The Design and Preparation of an Audit Program for MBA Factory Based on the Study and Evaluation of Its Internal Control System

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Preface

This research is designed to show the importance and necessity of evaluating the internal control system of an entity that is subject to an audit. The objective way adopted to study and evaluate the internal control system, quantify the amount of risk (in terms of money) existing in the system. This risk determined constitutes the probability of error occurring in the present system without being prevented or detected. To measure this risk, certain rates for potential errors and effective rates of present controls are used for determining the net risk amount. Once the auditor determines the net risk inherent in the internal control system, he can then design his audit tests program in the most effective and efficient way, in order to ensure if the financials of the entity under audit presents fairly the financial position of the entity.

Chapter one includes an introduction and a historical background of the entity to be audited. The statement of problem as well as the hypothesis are also included in Chapter One. Chapter Two presents literature review on the subject of internal control and audit. Chapter Three and four includes the methodology adopted in studying and evaluating the internal control system. Chapter Five presents the conclusion, recommendations and summary of the research.
Acknowledgements

I would like to take this opportunity and dedicate the work and efforts put on this research to abducted professor Mr. Robert B. Polhill.

Your professional knowledge and wide experience enriched my graduate education and professional understanding, and made me more influenced by your intelligence. I believe my work will still be incomplete, since my research was deprived from the honor of having your signature.

I wish you will be soon released from your captivity and retain your freedom back to be again between your family, friends and students.

Also, I would like to thank Mr. Bilal Al Hasan for the advice and help he provided me with.

Ahmad Farroukh
June 1988
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CHAPTER ONE

Introduction

Centuries ago human beings practiced trading as they felt the need to exchange goods and services among each other. As human nature developed and different societies and cultures came into being, man tried to organize his trade. As a result of man organization of his trade with others, was the establishment of separate business entities that represent the individual or individuals in a market or industry. Business entities now-a-days are classified in three types:

- Single Ownership
- Partnership (two partners or more)
- Companies (Shareholders)

In the early 20th century the majority of business entities were concentrated in the first and second categories. At that time, the direction of auditors work was on locating potential fraud in the balance sheet accounts. Owners were less interested then in an independent review of the results of operations since, for the most part, they were, themselves, the operators. They were concerned, however, that their employees not make off with the assets. So auditors spent hours "verifying" transactions individually

- 1 -
and accounting for the assets of the entity". ¹

As the business and economical climate became more complex and as business inter-relations became more conflicted, the trend of forming business entities in the mid thirties was directed towards establishing corporations, where the risk exposure of an individual will be limited only to the amount of his investment. The prime objective of corporation management is to look after the economical wealth of the shareholders. Shareholders found it rather necessary to select independent auditors to evaluate and report on the performance of management. But since the scope and size of corporations increased to the point where their structural organization have become complex and widespread, auditors "recognized that their own supply could not meet the rising corporate demand if they continued to audit on the basis of fraud". (2)

In the year 1949, two of the seven standards of the auditing profession issued by the American Institute of Accountants, emphasized for the first time, the role of internal control in the business entities as

² ibid., p. iii
basis for the auditors to evaluate and rely on, in determining the extent to which audit procedures are to be designed. Since then, auditing practice shifted from the mere of substantive testing of balance sheet accounts to the extent of reliance on internal control and compliance testing.

**Importance and Validity**

The role of internal control systems in determining the extent and timing of any effective audit is still viewed as a theoretical issue in the Lebanese business community.

This research project will design an audit program that will be established in case of auditing MBA Factory. The design of the audit program will be based on the study and evaluation of MBA Factory internal accounting system. The importance of this research lies in finding the link between the internal control objectives and those of auditing.

Elements of internal control are designed to detect and prevent errors, which could be classified into major classes. When implemented, internal control objectives are set and these could be summarized as follows:

1. Transactions are valid.
2. Transactions are properly authorized.
3. Transactions are properly valued.
4. Transactions are recorded correctly.
5. Transactions are properly posted and classified.
6. Transactions are properly summarized.

Audit programs include procedures that auditors follow to achieve audit objectives. These objectives include the following:

1. Overall reasonableness
2. Validity
3. Ownership
4. Completeness
5. Valuation
6. Classification
7. Cut-off
8. Mechanical Accuracy
9. Disclosure
Background

MBA is a factory for binding books. It is one of the biggest factories in Lebanon for binding books and is regarded as the leader in this industry. Binding means the final physical shape that a lot of printed material take when put together, and this includes making of the cover. Binding passes through the process of gathering the printed pages in order, sewing, gluing, pressing, choosing and decorating the cover. The cover for this purpose might be:

- Light - paper cover
- Medium (with or without writing and/or decorating)
- Hard (with or without writing and/or decorating)

This family-owned business started in the early sixties. The father who is the owner started his workshop with five employees. At that time the production process was manual and the owner personally assisted the workers. As demand was increasing, machinery for production became a necessity. The first second-hand rebuilt machine was bought under a direct mortgage. MBA was able to pay off its cost in a short time. By mid sixties, another machine was added to the line of production and production process became semi-mechanical. Afterwards, the business was growing at a faster rate and was operating at full capacity to meet the growing demand.
The workshop grew and expanded to be a factory with full mechanical operation supported by one hundred labor force. Most of production phases do not require skilled labor and this made it rather easy to hire labor from the local market and domestic area of the factory. MBA Factory is located in the middle of a crowded domestic area in Beirut.

In the beginning, financing operations were made through brokers who supplied funds at high interest rates and with direct mortgages. The high performance and full capacity production were able to pay-off these loans. Good reputation and quality made the factory rank high in the market and this made it easy to raise funds through banks against sufficient assets and high liquidity. The rapid growth was accompanied with vertical diversification of products. The owner of MBA Factory was able with some other minor investors to establish three small companies for importing and trading of printing machinery, spare parts, and raw material (paper, carton and glue). These sister companies provided production materials for MBA Factory at lowest possible cost which enabled the factory to be more competitive in the market.

The process of machinery improvement and replacement went on, which made the factory capital heavily invested in machinery.
The theory of open free market in the Lebanese Economy proved itself. Many investors were attracted to this business since the return on investment proved to be rewarding. At the peak of the industry competition was wide, but among the competitors, only one factory was able to catch with MBA production volume and be a direct competitor in the market.

Statement of Problem

MBA Factory for binding books has been operating for twenty years, during which many organizational and structural changes took place. The problem is that the financial affairs of the Factory over the past twenty years of operation were never audited. The other face of this problem would be to what extent an auditor can rely on the existing internal control system in his attempt to audit this company, since no one had tested or made an evaluation of the system before. An evaluation of the existing internal control system should be performed before attempting to undergo auditing the financial statements of MBA Factory.

Problem Questions

Very well defined questions arise from the statement of problems and these need to be answered in order to find possible solution for these problems.
1. What is internal control, and does it exist in the factory?

2. How to study and evaluate the internal control system of MBA Factory?

3. Upon conclusions of study and evaluation, how can the auditor link between his findings and the audit program.

4. Is MBA auditable?

Hypothesis

In a first time audit, a thorough study and evaluation of the existing system of internal control is necessary to provide the basis for design of the audit plan and of year-end substantive tests audit program of accounting records.

Statement of Purpose

The practice of accounting and auditing in Lebanon is still considered to be in its development stage. The more emphasis is given in this stage to the establishment of accounting and financial reporting standards for the various industries. Apparently, no attempts were made to explain and clarify the role of internal control and its relationship to performance of an audit. The purpose of this research is to explore and show the importance of internal control as basis for reliance upon in determining the nature, extent, and
timing of audit tests to be applied in examining of financial statements and expressing opinions there on.

Efficient utilization of economical resources is a major concern for a business especially under difficult economical situation like that prevailing in Lebanon. The review and evaluation of MBA Factory internal control system will show whether the system is built to detect and prevent errors and irregularities in the operation that affect the company's assets and the fairness in presentation of the financial statements.

Performance Objectives

The performance of the project will develop to meet its objectives as follows:

- Define Internal control.
- Review and evaluate MBA Factory's internal control system by using the flowcharting technique.
- Refer to internal control elements and objectives to pinpoint weaknesses in the system.
- Quantify the volume of these weaknesses and the possibility of error occurrence.
- Assess materialities of risk to these weaknesses on the light of my findings.
Determine the scope of the audit and design an audit program accordingly.

Recommend changes in the system.

**Definition of Terms and Symbols**

In this research I will refer to some abbreviations and flowcharting symbols that might be unfamiliar to the reader. The following is the operational definition and explanation of the symbols used.

**Abbreviations**

**AICPA:** American Institute of Certified Public Accountants.

**Prev.** : Preventive Controls.

**P.** : Preventive Controls.

**Det.** : Detective Controls.

**D.** : Detective Controls.

**Pres.** : Present in the System.

**Y** : Yes - Present in the System.

**N** : No - Not Present in the System.

**Flowcharting Symbols**

Standard flowcharting symbols are used to describe the Internal Control System of the entity under study. The following connotes what each symbol means:
Physical Flow of Documents

Information Flow

Fork-Alternative Possibilities

Temporary File
\[ A = \text{Alphabetical} \]
\[ N = \text{Numerical} \]
\[ D = \text{Chronological} \]

Permanent File
\[ A = \text{Alphabetical} \]
\[ N = \text{Numerical} \]
\[ D = \text{Chronological} \]

Decision

On Page Connector
Dead-end... Leaves Charted System

Documented Package
CHAPTER TWO

REVIEW OF RELEVANT LITERATURE

Development of Internal Control Definition

"In early periods the independent accountant frequently had to examine practically all transactions and make dozens of journal entries before reasonably accurate financial statements could be prepared. Under current conditions in most engagements under taken for the purpose of expressing his independent expert opinion upon the fairness of management's representation, the public accountant expects the company's accounting department to produce financial statements and collateral accounting records which management is satisfied are proper, complete and free of material error."(3)

Inspite of the shift in the direction of the auditor's work from account balancing and detail transaction testing towards increasing reliance on the system of internal control, true guidelines for performing this work effectively and efficiently with the available resources were slow to develop.

3 Ibid., p. vii
In 1948 The Committee On Auditing Procedure made a comprehensive study of internal control and published a report titled *Internal Control - Elements of a Coordinated System and Its Importance to Management and the Independent Public Accountant*.\(^4\) In that report internal control was defined as follows:

"Internal control comprises the plan of organization and all of the coordinate methods and measures adopted within a business to safeguard its assets, check the accuracy and reliability of its accounting data, promote operational efficiency, and encourage adherence to prescribed managerial policies. This definition possibly is broader than the meaning sometimes attributed to the term. It recognizes that a "system" of internal control extends beyond those matters which relate directly to the functions of the accounting and financial departments.\(^5\).

The American institute of accountants that was established in 1916 to organize the profession, issued in 1941 its auditing standards. The second standard of the field work stated:


\(^5\) Ibid.
"There is to be a proper study and evaluation of the existing internal control as a basis for reliance thereon and for the determination of the resultant extent of the tests to which auditing procedures are to be restricted." (6).

**Accounting Controls and Administrative Controls**

These two broad definitions of internal control brought the need to distinguish clearly between special services auditors provide such as management advisory or consulting services and those audit services required for compliance with the auditing standards for the study and evaluation of internal control incident to an examination of financial statements. Besides, three more questions were raised and needed clarification upon issuing the second standard.

- What is internal control?

- What is meant by reliance on it?

- How internal control is studied and evaluated?

6 American Institute of Accountants, *Statement of Auditing Procedures* No. 1, N.Y. 1949
To clarify the scope of the auditor's review in understanding what is meant by internal control, the Committee of Auditing Procedure issued Statement on auditing procedure No. 29 in 1958,(7) which divided internal control into either accounting or administrative controls.

"Accounting controls comprise the plan of organization and all methods and procedures that are concerned mainly with, and related directly to, the safeguarding of assets and the reliability of the financial records.

Administrative controls comprise the plan of organization and all methods and procedures that are concerned mainly with operational efficiency and adherence to managerial policies....(8)"

The subdivision of internal control into accounting controls and administrative controls did not answer the profession questions and left auditors confused between these two types of controls. Until the Committee's conclusions in that respect incorporated in Chapter 5 of Statement No. 33 in 1963:

8 Ibid.
"The auditor is primarily concerned with the accounting controls .... Generally bear directly and importantly on the reliability of financial records and thus require evaluation ..... 

But administrative controls ordinarily relate only indirectly and thus would not require evaluation."(9)

Objectives of Internal Accounting Controls

The two broad interrelated objectives of internal accounting control, were defined as the safeguarding of assets and reliability of financial records. Clarification of this definition was desirable to avoid any possible differences in interpretation with respect to these "two key elements".(10)

One meaning of safeguard was "A means of protection against something undesirable".(11)

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that could be "management decision making process." (12)

A second meaning refers "to protection against loss arising from intentional and unintentional errors in processing transactions and handling the related assets". (13)

A third meaning refers to "protection against loss arising from intentional errors." (14)

The interpretation for reliability of financial records went on to emphasize whether the purpose of the degree of accuracy and classification of accounts is for internal or external reporting.

The committee believes that the definition of accounting control "extended only to the safeguarding of assets against loss from unintentional or intentional errors or irregularities and to the reliability of financial records for external reporting purposes (15) that are "consequently designed to provide reasonable assurance" (16) of "functions involved in the flow of transactions". (17)

12 Ibid., AU Section 320.14, p. 244.
13 Ibid., AU Section 320.15, p. 244.
14 Ibid., AU Section 320.16, p. 244.
15 Ibid., AU Section 320.19, p. 245.
16 Ibid., AU Section 320.28, p. 246.
17 Ibid., AU Section 320.29, p. 247.
Accounting Transactions

The accounting system of an entity is required to devise systems capable of processing numbers of various types of transactions. "A transaction is an economic event that has been recognized as having such an effect rendered in a form that can be processed, and accepted for processing by one or more of the entity's accounting systems." (18) An economic event is a factual happening. (19) Economic events involve the entity to exchange transfer and appreciate its assets with other internal or external forces.

Consequently, accepted accounting principles require that certain economic events involving external forces or entities and certain internal economic events, should be reflected in the financial statements. It is then a necessity of accounting that all economic events that involves the entity in exchange of assets with outsiders, or conversion of assets internally, should be reflected in its financial statements.

19 Ibid., p. 1.
"The transformation of a myriad of economic events of various types into organized financial statements is accomplished primarily by transactions, which flow through systems." (20)

Section 320.20 classified the revised definition expressed in relation to the function involved in the flow of transactions.

"Transactions are the basic components of business operations, and therefore, are the primary subject matter of internal control. In the context of this section, transactions include exchanges of assets or services with parties outside the business entity and transfers or use of assets or services within it. The primary function involved in the flow of transactions and related assets include the authorization, execution, and recording of transactions and the accountability for resulting assets." (21)

20 ibid., p. 2.
21 AICPA., AU Section 320.21, p. 245.
Aspects of Internal Control

The following are the four aspects of internal control that imply whether accounting data are reliable and assets and records are safeguarded.

Authorization: The authority for business transactions rest on the boundaries of delegation, that shareholders or owners expressed in the entity laws and objectives, to different management personnel. Delegation of authority to management is not the concern. "As used herein, authorization of transactions refers to management's decision to exchange, transfer, or use assets for specific purposes under specific conditions."\(^{(22)}\)

Authorization may be general or specific. General in the sense that authorization of transactions is concerned with the identification of the general conditions without regard to specific parties. Specific authorization comprehends both the conditions and parties involved before executing a transaction.

\(^{22}\) Ibid., AU Section 320.21, p. 245.
Execution: "of transactions includes the entire cycle of steps necessary to complete the exchange of assets within the business." (23)

Recording: of transactions comprehends to the recording of transaction, preparation and summarization of records and functions performed on these records such as posting to general ledger and subsidiary ledgers.

Accountability: following assets from acquisition in one transaction until use in another. It is based on maintaining proper records for the assets and the comparison of these records with the actual physical existence.

The committee concluded its revised definition by pointing out that the internal control aspects are not necessarily mutually exclusive.

Concepts and Characteristics Implicit In Internal Control Definition

A further elaboration of the definition of accounting controls is drawn from a discussion of the basic concepts implicit in the definition.

23 Ibid., AU Section 320.23, p. 246.
Management Responsibility: The establishment and maintenance of a system of internal control is the responsibility of management and not auditors. Continuous supervision to determine that the system is functioning as prescribed, falls under management responsibility.

Reasonable Assurance: It is the responsibility of an entity to develop an internal control system to provide reasonable assurance that the financial statements are fairly presented since absolute assurance does not exist. This concept "of reasonable assurance recognizes that the cost of internal control should not exceed the benefits expected to be derived." (24) The committee also stated that in certain areas control procedures cannot be applied considering both the cost and benefits of the controls.

Methods of Data Processing: Since the definition and concepts of accounting control are expressed in terms of objectives, they are independent from the method of data processing used. Consequently, they equally apply to manual and computerized (EDP) systems.

24 Ibid., AU Section 320.32, p. 247.
Limitation: There are inherent limitations in considering the potential effectiveness of any system of accounting controls. Possibilities for errors in performance arise from causes such as:

- Misunderstanding of instructions.
- Mistakes of judgement.
- Personal carelessness, distraction, or fatigue.
- Collusion.
- Error or irregularities perpetrated by management with respect to transactions required in the preparation of financial statement.

These four concepts apply generally to the definition of internal accounting control while the following applies to "essential characteristics" (25) of internal accounting control.

- Competent personnel with clear lines of authority and responsibility.
- Segregation of functions.
- Execution of transactions.
- Recording of Transactions.
- Comparison of recorded accountability with assets.

25 Ibid. AU Section 320.30, p. 247.
Basis For Studying And Reviewing An Internal Control System.

The definition and clarification of internal control presented in the first part of AICPA Section 320 (from paragraph 1 to 40) answered the first question auditors raised: What is internal control? Section 320 extended to define what is meant by reliance on internal control and gives a guide for studying and evaluating internal accounting control system.

