



## FINANCIAL MANAGEMENT IN INDUSTRY

Mr. William E. Buxbaum

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Reviewed by Col E. J. Ingmire, USA on 17 January 1964

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10 January 1964

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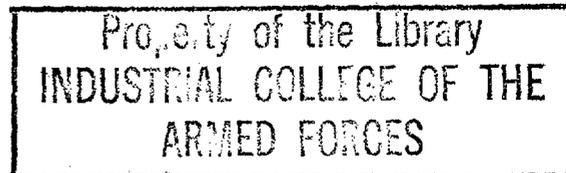
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Reporter--Grace R. O'Toole

Reviewed by: Col E. J. Ingmire, USA Date: 17 January 1964



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## FINANCIAL MANAGEMENT IN INDUSTRY

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GENERAL STOUGHTON: Gentlemen: The Du Pont Company was selected by the President's panel as one of the 10 best managed companies in this country, and its particular field was financial efficiency.

Our speaker this morning, Mr. William E. Buxbaum, is the First Assistant Comptroller of Du Pont. Obviously, from his position he must have made a major contribution to Du Pont's winning this accolade.

It is a pleasure to welcome Mr. Buxbaum and to present him to this audience.

MR. BUXBAUM: Admiral Rose, General Stoughton, Colonel McElwee, Gentlemen of the Industrial College, and Guests of the College: I appreciate your invitation and I'm glad to be here with you this morning.

The subject given me is Financial Management in Industry. Some of my remarks might be sufficiently broad to qualify me for this title, but for the most part I shall be talking about some of the aspects of organization and financial management in the Du Pont Company.

It might be helpful first to sketch the organizational environment in which we live and then to describe some of the management tools we employ. We consider organization and reporting techniques to be quite important. At the same time I would caution against giving undue emphasis to these things as to things of other major importance.

I suspect that the anatomy of an organization is really less important than its chemistry and the techniques of decision-making less important than the experience, the judgment, and the imagination of the people involved.

Organizational plans and reporting procedures must give primary recognition to the circumstances in which they exist. For example, if a company much younger than ours, one without continuity of management and the long experience of diverse groups working together, should emulate our form of organization the results probably would not be good. Or, if a company much smaller than ours, one whose top management was principally engaged in administering the business, should adopt the kind of reports we give our top management, which is the policy-making body, that smaller company management might lose touch and become inefficient. They probably would feel the need of an intermediate management group to operate the business day by day, and a combination of these might be more expensive than the business could support.

So each organization has to devise an arrangement to suit the circumstances and then permit it to evolve. The main thing about such an arrangement is not how scientific it might be but whether or not it works.

We do not believe that the Du Pont Company has any secret formula for organization or financial control that insures our success or, much less, which contributes significantly to the success of any other company. The purpose of organization is to keep things orderly without smothering the ideas and initiatives of the individuals.

Control or reporting techniques involve the use of a few management tools, most of which are in the public domain. The important part of the job is keeping these tools sharp and working them hard. We spend a great deal of effort in trying to keep simple things that might be portrayed in a complicated way.

So what I have to say should not impress you as being esoteric or revolutionary. That also is part of the message.

The Du Pont Company manufactures and sells a variety of chemical products, ranging from sulphuric acid and columbium metal to cellophane and spandex yarn. It is an old company, having started business in 1802. The founder of the firm, E. I. Du Pont de Nemours, was a chemist by profession, and came here from France and built a small powder mill on the banks of the Brandywine at Wilmington. Good domestic powder was badly needed for mining and hunting and protection, so he had a ready market.

During its first century, the Company remained primarily a manufacturer of black powder, but nitroglycerine, dynamite, and smokeless powder came along in the later years. In the 20th century the Company's interests were directed increasingly toward the general chemical field. Twice in the century, however, normal operations were interrupted by war, and in each case the Company placed its facilities at the disposal of the Government, producing large quantities of military goods for the Armed Forces. During the Second World War, despite a huge military program, chemicals other than explosives represented by far the major part of the Company's business, consisting of such things as nylon, neoprene, synthetic

rubber, dyes, rayon yarn, paints, industrial chemicals of many types, insecticides, fertilizers, and photographic film. For many years prior to the war military explosives made up less than 2 percent of the Company's business. It is currently less than that.

Du Pont now employs about 100,000 people. We operate 82 manufacturing plants in this country. Some 100 laboratories are maintained for research, sales service, and plant process controls. Operating investment is about \$3.7 billion, and annual sales are at the current rate of about \$2.5 billion. Expenditures for plant equipment last year totaled about \$370 million. The Company manufactures more than 1200 products and product lines and sells to about 75,000 customers. Most of our sales are to other industries, less than 5 percent going to the ultimate consumer in the form in which we produce it.

Organization of the Company: For the first 120 years of its existence the Company was organized along functional lines, headed by the President with officers in charge of sales, production, management, et cetera. With the end of the First World War, expansion into the broader fields of chemical manufacturing was well under way. The management felt the need of a better system to deal with the problems of diversification.

In 1921 the Company was reorganized along lines then regarded as somewhat unique, but the form of organization adopted at that time remains still in effect, with very little change. It consists of three distinct groups: First, the Top Management Committee, to deal

principally with matters of general company policies; second, under them, several industrial departments, which are line organizations, charged with the responsibility of administering our operating investments; and, third, a group of staff departments to assist in matters of policy as well as administration. The Board of Directors, composed of 30 men elected annually by the stockholders, have full authority to manage the business. The individuals who comprise the Board can be characterized generally as follows:

First, those who have a direct and substantial ownership interest in the business and who have retired from active management positions; secondly, those now actively engaged in the management of the company--this group includes the President and eight Vice Presidents; third, a smaller group on the Board consisting of men who are substantial, interested stockholders and have a good deal of knowledge of the affairs of the Company but who have not been active in management.

From this it is apparent that the Du Pont Directors are men close to the Company, and for most of them it represents their first business interest--it is not a secondary or subsidiary one. The Board is an active one. It meets regularly every month to consider important financial and operating aspects of the business. Probably it exercises more direct control over the business than is the case with most companies, principally through the delegation of its authority to the committees of the Board, consisting of its own members.

