AN APPRAISAL OF ACCOUNTING STATEMENTS FOR CREDIT PURPOSES

by

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ABSTRACT

The credit grantor needs to make credit appraisals in deciding whether or not to extend credit to a corporation enterprise. The accounting statements (cash flow statement, funds flow statement, income statement and balance sheet) are the usual sources of such information. However, these statements contain different types of information and are capable of various interpretations. This study seeks to establish what types of information are or ought to be contained in these statements which would be of use to credit grantors, to evaluate the relevance and usefulness of such information for making credit decisions, and to suggest such modifications of present statements as appear desirable.

The short-term creditor is primarily concerned with short-term solvency. The cash flow statement and the funds flow statement are two sources of information which are relevant.

The long-term creditor's principal concern is long-term solvency. Future income flow is particularly indicative of long-term solvency. Present income is an index of the probable future income. The balance sheet is a statement listing the resources available which give rise to future income. Thus, the long-term creditor's primary interest is in the income statement and the balance sheet. His interest in short-term solvency and in the income statement is secondary and only to the extent that long-term solvency becomes irrelevant if an enterprise becomes insolvent in the interim period before payment of his debt.

Each of the terms "cash flow", "funds flow", "income" and "balance sheet" have several interpretations. The relevant accounting statements can each be prepared in various ways according to the interpretation of the respective terms. The information in the statement will vary accordingly.

A proposal is made in this study to adopt "cash flow as historical changess in the cash account", "funds flow as the inflow and outflow of total resources or purchasing power", "income as measured according to the current operating concept of income", and "balance sheet as a listing of total resources available".

An attempt is made to introduce into the respective statements such modifications as appear particularly relevant to the creditor for decision making. A model for each type of statement, based on the proposed interpretation and incorporating the suggested modifications, is illustrated in the study.

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CHAPTER I

INTRODUCTION

Credit Granting and Accounting

Credit is a major factor in modern business. It plays an important role in the affairs of the credit grantor, the debtor, and the economy as a whole. Sound credit administration is essential and beneficial to the proper and advantageous conduct of their affairs. The interest of the credit grantor is most vital in this regard. The credit grantor must make important evaluations in deciding whether or not to grant credit. He needs as much relevant and useful information as is possible to help him in his decision making.

Accounting is a means of communicating information and a tool for decision making. It can and does provide the credit grantor with much relevant and useful information, and serves his needs as a tool for decision making.

The Purpose of this Study

The purpose of this thesis is to describe the accounting information which is made available to the credit grantor, to evaluate its usefulness, and to suggest such modifications as appear to be desirable.

The Scope of this Study

This study will confine itself to producer's credit, and the problems facing such credit grantors. The debtor, in this case, is a business enterprise which obtains credit for its operations. Consumer's credit and the problems facing such credit grantors will not be considered in this study.

Plan of Approach

The remainder of this chapter will be devoted to a general description of the nature, function, and economic significance of credit, the kinds of credit, the types of credit grantors and the main problems facing them.

The second chapter will discuss the information needs of creditors in making credit granting decisions and a description of the development to date of accounting in meeting these needs. An outline of relevant accounting statements and data concludes the chapter.

The succeeding chapters will critically discuss in greater detail the individual types of accounting statements and data, and will suggest models of these statements specifically developed for the use of credit grantors.

The concluding chapter will summarize the findings of the earlier chapters.

Nature and Function of Credit

That credit is a force in modern business requires but little proof in view of its extensive use by merchants and manufacturers the world over. [1] Even a cursory examination of the subject will readily reveal that it is an indispensable element in present-day commerce, finance, and the smooth functioning of the economic system.

Credit is essentially a medium of exchange. It makes it possible for the receiver of credit to purchase goods and services for which he cannot make payment immediately. To the grantors of credit it is the confidence that payment for goods, services and other assets they transfer will be made some time in the future. Even though it has no physical form and is not wealth in the sense that it has an exchange value in the market place, it is of great value to individuals and business organizations who can obtain goods and services on credit. This places them at an advantage over those who cannot do likewise. Very often the availability of goods and services are critically vital in the operation of their businesses and the conduct of their affairs. Credit makes it possible for them to obtain the things they need which they may otherwise be unable to obtain. It logically follows that credit is of value to those who have the opportunity to benefit from its use.

As a medium of exchange, the main economic function of credit is to facilitate the flow of goods and services in the economy which otherwise would be impossible or extremely difficult under the

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[1] Peter P. Wahlstad, Credit and the Credit Man, (New York: Alexander Hamilton Institute, 1917) p. 1.

circumstance. Barter is a commercial transaction that is complete in itself. We find, however, that barter involves a great deal of inconvenience. Accordingly, we use money as a medium of exchange to expedite the flow of goods and services. Money, however, has a special relationship to the state of the economy, and it is often unwise to vary its supply to match the volume of trade. The supply of money becomes inadequate as the volume of trade increases. Credit becomes necessary to supplement this inadequacy. Credit permits the vendors of goods and services to part with what they wish to sell on the promise that they will receive payment for the goods and services at some time in the future. The purchasers obtain what they want to buy with a promise to pay in the future. Physical transfer of what is in question is effected without any money exchange taking place. This process tends to facilitate trade and stimulate production further with consequent increase in total wealth in the economy. To illustrate this aspect of the function of credit the following quotation is taken from Wahlstad:

> "A merchant in Chicago wishes to import a shipment of goods from a manufacturer in Yokohama, Japan. He is not willing, however, to pay for these goods in advance; in fact, he wishes to pay for them only after he has received them and has had an opportunity to re-sell them to his customers. But the Japanese manufacturer insists upon receiving payment before the steamer upon which he is to ship the goods leaves port. Inasmuch as it might take two months before such a shipment could be delivered in Chicago, and since another month or two might be required for the resale of the goods and for the money to reach the Yokohama manufacturer, probably four months would elapse before the transaction as a whole could be closed. It is evident, therefore, that the conditions imposed by the shipper on the one hand, and the importer on the other, cannot be complied with -- unless, indeed, the latter borrows the required amount of money.

> "Credit, however, overcomes the difficulty. A simple letter of credit, obtained by the Chicago merchant from his local banker, permits the Yokohama manufacturer to make a four months' draft upon a London bank, which draft he can sell to his Yokohama banker even before the ship that carries his goods has started on its voyage to the United States, the Yokohama bank in turn may promptly resell the draft to a local merchant who has bills to pay in London. Upon presentation in due time of the draft at the London bank, the latter with a stroke of the pen 'accepts' the document, which thereupon circulates in the credit market until the four months have just expired, when it is again presented -- this time for payment. But long ere that date arrives, the goods from Japan will have been resold by the importer. A sufficient part of the proceeds of the sale will also have been sent to the London bank, so that the latter, when the draft reappears, is ready to pay without having to use any of its own money.
>
> "Thus, without anyone having advanced a penny, the transactions have gone through without a hitch. The money which the Chicago importer paid for the Japanese shipment was received by the shipper four months before that money was sent. Yet the importer sent the money only after the goods had been received in Chicago and resold there. Credit, as we see, has performed the apparently impossible!"[2]

There are several variants of such techniques of effecting trade payments of which the foregoing example is one. They are commonly utilized in international commercial transactions. Merchants within the same national boundaries may also utilize them with equal advantage. The existence of a highly developed money and banking system makes them convenient means for merchants to settle their commercial obligations. In all these the element of credit is of strategic importance.

Credit is also becoming increasingly important as an instrument to mobilize savings for investment purposes through financial intermediaries or direct borrowings. Many people have excess income to save and to put into profitable use. They may not see any profitable investment opportunities themselves or may not be willing to

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[2] Credit and the Credit Man, op. cit., pp. 1-3

assume the trouble involved. Others may have profitable investment opportunities and are ready to profit therefrom but do not have the resources to exploit the opportunities successfully. On a promise to pay the savers in the future, those who have investment opportunities to exploit may borrow from those who save. People purchasing bonds and debentures from corporations on the understanding that the corporations will repay them when the bonds and debentures mature is such an example. Commercial papers purchased by investors for short-term investment is yet another example. Behind all this is credit, the confidence of the credit grantors that they will receive payment of their claims in the future.

Economic Significance of Credit

To illustrate the economic significance of credit, and to emphasize the needs of credit grantors for information in decision making, we now examine briefly the relationship between credit and the level of economic activity.

The level of economic activity depends on total aggregate demand, and unemployment results from a deficiency of total aggregate demand.[3] Effective demand is the sum of consumption expenditures and investment expenditures. Consumption depends on the size of the consumer's net income, and the propensity to consume. Investment depends on the consumption and investment multipliers.

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[3] John Maynard Keynes, The General Theory of Employment, Interest and Money, (London: The Macmillan Co., 1961), Dudley Dillard, The Economics of John Maynard Keynes, (New York: Prentice-Hall, Inc., 1948), and R.C.O. Matthews, The Trade Cycle, (London: Cambridge University Press, 1959).

Credit as a medium of exchange facilitating the flow of goods and services has a direct impact on consumption, investment, aggregate net income and the level of employment. Credit expansion leads to an expansion of aggregate demand for goods and services, an increase in aggregate net income, and a rise in the level of employment. Credit contraction has the opposite effects. While an increase in net income in the economy, and a rise in the level of employment are desirable, there is always the tendency for inflation to creep in. The adverse effects of inflation are well known and should be avoided. The evils of deflation are equally undesirable and likewise to be avoided. Credit can be used as an instrument to control or at least minimize the impact of inflation and deflation. Proper credit management by individuals and business organizations can help to solve some of the problems of economic fluctuations in the economy.

Individuals and business organizations decide whether or not to grant credit in the light of the advantages they enjoy therefrom and the resultant disadvantages they must suffer. The wisdom of each of such decisions has an impact on the economy and the welfare of society. The impact of each individual decision may be insignificant. The sum total of the impact of all decisions cannot be overlooked. Conceptually it is wise to become a creditor of a profitable enterprise. The individual creditor gets back his investment plus a return. The enterprise makes use of the resources in a productive capacity and in doing so makes a profit for itself and a return for the creditor. There is a resultant increase of wealth for the enterprise, the creditor and the economy as a whole. This is socially

desirable and beneficial. On the other hand, it is detrimental to the interest of the creditor himself, the enterprise and the society to extend credit to an unprofitable enterprise. The enterprise may suffer losses. The creditor would likely, though not necessarily, suffer losses himself. The enterprise's losses, however, represent losses to society. Resources have been put into unprofitable use, and there is mal-allocation of scarce resources.

Some specific examples of the important role credit occupies in modern business follow. Accountants often classify common and preference shareholders as investors, and all other suppliers of funds to an enterprise as creditors. They further emphasize the importance of the interest of the equity shareholders. This is unfortunate. The entity theory of accounting makes little distinction in this regard, but treats equity shareholders and creditors alike as suppliers of funds to and claimants to the assets of the enterprise. Creditors are as much investors as equity shareholders. In Canada about one-third of the capital funds of corporations come from creditors (excluding preference shareholders) of one class or another. The instruments of credit take the forms of bank loans, accounts payable, mortgage liabilities.[4] Creditors supply 93% of the total assets of Canadian banks in the forms of fixed, savings, and demand deposits.[5]

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[4] Taxation Statistics, 1964, Part Two - Corporations, (Ottawa: Queen's Printer & Controller of Stationery, 1964)

[5] Royal Commission on Banking and Finance Report, (Ottawa: Queen's Printer & Controller of Stationery, 1964), and William C. Hood, Financing Economic Activity in Canada, (Ottawa: Queen's Printer & Controller of Stationery, 1958).

Trade credit is among the more important forms of credit, and is one of the most important means of financing in the American economy.

> "It is estimated that by the end of 1962 there was approximately US$111 billion in trade credit outstanding. This sum exceeded the volume of more familiar financial media such as corporate bonds and state and local securities; it was twice the volume of the entire commercial banking system."[6]

In several lines of business in the United States, trade credit is a major source of corporate finance. Its importance varies widely among different sectors and industries, but does not vary much among firms of different sizes and profitability within the same sector or industry. Trade credit represents on average nearly half of the total assets of corporations engaged in construction, and nearly one-third of those of corporate wholesalers. In the manufacturing sector the ratio of trade payables to total assets is 16 per cent, and in mining 12 per cent. In no sector is the volume of trade receivables negligible, and its importance in the corporate capital structure has been growing in the course of the postwar years.[7]

It is thus apparent that the actions of creditors will have a significant impact on the level of income and employment in the economy. When creditors liberalise their credit policy they pump new purchasing power into the economy and create additional aggregate demand. They reduce the aggregate demand when they contract the

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[6] Martin H. Seiden, The Quality of Trade Credit, (New York: National Bureau of Economic Research, 1964) Occasional Paper 87.

[7] Ibid., pp. 7-8.

credit supply. Creditors control a large proportion of the new purchasing power in the economy; their decisions to extend or to withdraw credit are bound to affect economic stability.[8]

The decision when to grant and when to withdraw credit also has an important impact on the economy and the individual enterprises. In fact, proper timing is strategic in the attainment of the desired results for which credit is intended. Haste or delay may both defeat the very purpose credit is to serve. A financial analyst of a leading finance company in Canada once expressed the view:

> "We must act quickly upon requests for loans by our clients. To delay action would mean that we might have to forego what we would have earned during the period of delay, and we might lose the clients altogether. It is very important to the interest of our clients that they should be able to turn to other sources of credit at an early opportunity should we be unable to meet their requests."[9]

To further illustrate this point, let us suppose that there is an enterprise which has made good profits in the past and shows every prospect of continued success, but faces a chronic insolvency problem and is unable to pay off its current debts because much of its resources is tied in non-liquid assets. The timely availability of credit may help to solve this solvency problem. We can imagine that the enterprise may go bankrupt if credit is not available or it is not available in time. This represents losses to the owners and possibly to the creditors of the enterprise, and the community.

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[8] Gottfried Haberler, Consumer Instalment Credit and Economic Fluctuations, (New York: National Bureau of Economic Research, 1942.

[9] In private communication.

On the other hand, to supply credit to an enterprise that is going to fail in any case is a waste of resources and a social loss.

Sound credit decisions are beneficial to the corporate debtors but are vital to the corporate creditors themselves. Credit losses are expenses from which no one gets any benefit. Credit losses can pose a serious threat to the survival of the creditors themselves. It has been estimated that, on average, over 9 per cent of all business failures in the United States in the postwar period resulted from poor quality of trade credit in the portfolios of the failing firms. Receivable difficulties accounted for 17 per cent of all failures in the wholesale industry. The average was 15 per cent for construction, 12 per cent for mining and manufacturing, 6 per cent for commercial services, and 5 per cent for retail trade.[10] This phenomenon was not, however, entirely new. Inability to realise their loans was responsible for many bank failures in the early decades of this century.[11]

Kinds of Credit

Credit may be of various kinds and in forms devised to suit the needs of various circumstances. A few standard forms of credit are common in commerce and finance. Bank credit refers to loans and advances made by banks to individuals and business organizations. Consumer instalment credit is an arrangement, usually at the retail level, between the seller and the buyer which allows the debtor to purchase consumer durable goods on an instalment payment plan.

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[10] Martin H. Seiden, op.cit., p. 3.

[11] Waldo F. Mitchell, The Uses of Bank Funds, (Chicago: University of Chicago Press, 1925) Ch. VI.

Personal credit refers to loans made by banks and finance companies to individuals for personal consumption or other personal purposes and needs. Businessmen may deliver goods and services to purchasers and expect to be paid in ten days, thirty days or sixty days as is customary among some lines of business, or on terms the vendors and purchasers may otherwise agree. In the main, we may assign the various forms of credit into one of two broad categories, producer credit and consumer credit. The latter is for consumption purposes and relates to individuals. The former is used to facilitate the production and distribution of goods and services, or what we may refer to as the economic production of wealth. This relates most often to business enterprises. In this study we shall only concern ourselves with producer credit because it is the business enterprises which are of interest to the corporate creditors whose problems we wish to examine.

Types of Creditors

Creditors may be classified by the maturity of their claims. Short-term credit is usually expected to be liquidated in the near future, say, from anything up to three months. Short-term creditors are usually those who sell merchandise, materials or services for which payment is not made immediately, and bank creditors who lend money on an institutional basis for short periods. Most trade terms fall within a three months' time limit, and working capital loans seldom extend beyond three months. Payment for short-term debts is usually made out of realization of non-cash current assets in the normal operation of the enterprise, or from alternative sources of

short-term financing. A characteristic of short-term credit is that it tends to be on a continuous rotating basis. As the debts arising from one set of transactions are paid off, new credit is extended on new and similar transactions.[12]

Intermediate-term creditors are those whose claims mature in one to five years. Liquidation of their claims is to be made from earnings accumulated in the form of assets, including assets not requiring immediate disbursement to meet expenses such as depreciation. The credit terms will approximate to the length of life of any assets required with the credit facilities. Machinery purchased on an instalment basis is an example.

Long-term creditors are those whose claims mature in anything between five to twenty-five years. Debenture and bond holders are two common examples of this class of creditors. Payment for long-term debts is to be made from accumulation of earnings from profitable operations (including expense items not requiring outlays such as depreciation) and/or other sources of long-term financing. Liquidation or realization of assets is only incidental.

The distinction between the various classes of creditors is necessarily vague and arbitrary, and only serves as a convenient rule of thumb. On one extreme we have the short-term creditors. On the other extreme we have the long-term creditors. The intermediate-term creditors stand in between. It is, however, difficult to say

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[12] Most writers on accounting and finance classify short-term credit as maturing within a year or the normal operating cycle of the enterprise if this is longer than a year. All other debts are classified as long-term.

where one class of creditors ends and another class of creditors begin. For the purpose of this study, and of examining the problems facing them, we shall assign creditors into one of two classes: long-term creditors and short-term creditors. The problems of intermediate-term creditors are usually seen to be identifiable with those of long-term creditors.

Decisions Creditors must make

The problem facing a potential grantor of credit is whether or not he should extend credit to some particular business enterprise. He must decide if he should part with his command over present economic resources in turn for a promise of command over more economic resources in the future. Those who are already creditors to some enterprises face the problem of whether or not they should continue to remain as creditors to these enterprises, should extend them additional credit, or should even withdraw their credit. In a case of potential insolvency creditors must decide if they should foreclose and salvage whatever they can get, or forego their legitimate claims and give the defaulting debtor another chance and hope for an improvement in the future. They may even extend additional credit to the defaulting debtor to tide over his temporary difficulties.

Credit management is concerned with the administration of economic resources. Creditors and potential creditors must weigh the relative economic advantages against disadvantages of the alternative courses of action. Banks estimate the present returns on what they lend and prospective future business against the risk that the loan

may default. Suppliers estimate the profits arising out of a credit sale and possible future orders against the risk that they may not be paid.

All these problems would be simple if we knew the future with perfect certainly. However, the environment surrounding business enterprises is dynamic, and we just cannot know the future with certainty. Some information is, however, helpful in making predictions about the future.

Creditors choose the various alternative courses of action on their evaluations about the future. In making such evaluations creditors require significant and relevant information. While they can obtain such information from many sources, we intend to show in the next chapter that financial statements are one (or perhaps the most) important source of such information.

CHAPTER II

INFORMATION NEEDS OF CREDITORS

What Creditors Look For

All creditors and potential creditors wish to be reasonably sure that their debtors will honour and repay their debts as they fall due. Whether or not debtors will do this depends on their capacity and willingness to do so. Creditors must estimate the risk that the debtors may default. They look for clues of the debtors' capacity and willingness to honour their debts. Credit analysis is the search for such clues.[1]

Traditional credit analysis involves three principal considerations, character, capacity and capital which are often referred to as the "three C's of credit".[2] Some credit analysts include three additional considerations, collateral, coverage and condition. More recently the concept of credit analysis has been broadened and restated in terms of personal, financial and economic factors.[3]

Character refers to inherent personal qualities such as personal habits, style of living, business friends and associates,

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[1] Edward W. Reed, Commercial Bank Management, (New York: Harper & Row, 1963), p. 216.

[2] Ibid., p. 218.

[3] William H. Steiner, Mercantile Credit, (New York: Longmans, Green and Co., 1937), Ch. I.

ethics, and the general standing in the community. In credit analysis character refers to those personal qualities which cause an individual to desire and intend to honour an obligation. By some arbitrary standards people possessing such qualities as honesty, integrity, industry, trustworthiness, and morality are accepted as good, while those who lack such qualities are regarded as undesirable. However, a person with all the good attributes may not possess the will to honour his debts. Another person lacking all the usual good attributes may yet have the will to honour his obligations. There is no way to measure or evaluate character objectively. People have different concepts of good and bad character. Therefore, character in credit analysis, though important, remains a matter of opinion, a subjective factor.

Capacity is the ability to generate income. This depends on energy, ambition, experience, executive ability, and the acumen to make sound business judgments. Generally those who have education, skills, and good health can earn more income than those who have few employment opportunities because of poor health, education, and lack of skills. Capacity in credit analysis can be evaluated with reasonable objectivity, but measuring it quantitatively remains a serious problem.

Capital refers to the ownership of assets which include inventory of merchandise, machinery, plant, real properties, and monetary claims such as marketable securities. Assets can be used to meet debt obligations and to generate future income. The ratio of liquid assets and current debts measures the relative short-term financial strength of the enterprise. The ratio of total assets and

total debts measures the relative overall protection creditors have. Among the three C's capital is perhaps the most objective and can be conveniently measured in meaningful terms.

Character in credit analysis is relatively unimportant in this study because we are examining the problems facing creditors who deal with corporate entities rather than individuals. Businesses today are less identified with individual owners and management. Modern credit analysis is becoming depersonalised. There is, however, the argument that corporations are owned and managed by individuals, and reflects the traits of these individuals. Incorporation of a business does not add to its willingness to honour its debts if the management is dishonest, untrustworthy, and does not take the repayment of obligations seriously. In fact, incorporation is a way of limiting the liability of owners.[4] However, we may assume that most businessmen are honest, and that cases of dishonesty must be regarded as exceptions rather than the rule. It also suggests that we should look to something else besides character to evaluate an enterprise's credit worthiness.

It is much easier and more objective to measure capacity and capital. Past earnings record and present assets give a fair measure of an enterprise's ability to generate income in the future. Capital is simply the total assets an enterprise possesses at one point of time. Information about an enterprise's capacity and capital is to be found in the financial records of an enterprise. Financial

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[4] Edward W. Reed, op. cit., p. 219.

statements are one ready source of such information when it is adequately disclosed. We therefore propose that financial statements should be the main basis of credit analysis. All information relevant to credit analysis should be disclosed in the financial statements.[5] We shall later describe such information and its presentation.

Financial Statements as a Source of Information for Credit Analysis

Creditors have for a long time made use of financial statements for making decisions whether or not to extend credit. Bankers were the first to make systematic analysis of financial statements for this purpose. As early as 1895 the Executive Council of the New York State Bankers' Association adopted a resolution to

> recommend to the members of this association that they request borrowers of money from their respective institutions to give them written statements over their signatures of their assets and liabilities, in such form as the Committee on Uniform Statements of the various groups recommend.[6]

Since then financial statements have always been a basis of analysis of bank credit. How much significance each banker attaches to financial statements is of course a matter of his judgment. Other creditors also make frequent use of information in financial statements in credit

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[5] Accounting has often been criticised for lack of a complete philosophical system of thought. It suffers from many of the practical imperfections of existing methods arising from makeshift devices adopted in the absence of a consistent theory of accounting. Many doubt if the information in the financial statements is realistic, objective and reliable at all. It is true that accounting is not yet a perfect art. Thus, there is every reason to attempt to improve its objectivity, reliability and usefulness to its users amongst whom creditors are a class. This study is one such attempt.

[6] Quoted in John N. Myer, Financial Statement Analysis, (New York: Prentice-Hall, Inc., 1952), Second Edition, p.6.

analysis. Chapin, an eminent writer in this field, says, "financial statements are one of the most important sources of credit information. It furnishes, in many cases and in fact in most cases, all the information available in regard to the capital factor, and this factor..... is regarded by some credit managers as being the most important of all."[7] Another writer says that the advance of accountancy has given credit grantors much more precise and dependable tools of deciding whether or not to grant credit. The foundation of "scientific" credit analysis rests on three basic accounting statements, the balance sheet, the income statement, and the cash-flow statement.[8] Reed suggests that financial statements can be used to determine solvency of a firm as of the date the statements are prepared, the possibility of continued solvency, the disposition of past income, and the ability to generate income in the future sufficient to pay off its obligations as they fall due.[9]

Considerable thought has been given by accountants to the need of creditors for information, although we may wish to contend that it has not been adequate. George O. May recognizes that there are at least ten distinguishable uses of financial accounts, one of which is its use as a basis for the granting of credit.[10] Other

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[7] Albert F. Chapin, Credit and Collection - Principles and Practice, (New York: McGraw-Hill Book Company, Inc., 1953), Ch. XVIII.

[8] Roland I. Robinson, The Management of Bank Funds, (New York: McGraw-Hill Book Company, Inc., 1962), p. 160.

[9] Op. cit., Ch. 10

[10] Financial Accounting, (New York: The Macmillan Company, 1956), p. 3.

accountants devote time and energy to consider the possibility of preparing financial statements that will provide useful information to the various classes of creditors.[11] In fact, some accounting bodies in the United States have special personnel to work in close association with the various classes of creditors who make use of financial statements which accountants prepare. Unfortunately, such efforts are only made to meet individual needs rather than to the development of a consistent body of ideas which are generally applicable.

Creditors themselves also express their need for accounting information and suggest how their needs may be met. A banker has expressed the view as follows:

> "The value of financial statements has continually gained a more prominent position because of the acceleration of the tax-paying burden on business, the larger risk involved, the widespread specialization of businesses, and the huge volume of loans handled -- both in number and dollar amount -- by our financial institutions. It follows that greater reliance is therefore placed upon the story of each business as told by the financial statements."[12]

Still others express the view that financial statements are useful to creditors, but much can be done to improve their usefulness. One way is to enhance the reliability of the amounts stated in the financial statements. The relevant information may be more adequately disclosed, and the methods of presentation may be standardised. Methods of treating a financial transaction may be made more uniform.

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[11] Saul C. Hertz, "Recurring Problems Confronting the CPA and the Credit Grantor" in New York Certified Public Accountants, I:29, 1959

[12] Joseph J. Kaberna, "The Importance of Financial Statements in Bank Lending" in Auditgram, April, 1957.

The effects of adopting different methods may be disclosed.[13]

Of course other factors also influence the creditor's judgment, and may condition the type of information required. One of these factors is the mere size of the debtor. If the debtor is a very large enterprise, it is probable that past operations have been successful. It is also probable that too much detail would be useless because there would likely be a great diversity of operation and great difficulty in interpreting too much detailed information. In such cases, the creditor must base his decision on summarized information and must rely more on a large management organization to keep the business under control.[14]

On the other hand, if the debtor is a relatively small business, it is possible that there is less diversity in operation. It is also probable that management organization is smaller and may not contain as much top-grade talent as would be found in the large management organization. For this reason, the creditor frequently needs more detailed information regarding the position of the smaller debtor.[15]

Another factor is the general credit standing of the debtor in the business community.[16]

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[13] Eugene L. Larkin, "Interpreting Financial Statements and Accountants' Report for Credit Purposes" in Haskins and Sells, Selected Papers, 1960, pp. 99-111.

[14] Milton J. Drake, "Reports for Creditors" in Accounting Review, XXV No. 1 (January, 1950), p. 60.

[15] Ibid.

[16] Ibid.

A third element in a creditor's judgment relates to the intangible factors in the debtor's situation, such as labour relations, research and product development, and the general outlook for the industry, one of which can be thoroughly encompassed in an accounting report.[17]

It is suggested that:

> "The line of business is also frequently of importance to the creditor. Certain types of business have peculiarities of their own and have a relatively high risk, as indicated by mortality figures for that particular line. In such case the creditor needs a great deal more information than he does where the line of business is stable and has a low mortality rate."[18]

However, information in financial statements is still required, and accounting reports remain the basic tools of creditors. We must then explore means to improve the usefulness of accounting information to meet the needs of creditors.

Ratios in Credit Analysis

There are a great many financial ratios which are used for making credit appraisal. These ratios help to bring out the significance of the information in the financial statements, relevant to making predictions about an enterprise's future financial position. The more important ratios are as follows:

1. Turnover of Receivables: This is annual sales divided by outstanding receivables, and indicates the number of days or months

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[17] Ibid.

[18] Lo. cit.

of average sales on the debtor's book, and the rate of cash collection out of line with current sales.

3. Cash and Receivables to Current Liabilities: This ratio indicates the liquidity of the business and the possibility of the debtor being able to meet his currently maturing liabilities and operating costs from his cash and currently collectible receivables.

4. Current Debt to Working Capital: The amount of protection the current creditors are receiving from the invested working capital (defined as current assets) of the debtor is shown by this ratio.

5. Total Debt to Working Capital: This is similar to the previous ratio, but indicates how much total debt has to be supported by existing working capital.

6. Times-Interest-Earned: This shows the debtor's ability to pay interest on long-term debts from current earnings. This is specially relevant to long-term credit considerations.

7. Current Debt and Total Debt to Net Worth: These ratios indicate the proportion of total funds supplied by creditors and owners.

8. Net Profit to Sales: This shows whether there is much of a margin for the absorption of increased expenses or the shock of a downward movement in the volume of business.

9. Profit to Net Worth: This ratio points out the profitableness of the business and the effectiveness with which invested capital is being utilized.