In order to evaluate a system, this system should be clearly defined and understood. That is, a system should be studied before it is evaluated. The study to be made as the bases for evaluation of internal control is made up of two phases:

- "Knowledge and understanding of the procedures and methods prescribed.
- A reasonable degree of assurance that they are in use and are operating as planned." (26)

These two phases of the study are referred to as the review of the system and tests of compliance, respectively.

26 Ibid., AU Section 320.50. p. 252.
Review: The purpose of the review phase is to provide the auditor with an "understanding of the control environment and the flow of transaction through the accounting system." The auditor will have a general knowledge of the organizational structure, responsibilities, authority and how various classes of transactions are executed and recorded in the system. At that point, the auditor should know how the control system is supposed to work if a control system exists in the entity. The information the auditor needs in this phase will be supplied by the client either through reading the descriptive internal control manuals or by interviewing the client and tracing the flow of a sample of transactions in the system.

There are four main tools and techniques auditors use to review the client's system of internal control: narrative descriptions of client's system, flowcharts, internal control questionnaires and walk through tests. The extent to which each is used varies between the auditor's choice and engagement.

The purpose of the review of the system is to obtain knowledge and understanding about the accounting system and internal accounting control system.

27 Ibid., AU Section 320.52, p. 252.
(a) "to make a determination of whether there are internal accounting control procedures that may provide a basis for reliance thereon in determining the nature, extent, and timing of substantive tests.

(b) to aid the auditor in designing substantive tests in the absence of such reliance" (28).

[As amended, effective after August 31, 1982, by Statement of Accounting Standards No. 43.]

Grouping Transaction In Cycles.

As previously stated, the review and study of internal accounting control requires a reasonably detailed description of the accounting system. "to facilitate description, transactions are placed in natural grouping called transaction cycles". (29)

Arthur Andersen's key feature to studying and evaluating internal control "is a recognition that the economic events

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28 Ibid., AU Section 320.51, p. 252.
(defined earlier) that impact an entity and the resultant web of transactions ...... can be broken down logically into a limited number (usually four or five) groups. The firm's term for such groups is cycles. The cycles are based upon what is accomplished."

Treasury, expenditures, conversion, and revenue describe four cycles of the business activity of many entities. Each of these cycles consist of similar economic events that are converted into related types of transactions and processed by the entity accounting systems to produce financial statements.

**Flowcharting: A Technique To Describe Transaction Cycles Of An Internal Control System.**

Transaction cycles are described to show the flow of each type of transaction through the various activities of the business. "The elements of internal accounting control should be clearly displayed; flowcharting is often used for this purpose". (31)

Adequate documentation of the system review is required by the second and third standard of field work.

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Flowcharts are one of many forms used for documentation "since the committee expressly defined internal control in terms of the "flow of transaction" it would seem that flow charts hold at least a slight edge in preferability although the committee did not make this recommendation."\(^{32}\)

The form that I have chosen to document the review of MBA Factory's internal control is flowcharting.

"Flowcharting of an internal control system is a symbolic diagramatic representation of the client's documents and their sequential flow in the organization."\(^{33}\)

Flowcharts show the origin and recording of each transaction in the system, its processing and flow to its final disposition.

In addition flowcharts show separation of duties, authorization, approvals and internal verification that take place in the system. Flowcharting is an analytical tool for evaluating and understanding how a system operates. Every flowchart has three major elements:

\(^{32}\) Burns and Polhill, p. 18.

The departments or activities covered.

Symbols representing the documents, records, and task related to those activities.

Flow lines which show how transactions, evidenced by the documents and record, are processed."(34)

Preliminary Evaluation Of An Internal Control System

Upon completion of the preliminary phase of the review, the auditor should complete the review of the system to determine whether the accounting control procedures" are suitably designed to provide reasonable assurance that they will prevent or detect errors or irregularities."(35) The information required for the review of the system design is obtained through inquiries from personnel, inspection of documents or observation of processing transactions. To further clarify his/her understanding the auditor may trace few transactions of different classes and observe the related internal accounting controls.

When the review of the system design is completed, the auditor

34 Burns and Polhill, Appendix D, p. 2.
35 AICPA, AU Section 320.55, p. 253.
should make a preliminary evaluation of whether specific control procedures are suitably designed for him to rely on for his purposes, assuming satisfactory compliance with those prescribed control procedures. If control procedures are not suitably designed for the auditor to rely on for his purpose, he would not test compliance with these controls, and he would design substantive tests that do not contemplate reliance on such internal accounting controls procedures."

The Committee On Auditing Procedures discussed two reasons for why auditors choose not to rely on the control procedures:

"- The procedures do not afford the kind of control upon which they can rely.
- It would take more audit work to test compliance with the control procedures than the amount of additional substantive testing required by not placing reliance in these controls."

In Auditing, An Integrated Approach, Alvin A. Arens, and James K. Loebbecke defined compliance tests. "Each control that is to be relied on to reduce substantive audit tests must first be tested to determine if it is actually present and effective. This is referred to as compliance testing."
Whereas substantive audit tests "are tests for monetary errors in transactions and balances. They are based, in part, on the auditors' evaluation of the controls and weaknesses of the client's system after it has been tested for compliance."(39)

Tests Of Compliance

The second phase of the study and evaluation is to "provide reasonable assurance that the accounting control procedures are being applied as prescribed."(40) These tests are necessary "if the prescribed procedures are to be relied on in determining the nature, timing, or extent of substantive tests of particular classes of transactions or balances, (but it is) not necessary if the procedures are not to be relied on for that purpose."(41) This determination depends on the nature of accounting control procedures and the kind of available evidence of compliance. Auditing procedures always provide evidence of compliance with accounting control procedures, at the same time this evidence is required to be tested in a substantive way.

39 Ibid.
40 AICPA. AU Section 320.59, p. 255.
41 Ibid.
Nature of tests: Accounting of controls requires that certain procedures be performed properly and independently. Tests of compliance are therefore, concerned with these questions:

- Were the prescribed procedures performed? (In the circumstances needed)?
- Were they performed properly?
- By whom were they performed?

Some procedures in the accounting control deal with performances that do not necessarily need transaction execution. These include approval or checking of documents evidencing transactions. Tests of such procedures require inspection of documents to check evidence that might be in form of signatures, initials, or audit stamps to see if they were performed and by whom they were performed.

Some aspects of accounting control require a segregation of duties to ensure that certain procedures are performed independently. Such procedures leave no audit trail of documentary evidence. Testing segregation of duties is done by asking and observing people who perform the procedures in their usual office routine. These tests should confirm or refute the knowledge and information gathered by the auditor in his initial review.
Timing extent: As stated before, the purpose of compliance with accounting control procedures is to "provide a reasonable degree of assurance that they are in use and are operating as planned." (42) Determining what constitutes a reasonable degree of assurance "is a matter of auditing judgement." (43)

Auditors usually perform compliance tests at some interim date. If auditors did so they may not have to apply those procedures again at later dates to the remaining period. However, a list of factors should be considered.

Answers to inquiries about the remaining period.

- The length of the period from interim to year-end.
- The nature of the transactions involved or the balances they make up.
- The amount of those transactions or balances.
- "Evidence of compliance during the remaining period as shown by:

- Substantive tests.
- Internal auditors.
- Anything else the auditors feel is relevant." (44)

42 Ibid.
43 Ibid., AU Section 320.64, p. 256.
44 Burns, and Polhill, pp. 20 - 21.
Evaluation Of An Internal Control System

The Committee on Auditing Procedures presented a systematic approach to evaluate a system of internal control. This approach was called "a conceptually logical approach to the auditors evaluation ..., which focuses directly on the purpose of preventing or detecting material errors and irregularities." (45) This approach requires the auditor to apply the following steps in considering each class of transaction and related assets involved in the audit. These steps are:

- Consider the types of errors and irregularities that could occur.
- Determine the accounting control procedures that should prevent or detect such errors and irregularities.
- Determine whether the necessary procedures are prescribed and are being followed satisfactorily.
- Evaluate any weaknesses: i.e. types of potential errors and irregularities not covered by existing control procedures to determine their effect on:

1. The nature, timing, or extent of auditing procedures to be applied, and
2. Suggestions to be made to the client." (46)

45 AICPA, AU Section 320.69, p. 257.
46 Ibid.
The approach demands from the auditor a full understanding of each class of transactions, the client processes and of the system through which the transactions flow.

The first two steps can be performed through the development of questionnaires, checklists, or similar generalized material used by the auditor. The auditor will need to use his professional judgement in interpreting the data obtained from generalized material. The third step is accomplished by reviewing the system and tests of compliance. The last step requires the exercise of professional judgement in evaluating information obtained in the first three steps.

"This suggested approach emphasizes the possibilities for, and controls against, particular types of errors and irregularities concerning particular classes of transactions and related assets."(47)

In Auditing: An Integrated Approach, Alvin A. Arens and James K. Loebbecke state that the most effective way to identify controls in the evaluating phase is to use three pieces of information:

47 Ibid., AU Section 320.71, p. 259.
Internal control objectives.
- Elements of internal control.
- Description of client’s internal control system.

They developed a matrix showing the relationship of the internal control objectives to the elements of internal control. By referring back to the information obtained during the review phase, the auditors use the matrix to identify specific controls by control objectives. (48) (See Matrix M 2.1 on next page)

Besides calling for auditors to study transaction flow to determine the types of errors which could occur in processing transactions, the committee concluded the approach of system evaluation and explained some other important points and gave examples on them.

"Transaction flow must be studied on a class basis since controls applicable to one class cannot offset a lack of controls over another class." (49)

The auditors may find that specific controls or lack of them, apply only to a particular kind of transactions within a class.

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49 AICPA, AU Section 320.71, p. 258.
<table>
<thead>
<tr>
<th>INTERNAL CONTROL</th>
<th>ELEMENT OF INTERNAL CONTROL</th>
</tr>
</thead>
<tbody>
<tr>
<td>OBJECTIVE FOR PAYROLL</td>
<td>Competent Trust Adequate segregation of duties for authorization and records checks on records</td>
</tr>
<tr>
<td>Recorded payroll transactions are for work actually performed by nonciticuous employees (validity)</td>
<td>Proper Procedures Adequate documentation</td>
</tr>
<tr>
<td>Payroll transactions are properly authorized (authorization)</td>
<td>Adequate physical control Independent Performance</td>
</tr>
<tr>
<td>Existing payroll transactions are recorded (completeness)</td>
<td></td>
</tr>
<tr>
<td>Recorded payroll transactions are for the amount of time actually worked and at the proper pay rate; (valuation)</td>
<td></td>
</tr>
<tr>
<td>Payroll transactions are properly classified (classification)</td>
<td></td>
</tr>
<tr>
<td>Payroll transactions are recorded on a timely basis (timeliness)</td>
<td></td>
</tr>
<tr>
<td>Payroll transactions are properly included in the employee earnings records; (posting &amp; summarization)</td>
<td></td>
</tr>
</tbody>
</table>
Finally, the auditor's evaluation of internal control with reference to each class of transaction should determine whether the prescribed procedures and compliance with them is "considered satisfactory if the auditor's review and tests disclose no condition he believes to be a material weakness for his purpose." (50)

A material weakness is defined as:

"A condition in which the specific control procedures or the degree of compliance with them do not reduce to a relatively low level the risk that errors or irregularities in amounts that would be material in relation to the financial statements being audited may occur and not be detected within a timely period by employees in the normal course of performing their assigned functions." (51)

Substantive Tests

The committee concluded section 320, by referring back to the second standard of field work to illustrate that the evaluation of internal control should provide a basis for determining to what extent the auditor may restrict his procedures while satisfying the third standard:"

50 Ibid., AU Section 320.72, p. 258.
51 Ibid.
Sufficient competent evidential matter is to be obtained through inspection, observation, inquiries, and confirmations to afford a reasonable basis for an opinion regarding the financial statements under examination."(52) The procedures required to satisfy the third standard were referred to by the committee as "Substantive tests",(53) and fall into two general classes:

Tests of transactions details and balances.

Analytical review procedures such as comparative figures, trends and ratios, that are applied to financial statements.

Substantive test (defined earlier) are designed to provide "evidence as to the validity and the propriety of accounting treatment of transactions and balances or, conversely, of errors or irregularities."(54)

52 Ibid., AU Section 150.02. (As quoted in AU Section 320.73, p. 259).
53 Ibid., AU Section 320.74, p. 259.
54 Ibid.
In considering the "more difficult question as to the extent of restriction contemplated in the second and third standards" (55) the committee quoted section 350, Audit Sampling, to provide a conceptual analysis of the intricate relationship between these standards:

"Ultimate risk combines two distinct risks" (56)

1. Risk that material errors occurrence in accounting process.
2. Risk that material errors go undetected.

The auditor attempt to reduce risks by relying on internal control to reduce the first risk and on substantive test to reduce the second risk. The combination of reliance and substantive tests should add up enough evidence to provide a reasonable basis for the auditors' opinion on the financial statements.

The extent of audit procedures should consider the effectiveness which refers to the audit satisfaction, and efficiency which refers to the audit time and effort required to perform the procedures. By pointing out these two aspects the committee ended its explanation of the second standard of audit field work.

55 Ibid., AU Section 320.76, p. 260.
Materiality and Audit Risk

The next step the auditor will perform after he had finished the study and evaluation of internal accounting control is the planning of the audit and designing of the audit program (procedures). But prior to this step the auditor should understand the terms materiality and audit risk. Materiality and risk are important to the audit planning and designing of audit procedures, since they constitute a factor in determining the nature, timing and extent of audit procedures, and therefore expressing an opinion on the financial statements.

Materiality is: "The magnitude of an omission or misstatement of accounting information that, in the light of surrounding circumstances, makes it probable that the judgement of a reasonable person relying on the information would have been changed or influenced by the omission or misstatement." (57)

Audit risk: "Is the risk that the auditor may unknowingly fail to appropriately modify this opinion on financial statements that are materially misstated." (58)

57 AICPA, AU Section 312 (As quoted form FASB 2).
58 Ibid., AU Section 312.02, pp. 231 - 3.
In planning the audit, the auditor should use his professional judgement in determining the level of audit risk and materiality level, in a way that can provide him within the limitation of auditing process, with sufficient evidential matters to make a reasonable evaluation, whether the financial statements are materially misstated. The auditor plans the audit and designs procedures to detect errors that he believes, based on his judgement about materiality, could be material. The auditor needs to consider audit risk at the individual account balance or class of transaction level to enable him determine the scope of audit and transaction level.

Audit risk consists of:

a) Inherent risk.

b) Control risk.

c) Detection risk.

a) "Inherent risk is the susceptibility of an account balance or class of transactions to error that could be material, when aggregated with error in other balances or classes, assuming that there were no related internal accounting controls."\(^{(59)}\)

\(^{59}\) Ibid., AU Section 312.20, pp. 231 – 7.
b) "Control risk is the risk that error that could occur in an account balance or class of transaction and that could be material when aggregated with error in other balances or classes, will not be prevented or detected on a timely basis by the system of internal control."(60)

c) "Detection risk is the risk that an auditor's procedures will lead him to conclude that error in an account balance or class of transactions that could be material, when aggregated with error in other balances or classes, does not exist when in fact such error does exist."(61)

Quoting, Auditing An Integrated Approach, the authors introduced five closely related steps for applying materiality. (62) The figure on the following page clearly explains these steps since they are self explanatory.

60 Ibid., AU Section 312.20, pp. 231 - 7.
61 Ibid.
Set

Step 1
Preliminary estimate of material

Allocate

Step 2
Preliminary estimate of materiality to segments

Estimate

Step 3
total error in segments

Estimate

Step 4
the combined error

Compare

Step 5
combined estimate to preliminary or revised estimate of materiality
The first two steps in applying materiality involve planning, which the auditors concern prior to his audit performance, while the last three steps result from performing audit tests.

Arens and Loebbecke also introduced a risk model called "audit risk model"(63) Audit risk model is used for audit planning and to determine the relation between audit risk and related inherents control, and detection risk. The model is:

\[ AR = IR \times CR \times DR \]

Where

\( AR = \) Audit Risk.
\( IR = \) Inherent Risk.
\( CR = \) Control Risk.
\( DR = \) Detection Risk\(^{(64)}\)

---

63 Arens and Loebbecke, p. 244.
64 Ibid.
Designing the Audit Program:

A major decision that faces the auditor, is the determination of the "appropriate amount of evidence to accumulate" (65) in order to assure that the client's financial statements are fairly presented. This judgement is important since the auditor is subject to economical limits that prohibits the examination and evaluation of all available evidence. The auditors' decisions on evidence accumulation can be broken into the following forms:

- Audit procedures: Are the detailed instructions for the collection of a particular type of audit evidence that is to be obtained at some time during the audit. There are seven types of audit evidence that can be used to accomplish different audit objectives. These are:

  "- Physical examination
  - Confirmations
  - Documentation
  - Observation
  - Inquiries of the client
  - Mechanical accuracy
  - Analytical testsless." (66)

65 Arens and Loebbecke, p. 165.
66 Ibid., p. 170.
Sample size: When the audit procedure is selected, the auditor makes the decision as to the sample size he wants to test for each audit procedure. This sample size can vary from one to all the items in the population.

Items to select: After determining the sample size for a particular audit procedure, it would be necessary to decide the particular items to examine.

Timing: Financial statements audit normally covers a period of one year. The auditor could start to accumulate evidence soon after the beginning of the accounting period.