This authority is delegated principally to the Executive Committee

and to the Finance Committee, and in special areas to the Committee on Audits and to the Bonus and Salary Committee.

The Executive Committee possesses and exercises the power of the Board in the management and direction of all the business of the Company except those matters particularly reserved for other committees, just mentioned. It is composed of the President of the Company, who acts as the Chairman, and eight other members who are our Vice Presidents. Acting as a committee, this group passes on all major policies and on important investment proposals generated by the industrial departments. Its formal actions constitute the body of rules under which we operate. It might be said that the Executive Committee operates much like a headquarters command. It is concerned with the major strategy, while the department heads are responsible for tactics and execution.

In addition to sitting on the committee, members of this group also serve as advisers for various company activities. For example, one is adviser on manufacturing, others on sales, research, legal, financial matters, and so on. It should be emphasized that the character of these assignments is advisory, and in no sense are committee members in positions of day-to-day, administrative responsibilities.

The other principal committee of the Board is the Finance Committee, which consists of nine members. Some of its members are active company executives, and some are men who have retired from active employment but who still lend their experience and judgment to the Company. For example, three former Treasurers are on the Finance Committee at present. Other

members are substantial stockholders who are quite interested in the Company's success but not active in its management.

This committee has full authority with respect to the financial affairs of the Company, except for a few matters reserved by the Board such as the declaration of dividends.

Under the bylaws, the Treasurer and the Secretary of the Company are responsible to the Finance Committee, whereas all other department heads are responsible to the Executive Committee.

The Committee on Audits is composed of three Board members not in active management. Their responsibility is to engage the independent public accountants, to prescribe the scope of their audits, and to receive their reports and recommendations.

The Bonus and Salary Committee consists of five members, none of whom is eligible for bonus awards. It exercises the authority vested in it on the Company's bonus plans and fixes the compensation of other Board members who are active in the management.

The Industrial Departments: Responsibility for the manufacture and sale of products is vested in the General Managers of our industrial departments. The commercial activities of these departments are divided along lines of logic to related products or manufacturing processes. There are 12 such industrial departments, as follows: Elastimer Chemicals, Electrochemicals, Explosives, Fabrics and Finishes, Film, Industrial Biochemicals, International, Organic Chemicals, Photo Products, Pigments, Plastics, and Textile Fibers.

Each of them operates much like an independent company. The General Manager is charged with the successful operation of the business and the investment under his responsibility. Transfers of products between departments are at arms' length, generally on the same terms as transactions with outside companies. The head of an industrial department has a great deal of autonomy. Operating within the broad policy limits set by the Executive Committee, he is held accountable for results and given commensurable authority. The only significant area in which his responsibilities are not comparable to those of the head of an independent company is in finance.

The General Manager of an industrial department can authorize expenditures within stated limits, but he does not have the responsibility of financing his operating and construction needs nor for the receipt, disbursement, and custody of cash. These are responsibilities of the Treasurer, on the Finance Committee.

Staff Departments: In addition to the manufacturing departments and the Treasury Department, there are 13 staff departments, as follows: Advertising, Central Research, Development, Economist, Employee Relations, Engineering, General Services, Legal, Public Relations, Purchasing, Secretaries, and Traffic.

The activities of these groups are generally evidenced by their names. Their responsibilities might be compared with the staff functions formed by analogous groups in the Armed Forces. They provide a wide range of skills and experiences to serve top management and the operating

departments in their respective fields.

Treasurer's Department. The Treasurer is responsible to the Finance Committee for all the accounting and financial matters of the Company. While we are usually identified as a staff department, our work consists of a combination of line and staff functions. For example, banking, disbursements, and the administration of taxes are some of the direct responsibilities of the Treasurer, but in addition we perform a great many staff functions for the industrial departments and for the Executive and Finance Committees.

There are vast amounts of business data emanating from our plants and offices. An important part of the comptrollership function is to digest and edit these facts and figures in such a way that those in the various management levels may have what they need and can effectively use to manage the business without being inundated.

It is especially important that the data furnished top management be clear, concise, and meaningful.

The Treasurer's Department consists of some 1200 people. It is divided into six divisions. Names of some of the sections and groups within these divisions might be more illuminating, as for example, Accounts Receivable, Financial Statements, Depreciation, Taxes, Computers, Methods, Project Reviews, Forecasts, Sales Analysis, Payroll, Insurance, Accounts Payable, Credit, Foreign, Banking, Audit, Securities, Charts, Financial Analysis, Bonus, and Pensions.

In addition to the accounting and financial work in the Treasurer's

Department, there are quite a few accounting and related functions performed in the other departments. For example, in each plant there is cost accounting, inventory and stores accounting, wage rolls, and the cashier's office. These plant activities are under the responsibility of a plant accounting superintendent who is an employee of the industrial department responsible for that plant. Also, each industrial department has a control manager located in Wilmington and responsible for the accounting and related activities performed in that department. The control managers further assist the general managers of their departments in the economic and commercial aspects of manufacturing, selling, pricing, et cetera.

Now, the Treasurer is responsible for all the accounting and financial work in the Company, and the Comptroller, reporting to the Treasurer, is charged with management of the Accounting Division, and is responsible for accounting matters generally throughout the Company. At the same time the control managers of the industrial departments do not report to the Treasurer or to the Comptroller, but to the managements of their respective departments.

It might appear difficult to operate efficiently and to maintain control in a situation such as this. However, this is typical of the delicate balance existing in many similar instances throughout the Company. If management is to hold industrial departments responsible for results, it must avoid, wherever possible, impinging upon their authority.

We consider the overall efficiency to be very good and the control entirely adequate. The Comptroller's Office issues bulletins from time to time for the guidance of other departments on matters of general policy. Importantly, we are in close physical proximity with the Wilmington Offices and therefore in frequent personal contact with the control managers.

