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BY D. PAUL MUSSELMAN

I

One of the primary purposes of any system of accounts and reports is to record the resources, liabilities and operations of a given enterprise in such a manner as to disclose the various factors that contribute to the ultimate accomplishment or failure of its purpose and to measure and compare these separate causes in the common terms of dollars and cents.

If new factors enter in, the accountant must widen the scope of his analyses and exhibit their effects. To try to combine the new with the old in order to preserve the old forms is to destroy the value of the account for both. And yet this is being constantly done in accounting for merchandising enterprises which have adopted the instalment method of selling. New factors of prime importance relating to the accounts receivable have been introduced, but appropriate changes in accounting methods and forms of statements have not followed. Many firms continue to force their facts into the old forms used for cash-trading concerns with the result that statements not only fail to disclose the special information that interested persons need regarding this particular type of enterprise, but so combine unrelated factors that conclusions drawn from these statements may be dangerously misleading.

Instalment selling was formerly confined to high-priced goods whose identity was preserved, whose useful life, generally in some productive capacity, was relatively long, and which were sold, on the whole, to financially responsible purchasers. Such operations are generally accounted for on some plan of deferred profits with which we are not primarily concerned at this time. But within the last few years this method of selling has been extended

to the much wider field of so-called consumers' goods, and under conditions almost entirely opposite to those mentioned. With the controversy as to the right and wrong of this matter the accountant, as such, has nothing to do. He must recognize, however, that new conditions often call for new accounting information, and must revise his forms and methods accordingly.

It is with the needs of this new kind of enterprise that this article is especially concerned. And the fundamental mark of distinction which separates this kind of instalment selling from others is the multiplicity of small accounts. This is the principal condition of the problem which confronts the accountant from first to last. We presuppose a customers' ledger consisting of so many thousands of accounts, and involving so many tens of thousands of postings, that analysis for data affecting profit and loss is impossible as a matter of regular routine, even by the expedient of reasonable tests. Our necessity is for a method of treating these accounts in the mass and in such a manner as to furnish such special and peculiar information as managers and creditors of these enterprises require.

From the accounting viewpoint the most significant fact calling for recognition in the accounting system is that the function of financing has been joined to that of merchandising. This means that the element of *time* must be taken into consideration. While the accounts receivable of the non-instalment-trading concern are a part of its working capital, the accounts of the instalment house are only partly so. One of the practical effects of this condition (and one of the practical reasons demonstrating the above generalization that accounting methods must accommodate themselves to introductions of new factors) is that, unlike conditions in the non-instalment house, increasing sales reduce rather than increase working capital. This is an unavoidable development which many ambitious proprietors have failed to realize, to their sorrow. Proper accounting methods might have warned them that they were expanding themselves into insolvency. Liquid capital must be replenished from outside sources, and bankers are likely to ask pertinent questions to which the accounts, kept on old-line methods, fail to provide the answers.

It is the policy of instalment sellers of consumers' goods to keep their customers "loaded up." Terms are likely to be based on the amount of the unpaid balances rather than on the length of

life of the goods which are sold. Collections tend to diminish in amount as the end approaches. Proprietors are lenient in the hope of making more sales. Thus, as a practical matter, the term of collection applied to any given sale may extend, and usually does, considerably longer than the nominal term of the contract. To include all of these accounts as current assets leads to a paper inflation of working capital when the capital, needed as it is for current obligations, is actually reduced. There is no more justification for the inclusion of all these accounts in the current assets than for a financial institution, without a merchandising department attached, to combine its investments with its loans and discounts, nor is the analogy far-fetched, considering the extensive financial function which has joined the operation of the instalment house. If a comparison between current assets and current liabilities is to mean anything, especially to the banker, differentiation must be shown in some form on the balance-sheet; but with the methods of the cash-trading concern no truthful segregation can be made, the great volume of customers' accounts making separate analyses impracticable.

Thus the element of time becomes an essential factor to be dealt with in the instalment-house statement. Instead of a single item of accounts receivable, due in 30 or 60 days, we have in reality groups of monthly maturities, many of which are far too remote to be considered in relation to the current liabilities.

The importance of this condition in its bearing on the financial statement is even more apparent when it is considered that while the ordinary accounts-receivable item contains a measure of unrealized profit, that of the instalment house, with its implied interest charge, contains a double measure of unrealized profit and a profit far removed in time from its ultimate realization. Accounting practice does not tolerate the existence of unrealized profits in the balance-sheet, except when sales transmute the inventory into receivables, and this is because of their imminent availability in the ordinary case. But in the instalment account this generally trivial inconsistency assumes formidable proportions.