The relationship between types of evidence and audit objectives is illustrated on Table 2.1 on the next page as adopted from *Auditing An Integrated Approach*, Arens and Loebbecke. (67)

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67 Arens and Loebbecke, p. 185.
<table>
<thead>
<tr>
<th>Types of Evidence</th>
<th>Overall reasonableness</th>
<th>Validity</th>
<th>Completeness</th>
<th>Ownership</th>
<th>Valuation</th>
<th>Classification</th>
<th>Cutoff</th>
<th>Mechanical</th>
<th>Disclosure accuracy</th>
</tr>
</thead>
<tbody>
<tr>
<td>Physical examination</td>
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<tr>
<td>Confirmation</td>
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<td>Observation</td>
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<td></td>
<td>X</td>
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<tr>
<td>Inquiries of client</td>
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<td>X</td>
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<td>X</td>
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<td>X</td>
<td>X</td>
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<tr>
<td>Technical accuracy</td>
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<tr>
<td>Analytical tests</td>
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</table>
What is the importance of audit evidence and its breakdown? "The detailed (written) description of the results of the four evidence decisions for a specific audit is called an audit program" (68) The audit program always includes a list of audit procedures that should be accomplished and usually states the sample size, the item to select, and the timing of the test. Normally, there is an audit program section for each component of significant accounts in the financial statement.

There are three basic types of tests auditors use in designing the audit program, to determine whether the financial statements are fairly stated: Tests of transactions, analytical review procedures, and direct tests of balances.

- **Test of transactions:** The purpose of tests of transaction is to determine if the client accounting system is functioning as intended. The audit program for tests of transactions will include substantive tests when internal controls are weak or will emphasis on compliance testing when controls are effective and could be relied on.

- **Analytical Tests:** The primary purpose of analytical review procedures is to help the auditor decide the evidence needed to meet audit risk.

---

68 Arens and Loebbecke, p. 166.
Choosing the analytical procedures requires the auditor's judgement. Financial ratios are of several other procedures that help the auditor in his analytical review.

- Direct test of Balances: Direct tests of balances is concerned (as title indicates) with the final balances of ledgers for both Balance Sheet and Profit and Loss statements. It is one of the difficult and important tests.

The methodology for designing direct test of balances is oriented to the relation between audit objectives and audit evidence components. The audit program is developed after consideration of all features that affect direct test of balances and is based on several assumptions about audit risk, internal control and results of compliance and substantive tests of transactions and analytical review procedures. If those assumptions are materially incorrect, the planned audit program will require revision.

The following page presents a sample of an Audit programme procedure for direct tests of balances of accounts Receivable, as adopted from Auditing An Integrated Approach

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69 Arens and Loebbecke, p. 324.
### Audit Objectives

<table>
<thead>
<tr>
<th>C</th>
<th>R</th>
<th>e</th>
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<th>M</th>
<th>a</th>
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<td>y</td>
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<td></td>
<td></td>
</tr>
</tbody>
</table>

(Sample of one Audit Procedure)

<table>
<thead>
<tr>
<th>Sample Size</th>
<th>Item to select</th>
<th>Audit Timing</th>
<th>Procedure</th>
</tr>
</thead>
<tbody>
<tr>
<td>100</td>
<td>30 largest</td>
<td>Interim</td>
<td>Obtain direct confirmation of A/REC.</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>XX XXX X</td>
</tr>
</tbody>
</table>
Touche Ross International presented in their publication "Substantive Procedures Technique Booklet" an inclusive description for designing and planning of an audit program. The substantive procedures in this booklet are organized into four sections:

1. Master interrelationship matrix
2. Account balances
3. Other audit areas related to financial statement
4. Transaction cycles"(70)

Master Interrelationship Matrix:

- It is designed to demonstrate how audit procedures for potential errors in transactions are related to audit objectives for financial statement account balances.

"The master matrix contains example potential errors on the left, audit procedures (by reference) on the right, and relates error types to audit procedures by the audit objective(s) and the account balance(s) affected."(71)

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71 Ibid.
Account balances: The section of each account balance starts with analytical review procedures followed by an interrelationship matrix (for each account section) followed by substantive procedures for auditing account balances." These substantive procedures are presented with the fundamental audit procedure in heavy type followed by examples of detailed procedures which can be used to accomplish the fundamental audit procedures."(72) The publication included the concept and step for using this booklet.

The following 2 pages will show a copy of the master Interrelationship matrix that the booklet introduced on pages 8 and 9.

72 Ibid., p. 3.
### Examples of Potential Errors for Specific Transactions

#### Wages and Salaries
- Payroll bond
- Employee paid for work not done
- Errors in payroll calculations
- Wages/salaries charged to wrong account
- Executive payroll improperly completed or paid

#### Audit Procedures with No Specific Error Type

<table>
<thead>
<tr>
<th>Error Type</th>
<th>Cash</th>
<th>Accounts Receivable</th>
<th>Marketable Securities</th>
<th>Inventories</th>
<th>Prepaid Expenses</th>
<th>Property, Plant &amp; Equipment</th>
<th>Accounts Payable</th>
<th>Income Taxes Payable</th>
<th>Long-Term Debt</th>
<th>Stockholders' Equity</th>
<th>Sales</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cash</td>
<td>A5</td>
<td>A3</td>
<td>A8</td>
<td>B1</td>
<td>B5</td>
<td>E3</td>
<td>E5</td>
<td>E4</td>
<td>F5</td>
<td>F10</td>
<td>F5</td>
</tr>
<tr>
<td>Accounts Receivable</td>
<td>B2</td>
<td>B1</td>
<td>B6</td>
<td>D4</td>
<td>D5</td>
<td>D2</td>
<td>D5</td>
<td>D6</td>
<td>G1</td>
<td>G3</td>
<td>G5</td>
</tr>
<tr>
<td>Marketable Securities</td>
<td>C4</td>
<td>C5</td>
<td>C7</td>
<td>E4</td>
<td>E5</td>
<td>E7</td>
<td>E8</td>
<td>E9</td>
<td>F7</td>
<td>F8</td>
<td>F10</td>
</tr>
<tr>
<td>Inventories</td>
<td>D3</td>
<td>D1</td>
<td>D6</td>
<td>E9</td>
<td>E10</td>
<td>E12</td>
<td>E13</td>
<td>E14</td>
<td>E15</td>
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</tr>
<tr>
<td>Prepaid Expenses</td>
<td>E2</td>
<td>E5</td>
<td>E4</td>
<td>E5</td>
<td>E6</td>
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<td>F10</td>
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<td>F12</td>
</tr>
<tr>
<td>Property, Plant &amp; Equipment</td>
<td>F1</td>
<td>F1</td>
<td>F6</td>
<td>G5</td>
<td>G6</td>
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<td>H1</td>
<td>H2</td>
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<tr>
<td>Accounts Payable</td>
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<td>G2</td>
<td>G3</td>
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<td>H6</td>
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<tr>
<td>Income Taxes Payable</td>
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<tr>
<td>Long-Term Debt</td>
<td>I3</td>
<td>I4</td>
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<td>Stockholders' Equity</td>
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</table>
The previous literature review quoted and emphasised the Generally Accepted Auditing Standards that are issued by the American Institute of Certified Public Accountants.

As it was stated before, the American Institute of Certified Public Accountants was first established in year (1916). From that time and till now, the AICPA worked on developing the profession of Accounting and Auditing in the United States. The AICPA product can be simply viewed, in the established General Accepted Accounting Principals and Generally Accepted Auditing Standards.

However, one would ask: what rules and standards were applied before the foundation of AICPA professional standards? and, what was the origin of these rules and standards or who first established them?

To answer these questions a small review of history would be required.

In the seventeenth and eighteenth century a great part of the American territory was colonized by the British. Apparently, the British Colonizer applied the British accounting methods in the colonies.
The American accounting and auditing rules and standards were of British origin, but consequently they were developed and updated to meet the Americans needs.

In general, the American and British profession principals and rules are closely similar, eventhough some difference are found in some areas. The following is a brief summary on the British Operational Standards.

In view of the importance of the system of internal control as the basis for determining the extent of the audit tests, it is worth considering the principals of control. The British Operational Standards (Guideline) defines internal control system as being:

"The whole system of controls, financial and otherwise, established by the management in order to carry on the enterprise in an orderly and efficient manner, ensure adherence to management policies, safeguard the assets and secure as far as possible the completeness and accuracy of the records."(73)

The British definition of internal control states that it is the management responsibility to establish an internal control system. The nature and extent of controls in a system will vary from one enterprise to another depending on the nature, size and volume of transactions. Thus, the auditor will have to decide the extent to which he wishes to place reliance on the system of internal controls under audit. In order to decide the extent of reliance, the auditor has to study, evaluate and test the internal control system.

"The auditor's objective in evaluating and testing internal controls is to determine the degree of reliance which he may place on the information contained in the accounting records. If he obtains reasonable assurance by means of completeness and accuracy of the accounting records and the validity of entries therein, he may limit the extent of his substantive testing."(74)

In his attempt to study and evaluate the internal controls, the auditor has first to understand the system. The auditor may find it helpful to trace a group of transactions that flow through the system. Once the auditor understands the system he must then identify the controls in the system.

74 The Guidelines to the 1980 Operational Standards, as quoted by E. Woolf in Auditing Today, p. 71.
The evaluation of internal controls will be assisted by documentation designed to help and identify the internal controls on which the auditors may wish to place reliance on. The documentation is mostly based on question asking either:

"a) Whether controls exist which meet specific overall control objectives; or

b) Whether there are controls which prevent or detect particular specified errors or omissions."(75)

The most common techniques to document internal control system are "Flow Diagrams"(76) and internal control questionnaires.

Once the documentation is finished then the auditor would have been able to:

"a) record the system

b) ascertain where the respective strenghts and weaknesses lie

c) Assess and evaluate their importance in relation to the functionality of the system as a whole; and hence determine the reliability of the records which present the system's natural product."(77)

75 Emile Woolf, Auditing Today, U.K. p. 72
76 Ibid., p. 91
77 E. Woolf, p. 90
If the auditor evaluation of internal controls "indicates that there are controls which meet the objective which he has identified, he should design and carry out compliance tests if he wishes to rely on them. Where, however, the preliminary evaluation discloses weakness in, or the absence of, internal controls, such that material error or omissions could arise in the accounting records or financial statements, the auditor will move directly to designing and carrying out substantive tests." (78)

The evaluation of internal controls system is required by the British Standards, so that the auditor can determine the degree of reliance on the system, and thereon, design the nature, range and depth of audit tests to be executed.

The presented literature review relevant to internal control review and preparation of an audit program will be the guide for the development of this research, statement of problems and hypothesis.

78 The Guidelines to the 1980 Operation Standards, as quoted by E. Woolf, p. 72.
CHAPTER THREE

Research Methodology

It is the management's responsibility to maintain an internal control system in any business entity. But the question still holds: how adequately an internal control system is maintained and operated. The answer of this question is of first degree importance to the entity's auditor who should test the system and determine the degree of reliance thereon in order to design the scope of the audit and be able to express an opinion on the presented financial statements. The increasing number and complexity of business entities are keeping demand for auditors high and faced, however, with some limitations. The limitations of an audit process can be clearly expressed in a time-cost/effectiveness relationship. Eventually, transaction by transaction audit is not applicable any longer. Instead, various methodologies for testing internal control and auditing are used to meet the profession requirements and cross the limitations.

The methodology I am going to use for studying and evaluating the internal control system of MBA Factory was introduced by Robert Polhill in a classroom game on the subject of internal control. Besides, Polhill's material, publications on this issue will be used and quoted when necessary.
"Touche Ross and Co., Controlling Assets and Transactions, (1979)".
"Arthur Andersen and Co., A Guide For Studying And Evaluating Internal Accounting Controls".

The research strategy will be performed in the following manner:

1. Collect data to understand the system of MBA Factory.
2. Identify the types of transactions processed by the system at MBA Factory and divide them into cycles.
3. Document obtained data in step one and two in clear descriptive flowcharts.
4. Identify the types of errors that could occur for each transaction type using the internal control seven general objective/errors as a guide.
5. Identify controls existing in MBA Factory, that could detect and prevent each type of error in the system.
6. Determine the risk exposure in the present system.
7. Suggest recommendations and corrections to the system.
8. Design an audit program based on the findings of MBA Factory internal control evaluation.
1. Collect Data to understand the system of MBA Factory

- Written Procedures and Manuals:

The first step in collecting information on MBA Factory accounting system was to inquire about the existence of written procedural descriptions on job processing, organizational charts, job descriptions and operational manuals. Such written information can help in developing an overall picture or outline of the system under review. Answers to my inquiries were negative. No such written procedures exist at MBA Factory. To overcome this difficulty I have used the observation technique. Observing the flow of a sample of transaction in the system from their origin to the end, assisted in developing an overall understanding of the system. A number of interviews with relative concerned staff was conducted to obtain details of the system.

- Interviews:

Making interviews is the most important tool for collecting information about a system. The interviews were properly planned to gather relevant information from the right persons. At the beginning of each interview I have explained my objectives to the interviewee(s). The setting of the interviews can be summarized as follows:
The interviewer must remember "to be tactful, to avoid defensiveness yet firm to keep the interview going in the right direction."(79) I have interviewed employees in the following positions:

- Operational Manager
- Chief Accountant
- Inventory Controller
- Machine Operator(s)

The following was the set of questions that was detected to each interviewee:

- What procedures they perform?
- What records they keep under their control including any unofficial records which they may have devised for their own purpose?
- What documents they process?
- From whom they receive these documents?
- To whom they send these documents?
- What methods they use to detect errors?
- What do they do if they discover error?
- How frequently they discover errors and the size and effect of these errors?

79 Burns, Polhill, Appendix D, p. 16.
Beside these questions, I have checked the books and registers described in the interviews and related them to the information obtained. It should be noted that the collected data and financials pertain to the year ended 1984.

2. Identify the types of transactions processed by the system and divide them into cycles.

Upon the completion of step one, my understanding of the system included:

a) Transactions processed through the system.

b) Employees and departments involved in transactions processing.

c) Documents used for processing the transactions.

a. Transactions processed through the system

Transactions at MBA Factory are processed through four cycles. These cycles are treasury, expenditure, conversion and revenue. I have identified the following types of transactions that flow through one or more of these cycles.

* Treasury cycles
  - Bank Loans
  - Changes in the current values of capital.
  - Purchases and sales of foreign currencies.
* Conversion cycle

- Inventory usage (transfers)
- Depreciation

* Expenditure cycle

- Purchases transactions
- Payment transactions
- Payroll and salaries transactions.

* Revenue cycle

- Sales
- Credit sales transactions
- Cash receipts transactions.

Statistics on the volume and number of three major transactions processed in these different cycles through the system were obtained. The statistics obtained will be a major parameter in determining the net risk exposure existing in the system.

<table>
<thead>
<tr>
<th>Transaction</th>
<th>Number/Year*</th>
<th>Volume*</th>
<th>Average Size</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sales</td>
<td>286 Invoices</td>
<td>7,283,194</td>
<td>25,465.71</td>
</tr>
<tr>
<td>Purchases</td>
<td>499 Orders</td>
<td>2,956,367.34</td>
<td>6,613.79</td>
</tr>
<tr>
<td>Payroll</td>
<td>100 Employee</td>
<td>3,000,000</td>
<td>2,500/month</td>
</tr>
</tbody>
</table>

* Obtained from year 1984 accounting records.
b. Employees and departments involved in transactions processing

In the absence of clear organizational charts set by MBA Factory management, it was essential to draw organizational charts in order to view and summarize the organizational hierarchy, responsibilities and delegation of authorities. The following are the organizational charts that I was able to draw after the interviews and observation tests were completed.
NFA Factory

Organizational Chart - Management Organization

- General Manager
  (Owner)
  Mr. A

  - Accounting and Administration
    Mr. Y
  - Sales
    (General Manager)
    Mr. A
  - Operation
    (and Purchases)
    Mr. B
MBA Factory

Organizational Chart - Sales

Sales Manager
(General Manager)
Mr. A

Bidding
- pricing
- Receiving
- Orders
- Credit
- Sales

Reception
- Telex
- Typing
- Filing

Secretary
Organizational Chart - Accounting and Administration

- Chief Accountant and Administration
  - Mr. X
    - Assistant Chief Accountant
      - 2
    - Secretary
      - 1
  - Filing
    - Communication
    - Personnel Files
    - Typing
    - Correspondence

- General Ledger
- Payroll
- Taxes
- Reconciliation
- Accounts Receivable
- Billing
- Petty Cash
- Check Writing
- Payment Voucher
- Assets Records
- Inventory Records
- Social Security
c. Documents used for processing the transactions

During the conducted interviews, all printed and unprinted forms used for processing transactions at MBA Factory were collected and can be tabulated as follows:

<table>
<thead>
<tr>
<th>Form</th>
<th># of Copies</th>
<th>Prenumbered</th>
</tr>
</thead>
<tbody>
<tr>
<td>Employees Time Card</td>
<td>1</td>
<td>No</td>
</tr>
<tr>
<td>Material Requisition</td>
<td>3</td>
<td>Yes</td>
</tr>
<tr>
<td>Inventory Request</td>
<td>1</td>
<td>No</td>
</tr>
<tr>
<td>Perpetual Inventory Card</td>
<td>1</td>
<td>No</td>
</tr>
<tr>
<td>Delivery Slip</td>
<td>2</td>
<td>No</td>
</tr>
<tr>
<td>Receipt Slip</td>
<td>2</td>
<td>No</td>
</tr>
<tr>
<td>Purchase Order</td>
<td>2</td>
<td>Yes</td>
</tr>
<tr>
<td>Production Schedule</td>
<td>1</td>
<td>-</td>
</tr>
<tr>
<td>Payroll Register</td>
<td>1</td>
<td>-</td>
</tr>
<tr>
<td>Accounts Receivable Ledger</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sheet/by Client</td>
<td>1</td>
<td>-</td>
</tr>
<tr>
<td>Invoices</td>
<td>3</td>
<td>-</td>
</tr>
<tr>
<td>Standard Employment Application</td>
<td>1</td>
<td>Yes</td>
</tr>
<tr>
<td>Accounting Records</td>
<td></td>
<td></td>
</tr>
<tr>
<td>- Vouchers</td>
<td>1</td>
<td>-</td>
</tr>
<tr>
<td>- Daily Journal Ledger</td>
<td>1</td>
<td>-</td>
</tr>
<tr>
<td>- Subsidiary Ledgers by Account</td>
<td>1</td>
<td>-</td>
</tr>
<tr>
<td>- Contracts</td>
<td>2</td>
<td>-</td>
</tr>
</tbody>
</table>
3. Document Obtained Data in step one and two in flow charts

The data and information collected in step one and two will be documented in clear descriptive flowcharts. The method of charting adopted here "can be described as horizontal charting because the documents shown on the chart are depicted in horizontal flow, among various departments, following a left to right pass from source to ultimate filing, departure from the system or destruction." (80) Activities that require an accounting transaction, are usually recorded on left-hand side of the page while the final activity is drawn on the right-hand side. If a document is sent from one department to another, the flow is shown as a solid line between departments. If documents enter a new department the line is drawn again.