Several empirical studies have come up with correlations between these ratios and the financial difficulties and failure experienced by firms.[19] The Winahor and Smith study shows a close

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19 See James D. Horrigan, "Some Empirical Bases of Financial Ratio Analysis", The Accounting Review, XL No. 3, (July, 1965), pp. 558-568.

association between the nature of the ratio of net working capital to total assets and business failures.[20] Fitzpatrick shows in another study a similar relationship between the net profit to net worth ratio, the net worth to total debt ratio, and impending financial difficulties and eventual failures.[21] W. B. Hickman in his Corporate Bond Quality and Investor Experience concludes that the times-interest-earned ratio and the net profit to sales ratio are useful predictors of defaults on bond issues, whether used jointly or separately.[22] With regard to bank credit difficulties, the Moore and Atkinson study concludes that firms with higher current ratios, and working capital to total assets, net worth to total debt, and net profit to net worth were in a better position to use bank credit than other firms.[23]

However, these ratios only serve as convenient rules of thumb. There is no particular reason why a current ratio of 3:1 is satisfactory in a given case. These ratios can even be misleading unless the amounts entering into their computations are correct and meaningful for credit analysis. Creditors need information about the elements entering into the computations of these ratios.

Development of Accounting in Meeting Creditors' Information Needs

Accounting is a principal means of recording, classifying,

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[20] Ibid., p. 566

[21] Ibid.

[22] W. B. Hickman, Corporate Bond Quality and Investor Experience, (Princeton, N.J.: Princeton University Press, 1958).

[23] Horrigan, op. cit., p. 567

interpreting and communicating the information about the elements entering into the computations of the financial ratios we have discussed in the preceding section. Such information is disclosed in two principal products of accounting -- the income statement and the balance sheet. Two other statements -- the cash flow statement and funds flow statement -- also disclose useful and relevant information for making credit appraisal. However, there are several acceptable methods of recording and interpreting and presenting a financial transaction or event. Income may be computed on an all-inclusive basis or net operating basis. An inventory may be priced on an average-cost basis or on a last in, first out basis. Each method can produce a different figure in the financial statements. We shall later describe these statements, evaluate their usefulness and suggest adaptations as appear suitable for use by long-term and short-term creditors.

Information for Forecasting Debt-Paying Ability

Generally creditors need information about an enterprise's ability to provide cash and generate income in the future in order to gauge its capacity to pay off its debts. However, different types of creditors lay emphasis on different types of information depending upon the maturity terms of their credit, because some types of information are more relevant to specific types of credit analysis than others. The types of information relevant to the types of creditors, in order of importance, are as follows:

Information Relevant to Short-Term Creditors

Type of Decision	Relevant Information	Source of Information
Before Granting of Credit: Whether or not to grant credit	Potential cash generation and uses	Cash flow Statement
	Funds flow and uses in the near future	Funds flow Statement
Subsequent to Granting of Credit: Whether to give additional credit or to withdraw credit	Realizable values of assets (liquid and fixed)	Balance Sheet
	Potential earning power	Income Statement (together with balance sheet)

Information Relevant to Long-Term Creditors

Type of Decision	Relevant Information	Source of Information
Before Granting of Credit: Whether or not to grant credit	Potential earning power (e.g. times-interest-earned)	Income Statement (together with balance sheet)
Subsequent to granting of credit: Whether to give additional credit or to withdraw credit; whether or not foreclosure is desirable in the event of default.	Funds flow (mainly to maintain short-term liquidity for normal operations and payment of short-term debts and periodic interest. Not suitable as indication of ability to pay long-term debt.	Funds flow Statement
	Cash flow (mainly to maintain short-term solvency without abnormally converting assets such as receivables and securities.	Cash flow Statement
	Realizable values of working capital assets in the ordinary course of operations, and replacement values of long-lived capital assets	Balance Sheet and supplementary data
	Realizable values of assets in event of foreclosure in forced sale	Appraisals by competent Appraisers

Short-term creditors want information to forecast an enterprise's ability to generate sufficient cash before their claims become due because cash will be wanted to settle their claims. Therefore, their interest is in the cash flow statement. Funds flow indicates the probable amount of cash and near cash assets available which may be converted into cash to pay off short-term debts in cases of dire need for cash. This is, however, only secondary importance to short-term creditors. Receivables and inventories are two important sources of funds. Receivables and inventories should only provide cash through normal sales and collection. Other assets are not meant for sale in the normal course of operations. The conversion of operating assets into cash to pay off current debts may be a slow process. Realizable values of long-lived assets through forced sale give an indication of the probable amount of cash that can be realized upon liquidation. This is relevant only in the event of forced liquidation. People do not extend credit to a firm that they expect to go bankrupt. One may argue that creditors no longer have any interest in a firm after it has paid off their claims. This is, however, retrogressive. The proper function of credit is to assist businesses to operate profitably. Creditors should aim to avoid giving credit to unprofitable enterprises. One of the aims of this study is to assist creditors to reach that goal.

Similarly, short-term creditors have only an incidental interest in the enterprise's potential earning power. In the long run a profitable enterprise is also a solvent enterprise. This is not true in the short run. A profitable enterprise may have all its resources

tied up in capital and other non-liquid assets and be unable to pay off its current debts. If an enterprise is unable to pay off its short-term debts it will have no opportunity of realizing its potential long-run profits.

Long-term creditors' primary interest is in the enterprise's potential earning power. The principal source of resources to pay off long-term debts is future earnings. A firm with high earning power will be solvent in the long run. It may induce long-term creditors to reinvest in it when their claims fall due or even borrow from others to pay off the long-term debts falling due. Under optimum financial management firms will finance their operations with long-term loans up to a certain proportion of their total assets. They will negotiate new long-term loans to replace the existing long-term loans as the latter fall due. To be able to do this the firms must show high earning potential. Where new loans will not replace existing ones, the additional resources made available to the business from reserves will probably enable repayment of long-term loans without curtailment of operations.

Cash flow and funds flow are relevant to long-term creditors to the extent that they tell long-term creditors if an enterprise is currently solvent and will be able to remain in existence to realize its potential future earnings. Cash flow and funds flow will not be relevant to the payment of long-term debts because long-term debts are not expected to be paid in the short run or with cash from current operations.

Long-term creditors' concern with the values of assets is centred on the assets' ability to generate income in the future. Their interest in the realizable values of working capital assets arises from the fact that working capital assets can be realized to meet short-term obligations as a temporary measure. Future earning power is the basis of long-lived asset values. Thus, current replacement values of long-lived capital assets give some indications of the potential future earnings and the values to be replaced to maintain the productive capacity.

Some long-term creditors such as mortgage lenders have an interest in the realizable value of the long-lived capital assets which are used as collateral for their claims. However, this interest is one of last resort. The safety of creditors' claims is not measured by the value of a lien but by debtor's ability to pay, which in this case is future earning power. Lien is no guarantee against shrinkage of asset values. Enforcing legal rights under a lien is expensive, troublesome and time consuming. All creditors should seek to avoid trouble rather than to protect themselves in the event of trouble.[24]

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[24] Benjamin Graham, David L. Dodd and Sidney Cottle, Security Analysis, (New York, Toronto and London: McGraw-Hill Book Company, Inc., 1962), Fourth Edition, pp. 309-315.

CHAPTER III

THE CASH FLOW STATEMENT

"Cash Flow" Analysis and Credit Granting

The cash flow statement describes the flow of cash of an enterprise over a period of time. Careful analysis and use of the appropriate information in the cash flow statement can help short-term creditors to make a forward-looking forecast of the enterprise's probable cash receipts and disbursements in the near future, the probable decrease in cash receipts and increase in cash disbursements, and the risk of cash insolvency. However, "cash flow" is capable of various interpretations.[1] It has different degrees of usefulness to short-term creditors depending upon the interpretation. Some such interpretations follow this paragraph.

Meaning of "Cash Flow"

"Cash Flow" may be interpreted as: (1) funds from operations, (2) cash from operations, (3) historical changes in the cash account, and (4) cash budget.

"Funds from operations" are perhaps the most popular interpretation of "cash flow" and refer to earnings after taxes plus depreciation and other non-funds deductions. Revenues which do not currently provide cash or funds are also excluded from the computation of "cash

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[1] See Perry Mason, "Cash Flow" Analysis and the Funds Statement, Accounting Research Study No. 2, (New York: American Institute of Certified Public Accountants, 1961).

flow". Funds in this context usually refer to cash, receivables or both. A business enterprise may receive other assets in the process of earning revenues in its operations; but cash and receivables are more usual in practice.

A principal function of the analysis in this case is to measure the amount of cash and receivables from normal operations flowing into a business enterprise over a period of time. Short-term creditors may make use of these data for forecasting the inflow of cash and other liquid assets from operations in the near future. We can reasonably expect the flow of funds from operations to continue so long as the business continues to operate. The forecast of short-term funds flow from operations is reasonably reliable because the scale of operations and the environment surrounding the business do not change substantially in the short run. If there are known predictable changes, the figures can be suitably adjusted.

The main drawback of interpreting "cash flow" as funds from operations is that non-cash transactions in operations also enter into the analysis. "Cash flow" analysis becomes a misnomer. The second drawback is that it does not include cash or funds outflow arising on items not entering into income determination. Inflow of cash or funds assets alone arising from operations is not an efficient gauge of short-term debt-paying ability. Total outflow of funds may well exceed the inflow of funds from normal operations. There may be no excess cash or funds from operations to pay off short-term debts. The converse will also be true.

"Cash from operations" refers to cash sales of goods and services, and collections on receivables, less cash expenses and payments of payables in the normal operations of a business. All transactions which do not involve cash are excluded from the computation of cash flow.

The main purpose of this analysis is to measure the amount of cash from operations flowing into a business over a period of time. Assuming that operations of the business will continue under similar conditions, the analysis of cash from operations permits the forecasting of the amount of cash available from operations in the near future. Inflow and outflow of cash from transactions other than those in the course of operations are not considered. The exclusion of such inflow and outflow of cash represents a weakness.

Historical changes in the cash account record the total cash receipts and disbursements of a business over a period of time. Receipts include cash sales, collections on receivables, borrowings, sale of equity stock, and cash from other sources. Disbursements include cash expenses, payment of payables, purchase of assets for cash, and other uses of cash.

The principal function of analyzing historical cash flow is to measure the change in the cash account, and to describe the sources and uses of cash over a period of time. The analysis can be used to forecast the future cash requirements and cash available from the various sources.

Cash budget is really an extension of the analysis of historical changes in the cash account. It is an actual forecast of

the cash requirements, the sources of cash available and the changes in the cash account at various points of time.

The primary function of a cash budget is to show the amount of forecast cash expenditures, the amount of cash available from the various sources to meet these expenditures, the probable amount of excess cash available, and the probable amount of cash deficit. It is an aid in making short-term credit decisions as to whether cash must be borrowed to make good the deficit, and how the excess cash may be utilized. It is also helpful in deciding what sort of borrowing is suitable, and what kind of investment for the excess cash is feasible in the circumstance.

Usefulness of "Cash Flow" Analysis to Creditors

Regardless of how "cash flow" is interpreted, "cash flow" analysis serves as a basis for forecasting short-term availability of cash to meet current obligations, and is therefore helpful to short-term creditors in deciding whether or not to grant credit. The relative usefulness of this analysis as a basis of forecasting, however, hinges on how it is interpreted and the information it communicates.

Analysis of "funds from operations" permits a forecast of available future cash and receivables. Cash is a ready means of meeting debt obligations. Receivables provide cash on collection. Cash may even be realized through sale of receivables in the discount market. Analysis of "funds from operations" permits short-term creditors to forecast if an enterprise will have enough cash or other readily

realizable assets to pay off its debts as they become due.

Information about funds from operation is less useful to long-term creditors. As we have stated elsewhere,[2] long-term creditors do not expect to be paid in the near future, or with funds from the operations. Long-range "cash flow" forecast is in any case likely to be unreliable. The interest of long-term creditors in analysis of "funds from operations" is whether or not a business has sufficient liquid resources to pay its current debts and periodic interest on long-term debts. Unless an enterprise is able to meet its current obligations, it will go bankrupt. Long-term creditors will have no hope of realizing their claims.

Analysis of "cash from operations" serves the same basic function of providing a basis for short-term creditors to estimate future flow of cash from operations which may be used to meet current debts. It is useful to short-term creditors for reasons similar to those in the preceding paragraph. Likewise, it is less useful to long-term creditors. As in the case of "funds from operations", it suffers from the drawback of excluding cash inflow and outflow from other than operations from the analysis.

However, "cash from operations" appears to be an interpretation superior to that of "funds from operations". Cash is the legal and ready means of paying off obligations. Short-term creditors want cash in settlement of their claims. The prospective future cash flow

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[2] See Chapter II, p. 29

is a better measure of short-term debt-paying ability. Receivables provide cash upon collection and are one source of cash from operations. Receivables can also provide cash through factoring. However, in the normal course of the business, receivables are expected to provide cash on collection rather than through factoring. Factoring of receivables incurs discount expenses and may realize considerably less cash than is expected. In some cases a need for cash may force a firm to sell receivables to provide cash to meet short-term debts.[3] This reliance on selling receivables to meet current obligations would signal financial stringency. This is specially true of firms which do not factor receivables as a normal practice. To regard factoring of receivables as a source of cash may lead to wrong conclusions about an enterprise's ability to generate cash through its normal operations.

Analysis of "historical changes in the cash account" permits short-term creditors to project future cash flow from the various sources including short-term borrowings, and future cash outflow to meet the various uses including payment of debts. A comparison of cash inflow and cash outflow is more meaningful than either cash inflow or cash outflow alone.

A shortcoming of the analysis of "historical changes in the cash account" is that it includes all sources and uses of cash, some of which do not recur in the normal operations of the business and are therefore of no value to short-term forecasting. Cash receipts from

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[3] In some lines of business factoring of receivables is a regular source of financing and is a normal practice.

sale of equity stock and long-term debts do not recur often, at least not as regular sources of cash for paying off short-term debts. Similarly, purchase of fixed assets and retirement of long-term liabilities are irregular and cause spasmodic but important drains on cash. Only those sources and uses of cash which have recurred and which are expected to re-occur in the normal operations are relevant to projecting future cash flow.

The cash budget is a projection of how short-term creditors' funds will be utilized and what future sources of cash will be available to pay off the short-term creditors. It saves short-term creditors the trouble of having to prepare the cash budget themselves. If the cash budget is sufficiently reliable, short-term creditors can well decide whether or not to grant credit on the basis of the cash budget.

A shortcoming of the cash budget is that it does not disclose the basis upon which the forecast of cash receipts and disbursements is made. Unless there is supporting evidence, short-term creditors and potential short-term creditors cannot be confident that the estimates are reasonable and will materialize eventually. Analysis of historical "cash flow", regardless of how it is interpreted, serves to support the cash budget.

Suggested Adaptations

We now propose some adaptations to the cash flow statement which will eliminate some of the defects it presently suffers from and make it more useful to short-term creditors. The resultant statement of cash flow will be an extension of the statement of historical

changes in the cash account with emphasis on the distinction between recurring sources and uses of cash which necessarily emerge in the normal operations, and sources and uses of cash which do not recur in the normal operations of the business. The rationale is that only those recurring items are relevant to short-term cash forecast. The principal features of the statement are as follows:

1. All normal recurring cash receipts are separately calculated and classified. The important items of normal cash receipts are cash sales and collections on accounts receivable on credit sales. Short-term bank loans may be included in this category if this is a regular source of short-term financing. The important criterion is that we should reasonably expect inflow of cash from these sources to continue if the basic character of the corporate operations remains unchanged. As a matter of fact we do not expect substantial changes to occur in the near future.

2. All normal recurring cash disbursements are likewise separately grouped. The normal disbursements include paynents of salaries, wages, short-term loans, accounts payable and purchase of merchandise for cash. Included also are dividend payments, as these are normal distributions in a profitable enterprise. Here again, the criterion is that such outflow of cash will normally continue in the ordinary course of business.

What are normal sources and uses of cash must be judged in the light of the surrounding circumstances in each individual case.

3. A comparison is made between normal cash receipts and normal cash disbursements. The ratio gives a fair measure of the ability of generating cash from normal operations to meet normal

operating needs, and the extent to which normal cash receipts may shrink and normal cash disbursements may increase without hampering the normal operations. The difference between normal cash receipts and normal cash disbursements is the normal cash surplus or deficit. This gives a fair measure of the amount of cash available from normal operations to meet other short-term obligations, and the need for cash from other sources.

One fundamental principle of financial management is that normal operations should be financed from short-term sources. From the standpoint of short-term creditors, cash from the normal operations is the proper source of cash for paying off short-term debts. Analysis of normal cash receipts and disbursements from operations and other sources meets the needs of short-term creditors and management. Information about such normal cash flow covering a number of periods will provide a sound basis of making short-term cash forecast by short-term creditors, especially bankers and suppliers.

It is possible to influence the normal cash flow by either changing the terms of credit sales, or by re-negotiating the terms of credit purchases. We, however, assume that such managerial policies do not change so frequently as to render the analysis useless. Due allowance for such changes can and should be made in the cash forecast. Comparative balance sheets and income statements may give some indications of such changes.

4. All items of cash receipt which do not recur in the normal course of the business are to be separately grouped together.

5. All items of cash disbursement which do not recur in the normal course of the business are to be grouped in another class.

(4) and (5) together will give the net cash surplus or deficit in respect of items which do not recur frequently.

In all cases, the sources and uses of cash should be clearly identified; and data covering a number of periods are of greater value to forecasting. Such data will indicate a trend for each of the figures entering into the forecast. Readers of the cash flow statement can place greater confidence and reliance on the data.

A Suggested Model

A "cash flow" statement incorporating the features in the preceding section appears below.

XYZ Company Limited
Statement of Cash Flow
For Period.....

A. Normal Sources of Cash Receipt		
Cash Sales (goods and services)	$xxxx	
Collections on Accounts Receivable	xxxx	
Regular Bank Loans	xxxx	
Other Items	xxxx	$xxxxx
B. Normal Cash Disbursements		
Wages and Salaries	$xxxx	
Cash Purchases	xxxx	
Payments on accounts of payables	xxxx	
Payment of Dividends	xxxx	
Regular Bank Loan Repayments	xxxx	
Taxes	xxxx	
Other Items	xxxx	xxxxx
C. Net Normal Cash Surplus (Deficit)		$ xxxx

D.	Non-recurring Cash Receipts		
	Sale of Investments	$xxxx	
	Issuance of Stock	xxxx	
	Cash from long-term Loans	xxxx	
	Gifts, etc. (of cash)	xxxx	$xxxxx
E.	Non-recurring Cash Disbursements		
	Purchase of Fixed Assets	$xxxx	
	Retirement of long-term Debts	xxxx	
	Other Items	xxxx	$xxxxx
F.	Net Non-recurring Cash Surplus (Deficit)		$ xxxx
G.	Net Change in Cash (C. & F.)		$ xxxx
H.	Add Opening Balance		xxxx
I.	Final Cash Balance		$xxxxx

This analysis refers to cash receipts and disbursements over a period of time which may vary from three months to a year. The value of the statement as a basis for making short-term forecast of cash flow declines rapidly as it ages. A cash flow statement to be useful to short-term creditors should not be more than three months old.

Thus, a cash flow statement of this form should prove more useful to short-term creditors than other forms of cash flow statements incorporating other interpretations of cash flow, and may be prepared on a quarterly basis or as often as appears desirable.

The suggested form of "cash flow" analysis discloses significant information which the analysis of "cash flow" presently available overlooks. A business may obtain short-term bank loans and pay them off in exact amounts during the same period to which the analyses relate. Short-term creditors may find such information extremely

useful to their decision making. It may mean that the business has to rely on short-term loans to keep itself currently solvent. It may also be an indication that the business enjoys good credit standing. But such information may not show up in the analyses presently available. Probably only the net effect of these transactions will appear.

It is conceivable that for some businesses cash flows from normal sources and non-recurring sources may both fluctuate considerably over a period of time. The same is true for cash outflows. These will not show up in the cash flow statement covering the period as a whole. At some point in time the volume of normal cash receipts may be particularly low while the volume of normal cash disbursements remains high. There is then the danger of cash insolvency. Good financial management should attempt to synchronize cash outflow and cash inflow. This is an ideal objective, but it may not be always achievable. It is, however, possible to estimate the probability that normal cash disbursements may outrun normal cash receipts. The cash flow statement in the suggested form provides ready information for making such an estimate.

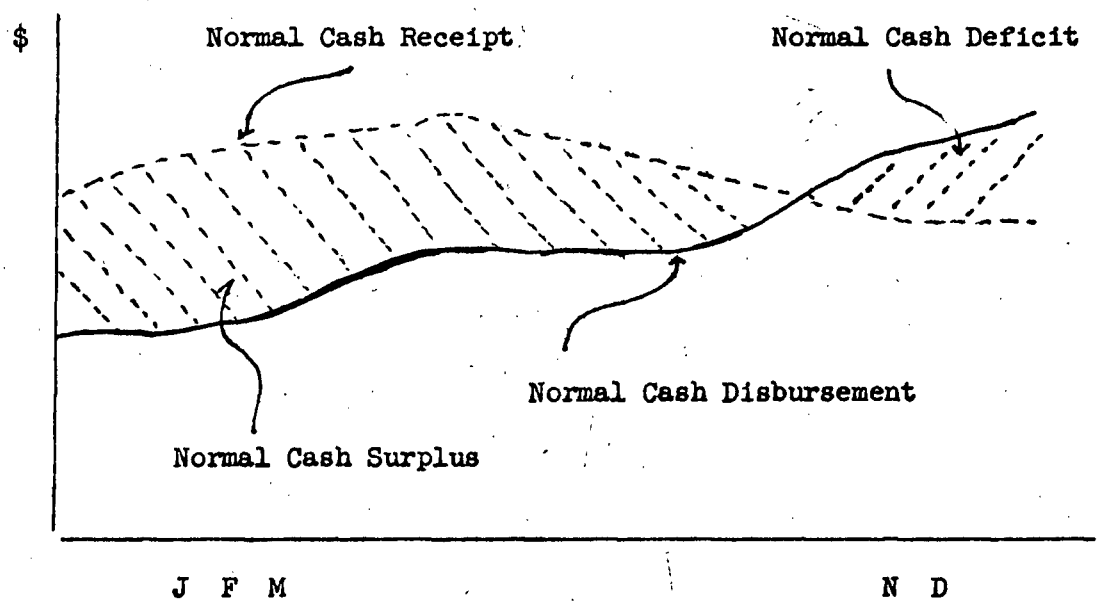
An Illustrative Example

Several methods are suitable and available for estimating the risk of cash insolvency. One method is to calculate the average normal cash receipt and average normal cash disbursement over an entire period. We can further develop statistical measures of the degree of fluctuation; for example, the standard deviation, and median, etc.

We may also illustrate the fluctuations in tabular forms or graphically as follows:

Time Period (Month)	Normal Cash Receipt $	Normal Cash Disbursement $	Net Normal Cash Surplus (Deficit) $
January			
February			
March			
April			
May			
June			
July			
August			
September			
October			
November			
December			

Monthly Normal Cash Receipts and Normal Cash Disbursements



Graph of Monthly Normal Cash Receipts and Normal Cash Disbursements.

We now introduce a mathematical model for estimating the probability of cash insolvency. Other mathematical models incorporating such data as average normal cash receipts and disbursements, standard

deviations, etc., are commonly employed by financial managers for cash balance analysis.[4]

Let us take Yi to be the amount of net normal cash surplus, a random variable, and let Pi denote the probability distribution of the variable Yi. Then the probable net normal cash surplus (or deficit) for the period, B, is

$$B = \sum_{i=1}^{n} Yi\ Pi$$

Where $Yi = (Ri - Di)$

Ri = Normal Cash Receipts

Di = Normal Cash Disbursements

$i = 1, 2, 3 \ldots n$

$$\sum_{i=1}^{n} Pi = 1$$

With the aid of statistical measures short-term creditors can use the mathematical model to estimate the probable future cash flow. A cash flow statement of the suggested form will have ready information for this purpose. Suppose we estimate the following probability distribution with information from the cash flow statement. We can conveniently compute the probable future cash flow.

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[4] William Beranek, Analysis for Financial Decisions, (Homewood, Illinois: Richard D. Irwin, Inc., 1963) Ch. 11.

[5] The theoretical model for a case where Yi is a continuous variable is

$$B = \int_{k_1}^{k_2} gi\ (y)\ dy$$

where gi(y) is the probability distribution of the continuous random variable y. This model is, however, difficult to apply in practice.

Probability Distribution of Normal Cash Flow

Probability (Pi)	1/12	2/12	3/12	3/12	2/12	1/12
Ri	$300	$400	$500	$600	$700	$800
Di	$400	$450	$500	$550	$600	$650
Ri - Di (Yi)	-$100	-$ 50	0	$ 50	$100	$150
Yi Pi	-$100/12	-$100/12	0	$150/12	$200/12	$150/12

$$\sum_{1}^{6} Yi\ Pi = \$(-100 -100 +150 +200 +150)/12$$

$$= \$300/12$$

$$= \$25$$

The illustration is an example of how the information provided in the suggested cash flow statement can prove useful to short-term creditors for making short-term cash forecasts and to make statistical tests of their reliability. Nonetheless, we can foresee several limitations. There must be an accounting system to gather the relevant data. The suggested cash flow statement discloses much more information than is presently available, some of which may be of value to competitors. The prospective debtor may be reluctant to make adequate disclosures. The statement may not be available as frequently as its usefulness would require.

Short-term creditors can compute statistical measures of means, standard deviations, and medians from information in the cash flow statement of the suggested form. With the aid of these measures, short-term creditors can make probabilistic estimates and construct a probability distribution. They can make their own estimate of their

prospective debtor's future cash flow and compare it with the forecast their prospective debtor may submit.

Suppose the prospective debtor submits a forecast of cash flow as having $50 of normal cash surplus. A short-term creditor using the information in the past cash flow statements may come up with an estimate of $25 in normal cash surplus. The conclusion is that he should be suspicious of the prospective debtor's estimate. It may be wise for the short-term creditor not to extend credit in this case.

It is conceivable that many creditors will be unable to make rewarding use of the mathematical technique in conjunction with the information in the suggested statement. But it remains useful to those who can use it. There is no reason why we should not provide the information to those who can and want to use it. A real appreciation of the value of financial statements can only be made by (a) improving the quality of the data by those who prepare the statements, and (b) increasing the understanding of the statements on the part of those who use them. What we seek to accomplish is to improve the quality of the cash flow statement. It is quite a different problem if creditors cannot or do not wish to use it.

In summary, the analysis of cash flow is helpful to short-term creditors. However, it is capable of various interpretations. A statement of cash flow may be prepared in various ways according to the interpretation. The illustrated form is suggested as the most useful of all.

CHAPTER IV

THE FUNDS FLOW STATEMENT

Funds Flow Analysis and Credit Granting

The funds flow statement is becoming increasingly an important means of communicating information about a business enterprise significant to decision making. It describes the historical flow of funds of an enterprise over a period of time. Creditors can utilize the appropriate information in the funds flow statement to prepare a forward-looking forecast of the enterprise's future funds flow. If the enterprise's future funds inflow exceeds its funds outflow, it is probably a fair indication that the enterprise will be solvent in the near future. Creditors may predict whether or not the enterprise will likely to have liquid resources available to meet their claims as they fall due. Funds flow analysis can help creditors to decide whether or not to grant credit.

Meaning of "Funds" and the Funds Flow Statement

The term "funds" is capable of several interpretations. The funds flow statement can be prepared in several ways according to the interpretation. The types of information in the funds flow statement also vary according to an interpretation of the term. The funds flow statement can have different degrees of usefulness as a tool for decision making depending upon the types of information it discloses.

The term "funds" may be defined as: (1) literal cash, (2) monetary assets, (3) net monetary assets, (4) current assets, (5) working capital, and (6) all resources or total purchasing power.[1]

"Literal cash" is simply cash on hand and demand deposits in banks. The principal purpose of the funds flow statement incorporating this interpretation is to explain the change in the cash account covering a period of time.[2]

There are two main approaches to the preparation of the funds flow statement on a literal cash basis. One approach is to consider the net changes in the balance sheet accounts at the beginning and end of a period and the income statement covering the period.[3] A drawback of this approach is that only the net effect of cash flow affecting the balance sheet accounts appears in the funds flow statement. The actual amounts of cash inflow and cash outflow may not appear in the statement at all. For example, an enterprise borrowed $10,000 from banks, and paid off $6,000 during the same period. Only the net amount of $4,000 will appear as bank loans in the statement. The bank loans will not appear in the statement at all if the enterprise paid off the entire amount during the same period. Such information may, nevertheless, be significant to decision making.

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[1] See Perry Mason, op. cit., pp. 48-57, and Hector R. Anton, Accounting for the Flow of Funds, (Boston: Houghton Mifflin Company, 1962).

[2] For illustrative examples, see Anton, op. cit., p. 43.

[3] See H. A. Finney and Herbert E. Miller, Principles of Accounting - Intermediate, (Englewood Cliffs, N.J.: Prentice-Hall, Inc., 1962), 5th Edition (Canadian Edition), Ch. 25.

The other approach is to include all cash receipts and disbursements in the statement of funds flow. It is devoid of the drawback from which the first approach suffers. This approach is identical to the "historical changes in the cash account" of the preceding chapter and is capable of adaptation to meet different needs.

"Monetary assets" refer to cash, marketable securities, and short-term receivables. This concept of funds is akin to the general concept of funds as pecuniary resources.[4] A quality of this concept is that it takes into consideration the commercial practice of the free market economy in which receivables and marketable securities possess purchasing power.

A funds flow statement incorporating "funds as monetary assets" includes only changes affecting an enterprise's monetary assets. The purpose of the statement is to explain the increase or decrease in the enterprise's monetary assets over a period of time.