By these formal and informal means we manage to keep aware of problems and to deal with them. Also, the internal audit staff regularly reviews activities at all plants and sales offices to assure compliance with established procedures. The fact is, we have remarkably few problems for noncompliance with the rules or with respective jurisdictions. I believe this is primarily the result of having learned over a long period of time to live together in an atmosphere of mutual confidence and respect. It would be neither practical nor desirable to make the arrangement any more formal or rigid.

We will now proceed to some of the specific financial management tools and procedures. The Du Pont Company believes that this system of financial control should include among other things a periodic forecast of sales and profits, forecasts of cash requirements and cash resources, capital expenditures forecasts, and standards against which to measure inventories and accounts receivable. In addition there should be statements and analyses to show actual operating results and trends, together with current data on assets and liabilities.

It is the primary responsibility of the financial staff to make these data available promptly and in such form as will best portray the

profitability, and that will increase product line or division investment. Again, clarity of presentation is of great importance.

First Forecast. A forecast of sales, earnings, and cash positions extending 12 months into the future and revised quarterly has been one of our principal tools for many years. The forecast of sales usually originates with salesmen in the field and in sales offices throughout the country. It is reviewed and revised at successively high levels of management within each industrial department where the forecast cost of sales is also calculated and the resulting earnings developed.

By means of this intensive review feature every three months, the people directly responsible for the manufacture and sale of all their products are required to think ahead and plan for the future. If problems appear there is a chance to do something to correct them before the fact. This forced preoccupation with the future might be the greatest single benefit obtained from forecasting, and it must be done seriously, because a review of each department's sales and earnings forecast by the Executive Committee then becomes an important criterion against which to measure their results in the following period.

All of the departmental sales and earnings forecasts are sent to the Treasurer's Department for consolidation into a total company forecast. We consider the reasonableness of each departmental forecast, checking against historical trends and ratios that have proven useful in the past for this purpose. We explore with the industrial departments any unusual situation and investigate reasons for any important changes in direction from previous forecasts or from previous actions.

The overall company forecast of sales and operative earnings is then transmitted by the Treasurer to the Executive Committee. An interesting exhibit included in the forecast report sent to the Executive Committee is the profit-volume-and-profit-selling-prices chart. By means of this graph one can assess the reasonableness of the forecast or inject his own judgment into the results by substituting alternative estimates of sales and selling price levels, and then read off from the chart an approximation of earnings that would result.

This profit-volume chart is not a precise tool, of course, but it is useful. Tests made over a period/time show it to be fairly accurate in pointing out probable results and variations from forecasts.

Construction Forecast. A forecast of construction authorization and expenditures is prepared twice a year and sometimes more frequently. This is the responsibility of the Engineering Department with the assistance of all the industrial departments. It sets forth in some detail the appropriation requests for new and expanded facilities expected to be submitted for authorization during the succeeding 12 months. It also forecasts the expenditures for plant and equipment expected to be made during that period. Expenditures, of course, will stem partly from projects already authorized and partly from those forecast to be authorized.

Construction forecasts are submitted to the Executive Committee and to the Finance Committee for approval, and thereafter are ready for use, along with the sales and earnings forecasts, for a projection of our cash position. It should be noted that approval of the construction forecast

does not constitute authorization of any specific project. This step is handled separately, and I'll touch on it later.

The next step in forecasting is to derive net income. Working with the forecast of sales and operative earnings, we incorporate items of income and expense other than those originating with the industrial departments to determine the provision of income taxes and arrive at the forecast of net income.

This forecast, together with the forecast cash position, is included in the Treasurer's quarterly report to the Finance Committee and serves as a basis for considering their dividend recommendation to the Board.

The forecast of cash position has two parts. First, a careful estimate is made of the maximum amount of cash we might reasonably expect to need for operations and construction. This amount we call desirable cash. In calculating desirable cash we use the layer approach. This first takes into account the day-to-day cash needs based on forecast disbursements for normal operations and construction. To this we add the amount we might need for working capital increases during the next 12 months, not just those increases forecast to occur but the additional amount we would need if operating at full, attainable capacity. We then calculate in some detail and on a cumulative basis our forecast disbursements and receipts for the next 12 months, and provide for the maximum amount by which we expect those disbursements might exceed receipts at any time during the year. Finally, we add an arbitrarily determined amount

of \$25 million for contingencies, such as an unexpected plant shutdown, stockpiling of inventory beyond expectation, and sorts of delay and cuts in payments. Obviously, desirable cash is a conservative yardstick, and it must be, to alert us on any possible cash stringency ahead.

Next we develop the amount of available cash. This term is used to define the total cash and marketable securities readily convertible into cash in excess of the amount earmarked to pay our Federal income-tax bill and some other items which we consider not available for day-to-day needs. The forecast amounts of available cash can then be compared with the desirable cash at future points in time to determine whether there need be any concern over having sufficient cash to meet our needs.

Cash In Banks. The control of cash for day-to-day requirements is another important part of our work. Such cash, currently about \$75 million, is deposited in some 170 banks throughout the country. The condition of each depository in which we maintain an average balance of \$10,000 or more is reviewed annually, using a method of statistical analysis we developed some years ago, based on the experience of banks during the waves of closing in 1930 to 1933.

The results of this review serve as one of the bases for determining the balance to be kept in each bank.

Our control of the flow of cash is designed to convert customers' remittances and other receipts to usable Du Pont funds with maximum speed, thereby minimizing flow. Cash in excess of that needed to maintain the proper bank balances is promptly invested in short-term, high-grade

securities, sometimes for as short a period as overnight.

During 1963 our marketable securities portfolio averaged about \$480 million.

Budget. The sales and earnings forecast constitutes the principal budgeting procedure for the industrial departments. Some of them use supplemental budgets for various activities within the department, but these are at the discretion of the departmental manager in each case.

The staff departments are required to prepare an annual budget covering their operations. These budgets are submitted to the Executive and Finance Committees for approval. Usually the budget is submitted to the Committees along/department's formal report on its activities for the preceding year. If any time during the year it appears that expenses will vary from budgets by more than 5 percent plus or 10 percent minus, the department is required to submit a revised budget with appropriate explanation for approval.