Flowcharts indicate where documents are filed, what books are used and the controls that exist in the system. Departments or individual employees who perform specific functions are represented by vertical columns across the page.

Outline flowcharts express an overview or summary of the system and highlights the processed transactions and their flow through the cycles. Outline flowcharts do not differ from detailed flowcharts. They both carry the same major event and column heading, except for the outline flowcharts, the flow is represented by solid unbroken lines, diagrams and symbols are not used.

The following outline flowcharts express an overview of MBA Factory system, or in other words, an outline documentation for the data and information collected in the previous two steps, concerning the flow of transactions through the cycles.

The treasury cycle at MBA Factory is managed by the owner and General Manager. Decisions pertaining to this cycle transactions such as banks, loans, appreciation of assets and investments are all operated and controlled by the General Manager.

The treasury cycle will be excluded from the research analysis due to the insignificant size of this cycle transactions. The analysis of contracts or decision making is beyond this research scope.
4. **Identify the types of errors that could occur for each transaction type**

The analysis of the detailed flowcharts will be based on the identification of errors that could occur for each transaction type.

In *The New Management Imperative*, Touche Ross and Co. (61) defined seven internal control objective/error type as a guide to identify the types of errors that could occur for each transaction type.

- Recorded transactions are valid/invalid.
- Transactions are properly authorized/not authorized.
- Existing transactions are recorded/not recorded.
- Transactions are properly/improperly valued.
- Transactions are properly/improperly classified.
- Transactions are recorded at the proper/improper time.
- Transactions correctly/incorrectly summarized.

---

5. Identify existing controls in the system that should prevent or detect each type of error.

Controls are segregated into two broad classifications:

- Preventive controls whose objectives are to prevent error from occurring and are built as part of the existing system of internal control to reduce the cost of correction.

- Detective controls whose objectives are to detect errors that have occurred and insure their correction on timely basis. Detective controls are obvious in the system since they are additions to aid the system.

In controlling Assets and Transactions, Touche Ross and Co. presented nine principle types of controls that mainly exist in any system.\(^{(82)}\) The identification of existing controls at MBA Factory, which is part of the internal control system analysis, will be directed to identify the nine principle types of controls presented by Touche Ross.

\(^a\) Independent approval, review, checking or recalculation.

b. Matching of independently generated documents.
c. Prenumbering and sequence checking of key documents.
d. Maintenance of independent control totals.
e. Comparison with independent third-party information (Bank - customer - vendor).
f. Solicit independent third-party confirmation.
g. Cancellation of documentation.
k. Segregation of personnel, operations and assets.
i. Timeliness of operation.

6. Determine the net risk exposure existing in the present system of internal control.

The overall evaluation of internal control seeks to assess the likelihood of a risk occurring. The analysis that will be performed will determine how well the various controls existing at MBA are working and allow generalization to be made about controls. The generalization is the likelihood of a particular risk occurring.

Robert Polhill presented a worksheet for analyzing flowcharts. The outcome of this worksheet is the determination of net risk exposure in each transaction. On the following page there is a copy of Polhill's flowchart analysis worksheet which I am going to use in analyzing the internal control system and determining the net risk exposure existing in the present system of MBA Factory.
<table>
<thead>
<tr>
<th>Transaction/ Potential Error</th>
<th>Number</th>
<th>Size in LL</th>
<th>Volume in LL</th>
<th>Average</th>
<th>Total</th>
<th>Est. Total LL</th>
<th>Type</th>
<th>Controls</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
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<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
The five previous steps of our methodology contribute a major part of information needed to execute Polhill's flowchart analysis worksheet.

We are going to illustrate and give an example on how net risk is determined by using Polhills' flowchart working sheet.

The worksheet can be divided into four sections. The heading of the worksheet will indicate the company's name and the cycle under review.

1. The first section has two columns. One for flowchart's reference for easy tracing of information to flowcharts. The second will list the seven general objective/error as identified previously. The first potential error for example will be 'Authorization'.

2. Under the second section we will have the transaction data. It will show the number of transactions that flow in the cycle under review, their average size in LL and their total monetary volume.

3. The third section carry the error data. It will indicate the estimated percentage of error or error frequency and the total LL volume of error. The estimated rate of potential error occurrence is quantitatively categorized for each type of error. The categories are: Average, high and low.
### Potential error occurrence

<table>
<thead>
<tr>
<th>Average</th>
<th>High</th>
<th>Low</th>
<th>Estimated</th>
</tr>
</thead>
<tbody>
<tr>
<td>35%</td>
<td>50%</td>
<td>25%</td>
<td>50%</td>
</tr>
</tbody>
</table>

Total LL value of error is determined by multiplying the estimated rate of error occurrence by total LL volume of transaction: \( \text{LL} \times 3,904,860 \times 50\% = \text{LL} 1,952,430 \)  

(Possibility of error occurrence).

4. The last section is for controls and risk determination. Under this section, the types of controls applicable for preventing or detecting each type of the seven potential errors will be identified and checked for existence. If such controls exist, then the effective rate of error reduction will be multiplied by the total LL error value previously obtained to get the volume of error reduction. The effective rate of control for error reduction (degree of reliance on existing controls) is expressed quantitatively in three categories: High, average, and low.
Example:

<table>
<thead>
<tr>
<th>Control Type</th>
<th>Average</th>
<th>High</th>
<th>Low</th>
<th>Rate</th>
</tr>
</thead>
<tbody>
<tr>
<td>Independent</td>
<td>80%</td>
<td>85%</td>
<td>75%</td>
<td>70%</td>
</tr>
<tr>
<td>Approval</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Supervisory</td>
<td>70%</td>
<td>80%</td>
<td>45%</td>
<td>45%</td>
</tr>
</tbody>
</table>

Estimated Effective

Each potential error can prevent or detect more than one control. In this case the effective rate will be applied to the total error volume that remains after applying the first control type. Example:

<table>
<thead>
<tr>
<th>Potential Error</th>
<th>Total Error Value</th>
<th>Control Type</th>
<th>Effective Rate</th>
<th>Effective Reduction</th>
</tr>
</thead>
<tbody>
<tr>
<td>Authorization</td>
<td>IL 1,952,430</td>
<td>Independent</td>
<td>70%</td>
<td>1,366,701</td>
</tr>
<tr>
<td>Approval</td>
<td></td>
<td>(1,952,430 x 70%)</td>
<td>1,366,701</td>
<td></td>
</tr>
<tr>
<td>Supervisory</td>
<td></td>
<td>45%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Review</td>
<td></td>
<td></td>
<td>(1,952,430 - 1,366,701)</td>
<td>585,729 x 45%</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1,630,279</td>
</tr>
</tbody>
</table>

Net risk will be determined by subtracting the total IL value of error from the value of reduced error that resulted
from the present preventive and detective controls existing in the system. Example:

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Total error value</td>
<td>1,952,430 LL</td>
</tr>
<tr>
<td>Total error reduction</td>
<td>1,630,279 LL</td>
</tr>
<tr>
<td>Net risk exposure</td>
<td>322,151 LL</td>
</tr>
</tbody>
</table>

The preliminary review of MBA Factory internal accounting control enabled me to obtain a broad clear understanding of the system. Based on this understanding and on a similar class game presented by R. Polhill I established the quantitative data of error frequency of the seven potential objective/error type and the control effectiveness rate of the nine general internal control types. The established data is presented in the following tables:
## MBA FACTORY

### Potential Error Occurrence

<table>
<thead>
<tr>
<th>Potential Error Type</th>
<th>High</th>
<th>Average</th>
<th>Low</th>
</tr>
</thead>
<tbody>
<tr>
<td>Authorization</td>
<td>40%</td>
<td>25%</td>
<td>10%</td>
</tr>
<tr>
<td>Validity</td>
<td>50%</td>
<td>35%</td>
<td>25%</td>
</tr>
<tr>
<td>Recording</td>
<td>40%</td>
<td>30%</td>
<td>10%</td>
</tr>
<tr>
<td>Valuation</td>
<td>40%</td>
<td>25%</td>
<td>10%</td>
</tr>
<tr>
<td>Classification</td>
<td>25%</td>
<td>20%</td>
<td>10%</td>
</tr>
<tr>
<td>Timing</td>
<td>40%</td>
<td>30%</td>
<td>20%</td>
</tr>
<tr>
<td>Summarization</td>
<td>15%</td>
<td>10%</td>
<td>5%</td>
</tr>
</tbody>
</table>

### Control Effectiveness Rate

<table>
<thead>
<tr>
<th>Internal Control Type</th>
<th>High</th>
<th>Average</th>
<th>Low</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Independent approval</td>
<td>95%</td>
<td>80%</td>
<td>70%</td>
</tr>
<tr>
<td>- Supervisory review</td>
<td>80%</td>
<td>70%</td>
<td>45%</td>
</tr>
<tr>
<td>- Reperforming</td>
<td>90%</td>
<td>85%</td>
<td>65%</td>
</tr>
<tr>
<td>2. Matching document</td>
<td>60%</td>
<td>30%</td>
<td>20%</td>
</tr>
<tr>
<td>3. Prenumbering</td>
<td>50%</td>
<td>40%</td>
<td>20%</td>
</tr>
<tr>
<td>4. Independent control</td>
<td>90%</td>
<td>85%</td>
<td>80%</td>
</tr>
<tr>
<td>5. Reconciliation 3rd party</td>
<td>93%</td>
<td>95%</td>
<td>93%</td>
</tr>
<tr>
<td>- Bank</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>- Customer</td>
<td>60%</td>
<td>55%</td>
<td>40%</td>
</tr>
<tr>
<td>- Vendor</td>
<td>50%</td>
<td>40%</td>
<td>20%</td>
</tr>
<tr>
<td>6. Confirmation 3rd party</td>
<td>40%</td>
<td>30%</td>
<td>20%</td>
</tr>
<tr>
<td>7. Cancelling Documents</td>
<td>80%</td>
<td>70%</td>
<td>60%</td>
</tr>
<tr>
<td>8. Segregation of duties</td>
<td>80%</td>
<td>70%</td>
<td>40%</td>
</tr>
<tr>
<td>9. Timeliness</td>
<td>90%</td>
<td>70%</td>
<td>60%</td>
</tr>
</tbody>
</table>
7. **Suggest recommendation to the system**

Determining the net risk that MBA Factory assets and records are exposed to. I suggest logically the recommendation for certain corrective acts in the system. Recommendations might suggest certain additional control types for the system or the addition or change of operational procedures. For example, it might be recommended that all purchases should be investigated and approved by the operation manager. Or, an EDP system should be introduced to the entity. The new introduced controls through recommendation, will reduce the net risk with present controls by a certain reasonable effective rate.

**Example:**

<table>
<thead>
<tr>
<th>Potential error</th>
<th>Net risk with present control</th>
<th>Effective rate of new controls</th>
<th>Net risk after new controls</th>
</tr>
</thead>
<tbody>
<tr>
<td>Authorization LL 322,151</td>
<td>35%</td>
<td>LL 209,309</td>
<td></td>
</tr>
</tbody>
</table>

8. **Design an audit program:**

The appraisal of certain aspects should be achieved before designing an audit program for MBA Factory. These aspects are:
- Auditability of the entity.
- Professional risk (audit risk).
- Materiality.

- **Auditability:** The management of MBA Factory will act with integrity and good faith in their relationship with the external auditor who might carry and execute the designed audit program. The review of MBA Factory system examined sufficient sources of audit evidence. In my opinion the above stated facts makes MBA Factory auditable.

- **Professional risk:** The knowledge of the business provided the opportunity to identify the conditions of audit risk. These conditions are categorized as follow:

  "a. General economic and financial conditions.
  b. Organizational conditions.
  c. Management's integrity." (83)

The conditions that fall within these three categories are warning signs of audit risk. MBA Factory satisfied all these conditions except for:

---

1. Management has not developed managerial talent in relation to the growth of the business.

2. Managements' desire for low taxable income.

I believe that the MBA Factory audit engagement carry an acceptable audit risk where the design of audit program will concentrate on these two unsatisfied conditions.

-Materiality: Every discovered error that has an effect of 5% on the income statement of MBA Factory should be considered material if not corrected.

The design of MBA Factory audit program will be based on the information obtained and results that will be obtained in the following chapter. The design of the audit program will not be feasible if this information was not obtained or if some parts of it were excluded. The information obtained can be summarized as follows:

a. Knowledge of the business.
b. Appraisal of auditability and professional risk.
c. Assessment of materiality.
d. The likely year-end account balances.
e. The identification of transactions and cycles.
f. Types of potential errors.
g. The description of the client's system (flowcharts).

h. Internal control evaluation and analysis and its degree of reliability (Steps g & h are products of chapter four).

The first decision in the process of designing an audit program will be whether to rely on the existing internal control of MBA Factory. This decision is of prime importance because it will determine to a great degree the effectiveness and efficiency of the audit.

The adoption of R. Polhill flowchart analysis worksheet for the evaluation of MBA Factory Internal Control System will indicate the degree of reliance on the existing internal control system, and thus will determine the nature and extent of the audit.
CHAPTER FOUR

Findings and Analysis

This chapter presents the results of the research upon which all conclusions and recommendations will be based. As presented in Chapter three, data collected concerning the testing of internal control system of MBA Factory will be documented in flowcharts. The outline flowcharts for the different cycles presented earlier were the base of our detailed flowcharts for each transaction cycle. The objective of detailed flowcharts documentation of collected data is to provide a better understanding of how transactions are processed and assets are safeguarded. This documentation provides effective basis for organizing tests of controls that are presented in the flowchart worksheet analysis.

In order to present the results of the analysis of the Internal control system of MBA Factory in a clear understandable pattern, the detailed flowchart and worksheet analysis (Defined in chapter 3) of each cycle will follow each other with the necessary explanation that might be needed to verify the results.

Theoretically it would be unusual to use both a narrative and flowchart technique, to describe the same system. Since both techniques are intended to describe the flow of documents and records in an internal control system.
In this research the detailed flowcharts are the descriptive tool of the internal accounting control system of MBA Factory and will be assisted by a brief narrative description that will be presented in Appendix One. The objective behind presenting the narrative description in Appendix One is to assist the users (auditor) and readers of the research in understanding the overall system of MBA Factory in case they are not familiar with the flowcharting technique.

The analysis of the flowcharts that I followed based on Mr. R. Polhill's flowchart analysis worksheet, can be briefly summarized in stating the transaction potential error and determining the error data rate and the total value of error. Afterwards, I will ensure to check the existing controls and measure their effectiveness to obtain the total error reduction. Subtracting the net error reduction from the total value of error will determine the net risk. Briefing on the analysis methodology was discussed in length in Chapter Three.

The following are the flowcharts and flowcharts analysis worksheet for the three transaction cycles:

- Revenue Cycle
- Conversion Cycle
- Expenditure Cycle
- Purchases
- Payroll
Revenue Cycle

- Sales Transactions: Total Net Risk L.L. 2,823,153 (38.7%)  
  - Total Sales  L.L. 7,283,194

Noting the net risk exposure reported on the analysis worksheet and comparing it relatively to sales total value is not sufficient. However, there are some weaknesses in the sales transactions that permit error occurrence and support the figure of estimated net risk.

- Sales authorization: Net Risk L.L. 90,330.00/ (1.2%)

The only person who authorizes sales is the General Manager of MBA Factory. Customers' orders acceptance, pricing, delivery duration and conditions are subject to his direct judgement and approval based on his experience. Apparently, the risk of error occurrence of orders being accepted or executed without authorization is minimal.

- Sales Validity Risk: L.L. 109,250.00/ (1.5%)

The possibility of sales being erroneously validated is very low, due to the low volume of sale invoices and sale orders. These are directly authorized by the General Manager. The existence of fictitious sales or over-recorded sales are controlled by the segregation of duties of sales authorization, order execution and sales recording personnel.
Sales Recording Net Risk: L.L. 655,487.00/(9.0%) 

Sales recording is one of the sensitive areas where error can fairly occur in the system of MIA Factory. The potentiality of error resulted from the gap between sales authorization, jobs execution and recording. Sales prices are transferred to the accounting department in an informal way which allows wrong pricing errors. Also the production schedule that is sent from Operations department to Accounting department is not crossreferenced which allows the error of invoicing wrong quantities. The complete independence of shipping and delivery operation from Accounting department, allows the occurrence of sales being recorded and not delivered or delivered and not invoiced. The review of the system indicated that the only control that exists to prevent errors in sales recording is the General Manager review of the invoices after they are prepared and which I believe is not sufficient.