The two approaches to the preparation of the funds flow statement on the basis of "funds as literal cash" are applicable to the preparation of the funds flow statement on the basis of "funds as monetary assets". The respective drawback and advantage of the two approaches also apply.

"Funds as net monetary assets" refer to the sum of cash on hand and in banks, marketable securities held as secondary reserves, and current receivables less the current liabilities. This concept

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[4] For illustrative examples, see Anton, op. cit., p. 41

assumes that funds to be freely usable by the business must only consist of net monetary assets. Current receivables provide cash on collection in the near future. Marketable securities provide cash through sale. Current liabilities represent uses of cash in the near future. The amount of net monetary assets measures the excess liquid resources available to meet other needs and the relative short-term solvency of a business.

A funds flow statement which is based on "funds as net monetary assets" includes all transactions affecting the monetary assets and current liabilities of an enterprise. The purpose of the statement is to explain the changes in the monetary assets and the current liabilities over a period of time.

Again the two approaches in preparation can be used, and again the same drawback and advantage are experienced.[5]

"Funds as current assets" refers to all current resources of a short-term nature such as cash on hand and in banks, marketable securities, current receivables and inventories. "Funds" in this case is a pool of resources supporting the current operations of the business. The emphasis is on short-term operating assets. The concept excludes current liabilities from consideration, and overlooks the problem of liquidity.

A funds flow statement which is based on interpreting "funds" as current assets describes the sources and uses of current

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[5] For illustrative examples, see Anton, op. cit., p. 42.

assets over a period of time. It also explains the resultant change in the current assets during the same period of time.

All inflows and outflows of funds affecting the current assets enter into the preparation of the funds flow statement explaining changes in the current assets. Only funds flow not affecting current assets is excluded from the statement.[6]

The two approaches to the preparation of a funds flow statement based on "funds as current assets" are similar to the two approaches to the preparation of the funds flow statement incorporating "funds as literal cash". The balance sheet approach considers only the net balances of the inflow and outflow of funds affecting the current assets. This approach suffers from the drawback of showing only the net effect of the funds flow. The transaction approach takes into account the actual inflows and outflows of funds affecting the current assets, and is therefore devoid of the drawback from which the balance sheet approach suffers.

"Working capital" is the most popular interpretation of "funds", and refers to total current assets less current liabilities.[7] Current assets and current liabilities in this connection have the same connotations common in accounting. The emphasis of this concept is on liquidity.

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[6] For illustrative examples, see Anton, op. cit., p. 40

[7] Accounting Research Bulletin, #43, Ch. 3.

The statement of working capital describes the inflow and outflow of resources affecting working capital over a period of time, and explains the change in working capital position, if any, for the same period.

The analysis of working capital takes into account all inflow and outflow of funds affecting working capital accounts. However, funds flow affecting current assets and current liabilities simultaneously has no effect on the working capital position. For example, a short-term bank loan increases cash and current liabilities simultaneously. The net effect on working capital is zero.

The balance sheet approach to the preparation of a statement of working capital is more usual. It takes into consideration the net changes in the non-current balance sheet accounts at the beginning and end of a period, and the income statement covering the period.[8] Only the net balances of the inflows and outflows of funds affecting working capital appear in the statement. The actual inflow and outflow of funds in each individual category of transactions do not show up in the statement. The latter information may, however, be more significant. Therefore, the absence of this information is a shortcoming of the balance sheet approach.

The transaction approach takes into account the actual inflow and outflow of funds in each category of transactions affecting working capital. This approach avoids the shortcoming in the preceding paragraph.

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[8] For illustrative examples, see Anton, op. cit., p. 40.

A somewhat broader interpretation of "funds" refers to total resources conceived as purchasing or spending power, arising from external rather than internal transactions of the business enterprise. It includes all assets or financial resources which may not affect or flow through the working capital accounts, and makes no distinction as to the degree of nearness to cash or any other time realization consideration.[9]

The statement of "funds as total resources" describes the flow of purchasing power into the enterprise and the uses of such purchasing power to increase the resources available. It also describes the release of purchasing power from the resources flowing out from the enterprise. The statement can provide information such as how earnings are applied, how plant expansion is financed, and why there is an increase in working capital, etc.

One approach to the preparation of a statement of "funds as total resources" is to consider the net effect of the inflows and outflows of purchasing power on the various resources of the enterprise. This approach conceals the gross magnitudes of the inflows and outflows. This can be a drawback as such information is significant to decision making.

The other approach is to consider the gross magnitudes of the inflows and outflows of purchasing power, and their effects on the various resources of the enterprise. This approach avoids the shortcoming mentioned above.

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9 Perry Mason, op. cit., p. 54.

Usefulness of "Funds Flow" Analysis to Creditors

Depending upon the interpretation of "funds", the funds flow statement communicates significant information about the financial administration of a business enterprise over a period of time. To the extent that the past is useful to predicting the future, such information can be helpful for forecasting the short-term future financial position of a business enterprise. Analysis of "funds flow" is therefore useful to short-term creditors in deciding whether or not to grant credit to a business enterprise.

Analysis of "funds as literal cash" can indicate whether or not the inflows of cash from the various sources into the business will continue in the near future, and the probable amounts of such inflows. It can also indicate if the outflows of cash from the business will continue, and the probable amounts of such outflows. Short-term creditors will make a cash budget and then decide whether or not to grant credit according to whether or not the prospective debtor will be solvent in the near future. We have discussed the various interpretations of "cash flow", the analyses incorporating the various interpretations, and the suggested adaptations in the preceding chapter.

A statement of "funds as monetary assets" describes the flow of funds affecting an enterprise's monetary assets in a past period. Careful analysis of information in the statement, and information from other sources permit the construction of a proforma funds flow statement affecting monetary assets, and forecasting the amount of monetary assets available at a future point of time. By this means short-term

creditors may evaluate a business enterprise's prospective solvency position. Cash is a ready means of meeting debt obligations. Receivables provide cash on collection. Over a sufficiently long period of time, say, six months, short-term creditors can be hopeful that receivables will provide a stream of cash flow as customers pay off old accounts when making additional credit purchases. Receivables can even provide cash through factoring to meet the various needs for cash.

One possible drawback of the analysis of funds as monetary assets is that it overlooks the payment of current liabilities which represent uses of monetary resources in the near future. The amount of monetary assets is not an adequate measure of solvency without considering the amount of possible uses of monetary assets. An enterprise can borrow from banks to increase its monetary assets. But this does not improve the enterprise's debt-paying ability. The gross amount of monetary assets tends to depict an optimistic picture of the enterprise's financial position.

Analysis of "funds as net monetary assets" serves the same basic function of assisting short-term creditors to estimate future flow of monetary resources and future uses of monetary resources. It is useful to short-term creditors for reasons similar to those in the preceding paragraph.

However, analysis of "funds as net monetary assets" appears to be superior to that of "funds as monetary assets". Net monetary assets at any point of time is the excess of monetary assets over and above the uses of monetary assets for present current obligations. This measures the extent to which the monetary assets may shrink in

value before they become inadequate to meet the uses of monetary assets for present current liability payments. Analysis of "funds as net monetary assets" permits a forecast of the net monetary assets available in a future period. This measures the degree of protection against insolvency in gross terms. A comparison of the total monetary assets against total current liabilities indicates the degree of protection in relative terms, and this is more meaningful. For example, firm A has a total of monetary assets of $3,000 against current liabilities of $2,000. Firm B has $2,000 in monetary assets and total current liabilities of $1,000. Both firms have net monetary assets of $1,000. But firm B is more solvent than firm A. Firm B has $2 in monetary assets against every $1 in current liabilities. Firm A has only $1.50 in monetary assets against each dollar of current liabilities.

Analysis of "funds as current assets" also provides a basis for forecasting the future flow of current assets into an enterprise over a period of time and the probable amount of current assets available at a point in time in the future. The analysis lays emphasis on short-term operating assets, and overlooks the problem of liquidity. It is, nevertheless, useful to short-term creditors for decision making. If an enterprise has sufficient current assets to maintain smooth and profitable operations, short-term creditors can be hopeful that the enterprise will generate enough cash or even be able to borrow from banks to meet current debt obligations as they fall due in due course. Over a sufficiently long period of time current assets will provide cash through operations. It may even be possible to liquidate by exceptional means the current assets to provide cash when cash is

not available from other sources. The flow of current assets through the enterprise over a period of time and the probable amount of current assets available at one point of time are indications of a business enterprise's future solvency if uses of current assets are known. Short-term creditors can probably estimate future uses of current assets with the aid of information from the funds statement and other sources.

It is even possible to construct a proforma statement of "funds as current assets" to estimate the probable amount of current assets available in a future period with information from analysis of statements covering several past periods. Short-term creditors may deem a certain amount of current assets as necessary for the enterprise's smooth operations and protection for their claims, and make their decisions accordingly.

There is a shortcoming that the analysis does not take into account the current liabilities which represent uses of current resources in the near future. The probable amount of future current assets available is not an efficient gauge of future debt-paying ability without taking current liabilities into account. If the amount of current liabilities exceeds that of current assets, the enterprise will not be able to pay off its current debts without borrowing from other sources. However, this will not show up in a proforma statement of funds flow incorporating funds as current assets.

The analysis of working capital lays emphasis on the problem of liquidity. The statement of working capital contains much useful information which is of interest to short-term creditors such as bankers

and suppliers. If an enterprise shows an increase in its working capital, prospective grantors of short-term credit wish to know what caused the increase. The reasons for the working capital position remaining unchanged are also significant. The illustration below shows the relevance of these points.[10]

A Limited
Schedule of Working Capital
December 31, 1959 and 1958

	December 31		Changes in Working Capital	
	1959	1958	Increase	Decrease
Current Assets				
Cash	$20,000	$17,000	$3,000	
Accounts Receivable	35,000	37,500		$2,500
Inventory	50,000	45,000	5,000	
Total current assets	$105,000	$99,500		
Current Liabilities				
Notes Payable	$10,000	$15,000	5,000	
Accounts Payable	30,000	38,000	8,000	
Total current liabilities	$40,000	$53,000		
Working Capital	$65,000	$46,500		
Working Capital Ratio	2.63	1.88		
Increase in Working Capital				18,500
			$21,000	$21,000

The foregoing schedule of working capital can create a very favourable impression on short-term creditors. It shows an increase of $18,500 in the Working Capital and an increase in the Working Capital Ratio from 1.88 to 2.63.

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[10] Adopted from Finney and Miller, Principles of Accounting - Intermediate, op. cit., pp. 512-513.

Suppose the reasons for the increase in working capital are as follows:

Funds provided (increasing working capital):	
By operations	$24,500
Funds applied (decreasing working capital):	
Dividends paid	6,000
Increase in working capital	$18,500

This means that working capital was increased by funds provided from operations, which are regular sources of funds in the ordinary course of business. Short-term creditors can be hopeful that funds flowing from operations will continue. The working capital position will continue to remain favourable.

If, however, the reasons for the increase in working capital are as below, short-term creditors will be less confident that the favourable working capital position will continue.

Funds provided:	
By operations	$10,000
By sale of long-term investments	14,500
Total	$24,500
Funds applied:	
Dividends paid	6,000
Increase in working capital	$18,500

Now suppose the reasons for the increase in working capital are as follows:

Funds provided:	
By operations	$4,500
By issuance of three-year notes	20,000
Total	$24,500
Funds applied:	
Dividends paid	6,000
Increase in working capital	$18,500

Short-term creditors can be very doubtful of the firm's ability to meet its current debt obligations in the near future even though the present working capital position is favourable. There is an indication that funds flow from operation is inadequate to meet dividend payments. The working capital would have decreased by $1,500 if the firm had not borrowed the $20,000. Short-term creditors are unable to regard funds from operations as a reliable source of funds for meeting current debts falling due. It is questionable financial administration to borrow from long-term sources to pay dividends in excess of current earnings.

It is then apparent that the analysis of working capital can disclose much significant information to short-term creditors. It can serve as a basis for forecasting the future flow of resources into the enterprise and the working capital position at various points in time, which are fair measures of future short-term solvency. Cash is a ready means of meeting current debts. Other non-cash assets are in the process of conversion into cash through normal operations. Over a sufficiently long period of time non-cash current assets will provide cash to meet debt obligations falling due. Under optimum

liquidity management the rate of converting non-cash current assets into cash should match the rate at which current liabilities fall due. There will then be sufficient cash to meet current debts falling due. The working capital position is a measure of the cushion against the shrinkage that can take place in the value of the current assets before current liabilities exceed current assets.

However, the working capital position only measures the excess of current assets over current liabilities in absolute terms. This is a drawback. Two business enterprises with the same amount of working capital need not have the same debt-paying capacity if the relative proportions of current assets and current liabilities for the two enterprises are different.

Analysis of the statement of "funds as total resources" also serves as a basis for forecasting the future flow of resources into the enterprise and the uses of such resources (purchasing power) in the various assets of the enterprise. It is possible to construct a pro-forma statement of total resources and to estimate the short-term solvency position in the future. A forecast of the relative amounts of current resources and current uses of resources is a fair measure of the short-term liquidity position. Thus, it is useful to short-term creditors as a tool for decision making.

The statement incorporating "funds as total resources" provides a more complete presentation of the information about the financial administration of an enterprise. Information about financial transactions which do not directly affect cash or working capital

is also significant to short-term creditors. It is even possible to use information in the statement of "total resources" to prepare statements of funds flow incorporating other interpretations of "funds". It is therefore superior to statements of funds flow, using other interpretations of "funds" such as "funds as literal cash", "funds as monetary assets", and "funds as working capital", etc. as a means of communicating information significant to creditors.

It is then apparent that funds flow statements, regardless of the interpretation of "funds", contain much information significant to short-term creditors. It is possible to compute statistical measures of fluctuations of recurring items from funds flow statements covering a number of periods. Prospective short-term creditors can then objectively estimate the probable funds flow and solvency position in a future period.[11] Information in the funds flow statements is generally suitable for appraising short-term debt-paying ability. It is less relevant to appraising long-term debt-paying ability. A forecast becomes progressively less reliable as its time period lengthens. In the long run, of course, a company must be able to pay debts in the short-term and interim-term if it is to meet long-term commitments. If a firm is unable to pay its debts as they become due in the short and interim periods, and is unable to make satisfactory arrangements, a forecast of the long-term position is not of much use.

Presumably, cash flow analysis is more accurate, reliable and relevant than funds flow analysis in predicting solvency for a

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[11] See illustrations in Chapter III.

shorter time period. Funds flow analysis is more relevant for a longer time period, say, from three to six months. Cash flowing into an enterprise is readily available to meet current debt obligations. Inflows of funds need not be in the form of cash. Such inflows of funds may be in the form of receivables and other current assets. Normally, it takes time to realize cash from these current assets.

There are suggestions that funds flow statements, particularly the statement of working capital and the statement of "funds as total assets", can be useful for predicting the financial policies and practices of an enterprise. They are thus useful for appraising its long-term debt-paying ability. They can provide a basis for preparing proforma statements extending over a number of years.[12] However, it is doubtful how reliable and useful forecasts for such long periods can be. A forecast becomes progressively less reliable as the time period increases. In the circumstance, income is a better measure of long-term debt-paying ability. A firm will not remain in existence for a long time if it does not make sufficient profits. Funds from operations in the funds flow statements may be a measure of the firm's performance. However, it is income statements which provide the real basis for forecasting future funds from operations.

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[12] See Robert K. Jaedicke and Robert T. Sprouse, Accounting Flows: Income, Funds, and Cash, (Englewood Cliffs, N.J.: Prentice-Hall, Inc., 1965), pp. 92-93, and Edgar O. Edwards, "Funds Statements for Short- and Long-Run Analysis", The Journal of Business, XXV No. 3 (July, 1952), pp. 156-174.

A Proposal

In view of its superiority over other analyses, the proposal is made to adopt the analysis of "funds as total resources" as the most satisfactory for the purpose or estimating an enterprise's short-term debt-paying ability. It has an additional advantage. Even though information in most funds flow statements is generally suitable for short-term analysis only, analysis of the flow of total resources can be used for long-term as well as short-term analysis.[13]

Suggested Adaptations

It is possible to enhance the usefulness of the information in the statement of flow of total resources by introducing some adaptations to the statement. The emphasis is on gross inflows and outflows of funds rather than net funds flows, and the normal sources and uses of resources. Gross flows can be more meaningful than net flows. Normal sources and uses of resources are more relevant and useful for forecasting future funds flows. The principal features of the adapted statement of funds flow are as follows:

1. All inflows in gross amounts of funds from normal sources are separately classified. The normal sources of funds flow may include funds from operations, regular bank loans, and purchase of merchandise on credit. In the normal circumstance we can expect funds flow from these sources to continue in the normal course of operations.

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[13] See Jaedicke and Sprouse, op. cit., Ch. V

2. All uses of funds in gross amounts are likewise separately classified. The normal uses may include regular bank loan repayments, payments to trade creditors. Dividend distributions may also be included, as these are normal distributions in a profitable enterprise. All these are normal uses of funds in the ordinary course of business.

3. All inflows of funds in gross amounts which do not recur in the normal course of operations are to be grouped in another class.

4. All uses of funds in gross amounts which do not recur in the short-term operations are likewise separately grouped in another class.

A Suggested Model

We now suggest a "funds flow" statement which will have the features in the preceding section. We first present the supporting data necessary for its preparation below.

XYZ Company Limited

Schedule of Balance Sheet Changes

For Period.....

	Balances		Changes	
	Beginning	Ending	Increase	Decrease
Current Assets				
Cash	$150,000	$162,000	$12,000	
Accounts Receivable	180,000	150,000		$30,000
Merchandise Inventory	340,000	390,000	50,000	
Prepaid expenses	14,000	15,000	1,000	
Total Current Assets	$684,000	$727,000		
Long-lived Assets				
Equipment	$150,000	$150,000		
Plant		120,000	120,000	
Land	100,000	88,000		12,000
Total Long-lived Assets	$250,000	$358,000		
	$934,000	$1,085,000		
Current Liabilities				
Notes payable (bank loans)	$180,000	$ 155,000		25,000
Accounts Payable	200,000	216,000	16,000	
Total Current Liabilities	$380,000	$ 371,000		
Long-term Liabilities				
6% Long-term Bonds		$ 20,000	20,000	
Shareholders' Equity				
Share Capital	$400,000	$ 490,000	90,000	
Earned Surplus	154,000	194,000	40,000	
Total Shareholders' Equity	$554,000	$ 684,000		
	$934,000	$1,085,000		

We make the following additional assumptions. (1) The total debits and credits to notes payable for the period were $60,000 and $35,000. The notes were issued on commercial bank loans. (2) The analogous entries for accounts payable were $125,000 and $141,000. (3) The proceeds from issuance of capital stock and bonds, and sale of land were all in the gross amounts as in the statement of "funds flow".

A statement of "funds flow" having the features in the preceding section appears below.

XYZ Company Limited

Statement of Funds Flow

For period.....

			Source	Application
Normal Sources (other than cash change)				
Operating at a profit			$ 90,000	
Adjustment for depreciation			10,000	
Regular bank loans			35,000	
Purchase of merchandise on credit			141,000	
Realization from accounts receivable			180,000	
			$456,000	
Normal Uses (other than cash change)				
Payment of dividends				$ 60,000
Regular bank loan repayments				60,000
Payments to trade creditors on merchandise purchased				125,000
Increase in inventory				50,000
Increase in prepaid expenses				1,000
Accounts receivable arising during period				150,000
				$446,000
Cash (Increase) Decrease				
Normal sources	$330,000			
Normal uses	320,000	($10,000)		
Non-recurring sources	$122,000			
Non-recurring uses	120,000	($ 2,000)		$ 12,000
Non-recurring Sources				
Issue of capital stock			$ 90,000	
Issue of long-term bonds			20,000	
Sale of land			12,000	
			$122,000	
Non-recurring Uses				
Construction of plant				$120,000
Total			$578,000	$578,000

The suggested model of funds flow statement makes a distinction between normal and non-recurrent flows of funds. There is greater probability that the normal flows of funds will continue in the ordinary course of business. Information about normal funds flows can thus be useful for predicting future funds flows and short-term debt-paying ability. The suggested model also has the advantage of showing changes in all resources including working capital assets. Different working capital assets have different degrees of liquidity. Changes in working capital assets therefore have a direct effect on the liquidity position, and are of interest to short-term creditors.

Funds flows appearing in the suggested statement in gross amounts can be significant to short-term creditors. For example, a business borrowed $10,000 from banks and paid off the same amount during the same period. This will not show up in the conventional funds flow statement. If the business paid off $6,000 during the period, $4,000 will appear in the conventional statements as bank loans. Suppose the enterprise borrowed $4,000 from banks but made no repayment during the period. Again $4,000 in bank loans will appear in the conventional funds statements. However, there are important implications in these cases. Careful analysis of such information can be helpful to forecasting future short-term debt-paying ability.

The presentation of cash as a separate item emphasizes the effects of funds flows on the cash position. Cash is either a source or use of funds in the statement depending upon whether the cash balance decreases or increases.

It is also possible to use the same information in the funds flow statement of the suggested model to prepare funds flow statements incorporating other interpretations of "funds" such as working capital and net monetary assets according to the need of circumstances. Using information from the same funds statement, an illustrative statement of working capital appears below.

XYZ Company Limited
Statement of Working Capital
For Period.....

Working Capital Funds of Normal Sources:			
Operating at a profit		$ 90,000	
Adjustment for depreciation		10,000	
Regular bank loans		35,000	
Purchase of merchandise on credit		141,000	$276,000
Working Capital Funds of Non-Recurrent Sources:			
Issue of capital stock		$ 90,000	
Issue of long-term bonds		30,000	
Sale of land		12,000	$132,000
Total funds provided			$408,000
Normal Applications of Working Capital Funds:			
Payment of dividends		$ 60,000	
Liquidation of bank loans:			
Total bank loans repaid	$60,000		
Excess of repayment over new loans	25,000		
Net use of working capital		35,000	
Payments to trade creditors		125,000	
Increase in net current debt to trade creditors		16,000	$236,000
Non-Recurrent Applications of Working Capital Funds:			
Construction of plant			$120,000
Total application of funds			$356,000
Net Increase in Working Capital			$ 52,000[14]

[14] See Schedule of balance sheet changes on p. 66.

Thus, it is seen that the suggested model of funds statement is superior to other forms as a means of communicating information significant for making decisions by short-term creditors. However, it has several limitations. The preparation of a funds statement on the suggested model requires an accounting system to supply the relevant data. The prospective debtors may not have an accounting system to gather these data. The data may not be in a form suitable for the purpose. The prospective debtor may even be unwilling to make available such data and/or to make them available as often as the usefulness of the statement would demand.

In summary, funds statements are coming to be recognized as providing a useful basis for appraising future debt-paying ability. However, there are various interpretations of "funds". A funds statement may be prepared in various ways according to the interpretation. Its usefulness to short-term creditors depends on the quality and quantity of information it contains. A funds statement on the basis of "funds as total resources" is suggested as the most useful of all. Some adaptations to the statements can, however, enhance its usefulness. The suggested model is an attempt to do that.

CHAPTER V

THE INCOME STATEMENT

The Purpose of Income Determination

The income of a business enterprise has many important implications. It is an index of an enterprise's economic progress. It is a measure of its operating efficiency. Knowledge of an enterprise's income can be a basis for making decisions relating to the enterprise. George O. May suggests that it can be useful in at least ten different instances.[1]

The income statement is a description of the inflows and uses of resources that give rise to the income of an enterprise for a period measured in accordance with generally accepted principles of accounting. Careful analysis of the income statements covering a number of periods gives a fair indication of the nature of such inflows of resources into the enterprise and the uses of those resources to bring about the inflows. It indicates the trend of the inflows and their uses. The information in the income statement can thus be used to forecast the inflows and uses of resources giving rise to the income of an enterprise in the future.

It is the future stream of income flowing from an asset that gives rise to its present value. Forecasting an enterprise's future income is essential to the valuation of its assets. Thus, income determination is requisite to the valuation of an enterprise.

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[1] Op. cit., p.3.

The Interest of Creditors in Income Determination

The primary interest of creditors in a business enterprise is its ability to pay off its debts as they fall due. Other considerations surround this central objective. Income is an index of future earning power. The income of an enterprise covering a number of periods can serve as a basis for creditors to estimate its future income flows and to appraise its future debt-paying ability. A profitable enterprise is also a solvent enterprise in the long run. The income flowing into an enterprise necessarily increases the resources in its possession which in turn increase their earning capacity and ability to meet debt obligations.

It is desirable that an enterprise should operate efficiently. Its resources will then be more productive. Efficient operations assure that it will flourish and continue to generate income in the future. Its periodic income in relation to its total resources is a fair measure of its operating efficiency.

As a requisite to an enterprise's income stream continuing, it is necessary to maintain the stock of capital resources that make up its productive capacity. An increase of its stock of capital resources is even more preferable. Such an increase enhances both its prospective earning power and its debt-paying capacity. As a last resort, it can liquidate its capital resources to meet debt obligations when there are no other means to do so. Generally, creditors do not expect a business to liquidate its capital resources to settle their claims. However, such resources serve as a margin of protection for

the creditors in the event of bankruptcy. Therefore, they are of interest to creditors.

Dividend distributions represent outflows of resources from an enterprise. If there is no income or if distributions are in excess of income, dividend distributions can impair the productive capacity of an enterprise. Frequently creditors protect themselves legally and contractually against such events. The normal capital maintenance rule that is frequently found in long-term contracts prohibits the payment of dividends when there is no income and the payment of dividends in excess of income. There may be further restrictions on dividend distributions imposed by the contractual relationship of a company when income drops below a certain amount. Income, therefore, establishes the limits within which dividends may be legally distributed and determines dividend policy.

Income is also the basis of taxation. However, if income has not been incorrectly measured, taxes may be paid out of capital resources leading to impairment of productive capacity.

There are a number of financial ratios which are utilized for making credit appraisal. Common examples are "times-interest" ratio, "profitability" ratio, "accounts receivable turnover" ratio, and "inventory turnover" ratio, etc.[2] These are measures of operating efficiency and are indicative of the probable probable prospect of short-term solvency.

The income figure, in conjunction with items in the balance sheet, is necessary for computing these ratios. However, the ratios can be misleading if the income figure is incorrectly measured.

[2] See Chapter II

Except during periods of initial plantconstruction and expansion, sound principles of financial management will normally require that interest on debt capital should be paid out of current income, and debt capital should be repaid out of income accumulated in the business. It may be possible to pay interest on debt capital from short-term borrowings or existing resources. However, in order to accumulate sufficient resources to pay off the debt capital when it becomes payable, it is necessary to generate a sufficiently large flow of income during the period the debt capital is outstanding.

On the other hand a firm's financial policy may not require the repayment of the debt capital from accumulated income. In most cases, debt capital is an essential and integral component of an optimum capital structure. As the debt capital becomes payable, an enterprise will either re-borrow from the existing creditors or obtain new debt capital to replace the existing debt capital as the latter becomes due. However, to decide on this issue, the existing and prospective creditors would want to know the enterprise's past earnings and to appraise its future earning capacity.

A profitable enterprise is a solvent enterprise in the long run, but a profitable enterprise is not necessarily solvent in the short run. Therefore, income measurement has little relevance to short-term credit analysis.[3] The ability of an enterprise to settle a debt falling due shortly may depend on the cash flows which will take place before the debt becomes payable. What happens to the enterprise after the

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[3] See also Chs. III and IV

settlement of the debt is of little concern to short-term creditors. His direct financial interest in the enterprise terminates with the liquidation of his claims. The only additional interest he has is as regards prospective future business.

On the other hand, long-term creditors commit their resources to an enterprise for a long period and accept a position which is not usually easily changed. Long-term creditors such as bondholders want to appraise the interim and the long-term picture. Thus, they want to appraise the probability of an enterprise being able to make interest payments and meet other debts as they fall due, and they want to be satisfied that it will eventually be able to repay the principal in the long run. Unless there is a stream of current and future income, the enterprise may go out of existence in the interim period because of dissipation of its resources through losses.

It is thus apparent that income determination is of vital interest to long-term creditors. However, there are various concepts of income. The periodic income of an enterprise may be computed in various ways according to the concept used. It is also possible to present the computation of income in several ways even though using only one particular concept of income. The different concepts of income have different degrees of relevance in credit analysis. The forms of presentation of the computation of income also have varying degrees of utility to long-term creditors as a basis of appraising long-term debt-paying capacity.

The remainder of this chapter will be devoted to a brief examination and appraisal of the suitability of the concepts of income

and forms of income statement as regards long-term credit analysis. An attempt will be made to introduce such modifications as appear desirable.

Criteria for Choice of an Income Concept

Of the various concepts of income available, each has certain advantages for a particular purpose. Consequently, in any dispute over how income should be best measured, it is only rarely that the question can be settled by appeal to a fundamental income concept. The various methods of measuring income may all be consistent with the basic concept of income, but each puts a different interpretation on the elementary notions of which the basic concept is composed.[4] Therefore, there should be suitable criteria by which a choice may be made among the various methods of measuring income. There are three applicable general criteria: (1) The concept should best serve the purpose for which the measurement of income is desired. (2) It should be capable of implementation, in the broadest sense of the term. Otherwise, it has no real value in practice no matter how conceptually sound it may be. (3) It should also be readily understood and interpreted. Otherwise, the measurement of income is useless as a basis of decision makding.

