analysis of trust account No. of for the year 1930.

Income

Year's fees accrued (see Fee Card).............................. $100

Expense

Routine Services:
   Security deposits(.....at $.....)........... $0
   Security releases(.....at $.....)......... 0
   Coupon service (.....at $.....).......... 00
   Miscellaneous income entries (.....at $.....) 0
   Cash deposits........................................... 0
   Fund distribution entries (.....at $.....) 00

Special Services:
   Foreclosure and real estate supervision (.....at $.....) 0
   Trust administration (.....at $.....)........ 0
   Investment service (.....at $.....)......... 00

Maintenance Cost............................................... 0

Net Profit.................................................. $100
Charlton Alexander, vice-president of the Mississippi Valley Trust Company of St. Louis, has done some noteworthy research in determining the value of trusts. He says, "contrary to the usual thought, the determination of the approximate value of new trust business is not difficult. True, to determine mathematically the actual value is not only difficult—it is impossible; but to arrive at a reasonable value is not difficult though it may be tedious."  

"The formula is rather simple. Let us consider a given Will as an example. We learn of our appointment as executor, the probable duration of our services as testamentary trustee, the amount of the estate and the age of the testator. From our fee and, by referring to mortality tables, we are likely to get it. Then by deducting from this future income, the operating cost, we arrive at our eventual profit. It is a simple
matter to amortize this profit for the interval
of waiting and thus determine the present worth
of this "ill. Certain variable factors must then
be studied and applied, such as the chance of
our appointment being chance before the testator dies,
and the ratio of his present holdings to the estate
which we finally administer.

The "General" Method of Computing Values.— There is an-
other school of thought which deals with averages rather than
specific cases. This school works on the theory that certain
expenses and errors in the long run compensate for themselves.

"While the contention that there is no such thing
as an average testator, an average period of expect-
ancy and an average duration of trusteeship may
be logical when endeavoring to compute the value
of a given piece of business, yet this contention
may not apply where the purpose is to measure
the approximate value of a large volume of trust
business. Perhaps the Alexander hypothesis and
the Financial Advertisers Association tables have
their principal virtue in determining what to pay
by way of salary, commission and sales cost to
secure a given appointment. Opposed to them, is
the formula to enable trust departments to compute the
worth of business in bulk, in the absence of specific
information and study of each trust." 2

PRESENT VALUE OF ONE MILLION OF ASSORTED
ESTATES BUSINESS BASED ON THE
USUAL AVERAGES

<table>
<thead>
<tr>
<th>Type of Business</th>
<th>Present Value per &quot;1000&quot;</th>
<th>Total @ 4%</th>
<th>Total @ 3%</th>
<th>Total @ 2%</th>
</tr>
</thead>
<tbody>
<tr>
<td>11% Living Trust</td>
<td>$14.00</td>
<td>$1540</td>
<td>$1540</td>
<td>$1540</td>
</tr>
<tr>
<td>5% Custody</td>
<td>3.06</td>
<td>153</td>
<td>153</td>
<td>153</td>
</tr>
<tr>
<td>4% Agency</td>
<td>4.59</td>
<td>184</td>
<td>184</td>
<td>184</td>
</tr>
<tr>
<td>13% Ins. Trust</td>
<td>7.27</td>
<td>1339</td>
<td>1309</td>
<td>1309</td>
</tr>
<tr>
<td>50% R. / Will</td>
<td>5.54</td>
<td>2570</td>
<td>2580</td>
<td>2570</td>
</tr>
<tr>
<td>55% Ex. / Will</td>
<td>6.60</td>
<td>3435</td>
<td>3513</td>
<td>3455</td>
</tr>
<tr>
<td>Total Value, Dep\ing on fee</td>
<td>$9171</td>
<td>$8350</td>
<td>$7712</td>
<td>$7023</td>
</tr>
</tbody>
</table>