In addition we have budgets for advertising and for research activities that are subject to the same limits on overrun and underrun. The Treasurer's Department develops the format of these budgets and the procedures under which they are prepared, and we submit summary reports to the Committees that point up budget performance.

Capital Expenditures. Generally Du Pont finances its plants and equipment and working capital requirements with funds generated internally. The primary sources of such funds are retained earnings and depreciation set-asides. Over the past 20 years or so the Company has paid out as

dividends on average about 70 percent of operative earnings, the remainder being reinvested in the business. Expenditures for items of permanent investment require an appropriation request. The General Managers of the industrial departments have authority to approve such appropriations up to \$200,000. Projects over that amount require Executive Committee approval, and those over \$1 million require the approval of the Executive Committee and the Finance Committee.

We have rather an elaborate set of rules and administrative procedures dealing with the form and content of appropriation requests, and the responsibility for policing these procedures is delegated to the Treasurer's Department. Quite a few appropriation requests go to the Committee every week. A great deal of effort is devoted to this important decision-making process. The evaluation of a proposition for new investment is almost never a simple thing. We are not aware of any foolproof method that gives black-and-white answers to proposals involving the commitment of substantial amounts of money for new plants and processes and sometimes for entirely new lines of business.

Many questions are dealt with in the consideration of whether to pursue a promising new field or whether to halt work on an unpromising one. Carefully chosen words and figures go into these reports. All projects for new or expanded facilities must present certain economic data in a standardized format. Among other things this exhibit shows sales, costs, and earnings expected from the venture and the forecast rate of return

of investment. The examination of a project does not stop with its approval. Appropriations are authorized within expenditure limits of plus or minus 10 percent, and any overrun or underrun beyond these limits requires submission of a revised appropriation request.

After the first operation of the new or expanded facility, the Executive Committee receives from the department an accomplishment report which portrays the results obtained to date and the current outlook for the venture. It also compares actual sales, costs, and earnings with what was forecast at the time the project was proposed. For certain kinds of projects additional appropriation requests are required to be submitted after the third year of operation and in some cases the fifth year of operation, also.

In order for the Executive Committee to understand and evaluate the performance of the Company in each of the operating investments, there must be an effective means of presenting the results of operations in a condensed and meaningful form. For this purpose we have a system of charts and tabulations, referred to as the Executive Committee charts, prepared and presented by the Treasurer's Department. These charts are designed to concentrate attention without undue emphasis on detail on the factors we deem most important in appraising the performance of operating management. These factors are return on investment, turnover of investment, and earnings as a percent of sales or profit margin. Return on investment, of course, is simply earnings on an annual basis, divided by the related investment, but the same ratio can also be derived by

multiplying the profit margins by the annual turnover rate. Turnover represents sales as a percent of investment.

Our chart presentation follow this longer route to return on investment because it points up more graphically to independent factors the control of the final ratio.

Charts for each investment also portray the major components giving rise to earnings and investment, such as sales, mill costs, selling and administrative expenses--these on the earning side--and on the investment side permanent investment and the elements of working capital.

Since we believe that a manufacturing enterprise can best measure and judge the effectiveness of its effort in terms of return on investment, our charts series and other financial reports place primary emphasis on this ratio. We do not, of course, think that return on investment provides an answer to all business problems, and it is not the only measure we use, but clearly it predominates.

For purposes of calculating return we use gross investment, that is, original cost, without reduction of depreciation reserves, nor is investment reduced by any liability or other reserves. Earnings, on the other hand, are net of the depreciation charge, the same as that shown on income statements. There are several reasons for doing it this way. First, the industrial departments are responsible for prompt operation of the investment assigned to them. They are expected to earn a return on the total amount invested, this being the measure of what they have to work with. Since the operating departments have no responsibility for financing, there is

no basis for reducing their investments for the amount of any liabilities or reserves. Their performance is not related to return on stockholders' equity but rather on the total assets at their disposal.

Furthermore, the balances in the liability and reserve accounts change continuously, and operating ratios that reflected such changes would not measure performance in a consistent way. For examples, if assets were stated at net depreciated value, earnings in each succeeding period would be related to an ever-increasing investment.

Return on investment would appear to improve if earnings remained constant, thereby distorting the facts and trends in which we are interested. An investment also is expected to be returned intact, over and above the return it pays. In the case of a manufacturing investment, it can be assumed that funds invested in working capital would be liquidated and returned to their source at the end of the project's useful life, while funds invested in fixed assets are returned through depreciation setasides during the period of useful life.

Therefore, earnings for purposes of return on investment are those that accrue after provision for recouping the original investment.

This arrangement also gives recognition to the risks of obsolescence as reflected in the depreciation rates. In the Du Pont Company and, we believe, in the chemical industry generally, plants seldom are discarded because they wear out but rather because the product or process becomes obsolets.

The question has sometimes arisen as to whether it is fair to relate

earnings net of depreciation expense against gross assets. It is academic for our purpose to speculate as to whether this method is fair, and we are not interested in whether the general level of the resulting ratio is high or low. The proper function of such a tool is to provide a stable and useful basis for comparison of the profitability of assets employed as between investments and between periods.

Low-Return Investments. Another tool we have found useful in appraising the health of the business is an annual report to the Executive Committee on low-return investments. This term is used to define investments on which the return is in the lower range and fails to meet test levels. Low-return reports provide opportunity for a careful look at individual segments of the business that are not performing up to our normal expectations. Where the problem appears to be chronic, consideration is given to an orderly withdrawal from the particular product or line of business, unless continuation is justified for collateral reasons.

Working Capital Standards. Each year we establish standards against which to measure the amounts of money committed inventories and accounts receivable. Inventory standards are approved by the Executive Committee for each operating investment, and separately for raw material, semi-finished, and finished product inventories. Standards are stated in terms of days' supply, calculated by relating quantities on hand to forecast consumption in the ensuing period. Standards represent the lowest possible levels of inventory consistent with economic purchasing policies and with reasonable protection to production and sales.