Business men were quick enough to recognize this situation when it came to paying taxes on these paper profits; and so the law now recognizes the absurdity of taking the old names at their face value in these new circumstances and makes special provision for the instalment method of reporting taxable net income.

Finally, the relatively large size of the accounts-receivable item in proportion to other assets and in proportion to the same item in the balance-sheets of straight trading concerns magnifies the importance of the reserve. The possibility of manipulation of this item will throw any balance-sheet and profit-and-loss statement under suspicion if no information as to how it is obtained is available. Comparative statements are also rendered valueless. Accuracy in other departments is rendered useless. Manipulation of profits by tampering with depreciation or inventories is of trivial importance compared with the accuracy of the reserve for bad debts when the accounts receivable may be many times the book value of the inventory and fixed assets combined. A reserve based on sales or accounts receivable has at least a definite base, but the question remains, how is the rate to be justified? The technical difficulties in determining a proper rate will be discussed elsewhere in this article when the question of the use to which the old forms are generally put is considered. At this point attention is simply called to the fact that in the instalment business, an error in the rate will make for great distortion of profits, especially if cumulative. But in many cases no attention whatever is paid to the reserve in the general books. Guess work is the rule, and the item exhibits an astonishing elasticity according to whether credit is being sought or taxes are being paid.

II

Before discussing the concrete proposals for amending or supplementing existing methods it will be well to consider just what information should be furnished in the instalment-house statement, and see how the old forms meet the test or fail to meet it.

Because of the comparative novelty of the business many bankers and managers, confronted with a financial statement, are somewhat in doubt as to just what special information they should look for. Special lines of business have their special features, but generally speaking certain information should be furnished in all statements, and therefore the following questions are submitted, full and complete answers to which constitute the sine qua non for an intelligent comprehension of the condition of any instalment business or department. The accounts are presupposed to be sufficiently large in number and voluminous in postings to make complete periodical analyses of the individual ac-

counts impracticable. The questions (all of which relate to the accounts receivable) are as follows:

1. *Availability:* When will the accounts be realized in cash; and, particularly, how much of the item may be applied against the current liabilities?
2. *Value:* Is the reserve sufficient to offset (a) delinquent accounts not written off, and (b) probable future losses on accounts now on the books; and can it be scientifically proved that there has been no distortion of working capital and profits by the manipulation of this item? Can these facts be readily checked by audit?
3. *Collections:* What is their efficiency? Are they improving, or otherwise, and to what extent?
4. *Future cash position:* How much cash can be depended on to meet requirements of the near future?

III

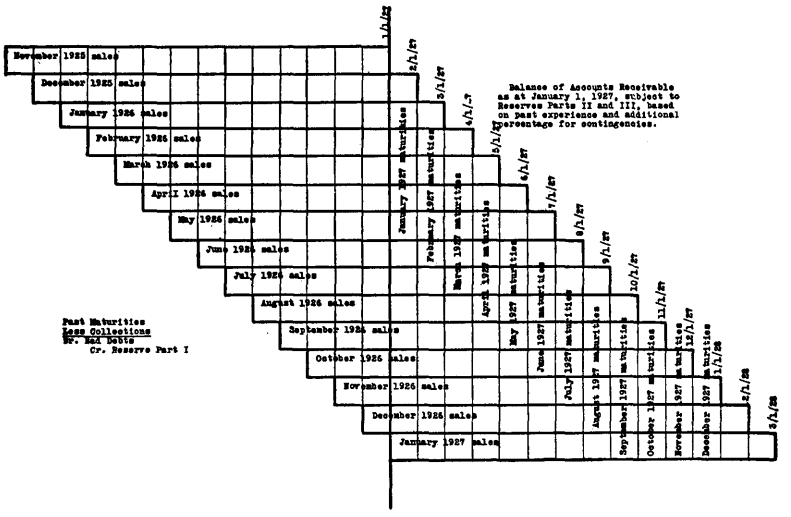
It is fairly evident, given an orthodox statement showing sales, a single item of accounts receivable and an unexplained reserve, that the results achieved upon applying these questions will be practically nil. It is hardly necessary to take them up seriatim to demonstrate this. The usual procedure, when this is the extent of the exhibit, is to use the accounts receivable, or the "outstandings", as a base, and to calculate various ratios thereon. Thus we have percentages of sales to outstandings or of collections to outstandings which are of little or no importance. Used comparatively, any conclusions formed are apt to be misleading, for the same variations may be brought about by different causes. The technical reason they are faulty is to be found in the complex and shifting character of the base used, i.e., the accounts receivable. In other words, the balance of this item at any given time does not represent a single, indivisible entity, but on the contrary it is, to borrow a term from mechanics, a resultant of various forces, the proportions of which individually are not revealed. These "forces" or factors that go to make up the balance are sales (made in fluctuating volume in numerous periods), profits (anticipated and unrealized), bad debts (of undetermined quantity), collections, returns and various allowances and discounts. Furthermore, the balance changes from day to day. After the Christmas season it may be double its size in the preceding summer. Percentages based on one period or the other will obviously be very different. Nor are average balances any