Sales Valuation Net Risk: 981,411 (13.5%) 

As it was stated before all the transaction cycles are inter-related. That is, one transaction flows from one cycle to another in the system with the possibility of error occurring in one cycle be filtered to the other cycle or
processed without being detected. The estimated net risk of valuation error is composed of two parts. The first part relates to wrong valuation of cost of sales and the other, wrong valuation in recording and calculating sales invoices.

The major part of valuation net risk is due to error in valuation of cost of sales. This error is carried to the conversion cycle where it will be inflated due to lack of effective controls in costing procedures. The remaining part of sale valuation is controlled through supervisory review and reconciliation with customers. The supervisory review is performed at the stage of signing the invoices by the General Manager where he might reperform the work done on the invoices.

- Sales Net Risk: Classification: 109,248 (1.5%)
  Timing: 841,209 (11.5%)
  Summarization: 36,416 (0.5%)

Due to the gap between the Operation department or the production assembly and Accounting department, errors such as classification and timing of transactions are frequent to occur. The only report that the accounting department receives from Operations concerning sales, is the production schedule which is not prenumbered. This report might mislead the Accounting department, which in turn might misclassify sales orders, accounts receivables and invoices. While the recognizable effect of this misleading schedule appears to be
on timing procedure. Since production and delivery transactions are distant from each other in the system, recording of transaction might take place either before or after they actually take place. This increases the likelihood of failing to record transactions on time or missing one vital information. An example is the delivery of an order without sending the production schedule to the Accounting department at the time of delivery. Another example would be permitting a discount after delivery without notifying the Accounting department to adjust the records. The act of late recording and improper cutoffs has a great effect on the fairness of financial statements. In the absence of an internal auditor and effective financial manager the only existing control is the supervisory review of the chief accountant and some times the General Manager when he inquires about a specific sales invoice.

The effect of proper summarization is expressed by the preparation of financial statements. Financial statements at MBA Factory are prepared semi-annually and adjustments are made to correct errors in posting to general and subsidiary ledgers cutoff.

Bank reconciliations are prepared on monthly basis to eliminate the possibility of error in banks accounts.
The risk of potential errors occur in the sale transaction cycle was estimated to amount LL 2,823,153. This amount of quantitative risk constitute 38.7% of total sales and an average of LL 9,870 in each sale order.

(Revenue cycle Flowchart and flowchart analysis worksheet are presented on the next pages).
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</table>
- Credit approval is decided by the General Manager who is the sales Manager. No precedure is done for credit sales.

- Sales Manager contact Operation Manager to arrange and schedule the manufacturing process.

- Goods are transported to customer after Operation Manager asks the Manager from General Manager.

- From customer Delivery note Signed
Conversion Cycle

Inventory Transactions—Total Net Risk: L.L. 1,131,000 (22.6%)
Total Inventory: L.L. 5,000,000

The system of internal Control applied for processing inventory transactions at MBA Factory appears to be efficient and strong enough to eliminate the possibility of error occurrence in some areas (recording/positing).

Authorization Net Risk: L.L. 25,000 (0.5%).

All material requests for assembly production are subject to the direct approval of the Operation manager. No withdrawals from the inventory warehouse are allowed without a written approval of the Operations manager. The trustworthy personnel of the warehouse eliminated the risk of inventory abuses and pilferage.

Validity Net Risk: L.L. 280,000 (5.5%)

Our review indicated that there is no intention to inflate or deflate inventory, either in the Accounting department records or warehouse records.
But the possibility of error occurrence still holds due to the separation between the records of warehouse and records of Accounting department. In most of the cases, errors would take the form of inventory used and not posted to accounting records. The prenumbering of the material requisition forms is the only control implemented to avoid such error.

Recording Net Risk: L.L. 216,000 (4.3%)

The estimated rate of error occurrence in recording inventory transaction is relatively high. This is due to the fact that the system does not maintain controls to prevent errors in recording at an early stage. Such errors could be in wrong posting to inventory records. There is no dual control on inventory posting. All recording errors are partially controlled by the prenumbering of material requisitions and independent control, such as year-end physical count of inventory. Records are adjusted to meet actual inventory counted without verification of the adjustment.

Valuation Net Risk: L.L. 30,000 (0.6%)

At MBA Factory, the periodical method is used in valuating inventory (Beginning inventory - Purchases - Ending inventory). All valuation transactions are subject to
reassessment by the chief accountant to eliminate the error of valuation of inventory.

Classification Net Risk: L.L. 30,000

Inventory classification errors are not potential since they are properly controlled. Also, the small variety of inventory and unique line of production eliminate the possibility of wrong classification.

Timing Net Risk: L.L. 300,000 (3%)

The review of the system indicated that there is always a delay in transforming the material requisitions from the warehouse to the accounting department and there is a consistent delay in posting the inventory in the accounting department. No proper justification was given to this delay. This delay keeps always some inventory transaction executed but unrecorded.

Summarization Net Risk: L.L. 250,000 (5%)

The cost of inventory used cannot be extracted from the records except after counting the ending inventory. This kind of accounting treatment does not suit a job order manufacturing company. Since the cost of inventory used for certain job order cannot be extracted and determined after the job is finished.
Conversion Transaction:

The system of MBA Company recognizes the conversion of inventory into finished product in one transaction. The system does not account for transfer of inventory to work in process transaction, allocation of overhead to work in process transaction, transfers of work process to finished good transaction and transfer of finished goods to cost of goods sold transaction. Instead, the system records the total inventory cost and the total wages and salaries cost without recognition of overhead. This major limitation in the present accounting system of MBA Factory has its effect on costing and pricing.

The General Manager assigns sales prices without referring to a standard price which should be extracted from a standard unit cost plus certain mark-up. The pricing method adopted by the General Manager and which is mainly based on his experience, is affecting the profitability of the factory since records cannot determine if a certain order is being operated profitably, breakeven, or possibly at loss. Besides, inventory at the assembly production is not subject to any control.

The risk of error occurrence in the system due to the above mentioned weaknesses has been accounted for in the risk determined in the three different cycles since it affects the whole system.
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LL = 1,131,000

= =======
Expenditure Cycle

Purchases Transactions—Total Net Risk: L.L. 212,263 (7.2%)

-Total Purchases: L.L. 2,956,367

In general, purchases transactions are controlled efficiently in the MBA Factory system. The Operation manager is the only person who authorizes purchases and chooses suppliers also. Also the Operation manager is the one who effects the payment for these purchases. It might be theoretically wrong to state that purchases transactions are well controlled and only one person authorizes, buys and pays for goods purchased. But one cannot steal or abuse the assets of his own company, since the Operation manager is the son of the owner. Errors such as recording, valuation and timing could take place in the purchase transaction but are insignificant in volume and which are in general due to lack of human accuracy. The only area that is not controlled is when the warehouse requests inventory which is in fact available but replenishment was requested erroneously.
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</table>
Payroll and Wages Transactions

- Total Net Risk: LL 96,450 (3.2%)
- Total Salaries and Wages: 3,000,000

Payroll and wages transactions are controlled efficiently in MBA Factory. The system assisted by trustworthy personnel does not allow significant errors to take place. All recruitments and salaries are determined by the General Manager. The foreman responsible for time cards has been working with the company since it started operations. However, the administrative staff presence is controlled by the General Manager office. Errors of wrong recording and calculation might take place but at a very narrow margin. The segregation of duties and the supervisory review are both effective controls in this cycle. Overtime work is the area which is not controlled in the payroll transaction.

(Payroll and wages transactions flowchart and flowchart analysis worksheet are presented on the next two pages).
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</tbody>
</table>
It is worth noting that the absence of standard cost per unit and the unaccountability for the transactions or transfers from inventory to work in process to finish good, to costs of good sold without allocation of overhead, had its direct negative effect on the system and on each transaction processed in the four different cycles.

The objective behind the evaluation and analysis of MBA Factory internal accounting control system, was to determine whether the existing system is reliable, since this reliance provides a base for auditing this company and thus accepting to a certain degree the fairness of presented financial statements.

The analysis of the internal accounting system of MBA Factory that was performed determined the amounts of quantitative risk in each transaction cycle:

<table>
<thead>
<tr>
<th>Category</th>
<th>Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>Revenues Cycle/Sales</td>
<td>LL 2,823,153</td>
</tr>
<tr>
<td>Conversion Cycle Inventory</td>
<td>LL 1,131,000</td>
</tr>
<tr>
<td>Expenditure Cycle</td>
<td></td>
</tr>
<tr>
<td>Payroll</td>
<td>LL 96,450</td>
</tr>
<tr>
<td>Purchases</td>
<td>LL 212,269</td>
</tr>
<tr>
<td></td>
<td>LL 308,719</td>
</tr>
</tbody>
</table>
These amounts are based on estimated rates of error possibility and existing controls effectiveness and do not present values of actual existing errors. The significance of these monetary quantitative error risk is that the existing internal accounting control system of MBA company allows the occurrence of error in the value of these amounts without being prevented or detected. It is concluded that the value of risk of errors which are not prevented or detected by MBA Factory internal accounting control system is relatively high in certain areas and low in others when compared to the size of transactions processed.

The judgement that would be passed on the internal accounting control system of MBA Factory with regards to the decision whether to rely on the system or not is affected by the size and volume of transactions processed.

Since the number of transactions processed at MBA Factory is relatively small the judgement will not cover the whole system as one unit but rather will be expressed on every possible potential error in each transaction cycle.

The internal control system of MBA Factory analysis determined in monetary value the possibility of error occurrence (net risk) for every error type in various transaction cycles.
Calculating the percentage of net risk in each error type in each transaction cycle total value is the parameter on which I based my judgement with regard to the reliance decision. My judgement was also based on the planned audit risk and on the predetermined materiality that were defined in the previous chapter.

The following table presents my judgement of reliance for every error type in every transaction cycle. The judgement was based on the analysis and evaluation of MBA Factory internal accounting control system.
<table>
<thead>
<tr>
<th>Transaction Cycle</th>
<th>Sale</th>
<th>Inventory</th>
<th>Purchases</th>
<th>Payroll</th>
<th>Conversion</th>
</tr>
</thead>
<tbody>
<tr>
<td>Error Type</td>
<td>LL 7,283,194</td>
<td>LL 5,000,000</td>
<td>LL 2,956,367</td>
<td>LL 3,000,000</td>
<td>N.A</td>
</tr>
<tr>
<td>Authorization</td>
<td>Reliable</td>
<td>Reliable</td>
<td>Reliable</td>
<td>Reliable</td>
<td>N.A</td>
</tr>
<tr>
<td></td>
<td>% 1.2</td>
<td>% 0.5</td>
<td>% 0.5</td>
<td>% 0.1</td>
<td></td>
</tr>
<tr>
<td>Validity</td>
<td>Reliable</td>
<td>Unreliable</td>
<td>Reliable</td>
<td>Reliable</td>
<td>N.A</td>
</tr>
<tr>
<td></td>
<td>% 1.5</td>
<td>% 5.6</td>
<td>% 1.4</td>
<td>% 1.1</td>
<td></td>
</tr>
<tr>
<td>Recording</td>
<td>Unreliable</td>
<td>Unreliable</td>
<td>Unreliable</td>
<td>Reliable</td>
<td>N.A</td>
</tr>
<tr>
<td></td>
<td>% 9.0</td>
<td>% 4.3</td>
<td>% 3</td>
<td>% 0.6</td>
<td></td>
</tr>
<tr>
<td>Valuation</td>
<td>Unreliable</td>
<td>Reliable</td>
<td>Reliable</td>
<td>Reliable</td>
<td>N.A</td>
</tr>
<tr>
<td></td>
<td>% 13.5</td>
<td>% 0.6</td>
<td>% 0.6</td>
<td>% 0.5</td>
<td></td>
</tr>
<tr>
<td>Classification</td>
<td>Reliable</td>
<td>Reliable</td>
<td>Reliable</td>
<td>Reliable</td>
<td>N.A</td>
</tr>
<tr>
<td></td>
<td>% 1.5</td>
<td>% 6.6</td>
<td>% 0.6</td>
<td>% 0</td>
<td></td>
</tr>
<tr>
<td>Timing</td>
<td>Unreliable</td>
<td>Unreliable</td>
<td>Reliable</td>
<td>Reliable</td>
<td>N.A</td>
</tr>
<tr>
<td></td>
<td>% 11.5</td>
<td>% 6%</td>
<td>% 1</td>
<td>% 0.6</td>
<td></td>
</tr>
<tr>
<td>Summarization</td>
<td>Reliable</td>
<td>Unreliable</td>
<td>Reliable</td>
<td>Reliable</td>
<td>N.A</td>
</tr>
<tr>
<td></td>
<td>% 0.5</td>
<td>% 5%</td>
<td>% 0</td>
<td>% 0.25</td>
<td></td>
</tr>
<tr>
<td></td>
<td>2,823,153</td>
<td>1,131,000</td>
<td>212,269</td>
<td>96,450</td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>% 38.7%</td>
<td>% 22.6%</td>
<td>% 7.2%</td>
<td>% 3.2%</td>
<td></td>
</tr>
</tbody>
</table>
At this stage the reliable areas as well as the unreliable ones in the internal accounting system have been defined and located. Reading the table on system controls of each error type shows that the reliable areas dominates the system. It should be clear that it is not a matter of dominance but rather a matter of relation between transaction volume and error volume. Again, it should be noted that no conversion cycle exists in the accounting system of MBA Factory. Thus a solid unreliance would be placed. This is indirectly affecting each transaction but might not touch its reliability under the present existing internal control system.

The research hypothesis was: In a first time audit, a thorough study and evaluation of the existing system of internal control is necessary to provide the basis for design of the audit plan and of year-end substantive audit program of account balances.

The thorough study and evaluation of the existing internal control system of MBA Company was very necessary and important. Why? Because, without the results of this thorough evaluation and analysis of the system, the auditor who has no historical background of MBA Factory (previous audit reports, working papers, knowledge of the client business nature) would not be able to assess his judgement on the reliability of the existing system of internal control. The outcome of the internal control system evaluation, is the
assessment of reliability or the determination of reliable areas in the internal control system MBA Factory. To this extent, I have discussed the internal control evaluation and the outcome of this evaluation.

But how could the outcome of the evaluation (which is the degree of reliance on the system) be necessary to provide the basis for the design of the audit plan? The degree of reliance on the internal control system or the outcome of the system evaluation is of great importance and necessity, since it enables the auditor to design his audit plan, i.e. the nature, extent and timing of the audit and thus will determine the effectiveness and efficiency of the audit.

The research hypothesis has been accepted and proved. Without the evaluation of the internal accounting control system in a first time audit, the degree of system reliability could not be determined. Thus, the extent and timing of control compliance tests and substantive audit tests could not be also determined.

Apparantly, and based on what has been discussed and proved in the research hypothesis, the evaluation of the internal accounting control system of MBA Factory is important and necessary for a first time audit, since the evaluation contributes to the components of the audit design and plan steps:
1. The degree of reliance on the different areas of the existing internal accounting control system.

2. The extent of controls compliance tests and substantive audit tests.

3. The timing of compliance and substantive tests.

The degree of reliance according to the approach used for every possible potential error in each transaction cycle was determined in the previous table. Following the order of the audit plan, in which steps are interrelated, the second step of determining the extent of compliance tests and substantive tests reflects the importance of the internal control evaluation outcome more strongly. In other words, without the internal control evaluation outcome the auditor has no objective evidence in determining the size and nature of the audit compliance and or substantive tests.

The following table is designed to show the interrelation between the three steps of the audit plan, which are determined by the evaluation results of the internal control system of MHA Factory.
<table>
<thead>
<tr>
<th>Control Evaluation</th>
<th>Good</th>
<th>Fair</th>
<th>Poor</th>
</tr>
</thead>
<tbody>
<tr>
<td>Reliance</td>
<td>Substantial</td>
<td>Some</td>
<td>None</td>
</tr>
</tbody>
</table>

**Compliance Tests**

<table>
<thead>
<tr>
<th>Extent</th>
<th>Tight Precision</th>
<th>Loose Precision</th>
<th>None</th>
</tr>
</thead>
<tbody>
<tr>
<td>Timing</td>
<td>Interim-Well</td>
<td>Interim-Near</td>
<td>None</td>
</tr>
<tr>
<td></td>
<td>before year-end</td>
<td>Year-end</td>
<td>N/A</td>
</tr>
</tbody>
</table>

**Substantive Tests**

<table>
<thead>
<tr>
<th>Extent</th>
<th>Maximum Restriction</th>
<th>Some Restriction</th>
<th>No Restriction</th>
</tr>
</thead>
<tbody>
<tr>
<td>Timing</td>
<td>Interim with interim to year end review and testing required</td>
<td>Interim with interim to year end review and testing required</td>
<td>Year-end</td>
</tr>
</tbody>
</table>

Adopted from *Internal Accounting Control Evaluation And Auditor Judgement*. 84

In summary, and according to the audit plan the defined reliable areas of MBA Factory internal control system will be subject to compliance tests. Controls-compliance tests of transactions are performed where the auditor expects no or very few insignificant errors, to satisfy and support his evaluation of controls as being reliable. If the results of the controls compliance-tests were satisfactory then the auditor judgement of reliance on these controls has been evidenced and accepted. Otherwise, if the compliance tests found deviation the auditor should disregard his judgement of reliance on these tested controls and should design substantive audit tests to locate the monetary errors (in the financial statements) that resulted from the lack of controls in the internal control system. Compliance tests can be performed any time during the interim audit.

Substantive audit tests are designed to locate the monetary errors in the areas where controls are evaluated as unreliable. If in certain areas controls were defined as unreliable, there would be no need for compliance tests. Substantive audit tests will be carried for account balances of financial statements at year-end. The substantive tests will be followed by a post balance sheet review after which the auditor will be ready to express his opinion on the fairness of presentation of financial statements.
A complete audit plan for MBA Factory will be presented in Chapter five as part of recommendation suggested. The audit plan will determine the size and nature of compliance tests and the procedures for the substantive audit tests.
CHAPTER FIVE:

Conclusion, Recommendations, and Summary

This chapter is the most important part of the research since it demonstrates the significance of the research and its implication in the field of internal control and audit practice. The implication is expressed through a hypothetical case which was MBA Factory for binding books.