Similarly, standards are established for the accounts receivable balances applicable to each operating investment and they are stated in terms of days' sales outstanding. Generally, accounts receivable standards are based on terms of sale or anticipated paying habits, whichever is lower.

Actual and forecast inventories and accounts receivable balances are regularly compared against standards, and any substantial deviation requires justification.

General Managers' Monthly Report. The General Managers' Monthly Reports to the Executive Committee are important management tools also. In these reports each industrial department summarizes the operating and financial results of the preceding month and the period to date, showing for each product line or division of investment data on sales, costs, earnings, and return on investment.

Comparisons are made against forecasts and against previous periods, and significant variances are explained.

The monthly report also provides an opportunity to advise the Committee of important developments concerning such things as competition, labor, inventories, research, patents, et cetera. The General Managers and their principal assistants usually are called in by the Committee to elaborate on the matters discussed in their monthly reports. It may be that more real decision-making results from these sessions than from all the written reports that I have just described.

As I implied at the beginning, there is a need for both kinds of communication in a business such as ours.

This concludes my prepared talk. I understand a discussion period

will follow shortly. At that time I shall be glad to deal with any questions on the points previously mentioned or to try to respond to other related matters in which you might have interest.

Thank you.

COLONEL McELWEE: Gentlemen, Mr. Buxbaum is ready for your questions.

QUESTION: Mr. Buxbaum, if I were the manager of a products plant in Du Pont and was asked to give a sales forecast or a profit forecast, I would suppose that I might make my forecast low so that I would look good when it came out better than my forecast. How do you go about insuring that plant managers forecast right on the head?

MR. BUXBAUM: Well, by hitting them on the head, mostly. You might not survive to perform against that forecast, because they would still be questioning you as to why you forecast so low and what was happening to your business. If things looked as bleak as you were now portraying them, probably another man could better operate this particular line of business.

The forecasts are examined critically. Sometimes we are not sure whether we are crying about our forecast position or our actual one. The forecasts are looked at carefully and they are fully explained. When you finish with them they represent normally a fair balance between optimism and pessimism.

This is a problem. There is a tendency to do that sort of thing, but there are things that move in the other direction, also.

Furthermore, as the manager of a plant, you wouldn't have any responsibility for profits--just for production costs.

QUESTION: Could you discuss the employment of computers as part of the financial management function? Are they simply glorified adding machines or have they made some penetration in the system?

MR. BUXBAUM: We were asked recently to respond to a questionnaire of doctoral candidates who were making a survey. A great many companies are using computers, and they asked such questions as how many clerks you have, and if you've got computers, and how many you have now. We decided to tell them we shouldn't answer the questionnaire, because, first, it would take a lot of work, and, secondly, it wouldn't give us the right answer. We didn't have any computer activity, roughly, 10 years ago, and we've got a lot of them now.

I think that probably you could add up the money that we spend to make the payroll, for example. This is a good, defined area. We could take the number of clerks and punch-card machines required 10 or 12 years ago and relate that to what we pay for rental plus related labor today, and I suspect that we are making the payroll cheaper.

The fact is that we are not doing the same things, so a mechanistic approach to it would be misleading. We are doing more things and getting more data. We can derive, for example, pursuing the payroll analogy, a lot of facts and figures on all the employees and tell how many we have with red hair, with green eyes, and all those things, and some more

useful than that.

As far as whether it is helping us run our business or not is concerned, that's really a tougher question, I find, because it's relative. We are not making computer-based decisions--a phrase I sometimes read-- that I know of. Generally speaking, we are getting more information, faster and better, and, I think, cheaper.

There won't be a significant advance in the accounting data, data processing activities, in my opinion, until the communications phase evolves a little bit further than it presently has. We are largely running batch processes still. We are not on real time, except in one or two isolated cases.

Even then, say that we were on a push-button arrangement, where a sale made in San Francisco was dispatched from a warehouse in Kansas City and an invoice was issued in Wilmington, and all of these things were triggered by the original action--I'm not sure that that would not still be pretty much a glorified adding machine.

I don't see personally yet--and I am not talking Company policy here, because we don't have any such firm policy--any displacement of the more or less typical thought processes that we have lived through in the past as far as decision-making is concerned.

The more information you have, the faster and more accurate it is, and the more refined, hopefully, the better decisions people make. Generally speaking, these decisions don't take all the brains in the world if you have the facts. The main thing is knowing what facts you

need to make the decision, and then getting them, and getting them accurately. To that extent it will be very helpful, yes.

QUESTION: Mr. Buxbaum, with respect to the effectiveness of your plans, how do you calculate, for instance, the return on your investment in your research and development facilities?

MR. BUXBAUM: We don't. These projects for investment in technical facilities do not have any economic justification as such. Now, the projects, though, that come in for expanded production facilities or new production facilities must pick up these things, because all of the investment applicable to every commercial project is allocated to all that goes on on that particular plant or location.

For example, you have numerous products manufactured in the same plant. There are certainly facilities in that plant, such as the powerhouse, the office buildings, the cafeteria, the first-aid room, and so on, that are general facilities--general power and service, we call them. Research laboratories that would be on that plant are also in this category. These investments are allocated on various places, to the investment on which a return must be earned by the commercial products on that plant. So they are not left in limbo, but there is no, as such, return on them, because they don't sell anything.

Does that answer you?

STUDENT: Do you not have any plants which are purely devoted to research and development?

MR. BUXBAUM: Yes, we've got the Experimental Station in Wilmington,

for example. It's quite a large installation. The landlord is our Central Research Department. Each of the industrial departments has facilities there, too. But this is a completely noncommercial plant. It's part of the general overhead investment, and it is allocated to all the industrial departments and in turn to all of their plants and operating facilities.

Central Research can't earn any money. They don't sell anything. Pioneering research, as we call it, is noneconomic in a measurable sense. There is no return on laboratories.