better unless some one of the important factors, such as sales, is practically constant as between periods, which is a highly unlikely condition. In short, it takes two known quantities to make a ratio, and one of them is missing: hence the effort to find a substitute and the deceptive character of the resulting ratio when a makeshift basis is used. This quantity which is so conspicuously absent from the usual set of books is the amount of collections due. Obviously the only useful percentage appertaining to collections is that of the amount actually realized to the amount which would have been realized if all collections had been made.

Accountants will also realize that so far as our four fundamental questions are concerned, the usual deferred-profit systems, even if used by the type of enterprises we are considering, do not furnish the answers. It would be beyond the scope of this article to analyze exhaustively the limitations of these systems. They have the virtue of recognizing the difference between realized and unrealized profits. However, this is only a negative advantage. Essential data are not furnished. Furthermore, inaccuracy is not eliminated, but merely shifted. This necessarily follows because the accounts rest only on the basis of collections. This incompleteness is reflected in the unrealized-gross-profits account which gradually accumulates a credit balance far in excess of its implied purpose. It usually comprises two totally dissimilar items: (a) unrealized, and (b) unrealizable gross profits. The latter can only be eliminated as accounts receivable are actually written off. (Dr. unrealized gross profits; Cr. accounts receivable.) But this operation, in the average enterprise of this character, rarely takes place. A balance-sheet showing unrealized gross profits may seriously mislead the non-technical reader. It appears to be a surplus reserve—a part of the net worth—but in truth an undetermined part of it is, on the contrary, a deduction, or offset to an asset—accounts receivable.

IV

However, the problem is readily solved, and fortunately from the practical side the additional bookkeeping labor required is inconsiderable. The key to the solution is in the recognition of the time element, the importance of which has already been stressed. Instead of single "current" accounts receivable there are actually a series of maturities or, more accurately, a series of



overlapping groups of maturities, resulting, however, for practical purposes, in a definite sum of maturities due every month. The situation may be more clearly shown by reference to the diagram, highly simplified to show only the essential factors, presented above.

The vertical lines represent the divisions between months. The areas of the horizontal rectangles represent the volume of sales of any given month, spread over the number of months in which the resulting accounts will be (or should be) collected. The length of the average contract being the same regardless of the volume of sales, the variation in volume from month to month is expressed in the thickness or height of the rectangles from top to bottom. It will be readily seen that each division of the rectangles from left to right represents the maturities for that month, and the sum of the maturities from top to bottom, falling between any desired date lines, is necessarily the total maturities to be expected to be realized in that month or other period of time.

It is this resulting total from top to bottom which is designed to give the means to answer the four vital questions submitted.

It will be readily seen what kind of bookkeeping record will correspond to this diagram. In a columnar book, which may be called the maturity record, the total of the sales of each month is distributed horizontally over the number of columns necessary to cover their expected collection, each column representing a suc-

ceeding month. As each month's sales are entered in this manner, the footings of the columns will give the total maturities for each month.

It will be noted that the entries in the record are controlled by the general ledger. The totals in this maturity record at any given time must check with the balance of the controlling account. The only estimated or averaged factor employed is the term of collection used, and the deviation here is a matter of small importance and is automatically self-correcting. It will be noted that the term of average collection is used, rather than the average term of contract, the former being reasonably longer than the latter. The reason for this is very important and will appear in the matter of determining future cash position. At present attention is merely directed to the fact that this term, though an estimate (and the only estimated factor used in the records), is necessarily a little indefinite in length, but compares favorably with the necessarily indefinite or arbitrary procedure for entering bad-debt losses in other lines. Mathematically a difference of two or three months in the term allowed for average collection is a matter of surprisingly little difference in the resulting monthly maturities. A little consideration will show that the more divisional units are made out of the monthly sales, the smaller the size of each unit, but, as against that, there is a correspondingly larger number of units making up each month's maturities. The matter of error due to the length of the term applied for collection is therefore immaterial if reasonable care is used, for the important consideration is that 100 per cent. of the charge sales are being accounted for and there is nothing in the nature of an estimate in the amount of dollars and cents entered in the maturity record. This, as said before, is under the control of the general ledger.