The purpose of this chapter is to evaluate the usefulness of income measurement as a basis for making long-term credit appraisal. As regards this purpose, two additional criteria are relevant for the choice of a suitable income concept: (1) The concept should be capable of indicating future earning potential.[5] (2) Its emphasis should be

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[5] See discussions in the preceding section.

on the maintenance of capital or productive capacity.[6]

Concepts of Income and their Relevance to Credit Analysis

The economist supplies the conceptual framework of income measurement. The popular economic concepts of income include (1) Irving Fisher's concept of income,[7] (2) the Hicksian concept of income, [8] (3) the concept of variable income by Sidney S. Alexander,[9] and (4) the concept of income as increase in net worth by Ronald Edwards.[10] Income is conceived of a flow of services ex ante giving rise to continuous appreciation of capital goods over time. The income of a period is the increase of capital values in real terms at two points of time adjusted for new capital added and existing capital withdrawn. It centres around the idea of maintaining capital intact in real terms. Thus, the economic concepts of income are theoretically suitable bases for income measurement which is to be used for making long-term credit appraisal.

However, the economic concepts of income have practical problems in application. The value of capital goods depends on future

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[6] See discussions in the preceding section.

[7] Ronald Ma, A Review of Price-Level Change and Income Determination Concepts (Unpublished M.B.A. Dissertation, University of British Columbia, 1963), p. 6.

[8] J. R. Hicks, Value and Capital, (Oxford: Clarendon Press, 1946).

[9] "Income Measurement in a Dynamic Economy" in Baxter and Davidson, op. cit.

[10] "The Nature and Measurement of Income" in Baxter and Davidson, op. cit.

expectations. Under conditions of certainty this is no problem, for all expectations will be realized. In real life, however, business enterprises operate under conditions of uncertainty. That all expectations will be realized is a rarity. Besides, expectations are subjective and not easily measurable. It is doubtful if they can have relevance to indicating future earning potential when the concepts cannot be implemented in practice. Thus, they fall short of the general criteria. The economic concepts of income, although sound in logic, must therefore be rejected as inapplicable for measuring business income for the purpose of long-term credit appraisal.

The accountant builds his concepts of income upon the framework which the economist provides. However, his approach to income measurement remains pragmatic and procedural rather than conceptual. His main concern is: what should be included in the income for a period? The accountant has two major concepts of income in this regard: (1) the all-inclusive concept of income, and (2) the current operating concept of income.

The all-inclusive concept of income takes into account all items of revenues, expenses, gains and losses as necessary factors in income determination irrespective of the period in which they arise. The income statement for a period properly includes all extraordinary items and these correcting previous periods (suitably described and segregated). This concept emphasizes the total changes in values, irrespective of sources, and therefore is more akin to the economic concepts of income. Arguments in support of this concept include

(1) over a number of periods extraordinary items do in fact become ordinary and recurring items, (2) efficiency and prediction of future performance should be based on the historical experience of a series of years, and (3) income measurement for a single period is not suitable for predictive purposes.

The current operating concept of income takes into account only those value changes and events which are controllable by management and result from the decisions of the current period, and relate to the normal operations of the enterprise. This concept focuses on the measurement of the efficiency of the business enterprise for the current period. Income flows relate to the normal operations.

The all-inclusive and current operating concepts of income are what the accountant applies in income measurement practice. They satisfy the criterion of being capable of implementation. They are generally understood by businessmen and other readers of financial statements. However, these concepts are silent on the question of maintaining capital intact. The methods of valuing assets and determining expired costs largely determine whether or not the concepts will result in maintaining capital intact in real terms. As regards income measurement as a basis for indicating future earning potential, the current operating concept of income appears to be superior to the all-inclusive concept of income. There is greater likelihood that income flowing from recurring sources in the normal operations of the enterprise will continue in the future. An income statement including only current operating items is more reliable for predictive purposes.

Regardless of which the above two concepts of income the accountant adopts in measuring the income for a period, he has two further questions to consider: (1) what are proper deductions in determining income? (2) what are profit-sharing distributions rather than deductions in determining income? Having regard to these questions, it is possible to compute several income figures within an income statement each of which may be of particular interest to some classes of readers. These include (1) income as total value added, (2) enterprise net income, (3) net income to investors (shareholders and long-term creditors), (4) net income to shareholders (common and preference shareholders), (5) net income to equity shareholders.[11]

Income as total value added is selling price of the enterprise's products less cost of goods and services. It focuses on employees, owners, creditors and the government as recipients of a share of the income. This is not of much interest to long-term creditors because payments to employees have not been made. Generally, payments to employees take a preferential order over creditors. A loss may result after paying the employees, and leaves nothing for the creditors.

Enterprise net income is the change in the net assets of the enterprise arising out of (a) the excess of revenues over expenses, and (b) other gains and losses to the enterprise from sales, exchanges, or other conversions of assets. Interest charges on long-term debts, income taxes, true profit-sharing distributions are not determinants

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[11] Eldon S. Hendriksen, Accounting Theory, (Homewood, Illinois: Richard D. Irwin, Inc., 1965), pp. 117-124.

of enterprise net income.[12] Enterprise net income focuses on shareholders, bondholders and the government as recipients of a share in the enterprise net income. Long-term creditors have a vital interest in enterprise net income as the normal source of funds for paying periodic interest on long-term debts. It is usual for long-term creditors to compute the "times-interest" ratio on the enterprise net income as a basis for appraising long-term debt-paying ability. Furthermore, in assessing the times-interest ratio, periodic interest payments take precedence over taxes because interest payments are deductible against taxable income. In the short run, taxes must be paid after deductions for interest charges. This necessarily reduces the total resources available (especially with the high rate of corporate taxes) and the future earning potential. But from the viewpoint of maintaining capital intact, long-term creditors can assume that some surplus will remain after taxes, for tax rates are always less than 100 per cent of income, and taxes are on income. Taxes will not lead to impairment of capital if income has been properly and correctly determined. This does, however, assume that deductions are allowed in determining taxable income for all items which reflect a reduction in resources, which may not always be so, e.g. goodwill amortization.

Income to investors (shareholders and long-term creditors) is enterprise net income less taxes. As regards ability to pay periodic

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[12] American Accounting Association, Accounting and Reporting Standards for Corporate Financial Statements, 1957 Revision, p. 3 Cf. Robert T. Sprouse and Maurice Moonitz, "A Tentative Set of Broad Accounting Principles for Business Enterprise" Accounting Research Study No. 3, (New York: American Institute of Certified Public Accountants, 1962), p. 45, and Finney and Miller, op. cit., pp. 75-76.

interest, income to investors is of little interest to long-term creditors, for interest payments take a preferential order before taxes in computation of income if not in payment. However, it is of interest to long-term creditors as a source of inflow of resources which will build up reserves for eventual payment of long-term debts and will enhance the enterprise future earning potential so long as these resources remain in the enterprise.

Income to shareholders (common and preference shareholders) is enterprise net income less interest, income taxes and other profit-sharing distributions.[13] Income to shareholders is the basis for paying dividends (preference and common), It is of interest to long-term creditors to the extent that dividend distributions must not impair the capital of the enterprise and its long-run earning power.

Income to residual equity shareholders is income to shareholders less preference dividends. This is of interest to long-term creditors for reasons similar to those in the preceding paragraph.

Form of Income Statement

The income statement is essentially a means of communicating information about the results of an enterprise's past operations. There are a variety of ways to present such information. The usual forms are single-step income statements, multiple step statements, and combined single-step income and retained earnings statements.

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[13] Accounting and Reporting Standards for Corporate Financial Statements, 1957 Revision, p. 3.

It may further be modified to present the information to meet the needs of some parties, such as long-term creditors.[14]

A Proposal

For reasons in the preceding paragraphs, a proposal is made to adopt the following:

As regards the concept of income measurement as a basis for making long-term credit appraisal, the current operating concept of income is most appropriate. Only items of revenues, expenses, gains and losses that relate to the normal and current operating transactions of the enterprise should enter into the determination of its periodic income.

As regards what are proper deductions against revenue, and what are profit-sharing distributions rather than deductions against revenue, the figure for enterprise net income is of primary importance to long-term creditors.

Rearrangement of items in the income statement may be made to emphasize the figures which are of interest to long-term creditors. We may compute a figure emphasizing the main operations of the enterprise: sales less cost of goods sold and expenses related to sales. Next we compute the enterprise income exclusive of depreciation and depletion charges to arrive at the enterprise income before such deductions. Deduction of depreciation gives enterprise net income.

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[14] Finney and Miller, op. cit., Ch. III.

We deduct interest on long-term debt to arrive at the net income before taxes. Adjustment for taxes gives the net income to shareholders.

A Suggested Income Statement

An income statement which incorporates the various proposals in the preceding paragraph is as appears below:

XYZ Company Limited
Income Statement
For period ended.....

Sales (less returns and allowances)		$100,000
Less: Cost of goods sold		60,000
Gross Margin		$ 40,000
Deduct:		
Salesmen's salaries	$15,000	
Sales discounts	2,000	
Various other sales expenses	3,000	20,000
Net Income from Sales		$ 20,000
Add other income:		
Interest income	$ 1,000	
Investment income from subsidiaries	2,000	3,000
Income after sales expenses		$ 23,000
Deduct:		
General and administrative expenses (exclusive of depreciation, interest and taxes)		8,000
Enterprise income before depreciation, interest and taxes		$ 15,000
Depreciation		2,000
Enterprise net income		$ 13,000
Deduct:		
Interest on long-term debts		3,000
Enterprise net income before taxes		$ 10,000
Income Taxes		5,000
Net income to shareholders		$ 5,000

The income statement as suggested has several merits. It contains information which is of interest to several classes of creditors. It presents several figures in the computation of periodic income each of which can be useful to creditors. Net income from sales ($20,000) measures the operating efficiency. The enterprise net income before depreciation and taxes ($15,000) is a measure of management's success with resources controllable in the short run. This figure also corresponds to the normal flow of funds from operations into the enterprise and is of interest to short-term creditors.[15] The most important figure as regards the payment of periodic interest for long-term creditors is the enterprise net income ($13,000).[16] Since taxes are chargeable after interest deductions, this figure indicates the amount available for payment of periodic interest. This arises from the normal operations of the enterprise and therefore is a more reliable index for predicting future income flow and ability to pay periodic interest. Depreciation deduction is proper, for it is necessary for a measurement of income which will not result in overstatement and excessive dividend distributions leading to impairment of capital, however crude its estimate may be.

Non-recurring and correcting charges and credits are excluded from our suggested model. Our thesis is that as they are not regular sources of income or charges, long-term creditors cannot depend on non-recurring sources for payment of periodic interest and eventual repayment of principal. Such charges and credits affect the income to shareholders.

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[15] This corresponds to the conventional funds from operations.

[16] In practice, this is used to compute the time-honoured times-interest ratio.

They are, however, of lesser interest to creditors for creditors will have got their share of the enterprise net income long before the shareholders. Long-term creditors do, nonetheless, have an interest in these items to the extent that non-recurring charges might wipe out the surpluses and impair the capital of the interprise and future earning potential, or vice versa, but past history is probably of little guide in the prediction of these items.

It is apparent that our suggested model income statement discloses much more information than is available at present. Such information is in a form ready for use by creditors for predicting future income flows and debt-paying ability. Given such income figures covering a number of periods and assumptions about future sales, cost of sales and related expenses, it is possible to prepare proforma income statements and estimates of future income. Long-term creditors can then decide on the various courses of action according to their forecasts. Employment of the statistical technique discussed in Chapter III will enhance the value of the forecasts.

It is admitted that the suggested model is unconventional. It may also appear confusing to some readers. This is, however, not important, because it is intended for creditors who have some understanding of accounting. Our main concern is that it should serve their needs more adequately than the conventional income statements. Utility alone is the justification for any manner of presentation.

Consolidated Income Statements

"The purpose of consolidated income statements is to present

primarily for the benefit of the shareholder and creditors of the parent company, the results of operations and the financial position of a parent company and its subsidiaries essentially as if the group were a single company with one or more branches or divisions."[17] Conceivably, creditors can have valuable information about the true earnings of the parent company against which they have claims. An important weakness is that creditors can have claims only on the assets of the company with which they have contracted. Much of the income of subsidiaries is in the form of stock appreciation; there need not be available cash to pay off debts of the parent company unless it receives cash dividends from subsidiaries or unloads the holdings. In this regard consolidated income statements are less relevant. Moreover, consolidated statements can conceal some pertinent facts. An insolvent and unprofitable subsidiary is easily covered up in a consolidated statement. In fact, bankers and other creditors even reject consolidated statements as not useful.[18] "For intelligent analysis and credit granting consolidating figures are essential. Consolidated balance sheets are worthless unless every subsidiary's statement is separately shown. A great many evils masquerade under the name of consolidated balance sheets." "A breakdown by subsidiaries would be helpful and would aid in distinguishing between profitable and non-profitable units.[19] A subsidiary having a considerable deficit is

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[17] Accounting Research Bulletin #51, p. 41

[18] See Roy A. Foulke, The Balance Sheet of the Future, (New York: Dun and Bradstreet, Inc., 1941) pp. 14-16.

[19] Ibid., p. 15.

not apparent in a consolidated balance sheet. It would appear that for a subsidiary consolidated statements would even confuse creditors and not enlighten them. We therefore should reject consolidated balance sheets as not being helpful to creditors.

In summary, the income statement is useful to long-term creditors as a tool for appraising long-term debt-paying ability. However, there are many concepts of income. The computation of periodic income varies according to the income concept. The income statement may also be presented in several ways regardless of the income concept. They all have different degrees of utility to long-term creditors. Our proposals as regards income concept and presentation are suggested as most satisfactory for their needs. They have, however, lesser relevance to short-term creditors because a profitable enterprise need not be also solvent in the short run. For example, income in the form of asset appreciation does not generate cash or other liquid resources for payment of short-term debts. [20]

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[20] See Appendix XXIII- A Note on Income Determination.

CHAPTER VI

THE BALANCE SHEET

What is a Balance Sheet?

The balance sheet has been defined as a statement of the assets, the liabilities, and the capital of a business as shown by the balances in its books as of a specific date.[1] If these balances did include all resources and all claims and did fairly represent these items, the balance sheet would reasonably reflect the amount of resources in the possession of the business and the claims against these resources by its creditors and owners as of that date. The conventional approach to the balance sheet is to assume that the balances do fairly represent the situation even though this is debatable.

It is usual to describe the nature of the assets, liabilities and capital and to classify them accordingly. The common classifications for assets are (1) current assets, and (2) long-lived or fixed assets. The common classifications for liabilities are (1) current liabilities, and (2) long-term liabilities. Shareholders' equity is classified according to sources such as common shareholders, preference shareholders and retained earnings.

What does a Balance Sheet do?

The main function of the balance sheet is presumably to present significant information about the assets, liabilities and capital

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[1] A.E. Cutforth, Balance Sheets: Their Uses, Abuses and Limitations, (Toronto: The Dominion Association of Chartered Accountants, 1937), p.1.

of a business which the reader requires for making meaningful financial analysis and interpreting and reaching conclusions about the business enterprise. Such analysis and conclusions can serve as a basis for making subsequent decisions relating to the business enterprise.

Its Usefulness to Creditors:

The main interest of creditors (long-term and short-term) in a business enterprise is its future debt-paying ability, a factor which is fundamental in deciding whether or not to grant credit. How far the balance sheet can be helpful to creditors in this is discussed in the following paragraphs.

It has been suggested that future earning potential is the proper measure of long-term debt-paying ability.[2] Future earnings flow from productive resources. The amount of productive resources are indicative of the future earning potential. The balance sheet shows (if it fairly represents the situation) the amount of an enterprise's total resources available for generating future earnings. In conjunction with the income statement the rate of earnings flowing from such resources may be computed from the balance sheet. Some resources are used up in the process of generating earnings. For example, merchandise may be sold and supplies used up. Such changes in the resources are determinants of periodic income. Successive balance sheets will reflect such changes. Thus, the balance sheet

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[2] See Chapter V

provides some information for measuring periodic income.[3]

It has also been suggested in an earlier chapter that forecasting cash flow can be indicative of short-term solvency.[4] In the ordinary circumstance, we can assume (as we normally do) that the business will continue to operate. It is reasonable to expect current assets to be a source of cash flow in the near future. Similarly, current liabilities represent future uses of cash. Thus, the information about current assets and current liabilities in the balance sheet is significant for forecasting the cash flow for a short period of time immediately following the balance sheet date.

Creditors usually make credit appraisals with the aid of financial ratios such as "debt-equity" ratio, "debt'total assets" ratio, etc.[5] The debt-equity ratio shows the protection for creditors by equity capital. The debt'total assets ratio measures the protection for creditors in terms of total resources. The computation of these ratios requires information about the assets, liabilities and capital. The balance sheet is the ready source of such information.

The information about the assets given in a balance sheet is also indicative of the asset structure of a business enterprise. The

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[3] As Sprouse and Moonitz state, "Both experience and abstract analysis tell us in unmistakable terms that any attempt in accounting to emphasize either the balance sheet or the income statement to the exclusion of the other is bound to give disappointing results. Neither lives in isolation from the other. Both must be considered in an integrated attack on the problem of financial reporting." Accounting Research Study No. 3, op. cit., p. 5.

[4] See Chapter IV

[5] For other relevant ratios, see Chapter II.

asset structure can be significant to creditors for making decisions. Let us assume the industry, to which an enterprise belongs, has a certain asset structure which is close to the optimum which should exist for that industry. If the balance sheet of the enterprise shows that its inventory is excessive by the standards of that industry, the prospective short-term creditors may well be led to assume that its sales are declining and inventory turnover is slowing down. They may be reluctant to regard past sales as indicative of prospective future sales volume. It is possible that there are other legitimate reasons explaining the excessive inventory. However, the prospective short-term creditors will be prone to enquire further before they decide whether or not to give credit. An excessive amount of accounts receivable may have analogous implications which require consideration by the prospective short-term creditors. The existing short-term creditors may decide whether or not to extend additional credit, using similar reasoning.

Prospective long-term creditors may also be concerned with future earning prospects if there appears to be excessive inventory and accounts receivable. The existing long-term creditors may wish to investigate if in fact sales are declining, possibly leading to a decline in earnings. They may become fearful of the safety of their investment in the enterprise if the decline in sales is likely to continue, resulting in a decrease in earnings. They may wish to invoke the protective clauses in their long-term loan agreements if the earnings falls below a specific amount.

Let us also assume that there can be formulated a standard capital structure for the industry. The balance sheet is indicative of the capital structure of the business enterprise. If the long-term debts as shown in the balance sheet of the enterprise are excessive by industry standards, the prospective long-term creditors may either refuse to lend money to the enterprise because additional loans will reduce the relative protection for all creditors, or require additional security for their loans. As for the existing long-term creditors, there may be clauses in the existing long-term debt agreements providing that the long-term debts shall become immediately payable when the total long-term debts in the capital structure exceed a certain proportion.

It has been stated earlier that short-term creditors expect to be paid from short-term cash flow, and long-term creditors expect to be paid from future earnings. However, in an uncertain business world there is no assurance that their expectations will materialize. There is always the possibility that a firm may go into liquidation. Accordingly, creditors (long-term and short-term) want to know the probable amount of resources they can salvage in such an event. Information about the assets, liabilities and capital in the balance sheet could be helpful to creditors in this regard dependent on the bases of measurement of those items. Long-lived assets such as land, buildings, plant and equipment do not dissipate easily and do remain in the business for a relatively long period of time. If the business does not otherwise dispose of these assets (creditors normally protect themselves by contractual agreements in this regard), they can provide

some protection for the creditors in the event of liquidation.[6]

However, the current assets can normally deplete more easily. The balance sheet will only be indicative of the probable protection for creditors for a short period immediately following the balance sheet date. One may argue that the balance sheet only serves the needs of the short-term creditors. It is conceivable that the long-term creditors will find it difficult to appraise what protection they will have in, say, fifteen years. However, the annual balance sheet can help to lessen this difficulty. Except for the current assets, other assets do not normally fluctuate very substantially within a year unless the business chooses to dispose of, or acquire more of such assets. Long-term creditors normally seek to restrict the disposal of those non-current assets. If the business acquires additional assets, the protection for creditors is strengthened.

The above illustrations show that the balance sheet does provide information significant to making overall credit appraisals. It is admitted that the balance sheet is just one of the several sources of information required for a complete credit analysis. However, to the extent that it is of assistance to making future expectations relevant to a firm's debt-paying ability, creditors must find it helpful.

Limitations of Its Usefulness

There are several approaches to balance sheet valuation.[7]

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[6] As has been suggested in Chapter II, future earnings is the real protection for long-term creditors.

[7] Eldon S. Hendriksen, Accounting Theory, op. cit., Ch. VIII.

The nature of the information in the balance sheet will vary according to the approach taken. The interpretation of the information will follow such variations.

The conventional approach is to value the assets, liabilities and capital at historical cost or to value them separately on different bases within the broad framework of generally accepted accounting principles. The assumption of continuity is implicit unless otherwise indicated. However, this gives rise to several limitations on the usefulness of the balance sheet as is shown in the following paragraphs.

Perhaps the information in the balance sheet most significant to the creditors is the amount of resources available for the generation of future earnings. The approach of valuing assets at historical cost is irrelevant in this regard. It is the flow of future benefits from such assets that give rise to the present value of assets. Therefore, present value is theoretically the proper basis for balance sheet valuation. However, to compute present value it is necessary to estimate the future benefits flowing from such assets and to discount such benefits at an appropriate rate of interest. The estimate of future benefits is subjective. There is no single acceptable basis for choosing an appropriate discount rate. In practice, these two problems remain insoluble at the present stage of the development in accounting. Thus, it is difficult, if not impossible, to use present value as a basis of balance sheet valuation.

Similarly, if the balance sheet is to show the amount of protection creditors have in the event of liquidation, it is necessary

to value the assets in the balance sheet on a liquidating basis. The conventional historical approach is again irrelevant in this regard.

The balance sheet by itself is also not an adequate basis for the prospective creditors (long-term and short-term) to decide whether or not to grant credit. All creditors expect to be repaid in the future rather than on the balance sheet date. Short-term debts are to be paid from future cash flows. Long-term debts are to be paid from future earnings. Normally creditors do not expect to be repaid from proceeds of assets as of the balance sheet date. Future cash flow and earnings rather than the balance sheet are the real bases for making credit decisions. The balance sheet is only auxiliary to making forecasts of future cash flow and earnings. Therefore, the balance sheet by itself and the form of a listing of assets and liabilities as at one date and as of the dates debts will be paid are irrelevant for making credit decisions.

There are other criticisms against the balance sheet. The balance sheet is conventionally regarded as reflecting the financial position of an enterprise as of a specific date. This interpretation seems to be erroneous. There is no intention to liquidate all the assets and pay off all the debts as of the balance sheet date. If it is interpreted as reflecting the financial position, it will be necessary to value the assets on a liquidating basis. The conventional going concern basis of asset valuation no longer applies. The assets may be worth less or more in liquidation than is shown in the balance sheet. For this purpose the balance sheet will not in fact present the financial position desired but will show a misleading picture of

the enterprise. Furthermore, this interpretation will contradict our usual going concern assumption and would seem to render unnecessary the making of any credit appraisal except as a measure of possible protection. If it is to be assumed that a firm is going into liquidation as the interpretation implies, the prospective creditors will not extend any credit to the firm. Existing creditors will have no choice or decision to make. If we assume the business will continue to operate (as we normally do), the concept of financial position on a liquidating basis becomes irrelevant to creditors for decision making except as a measure of possible protection and thereby measure of risk. There should be no suggestion that the balance sheet reflects the financial position of a business on a liquidating basis as of the balance sheet date.

Furthermore, the balance sheet is static in nature. It describes the assets, liabilities and capital at a point of time. The creditors are generally more concerned with what happens to the business enterprise after the balance sheet date than on the balance sheet date itself. The balance sheet is not forward-looking enough in this respect. Business negotiations look to the future and are dynamic in nature. Making dynamic estimates about the future on dates prepared on a static analysis is generally inadequate.

For reasons similar to those given in the preceding paragraphs of this section, the conventional approach to balance sheet valuation does not seem to result in information suitable for computing the various financial ratios, rate of income flow and forecast of

short-term cash flow. Such computations can only be useless and misleading if the basis of balance sheet valuation is faulty.

It might then seem reasonable to reject the conventional balance sheet available at present as helpful to creditors for making credit appraisals.

Where the Problem Lies

However, it is hardly deniable that the balance sheet can be helpful to creditors. It is a fact that creditors (long-term and short-term) do use balance sheets in credit analysis. Of course, they consider information from other sources as well.

The problem is not that the balance sheet is not helpful but that the figures making up the balance sheet may be improved. The weakness seems to lie in (1) the basis of balance sheet valuation, and (2) the interpretation of the balance sheet as showing the financial position.

To the extent that the balance sheet is helpful, attempts should be made to correct the weaknesses and to increase its utility wherever possible.

A Proposal

A proposal is now made to reinterpret the balance sheet and to introduce bases of balance sheet valuation which will avoid the difficulties mentioned earlier. Accordingly, the balance sheet is to be interpreted as a statement listing the forms in which an enterprise's

resources are held and the methods of financing these resources. The assets are regarded as a pool of productive resources for generating future income. It is assumed that the enterprise will continue to operate. This will avoid the difficulty arising from an interpretation of the balance sheet as showing the financial position. As has been mentioned earlier, interpreting the balance sheet as indicative of the financial position is irrelevant under the going concern assumption. To the extent that there is always the risk that a business may go bankrupt, the creditors must consider foreclosure only as the last resort. Liquidating value of a business enterprise should be of minor importance to creditors in the normal circumstance. It is future income flow that is more significant.

As each type of asset and method of financing has important significance to creditors, the balance sheet should also show, by appropriate classification and description, the nature of each group of assets in terms of liquidity and permanency, and the method of financing in terms of the relative permanency.

The next section is devoted to discussing the appropriate bases for valuing current assets, current liabilities and other items in the balance sheet. Attention will be focused on avoiding the difficulties which were encountered earlier.

Assets and Asset Valuation

The basic concept of assets is related to that of economic resources. "To come within the purview of 'assets' the scarce resources

must be assignable to specific entities, must be capable of exchange (transfer) either separately or as part of a related group, and must be expressible in terms of money."[8] "Briefly, 'assets' represent expected future economic benefits, the rights to which have been acquired by the enterprise as a result of some current or past transaction."[9] For creditors they are any economic or exchange values of an enterprise from which future income will flow. The more tangible examples are cash, inventories, plant and equipment.

Except in the case of intangibles, the real problem facing the treatment of assets in accounting lies in their valuation and not in their identification. Differences of opinion exist as regards (1) valuation concepts, and (2) application of these concepts in specific cases. The three main bases of asset valuation in dispute are (1) historical cost, (2) current cost and (3) present value of future receipts from assets. Each basis of valuation may, however, be particularly suitable in its application to a specific class of assets. Accordingly, it is best to evaluate each basis of asset valuation in relation to individual classes of assets.

As a broad generalization, from the standpoint of creditors (long-term and short-term), current value as a basis of asset valuation is superior to other bases. Cash becomes available to an enterprise from the sale of its products or other resources for cash (and from collection on credit sales) at current prices in the market. Current

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[8] Sprouse & Moonitz, op. cit., p. 19

[9] Ibid., p. 20

value is therefore more relevant as a basis for valuing current assets which are sources of cash flow. Current income is a basis for appraising long-term debt-paying ability. A proper measurement of current income requires assets to be valued at current values. Income determination on the basis of current value places emphasis on the maintenance of capital in real terms. Maintaining capital in real terms is essential to assuring income flow continuation. Therefore, current value is the appropriate basis of asset valuation from the standpoint of creditors.

Present value as a basis of asset valuation is too subjective to be of much practical use. Moreover, debt principals are payable at their face amounts without taking an element of discount into consideration.

Historical cost as a basis for valuing assets is totally irrelevant to creditors. Valuing assets at historical cost in connection with income determination will not result in measurement of income in terms of real income. Historical cost does not even bear any relationship to the value of assets in liquidation.

However, the commonest controversy in asset valuation is over historical cost and current value. Long ago, Kenneth MacNeal had effectively shown that balance sheets which were based on historical cost were not reasonably accurate statements of values existing on the balance sheet date by pointing to instances when historical costs and depreciated historical costs were not fair measures of values.[10] More

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[10] Kenneth MacNeal, Truth in Accounting, (Philadelphia: University of Pennsylvania Press, 1939).

recently, R. T. Sprouse has severely criticized the use of historical costs in asset valuation as "treacherous".[11] Conceding that the most powerful consideration in financial accounting measurements is that of objectivity, which historical costs have, Sprouse argues that the need for unbiased financial information cannot be satisfied by irrelevant or inadequate information. Objectivity and usefulness must be kept in proper perspective. He states:

> "If the primary goal of financial accounting is objectivity in the measurement of individual assets and liabilities, regardless of the usefulness of such information, I vote for historical costs.
>
> "But if the primary goal of financial accounting is objectivity in the meaningful measurement of income and financial position, historical costs must give way to current market values and replacement costs. In the vast majority of situations such measurements are objectively feasible. Their use could go far in eliminating the manipulative aspects and inconsistencies in financial statements and in restoring their economic relevance."[12]

On the other hand, G. K. Nelson[13] contends that there seems to be no real need for revising the balance sheet from historical costs to current costs. The balance sheet, in his view, is of limited use in any case, and its present usefulness would appear not to be enhanced by such a change. The balance sheet aids in two important functions of accounting, namely, the property control function and the legal function.

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[11] Robert T. Sprouse, "Historical Costs and Ancient Assets - Traditional and Treacherous", The Accounting Review, Vol. XXXVIII, No. 4. (October, 1963) pp. 687-695. See also Sprouse and Moonitz, op cit., Ch. IV.

[12] Ibid., p. 695

[13] "Ancient and Historical Costs in Financial Statements", The Accounting Review, Vol. XL, No. 1 (January, 1966), pp. 42-47.