This chapter will be discussed in three parts:

- Conclusion
- Recommendations
- Summary

CONCLUSION:

In reference to what have been presented in the four previous chapters, it is concluded that if MBA Factory for binding books, be subject to a first-time audit after twenty years of operation, the auditor would consider MBA Factory as an auditable company that contains an internal accounting control system, of which certain areas are considered to be reliable. However, the reliable areas or the degree of reliability of the existing internal accounting control system of MBA Factory could not have been determined without the thorough evaluation that was applied to the existing system.
Thus, the solution to the problem of system reliability was a product of the system evaluation. Without the performed study and evaluation of MBA Company internal control system no reliance could have been determined as a base to start a first-time audit, as well as the statement of problem could not have been solved and satisfied. The degree of determined reliance guides the auditor to plan his audit and thus determine the extent and timing of his audit tests. It is concluded that the auditor relates the degree of reliance with the audit plan to design the necessary audit tests in order to produce an effective and efficient audit.

A clear knowledge and understanding of internal control and reliance on internal control was required before proceeding with the research and reaching the desired conclusion and solutions. A great deal of this knowledge and understanding was conducted from the work of writers and theorists in the field of internal control and audit which was referred to in chapter 2 under literature review. The major reference from which I have conducted the knowledge of internal control and audit was the American Institute of Accountants, Statement of Auditing Procedures, section 320. These Generally Accepted Auditing Standards clearly mentioned that the auditor should study and evaluate the internal control system as a basis for determining reliance on the system and thereon to determine the extent of his auditing
test and procedures. Otherwise, the auditor would not be able to perform an accepted effective audit. The second standard of the field work clearly summarizes the work that should be performed before an audit should take place and clarified the link between reliance and audit plan by stating: "There is to be a proper study and evaluation of the existing internal control as a basis for reliance thereon and for the determination of the resultant extent of the tests to which auditing procedures are to be restricted" (85).

All publications on the subject of auditing refer constantly to the Generally Accepted Auditing Standards with the intention to further explain the standards and provide methods of proper evaluation of internal control and determination of proper auditing tests and procedures to be executed.

The research results agree with the Generally Accepted Auditing Standards on the necessity of internal control evaluation to determine the degree of reliance and thereon to design to necessary audit test and procedures. The current body of literature review reflected directly in the process the research was developed, as part of this body of knowledge was adopted to study and evaluate the internal control system of MBA Factory and design the audit plan. The research

85 AICPA. AU Section 320.01, p. 241.
presented an improved way for the determination of reliability through judgement of every potential error type in every transaction cycle. This improved way of determining reliability can guide the auditor more efficiently in designing his tests of compliance. The research does not suggest improvement of current practice in the field of auditing, since any audit should follow the way this research was developed. What this research suggests is the emphasis of following and applying the standard method for auditing especially in Lebanon where the link between internal control reliance and audit design is not clear for both people in the practice and entities administrators. In my opinion, and to further support the results of this research another researcher can perform an audit to MBA Factory by following the audit program of compliance test and substantive tests that will be presented later.

RECOMMENDATIONS:

The research conclusion suggests two parts of recommendations. The first part refers to recommendations on the improvement of the existing internal control system at MBA Factory, while the second lists a detailed audit program.

Recommendations on the improvement of the existing internal control system:
Based on the tests and examinations of the present internal control system of MBA Factory, and taking each cycle alone with its effects on other cycles, I came out with the following recommendations that I believe would reduce risk exposures materially if implemented properly.

**GENERAL RECOMMENDATIONS:**

I strongly suggest that MBA Factory employs a financial controller with at least five years experience in a similar manufacturing entity with sound knowledge and practice of cost accounting. The major role of this financial controller will be to change the accounting treatment of transactions processed at MBA Company. This change is defined through the introduction of job order manufacturing and standard costing system. Besides this role the financial controller will be responsible for the accounting department and will gradually work on the improvement of the existing system.

A feasibility study for computerizing the internal accounting system of MBA Factory should be implemented. The study should include a cost/benefit analysis to indicate whether the cost of implementing a computerized system will be greater than the benefits extracted from such system. A computerized system will totally eliminate human errors such as recording and calculating etc. Also, a computerized system will help the newly employed financial manager in changing the
present accounting system and in preparing a standard costing system.

After briefing the case to a computer specialist, for a mini computer and its package for a similar size factory will cost around $US 15,000.

The recommendations will be listed under each cycle.

**Revenue Cycle:**

- Sales pricing should be set by the newly employed financial controller who has established a standard cost for each unit of production. The mark-up to the standard cost should be set by the financial controller and approved by the General Manager. This will eliminate the risk exposure of accepting orders below the cost of manufacturing.

- The sales manager should initiate a new form titled "Sales Order". The order should contain the necessary information of any sale and should be signed by both the sales manager and financial controller in order to be accepted in the accounting department. This form will eliminate the risk of sales accepted and not recorded.

- The production schedule should be supported by a copy of
the delivery note signed by the client in order to bill the client when goods are shipped. This will eliminate the risk of goods been shipped and not recorded and vice versa as well as reflecting proper timing.

**Conversion Cycle:**

- It is recommended that after the inventory is recorded, material requisition should be sent back to the warehouse to be compared with records. Moreover, and independent person in the Accounting Department should review inventory records to eliminate any possible error. This dual control will decrease the risk exposure of inventory been used and not posted, also it will detect errors in recording and posting, and finally it will ensure proper timing of the transaction since two different departments are involved.

- If a computer is introduced to the company the above mentioned risk exposure will be eliminated through EDP controls (Codes, pronoumbering, etc...) and one party can automatically update the records.

The adoption of a new cost accounting system will be reflected in the different production stages of the books (work in process, finished goods, cost of goods sold). Along this change, the standard cost system of job orders
helps in exerting more control over use of material, direct labor and proper allocation of overheads. This system of cost accounting will assist in determining how much each product requires from direct labor, direct material and overheads. The financial controller will be provided with the necessary information to start his job of determining a standard cost for different kinds of job orders. This operation needs a proper feedback from the operation manager and close observation from the financial controller. The first two or more job orders will necessarily be performed on trial basis where the reported variance can help in correcting and adjusting the standards if necessary. Different new forms will be added to the system that will indicate the material, labor and overheads used in each job order.

**Expenditure Cycle**

**Purchases Transactions:**

- It is recommended that purchase orders are signed by the person responsible for the inventory records. He checks the records, approves the replenishment and investigates any variance between his records and those of the warehouse. This dual control will decrease the risk exposure of buying and storing excess inventory that might become obsolete or expired.
Payroll Transactions:

- It is recommended that all overtime work should be authorized by the operation manager. A form that includes the names and authorized number of hours should be only prepared and signed by him. This is of importance especially for the financial manager who will be working on proper costing of each job order.

- Again the introduction of EDP Processing can eliminate the risk exposure of wrong recording and calculations in the payroll.

These recommendations do not include all possible changes of controls. I strongly believe that the financial controller will suggest other changes in the system which along with my recommendations will reduce the risk exposures materially, thus helping the company increase profits and safeguard its assets effectively and maintain a proper financial records that represent fairly the company's financial position.

RECOMMENDED AUDIT PROGRAM

As stated before, the evaluation of the internal control system of MBA Factory determined whether the auditor can rely on the existing system to prevent or detect every potential error type in every transaction cycle. This determination of
reliable and unreliable areas in the system was a necessity for the design of an audit plan. MBA Factory audit plan indicated the extent and timing of audit tests and procedures. The extent and timing of tests varied between controls compliance tests at interim audit for reliable areas in the system and substantive audit procedures for year end balance for unreliable areas. The following will be the recommended audit program that contains detailed descriptive procedures of compliance tests and substantive audit procedures, which I recommend to be implemented in case MBA Factory financial statements were audited.

The recommended audit program will be comprised of two parts. The first part presents the controls compliance tests for reliable areas to ensure that the judgement of reliability was correct, and the second part includes substantive audit procedures for unreliable areas and for areas where compliance tests proved variances and judgement of reliability were wrong.

MBA COMPANY AUDIT PROGRAM

CONTROLS COMPLIANCE TESTS

There are two kinds of controls compliance test. Observation tests that leave no documentary evidence (signatures, reperforming, segregation of duties, clock cards.
physical controls over inventory, etc...), and compliance tests of transactions that leave evidence. The following are a combination of both kinds of compliance test for every potential error in every cycle.

Revenue Cycle / Sales

1. Select 30 sales invoices from the numerical parameter of sales invoices' third copy that are maintained at the accounting department.

2. Check adequately if the serial of the prenumbered invoices is correct. In case there is a number of missing invoices, investigate and ensure to check the cancelled sales invoices.

3. Check that selected sales invoices are signed properly by the General Manager.

4. Refer to the sales conditions draft form or sales contract in alphabetical temporary file maintained in the sales department and verify the client's name, invoices quality and quantity and price per unit with the selected sample of sales invoices.

5. During your presence observe if the General Manager reviews the sales invoices before signing them.
6. Refer to the permanent alphabetical file for production schedules and relate the selected sales invoices to these production schedules.

7. Relate the selected sales invoices to the chronological permanent file of goods delivery note, and insure that the 2 copies of delivery note are signed by the storekeeper and the client. Concentrate mainly on the quantity reported on the invoice and both copies of delivery note.

8. Trace the selected sales invoices to the general ledger by date.

9. Extract the relevant voucher number of each sales invoice from the General Ledger.

10. Compare the relevant voucher with the posting to general ledger and accounts receivable subsidiary ledger.

11. Ensure that the voucher is supported with the second identical copy of the sales invoice.

12. All selected sales invoices should be reperformed and footed.
Conversion Cycle / Inventory:

1. Select 50 material requisitions from the permanent numerical file maintained at the operation department.

2. Check if all selected material requisitions are approved and signed by the operation manager.

3. During your presence observe if the operation manager investigate or question material order for transfer.

4. Check the serial number of material requisition kept in the numerical file and investigate any missing numbers.

5. Observe if the operation manager enquire about the remaining inventory stock before he approves the request for purchasing new stock.

6. At year-end, select 15 inventory items from the perpetual records and trace them to the purchasing invoice and verify their value against the inventory year-end balance breakdown.

7. Trace the selected sample of material requisitions to the permanent numerical file of executed material requisitions maintained in the inventory warehouse. Make sure that they match.
8. Check the signature of the operations' foremen on the material requisition.

9. Observe if the received material is checked against the requisition order by the foremen in the operation.

10. Select the executed material requisition at one certain date and check if they were posted to the inventory perpetual records at the same date.

11. Check the serial number of the selected sample of material requisitions with the permanent numerical file of material requisitions maintained at the accounting department and verify if the same quantities and items are identical on both copies of material requisitions.

Expenditure Cycle

Purchases Transactions:

1. Select a sample of 100 purchases orders and inventory requisition and check if the purchase orders are identical to the inventory requisition.

2. Check if the prenumbered purchase orders selected sample is approved and signed by the operating manager.
3. Observe if the operating manager reviews and compares the purchase order to the inventory requisition form before approving and signing the purchase order.

4. Observe if the operation manager is informed about any back orders or adjustments in the purchase orders.

5. Observe the delivery of a purchase order at the inventory warehouse. Make sure that both the accountant and the warehouse keeper count the received inventory and verify it against the quantities reported on the supplier invoice.

6. Observe if the accounting department reperforms the calculation of the invoice and verifies the items and quantities against the purchase order and inventory requisition.

7. Extract the copies of suppliers' invoices for the selected sample from the alphabetical permanent file and trace them to the bank statements to ensure payments.

8. Check that the selected sample was posted to the perpetual inventory records.

9. Observe if the operation manager reviews the supplier's invoice before approving it.
10. Check if the serial number of purchase orders maintained at the inventory numerical file is correct and check the cancelled orders.

11. Trace the selected sample of purchase orders to the general ledger by date and extract the voucher number of each transaction.

12. Check that the voucher properly indicates the value of purchased goods, against the supplier invoice and against the attached purchase order.

13. Trace the posting of these vouchers to the cash ledger, subsidiary ledger and general ledger.

14. Trace the amounts of paid invoices to the bank statement through the check number reference reported on the voucher.

15. Check that item on the purchase orders and suppliers invoices are properly classified in the perpetual records.

16. Check the date of the selected sample of suppliers invoices with the date of posting to general ledger.
Payroll:

1. Select 15 files of different levels of staff and labor and check if the general manager approved and signed the application and assigned the salary.

2. Observe the workers punching their cards at different times (Morning, lunch, end of day).

3. Identify 5 workers and observe their attendance for 2 days and compare it to the punch cards.

4. Review the time cards and check any variances.

5. Investigate the existence of the punch card machine key.

6. Select a payroll register, and reperform the calculations with reference to each work file for the pay rate.

7. Refer to the general ledger to extract the voucher of payroll through date.

8. Ensure that the voucher is in the same amount of the payroll register.

9. Observe if the general manager reviews the payroll
register before signing the check.

10. Trace the voucher of payroll to the general ledger and subsidiary ledger.

11. Observe the distribution of cost in the envelopes.

12. Select 10 envelopes of cash and verify against the payroll register.

13. Observe the delivery of envelopes to laborers.

14. Perform the same test for staff.

These compliance tests of transactions are performed where we expect no or very few errors in the population, because the controls under consideration were evaluated as reliable. Therefore, any compliance deviations will be found upon testing these controls will be significant with respect to the level of reliance we placed on these internal controls. It is noted that we have chosen the judgement sampling for testing the controls. However, evaluation of a sample results is difficult, since we cannot measure the extent to which the sample results are representative of the population. For this reason, the auditor should not accept many compliance deviations in the selected sample. The nature and causes of all compliance deviations found in the
selected sample must be investigated. Accordingly, the
auditor must decide whether the area under testing is still
considered reliable.

If the results of the designed compliance tests for the
selected sample turned to be unsatisfactory, the planned
scope of substantive testing must be increased. If the
designed tests of controls do not support the evaluation of
internal control, then our evaluation should be amended and
more substantive testing is required.

If the results of the designed compliance tests were
satisfactory then we will prove that our judgement of
reliability on certain areas in the system of MBA Factory was
satisfactory. As well as it is ensured that the likelihood
of error occurrence in the financial statements of MBA
Factory will fall within the projected error risk materiality
that was determined during the evaluation of the internal
control system.

Substantive tests of balances:

The following substantive tests are designed to test the
areas of internal control which we have evaluated as
unreliable. Also, these tests are designed to cover
compliance deviations in case the results of compliance
testing were not satisfactory.
Substantive tests of balances will be performed for year-end balances. After the auditor receives an original signed copy of financial statements and relative account balances breakdown schedules he can start with the audit of financial statements of MBA Factory.

**SUBSTANTIVE TEST OF BALANCES**

**SECTION A - CASH**

--------

A1. Obtain a list of all cash and bank accounts together with reconciliations and relevant supporting schedules.

a. Test the additions on the list, reconciliations and schedules.

b. Trace totals to the general ledger.

A2. Count or confirm petty cash funds and investigate non cash items.

a. Count cash on hand on a surprise basis.

i. List and obtain proper approval and support for items other than cash (e.g. expense vouchers, stamps, I.O.U.'s). Test selected items.
ii. Ascertain that cash funds are cleared of material unreimbursed vouchers prior to the balance sheet date.

iii. Reconcile balances with books. Obtain explanations for all unusual items and differences and indicate how these have been corroborated.

iv. By reference to cash book ascertain last reimbursements to cash funds.

v. Obtain written evidence from custodian that items handled by you have been returned in fact to the client's personnel responsible.

a. Where the funds counted include such items as I.O.U.'s, advances (for purchasing) or checks cashed for employees, ascertain client's instructions concerning these and trace to their subsequent collection and clearance.

b. Test vouchers in the funds to subsequent petty cash reimbursements.

A3. Obtain directly from each bank with whom the client had
transactions during the period, a confirmation covering bank balances, loans, margins and securities held etc... at the balance sheet date.

A4. Review reconciliations of bank balances and investigate reconciling items.

a. i. Trace balance per bank to bank statements and to confirmation received directly from the bank.

ii. Trace balance per books to general ledger.

iii. Add the reconciled and supporting schedules.

b. Obtain and trace cash cut-off information (such as numbers and amounts of last checks issued) into cash books, bank statements and bank reconciliation.

c. Items cleared in the bank after reconciliation date:

i. For checks dated prior to reconciliation date:

a. Trace selected paid checks to list of outstanding checks test back to cash book ensuring that they were drawn in correct period.
b. List and investigate all checks payable to cash, banks, officers, employees, sister companies and any other checks that appear unusual as to nature, payee or amount to determine that they represent bona fide transactions.

d. Items appearing on the reconciliation not cleared in the bank in the period subsequent to the reconciliation date.

i. Trace outstanding checks to cash book to see that entries agree and were recorded before the reconciliation date.

ii. Vouch selected outstanding checks to supporting evidence to confirm that they represent bona fide transactions.

e. Items appearing on the reconciliation and not recorded on books at reconciliation date.

i. Trace dates and amounts of deposits from bank statements to subsequent cash book entries.

ii. Vouch all other items (eg. bank charges and bank errors) to supporting evidence and trace
to cash book.

iii. Determine that such reconciling items are routine in nature and are not a result of a breakdown in procedures.

f. Examine if there are checks still outstanding from last year.

A5. Review cash transactions before and after the balance sheet date.

a. Examine deposits and review subsequent bank statements for deposits dishonored by the bank.

b. Examine payments

i. Inquire about checks written just before the period to ensure that all were sent out.

ii. Review cancelled checks returned by bank after period and note date of payments.

iii. Review cash payments journal after period and investigate voided payments.