The advisability of using a definite collection period rather than an average contract period will also be seen when it comes to using this record as a means of determining the future cash position, or as an auxiliary to the budget. One should base his policies on what reasonably will take place, rather than what should take place from a legal viewpoint.

We are now in a position to answer effectively the first of the four questions previously submitted regarding the accounts receivable—their availability. It is a simple matter of arithmetic to combine the footings of any desired groups of columns for any desired period. The maturity record itself will show the matu-

rities by months, past and future. Instead of a single item in the balance-sheet, we can now analyze the item to any extent found useful. For example:

Accounts receivable:
Delinquent
Due within 90 days
Due from 90 days to 6 months
Due after 6 months

Whether the first and last group should be included in the current assets is a question. However, so long as the information is disclosed its position in the balance-sheet is perhaps a matter of minor importance.

Accountants are accustomed to comment on the age of accounts receivable in their reports. This is impracticable by the usual methods when thousands of small accounts are taken into consideration. It is now, however, practicable to present the information, and for the reasons set forth elsewhere it is desirable that the classification be shown on the balance-sheet itself.

The second major step is extremely simple. From the expected maturities of the closing month, the bookkeeper deducts the actual collections (and other net credits) for that month. The remainder obviously constitutes the proper charge for bad-debt losses for the month and forms the basis for journal entry No. 1:

1. DR. Bad debts.
   CR. Reserve for bad debts part 1.
   Deficiency of collections (net) to maturities according to maturity record.

The consistency of the results from this monthly entry is superior to that of any method based on percentages. The margin of error is small and automatically self-correcting. The figures used are controlled by the general ledger and are readily checked by audit. One hundred per cent. of the collections are being applied against 100 per cent. of the sales. The difference between the two is the loss. Any recoveries subsequent to the time allotted for collection will be absorbed in later collections and thus go to reduce the loss for the month in which the recovery is made.

Accounts actually written off, if any, will be charged to this reserve "part 1." The entry will be:

2. DR. Reserve for bad debts part 1.
   CR. Accounts receivable.
   Accounts written off.

The net value of the accounts receivable is, of course, not affected, but the entry is included to complete the procedure as affecting the reserve part 1. It will be noted that this part of the reserve applies only to past losses, and simply represents the usual reluctance of the proprietor to close a customer's account until the resources of the collection department have been completely exhausted.

Although the reserve part 1 will equal 100 per cent. of the delinquent accounts receivable, it is not desirable that the two should offset each other and disappear from the balance-sheet because (1) it is desirable that the statement should tie up with the books and (2) the balance shown is an indication of the volume of work confronting the collection department. If the volume grows unduly it may indicate that the department is not getting around to its customers and definitely ascertaining what accounts can be written off according to journal entry No. 2. (Recoveries of goods sold will be included in the miscellaneous credits for the month in step No. 1, and will operate to reduce the monthly net charge to bad-debt losses according to journal entry No. 1.)

In addition to reserve part 1, the bookkeeper will set up reserve part 2 to provide for losses to be expected on unmatured instalments now on the books. This amount will be determined by a percentage based on past experience as shown by this method of determining past losses. If the losses average 10 per cent. for the last two or three years (and assuming that no change takes place for the month being closed), the journal entry will be

3. DR. Bad debts.
   CR. Reserve for bad debts part 2.
   Being 10% of sales for closing month.

But as actual losses (according to journal entry No. 1) are entered each month in accordance with the deficiency of collections in relation to maturities, it is necessary to eliminate that portion of the reserve already credited in part 2, for which an actual entry in part 1 has already been substituted. Therefore, there will also be the following entry:

4. DR. Reserve for bad debts part 2.
   CR. Bad debts.
   Being 10% of maturities of closing month formerly charged to bad debts, but for which actual charge is now substituted, as per journal entry No. 1.