For the property control function the balance sheet serves as a summary of controlling accounts of property for which management is responsible, of obligations which must be met, and owners' investment. Nelson suggests that it would only complicate matters to apply fluctuating values to asset accounts for carrying out the property control function. The legal function of the balance sheet also requires that cost figures be used, in compliance with legal statutes and provisions of sinking funds and other agreements with creditors. Nelson concludes, therefore, that balance sheets on historical costs are best, because they are the most useful.[14]

However, Nelson seems to have erred at several points. The principal objective of the property control function of accounting is to record the amount of economic wealth in real terms at a point of time. Current market value is the true measure of economic wealth. Historical cost is irrelevant and therefore does not permit the proper discharge of the property control function.

As regards the legal function of accounting in connection with provisions of sinking funds and other agreements with creditors, Nelson seems to have overlooked the real interest of such creditors. As has been suggested earlier, the creditors' main interest in assets is the future income flow from such assets. The flow of future benefits is the proper source of asset value. Therefore, present value is the proper basis for valuing assets. Realizing the productive assets for satisfying creditors' claims is contemplated as the last resort. Eventually, liquidating value is the relevant valuation basis in the case

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[14] Ibid., p. 46.

of realizing productive assets for satisfaction of creditors' claims. Thus, Nelson's arguments supporting historical costs as the basis of valuing assets must be rejected as irrelevant as regards the creditors' interest.

Kollaritsch recognizes that even among creditors as a group there are different interests in the balance sheet.[15] They require different bases of valuing assets to meet their special interests and a further subdivision of creditors as a class is necessary. The time element in connection with loans needs to be taken into consideration. He classifies creditors into one of two types in distinguishing their interest in the balance sheet.

1. Creditors without substantial interest in the debtor's enterprise (short-term creditors).

2. Creditors with a substantial interest in the debtor's enterprise (long-term creditors).

Short-term creditors, he argues, are less interested in the debtor enterprise as a going concern; present security is the most important factor. Only current values are relevant in this regard. He concludes that liquidating calues only are of interest to short-term creditors and should be the basis for valuing the items on a balance sheet intended for short-term creditors.

Long-term creditors, Kollaritsch suggests, share a common concern with shareholders for solvency, earning capacity and future

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[15] Felix P. Kollaritsch, "Can the Balance Sheet Reveal Financial Positions", The Accounting Review, Vol. XXXV, No. 3 - (July, 1960), pp. 482-489.

prospects of the enterprise. Their interest in the debtor enterprise lies in the distant future, and with the continuation of the enterprise. Current values in liquidation are not relevant. Long-term creditors wish to know if the total assets in their relationship to production are sufficient to ensure solvency and continuity of the enterprise. The measure for this must be current replacement values. Therefore, Kollaritsch concludes, current replacement values should be the proper basis for balance sheet valuation from the standpoint of long-term creditors.

However, there are still some difficulties in Kollaritsch's proposals on balance sheet valuation which aim at serving creditors' purposes. His proposal that liquidating value should be the basis of balance sheet valuation for short-term creditors contradicts the usual going concern assumption and encounters the same difficulties as have been mentioned earlier.[16] His proposal of valuing assets at replacement costs for long-term creditors applies to long-lived assets only. Current assets are excluded from consideration. This is a shortcoming. All assets and not long-lived assets alone should be taken into account.

It is now proposed to examine the suitability of the various bases of valuation for specific items in the balance sheet and to choose a basis that is most suitable for the purpose of creditors. This will form the basis for a model balance sheet to be proposed later.

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16 See page 97.

Assets will be individually examined in order of their liquidity. Analogously, liabilities will be considered in order of their maturity. The examination of the various items in the balance sheet follows this paragraph.

Cash refers to legal currencies, coins and bank deposits, and is measured by count and summation. Domestic holdings are valued at their full amount; convertible foreign holdings are translated into domestic equivalent at the current rate of exchange in the market.[17] This is logical as liabilities are in terms of money and are liquidated by payment of cash at their face amounts or in cash equivalent of the same amounts, and all assets are valued in terms of money. The valuation of money must be in its own unit.

Marketable securities may be held either as short-term investments or as long-term investments. The basis of valuation of marketable securities should be net realizable value. Frequently, an enterprise, finding itself with too much excess cash, purchases securities with the intention that they will be sold shortly to pay off current debts when they become due or for payment of purchases. The cash proceeds are selling prices net of brokerage charges. Therefore the proper basis of valuation is net realizable value.[18] Historical cost is irrelevant. The market price is independent of historical cost. Replacement cost is equally irrelevant, because marketable securities

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[17] Sprouse and Moonits, op. cit., p. 24

[18] Sprouse and Moonitz, op. cit., p. 25. They suggest that current market price is the proper basis for valuing marketable securities. They ignore the cost of conversion.

are usually held as short-time investment of excess cash with intention to sell them in the near future; there is no intention to replace them. It may be argued that net realizable value has no relevance to marketable securities held as long-term investments for there is no intention to sell them. Furthermore, the fluctuating market may also render the net realizable value meaningless. It is true marketable securities held for long-term investments are not for immediate sale. But in case of necessity there is nothing to prevent them from being sold for cash to discharge debts as they become due. It would be more usual, easier and less costly to sell off the marketable securities than other assets to pay off debts falling due. Creditors especially short-term creditors, may look to marketable securities, whether they are for short-term or long-term investments, as a possible source of cash flow for satisfaction of their claims against the enterprise unless they are pledged for specific purposes. Net realizable value as the basis for valuating marketable securities is most satisfactory for the purpose of creditors. Sprouse and Moonitz suggest that the measurement of marketable securities at current market prices offers several distinct advantages:

> 1. Current market price represents objective information with respect to the amount of cash into which the securities may be converted.....
>
> 2. The measurement of marketable securities at current market price eliminates the anomaly whereby otherwise identical and interchangeable securities are carried at different amounts merely because they were acquired at different prices.[19]

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[19] Ibid., Sprouse and Moonitz use the current market price as the valuation basis for marketable securities. Net realizable value is current market price net of brokerage charges. The difference here does not affect the soundness of our argument, because the current market price is basic to the concept of net realizable value.

Receivables are also best measured at net realizable values. Receivables provide cash on collection. Creditors are interested in the probable amount of cash that can be realized from the receivables either through collection or factoring. Some accounts will go bad. Additional costs may be incurred in collection. Discounts must be given in factoring the receivables. Therefore, estimated net realizable value, making allowances for such deductions, is the proper basis for valuing receivables. The book value (historical cost) of receivables has no meaning to creditors if nothing can be realized from the receivables. Present value is not usually of interest to creditors as a basis for valuing receivables. Receivables are normally collected within a relatively short period of time. The interest element tends to be insignificant.

Inventories: As has been suggested in the preceding chapter, current replacement is the proper basis for valuing inventories for creditors. Short-term creditors expect that inventories will be sold in the normal course of business to provide cash (from cash sales and collection on credit sales). Long-term creditors are interested in the inventories as a pool of resources necessary for producing current income and for maintaining income-producing power in the future. Ideally, short-term creditors would like to value inventories at replacement cost. Cash flow is a better basis for appraising short-term solvency whereas income is indicative of future income flow. The balance sheet using net realizable value is most suitable for solvency whereas current replacement cost shows the amount of resources available for producing future income. Because of the lack of objective

information as to net realizable price, the better choice is probably current replacement value as the basis for valuing inventories.

As Sprouse and Moonitz suggest, valuing inventories at current replacement cost has several advantages: (1) The use of current replacement as the basis for inventory valuation eliminates the need for any assumption as to the flow of the actual cost incurred. (2) The relevance of current replacement cost to a going concern is emphasized whenever the enterprise continues to manufacture or purchase the items in the inventory. Thus, there is a forceful assumption that current replacement costs represent at least the minimum economic values of those items to the enterprise. Besides, current replacement cost is closer to the current value of the inventory than historical costs.

Prepaid Expenses are benefits to be received by an enterprise in the form of services. They include such items as prepaid rent, prepaid insurance, prepaid interest and prepaid taxes. These prepaid expenses relieve payment for future services which will otherwise be payable in cash in the future periods. Prepaid expenses are therefore properly considered as assets. The basis for measuring prepaid expenses is the book amounts which correspond to the amounts that otherwise will be payable. Other bases of measuring prepaid expenses are irrelevant. Prepaid expenses are not a source of cash flow but are a reduction of the cash flow which would otherwise take place. Net realizable value, present value, current market price, etc. are inapplicable.

Deferred charges which represent expenditures made for items such as organization costs and bond discount are in a somewhat similar

category as prepaid expenses. To creditors they are of dubious value. Often they have no exchange values. Where there is a clear relationship witn an iexpense item to be matched against revenue (as is the position for bond discount) there seems good argument for carrying them in the same way as prepaid expenses. The difference is merely a matter of the length of time period. Where a relationship with expense and/or revenue does not clearly exist, it would seem appropriate to treat the same as intangible assets and in most cases these would be the same as intangibles with no limited term of existence and therefore to be deducted in the shareholders' equity portion of the balance sheet.

Intangible assets belong to one of the two classes: (a) those having a term of existence limited by law, regulation, or agreement, or by their nature (such as patents, copyrights, leases, licences, franchises for a fixed term, and goodwill of which there is evidence of limited duration); (b) those having no such limited term of existence and as to which there is, at the time of acquisition, no indication of limited life (such as goodwill generally, going value, trade names, secret processes, subscription lists, perpetual franchises, and organization costs).[20] The treatment of all types of intangibles at present is that these assets should be stated at cost when they are acquired. In the case of non-cash acquisitions, cost may be considered as being either the fair value of the consideration given or the fair valuation of the property or right acquired, whichever is the more clearly evident.[21]

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[20] Accounting Research Bulletin #43, p. 37.

[21] Ibid., p. 38

Furthermore, the costs of intangibles having limited periods of usefulness should be charged against revenue systematically over those periods. Those intangibles having no limited period of usefulness may be carried in the books of accounts at cost indefinitely. Should it, however, become evident that those intangibles having no apparent limited period of usefulness have at a later date only a limited period of usefulness, their costs should be amortized over the remaining period of usefulness. Where an intangible has become worthless, its cost should be written off to the income statement or, if the amount is so large that its effect on income may give rise to misleading inferences, it should be charged to earned surplus.[22] Many writers agree that intangibles should be amortized or written off as is appropriate in each case, but differ on the basis of amortization and whether their amortizations should be charged to income or earned surplus. The other area of dispute is whether or not intangibles have any values for presentation in the balance sheet. As regards the purpose of creditors, both long-term and short-term, the two controversies can be solved by reference to two important criteria: (1) whether or not an intangible has any exchange values. This is important as part of a pool of resources from which long-term creditors may expect income to flow, and as an indication of the amount creditors can salvage should the enterprise liquidate. Though liquidation is not contemplated, creditors are conscious of the possibility and would rely on exchange values as indicating a last source from which to salvage their investments. (2) Whether or not there is an association between revenue and the

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[22] Ibid., p. 39.

expiration of the cost of an intangible. This is essential because our thesis is tha long-term creditors look upon income as an indicator of future debt-paying ability and the association of revenue and expiration of the cost of an intangible is a prerequisite to considering the amortization of intangible cost as a factor in income determination. Careful consideration reveals that the amortization of intangible assets has only a distant relationship to revenues. Amortizations are frequently regarded as discretionary charges. The existence of certain intangible assets may enable an enterprise to earn a larger amount of revenue, but the mere writing off of intangible costs in no way influences the actual revenue earning process.[23] It would be proper to write off intangible costs, systematically over a period of time, to earned surplus, if the whole amounts are not written off to earned surplus at acquisition, due to the fact that the earned surplus is not sufficient to absorb such immediate write-off. Moreover, in most cases intangibles have no exchange values; their inclusion in the balance sheet is misleading. They should be shown as deductions against shareholders' equity in the balance sheet. Some intangibles such as a sole distributorship or a franchise, which are transferable, do have exchange values. In such cases the proper measurement of the intangibles is the exchange values, an estimate of which is acceptable if other methods of determining the exchange values are not available. Should there be a decline in the exchange values of these intangibles, the decline in value should be written off to earned surplus.

Plant and equipment are long-lived tangible assets an enterprise holds for the purpose of facilitating the creation and distribution

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[23] Admittedly this same argument could be levelled at depreciation of other fixed assets.

of goods and services which give rise to their value to an enterprise. They lose their economic service potential through physical factors such as deterioration resulting from utilization and the action of the elements, and by functional factors such as obsolescence and inadequacy. Accordingly, with utilization and the passage of time, there is a diminution in the remaining useful services the plant and equipment are capable of providing.[24] This decline in useful service is depreciation.

Long-term creditors should best look upon plant and equipment as revenue producing capacity in current terms. The valuation of plant and equipment is essential to proper income determination. The proper valuation basis for plant and equipment is current replacement cost, which emphasizes the maintenance of the enterprise's capital in real terms. This is important to the long-term creditors. Unless an enterprise has assurance of continuity, long-term creditors cannot hope to recoup anything from their investments. Historical cost is completely irrelevant in this regard. The current replacement cost basis of valuation for plant and equipment probably offers creditors an additional piece of useful information about the probable amount they can recover should the debtor enterprise fail as a going concern and go into liquidation. The proper balance sheet measurement of plant and equipment is current replacement cost net of accumulated depreciation on replacement basis.

G. K. Nelson,[25] however, argues that current replacement cost

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[24] Sprouse and Moonitz, op. cit., p. 32

[25] G. Kenneth Nelson, "Current and Historical Costs in Financial Statements," The Accounting Review, Vol. XL., No. 1 (January 1966), p. 44.

offers no advantage over historical cost in measuring plant and equipment. He views long-term debts as being paid from revenues generated by plant and equipment rather than from plant and equipment themselves. For this purpose, he contends, it does not matter how much it would cost to replace the fixed assets; what does matter is how much revenue they can produce. Therefore, the best place to find out the ability to pay off long-term debts is indicated on the income statement and the funds statement. When the fixed assets do produce a satisfactory income flow after making allowances for market gains and losses, there will be resources available for payment of debt interest and principal, if and only if management does not make use of them for dividends or other purposes. If plant and equipment are not yielding satisfactory revenues for whatever reason, they may be worth no more than their scrap value, regardless of their book value or replacement value, unless they have other uses. We agree with Nelson that income is the index of the ability to pay off long-term debts. Thus, all costs are irrelevant. But he does not recognize that current replacement cost is essential to proper income measurement, and he completely ignores the value of the balance sheet as a source of useful information about the productive capacity. Therefore current replacement cost as the basis for measuring plant and equipment is superior to historical cost.

Buildings may be carried in the balance sheet at appraisal exchange value, which is close to current value and economic worth in exchange. As buildings are not intended for sale, net realizable value is inapplicable. Replacement cost is also close to appraisal value and may also be used for valuing building. However, appraisal value as a

basis for valuing building seems to be superior. The interest of the creditors (mainly long-term creditors) in buildings lies in their revenue power and their value in liquidation. Appraisal exchange value of buildings approximates their value in liquidation.

Land is best valued at its appraisal exchange value. As in the case of buildings, creditors' interest in land lies in its earning power and value in liquidation. Appraisal exchange value of land is close to its value in liquidation. Net realizable value is not relevant for land as it is not intended for sale in the normal course of business. Replacement cost is inapplicable for land does not need to be replaced, and in fact cannot be replaced. Other bases of valuation such as historical cost are also irrelevant for valuing land in the balance sheet.

The liabilities of a business enterprise are "its obligations to convey assets or perform services, obligations resulting from past or current transactions and requiring settlement in the future. The term 'obligations' connotes a claim or series of claims against the business enterprise, each of which has a known or reasonably determinable maturity date and an independent value which is known or reasonably measurable. Settlement of a specific obligation may involve payment in cash, or in other assets, or the performance of services. Ultimate settlement may be postponed by the substitution of another obligation."[26]

Creditors' interest in the liabilities of a business enterprise lies in their desire to know how well they rank as claimants to the enterprise's assets and income, and their relative shares in the

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[26] Sprouse and Moonitz, op. cit., p. 37.

total claims by creditors. Further, they want to know if any group of creditors have prior claims over the corporate assets. The maturity of a liability is of interest to creditors, long-term and short-term creditors alike, as regards whether the enterprise will have cash flow to pay off the liability when it falls due.

All liabilities regardless of maturity call for payment in cash at their face amounts on maturity dates, or in other assets having the same cash equivalent. Therefore, for creditors the measurement of liabilities is best in the cash amounts as of maturity dates. The discount element is irrelevant, because all liabilities must eventually be settled in cash of the face amounts as at maturity, or in other assets of the values of those cash amounts as at maturity. This view has logical and legal support. A debtor enterprise does not normally discharge its obligations at an earlier date than their maturity by payment of a smaller cash amount than that is otherwise payable at maturity, unless the obligees have specifically agreed to accept the smaller cash amount as full settlement of the enterprise's obligation. Many bond indentures call for full repayment at face amounts or greater before the maturity of the bonds should the issuer fail to observe the terms of the indenture. Where the issuer of a series of bonds chooses to retire them before maturity, very often he has to pay more than the face value of the bonds.

Sprouse and Moonitz call for taking the interest factor into consideration of liabilities.[27] This is, however, unnecessary and unsuitable from the standpoint of creditors. We recognize that the

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[27] Cf. Sprouse and Moonitz, op. cit., p. 39

debtor enterprise enjoys a real advantage by deferring the payment of debts; the enterprise can make productive and profitable use of the funds in the meantime. But creditors get nothing more than the cash amounts of their claims as at the maturity of the debts regardless of changes in the market rate of interest.

Sprouse and Moonitz' approach to the measurement of liabilities calling for settlement by the delivery of goods or the performance of services is relevant and useful to creditors. They state:

> "Liabilities calling for settlement by the delivery of goods or the performance of services ordinarily arise from deposits or other advances by customers for goods or services to be supplied later. Liabilities of this type should be measured by the amount of the deposit or advance which ordinarily is equal to the agreed upon exchange price of those goods and services. For example, the obligations resulting from the collection of subscriptions by a magazine publishing enterprise or the collection of an insurance company should be measured by the amounts of advance collection..."[28]

The agreed-upon exchange price of those goods and services is objective and approaches the cash values of the goods and services at the point of delivery or performance. A further point is that the enterprise may have to refund the deposits or advances in the cash amounts if it should be unable to deliver the goods or to perform the services in question. We should, however, recognize that the amounts of such liabilities bear no relation to the current values of the goods or services in question at the point of delivery or performance; but the delivery of goods or the performance of services discharge the liabilities regardless of the amounts at which the liabilities may be recorded in the balance sheet.

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[28] Ibid., p. 41.

Deferred taxes are becoming an important item, in terms of their magnitude and frequency, in corporate balance sheets, and deserves special mention. The main concern of the creditors in regard to deferred taxes is whether or not they are liabilities. Income taxes properly relate to the period during which the income which gives rise to the taxes arises. Insofar as this results in a proper measurement of income, which serves as a measure of future debt-paying ability of an enterprise, regarding deferred taxes as liabilities, is satisfactory to creditors. Deferred taxes arise from the difference in timing of the reporting of revenue and expense for income taxes compared with that used in the financial statements of an enterprise. Theoretically, over a sufficient long period of time total income is identical under both methods of computation. Deferred taxes mainly arise from liberal cost capital allowances in excess of depreciation charges. Conceivably, with technological development,corporations will have more capital intensive operations and purchase more depreciable capital assets. The excess of cost capital allowances over depreciation changes will keep on increasing. The enterprise may not have to pay the deferred taxes at all, at least not in the relatively near future before most other liabilities will have matured. To present deferred taxes in the balance sheet without further explanation does not tell the creditors if the government will take large parts of the enterprise's present cash or funds flows, or future income before they can hope to receive anything for their claims. It will be helpful for creditors if future contemplated investments in depreciable capital assets and the amounts of deferred taxes or reductions thereof that will arise in each subsequent accounting periods are stated in the balance sheet. In order not

to complicate the balance sheet too much, such information may be disclosed as footnotes.

The Owners' Equity in the enterprise is the amount of the residual interest in the assets of an enterprise. The owners' equity becomes payable to the owners only at the volition of the owners of the business enterprise or on ultimate liquidation. The owners' equity does not constitute an obligation because, ordinarily, the business enterprise is not legally or equitably compelled to provide payments or services to the owners. Creditors, especially long-term creditors, have an interest in the owners' equity insofar as the enterprise does not distribute dividends out of capital, or otherwise render itself insolvent, or impair the future earning capacity. In this regard, the descriptive aspect of owners' equity is more important than the quantitative aspect, which is of course also important. The description of the owners' equity should be sufficiently clear, and should indicate if any capital might be withdrawn and if the enterprise can distribute dividends without impairing its income-producing capacity in the future.

It has been proposed earlier that revenues and expenses arising from current operations should be the basis for income determination, and that all other items of revenues and expenses, such as correction of prior years' earning, and amortization of intangibles, should be charged to owners' equity with suitable descriptions. At present accountants classify revenues as realized or unrealized. However, such classification for the purpose of creditors is not important. The proper criterion of classification and description of owners' equity should be whether or not they are available for dividend distribution without impairing the enterprise's solvency and earning

capacity. We have also suggested that earned surplus should absorb certain items of amortization and charges. Conceivably, this may result in a negative earned surplus, and place undue restrictions on dividend distribution. But this is not too critical for one would allow dividend distributions so long as such distributions did not render the enterprise insolvent or impair its earning capacity; and this is legally permissible because an enterprise can distribute dividends from its most current earnings without making good past losses. This approach to analyzing the owners' equity in the balance sheet is entirely satisfactory to creditors, for creditors' interest lies in the amount of assets available for satisfying current debts and generating income for paying long-term debts. The amount of owners' equity is not available for payment of debts or to generate future income if there are no assets.

Balance Sheet Classification and Presentation.

In general, the balance sheet will be more useful to its readers if the information therein is presented in a clear and readily understandable fashion. To this end accountants have sought to classify the balance sheet items and to describe them suitably. The common classifications for assets are: (1) current assets; and (2) long-lived or fixed assets. The classifications for liabilities are: (1) current liabilities; and (2) long-term liabilities. The former refer to short-term debts; the latter are long;term debts. Current assets are cash and other assets which are reasonably expected to be realized in cash within one year or the normal operating cycle of the business if the

latter is longer than the year. Current liabilities are obligations whose liquidation is reasonably expected to require the use of current assets, or the creation of other current liabilities. The use of the one-year rule for classifying current assets and liabilities has been criticized as arbitrary. Even the normal operating cycle concept is relatively weak, for the proper normal operating cycle of many enterprises extend well over several years. Wineries and distilleries are examples.

On the other hand, long-lived assets are those whose life is relatively long and are not for sale or conversion in the normal course of business. Long-term liabilities are obligations whose liquidations fall beyond a year and outside the normal operating cycle. While these classifications do throw some light on the liquidity of the assets and the maturities of liabilities, they suffer from the weakness that the classifications are arbitrary. It would be preferable to indicate the relative liquidity of assets and maturity of liabilities.

In stressing the classifications of current assets and current liabilities, it is implicit that creditors desire to know the relationship between current assets and current liabilities, insofar as current assets should be the sources of short-term future cash flows, which is indicative of short-term solvency. The conventional balance sheet does not seem to bring out this relationship too clearly. We propose to remedy this weakness by presenting the balance sheet in the following manner.

A SUGGESTED BALANCE SHEET

XYZ COMPANY LIMITED

BALANCE SHEET

December 31, 19X1

Assets

Current Assets			
Cash in Bank and on Hand (face value)		$xxxx	
Marketable Securities (Net Realizable Value)		xxxx	
Accounts receivable (face value)	xxxx		
Allowance for doubtful accounts	xxx	xxxx	
Prepaid expense (historical cost)		xxx	
Inventories (current replacement cost)		xxxx	xxxxx
Current Liabilities			
Accounts payable) (Amounts payable		xxxx	
Notes payable) without discounting)		xxxx	
Taxes payable)		xxxx	
Accrued Wages and Salaries		xxxx	xxxxx
Net Current Assets			xxxxx
Long-lived Assets			
Plant and Equipment (Current replacement cost)	xxxx		
Accumulated Depreciation	xxx	xxxx	
Building (Current replacement cost or appraisal value	xxxx		
Accumulated Depreciation	xxx	xxxx	
Land (Current market value or appraisal value)		xxxx	xxxx
			xxxx
Less: Long-term Liabilities			
Deferred taxes		xxxx	
6% Recalled able Bonds due 19xx (Call price xxx)		xxxx	xxxx
Net Assets			xxxx
Shareholders' Equity:			
Preference Stock, 4% cumulative par value $100, authorized xxxxxx shares, Issued and outstanding xxxxxx shares		xxxx	
Common Stock, par value $10 Authorized xxxxxx shares, Issued and outstanding xxxxxx shares		xxxx	

Earned Surplus:			
Appropriated:			
Plant expansion		xxxx	
Unappropriated:			
Accumulated income from operations		xxxx	
Unrealized holding gains		xxxx	
Sundry adjustments to owners' equity:			
Appraisal increase		xxxx	
		xxxx	
Less: Deferred charges	xxxx		
Intangibles	xxxx	xxxx	xxxxx

Note on Deferred Taxes

The company's policy in respect of depreciation of investment in plant and equipment is to make charges against income such amounts computed on the current replacement cost basis. Under income tax regulations the company is claiming maximum allowable deductions which are greater than the provision recorded on the books of the company, and as a result income taxes payable for 19xx are estimated at $xxxx whereas Xxxxx was charged to income. The difference of $xxxx is applicable to future when the amounts deductible for tax purposes will be less than the depreciation recorded in the accounts.

Comparative Balance Sheet: The presentation of the balance sheet in a comparative form enhances its usefulness by bringing out more clearly the nature and trends of current changes in the various items in the balance sheet. Such a presentation emphasizes the fact that balance sheets for a series of periods are far more significant than those for a single period and that the accounts of one period are but one instalment of what is essentially a continuous history. The presentation of the balance sheet for a number of periods brings out the trend of the changes in the various items in the balance sheet. This is of obvious interest to creditors as an indication of the future trend. Conceivably, it may indicate the likely amount of assets an enterprise will have and the likely sources of financing at some point of time in the future. This will indicate the relative shares of the creditors in the total claims against the enterprise's future income, and assets should it go into liquidation.

Conclusion

In summary, the balance sheet contains some information useful to the creditors, even if such usefulness is of a limited nature. Among creditors, the balance sheet is more relevant to long-term creditors to the extent that it gives some indication of the amount of economic resources an enterprise possesses from which future income will flow.

Assets are economic resources from which income flows arise. Liabilities are claims against the assets of the enterprise. The

various bases for valuing items in the balance sheet are as follows:

Assets	Basis of Valuation
Cash	Face Amount
Accounts Receivable	Net Realizable Value
Marketable Securities	Net Realizable Value
Inventories	Current Replacement Cost
Plant and Equipment	Current Replacement Cost
Building	Current Replacement Cost (disclosure of appraisal value and footnotes)
Land	Appraisal Value
Liabilities	
All Liabilities	Face Amounts
Owners' Equity	Residual Amount

The presentation of the balance sheet in the form suggested best serves the need of creditors for information. Comparative balance sheets for a number of periods will enhance the utility of the balance sheet as a basis for judging expectations of the future

CHAPTER VII

SUPPLEMENTARY INFORMATION[1]

Supplementary Information and Decision Making

Some information about the financial affairs of an enterprise does not normally appear in the conventional financial statements for two main reasons. First, it is usually not required as part of the conventional reporting. Second, its inclusion in the conventional statements may unduly impair the simplicity and clarity of the statements making them difficult to comprehend and interpret. However, such information can articulate with the conventional financial statements and be significant to the reader of financial statements for decision making. It is often desirable to present such information as a supplement to the conventional statements.[2]

This chapter is devoted to describing such supplementary information, to evaluating its relevance and usefulness to creditors, and to suggesting disclosing it to creditors if it is helpful for their purpose.

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[1] Materials for this chapter are from personal interviews with a number of credit managers in Vancouver. See Appendices V-XXIII.

[2] Soo Seah Goh, A Descriptive Study of the Notes to Finance Statements in the Annual Reports of 75 Selected Canadian Public Companies, 1938-1963. (Unpublished M.B.A. Dissertation, University of British Columbia, April 1965) and Yam Pin Tan, Supplementary Data in Annual Reports of Selected Canadian Companies, 1938-63. (Unpublished M.B.A. Dissertation, University of British Columbia, 1965).

Analysis of Accounts Receivable

A common method of analyzing accounts receivable is the age of the accounts receivable in a schedule as follows:

Schedule of Accounts Receivable

Customers' accounts	Amounts	Percent.
Current	x_1	P_1
30 - 60 days	x_2	P_2
60 - 90 days	x_3	P_3
Over 90 days	x_4	P_4
	$xxxx	100.0
Officers' and Employees' accounts	xxx	
	$xxxx	
Less: Allowance for doubtful accounts	xxx	
	$xxxx	

$x_1, x_2, \ldots\ldots x_4$ are amounts in dollars

$P_1, P_2, \ldots\ldots P_4$ are percentages

The ages of the accounts receivable have several important implications. The older the accounts are the greater is the probability that they will go bad. The age structure of the accounts receivable as a whole is indicative of the rate of cash flowing from collections on accounts receivable. With the aid of the record of past experience, it is also possible to calculate from the age structure of accounts receivable the probable amount of bad debts and hence the net realizable value of accounts receivable in the balance sheet.

The rate of cash flowing from collections on accounts receivable is significant for forecasting future cash flow. It has been shown that cash flow is significant to short-term credit analysis. Therefore, aging of accounts receivable should prove helpful to short-term creditors.