2. Ibid. pp. 28-29.
3. Ibid. p. 51.
Hence, we see many attempts at scientific analysis of trust business. In these latter studies which were compiled by Weldon, we find emphasis on income rather than expenses. Furthermore, in these studies, we find costs "estimated" without any description of the basis of these estimates. We would want to know how administrative and indirect costs were apportioned, if personal services are considered, and what specific accounts were profitable or unprofitable. If we proceed on averages, the fees from good accounts will be paying for the poor accounts and again we would find bank policy favoring the unprofitable customer to the detriment of the good one. In my opinion, the analysis of trust business should be applied to each account so that unprofitable business can either be avoided or charged for the losses.

**Loan Costs**

**Objective of Cost Analysis**—The objective of the analysis in this instance is to determine the costs of making loans so that interest rates and service charges can be adjusted to insure the profitable operation of this department.

On page 102, a schedule was presented which showed loaning costs in seven midwestern banks which varied in size from $100,000 in deposits to $13,000,000. An analysis of this schedule reveals that the costs per loan ranged from 56¢ to 1.32¢. It is important to emphasize the fact that there is no correlation between the size of the bank and the costs of making a loan. Hence, it is obvious that this inconsistency is due primarily to administrative conditions and other questions of policy.
Problem of Determining Costs.--The costs in the Loan Department would be computed in the same manner as the other operating departments. It would be broken down into its division; for instance, the mortgage-loans division and the small-loans division might make up the entire Loan Department. The direct and indirect expenses would be allocated to each division. Then after the prime cost of each loan was computed, a share of the administrative expense of the department would be ascertained to give the complete cost of each loan.

The following schedule is a cost analysis of mortgage loans of a middlewestern bank. This is an example of the value and information which the proper application of cost accounting principles will disclose.

RECORD OF TWO YEARS' OPERATIONS IN A COMBINATION CITY AND FARM LOAN TERRITORY

<table>
<thead>
<tr>
<th></th>
<th>Operating Ratios--The Average Loan</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>1932</td>
</tr>
<tr>
<td>Dollars of loans produced</td>
<td>$3,038,600.00</td>
</tr>
<tr>
<td>Number of Loans produced</td>
<td>391</td>
</tr>
<tr>
<td>Income:</td>
<td></td>
</tr>
<tr>
<td>Present worth of commissions received</td>
<td>4.86%</td>
</tr>
<tr>
<td>Less: Agent's Commission</td>
<td>.87%</td>
</tr>
<tr>
<td>Net Commissions(per cent and dollars per average loan)</td>
<td>3.97%</td>
</tr>
<tr>
<td>Expense:</td>
<td></td>
</tr>
<tr>
<td>Production cost</td>
<td>$75.66</td>
</tr>
<tr>
<td>Sales Cost</td>
<td>13.16</td>
</tr>
<tr>
<td>Probable service requirements</td>
<td>18.23</td>
</tr>
<tr>
<td>Probable collection requirements</td>
<td>6.12</td>
</tr>
<tr>
<td>Balance for losses and profit</td>
<td>$65.77</td>
</tr>
</tbody>
</table>

The costs listed below are averaged from twenty-five institutions all of which carry a volume of $100,000 or more of small endorsed loans. The costs indicated are computed on the basis of each $100 loaned to be repaid in twelve monthly payments:

1. Cost of money............................ 1.87
2. Return interest and rebates................. .28
3. Salaries.................................. .23
4. Investigation................................ 1.30
5. Losses.................................... .50
6. Insurance.................................. .50
7. Reserve for taxes........................... .50
8. Advertising................................ 1.10
9. Collection.................................. .34
10. Stationery and printing..................... .15
11. Rent...................................... .28
12. Miscellaneous............................. .67

Total........................................... $7.31

"Apparently it is not possible for small volumes in endorsed loans to be made at less than 28% per 100 loan discount. Those banks making loans in volumes from $250,000 to $1,000,000 report an average operating cost per $100 loaned of 55.22. Cost items reduced are cost of money, investigation, losses, advertising, stationery and printing. Volumes of $1,000,000 and upwards show still further reduction of cost of money and investigation. These larger volumes permit rates of discount as low as 4 per cent."