QUESTION: Mr. Buxbaum, on your sales and operating and earnings forecast techniques, I noticed that you have indicated that they are projected 12 months into the future and revised quarterly. I assume that your operating fund allocation is based on these forecasts. Is there any technique whereby these are reviewed on a monthly basis to determine whether the forecasts were correct within the 12-month picture change, or do you not find that necessary?

MR. BUXBAUM: We submit and review the forecast, update it, and revise it quarterly. Maybe I had better go into a little bit more detail on this than I did a while ago. The quarterly forecast does extend out 12 months in the future. The first three months of that period are month to month. The remaining months are quarter by quarter. Now, you've always got one month actual against one month forecast with which to measure. Say the No. 1 forecast covers the calendar year 1964. The months of January, February, and March are forecast separately by month.

When January actually comes along you've got a January forecast against which to measure it. February is the same, plus a to-date figure. By the time April gets here actually, we've got a No. 2 forecast in which we've got April, May, and June by month.

Have I followed your question properly?

STUDENT: Yes.

MR. BUXBAUM: You've always got a forecast figure against which to measure your actual results. Furthermore, this is done. I referred to the General Managers' Monthly Reports, for example, and the chart-room presentations of each department's results. The important part of these reviews is comparing and explaining away the variations of actual results from forecasts.

STUDENT: Would you change your forecast after each review on a monthly basis?

MR. BUXBAUM: You don't get a chance, once you seal up a month. You've got January, February, and March in 1964, for example, in your No. 1 forecast. Well, you don't get another chance to change that. You can change April, May, and June from what you had put in the second quarter of the No. 1 forecast, which becomes the first quarter of No. 2, but you don't have another shot at No. 1.

Does that answer it?

STUDENT: Yes, sir, it does.

QUESTION: You have indicated in your return on investment that you do not depreciate your fixed assets. Do you appreciate your fixed

assets, for example, for plant and equipment that was bought 20 or 30 years ago? It must be stated at a very low fixed-asset value if you take into consideration your current assets' value.

MR. BUXBAUM: Well, in our normal report, you know, there's a defect here which we can put our finger on, and we use the regular cost. There are some offsetting things, though, that might be said. We've got studies that would indicate--and also the reverse--that, while it would cost a lot more to replace the bricks and mortar which we built 10 or 20 years ago, there are also advances in technology by which, for perhaps the same amount of money, you could get that much capacity. You wouldn't get the same size of building. The fact is, you wouldn't make that kind of building or use that particular process. That alleviates it some.

There is no real answer to this. What we do--I didn't mention to you all the reports and techniques we use--we do have another annual go-round which we call economic return on investment. That is when we take all the operating results for reinvestment for the whole Company, that is, each element of the Company, and restate the investment on a replacement-cost index, and indicate what the picture would look like compared to the actual, if their earnings were related to the replacement cost of those assets, as distinct from the original cost. Furthermore, the earnings themselves are not the same, because you are depreciating on the replacement cost, and therefore the depreciation charge is greater.

Well, we look at this, and we worry, and it comes out looking worse,

of course, than the natural, and so it worries us, but it keeps us from becoming complacent, in any event. But there is not much you can do about it.

We have not so far found it feasible to change over our day-by-day comparisons to this replacement-cost basis, because there are too many things. If all the public accountants in the Internal Revenue Service and everyone would recognize the replacement value for investment and depreciation purposes, I think that probably then we would be only too happy to restate our published and internal data this way. But, if you get too many wave lengths going at once, the confusion probably more than offsets the benefit.

QUESTION: Mr. Buxbaum, you indicated that 70 percent of earnings goes back to the stockholders. Is this because you forecast how much you are going to invest in marketing and plant ahead, and you are trying to keep this percentage approximately the same, or is this the way it happens to work out?

MR. BUXBAUM: There is a distinct effort to keep it the same, and it also works out. However, yes, we consider we have a distinct obligation to the stockholders and the investing public generally not to let this thing oscillate around and have everybody surprised when we declare dividends. Within certain limits we don't calculate 70 percent of reported earnings each time and declare the dividend on that amount. It frequently runs 71 or 72 or 69 percent, but on balance we shoot for 70. That's what we have done.

Now, if we had a construction program and capital needs of such

a magnitude that retained earnings plus depreciation setasides and other cash availabilities left us short, we'd have to worry a little bit, and maybe we'd cut down the dividend a little bit, or we might look for financing. We haven't for some years faced the problem, but we will when it comes.

This is not just happenstance. Actually, the total payout, I should say, has been running more like 85 percent of reported earnings, because reported earnings have included General Motors dividends which we considered to be paid out in tax, plus 70 percent of the earnings from Du Pont sources. The balance between the two gives them something over 80 percent. That is going to be determined very soon, because we will soon have completed the distribution of General Motors shares.

QUESTION: Mr. Buxbaum, you mentioned that you have definite policies for the size of inventories. Could you give us some idea as to what they were from the complete industrial departments, say, the percentage of the quarterly production?

MR. BUXBAUM: Oh, yes. The limits, of course, in size are not absolute. They are in terms of days' supply. They will vary a great deal. We don't any more, because we are mining a lot of it now in Florida, but we used to get ilmenite to make titanium oxide from India, for example, and we would keep a year's supply of that on hand. On some of the other ingredients in that product you might be quite satisfied to have 15 days' supply.

On balance, just to give you an answer that is meaningful, I don't recall exactly, but I'd say that our raw material standards for typical departments and perhaps for the Company overall might run at certainly something less than 30 days' supply, and the supply of semi-finished products that you might have in process might be for 10 or 15 days. On finished products it depends on a lot of things-- how many kinds of colors, makeups, and so on, that you have to keep on the shelf. Generally, overall it would run less than a month's supply on inventory.

QUESTION: Mr. Buxbaum, oddly, one of the payoff uses of information is for setting prices. Will you give us just a little bit more detail on how prices are set in Du Pont? For example, does each of the departments have the prerogative on its own or are there Company standards applied?