The accounts receivable within each age group may also be classified by size as follows:

	Amount $	Percent.
Accounts by size		
Below $500.	x_1	P_1
$500. - $2,000.	x_2	P_2
$2,500. - $5,000.	x_3	P_3
.....	..	..
.....	..	..
Over $5,000.	x_6	P_6
	$xxxxx	100.00

$x_1, x_2, x_3 \ldots\ldots x_n$ are amounts in dollars

$P_1, P_2, P_3 \ldots\ldots P_n$ are percentages.

The classifications above can reveal important implications. If the accounts receivable of an enterprise comprise mainly a small number of large individual accounts, it means that the enterprise will suffer heavier losses if one of the accounts goes bad. If a large number of small individual accounts constitute its accounts receivable, the enterprise will suffer relatively smaller losses even if a number of accounts may go bad. Generally, the mathematical probability of

losses will be smaller if the accounts receivable of an enterprise comprise mainly small individual accounts, and vice versa.[3] Thus, an evaluation of the quality of accounts receivable may be made from such classifications. As this is significant in predicting future cash flow and short-term solvency, it is significant to short-term creditors.

In extreme cases, a few unusually large accounts receivable may constitute a substantial proportion of the total accounts receivable of a firm. Here, it may be necessary to disclose the identities of such debtors. The solvency of the firm will be seriously affected when one of such accounts goes bad. The solvency of the firm may depend on the solvency of its debtors. It may be necessary for the prospective creditors of the firm to evaluate the quality of these unusually large accounts, otherwise the credit analysis of the firm is incomplete.

In view of the value of such a schedule to short-term creditors, it is suggested that short-term creditors should have available schedules of accounts receivable classified by age and by size. A convenient means to accomplish these objectives is to classify the accounts receivable in a matric form as appears below. Accounts belonging to the various age groups within the same size classification are the row elements. The columnar elements are accounts belonging to the various size classifications within one age group. It is obvious that the sum of all horizontal elements will be equal to the sum of all the vertical elements.

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[3] One of the reasons for the failure of Atlantic Acceptance Corporation in 1965 was the bad debt losses arising from financial difficulties of a few of its large borrowers. See Financial Post, November 30, 1965.

The matric form has the advantage of presenting the aging schedule and size schedule together.

	Accounts by Age				
Accounts by Size	Current	30 - 60 days	60 - 90 days	Over 90 days	
Below $500.	x_{11}	x_{21}	x_{31}	x_{41}	
$500.-$2,000.	x_{12}	x_{22}	x_{32}	x_{42}	
$2,500.-$5,000.	x_{13}	x_{23}	x_{33}	x_{43}	$\sum_{i=1}^{4} S_i$
Over $50,000.	x_{1j}	x_{2j}	x_{3j}	x_{4j}	

$$\sum_{j=1}^{n} A_j$$

Analysis of Accounts Payable

For reasons analogous to the analysis of accounts receivable, analyzing accounts payable along similar lines can be helpful to creditors. Accounts payable represent future uses of cash. Scheduling of accounts payable is in fact making a forecast of future cash flow.

If a firm has only a few large accounts in its total accounts payable, it means that the firm is dependent on a few creditors for short-term financing. The firm may have to seek short-term financing from elsewhere when one of the creditors withdraws his credit to the

firm. It may then experience short-term solvency difficulties. If the firm's accounts payable comprise a large number of small individual accounts, the effect on the firm's solvency is negligible even if several creditors withdraw their credit. Generally, the mathematical probability of fluctuation is smaller in small accounts payable than that in large accounts payable.[4] Thus, the classification of accounts payable by size is also significant to short-term creditors.

Similarly, identification of unusually large accounts payable is also significant for short-term credit analysis. For example, a prospective short-term creditor may be more confident of his prospective debtor's debt-paying ability if he knows that a leading banker is supplying a very substantial proportion of the firm's short-term finances. The firm might be expected to experience solvency difficulties should the one or more of these few creditors withdraw their existing credit. If these creditors themselves encounter financial difficulties, they may be forced to withdraw their financial support to the firm.

Schedules of accounts payable classified by age and by size may be prepared in forms similar to those for accounts receivable. There is a similar advantage in using the matrix form.

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[4] R. I. Robinson says that banks experience greater degrees of fluctuation in deposits of large accounts than that in small accounts. See his The Management of Bank Funds, (New York: McGraw-Hill Book Company, Inc., 1962).

Schedule of Inventory

Inventory may comprise merchandise ready for sale, goods in process and raw materials. Each of these has a different meaning to creditors. It is obviously much easier to convert the readily saleable merchandise note for cash in the market than either goods-in-process or raw materials. Although creditors normally expect that merchandise will be sold in the ordinary course of business and will provide cash in due course, (cash sales and collection on credit sales), creditors can seize and sell the merchandise to satisfy their claims on a foreclosure. Raw material may also be sold for similar reasons. But goods-in-process may be practically worthless. It will be of interest to present a schedule containing such information as appears below supplementing the single figure for inventory in the balance sheet. Such schedules can be indicative of the rate of inventory turnover which bears upon cash flow and short-term liquidity. These schedules may contain such information as appears below.

Schedules of Merchandise, Goods-in-Process and Raw Materials

Merchandise	Opening Balance	Additions during period	Sold during period	Ending Balance
M_1	M_{o1}	M_{a1}	M_{s1}	M_{e1}
M_2	M_{o2}	M_{a2}	M_{s2}	M_{e2}
M_3	M_{o3}	M_{a3}	M_{s3}	M_{e3}
M_4	M_{o4}	M_{a4}	M_{s4}	M_{e4}
	$\sum_{i=1}^{4} M_{oi}$	$\sum_{i=1}^{4} M_{ai}$	$\sum_{i=1}^{4} M_{si}$	$\sum_{i=1}^{4} M_{ei}$

M = merchandise of any kind.

1, 2, 3, 4 refer to merchandise of type 1, type 2, type 3, etc.

M_{o1} = opening balance for type 1 merchandise and so on

M_{a1} = amount in dollars of type 1 merchandise purchased and so on

M_{s1} = amount in dollars of type 1 merchandise sold and so on

M_{e1} = ending balance of type 1 merchandise and so on.

Similarly, schedules of goods-in-process and raw materials can be prepared. The notations would be analogous to those in the schedule of merchandise.

The inventories of merchandise and raw materials may also be further classified by age for reasons as follows: (1) The value of old inventory is doubtful. (2) The value of new inventory is close to the

market price. (3) Older inventories will probably continue to take longer to convert into cash. Therefore, such classifications will be of further assistance to short-term creditors in valuing inventories and predicting future cash flow, both of which bear upon the short-term solvency.

Schedule of Land

A schedule of land may contain such information as appears below.

Schedule of Land

Location: (address and general area)
Use to which land is put:
Frontage on: (feet)
Lot No. (Cadastral) size: sq. ft.
Zoning: Residential ( ) Commercial ( ) Industrial ( )
Municipal services: water ( ) sewers ( )
Cost and date of purchase:
Municipal valuations:
Last Appraisal (if any): by whom:
Other details:

Creditors' (generally long-term) interest in land arises from (1) its revenue earning power, and (2) its value on a liquidation. Long-term solvency is dependent on the former. The protection for creditors in the event of bankruptcy rests upon the latter. The information in the schedule is to assist creditors in evaluating its

earning power and value in liquidation. The schedule is self-explanatory. The conclusions will follow from the information itself. For example, if the land is in a flourishing city, it is expected to appreciate in value and earn higher rental over time along with urban expansion. The converse will be also true.

Schedule of Buildings[5]

For reasons similar to those in the previous paragraph, the interest of creditors in buildings is in their earning power and value on liquidation. As regards the value and earning power of the building, the significant information includes the following:-

Location

Year built and cost (including improvements)

Municipal value

Type of construction

Use to which building is put

Services available such as elevator and heating

Mortgage commitment

Leases

Fire Insurance on building

The schedule is also self-explanatory and its relevance to creditors for decision making is obvious. What conclusions creditors will draw from the schedule depends on the information itself. For example, creditors will not lend money on a building if its annual rental is insufficient to cover interest charges on the loan. The

[5] See Appendix VII

building provides little real protection for creditors if there is no fire insurance on the building.

Schedule of Machinery and Equipment[6]

Creditors have the same interest in machinery and equipment as in land and buildings for similar reasons. The information in a schedule of selected (major items) machinery and equipment is for the same purpose as that in the schedules of land and building. Such information is as follows:

Items of machinery or equipment

Date of purchase/age

Make

Model

Cost

Outstanding lien

Approximate immediate sale value

The interpretation of the schedule is dependent on the information. For example, if a machine is very old it may imply that its productive capacity is low. Probably, it will also not be of much value in the market. It is possible to draw other conclusions along similar lines.

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[6] See Appendix VIII

Schedule of Insurance Coverage[7]

Insurance is a means of spreading risk. It provides protection against losses in the event of the occurrence of certain contingencies. A firm purchases insurance to reduce the risk it has to bear. As the fortune of a firm indirectly affects the position of its creditors, the insurance coverage for a firm indirectly reduces the risk its creditors have to bear. Large losses arising from such contingencies as fire and flood can severely impair the firm's debt-paying ability. Assets (especially long-lived assets) represent future earning power and provide some protection for creditors in the event of liquidation. Both considerations become irrelevant when fire destroys the assets in question. Thus, insurance coverage is of concern to creditors (mainly long-term creditors).

A schedule of insurance coverage may include information as follows:

Name of insurance company
Nature of coverage
Amount of insurance
Rate per thousand per term
Book value of assets insured
Expiry date of policy
Beneficiaries.

What conclusions creditors can draw from the schedule are dependent upon the nature of the information. For example, if the

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[7] See Appendix IX.

amount of insurance is not sufficient to cover the replacement cost of the productive assets such as buildings, the firm may not be able to replace its productive capacity in the eventuality that these assets are lost.

Executory Contracts

Executory contracts usually impose financial obligations upon a firm as a party to such contracts. A future sale contract shows the potential revenue inflow in connection with the contract at some future point in time. The amount of future cash disbursements in connection with a purchase agreement is evident in a future purchase contract. Such information is relevant to forecasting cash flow and short-term solvency.

Restrictive Covenants, Mortgages, Etc.:

Information about restrictive covenants, mortgages, etc. is particularly important to prospective creditors (mainly long-term creditors). Generally, creditors will not lend money to a firm which is prevented from borrowing by its previous debt contracts.

Information about restrictive covenant and mortgages can also be helpful to existing creditors in their credit supervision. In conjunction with the usual financial statements, it enables the creditors to see if the terms of their loan agreements are in fact being observed.

Supplementary information has relevance to different types of creditors depending on what the information helps to show. Supplementary information indicative of future cash flow from assets is helpful in evaluating short-term solvency. Supplementary information indicative of earning power of assets and value in liquidation is more relevant to long-term solvency. Short-term creditors do participate in assets on a liquidation, but this is normally of less significance because most long-term debts place a lien on the long-lived assets.

The types of schedules relevant to the various kinds of creditors are summarized below:

Types of Schedules	Indications	Creditors having an Interest
Accounts receivable	1) Cash flow 2) Reliance to be placed on values in balance sheet	Short-term
Accounts payable	Cash flow	Short-term
Inventories	1) Cash flow 2) Reliance to be placed on the value in the balance sheet	Short-term
Buildings	1) Earning power 2) Value in liquidation	Long-term (mainly)
Machinery and Equipment	1) Earning power 2) Value in liquidation	Long-term (mainly)
Insurance coverage	Protection of productive capacity and value in liquidation	Long-term (mainly)
Executory Contracts	Cash flow	Short-term
Restrictive covenants, mortgages, etc.	Restrictions on management actions	Long-term Short-term

Other Supplementary Information

Other information such as the trend of the economy, the prospects of the industry, the history, and managerial plans of the firm, are also relevant to an evaluation of the long-term debt-paying ability of a firm. Prospective and existing long-term creditors need to have such information to forecast the long-range prospects. In practice, such information is furnished, along with financial statements, to the prospective long-term creditors.

However, these are future expectations. Inasmuch as they are subjective, they have negligible relevance to financial statements which report upon the past. The purpose of this study is to evaluate the financial statements based on the present as regards their relevance to credit analysis. While the information about the economy, the industry, etc. is significant to credit analysis, it falls outside the scope of the present study. It may, however, be furnished independently to the creditors as they may request.

There is a possible criticism that the prospective debtors may be reluctant to disclose much of the information suggested above because such information is of value to the competitors. However, this is not too serious for such information will only be disclosed to creditors. Besides, creditors will request such information in any case. The disclosure of such information will only expedite their credit analysis. As has been shown earlier, the minimum waste of time in making credit appraisals will benefit both the prospective debtors and creditors. This is even more important for the debtors for credit available timely may be critical to the survival of the debtors.

In summary, supplementary information throws additional light on the usual financial statements. It can help the reader to better understand these statements and to make use of them more advantageously. The various schedules in this chapter contain information specially relevant to credit analysis. Therefore, such information should accompany the usual financial statements submitted to creditors.

CHAPTER VIII

SUMMARY AND CONCLUSION

Summary

Credit is a medium of exchange. Its main economic function is to facilitate the production and distribution of goods and services. Thus, credit can have a direct impact on the level of employment, income and prosperity of the economy.

Making credit available to a profitable enterprise to facilitate its operations will benefit the enterprise itself, the creditor and society as a whole. Giving credit to an unprofitable enterprise is misallocating scarce resources and is a loss to society. It can adversely affect the interest of the creditors themselves.

Thus, the credit grantor must evaluate the probable debt-paying ability of the debtor before he decides whether or not to grant credit. He needs as much relevant information as is possible to help him in making such credit appraisals. The usual factors in credit appraisals include character, capacity and capital. Character is a less objective and important factor than capacity and capital in giving credit to a corporate enterprise.

Financial statements are important sources of information for appraising capacity and capital. The usual financial statements are the balance sheet and income statement. The cash-flow statement

and funds-flow statements are two additional sources of such information.

However, these statements each contains different types of information relevant to credit analysis. The type of information largely determines what purpose the statement will serve. Thus, different types of financial statements will serve different purposes.

Different types of creditors also have different interests in a business.[1] Short-term creditors are concerned with short-term solvency and present security. Long-term creditors are more interested in earning power. Therefore, their principal interest lies in different financial statements.[2]

There are several interpretations of cash flow. The possible interpretations include (1) funds from operations, (2) cash from operations, (3) historical changes in the cash account, and (4) cash budget. The cash-flow statement can be prepared in various ways according to the interpretation used. A suggestion is made in this study to adopt the interpretation of "cash flow as historical changes in the cash account". A model of cash-flow statement incorporating this interpretation is proposed in Chapter IV. Emphasis of this model is on the distinction between normal cash flow and non-recurring cash flow. As normal cash flow has greater probability of continuing in normal circumstances, information about normal sources and uses of cash is

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[1] See Chapter II

[2] See Chapter II

more reliable and useful for making short-term forecast of cash flow. Future cash flow is indicative of short-term solvency. But short-term forecast of cash flow becomes less reliable as the period of forecast lengthens. Therefore the cash-flow statement is mainly of interest to short-term creditors. The interest of long-term creditors in the cash flow arises from the fact that long-term solvency becomes irrelevant if an enterprise is currently insolvent.

The term "funds" also has several interpretations such as literal cash, monetary assets, net monetary assets, current assets, working capital and all resources or total purchasing power. "Funds as all resources or total purchasing power" is suggested as the most satisfactory for the purpose of short-term creditors. A model funds-flow statement incorporating "funds as all resources" is also proposed. The model funds flow statement focuses on several features. Firstly, inflows and outflows of funds are in gross amounts. For example, a firm borrows $10,000 from banks and pays off $5,000 during the same period. The $10,000 in bank loans will appear in the funds-flow statement as a source of funds flowing into the firm. The $5,000 repayment of bank loans will appear as a use of funds during the period. Only $5,000 in bank loans would appear in the conventional working capital statement. But showing inflows and outflows of funds in gross amounts is more significant to short-term creditors. Secondly, the statement of funds as all resources also explains changes in the working capital items in the balance sheet. As different working assets (current assets) have different degrees of liquidity, changes in the working capital items have a direct bearing upon short-term

solvency. Thus, the statement of "funds as all resources" gives a more complete picture of the changes that have taken place. Thirdly, there is also a distinction between normal funds flows and non-recurrent funds flow. This distinction has the same advantage as in the preceding paragraph.

The funds-flow statement is also of primary interest to short-term creditors for reasons similar to those for the cash-flow statement.

Income is an index of future earning potential. As a profitable enterprise is also solvent in the long run, but need not be solvent in the short run, income measurement is more relevant to long-term creditors than to short-term creditors.

In order that an enterprise may remain in existence to realize future earnings, its capital (productive capacity) must remain intact. Therefore the current replacement cost and variants thereof have been proposed for balance sheet valuation for income measurement.[3]

As regards what revenues, expenses, gains and losses enter into income determination, the current operating concept of income is suggested as appropriate for the purpose of creditors. This concept of income takes into account only those revenues, expenses, gains and losses relating to the normal operations of the current period. There is greater likelihood that income from recurring sources in the normal operations will continue in the future. An income statement including only current operating items is more reliable for predictive purposes.

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[3] See Chapter V.

A model income statement based on the current operating concept of income is suggested. Several interpretations of "income" with different implications are available in the model income statement. As regards the payment of periodic interest, enterprise net income is most important to long-term creditors. Income to shareholders is also of interest to long-term creditors to the extent that dividend distributions, which are based on income to shareholders, must not impair the capital of the enterprise and its long-run earning potential.

The conventional interpretation of the balance sheet as reflecting the financial position at a point of time is erroneous. The balance sheet should be interpreted as a statement listing the forms in which assets are held. These assets are to be regarded as a pool of resources for producing future income. Thus, it is of interest to long-term creditors primarily. To the extent that current assets and current liabilities in the balance sheet are sources and uses of cash in the period following immediate the balance sheet date, the balance sheet is also of interest to short-term creditors.

For convenience, the proposed models of the cash-flow statement, funds-flow statement, income statement and balance sheet are presented in Appendices I, II, III and IV.

Conclusion

The purpose of this study has been to describe the accounting information which is made available to the credit grantor, to evaluate its usefulness, and to suggest such modifications as appear to be

desirable. As has been shown in the preceding chapters, the various types of accounting information has been examined in some detail as regards their usefulness to creditors. Various modifications to the usual financial statements have been introduced as seem desirable. Models of the financial statements (that is, the cash-flow statement, funds-flow statement, balance sheet and income statement) incorporating such modifications have also been proposed. It seems, therefore, the purpose of this study has been achieved.

It is recognized, however, that a complete credit analysis must also take into account future expectations. The creditors are primarily concerned with what will happen in the future. The formulation of future expectations will involve the following: (1) forecast of the prospects in the economy, (2) forecast of the prospect in the industry, and (3) forecast of the prospects of the firm. The forecast of the firm's future prospects include managerial intention and plans and management's expectations. However, these problems are beyond the scope of this study.

It should also be recognized that all the information in the various financial statements refers to events in the past and present. The creditors' primary interest is with respect to the future. Thus, it may be argued that the historical statements really do not serve any purpose for the creditors. However, to the extent that the past is indicative of the future, information about the past is relevant in making future expectations. The various modifications in this study make available in the various financial statements more information useful to creditors for making credit appraisals. Emphasis is

on what is specially suitable for the purpose of creditors. Thus there is improvement in the utility of the various financial statements. Therefore, this study is a contribution toward making credit analysis more reliable, to improving the quality of credit decisions, and to making the task of credit analysis easier.

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A P P E N D I C E S

APPENDIX I.

An Illustrative Statement of Cash Flow

XYZ Company Limited
Statement of Cash Flow
For Period.....

A.	Normal Sources of Cash Receipt		
	Cash Sales (Goods and Services)	$xxxx	
	Collections on Accounts Receivable	xxxx	
	Regular Bank Loans	xxxx	
	Other Items	xxxx	$xxxxx
B.	Normal Cash Disbursements		
	Wages and Salaries	$xxxx	
	Cash Purchases	xxxx	
	Payments on accounts payable	xxxx	
	Payment of Dividends	xxxx	
	Regular Bank Loan Repayments	xxxx	
	Taxes	xxxx	
	Other Items	xxxx	$xxxxx
C.	Net Normal Cash Surplus (Deficit)		$ xxxx
D.	Non-recurring Cash Receipts		
	Sale of Investments	$xxxx	
	Issuance of Stock	xxxx	
	Cash from Long-Term Loans	xxxx	
	Gifts, etc. (of cash)	xxxx	$xxxxx
E.	Non-recurring Cash Disbursements		
	Purchase of Fixed Assets	$xxxx	
	Retirement of Long-Term Debts	xxxx	
	Other Items	xxxx	$xxxxx
F.	Net Non-recurring Cash Surplus (Deficit)		$ xxxx
G.	Net Change in Cash (C + F)		$ xxxx
H.	Add Opening Balance		xxxx
I.	Final Cash Balance		$xxxxx

APPENDIX II.

An Illustrative Statement of Funds Flow

XYZ Company Limited
Statement of Funds Flow
For Period.....

			Source	Application
Normal Sources (other than cash change)				
Operating at a profit			$xxxxx	
Adjustment for depreciation			xxxxx	
Regular bank loans			xxxxx	
Purchase of merchandise on credit			xxxxxx	
Realization from accounts receivable			xxxxxx	
			$xxxxxx	
Normal Uses (other than cash change)				
Payment of dividends				$ xxxxx
Regular bank loan repayments				xxxxx
Payments to trade creditors on merchandise purchased				xxxxxx
Increase in inventory				xxxxx
Increase in prepaid expenses				xxxx
Accounts receivable arising during period				xxxxxx
				$xxxxxx
Cash (increase) decrease				
Normal sources	$xxxxxx			
Normal uses	xxxxxx	($xxxxx)		
Non-recurring sources	$xxxxxx			
Non-recurring uses	xxxxxx	($ xxxx)		$ xxxxx
Non-recurring sources				
Issue of capital stock			$ xxxxx	
Issue of long-term bonds			xxxxx	
Sales of land			xxxxx	
			$xxxxxx	
Non-recurring uses				
Construction of plant				$xxxxxx
Total			$xxxxxx	$xxxxxx

APPENDIX III.

An Illustrative Income Statement

XYZ Company Limited
Income Statement
For Period Ended.....

Sales (less returns and allowances)		$xxxxxx
Less Cost of goods sold		xxxxx
Gross Margin		xxxxx
Deduct:		
Salesmen's Salaries	$xxxxx	
Sales discounts	xxxx	
Various other sales expenses	xxxx	xxxxx
Net Income from Sales		$ xxxxx
Add other income:		
Interest income	$ xxxx	
Investment income from subsidiaries	xxxx	xxxx
Total income after sales expenses		$ xxxxx
Deduct:		
General and administrative expenses (exclusive of depreciation, interest and taxes)		xxxx
Enterprise income before depreciation, interest and taxes		$ xxxxx
Depreciation		xxxx
Enterprise net income		$ xxxxx
Deduct:		
Interest on long-term debts		xxxx
Enterprise net income before taxes		$ xxxxx
Income taxes		xxxx
Net income to shareholders		$ xxxx

APPENDIX IV

An Illustrative Balance Sheet

XYZ Company Limited
Balance Sheet
December 31, 19X1

Assets

Current Assets			
Cash in Bank and on Hand (face value)		$xxxx	
Marketable Securities (Net Realizable Value)		xxxx	
Accounts receivable (face value)	$xxxx		
Allowance for doubtful accounts	xxx	xxxx	
Prepaid expense (historical cost)		xxx	
Inventories (current replacement cost)		xxxx	$xxxxx
Current Liabilities			
Accounts payable) (amounts payable		xxxx	
Notes payable) without discounting)		xxxx	
Taxes payable)		xxxx	
Accrued Wages and Salaries		xxxx	xxxxx
Net Current Assets			$xxxxx
Long-Lived Assets:			
Plant and Equipment (Current replacement cost)	xxxx		
Accumulated Depreciation	xxx	xxxx	
Building (Current replacement cost or appraisal value	xxxx		
Accumulated Depreciation	xxx	xxxx	
Land (Current market value or appraisal value)		xxxx	xxxx
			$ xxxx
Less: Long-term Liabilities:			
Deferred taxes		xxxx	
6% Recallable Bonds due 19XX (Call price xxx)		xxxx	xxxx
Net Assets			$ xxxx
Shareholders' Equity:			
Preference Stock, 4% cumulative par value $100, authorized xxxxxx shares, Issued and outstanding xxxxxx shares		xxxx	
Common Stock, par value $10 Authorized xxxxxx shares, Issued and outstanding xxxxxx shares		xxxx	

Earned surplus:			
Appropriated:			
Plant expansion		$ xxxx	
Unappropriated:			
Accumulated income from operations		xxxx	
Unrealized holding gains		xxxx	
Sundry adjustments to owners' equity:			
Appraisal increase		$ xxxx	
		$ xxxx	
Less: Deferred charges	$ xxxx		
Intangibles	xxxx	xxxx	$xxxxx

Note on Deferred Taxes

The company's policy in respect of depreciation of investment in plant and equipment is to make charges against income, such amounts computed on the current replacement cost basis. Under income tax regulations the company is claiming maximum allowable deductions which are greater than the provision recorded on the books of the company, and as a result income taxes payable for 19xx are estimated at $xxxx, whereas $xxxx was charged to income. The difference of $xxxx is applicable to future when the amounts deductible for tax purposes will be less than the depreciation recorded in the accounts.

SUPPLEMENTARY INFORMATION

Three credit institutions in Vancouver supplied information on the financial data and supplementary information they require in granting credit. Two of the institutions prefer to remain anonymous. But some specimen materials used by them are reproduced herewith.

RN 1 (2-64)

To: ROYNAT LTD.

Reference Nos.
Bch.
RN.

ENQUIRY FOR TERM FINANCING _____ 19____

1

Name of Company _____ Phone No. _____

Address _____ Town or City _____ Province _____

Incorporated under The Companies Act of _____

2 TYPE OF BUSINESS OPERATION

Date of commencement: _____

Description of products or services: _____

Franchise or patent rights if any: _____

Class of customer served: _____

Area supplied: _____

3 LIST OF DIRECTORS

NAME	EQUITY HELD	AGE	OCCUPATION	HOME ADDRESS
	%			
	%			
	%			
	%			
	%			

4 LIST OF OFFICERS AND KEY STAFF

NAME	EQUITY HELD	AGE	TITLE	YEARS WITH COMPANY	EDUCATIONAL QUALIFICATIONS
	%				
	%				
	%				
	%				
	%				

5 PLANT OR OTHER BUSINESS PREMISES:—Location: _____ ☐ Owned; ☐ Leased

6 OUTLINE OF PROPOSED PROJECT, ESTIMATED COSTS AND ANTICIPATED BENEFITS:

(If space insufficient, continue in section 12 on reverse)

7 TOTAL NEW FINANCING REQUIRED (omit cents)

Acquisition of land	$
New buildings or additions	$
Machinery & equipment	$
Vehicles	$
Working capital	$
Other (Specify)	$
	$
TOTAL	$

8 PROPOSED SOURCES OF NEW FINANCING (omit cents)

RoyNat Ltd., for a term of ____ years	$
Investment by shareholders and others	$
From working capital	$
Other (Specify)	$
	$
	$
TOTAL	$

(OVER)

9 COMPANY'S OPERATING RESULTS FOR LAST FIVE YEARS (omit cents)

PERIOD COVERED	GROSS SALES OR GROSS INCOME	INTEREST ON MONEY BORROWED	PROVISION FOR DEPRECIATION	PROVISION FOR INCOME TAXES	NET PROFIT AFTER TAXES
	$	$	$	$	$
____ mos. ended ____ 19 ____					
____ mos. ended ____ 19 ____					
____ mos. ended ____ 19 ____					
____ mos. ended ____ 19 ____					
____ mos. ended ____ 19 ____					

10 LINES OF CREDIT

This Company has had the following lines of credit with its Bankers over the last five years, by way of loans or overdraft, and has used its credit to the extent indicated below:

YEAR	BANK	LINE OF CREDIT	AMOUNT OF CREDIT USED MAXIMUM	AMOUNT OF CREDIT USED MINIMUM
		$	$	$
		$	$	$
		$	$	$
		$	$	$
		$	$	$

SECURITY NOW HELD BY BANK

- ☐ Assignment of Accounts Receivable
- ☐ Section 86 or 88 of the Bank Act
- ☐ Personal Guarantees
- ☐ Life Insurance
- ☐ Negotiable Securities

11

Company's Bankers (bank and branch): _____

Company's Auditors (name and address): _____

Company's Solicitors (name and address): _____

Company's Insurance Agent (name and address): _____

Company's or principals' Trust Company, if any: _____

Company's Notary (in Quebec only): _____

RoyNat Ltd. term financing facilities were first brought to our attention by: _____

12 ADDITIONAL OR SUPPLEMENTARY DATA

We attach a copy of this Company's latest audited annual Financial Statements and two sets of photographs of buildings owned by the Company.

In order to supplement the information contained herein, we authorize you to discuss this enquiry and the affairs of our Company with such banks, firms and persons indicated in section 11 above as you may consider it necessary or desirable to approach and we authorize each of them to give to you such information as you may request.

The undersigned hereby enquires as to whether, on the basis of the information given herein and in our Financial Statements attached, term financing from RoyNat Ltd. in the amount indicated herein will be made available.

_____
(NAME OF COMPANY)

PER _____
(AUTHORIZED SIGNING OFFICER)

RN 30

Reference No.
RN

To: ROYNAT LTD.