Thus, it seems evident that the cost problem in both the Loan Department and the Trust Department is one that should be met in order that these departments may operate profitably. One can easily understand the necessity for knowing the net profit on each operation rather than the profit of the entire department because within a profitable department, it is possible that many losses are hidden by the profits on other transactions. Such a condition penalizes

   p. 18.
both the bank and its customers.

Young points out that cost accounting in both of these departments and especially the Trust Department is yet in its infancy.¹

"The writer has a feeling of regret that it has not been possible to discuss the matter more fully, and more particularly in this instance there is present that feeling of futility which results from the inability to argue over the matter and to express personal opinions and experiences."

¹ Young, B. E. Bank Cost Control. p. 289.
CHAPTER VIII
CONCLUSIONS

In the first chapter the nature of banking was emphasized. It seems to me that the most important thought in that chapter is the very one that is least emphasized by writers in the field. I refer to the banks' need for public confidence. It is hardly necessary to repeat that the greatest reason for the bank holiday of 1938 was a complete breakdown of public trust. Hence, we realize the great objective of bankers today is to maintain the confidence of the public.

Public confidence is not a problem that can be handled like reserve ratios, legal difficulties, and accounting techniques. It is an intangible thing that must be controlled by influence and personality. The public as a whole does not react to reason; it reacts to emotion. Hence, it is my opinion that banks should make every effort to impress the public with its stability and earning power. Those who contact the public should be a type that readily give the impression of success. They should be men or women who can not only sell but also educate the public to the problems of banking. The suggestions in this direction are not governed by rules and regulations but must be met by personality, tact, an' code of ethics that wins confidence.

There should be more than the impression of stability; there should be stability itself. To a great extent, stability is the result of banking functions which are different from
accounting functions. However, the control and interpretation of the degree of success lies with the accountant; the attainment of that success lies with the banker.

In the second chapter, "Bank Accounting", we were acquainted with the broad objectives and principles of accounting practice in banks. These objectives, simply stated, are to record everything that should be recorded in a regular manner. This is the essence of a sound accounting system and is the basis of intelligent control.

Bankers are a conservative group of business men due to the nature of their work. They are slow to adopt new policies and practices. This characteristic is commendable in many ways as one can infer; yet, too much conservatism is as disastrous as the other extreme. The repetitious nature of bank accounting makes the system one that can readily be served by modern recording machines. At the present time the State Street Trust Company of Boston is experimenting with a completely new type of commercial department check file. A clerk takes all checks written against accounts, sorts them, and then takes a picture of the checks in their proper order. After the film has been developed, the clerk goes into a dark room, sits at a machine equipped with keys similar to a typewriter, projects the film on a screen before him, and types the statements to the customers. The film is then put in a fire-proof container and is placed in the safe. This convenient system has all the essential characteristics of a good record; yet, the costs are considerably lower than older methods of keeping up with
commercial accounts. Heretofore, banks have been slow to adopt new methods, but the many bank failures in the early 1930's plus increasing bank costs have forced bankers to interest themselves in new recording developments.

The National Labor Relations Board recently has decided that bank clerks should be included under the provision of the Wagner Labor Act. As a result of this decision, the Committee for Industrial Organization (C. I. O.) and the American Federation of Labor have begun to organize bank clerks into labor unions. If this movement is successful, it will mean that the banks will be forced to pay higher wages and give shorter hours to their employees. This statement is made on the basis of what has happened in other industries. Since banks at the present time are finding it difficult to meet rising costs, this new extra expense will have to be met with some off-setting efficiency. It seems to me that the logical answer is increased efficiency by the use of machines or new techniques such as the one mentioned in the previous paragraph.