MR. BUXBAUM: The latter part is easy. Each department is responsible for its own pricing. Somebody might ask the question, "Why did you do that?" They won't tell you not to. It's a department to department, product to product thing. It's not really quite so hard as it might sound, because competition will help you out on this, and they are set for you. On all the products we make, there are very few on which we are the largest. We are the largest overall because of their attitude.

on  
Let me touch/one more thing. I don't think I have done a very good job of answering on prices. One is tempted to say all he can, but that's not the case. Usually competition controls prices. Where that is not the case, then we try to do the thing that is best for the Company in the long term. The long term is generating a large market and quite

frequently this involves lowering the prices for products when you don't have any competitive reason for doing so, because you want to broaden the base of sales.

As I hope I indicated briefly, your return is governed by two factors, the turnover on one hand and the profit on the other. Generally the higher your profit margin the lower your turnover. You can quite frequently make more money overall and have a higher return on your investment overall by selling a lot more of the product and working your plant and your investment harder, and taking a smaller portion of profit on each individual sale. Your return will go up.

That, I would say, is the governing philosophy in those areas on which competition doesn't set the price. If they don't today they will next month anyway. It's what is the best result long term and the return on investment.

QUESTION: Sir, we know, of course, that the recent court decision forced your Company to divest themselves of rather large holdings of GM stock. I wonder if you can tell us what your Financial Committee and your Board will do with this rather large new amount of working capital so that you can divest yourselves of this stock.

MR. BUXBAUM: Well, we don't have the problem, really, because the practice being employed is to distribute all General Motors stock to the shareholders of the Du Pont Company. So there is no effect at all on Du Pont's operation. There might be a few of the shares left over one way or the other to balance out. It might generate a few million dollars cash

but it's not \$5 billion, in any event. You understand what I mean by that. The shares are all being passed through to the Du Pont shareholders, and we don't get the cash.

QUESTION: My question relates to public health. How much money is Du Pont at present investing in research into water and air pollution abatement? Is this on the increase, sir?

MR. BUXBAUM: Honestly, I don't know how much money is directed to that. And my response as to whether it is on the increase would have to be based just on a generalized knowledge of what I see going through in the way of projects for expenditures of funds, and it does seem to me that I see more of them these days than I used to see.

My answer has to be that general. It's a problem that gets a great deal of attention, and I think it is fair to say an increasing amount of attention.

STUDENT: There is another related question. Do you have any idea of whether there is some value return insofar as the recycling and reclamation of spent chemicals allows you to use them again, in the waste discharge?

MR. BUXBAUM: I think that's the case. Quite a few projects go through normally in what we call the necessity category. For example, going back to my project bit, most projects, all those for expanded or new facilities, have to show a return. There are some such as research that don't show a return, and there are some called necessity projects that also don't show a return. The kind you are referring to fall in the latter category.

So would a new power plant, for example. Many times, though, in addition to the necessity aspects of air pollution control and water pollution, <sup>words</sup> et cetera, they draw out in the/that accompany the project certain collateral benefits that will accrue to the plant. Overall it might not show a profit, but still and all it's not money which won't earn any return.

I'm afraid I'm a bit weak in this area. I can't help you much more than that. Some of those research people who were here a few weeks ago could probably have answered that better than I can.

QUESTION: Mr. Buxbaum, I have a double question. You presented us with the idea at the corporate level of the accounting function having both a line and a staff function. Now, at a lower corporate level, say at a plant level, what is the relationship of the comptroller or the head of the Accounting Department to the plant manager and to you? The second question is: In the development of standards, what particular part or what share of the development does the Accounting Department play?

MR. BUXBAUM: In the last part do you mean the ~~working-capital~~ standards?

STUDENT: I am thinking of production standards, the financial side of production standards.

MR. BUXBAUM; On the plant level the accounting and the accounting type functions are line, I guess you would say generally, although they are staff to the extent that they assist the management of that plant or the management of that department who might want some information from that plant. First of all, the accounting superintendent on a typical plant--

and these vary a lot because some plants will be quite small and some will be quite large, and sometimes some are not big enough to have an accounting superintendent as such, but might have a few clerks--is on the staff of the plant manager. The others on that staff are the manufacturing superintendent, the works engineer, the technical superintendent, and a service superintendent to take care of personnel and such as that. So the accounting manager's job is to maintain adequate procedures for accumulating the cost of production, importantly. He doesn't do all this. Usually it is pretty well established and he just operates it. He establishes cost centers within the manufacturing operation as to where you cut off for cost comparisons and for cost accumulation purposes. He maintains adequate records on inventory stores. Usually a plant will pay its own wage rolls, whereas all the salary rolls for the whole Company are paid in Wilmington. So there's a wage-roll matter. Sometimes the plant is big enough to have a small computer. So the plant accounting superintendent performs a combination of line and staff jobs and is directly responsible to his plant manager.

Now, the plant manager is responsible to the director of manufacturing of this department who sits in Wilmington. Let's say we've got 11 domestic industrial departments and 82 plants, so we've got maybe 7. something plants per department. Some have 15 and others have 4. So there is a manufacturing director in Wilmington to whom all the plant managers under the responsibility of this department look to. This is a line relationship.

There is also a control manager who is on the staff of the General Manager of the department, and who looks in a functional way into things that go on in the accounting field and related functions on all the plants.

As I alluded to a while ago, these control managers then are responsible for all the accounting-type activities that go on outside of the Treasurer's Department. They are not in a line relationship to us but they are in a rather friendly relationship to us, and we talk to each other. We don't ever need to say who has the last word, because it doesn't occur.

As a practical matter, I guess, when you get down to the printed words, the Treasurer and under him the Controller are responsible definitely for all the accounting that goes on in the Company. But it's done on this dotted-line relationship.

Does that answer that part of the question all right?

STUDENT: Yes, sir. Does the comptroller and the control manager have a string on the plant accounting?

MR. BUXBAUM: Definitely, yes. That's a much stronger string than the one from us to him. The control managers, operating as part of the General Manager's staff, tell them what to do in the plant as far as accounting matters go.