SECTION B - ACCOUNTS RECEIVABLE

B1. Obtain aged lists of receivables (trade accounts, bills, notes).
   a. Add and cross-add lists.
   b. Trace totals to general ledger.
   c. Trace selected items to and from detailed subsidiary records.
   d. Test the accuracy of the aging by reference to supporting documentation.

   a. Prior to commencing detailed procedures obtain and control all statements/customers records.
   b. Make sure that all confirmations are addressed to our attention.
   c. Where replies are received:
      i. group these replies (positive, negative, no opinion, others).
      ii. calculate percentages of each kind of confirmation.
iii. Summarize results of confirmation procedures.

iv. Investigate variances resultant from negative confirmations and check if they were effected on the client records. (Client records need to be adjusted).

B3. Review accounts receivables and investigate the nature of, and review support for, any large unusual entries or any entries not arising from normal journal sources.

B4. Investigate collectibility of account balances:

a. i. Investigate old accounts that are unpaid for the last 6 months.

Make reference to accounts of customers correspondence and review customers' payment trend.

ii. Discuss with management each customer account receivable, and try to conduct management opinion or the collectibility of the accounts receivable.

iii. Toward end of audit, request client to update cash received after balance sheet date.
schedule of accounts receivable balances. Trace selected items to customers remittance advices and to bank deposits slips stamped by bank.

b. Where balances involve loans and bills

i. Investigate balances in which interest or principal payments have not been net.

ii. Confirm propriety and consistency of recognition of interest income.

c. Where balances involve contracts, for selected items: compare billing and payments with contract terms and investigate any noncompliance therewith.

d. Investigate adjustments subsequent to the balance sheet date (discounts, damages, etc...).

B5. If balances are receivable in a foreign currency, determine the exchange rate for conversion and check conversion calculations for correctness.

B6. Review lists of balances for amounts due from sister companies employees, and unusual items.

a. Summarize amounts due from group and related
companies and check methods of payment. (direct payment or against credit balances).

b. Vouch major transactions to supporting evidence.

c. Summarize balances not arising from manufacturing or which relate to employees.

d. For credit balances
   i. Vouch selected items to supporting evidence.
   ii. If material, consider reclassification to accounts payable.

B7. Determine that proper cut-off procedures were applied at the balance sheet date to ensure that sales on credit have been recorded in the correct accounting period.

i. For selected delivery receipts trace to sales invoices and sale journal before and after the applicable date.

ii. For selected entries in sales journal before and after applicable dates trace to delivery receipts and to sales invoices.
SECTION C - INVENTORIES

C1. Obtain copy of final inventory summary and priced inventory sheets and check accuracy.

a. Add and cross-add summary

b. Trace totals to the general ledger.

c. Test check calculations and extensions of individual items.

d. Review priced inventory sheets for any unusual items.

C2. Check accuracy of final physical inventory listings with original count records.

a. Ascertained that all priced inventory sheets and original count records have been satisfactorily accounted for.

b. Trace our test counts (descriptions and units) to priced inventory sheets.

c. Trace selected items from original count (or perpetual) records to priced inventory sheets, and
from priced inventory sheets to original count (or perpetual) records.

d. Examine original count records for alterations and obtain satisfactory explanation.

C3. Review adjustments to bring book inventories into agreement with physical inventories.

a. Trace adjustments which record differences between book and physical inventories to inventory control accounts.

b. Obtain satisfactory explanations for any differences and, in particular:

i. Whether any unexplained deficiency of physical below book inventories represents unrecorded material requisitions.

ii. Whether any unexplained excess of physical over book inventories represent unrecorded purchases.

C4. Determine physical existence of inventories.

a. Review client's preparations for the taking of physical inventories and plan audit procedures.
i. Contact client and:

a) Review the adequacy of inventory arrangements and make any necessary recommendations for improvement or clarification of instructions.

b) Determine whether client is counting all significant areas of inventories.

c) Determine which locations and areas are to be attended by us and subjected to our test count procedures and agree arrangements with client. Reference should be made to accounting records to ensure that no areas of high value are excluded.

b. Observe the counting and recording of inventories;

i. Observe counting and recording as they are being done and determine that the methods used are in accordance with laid down procedures. Ensure any inadequacies are rectified.

ii. By observation and discussion with client's personnel, determine that excess, obsolete, damaged or slow-moving items have been properly
identified and listed for follow-up and
collection of appropriate valuation.

iii. By observation and discussion with client's
personnel, determine that items not belonging
to the client have been excluded from the
inventory but have been counted and recorded
separately. Where amounts are material
consider test counting and obtaining direct
confirmation of ownership.

iv. Observe adequacy of cutoff procedures. (Note
particularly transfers between departments.)
Obtain cutoff information (e.g., last shipping
and receiving documents) for subsequent
follow-up.

v. Observe adequacy of control of count sheets,
tags and other recording documentation.

vi. Ascertain whether all items have been counted
and either tagged or listed on count sheets.

vii. Perform test counts and:

a) Summarize details and trace to perpetual
inventory records.
b) Where items for test counting include unopened boxes, packing cases, etc., open (where practicable having regard to the nature of the goods) and test sufficiently to ensure that contents are intact and proper.

c) Ascertain that a proper cutoff has been achieved prior to reconciliation of physical count with perpetual inventory records (i.e., that receiving and shipping documents have been correctly posted to perpetual records up to date of count).

d) Enquire into and obtain satisfactory explanations for any significant difference. If our counts reveal significant discrepancies that cannot be explained, request client to recount and perform sufficient additional tests to establish the accuracy of the perpetual records.

C6. Check the valuation of inventories at cost from source documents and records.

a. Ascertain client's basis for pricing inventories
(eg. average cost, first-in, first-out, standard cost) and that basis is consistent with that used in the previous period.

i. Ascertain that trade discounts, special rebates and other price reductions have been correctly applied in the pricing of inventories.

ii. Determine that inventory prices include freight and duty costs, where material.

iii. Determine that all internal unrealized profits included in inventories (interdepartmental or interunit) have been eliminated.

b. Ascertain the percentage relationship between materials, labor and overhead included in inventories to determine the scope of our pricing tests and where tests should be primarily directed.

c. Select from priced inventory sheets items of raw materials and purchased parts for pricing tests and:

i. Trace prices to purchase invoices, standards costs and other relevant supporting documents.

ii. If client maintains priced perpetual records,
trace selection of items tested above to perpetual records.

d. Check how the orders still under working process are valued in the inventory records.

C7. Identify obsolete and slow-moving items and irrecoverable costs.

a. Trace information obtained during physical inventory observation to priced inventory sheets to ensure items identified as obsolete, slow-moving or defective have been properly described.

b. Inquire of client's personnel as to obsolete, unsalable, slow-moving, defective or excess items of inventory.

c. Review perpetual records, customer order files, purchasing, sales and production forecasts, engineering change orders, and other relevant data to establish that quantities on hand are not obsolete or significantly in excess of known requirements.

d. Examine write-offs and journal adjustments made after the balance sheet date.
C8. Determine that proper cutoff procedures were applied to ensure transactions affecting inventories have been recorded in the correct accounting period.

a. Trace purchases and sales cutoff information obtained during our attendance at the physical inventory into the accounting records to determine that invoices have been recorded in the correct accounting period.

b. Select items in transit before and after count date and trace to shipping/receiving documents, purchases/sales invoices and purchases/sales journals.

c. Select from finished goods cost records those finished goods completed and partial shipments made on or before balance sheet date and:

   i. Trace to sales invoices to determine that sales were recorded in the proper period.

   ii. Determine that appropriate proportion of costs has been transferred to cost of sales.

   iii. Review pricing of partial shipments and consider effect of profit taking.
C9. Enquire as to any inventories pledged as collateral.

SECTION D - PREPAID EXPENSES, DEFERRED CHARGES AND OTHER ASSETS

D1. Obtain schedules of prepaid expenses, deferred charges, goodwill, patents, copyrights and other assets showing, where applicable:

i. Description of item
ii. Balance at beginning and end of period
iii. Accumulated amortization of costs written off at beginning and end of period.
iv. Additions giving date of purchase or assignment and vendor.
v. Amounts amortized or written off in period.
vi. Sales proceeds and profit or loss on disposal.
vii. Lapsed items, renewal fees and amounts written off.

viii. Any other relevant information.

and check accuracy.

a. Add and cross-add schedules
b. Trace totals to the general ledger.
c. Check calculations where appropriate.
D2. Examine underlying documents for account balances.

   a. Vouch selected items to required authorization. Note that detail indicated is in accordance with terms authorized.

   b. Where debts relate to the receipt of income by the client (e.g., interest, rents or commission) verify that income is accounted for correctly.

D3. Determine whether balances are collectible or whether expectations of future benefits are reasonable in relation to prepayments and deferrals.

   a. Ascertain that adequate provision has been made for any items that are overdue or appear doubtful.

   b. Where applicable ensure all suspense accounts not cleared are fully analyzed and represent amount which are fully recoverable.

   c. Consider management's policy with regard to prepayment and deferral of expenses and confirm that no costs attribute to present or past periods are being carried forward. Ensure there is reasonable support for retaining such assets (e.g., continuing value, not change in conditions or expectations).
d. Where deferred charges are being systematically amortized, ensure that the method has been consistently applied and that no events have occurred which might lead to a reduction in the period over which the expenditure is being written off.

SECTION E - PROPERTY, PLANT AND EQUIPMENT

El. Obtain schedule, by general ledger account, of property, plant and equipment showing:

i. Cost and accumulated depreciation at beginning and end of period.

ii. Additions and disposals/retirements during the period.

iii. Depreciation and amortization movements during the period.

iv. Any other relevant information.

a. Add and cross-add schedule.

b. Trace totals to the general ledger.
c. Obtain subsidiary ledger of property, plant and equipment (plant register) and:

i. Agree listing of subsidiary ledger to individual plant/property records.

ii. Test extensions on individual plant/property records.

iii. Agree totals of subsidiary ledger to schedule obtained above.

E2. Check physical existence of plant and equipment

a. If client performed physical check:

i. Trace selected items from subsidiary ledger (plant register) against evidence of client's check.

ii. Review results and summarize in working papers.

iii. Where check was not 100% consider significance of any discrepancies found.

b. Select major items (including additions during the year) from subsidiary ledger and inspect physically.
c. Physically select items and trace to subsidiary ledger.

d. During physical inspection observe and note any items of plan which are off-line and plant which does not appear to be utilized as part of the "manufacturing" process.

E3. Vouch additions and disposals from summaries showing detailed movements.

a. Make a selection of additions and transfers and:

i. Vouch details to purchase invoices noting price, description, etc.

ii. Where additions represent items constructed by the client:

a) Vouch labor and material costs.

b) Check overhead calculations and determine that allocation to construction is both proper and consistent with prior periods.

c) Confirm that no internal profit is included.
d) Confirm that total cost is reasonable in relation to "bought out" price.

iii. Agree to appropriate authority for acquisition and to detailed capital expenditure budget.

b. Make a selection of disposals, scrappings and transfers out:

i. Vouch to sales invoices noting description and price.

ii. Vouch to appropriate authority of disposals.

iii. Confirm calculation of profit and loss on disposals and trace to earnings statement.

iv. Determine that deductions from cost and accumulated depreciation accounts have been made.

v. Trace proceeds to cash receipts book.

c. Scrutinize and obtain satisfactory explanations for any unusual items.

d. Ascertain that additions and disposals, not at "arm's
length", took place at reasonable prices and were independently approved.

E4. Review Depreciation policy and test calculations.

a. Review adequacy of accumulated depreciation allowances in relation to estimated useful lives and possible net salvage values. Determine the reasonableness of estimates of useful lives, accumulated depreciation and depreciation expense for the year. Consider and discuss with management:

i. past significant profits and losses on disposals of assets.

ii. Effect of changes in products or technology.

iii. Any idle facilities (Refer to observation tests above).

iv. Significance of fully depreciated assets still in use and need to reassess remaining useful lives.

v. Experience of scrappings.

vi. Remaining life of leases in connection with
leasehold improvements.

vii. Repairs and maintenance policy.

b. Check utilization records of major production for any idle or underutilized plants.

c. Review product line changes which may indicate any special plant items which are redundant.

d. Check computations of provisions for depreciation for the year:

i. Make a selection of items and check detailed depreciation calculations. Review consistency with prior periods.

ii. Cross-reference total depreciation expense for year to expense accounts.

E5. Review capitalization policy to ensure all significant capital expenditures are properly recorded.

a. Ascertain that additions to property, plant and equipment include all significant costs connected with acquisition (e.g., legal fees, transfer taxes, installation costs).
b. Ascertain that expenditures in the nature of repairs and maintenance have been written off.

c. Review repairs and maintenance account for inclusion of capital items.

E6. Where assets have been revalued, check valuation.

a. Examine the basis of valuation and see that it takes into account existing use and condition of the assets.

b. Where assets have been revalued during the year, vouch the revaluation to published indices, independent professional valuer's report or other supporting evidence.

c. Confirm correct accounting treatment of any write-up or write-down of asset values.

d. Ensure that depreciation is based on revised asset values.

E7. Ascertain there was a proper cutoff at year-end.

a. Investigate purchases and sales of assets immediately before and after balance sheet date and verify date actually purchased/sold by reference to documents and
contracts, receiving/shipping records.

E8. Ascertain whether any items are pledged as collateral.

SECTION F - ACCOUNTS PAYABLE

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F1. Obtain a schedule of accounts payable.

   a. Add schedule

   b. Trace total to general ledger.

   c. Trace selected items to and from detailed subsidiary records (or to purchase invoices).

F2. Obtain suppliers' statements and reconcile to accounts.

   a. Request client to hold all suppliers' statements for our examination.

   b. From list of accounts payable balances (or list of unpaid invoices) request statements directly from suppliers (include major suppliers' accounts with high volume or value of transactions as well as those with large balances).

   c. Vouch balances on statements to suppliers' ledger
account balances.

d. Make a control record of suppliers' statements and account balances. Request client to reconcile differences, and:

i. Trace reconciling items to supporting evidence (eg., receiving documents and paid checks).

ii. Consider whether items disclosed by reconciliations should be adjusted at balance sheet date.

e. Summarize results of circularization and reconciliations, classifying differences by type.

F3. Review the accounts payable control account for the period and investigate any large or unusual entries or any significant increases or decreases in purchases towards year-end.

F4. Perform search for unrecorded liabilities.

a. Examine transactions subsequent to year-end.

i. Select from purchasing records and examine all invoices in excess of a selected amount, and
vouch to supporting evidence.

ii. Select and examine invoices in the process of being passed for payment for significant amounts. Enquire of all people who normally hold invoices.

iii. Select from cash disbursement records payments in excess of a selected amount and vouch to supporting evidence.

b. Examine write-offs and journal adjustment entries made subsequent to year-end.

c. Review correspondence with suppliers and inquire of the client's staff for evidence of unpaid accounts and disputed balances.

F5. Review list of accounts payable balances for amounts due to (or from) group and related companies, debit balances and unusual items.

a. Summarize amounts due to group and related companies and perform the procedures in step B6a.

b. Summarize balances not arising from trading or which relate to employees or officers and vouch balances to
supporting evidence. Consider propriety thereof.

c. For debit balances:

i. Vouch selected items to supporting evidence.

ii. Ensure that debit balances do not represent payments on account of unrecorded liabilities.

iii. Review selected balances of evidence of recoverability (or offset).

iv. Consider reclassification to accounts receivable, if material.

d. Ensure that creditor balances have been offset against debtor balances relating to the same individual where a right of offset exists and it is appropriate to do so.

P6. Determine that proper cutoff procedures were applied to ensure purchases and debit notes have been recorded at the balance sheet date (and at count date if different) in the correct accounting period.

a. For selected receiving documents before and after the applicable date, trace to purchase invoices and to purchase journal.
b. For selected entries in the purchase journal before and after the applicable date, trace to receiving documents and to purchase invoices.

F7. If liabilities are payable in a foreign currency, determine the exchange rate and check conversion calculations for correctness.

F8. Determine which liabilities are affected by discounts or premiums and ensure they have been properly handled.

SECTION G - ACCRUED AND OTHER LIABILITIES

G1. Obtain analyses of accrued and other liabilities, showing all relevant information, such as:

i. Balances at end of period and corresponding amounts at previous period-end.

ii. Description of balances and periods to which they relate.

iii. Basis of calculations

iv. Due dates

v. Security given, if any.
a. Add and cross-add analyses.

b. Trace totals to general ledger.

G2. Check validity and accuracy of accruals by reference to supporting documents.

a. Determine that proper accruals have been set up on a basis consistent with that of the previous year, for the following:

i. Periodic accounts (eg. rent, property taxes, water, gas, electricity, telephone, etc...).

ii. Interest on all interest bearing liabilities (eg., bank overdrafts, debentures, etc.).

iii. Unpaid wages and salaries and commissions from last pay period to balance sheet date.

iv. Vacation pay and annual bonuses.

v. Group and payroll taxes.

vi. Pensions – company’s contribution.

vii. Any other items (eg., legal expenses, repairs, overseas traveling).
b. Vouch selected items to supporting evidence.

c. Ensure that proper liability has been set up for items purchased on credit (see Property, Plant and Equipment).

G3. Where there is a lack of substantive internal evidence obtain direct confirmation of account balances from independent third parties.

SECTION H - TAXES ON INCOME SUBSTANTIVE TESTS OF BALANCES

H1. Obtain analyses of tax accounts, showing:

i. Balances at beginning and end of period.

ii. Details of payments during the period.

iii. Details of estimates for the period.

iv. Adjustments to or write-off of prior period balances and reasons therefor.

v. Any other relevant information.

a. Add and cross-add analyses.
b. Trace totals to general ledger.