It might be argued, on the other hand, that the increased cost should be met by increases in service charges which would put the burden on the recipient of bank services. I think this argument is fallible because of the fact that there is no net profit in an account with a customer who must pay service charges. Therefore, the rising costs brought about by increasing wages would be met only in part by service charges. The other part would come from present profitable accounts which still carry enough profit after the increased wage cost to keep themselves free from the service charge. Hence, it would
be my opinion that a present demand for increased salaries for bank clerks will be met with efficiencies which will result in fewer employees doing a substantially greater amount of work. I might say that I am not alone in making this assertion: as a matter of fact, the idea came to me through Professor O'Neill who advanced the argument which I have already presented.

It has been stated that the net profit in banks has been greatly reduced by increasing costs. The cause for these increases in costs is aptly presented in the following quotation:

"The heavy failures of banks between 1929 and 1930 drew public attention to the fact that most banks were very poorly managed; among other things, most of the deposit accounts were run at a loss, but most banks did not know what accounts or how many. The bankers' associations made intensive study of this cost; a typical revelation was the published by the American Bankers Association of the accounts of a bank, in which 46.6% of its accounts, representing 14.1% of its deposits, were under $50.00 and averaged $11.88, and 37.5% of its accounts, representing 4.1% of its deposits, were under $100.00 and averaged $28.60. If the bank were able to loan $23.60 continuously at 3% a year, the gross annual earnings from these accounts would be $1.89 each, a sum far less than the cost of operating the account. The reason for such a situation was poor bank management, and the basic reason for poor management was the utterly unreasonable multiplication of our banks and the consequent competition for accounts."

It is a sorry fact that the cost analysis of bank accounts was most dilatorily developed in our country, long after it had become quite widely used in the business world. The most common objections offered to the installation of a complete and exact system for banks were:

1. That its cost is not an economical expenditure.
2. That accounts are likely to grow into profitable ones, or accounts which are unprofitable so far as direct financial returns are concerned may be profitable accounts because of their influence in getting or keeping other profitable accounts and because of their advertising value.

1. Westerfield, R. B. Money, Credit and Banking. p. 287.
3. That a bank is so highly complex that it is impossible to allocate, with any degree of exactness, the overhead and general expenses among the departments and the customers."

In the chapters on "Cost Accounting", "Accounting for Float", "Analysis of Accounts", "The Auditing Department" and "Trusts and Loans" we saw that there is definitely an awakening to the points emphasized here by Westerfield. We also found that the objections to cost control are based upon conjecture rather than actual experiments. The use of cost systems is practical if common sense and discretion are exercised in the application of the principles involved. I think this point is particularly well answered in the chapter on the analysis of accounts. Moreover, I think it significant, that in all the material I was able to find, there was not one case where the cost system did not reduce losses enough to compensate for expense of a system that would make cost data possible.

Cost control implies more than the keeping of statistical data, cost records, statements, ratios, and so on. Cost control should include as a major part of the program cost reduction studies and efficiency planning. One of the things that few business men consider is the value of saving say 1 of a cent. Every small saving means that much added profit. This profit not only will accumulate over a period of years but consider the total saving if, by an efficiency move, the cost of cashing a check is reduced 1 of a cent. If the bank cashes 8,000 checks a day, the total saving is 480 which in a year's time grows to the sum of 26,000. Such savings as this are the real aim of cost control.

The subject of this thesis is still in its infancy and
experim ental stages of development. However, the definite trend in the direction of expense control indicates that bankers are aware of a problem that can be controlled in a scientific way. I think the future will find banking costs controlled in as great detail as the unit manufacturing costs in businesses like the shoe or automobile industries. If this be true, a step in the direction of a finer banking system will have been taken. It is the type of advancement that banking needs because it has come free from legislative enactments. It is an indication of the banker's determination to regulate his business in an efficient manner which will protect the funds of the public. The need for stable banking institutions in our present-day society is obvious. Cost control is one of the ways these institutions can be realized.
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