(Taking journal entries 3 and 4 together, it will be noted that each entry includes that part of the closing months' sales which matured in the same month, in other words, the down payment. While theoretically the down payment may be considered as unaffected by bad-debt reserves, the effect of including this amount in both entries is mutually offsetting, and for practical procedure it is easier and less apt to cause error to omit the elimination of the down payments. It will also be noted as a matter of technical detail that if the rate is changed a supplementary entry must be made covering the maturities not due, charging bad debts and crediting reserve part 2 if the rate is increased, or vice versa if the rate is decreased.)

It is further desirable, in the interest of conservatism, to set up a third (and final) part to the reserve to allow for a possible increase in the rate of loss or future maturities. (This should not be included as an addition to part 2, because part 2 has a further use in itself which will be shown hereafter.) The procedure, however, is the same as with part 2, and is based on a definite percentage of the unmatured instalments. A pair of journal entries is necessary, as in the former case, to eliminate the estimate as applicable to maturities of the closing month and to set up the additional estimate as applicable to the sales of the closing month (including the down payments both ways as a matter of convenience). These entries we will call Nos. 5 and 6.

5. DR. Bad debts.
   CR. Reserve for bad debts part 3.
   Being (say) an additional 2% on sales for closing month to provide for possible increase in expected rate of loss according to journal entry No. 3.

6. DR. Reserve for bad debts part 3.
   CR. Bad debts.
   Being (say) 2% of maturities of closing month formerly charged to bad debts, but for which actual charge is now substituted according to journal entry No. 1.

There is now available an answer to question 2—Value: sufficiency and proof of the reserve, etc. The sum of the three parts of the reserve will appear as the reserve against the accounts receivable. Its adequacy can be proved in detail, it can be readily checked by public accountants and, ipso facto, it proves the value of the accounts receivable as an asset.

We may now exhibit our accounts in the balance-sheet as follows:

Accounts receivable

	Book value	*Reserve*	*Net value*	
Due in 90 days	$.....	$.....	$.....	
Due in from 90 days to 6 mos.	$.....	$.....	$.....	
Due in more than 6 mos.	$.....	$.....	$.....	
Delinquent	$.....	$ (100%)	$ none	
Total	$.....	$.....	$.....	$.....

As stated before, any classification by groups of maturities can be substituted for the example above. It is also possible to show the last items elsewhere than in the current-asset section, though this is a minor matter provided the information is disclosed in some form, as above.

The delinquent accounts, with 100 per cent. reserve, should be set out and not eliminated for the reasons given previously—in order that the statement may tie up readily with the general books and that the volume of work before the collection department may be indicated.

All the journalizing necessary has now been done and answers to the remaining questions submitted may be supplied.

The third question related to collections: their degree of efficiency and their rate of improvement or otherwise. The first part of the question was answered as a result of the second major step—the deduction of actual collections and other miscellaneous credits from the maturities due. The ratio of the former to the latter is the proper index. It is, of course, the converse of the credit to reserve part 1.

In the latter part of the question will be found the reason for the separation of parts 2 and 3 of the reserve. The expected loss for each month, based on past experience, is shown (as in journal entry No. 4) as a definite percentage of the monthly maturities. In comparison to this there is the actual loss as in journal entry No. 1, showing the difference between maturities and net collections. If the actual is less than expected, it is an indication of improvement; if it is more than expected, it is the reverse, and the management is put on notice to determine the cause. The actual amount of the difference will be reflected in the combined effect on the bad-debt account of journal entries 1 and 4, the former charging the actual loss and the latter crediting (i.e., reversing) the estimated loss.

The final question, regarding the future cash position, is answered by the use of the maturity record for the number of months it is desired to make a forecast. With the income due from past sales known with substantial accuracy, the management need only add the income from future sales, as indicated by past experience and the present trend of the business, and apply against this estimated gross income the known current liabilities, including estimated overhead. The difference will be a fair indication of whether or not it will be necessary to see a banker and, if so, there will be ample warning, as well as ample information for the banker's benefit.

The requirements of this information incidentally disclose the very important reason for the use of the average collection period rather than the average contract period in distributing sales by maturities.

V

In conclusion, it will be seen that the operation of a maturity record and the entry of a few monthly journal entries are not matters to disrupt any existing system, but rather provide a supplementary record, controlled by the general ledger and requiring very little additional labor. It is also readily checked by audit. Its application to any instalment business or department should serve to dispel the fog that usually envelops the financial situation by disclosing all the vital information needed by this special type of business. It should be of practical value to the banker—and even to the most scornful of "practical" business men. Failure to produce information which is so readily obtainable should be looked upon by creditors as a suspicious circumstance.