

words a balance sheet of management was made up for each plant. Then there was a great deal of discussion as to how these reports could be made comparable. As a result a rather lengthy and elaborate questionnaire was worked out and each point in it was given a value. The sum of the ratings for any plant gave the management rating for the plant, or the percentage of efficiency of the plant.

This system had two results. In the first place it gave a very definite picture of management's responsibility for waste. In the final summation it was found to be responsible for some 60 per cent of industrial waste while labor was found responsible for only 15 to 20 per cent. This was a radical finding which the committee had some hesitancy in publishing but fortunately the material had been released before the Council's approval was gained. This produced an entirely new point of view in many manufacturers who had believed labor responsible for all its troubles. The percentages were of course crude and inexact but they gave a true picture of the situation.

Another thing that was brought out was the wide range between the good and the bad concern. It showed up a thing which many of us had known but we had not had an exact basis for our opinions.

I think the next step should be to work up some very definite measure which will make it possible to compare different plants more exactly than we can at present and give the credit man the benefit of this fairly exact record.

Francis A. Westbrook.<sup>8</sup> I can well imagine a credit executive of an average-sized establishment exclaiming, "How can I use this thing?" The question is well put and perfectly legitimate. To get a complete answer to all the points brought out in the balance sheet we are discussing might easily require the services of an expert industrial engineer. On the other hand many of the most vital questions which must be answered to make an appraisal of the management are not so hard for anyone with an industrial background. They are questions which might be termed earmarks of good management and I think a brief discussion of them will tend to make the balance sheet look much less formidable. After all, the object of all

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this is simply to try to find out whether a given organization is functioning properly. It is altogether probable that credit executives are influenced, consciously or unconsciously, by some such considerations, although they have not had such an analysis as this balance sheet as a guide in appraising their findings.

My contacts have been mostly in the manufacturing field so that what I have to say is with this background. I also want to make it plain that what I am trying to do is to point out by means of a few suggestions how much of the necessary information can be rather easily secured by a credit executive of some experience without other expert help. He can usually find out all that is necessary, especially with the help of a carefully considered balance sheet.

Take, for instance, the quality of the product. Obviously this would be the first concern of a good management. Good quality is certainly not hard to determine. In the first place if the type of product is specified by engineers, these engineers will have very decided ideas. They will know, to their sorrow or satisfaction, how the product has served its purpose. They will also have ideas as to what sort of a concern they are dealing with—whether it sends out high-pressure salesmen whose main object is to make sales regardless of consequences, or whether it sends out well-trained men whose object it is to help them select the most efficient and serviceable equipment for the purpose in hand. Reference to three or four engineers will usually clarify these points.

In cases where engineers do not figure it is always possible to make contact with some of the users of the products. Purchasing agents have good ideas as to what the concerns with which they deal are like. The experience of either the engineer or the purchasing agent will tell much of how the concern which asks credit is run. It is also always possible to learn the names of a few important consumers of a product and ask them some questions along these lines.

The service which is rendered by manufacturers to their customers is without doubt a very definite indication of the quality of the management. Service in this sense includes promptness of delivery, replacement of parts, technical advice, quick action in emergencies, etc. This can be ascertained from the above sources and at the same time.

It is probably safe to say that nowadays every first-class producer of materials or services feels the necessity of carrying on research work in some form or other. The existence of such activities is not hard to determine. Engineers and consumers know about them from their contacts and the results of the co-operation they have received. Furthermore, companies which have good research departments are usually proud of them and are generally willing and anxious to tell about them. Very likely members of the research staff from time to time present papers at the meetings of technical societies, and to the technical press, from which a very good impression can be gained as to what they are doing. Even if the credit executive finds that some of these things are too technical for him there is probably an engineer or chemist, for instance, in his organization who can help him out.

Well-managed industrial enterprises generally see to it that they have sufficient diversity in their products so that their eggs are not all in one basket. Even if they make a limited class of machinery, they usually make every effort to produce grinders, milling machines or what not, as adaptable as possible so as to remove all possible limitations and have the product as widely used as practicable. Whether this very desirable condition exists or not can be determined from catalogs, customers and engineers. This applies not only to machines but to almost all kinds of manufactured products, and is one of the best safeguards against sudden obsolescence due to technological changes.

There are also manufacturers who make products with a seasonal demand, such as toys. Those which are well managed have developed other seasonal lines which fit in, so that they can keep busy the year round. This is certainly not very hard to find out.

The quality of plant management can probably best be determined by a personal visit. Such obvious conditions as cleanliness, intensity of lighting, type of machinery, the use of cranes, conveyors, industrial trucks and tractors, the absence of overhead shafting and belts are among the more easily recognizable earmarks of good plant management. In old plants progressive changes in these directions, even if still incomplete, are not hard to recognize.

Perhaps the attitude of whatever member of the organization it is possible to talk with is one of the

best guides to the alertness of the management. In conducting his visitor around the plant this man will, if his listener shows interest, generally discuss current problems and plans and will almost always be glad to explain the workings of the planning and scheduling departments.

If a credit executive visits a plant it is not very difficult for him to form some sort of an opinion of the personnel relations existing there. The existence of foreman training and shop committees in addition to the more conventional forms of welfare activities may be determined by the asking of a few questions. In fact, the way in which these questions are answered will very often tell the story in a nutshell. The answers will often disclose immediately whether the management is, antagonistic, indifferent or enlightened in its attitude toward labor. Executives really interested in this most important part of their managerial function always seem to be easily accessible and only too glad to talk about and explain their aims and accomplishments in building up good relations and reducing the wastes due to labor turnover, lack of interest and contentment.

A credit man can easily ask some questions which will bring out the essential facts as to what a concern is doing in regard to merchandising its products, such as forecasting sales, studying styles, the needs and preferences of its consuming public, the most economical methods of distribution, etc. It should not require an impossible amount of effort to acquaint himself with the significance of the more important of these details.

As already stated, the object of this discussion is simply to point out by a few suggestions that a credit executive of an average-sized establishment can, without being an expert industrial engineer, quite easily obtain a very fair idea of what the management of a manufacturing concern is like, and whether it is functioning properly. It is evident that by following some such procedure as outlined he will have answered a good many of the questions raised in the tentative balance sheet. Consequently, it seems altogether probable that after feeling his way around for a time in his particular field he will develop a technique which, with the help of a balance sheet of management-worked out by the associations represented here, will enable him to appraise the effectiveness of different managements with surprising accuracy, at least for