Also, I might take up one other thing--the staff relationship. If a department wants--and they always do--to spend some money for enlarging the plant or building a new one, the cost data and basic economics are

developed on the plant, as to how many men it would take to operate this and to build up mill costs with the proposed new venture. These data generate on the plant. They are sent on into the Control Division in Wilmington and are refined and put in proper form there. This is a staff relationship to the Wilmington Office also. Most of the people who now work in the Wilmington Office Control Division started in the accounting office of some plant of that department.

What part does the Treasurer's Department or the Comptroller's Division play in the establishment of these standards? Is that the way you put it?

STUDENT: Yes. Do you make the decision?

MR. BUXBAUM: What we do in the Treasurer's Department has been in one of the rules passed by the Committee many years ago. We delegate responsibility for the implementation of the rules governing the establishment of working capital standards. So in the basic Executive Committee rules, which the Treasurer wrote in the first place, it says how you go about doing this. You establish the minimum amount of inventory that is necessary compatible with economic purchasing, and protection, et cetera. You state it in terms of days' supply. Each department then is required under this rule to prepare and submit to the Committee its proposed standards for each year. The Treasurer's Department participates in this by going around to these departments and reviewing with them what their proposed standards are and reviewing how they arrived at them-- going back to the man's first question on forecasts, and why don't they make them loose so they can live with them comfortably. This is the place where we try to prevent that from happening, because, if they haven't built up their requirements in a consistent way and one that truly

represents the lowest level that seems to give adequate protection, we won't approve them. We in the Treasurer's Department have to approve each of the standards proposed by the industrial departments. Now, I can't remember a case since I've been there where we have failed to do this. We may talk about it a long time but we finally agree that this represents a fair standard under the circumstances as they exist.

So we prescribe the rules and we work with the departments in reviewing what they propose and act as sort of a watch dog for the Committee in this respect.

QUESTION: Mr. Buxbaum, I wonder if you would tell us a little more about the people in the financial-management part of the business. For example, are you having trouble getting enough qualified financial-management people? Do you have your own program? Do you have any problem with turnover?

MR. BUXBAUM: Sometimes it seems that when we have jobs to fill-- and there are always jobs to fill, a new supervisor's job opening up or an assistant manager or a manager of a section--we say to ourselves that we just wish there were a half-dozen men who were clearly sticking their necks out for this and that our problem was not reaching a little bit but was finding it hard to decide which one was best qualified. To that extent I think this would seem to indicate that we don't find ourselves flooded with talent which is eminently qualified.

Now, in this category, it would perforce be a man who had a few years' experience with the Company. We can always see a lot down the

line. Things never materialize this year as rosy as they appear to be coming up a few years hence. But I do believe we have made progress in the past few years in getting into the organization men of a lot of native ability and good training and good education who should develop into a good cadre of management people for the Treasurer's Department in the future. I believe this is the case.

I wouldn't say that we have a great deal of trouble getting men now. We have a sizable college-recruitment program carried on by our Employee Relations Department for us and for all the other departments. We could go out and visit the campus ourselves if we wanted to but they have a staff of people who are quite good at this, and they have been generating a lot of good referrals over the past 2 or 3 years, in my opinion.

I've talked to a lot of these boys and we made offers to a lot of them this year and last year and the year before and we've got a good proportion of acceptances. So I would say things are looking up.

Most of the men just out of school, without any substantial business experience, start in what we call a training program usually in the Accounting Division, because that's the largest division of our department and it is where most of the facts and figures originate and where they learn the basic facts of life as compared with going out and making some long financial study without knowing the facts and figures they are dealing with. We get them off to a good start, hopefully. We give them about a year working in three or four basic accounting sections of

our division, and we generally supply several of the other divisions as well as our own requirements from this pool.

Does that hit the various things you asked?

STUDENT: Do you have any turnover problem?

MR. BUXBAUM: Well, little or none, I'd say. Not many people leave.

QUESTION: Do your product managers submit functional and integrated project programs to the Executive and Finance Committees? Once the projects are accepted is there central development?

MR. BUXBAUM: There are two things here. One, we tell them what is happening. We keep them informed in the industrial departments. This is an information thing. Sometimes we go asking for something. Let's take the second one first.

When you come in and ask for an appropriation request for so much money to do a certain, specific thing, almost invariably it is to spend money on an annual, permanent investment. They don't need authority from our people or special Executive Committee authority.

Now, when they come in with a proposal to enter a line of business or to expand upon the existing one, this usually involves the spending of money, and that's when they have to tell their story on what they expect to do, very specifically. They list even the description of the proposed work, for example, as one of the items, and say they want to add a tank here, and a large power house to this extent. This is quite a specific thing and they have no authority to do anything else. Any change in the scope of work or material at all requires going back to

the Committee, even though there is no more money involved. They do what they say they are going to do with that particular amount of funds.

Now, sometimes things get complicated--quite frequently things get complicated--and it is difficult to sort out any long program of things that you intend to do. Each individual project and step won't make sense or hold together. So sometimes we have what we call a program, and we say, "Now, we are going to start next year embarking on a long series of things. They will involve a laboratory here and a sales office there, and a plant somewhere else. This is a market development program and we foresee in X years hence that this is the posture in which we will find ourselves, because the timing is what it is. We are not asking for all these things now. In fact, some of the things we will ask for have yet to be determined. But we are embarking on a program."

This might be solely informational, but they describe from beginning to end what they think they are going to be asking for, and say, "For some of these things we'll be coming back in with a project to you." Some others will require less than \$200,000, and we'll authorize this ourselves. Then, if the Committee expresses agreement in principle with the program, they will proceed to implement it, coming in with specific requests as they see fit--the size of the sales force, the size of the plant roll, et cetera. These things are all wrapped up in their forecast.

If their forecast means hiring a lot more men, no matter what they are doing, it is going to have an effect on their month-by-month prospective position, purchase, and that might cause their forecast to look not so good, and

this story will come out when they explain what happens.

COLONEL McELWEE: Mr. Buxbaum, on behalf of the Commandant,  
thank you very much for a very informative morning.