DATE _____ 19____

APPLICATION FOR TERM FINANCING

The undersigned _____
(NAME OF APPLICANT COMPANY)

(hereinafter called the "Applicant") with head office at _____
(STREET ADDRESS)

_____ Phone No. _____
(TOWN OR CITY)

having filed an "Enquiry for Term Financing" dated _____ 19____

at the _____ branch of _____
(NAME OF BRANCH) (NAME OF BANK OR TRUST COMPANY)

_____, hereby applies to RoyNat Ltd. for term financing in the

amount of $_____ for a period of _____

and for this purpose affirms to RoyNat Ltd.:

1. That the statements and representations in the documents submitted herewith are true and correct, to the best of the knowledge and belief of the undersigned. (Please attach a list of the documents submitted.)

2. That the Applicant has not borrowed any money other than in the ordinary course of business since _____ 19____, the date of the latest audited annual financial statements filed with this Application, and that there has been no material change in its financial position or operations since that date, except as noted below.

3. That the Applicant is not engaged in any litigation before any court, administrative board or other tribunal, and that no unsatisfied claim has been made against the Applicant which is not reflected in its latest audited annual financial statements filed herewith, except as noted below.

_____
NAME OF APPLICANT COMPANY

PER _____
AUTHORIZED SIGNING OFFICER—TITLE

SEE REVERSE

The following should be submitted by the Applicant Company with this Application:

1. Description of the project for which the new financing is required, including the estimated cost of the principal components and the estimated maximum cost of the entire project, and stating, to the best of the knowledge and belief of the Applicant, that the proposed financing will be fully adequate to complete the project.

2. Copies of any reports prepared by architects, contractors, consulting engineers, management consulting firms or other consultants, relating to the project for which the new financing is required.

3. A condensed cash budget for the term of the proposed financing, demonstrating ability to repay.

4. A statement, signed by the Applicant, (a) giving the name, title and age of the key individual responsible for the successful management of the Applicant's business, (b) stating the terms of such key individual's employment agreement, (c) indicating whether there is presently in the Applicant's employ a capable replacement and giving his name, age, relationship (if any) to the owners and general and technical qualifications.

5. Audited annual financial statements for the past five years, or for the number of years the Company has been in existence if fewer than five years.

6. Photostatic copies or certified true copies of income tax assessment notices received in respect of the periods covered by the audited annual financial statements submitted herewith.

7. A schedule of land and buildings, prepared on Form RN 30A.

8. A schedule of machinery, equipment and fixtures prepared on Form RN 30B.

9. A schedule of insurance coverage, prepared on Form RN 30C.

10. Photostatic copies or certified true copies of the latest municipal tax assessments on land and buildings and any other assets subject to municipal tax.

11. List of all registered employee unions or associations.

APPENDIX VII

ROYNAT LTD.

RN 30A
REV. FEB/63

SCHEDULE OF LAND & BUILDINGS
(USE ONE FORM FOR EACH LOCATION)

DATE:

NAME:
ADDRESS:

TYPE OF BUSINESS:

LAND:

LOCATION (ADDRESS AND GENERAL AREA)

USE TO WHICH LAND IS PUT:

FRONTAGE ON: (FT.)
LOT NO. (CADASTRAL) SIZE: SQ. FT. (FT. BY FT.)
ZONING: RESIDENTIAL ( ) COMMERCIAL ( ) INDUSTRIAL ( )
MUNICIPAL SERVICES — WATER ( ) SEWERS ( )
COST AND DATE OF PURCHASE:
MUNICIPAL VALUATION:
LAST APPRAISAL (IF ANY); BY WHOM:

OTHER DETAILS

BUILDING: (IF MORE THAN ONE BLDG. USE ONE SHEET FOR EACH BLDG.)

LOCATION (ADDRESS AND GENERAL AREA)

YEAR BUILT COST (INCLUDING IMPROVEMENTS) $
MUNICIPAL VALUE $
DIMENSIONS OF BLDG. TOTAL FLOOR AREA

TYPE OF CONSTRUCTION — FOUNDATION
FRAME
WALLS
TYPE OF ROOF & CONDITION

USE TO WHICH BUILDING IS PUT:

NO. OF FLOORS CLEARANCE FLOOR AREA (AVERAGE)

FLOOR CAPACITY (LIGHT OR HEAVY INDUSTRY)
FINISHED OFFICE SPACE — (GENERAL INFORMATION):

ELEVATOR
HEATING — HOT WATER HOT AIR STEAM
BOILERS OR FURNACE — OIL COAL GAS AUTOMATIC MANUAL
ELECTRICITY VOLTAGE AMPERAGE
FIRE PROTECTION SPRINKLERS WET ( ) DRY ( )
LAST APPRAISAL OF BUILDING (IF ANY); BY WHOM:

OTHER DETAILS:

NOTE: LIST OF MORTGAGES ETC., LEASES AND INSURANCE ON BACK OF PAGE

APPENDIX VII - Cont'd

1. DETAILS OF ANY MORTGAGES, LIENS, EASEMENTS (OR HYPOTHECS, PRIVILEGES OR SERVITUDES IN QUE.), LEASES, RIGHTS OF REDEMPTION, OPTIONS TO PURCHASE OR OTHER RIGHTS AFFECTING THE FOLLOWING: (IF NONE STATE "NONE")

   A. LAND

   B. BLDG.

2. LEASED LAND AND/OR BUILDINGS: (IF MORE THAN ONE LEASE, LIST SEPARATELY)

   A. DATE OF COMMENCEMENT OF LEASE

   B. EXPIRY DATE

   C. ANNUAL RENTAL

   D. DETAILS OF ANY RIGHT OF RENEWAL OF LEASE OR OPTION TO PURCHASE LAND AND BUILDINGS UNDER LEASE.

3. AMOUNT OF FIRE INSURANCE ON BUILDING

APPENDIX VIII

ROYNAT LTD.

RN 30B

Reference Number
RN _____

NAME OF APPLICANT _____

SCHEDULE OF MACHINERY, EQUIPMENT & FIXTURES AS REFLECTED IN LATEST BALANCE SHEET SUBMITTED, DATED _____ 19__ DATE _____ 19__

(Omit cents throughout)

APPROXIMATE DATE PURCHASED	ITEM List each item, the cost of which was in excess of 5% of the total value of each class of asset.	MAKE	MODEL	SERIAL NO.	NEW OR USED	PURCHASED FROM	COST	OUTSTANDING LIENS ENCUMBRANCES OR RENTAL AGREEMENTS	APPROXIMATE IMMEDIATE SALE VALUE	†COMMENT ON CONDITION, USABILITY OR PLANNED DISPOSAL

Total Accumulated Depreciation ..... $ _____

Capital Cost Allowance Claimed ..... $ _____

N.B. Attach list of items acquired after date of latest Balance Sheet, showing details under the same headings as above.

Total of items listed	$	.....	$
Add: Items not listed	$ _____	.....	$ _____
Total Machinery, Equipment and Fixtures per latest Balance Sheet	$ _____	.....	$ _____

†Insert "SOLD" opposite any items sold after date of latest Balance Sheet

APPENDIX IX

List all policies in force including Business Interruption, Public Liability, Life on lives of Officers, etc.

ROYNAT LTD.

RN 30C

Reference Number
RN _____

SCHEDULE OF INSURANCE COVERAGE AS AT _____ 19___ NAME OF APPLICANT _____

POLICY NUMBER	NAME OF INSURANCE COMPANY	ASSETS INSURED AND/OR NATURE OF COVERAGE	AMOUNT OF INSURANCE	RATE PER THOUSAND PER TERM	BOOK VALUE OF ASSETS INSURED	REPLACEMENT COST OF ASSETS INSURED	EXPIRY DATE	LOSS PAYABLE TO	COMMENTS (RESTRICTIONS, CO-INSURANCE, C.S.V. ETC.)

APPENDIX X

ROYNAT LTD. - INVESTMENT SUMMARY

Form RN 55
(11-63)

First Investment ( )
Supplemental Investment ( )

DATE:

1. Full Name of Company
2. Head Office Address
3. Branch Office Address(es)

4. Type of Business: Products, Services, Franchises, etc.

GUIDING INFORMATION

5. District Office
Investment Officer
Correspondence: English - French
Source of Enquiry

Date Enquiry Received
Date Application Received
Date Summary Received at Head Office
Reason for any apparent delay in processing

Applicant's Banker & Branch

Applicant's Trust Co. Connection (if known)

Are identified photos attached? If not, explain

Has Applicant applied for funds elsewhere? If so, explain in Sec. 17.
Does Applicant have an established Pension Fund? If so, with whom?

6.

OFFICERS & DIRECTORS Full Names	Position in Co.	Age	Other Occupation	Salary	Years Empl'd	Equity %

7. Amount, if any, of existing RoyNat investment in Applicant or related Companies - $ (See Schedule C-1).

8. FINANCING PROGRAM

Amount Rate % Term: yrs. mos.
Neg. Fee $ Date(s) Funds Required:
Standby Fee Date(s)
Has Equity Proposal Been Discussed?
Recommendation re Equity:

If equity recommended, attach detailed information on Schedule A-5; if not, explain above.

Appendix X - Cont'd

9. REPAYMENT SCHEDULE

INTEREST - Quarterly payments commencing
PRINCIPAL
quarterly payments of $ starting = $

Final Payment Date Balloon Payment

Total: = $

Final Payment Date

Prepayment arrangements if not standard:

10. PURPOSE OF FINANCING		SOURCE OF FINANCING	
Working Capital	$	RoyNat	$
		Working Capital	
		New Investment	
Total:	$	Total:	$

11. SECURITY TO BE HELD BY ROYNAT: (Established current market values - See Schedule B-1)	GUARANTEES & OTHER SECURITY: Names
Land	
Buildings	
Machinery, Equipment	
Rolling Stock	
C.S.V. Life Insurance	Life Insurance (face value)
Other	Other
Total: $	

Indicate Schedule Attached by Number:

Schedules A1-5 - Financial Information and Reports
Schedules B1-3 - Security Valuations and Conditions
Schedule C1 - Current RoyNat Loan to Applicant, Related Companies.

APPENDIX XI

SCHEDULE A-1

RN 55
A-1

BALANCE SHEETS - APPLICANT, SUBSIDIARY, GUARANTOR COMPANIES
(Separate Schedule for each - figures to nearest $1,000)

COMPANY: YEAR-END

INCORPORATED OR TO BE INCORPORATED UNDER THE LAWS OF

Indicate Audited or Unaudited ASSETS	Dates Year-End	Year-End	Interim	Proforma
CURRENT ASSETS				
Cash				
Accounts Receivable				
Inventory				
TOTAL CURRENT ASSETS				
FIXED ASSETS				
Land				
Building - cost				
Less Depreciation	( )	( )	( )	( )
Machinery & Equipment - cost				
Less Depreciation	( )	( )	( )	( )
Rolling Stock - cost				
Less Depreciation	( )	( )	( )	( )
TOTAL NET FIXED ASSETS				
After depreciation of				
Other Assets				
TOTAL				

CONTINGENT LIABILITIES AND GUARANTEES OUTSTANDING:

QUALIFICATIONS IN AUDITOR'S REPORT (if any):

COMMENTS ON BALANCE SHEET:

Appendix XI - Cont'd
Schedule A-1

	AUDITOR			YEAR-END
LIABILITIES & CAPITAL	Year-End	Year-End	Interim	Proforma
CURRENT LIABILITIES				
Bank Loans				
Accounts Payable				
RoyNat - Current				
TOTAL CURRENT LIABILITIES				
DEFERRED LIABILITIES				
RoyNat Int.Rate %				
Int.Rate %				
Int.Rate %				
TOTAL DEFERRED LIABILITIES				
SHAREHOLDER'S EQUITY				
Loans to be postponed				
Preferred				
Common				
Surplus - earned				
Surplus - other				
TOTAL EQUITY				
TOTAL				

APPENDIX XII

SCHEDULE A - 2

RN 55
A-2

COMPARATIVE PROFIT AND LOSS FIGURES:
APPLICANT, SUBSIDIARY, GUARANTOR COMPANIES
(Figures to nearest $1,000)

NAME OF COMPANY:

Latest Interim & Year Ends - Dates	Gross Revenue	Tax	Depre-ciation	Profit	Cash Flow
Earliest Year-End					
Latest Year-End					
Interim					
FORECAST					

PROJECTED FUTURE CAPITAL EXPENDITURE REQUIREMENTS: (excluding current financing proposal).

Asset	1st Year	2nd Year	3rd Year

PROJECTED CASH FLOW REQUIREMENTS:	Year 1	Year 2	Year 3	Year 4
RoyNat - Principal				
RoyNat Interest				
RoyNat - TOTAL				
PRINCIPAL - Other debt				
INTEREST - Other debt				
CAPITAL EXPENDITURES				
DIVIDENDS, REDEMPTIONS, etc.				
TOTAL CASH FLOW REQUIRED (before tax reduction due to interest expenses)				

COMMENTS: (Profit & Loss, Capital Expenditures, Debt-servicing Ability)

Interest	Dividends	Capital Expenditure	Shares & Surplus	Shareholder Loans	Working Capital
4th Year		5th Year			
Year 5	Year 6	Year 7	Year 8	Year 9	Year 10

APPENDIX XIII

RN 55
A-3

SCHEDULE A-3

PERSONAL STATEMENTS OF GUARANTORS
(figures to nearest $1,000)

Name of Applicant Company:
Name of Guarantor:
Address:
Date of Statement Held:
Source of Statement:

ASSETS		LIABILITIES & NET WORTH	
LIQUID ASSETS		CURRENT LIABILITIES	
Cash		Bank Loan	
Receivables		Payables	
Marketable Securities			
TOTAL	$_____	TOTAL	$_____
OTHER ASSETS		OTHER LIABILITIES	
Investment in Applicant Company			
		Net Worth	
TOTAL	$_____	TOTAL	$_____

Net Worth Outside Applicant Company $

Life Insurance Carried: $

Contingent Liabilities and Assets Pledged:

COMMENTS: (Investment Officer's Assessment)

Appendix XIII - Cont'd
Schedule A-3

Name of Applicant Company:
Name of Guarantor:
Address:
Date of Statement Held:
Source of Statement:

ASSETS		LIABILITIES & NET WORTH	
LIQUID ASSETS		CURRENT LIABILITIES	
Cash		Bank Loan	
Receivables		Payables	
Marketable Securities			
TOTAL	$_____	TOTAL	$_____
OTHER ASSETS		OTHER LIABILITIES	
Investment in Applicant Company			
TOTAL	$_____	TOTAL	$_____

Net Worth Outside Applicant Company: $

Life Insurance Carried: $

Contingent Liabilities and Assets Pledged:

COMMENTS: (Investment Officer's Assessment)

APPENDIX XIV

SCHEDULE A-4

REPORTS ON APPLICANT COMPANY AND GUARANTORS

SHAREHOLDER BANK or TRUST COMPANY:

Manager:

Comments:

SUPERVISOR:

Comments:

OTHER BANK REPORTS - APPLICANT & GUARANTORS:

EXISTING BANK LINE OF CREDIT: $

Security Pledged:

DUN & BRADSTREET and/or MERCANTILE AGENCY:

(Payment record, Fires, Financial Difficulties, Reputation, etc.

OTHER SOURCES:

PROFESSIONAL ADVISORS to APPLICANT and REPUTATION THEREOF

AUDITOR:

Comments:

SOLICITOR:

Comments:

NOTARY:

Comments:

CONSULTANT:

Comments:

If a Feasibility Report has been prepared for Applicant's account, attach one copy.
Explain why the Report was prepared and comment on the person or firm who prepared it:

APPENDIX XV

RN 55
B-1

SCHEDULE B-1

Date of Figures

FIXED ASSET SECURITY AND VALUATIONS THEREOF - APPLICANT, SUBSIDIARY, GUARANTOR COMPANIES
(Separate sheet for each, figures to nearest $1,000)

LAND & BUILDINGS NAME OF COMPANY:

LOCATION	DESCRIPTION	Book Value or Projected Cost
	TOTALS	

If buildings are located on leased land, forward copies of all leases to Head Office with the Summary. If leases are not available, include a detailed description of the terms of all leases.

MACHINERY, EQUIPMENT, ROLLING STOCK, OTHER FIXED ASSETS

LOCATION	DESCRIPTION	Cost	Depreciation
	TOTALS		

COMMENTS - Appraisers:
(Reputation, Date, Purpose of Appraisal)

COMMENTS:
(Charges Prior to RoyNat: Repayment terms, held by whom, interest rates, reason for not refinancing through RoyNat)

Would the proposed security be eligible under Section 63-1(H) of the Canadian and British Insurance Companies Act?

COMMENTS:
(Security valuations, Terms of leases, etc.)

Established Current Market Value	Established Forced Sale Value	Municipal Valuation	Name of C.M.V. Appraiser	Charges prior to RoyNat

Book Value or Projected Cost	Established Current Market Value	Established Forced Sale Value	Name of CMV Appraiser	Chargees prior to RoyNat

APPENDIX XVI

SCHEDULE B-2

RN 55
B-2

VALUATION OF SECURITY OTHER THAN FIXED ASSETS -
APPLICANT, SUBSIDIARY, GUARANTOR COMPANIES
(Figures to nearest $1,000)

NAME OF APPLICANT COMPANY:

GUARANTEES TO BE PROVIDED
(if statements are not attached in Schedules A, explain below)

NAMES	Relationship to Applicant Company	Amount and type of Guarantee

LIFE INSURANCE

ON LIFE OF	Relationship to Applicant Company	Amount of Insurance

INSURANCE TO BE LODGED OR EVIDENCE TO BE OBTAINED THEREOF
(check below with an X if considered necessary).

NORMALLY LODGED

FIRE: Extended coverages on buildings, machinery, equipment		
BOILER: Direct damage		
BUSINESS INTERRUPTION:		
AUTOMOBILE: Public Liabilities, Public Damages, Collision, Fire, Theft		
MARINE:		
THEFT: Machinery, Equipment		
OTHER:		

OTHER SECURITY TO BE PROVIDED -
Assignment of Tenant's Leases, Contracts, etc.

COMMENTS:

Established Worth Outside Applicant Company	Assets Pledged in Support of Guarantee

Type of Policy Term or Otherwise	Present C.S.V. (if any)	Owner of Policy

NORMALLY EVIDENCE OBTAINED THEREOF

PUBLIC LIABILITY, PROPERTY DAMAGE: - Operations	
PRODUCTS LIABILITY:	
TENANT'S LEGAL LIABILITY :	
EMPLOYEE'S FIDELITY BOND :	
PROTECTION & INDEMNITY: Vessels	
OTHER:	

APPENDIX XVII

RN 55
B-3

SCHEDULE B-3

CONDITIONS OF FINANCING - APPLICANT

NAME OF COMPANY

1. UNDERLYING CONDITIONS

(a) Financial Statements to be provided as follows by Applicant, Subsidiaries, Guarantors, etc.

Name of Companies or Individuals	Annual Audited -Date	Semi-Annual -Date	Other - Dates

(b) Capital Expenditures to be limited to $ per annum without our prior consent.

(c) Limits re Dividends and Redemptions: Common Dividends $ Preferred Dividends Redemption of Preferred

(d) Limits re Salary and Bonuses Payable to Shareholders: Names: $

(e) Postponement of Outside Obligations:

(f) Limits re Interest on Outside Obligations:

(g) Working Capital to be Maintained at a Minimum of $ or Ratio of

(h) No Loans, Investments, Guarantees

(i)

2. CONTINGENT CONDITIONS: (infusion of additional capital, bank lines of credit, management contracts, land leases, postponements, sale of assets, satisfactory plans, specifications, tenders, performance bonds, statements before disbursement, licenses, etc.)

APPENDIX XVIII

RN 55
A-5

SCHEDULE A-5

INFORMATION REQUIRED WHEN EQUITY PARTICIPATION RECOMMENDED

NAME OF COMPANY

SHARE CAPITAL

Class	Authorized No.	Authorized Amount	No.	Amount	Book Value	Quoted Market Price

Comments:

1. Have the shares of the Company been sold publicly?
   Are shares quoted on an exchange?
   Traded over-the-counter?
   (attach copy of prospectus where applicable)

2. Attach copies of Letters Patent and Supplementary Letters Patent or Memorandum of Association and Amendments thereto.

3. Have the principals discussed the possibility of selling securities publicly some time in the future? (Elaborate)

4. Particulars of Major Share Sales During Last Two Years - Public or Private.

Class	Date	No. of Shares	Price or Consideration

6. Dividend Policy (last 5 years if possible)

Preferred	Year	Dividend/ Share	Arrears	Comments

7. Are there shares reserved to satisfy options or conversion privileges?

INCORPORATED OR TO BE INCORPORATED UNDER THE LAWS OF

	SHARE OWNERSHIP				
	% voting held		% non-voting held		Loans to
Names	Class:	Class:	Class:	Class:	Company

5. Details on recent offers or anticipated offers to purchase the Company:

Common	Year	Dividend/ Share	Comments on Policy

(State particulars, individuals, prices, terms, etc.

APPENDIX XIX

6-65 RN 141

COMPANY YEAR END _____ ROYNAT LTD. DISTRICT OFFICE _____

INVESTMENT REVIEW

For ____ months ended _____ 19 ____

NAME:

BUSINESS:

AUTHORIZED - Bonds: DISB: O/S
Inc. Bonds:
Pfd. Shares:

ARREARS:

REPAYMENT TERMS: $ per year

PROFIT AND LOSS: (000)

Period	Sales	Gross Profit	Gross %	Dep'n	Net Profit After Tax	Cash Flow
____mos.to_____19___						
____mos.to_____19___						
____mos.to_____19___						
____mos.to_____19___						
____mos.to_____19___						

BALANCE SHEET: (000)	19___	19___	19___
Current Assets			
Current Liabilities			
Working Capital & Ratio			
Bank Borrowings			
Other Long Term Debt			
Equity & Shareholders Loans			
Net Fixed Assets			

UNDERLYING CONDITIONS:	ACTUAL	LIMIT
Working Capital		
Capital Expenditures		
Dividends		
Salaries		
Loans Postponed		
Other Debt		
Other (Specify)		

EQUITY: Check if RoyNat holds: ( ) Option, ( ) Convertible Pfd., ( ) Common
Date of Exercise or Conversion:

CAPITALIZATION: (No. of issued shares)	Present	At Authorization
Preferred:		
Common:		

SECURITY: (Changes or recommendations)

AUDIT REPORTS:

POSSIBLE FUTURE INVESTMENT:

COMMENTS & CONCLUSIONS:

PREPARED BY:_____ APPROVED BY:_____ REVIEWED BY:_____
Dist. Mgr. Head Office

DATE: _____19____. LAST PLANT VISIT:_____

Credit Application — Industrial

From: _____ Telephone _____

_____

(Address) (City) (Province)

Registered under the Companies Act of _____ on _____

The company commenced business _____

Products or services _____

_____

_____

Market served _____

_____

Type of suppliers _____

_____

Type of customers _____

_____

Board of Directors

Name	Participation	Profession	Address
_____	_____ %	_____	_____
_____	_____ %	_____	_____
_____	_____ %	_____	_____
_____	_____ %	_____	_____
_____	_____ %	_____	_____

Key Personnel

Name	Title	Age	Years of Service	Education
_____	_____	_____	_____	_____
_____	_____	_____	_____	_____
_____	_____	_____	_____	_____
_____	_____	_____	_____	_____
_____	_____	_____	_____	_____
_____	_____	_____	_____	_____
_____	_____	_____	_____	_____

Purpose of Loan _____

_____

_____

_____

_____

_____

_____

_____

_____

_____

_____

_____

_____

_____

Cost of the proposed project		Sources of funds	
Cost of Land	$	Owners' cash investment	$
Building	$	Laurentide	$
Plant and Equipment	$	Others (Explain)	$
Vehicles	$		$
Working Capital	$		$
	$		$
Total	$	Total	$

Operating results for the last 5 years.

Year ended	Gross Sales or Gross Revenue	Operating profit before taxes and depreciation	Depreciation	Taxes	Net Profit

	Name	Address
Bankers		
Auditors		
Solicitors		
Insurance Agents		

Present obligations of the company:

Creditor	Present out-standing balance	Security pledged	Monthly payment	Annual payments

Other information:

The information furnished in this application form for term financing is given for the purpose of obtaining from the amount indicated here for the purpose explained.

_____ _____ 19____. _____

Title

FINANCIAL STATEMENT

AS AT _____ 19 _____

NAME _____ ADDRESS _____

(If Applicant is a company/partnership complete following)

Principal's Name	Address	Phone	Position	Percentage Ownership
1.				
2.				
3.				
4.				

CURRENT ASSETS

Cash on Hand $ _____

Cash on Deposit $ _____

Accts. Receivable $ _____ $ _____

Notes Receivable $ _____ $ _____

Inventory

_____ $ _____

_____ $ _____

_____ $ _____

List Saleable Securities at Market Value

_____ $ _____

_____ $ _____

_____ $ _____

Cash Surrender Value

Life Insurance $ _____

Other Current Assets (Describe)

_____ $ _____

_____ $ _____

_____ $ _____

_____ $ _____

Total Current Assets $ _____

CURRENT LIABILITIES

Bank Overdraft $ _____

Bank Loan $ _____

Accounts Payable $ _____

Other Current Liabilities (Describe)

_____ $ _____

_____ $ _____

_____ $ _____

_____ $ _____

_____ $ _____

_____ $ _____

Amount owing on Income Taxes $ _____

Total Current Liabilities $ _____

OTHER ASSETS

Premises $ _____

Other Real Estate (Give Particulars) $ _____

Other Fixed Assets $ _____

Total Assets $ _____

OTHER LIABILITIES

Mortgage on Premises $ _____

Mortgage on Other Real Estate $ _____

Other Non-Current Liabilities $ _____

Total Liabilities $ _____

I/we hereby certify that the statement of assets and liabilities, given above, and all other information given on the reverse side hereof, are true and accurate to the best of my/our knowledge and belief and are taken from my/our books as at the date shown above.

Witness: _____ Signature _____

Signed this _____ day of _____ 19 _____

(Use Separate form for each partner)

For Credit Dept. use only _____

_____

_____

APPENDIX XXI - Cont'd

CREDIT STATEMENT

DATE _____

PURCHASERS FULL NAME 1.	AGE	☐ MARRIED ☐ SINGLE ☐ DIV. OR WID.	WIFES FIRST NAME	NO. CHILDREN	
HOME ADDRESS 2.	HOW LONG PHONE	☐ OWN HOME ☐ RENT	MO. PMT. OR RENT	HOW LONG IN CITY	
LANDLORD OR MORTGAGE HOLDER 3.	ADDRESS			PHONE	
FORMER ADDRESS 4.	HOW LONG	FORMER LANDLORD OR MORTGAGE HOLDER AND ADDRESS		PHONE	
EMPLOYED BY 5.	ADDRESS		PHONE	MONTHLY SALARY	
OCCUPATION (WORKS AS) 6.	HOW LONG	FORMER EMPLOYER	HOW LONG	OTHER INCOME AND SOURCE	
WIFE WORKS AS 7.	HOW LONG	WIFE EMPLOYED BY	BUSINESS ADDRESS & PHONE	MONTHLY SALARY	
BANK-BRANCH & ADDRESS 8.	☐ CURRENT ☐ SAVINGS	AUTO-YEAR, MAKE & LIC. NO.		OWN FURNITURE? YES ☐ NO ☐	
NAME TWO RELATIVES NOT LIVING WITH PURCHASER (IN VICINITY) 9.	ADDRESS		PHONE	HOW RELATED	
10.					
TRADE REFERENCES 11. 1.	ADDRESS			PHONE	
2.					
3.					
4.					

OUTSTANDING OBLIGATIONS

(LIST ALL MORTGAGES, INSTALMENT ACCOUNTS AND OTHER OBLIGATIONS)

TO WHOM INDEBTED	SECURITY PLEDGED	DESCRIBE DEBTS AGREEMENTS FOR SALE MORTGAGES-BANK LOANS-OVERDRAFTS	DATE INCURRED	ORIGINAL AMOUNT	PRESENT BALANCE	MONTHLY PAYMENTS	DATE OF LAST PAYMENT

DETAILS OF PROPERTY TO BE IMPROVED

ADDRESS (STREET, CITY, COUNTY, PROV.) (IF SAME AS ADDRESS OF APPLICANT, ENTER 'SAME')			TYPE (HOUSE, APT., STORE, FARM, ETC.)
PROPERTY IS (FILL IN 1 OR 2)	OWNED BY (GIVE NAME OF TITLEHOLDER) 1	DATE PURCHASED	PRICE PAID $
	BEING BOUGHT ON CONTRACT (GIVE NAME OF CONTRACT BUYER) 2	NAME OF TITLEHOLDER	PRICE PAID $

LEGAL DESCRIPTION

ARE PROPERTY TAXES PAID TO DATE? ☐ YES ☐ NO (IF 'NO', GIVE DETAILS)			AMOUNT OF TAXES
INSURANCE AGENT AND ADDRESS	AMOUNT OF INSURANCE	POLICY NUMBER	INSURANCE PAID TO DATE YES ☐ NO ☐

IMPROVEMENTS TO BE MADE (ITEMIZE AND LIST ESTIMATED COST) $

$

NAME OF CONTRACTOR

TOTAL COST OF INSTALLATION $ TOTAL COST OF EQUIPMENT $	DOWN PAYMENT $	BALANCE TO BE FINANCED $	FINANCE CHARGE $	TIME BALANCE $	NO. OF MONTHS REQUESTED

I HAVE REASONABLY INVESTIGATED THE ABOVE INFORMATION AND TO THE BEST OF MY KNOWLEDGE CERTIFY IT TO BE TRUE.