H2. Review prior tax returns field and determine similar taxes to the prior year have been paid or accrued in the current year.


H4. Review the tax accounts for proper classification.

Ensure that balances are properly segregated and disclose:

a. Taxes currently payable.

b. Deferred tax accounts

c. Tax effect of operating loss carrybacks and carryforwards.

d. Amounts applicable to extraordinary items and prior period adjustments.

SECTION I - LONG-TERM DEBTS

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II. Obtain an analysis of debt transactions for the year,
showing:

i. Description and amounts comprising balances at beginning and end of the period.

ii. Additions and reductions during period.

iii. Original and due dates.

iv. Interest paid and accrued together with terms and due dates.

v. Security given

vi. Any other relevant information.

a. Add and cross-add the analysis.

b. Trace total to the general ledger.

c. Trace selected items to subsidiary ledger.

12. Vouch significant transactions.

a. Select additions during the period and vouch to:

i. Loan agreements or other external evidence.
b. Select reductions during the period and vouch to:
   i. Loan agreements or other external evidence.
   ii. Paid checks.

13. Ascertained that interest has been accounted for.
   a. Test accuracy of interest accrual.
   b. Trace total interest expense to earnings statement and review interest expense for indication of possible unrecorded debt.

14. Confirm amounts and terms with lenders.
   a. Obtain direct confirmation of amount of loans, security held, interest due, etc.
   b. Obtain confirmation of debentures redeemed or canceled.

15. Determine that classification of liabilities is correct.
   a. Determine portion of debt to be included in current
liabilities.

b. Identify debt owed to group or related companies.

I6. Identify undisclosed debt.

a. Examine or obtain direct confirmation of company's register of charges to detect any secured liabilities not entered in the books.

b. Review board minutes.

SECTION J - STOCKHOLDERS' EQUITY

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J1. Obtain a schedule of all equity accounts, showing:

i. Nominal unit values and authorized number of shares.

ii. Number of shares issued and balances at beginning and end of period.

iii. Movements during the period.

iv. Identification of distributable and nondistributable balances.
v. Any other relevant information.

a. Add schedule.

b. Trace totals to general ledger.

J2. Ascertain by review of general ledger and register of shareholders (by examining the sequence of unissued shares) whether there have been any changes in capital stock during the period.

J3. Examine supporting documents for increases in issued shares.

J4. Where company maintains register of shareholders, vouch changes between shareholders.

J5. Review agreements and contracts for effects on equity accounts.

J6. Determine that dividend payment/liabilities have been correctly recorded.

J7. Examine all movements in paid-in capital, retained earnings and other reserves.

J8. Review classification of capital stock, paid-in capital,
reserves and retained earnings.

J9. Review computation of earnings per share.

SECTION K - SALES REVENUES AND SALES DEDUCTIONS

K1. Obtain analyses of various sales revenue and sales deduction account for the period, as appropriate, based on significance of account. Relationship to tests of other accounts and/or results of analytical review. Determine clerical accuracy and agree to general ledger and analyses of other accounts.

K2. Review sales and gross profit by product line by month and investigate unusual fluctuations.

K3. For selected sales revenues and sales deductions, test computations and trace details to supporting documents.

a. Investigate shipping records immediately before and after balance sheet date.

b. Vouch journal entries in sales and sales deductions accounts.

K4. Where appropriate, reconcile units shipped with sales
production and inventory records.

K5. Ascertain that nonoperating revenues are not included in sales.

K6. Inquire about and test that sales to related parties are properly handled.

SECTION L - COSTS AND EXPENSES

SUBSTANTIVE TESTS OF BALANCES

L1. Obtain analyses of various cost and expense accounts for period, as appropriate, based on significance of account, relationship to test of other accounts, and/or results of analytical review. Determine clerical accuracy and agree to general ledger and analyses of other accounts.

L2. Review purchases by month and investigate unusual fluctuations.

L3. Relate tests of cost and expenses to search for unrecorded liabilities.

L4. For selected cost and expense accounts, test computation and trace details to supporting vouchers, etc. Include tests before and after balance sheet date to ascertain proper cutoff has been made.
L5. Inquire about and test that costs of sales and expenses from related parties are properly handled.

SECTION M - CONTINGENT LIABILITIES SUBSTANTIVE TESTS

M1. Review audit working papers for existence of contingent liabilities (also, consider the possibility of contingent gains).

a. Cash at bank:

   i. Review bank confirmations for performed guarantees and other contingencies granted to third parties on behalf of the company.

   ii. Letter of credit in force.

   iii. Bills (notes) receivable discounted with banks but not yet due.

b. Inventories:

   i. Claims under costed contracts.

   ii. Uncompleted contracts, late delivery penalties.
iii. Product warranties.

c. Property, plant and equipment:

i. Committed but unpaid capital expenditures.

d. Accounts payable and borrowed funds:

i. Bills (notes) discounted or endorsed.

M2. Enquire with responsible company official whether client has complied with important statutory controls.

a. Wage and dividend controls.

b. Employee safety regulations

c. Environmental regulations.

M3. Discuss above areas with responsible company official and determine, as far as practicable, the details of any contingent liabilities.

a. Obtain an estimate of the maximum potential liability.

b. Determine whether any security has been pledged to secure payment.
c. Assess the likelihood of a contingency becoming an actual liability.

M4. Analyze legal expense and review lawyers' invoices for indication of possible contingent liabilities.

SECTION N - OTHER AUDIT PROCEDURES SUBSTANTIATIVE TESTS

N1. Trace opening balances in general ledger and subledgers to last year's balance sheet.

N2. Obtain preclosing trial balance sheet date and trace balances to general ledger. Investigate differences in trial balance and subledgers.

N3. Enquire into illegal acts.

N4. Review financial statements of client to determine whether going concern accounting concept is appropriate.

a. Where the ability of the client is pay its debts as they fall due is in doubt:

i. Review last unaudited accounts, cash position and investigate any further deterioration in financial position.
ii. Obtain letters from banks confirming overdraft limits and dates of next reviews.

SECTION AA – BOOKS OF ACCOUNT

AA1 Generally scrutinize all ledger accounts and obtain satisfactory explanations for any unusual accounts or items.

AA2 Test the buildup of all general ledger posting sources (books of original entry) to ensure completeness of information.

a. Cash receipts and payments books
b. Sales and sales returns journal
c. Purchase and purchase returns journal
d. Check payments book or register
e. Expenditure distribution reports

f. Responsibility or cost center reports
g. Payroll summaries
h. Sales analysis by region/product group
i. Inventory variance reports
j. General and other journals.

AA3 For selected periods test postings from all posting sources to the general ledger; where journal vouchers are
used, test posting from all posting sources to journal vouchers and from journal vouchers to the general ledger.

AA4 For selected periods test postings from sales and purchase journals (including returns journals), cash receipts and payments books, and check payment books to individual customer and suppliers' accounts in the subsidiary ledgers.

AA5 For selected customer and suppliers' accounts, test posting of credit entries back to posting sources to detect any dummy entries.

AA6 Review standard or recurring journal entries and ensure all have been posted throughout the period.

AA7 Review nonstandard journal entries and for selected entries, examine supporting documentation.

AA8 For selected journal entries or journal vouchers check posting codes to chart of accounts.

AA9 For selected accounts in the general ledger and subsidiary ledgers (such as accounts receivable and accounts payable), check additions.

AA10 For selected periods add and cross-add columns of all
general ledger posting sources (e.g., journals, journal vouchers, registers, summaries, etc.). In addition to the total column, be sure to add any column from which items are individually posted to subsidiary accounts receivable and accounts payable records.

The substantive tests of balances that were presented as part of MBA Factory recommended audit program are quoted and worded when applicable from "Substantive Procedures Technique Booklet" published by Touche Ross International, August 1978.

The selection of the sample size for substantive tests of balances is left to the auditor judgement according to each balance volume and size. In the recommended substantive tests I referred to the sample through the phase "selected items".

If the recommended audit program will be followed in auditing the financial statements of MBA Factory for binding books, I strongly believe that the audit outcome will be effective and efficient.
SUMMARY:

This summary presents the essentials of this research to serve as a guide to subsequent readers. It will summarize the entire body of the research.

The entire research was built around proving or rejecting a pre-determined hypothesis. The research hypothesis was:

"In a first time audit a thorough study and evaluation of the existing system of internal control is necessary to provide the basis for design of the audit plan and of year-end substantive tests audit program of account balances."

Accordingly, I started the review of literature to establish the relevance of the presented research. The major reference in the literature review was the generally accepted auditing standards of which I accept as they relate to the research methodology.

The presented literature review added to my knowledge in the audit field and enabled to select and design the appropriate methodology. The research methodology was built to serve the research hypothesis. In order to evaluate an internal control system which provides the basis for auditing the entity in which this system operates one should understand the system, describe it, how it operates. The research methodology was performed in the following pattern:
1. Data collected to understand the system of internal control. The observation and interviews technique was used to collect data.

2. The types of transactions processed by the system were identified and divided into cycles.

3. Obtained data was documented in clear descriptive flow charts. Flow charts drawn help in tracing the flow of transactions in the system.

4. The types of errors that could occur for each transaction type was identified and using the seven general internal control objective/errors as a guide.

5. Controls that existed in the system of internal control to prevent and detect each type of error were identified through reading and analyzing the flow charts.

6. The net risk exposure that the existing controls in the system permit was determined. The net risk exposure was calculated through assigning the percentage of possible error occurrence and the percentage of error reduction that existing control prevents or detect by using the flow chart analysis work sheet.
7. Recommendations were suggested to improve the existing internal control.

8. Audit program was designed.

The flowcharts of the four different transactions cycles describes the entire system of internal control as well as they represent the essential collected data. Once these flowcharts were based on the form "Flowcharts Analysis Works Sheet". The purpose of this work sheet is to determine the net risk exposure of each transaction cycle. The work sheet lists the seven potential errors types and data related to total value of transaction under analysis. The analysis requires the estimation of possible error rate for each type of error, as well as the estimation of existing controls effective rate in preventing and detecting each type of the seven errors. Once the transaction total value is multiplied by the error estimated rate, the total value of possible error is determined. Multiplying the total error value by the effective rate of existing controls will determine the error reduction. If error reduction is subtracted from the total value of error possibility we have the monetary value of net risk or the quantitative amount of errors that would not be prevented or detected by the existing system of internal control. The analysis continued and each type of error in each transaction cycle was divided by the total transaction volume.
These calculated percentages were the base for determining the reliability of existing controls in the system for each type of error in each transaction cycle.

Accordingly, it was concluded that the outcome of the evaluation of the internal control system is the determination of the reliability areas in the system. Determining the reliability of the system is very necessary since it affects the design of the audit extent and timing.

That is, the extent of the audit plan will include compliance tests for reliable areas and substantive tests for unreliable controls.

The recommendation included suggested improvements for the existing system of internal control and recommended an audit program that includes both compliance and substantive audit tests designed for MBA Factory for binding books.
BIBLIOGRAPHY


6- Interview with MBA Factory owner and responsible employees.


APPENDIX

In this appendix, I am going to present a brief narrative description of MBA Factory transactions flow system in the four different cycles. This description aims to support the flowchart description presented in the research and assist users and readers of the research, who might be unfamiliar with the flowcharting technique, to better understand the system of MBA Factory.

Revenue Cycle/Sales

Sales orders represent major part of MBA Factory General Manager responsibilities. All sales orders are received and discussed in his office. When a sale order is finally negotiated with the client and all terms are cleared, the sales manager (General Manager) prepares a draft form with the negotiated terms and conditions. If it was a normal sales order, the draft form is kept in an alphabetical file. If the sales order was in the form of a contract, two copies are consulted with the lawyer and signed by both parties. Copy one goes to the client and the second copy is kept in the same alphabetical file of all sales orders. (Mainly, all contracts are similar and there is a standard form established to be used always). Accordingly, the sales manager sends an informal note (no specific signed form) to the transportation personnel and warehouse keeper to bring the printed books from
the client premises. The operation manager assigns the truck
to transport the unbound books to the factory. The truck
driver prepares and signs two receipt copies of the quantity
of books received in each trip.

The white copy is kept with the client and the pink copy is
sent to the operation for filing in a permanent chronological
file.

The sales manager informs the accounting department about
the new order and orally dictates the sales orders payment
terms and prices. Prices are set by the sales manager
according to his estimation and usually these orders are
priced by unit. The unit price is multiplied by the quantity
of bound books.

Since all sales are of job order kind, sales return and
allowances and sales back orders do not exist.

Conversion Cycle / Inventory

Once unbound books arrive to the production assembly, the
forman responsible for the job prepares material requisition
form for raw material that will be used for production. The
prenumbered 3 copies material requisition should be signed by
the operation manager in order to be active for execution by
warehouse. The inventory warehouse sends the ordered material
with the copies to the assembly production where the quantity received will be compared with the orders and the white copy of the material requisition will be signed by the forman and returned to the warehouse. The second yellow copy is kept in a numerical permanent file and the third green copy is forwarded to the accounting department.

When material is delivered to production assembly, production begins according to a time table set by the forman and the operating manager. Once the order is executed a production schedule (in the quantities) finished is prepared and sent to the accounting department. Meanwhile, the forman requests transporting the finished quantity of bound books to the stores and he prepares two copies of a delivery note. The second blue copy is signed by the stores upon delivery and maintained with operation in a chronological file. The first white copy is signed by the client upon receipt of bound books and returned to operation to match it and file with the second copy.

In case the material requested is not available at warehouse, an inventory request form is prepared and sent to the operation manager for approval. Once the inventory request is signed, a two copy purchase order is prepared and sent with the signed inventory request to the operation manager.
When purchased inventory arrives to inventory warehouse, one person from the accounting department attends the delivery of inventory with the warehouse keeper. Purchased inventory is checked against the supplier invoice and the purchase order to ensure the receipt of the quality and quantity received. Then the two parties sign the supplier invoice and the two copies of purchase order. Copy two of the purchase order is kept with the warehouse in a numerical permanent file.

**Expenditure Cycle**

Once the operating manager approves the purchase order he assigns the supplier and the purchaser. When purchases are done the accounting department sends to the operating manager the supplier invoice to sign. The first copy of the purchase order and the inventory requisition are attached to the supplier's invoice. In case inventory request is not available the purchaser informs the operating manager who might assign substitute inventory or supplier. No extra forms are prepared. Only necessary adjustments are added to the purchase order regarding quantities and inventory items. (Mainly, all purchases are from sister companies that import all raw materials needed for MBA Factory and the market).

**PAYROLL:** Attendance is observed daily by a forman for labor and through the general manager's office for staff employees.
Staff employees are requested to sign on a daily register every working day to prove their presence at work on the right time. Staff employees are paid on a monthly basis. Labor have to punch their card every day. A forman observes the operation of punching cards and prepares an informal note in the name of absent labor and forwards it to the operation manager. At the end of each 15 days (two weeks) the forman responsible for attendance pulls the time cards, review and signs them. Once he signed them he forwards the batch of time cards to the accounting department for calculation and necessary operation. Overtime work is authorized orally by the operation manager. No special form is prepared for overtime work and it can be extracted from the labor time card. (The punching-time card machine has a lock key and the key is kept with the attendance forman who operates the machine on due times only).

ACCOUNTING: Accounting role is integrated among the whole system. The effect of all transactions processed among the four different cycles is the accounting recording and processing.

Cash and Accounts Receivable: When the accounting department receives the production schedule from the unit price and terms is requested from the sales manager in order to prepare an invoice, a three copy prenumbered invoice is prepared at the accounting department and sent
to the General Manager for approval and signature. Once the invoice is signed the first white copy goes to the customer. The copy is put in numerical permanent file. The second copy is used to prepare a journal voucher. The voucher always will be supported by the second copy. All cash receipts and checks are done at the General Manager's office who deposits them intact in the bank, and delivers the bank receipt to the accounting department. (I was informed by the Chief accountant that not a single error or other mistakes have ever occurred in the area of transferring cash and checks to the Bank).

- Payment and Accounts Payable: After the purchase inventory has been examined in the stores, supplier's invoice is checked.

for clerical accuracy and the invoice, purchase order. First copy and inventory request are forwarded to the operation manager to authorize payment or recording of accounts payable. The operation manager informs the General Manager of the new purchases and signs the supplier's invoice with the instructions to prepare a check or record accounts payable. A photocopy of the signed invoice, first copy of purchase order and inventory requisition is maintained in an alphabetic permanent file or suppliers. The original copies are used to prepare a voucher to support it. If cash payment was authorized, a check is prepared and attached to all these
documents and forwarded to the General Manager. Signed checks are taken to the customer, and the voucher and supporting documents are filed in a numerical permanent file. If no cash payment was required, the voucher and supporting documents go to the same mentioned file. The first posting is done to the inventory perpetual records and new purchases are added to inventory stock.

- When material is delivered from the warehouse the first copy of material requisition is received by the accounting department. This material requisition form serves as the source for accounts to post withdrawals of material in perpetual inventory records.

- Upon receiving the labor time cards, the accounts count the cards, review them, and refer to the personnel file in preparation of the payroll register.

The personnel file which is an alphanumerical permanent file contains a standard application and an appointment form on which all necessary details are found. Time cards are then kept in a separate chronological file. Necessary calculation are reperformed to eliminate calculation errors and the payroll register is forwarded to the operation manager for approval. Labor is paid every two weeks. When payroll register is signed, a check and voucher are prepared and sent to the General Manager for signature. Money is put in
separate envelope with the necessary explanation written on the envelope. (Money in the envelope is counted twice). The same procedure is followed for payment of staff salaries except for a monthly register is prepared and staff is paid monthly.

A computer step is applied to all accounting procedures in maintenance of vouchers. A number is given to each voucher and the supporting document is attached to the voucher. All voucher are filed in a numerical file and then after posted to the General Ledger and applicable subsidiary ledger(s).