_____
VENDOR

FOR THE PURPOSE OF OBTAINING CREDIT FOR THE LABOR & MATERIALS INSTALLED IN THE PREMISES DESCRIBED ABOVE I/WE, THE UNDERSIGNED APPLICANT(S) DECLARE THE ABOVE STATEMENTS TO BE TRUE.

_____
APPLICANT

_____
APPLICANT

SF 3425 1-69

COMPARATIVE STATEMENT OF FINANCIAL CONDITION

APPENDIX XXII

NAME _____ LOCATION _____

AUDITORS _____ AMOUNTS IN _____ CURRENCY

	DATE (MO./DAY/YR.)											
LINE	DESCRIPTION	KEY	AMOUNT	KEY	AMOUNT	KEY	AMOUNT	KEY	AMOUNT	KEY	AMOUNT	KEY	AMOUNT
1	Current Assets												
2	Current Liabilities												
3	Working Capital												
4	Long Term Debt												
5	Tangible Net Worth												
6	Net Sales												
7	Net Profit												
8	ASSETS												
9	Cash												
10	Marketable Securities												
11	Receivables												
12	Inventory												
13													
14													
15	Prepaid Expenses												
16	Total Current Assets												
17	Net Fixed Assets												
18	Inv. & Adv.–Subs. & Affiliates												
19													
20													
21	Intangibles												
22	TOTAL ASSETS												
23	LIABILITIES												
24	Notes Payable–Banks												
25	Accounts Payable												
26	Income Taxes												
27	Accruals												
28													
29													
30	Total Current Liabilities												
31													
32													
33	Total Long Term Debt												
34													
35													
36	Total Subordinated Long Term Debt												
37													
38													
39	Total L.T. Liabilities & Reserves												
40	Preferred Stock												
41	Common Stock												
42	Capital Surplus (Capital Res.)												
43	Earned Surplus (Undivided Profits)												
44													
45	TOTAL LIABILITIES & NET WORTH												
46	Lease Rentals												
47	Contingent Liabilities												
48	INVENTORY – Finished Goods												
49	INVENTORY – Work in Process												
50	INVENTORY – Raw Materials, etc.												
51	FIXED ASSETS – Land and Buildings												
52	FIXED ASSETS – Machinery, Equipment, etc.												
53	FIXED ASSETS – Gross Fixed Assets												
54	FIXED ASSETS – Depreciation Reserve												

OVER

APPENDIX XXII - Cont'd

AMOUNTS IN

	DATE												
	NO. OF MONTHS												
LINE	DESCRIPTION	KEY	AMOUNT	KEY	AMOUNT	KEY	AMOUNT	KEY	AMOUNT	KEY	AMOUNT	KEY	AMOUNT
55	Net Sales												
56	Cost Of Goods Sold												
57	Gross Operating Profit												
58	Selling, General, Admin. Expense												
59	Operating Profit Before Depreciation												
60	Operating Margin—%												
61	Depreciation & Other Non Cash Charges												
62	Other Income												
63	Other Expense												
64	Profit Before Interest and Taxes												
65	Interest and Other Fixed Charges												
66	Profit Before Income Taxes												
67	Income Taxes												
68	Extraordinary Charges												
69	Net Profit												
70	Dividend Withdrawals (Cash)												
71	Transferred to Surplus												
72	Other Credits to Surplus												
73	Debits to Surplus												
74	Net Change in Surplus (Undivided Profits)												
75	RATIOS												
76	Current Ratio												
77	L.T. Debt As % Total Capitalization												
78	Average Collections—Days												
79	Days Inventory on Hand												
80	Debt Burden Coverage												
81	Net Profit as % of Sales												
82	Net Profit as % of Net Worth												
83	Working Capital as % of Sales												
84	SOURCES OF FUNDS												
85	Net Profit After Taxes												
86	Depreciation & Depletion												
87	Other Non-Cash Charges												
88	SUB-TOTAL CASH FLOW												
89													
90													
91													
92	TOTAL SOURCES												
93	APPLICATION OF FUNDS												
94	Reduction in Long Term Debt												
95	Capital Expenditures												
96	Dividends												
97													
98													
99													
100	TOTAL APPLICATIONS												
101	NET CHANGE IN WORKING CAPITAL												

APPENDIX XXIII

A NOTE ON INCOME DETERMINATION

Revenues and Expenses, Gains and Losses

The discussion of income determination is incomplete without an examination of the recognition and measurement of revenue, expenses, gains and losses. These are basic to the accountant's conventional approach to income determination. Within the broad framework of generally accepted accounting principles, various alternatives are available for recognizing and measuring revenues, expenses, gains and losses. The validity and reasonableness of each alternative can rarely be justified by appeal to fundamental logic, but to general acceptance in practice. These problems are briefly discussed from the standpoint of creditors, and the relevance of these problems to the decision-making process of creditors. In the light of this discussion an alternative which is most appropriate to creditors will be chosen. The discussion of the individual items of revenues, expenses, gains and losses follows this paragraph.

Revenue is the principal factor giving rise to income. There are three considerations in the discussion of revenue: (1) the nature of revenue, (2) the recognition of revenue, and (3) the measurement of revenue.

Revenue is the inflow of resources from customers or patrons in exchange for either the commodities or services of the business.[1] The Committee on Concepts and Standards of the American Accounting Association states in the 1957 Statement: "Revenue, the principal source of realized net income, is the monetary expression of the aggregate of products or services transferred by an enterprise to its customers, during a period of time."[2] It appears implicit that revenue arises from sale of the enterprise's products. Elsewhere revenue is stated to have been earned as the result of the entire process of production, though it is not recognized and measured prior to the completion and disposition of the product. Reluctance to recognize revenue before the completion of production arises from the fact that the amount remains uncertain until the process is completed and the product transferred to the customer.[3] In this respect, Sprouse and Moonitz hold a more liberal view and state: "Revenue is the increase in the net assets of an enterprise as a result of the production or delivery of goods and the rendering of services."[4] They go on to say that "... revenue of an enterprise during a period of time represents a measurement of the exchange value of the products (goods and services) of that enterprise during that period."[5] Revenue is earned when the product has acquired exchange value. Actual exchange is not necessary, however. While measurement of revenue at this stage poses

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[1] Paton and Littleton, op. cit., p. 47.

[2] Op. cit., p. 5.

[3] Paton and Littleton, op. cit., p. 49.

[4] Sprouse and Moonitz, op. cit., p. 46.

[5] Ibid.

a serious problem, it is hardly deniable that revenue has been earned. The existence of an exchange value and the measurement of it are two distinct problems. The inability to measure value is not a valid justification for ignoring the existence of value. A positive step is to seek a solution to the measurement problem rather than to ignore the existence of value altogether.[6]

The satisfaction of creditors' claims must eventually come from the exchange value of an enterprise's assets at any point of time from the future income in the form of assets which can be generated by those assets. Short-term creditors are interested in the probable future cash flow and the availability of exchange value which can be realized by conversion of those assets. Recognizing revenue at the point of sale in fact does not give rise to cash if the value received in exchange is in the form of monetary claims rather than cash. Recognizing revenue at this point does not alter the presence or the amount of exchange value. Only a change in the assets representing exchange value has taken place. The exchange value of a dollar in the bank is the same as that of a dollar's worth of inventory in the warehouse. The difference is one being more liquid than the other. The economic values of both are identical. Long-term creditors are also interested in the exchange value of the firm. Therefore the exchange value is more important to long-term creditors. After all, production will have been completed and sales taken place long before the long-term

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[6] Cf. Reid K. Storey, "Cash Movements and Periodic Income Determination," The Accounting Review, Vol. XXXV, No. 3 (July, 1960), pp. 449-454, and A.B. Carson, "Cash Movement: The Heart of Income Measurement," The Accounting Review, Vol. XL, No. 2 (April, 1965), pp. 334-337.

debts of the enterprise fall due. Therefore, to creditors the increase in exchange value (or assets) is revenue.

The next problem is when to recognize revenue. In general, revenue is earned as a result of a series of economic activities. As creditors (long-term and short-term) must depend on the enterprise's exchange value for ultimate satisfaction of their claims, it is justifiable to recognize revenue at the point of time when the increase in exchange value of the enterprise has emerged from its normal operations. Short-term creditors need current exchange value to satisfy their claims. Long-term creditors have to depend on the existence of exchange value in the future to satisfy their claims. Revenues which give rise to income will have long been realized before the long-term debts fall due.

The usual practice is to recognize revenue at the point of realization, which, "according to dominant view, is evidenced by cash receipts, or receivables, or new liquid assets. Implicit here are two tests: (1) conversion through legal sale or similar process; (2) validation through the acquisition of liquid assets."[7] This view may be overly conservative and is hardly justifiable. Take for example a manufacturing concern. Revenue, under the realization criterion, will be recognized at the point of sale. This will result in the understatement of income and ignoring the existence of certain exchange value, amounting to a misrepresentation of facts.

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7 Paton and Littleton, op. cit., p. 49. See also AAA 1964 Concepts and Standards Research Study Committee, The Realization Concept, "The Realization Concept," The Accounting Review, Vol. XXXIX, No. 3, July 1964, pp. 312-322.

Sprouse and Moonitz suggest that "income should be identified with the period during which the major economic activities necessary to the creation and disposition of services have been accomplished, provided objective measurements of the results of those activities are available. These two conditions, that is, accomplishment of major economic activity and objectivity of measurement, are fulfilled at different stages of activity in different cases, sometimes as late as time of delivery of a product or the performance of a service, in other cases, at an earlier point of time".[8] This is a superior criterion over realization and is akin to what we have in mind. Another writer has proposed a critical function theory of revenue recognition.[9] This theory, taking cognizance of revenue being earned in an entire series of activity, would have us recognize revenue after the critical function in the series of activities has been performed. This theory again lends support to the position we have taken. Our position then seems valid and justified. There is no doubt that honest differences of opinion will be present as to what is the major economic activity, or critical function in the entire series of activities. Of necessity, the accountant should exercise his professional judgment in each individual case.[10]

The measure of revenue is closely related to the nature and recognition of revenue. We state that for our purpose revenue is the

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[8] Sprouse and Moonitz, op. cit., p. 47

[9] John H. Myers, "The Critical Event and Recognition of Net Profit," The Accounting Review, Vol. XXXIV, No. 4 (October, 1959), pp. 528-532.

[10] Cf. Hendriksen, op. cit., p. 133.

emergence of exchange value. It follows that the proper measure of revenue is the magnitude of the increase of the enterprise exchange value, resulting from the enterprise's normal operations. Revenue is best expressed by the price-aggregate at the point of sale, which is typical of most merchandising concerns. Where cash is the consideration in the exchange, no problem exists for we state our measurements in terms of money. Where the value received in exchange is a claim against money at some future date, it is the amount to be eventually received in cash, with due allowance being made for any possible shrinkage in probable cash receipts, resulting from cash discounts and bad debt losses, i.e. the net realizable value. The discounted cash flow approach is not recommended. In a normal circumstance, the waiting time is short and the discount element is small. The choice of a discount rate is also troublesome and subjective.

In the absence of an arm's length transaction, revenue may be measured by the increase in the enterprise's exchange value. Where a market exists for the enterprise's product, this poses no problem. Revenue may be measured by reference to the market, even though sales have not taken place. Revenue should still be recognized and measured even if ready external guides are not available; an estimate is acceptable if need be.

We may now discuss the recognition of revenue in specific situations[11] against the criterion we propose, and examine its suitability in each case for long-term analyses by creditors.

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[11] Cf. Ibid., p. 136-141.

Accretion is the increase in the exchange values arising from natural growth or an aging process. It is usually associated with growing timber, nursery stock and livestock, and the aging of liquors and wines. Accretion is similar to an entire process of production, and therefore our criterion for recognizing revenue is applicable. We reiterate that short-term creditors are interested less in income determination than cash flow, and long-term creditors are interested in earning revenue and increase in exchange value rather than realization. Recognizing revenue during the accretion process is perfectly acceptable. In point of fact, long-term creditors can well expect that the accretion process will culminate with the conversion of the assets in question into cash before their claims become repayable. Having regard to the nature of long-term debts, this kind of expectation is not improbable. The recognition of revenue arising from accretion is conceptually sound and has the support of economic rationale.

Much of the reluctance to recognize revenue during accretion stems from the practical difficulty of measuring it objectively. But this practical difficulty is not a justification for ignoring the earnings of revenue and increase in the interprise exchange values. We can measure revenue during accretion by reference to comparative inventory valuations. The measurement may be indeed crude, and does not have the kind of objectivity as in the case of an exchange transaction. Estimation is acceptable, however, if it needs to be.

Revenue may also be recognized at the completion of production. This is, however, not relevant to income measurement for the

purpose of creditors. It is suggested that revenue be recognized before completion of production for reasons similar to those advanced earlier.

Uncertainties of the selling price and the additional costs of selling and delivering have often been cited to justify deferring the recognition of revenue to the completion of production. This justification is, however, weak. The estimation of the selling price and cost of selling is no more accurate at the completion of production than during production. They affect expenses rather than revenues. The criteria, (a) the existence of a ready market, and (b) determinable and stable market price applicable to recognizing revenue at the completion of production, are also applicable to recognizing revenue during production. The deferment of recognizing revenue till the completion of production is indeed untenable.

It is more usual for businesses to recognize revenue <u>at the point of sale or realization</u>. The AAA states:

> "The essential meaning of realization is that a change in an asset or liability has become sufficiently definite and objective to warrant recognition in the accounts. The recognition may rest on an exchange transaction between independent parties, or on established trade practices, or on the terms of a contract performance of which is considered to be virtually certain.[12]

Paton and Littleton state:

> "It is evidenced by cash receipts or receivables, or other new liquid assets. Implicit here are two tests:

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[12] Accounting and Reporting Standards for Corporate Financial Statements, 1957 Revision, <u>op. cit.</u>, p. 3.

(1) Conversion through legal sale or similar process;
(2) Validation through the acquisition of liquid assets." [12A]

Realization is a valid and plausible criterion for most merchandising businesses which have as their principal functions buying and selling, with the latter being more critical. Revenue cannot arise from buying alone. Increase in exchange values results from success in persuading customers to buy and to pay more than the purchase price. To persuade customers to buy is a selling function. Therefore, selling is the critical event from which revenues arise. Therefore, for merchandising and other concerns whose main function is selling, recognizing revenue at the point of sale is proper.

In some lines of business revenue is recognized subsequent to sale. This approach is usually justified because (1) the collection of variables is hazardous, and (2) considerable collection expenses may be involved, and cannot be estimated with any degree of accuracy. Instalment sales are such examples. Having regard to the interest of creditors, this approach is overly conservative, and fails to represent economic facts correctly. Instalment sales are usually associated with merchandising of consumer durables. The selling function is more critical than the financing function, which is part of instalment sales. Revenue should be recognized when increase of exchange values has emerged. The least that must be done is to recognize revenue at the point of sale.

The two grounds of justification for deferring recognition of revenue in instalment sales are in fact weak. Where collection is

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[12A] Paton and Littleton, op. cit., p. 49.

hazardous, due allowance for bad debts can be made. Collection expenses are deductions against revenue, and do not determine the flow of revenue. It is also argued that revenue recognition be deferred to effect a proper matching of revenues and expenses. This is less important in the long run when collections and collection expenses will match by themselves even when recognized at the point of sale; expenses are decrease in exchange values and are recognized in the periods in which they are applied to the normal operations of the business. A further argument against deferment of recognizing revenue in instalment sales is that accounts receivable in instalment sales may be factored without recourse. Revenue is presumably recognized at this point. What has happened is that the financing function has been shifted to the factor. But this occurrence does not alter the fact that sales have been made on the instalment basis. It would seem that the deferment of recognizing revenue is dependent upon whether the seller also takes on the financing function rather than the selling function. We contend that the selling function is primary, and the financing function is secondary in instalment sales. Revenue is properly recognized at the point of sales rather than collection. Equally significant is the fact that receivable on instalment sales will have been collected long before the long-term debts fall due. Deferment of collections on instalment sales really does not worry long-term creditors whose interest in income determination centres on the long-term debt-paying ability of the enterprise.

Expenses result in the reduction of the exchange values of an enterprise and follow from the consumption of the enterprise's

economic resources through the normal operations of the enterprise. The 1957 Statement of the American Accounting Association defines "expense (as) the expired cost directly or indirectly related to a given fiscal period, of the flow of goods or services into the market and of related operations.[13] Sprouse and Moonitz define expense as "The decrease in net assets as a result of the use of economic services in the creation of revenue (in the normal operations of the enterprise)."[14] The emphasis is on the use of economic resources to produce revenue in the normal operations of the enterprise. This concept of expense is satisfactory to creditors whose interest is focused on the size of the enterprise's exchange values and the probable flow of revenue from these exchange values in the future. Expenses, as deductions against revenues, are decreases in exchange values essential and incidental to the normal operations of the enterprise.

Expenses are measured by the magnitude of the decrease in exchange values in terms of current value such as replacement cost. This measurement is consistent with the interest of creditors. Furthermore, income measurement interests only long-term creditors, whose claims fall due in the distant future. Capital capacity must be maintained intact to ensure survival of the enterprise and its continual revenue flow. Decrease in exchange values must be made good before income can be considered to have been earned. Replacement cost is proper.

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[13] Op. Cit., p. 6

[14] Sprouse and Moonitz, op. cit., p. 49.

Consistent with the current operating concept of accounting income, expenses are properly recognized in the periods in which the decrease of exchange values emerges, and relate to the normal operations of the enterprise. These items of expenses can be reasonably expected to recur in the enterprise's normal operations because we assume that the enterprise will continue to operate. Creditors are interested in the magnitude of these items of expenses as a basis for predicting the probable future deductions against revenues.

In determining business income, two major items of expenses, cost of goods sold and depreciation,deserve special attention. Each of them constitutes a significant proportion of an enterprise's total expenses in any given period. Several approaches to the measurement of these two items of expenses are available. The choice of an approach to measuring these two items has a direct effect on both the measurement of periodic income and asset valuations.

Cost of goods sold[15] is the total outflow of exchange values associated with the outflow of goods from the enterprise in its normal course of earning revenue. The measurement of cost of goods sold involves inventory valuation and the associating of this outflow of exchange values with revenue. The acceptable basis of inventory valuation include: (1) discounted money receipts; (2) current selling prices; (3) net realizable value; (4) historical cost; (5) current replacement cost; (6) realizable value less a normal markup; (7) lower cost or market; (8) standard cost; and (9) normal-stock valuation.

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[15] Cf. Hendrikson, op. cit., Ch. 10.

The common basis of associating cost of goods sold with revenues are product flow and cost flow. The most common methods of association include (1) specific identification; (2) average cost methods; (3) first-in, first-out; (4) normal-stock methods; (5) retail inventory methods; and (6) gross profit method. All these methods of cost association with revenue relate to historical cost. The principal weakness of historical cost is that it is irrelevant to the exchange value of the enterprise. Creditors are interested in the enterprise's total exchange values, and the probable flow of future revenues from this pool of exchange values in the future. As a basis of forecasting future revenue flow, revenue flows from the normal transactions of the enterprise are more relevant and important to creditors, especially long-term creditors. Historical cost is therefore irrelevant to inventory valuation and measurement of cost of sales from the standpoint of creditors, and may be ignored along with all methods of associating historical cost with revenue. The present value basis of valuation is too subjective to be of any practical use. The net realizable value basis is the best approximation of the exchange values of an enterprise's inventory, and has authoritative support.[16] It is a source of cash flow in the near future and is therefore of particular interest to short-term creditors, whose main interest is the enterprise's short-run debt-paying ability. However, certain shortcomings of this basis reveal themselves for closer analysis. The net realizable value basis implies liquidation of the inventory, and that

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[16] See Sprouse and Moonitz, op. cit., p. 27 and Accounting Research Bulletin No. 43, p. 34.

replacement of inventory will not be made. It amounts to liquidating the enterprise, and contradicts our going-concern premise. Further, the net realizable value basis recognizes revenue before the selling function has been performed, and is therefore a departure from our thesis that revenue arises from selling rather than from buying in a merchandising business. However, these shortcomings are not too critical. Short-term creditors' principal interest is in cash flow and funds flow. Their interest in income determination is incidental. Income determination should better serve the needs of long-term creditors. In the measurement of cost of sales, the choice of a basis of inventory valuation must be in favour of replacement cost rather than net realizable value.

Current replacement costs are basically historical costs but are closer to the enterprise's exchange values of inventory because replacement costs are stated in current terms. This basis also has popular authoritative support.[17] Conceptually, the current replacement cost basis satisfies the continuity premise. If an enterprise is to continue to operate, its exchange values of inventory must be replaced to maintain physical capital intact before income emerges. It permits the matching of outflow of exchange values with revenue, resulting from the current operations. It also makes possible the segregation of trading income applicable to the current period from the holding

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[17] See Edwards and Bell, op. cit., Sprouse and Moonitz, op. cit., p. 29; and Committee on Concepts and Standards, - Inventory Measurement, Supplementary Statement No. 2, The Accounting Review, Vol. XXXIX, No. 3, July, 1964, pp. 700-714.

gains and losses arising from price changes. This is important because our thesis is that the income from normal current operations is a better basis for predicting future income flow by long-term creditors. The application of the current replacement cost also eliminates the need for any assumption regarding the product flow or cost flow. Thus the application of FIFO, LIFO or weighted methods becomes unnecessary.[18]

If the prices of merchandise are stable over a period of time, to which the determination of income applies, holding gains or losses will not arise. The measurement of cost of sales and inventory valuation are relatively straightforward. If prices do not remain stable over the period, holding gains and losses emerge. Sales proceeds consist of two elements: (1) revenue from current normal operations -- selling; and (2) holding gains or losses which are realized. Unrealized holding gains or losses are tied up in the ending inventory. Having regard to our thesis that revenue from current normal operations is a better measure of income flows for forecasting future income flows, it seems desirable to segregate all holding gains or losses, realized and unrealized, from normal operating income. Such gains or losses are to be separately shown in the income statement or included in a surplus account. A method of accomplishing such segregations is illustrated as follows:

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[18] Hendrikson, op. cit., p. 255.

Opening inventory, January 1 - 10 units @ $5 (at current replacement cost)		$ 50
Purchased in May	- 10 units @ $6	60
Purchased in October	- 10 units @ $7	70
Sold during the year	- 20 units @ various prices	180
Ending inventory, December 31 (10 units at current replacement cost of $8 each)		80

Total number of units sold during the year = 20

Cost of goods sold (10 x $6 + 10 x $7) = 130

Realized holding gain (10 x $1 + 10 x $1) = 20

Unrealized holding gain (10 x $(8-7) = 10

A partial income statement thus appears:

Sales	=	$180
Cost of goods sold	=	130
Gross trading profit	=	$ 50

Realized and unrealized gains, suitably described, are shown either as separate items before the net trading income in the income statement or in surplus account. The ending inventory at current replacement cost is $80. There are two tacit assumptions in the foregoing illustration: (1) the price increases evenly over the year; and (2) the sales also spread evenly over the year. These assumptions need not be absolutely true, but they approximate to the truth in the long run. An ideal application of the current replacement cost basis is to adjust for inventory to current replacement cost before and after every sales transaction. This will accomplish the objective of more accurately segregating holding gains or losses from income from normal current operations, and a better measurement of cost of sales. But this is too troublesome in practice.

Depreciation[19] is another major item of expense whose measurement is a subject of dispute. Few people even agree on the nature of depreciation. One definition of depreciation is that it is a process of systematically allocating the original cost of the depreciable assets over its entire life. The AAA 1957 Statement defines depreciation as the decline in service potential of the asset by reference to its original cost. The 1963 AAA Committee on Concepts and Standards -- Long-Lived Assets also defines depreciation as decline in the current cost of restoring the service potential consumed during the period.

There are two basic problems in depreciation accounting: (1) the basis on which depreciation is to be charged, and (2) the method of changing depreciation for each period. The former is conceptual, and the latter is procedural. While both problems are important in a proper determination of periodic income, the former is more basic and the latter is technical and can be modified and refined to approach as closely as possible the desired objective.

The main concern over depreciation accounting is that depreciation charges may be inadequate, leading to overstatement of income, and dividends and taxes may be paid out of capital, resulting in the impairment of capital. Creditors are vitally concerned over this possibility. Very often long-lived assets are financed directly by long-term creditors. Long-term creditors expect to be repaid from

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[19] See Hendrikson, op. cit., Ch. XII.

the revenues flowing from these assets in the future. To ensure that future income flow will continue, capital must be maintained intact to make possible the enterprise's continuity. It follows, therefore, the proper basis of depreciation is replacement cost. Changing depreciation, according to the American Institute of Certified Public Accountants' definition of depreciation, leads to the recovery of original cost. Adopting the 1957 AAA definition leads to charging depreciation on a basis leading to recovery of original cost as in the case of adopting the AICPA definition. The 1963 AAA definition provides for the recovery of service potential in real terms and stresses on the maintenance of operating capacity or physical capital.

The main advantage of current replacement cost depreciation is that it permits a matching of current costs against current revenues consistent with the current net operating concept of income we advocate. Gains and losses arising from changes in the current values of assets can be segregated and reported separately. This provides a more meaningful measure of the relative efficiency of current operations, and a better basis for predicting future income flows by creditors.

Matching expenses against revenues is one of the tenets of accounting basic to the determination of periodic income. The usual premise is that a matching of revenues and expense results in a better measurement of income. Its application often leads to deferring the recognition of revenues and expenses. However, revenue may arise without incurring any expense, and rigid adherence to the matching principle may even lead to deferring the recognition of revenues and expenses

which should have been recognized. Even the matching concept is not without conceptual weakness. Revenue need not necessarily flow from an action incurring an expense, or vice versa. Expenses may be incurred without any revenue being obtained in the normal operations of the enterprise. Therefore all flows of exchange values should be recognized. Increase in the enterprise's exchange values resulting from the enterprise's normal operations is the proper basis for recognizing revenues. Otherwise, decrease in the enterprise's exchange values resulting from the enterprise's normal operations is the proper basis for recognizing expenses. In the normal course of events, a proper matching of revenues and expenses will automatically result. However, rigid adherence to the matching principle is not necessary or even desirable.

Gains and Losses

Gains are increases in net assets other than (a) those resulting from investment by owners or (b) those resulting from revenues. Gains may arise from net increase in asset valuations, a form of favourable settlement of debts. Losses are decreases in net assets, other than (a) those resulting from distributions to owners or (b) those resulting from expenses. Losses may be caused by a decrease in asset values arising from extraneous and exogeneous events causing the decrease of the enterprise's assets. Fire, floods, and lawsuit losses are common examples.

Gains and losses are non-recurring and do not relate to an enterprise's normal operations. Consistent with the objective of

creditors to base income determination on revenues and expenses relating to normal current operations only, gains and losses do not enter into periodic income determination. They are credits and charges to surplus accounts. This approach is logically consistent. Gains and losses are irregular and do not result from normal operations, and therefore they should not enter into periodic income determination which is to serve creditors as a predictive device.

Other Expenses, Amortizations and Write-offs

Other expenses essential to the normal operations of a business include salaries to employees, rent, interest expenses, general and miscellaneous expenses. These are paid in the period in which they arise. As these expenses are essential to the normal business operations, they are proper deductions against the period in which they arise. Whether or not they apply to the normal operations of the period is the basis for determining if they are properly deductible.

The amortization of prepaid expenses may raise some doubt. Rent and interest are proper charges against the normal business operations. Prepaid expenses are assets in every sense of the term. The prepayment of rent confers upon the enterprise the right to receive benefit from the use of the building facilities or machinery over the periods which the prepaid rent covers. Such prepayment is no different from placing a sum of money in the bank. Over time, amortization of prepaid expenses can be regarded as having paid out cash for expenses from the bank account.

Amortizations of goodwill and other intangibles should not enter periodic income determination. Their contributions to the results of current operations are very uncertain. Their association with current operations is negligible. Amortization charges are frequently arbitrarily determined by the management. Therefore they should not enter into period income determination which serves as a basis for predicting future income flows. To the extent that intangibles may have exchange values for the enterprise as a whole, they may be carried in the books of accounts. Intangibles must, however, be written off to earned surplus to take cognizance of the decrease in their exchange value.

Long-term creditors expect to be repaid from the income flowing from the normal operations of the enterprise. Those expectations are at best considered hopes, and cannot be relied upon absolutely. However, they must look to assets as the last line of protection for their interest should their expectations fail to materialize and the enterprise goes into liquidation.

Price-Level Changes and Income Determination

The general price level has been rising for several decades. This has led accountants and economists to fear that changes in the general price-level have rendered the measurement of business income incorrect and hence misleading. Rising price-level tends to result in the overstatement of business income and to paint a false picture of prosperity. As income is the basis of taxation and dividend distributions, overstatement of income may result in paying taxes and

dividends out of capital leading to impairment of productive capacity.

The possibility of overstating income as a consequence of changes in general price-level is of particular interest to long-term creditors. Income is a guide to future earning potential and long-term debt-paying ability. Furthermore, impairment of productive capacity may adversely affect future income flow.

However, the problem facing the creditors as arising from general price level changes is not too serious. In the model of income determination above current replacement cost has been proposed as the basis for valuing most assets and for income determination. The application of current replacement cost in asset valuation and income determination eliminates much of the distortions in income measurement resulting from general price-level changes.

Besides, all claims by creditors are measured by their face amounts in cash as at their maturity. These claims will be settled at their maturity in those cash amounts regardless of the changes in the purchasing power of money. Conceivably, creditors will suffer losses in purchasing power under rising prices. Adjustments for price-level movements in the income statements of the debtors will not, however, eliminate or lessen such losses of the creditors. The creditors must seek compensation for such losses through changes in their terms of credit.