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# Budgetary control for Paint Manufacturers' Association of the United States

Paint Manufacturers' Association of the United States. Cost Accounting Committee

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# BUDGETARY CONTROL

PAINT MANUFACTURERS' ASSOCIATION
OF THE
UNITED STATES

COST ACCOUNTING COMMITTEE
OCTOBER, 1923

ASSISTED
BY
A. C. STEPHAN
EFFICIENCY ENGINEER
CHICAGO, ILL.

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### CHAPTER I

### WHY BUDGETARY CONTROL IS NEEDED

### **Everybody Practices Budgetary Control:**

Every individual and every company doing business today estimates his probable sales before he makes a purchase. He plans ahead in some manner for his future business. This planning is sometimes done in a more or less imperfect manner by someone who carries all the facts and figures in his head, or it is based upon certain estimates made by various departments whereby future operations are outlined. This planning ahead as carried on by everyone, even though it be more or less effective, is in reality budgetary control.

### Necessity of Proper Records:

There are many instances today where the complete running of a company rests in the mind of a single individual and where no intelligent record is kept of the planning and the results of such planning whereby a successor could continue the trend of that business. There are concerns today where the owner of the business directs every phase of its activities. He is sales manager, purchasing agent, production manager and treasurer, all in one. As sales manager, he knows the requirements in manufacturing. This information in turn fortifies him with a knowledge of what to buy when he functions as purchasing agent. With a knowledge of his sales campaign, sales expense, production plans, and material and manufacturing expense requirements, he is further fortified with a knowledge of his financial requirements and therefore acts efficiently as a treasurer. He does all this without recording in a comprehensive way the various details step by step on which his plans are formed and carried out. Any day he may be incapacitated to the extent that the business will be deprived of his services, and also of that intimate knowledge of every phase of its activities. The concern, therefore, which allows one person to dictate the policy of the company, formulate its plans, and govern the activities of all departments on the basis of his intimate knowledge gained by years of experience and most of which must cease with the passing of the individual himself, is certainly not fortifying itself for future success like the company which currently gathers important statistics to be utilized in the planning of the future business and later on records how these plans were carried out. Even though it be assumed that this concern is making gratifying profits, nevertheless it is not properly fortifying its business nor protecting its investment. It is therefore appreciated how important it is that every business, no matter how small or how large, should show in black and white the way the business is planned and executed.

### Necessity of Co-ordination of Activities:

There are other concerns where the volume of business has increased considerably in size and the organization has correspondingly become more complex. And now, the single individual who once ran the entire business in his head is compelled to turn over certain phases of his duties to assistants, with a separate manager in charge of each leading function. A sales manager spends his entire time and energy soliciting sales and has nothing to do with the manufacturing end of the business, a produc-

tion manager or superintendent looks entirely after the manufacture of the goods and has very little to do with the sales end of the business, and a treasurer who devotes his entire time in providing proper funds based upon what little information he obtains. The co-ordination which formerly was carried on in the mind of the one individual when the business was small is now missing as the business grows, due to the lack of outlining a plan of proper future action whereby that co-ordination between all departments is made possible.

A majority of the business failures of today can be attributed to the lack of coordination between the various departments of the business and a further lack of cooperation between the officers and executives. This lack of cooperation is, in many cases, primarily due to the absence of that information which would make it possible.

The successful business man of today realizes that the administration of his business tends more and more to a standardized routine in order to maintain the proper coordination of all departmental activities and the subordination of all departments to a common head. The best way to accomplish this, is to lay out a definite plan of all activities and to have this plan submitted in black and white in detail and approved by some one with the proper authority and ability. This is budgetary control.

### Centralizing Executive Control:

Even though a practical and feasible plan is laid out for the future in the way of reaching a certain goal of sales and profits, it is just as important to provide plans not only for the proper co-ordination of all departments, but also for the enforcement of plans.

It is therefore appreciated that the enforcement of the budget must be delegated to some one. In most concerns, this duty is fulfilled by the general manager. In the larger concerns the detail enforcement may be delegated departmentally to several parties such as the sales manager, production manager, treasurer, purchasing agent, etc., and requiring a current report to be made to the general manager, showing how the enforcement is proceeding and how the goal is being approached.

In this manner, the administration of the business is carried on more efficiently as a result of this centralized control, and the general manager is currently presented with a comprehensive survey of the entire problem of administration. With the aid of this survey, he is given the information whereby the proper emphasis can be given to each problem.

### Why Budgetary Control Is Needed:

It has been explained above that budgetary control is urgently needed in the efficient administration of business for two well defined reasons, as follows:

- 1. To coordinate the activities of all departments.
- 2. To centralize executive control.

Most concerns do not use a budgetary control system primarily because they either do not understand how to prepare and operate it, or else they do not realize the need of it. From the elementary description given and the reasons cited why the budgetary system should be operated, it is hoped that all members of the Association will review their own requirements and plan some type of budgetary control.

### CHAPTER II

### HOW TO INSTALL A BUDGETARY CONTROL SYSTEM

### Preliminary Steps:

Certain vital factors upon which the proper preparation and the successful operation and enforcement of the system are based, shall be definitely decided and agreed upon before any detail work is attempted. Oftentimes a budget system is commenced before a proper basis is formulated for its execution, consequently unsatisfactory results are obtained.

It is therefore very necessary on installing a budgetary control system to spe-

cifically outline the following factors:

1. Proper budget period.

2. Proper parties to compile departmental estimates.

3. Periodical reports to show the working of the budgets.

4. Method of enforcing budgets.

5. Proper classification of budget expense items.

Any so-called budget system which is not definitely based upon these two cardinal requirements will not be effective and will be of little value to the executive.

### The Proper Budget Period:

Before any department shall attempt to prepare its estimates, and since all departments shall figure their estimates over the same period of time, it is readily appreciated that the first thing to decide is the proper budget period.

There are certain factors in the paint industry which should be considered before deciding upon the budget period such as market conditions, merchandise turnover period, accounting period and accounting methods, reliability of the statistics.

covering past periods, advertising program, financing methods, etc.

It is not intended here to lay down what is considered an ideal budget period in the paint industry as there may be individual cases where different budget periods will operate to better advantage. Many concerns, however, map out a sales and advertising program covering a yearly period. It therefore seems logical in those cases, that the budget period should cover a similar period and be checked up on a monthly basis to determine whether any revisions should be made on account of changing conditions.

Most companies have one month as their accounting period, commencing with the first day and ending with the last day of the month. The budget period under such conditions should therefore commence with the first day of an accounting period

and end with the closing day of the same or another accounting period.

### Proper Parties to Compile Departmental Estimates:

After the budget period has been definitely decided upon, it then becomes necessary to prepare the departmental estimates. The practice varies as to this. In some concerns, the general manager prepares these estimates and then submits them to department heads for criticism and approval. Other companies, turn this work over directly to the department heads: for example, the sales manager is asked to prepare

the sales estimate, the superintendent of the factory is requested to prepare the manufacturing expense estimate, etc. Each department head then in turn, allots a certain part of the estimates to his subordinates; for example, the sales manager asks each salesman to develop an estimate of his anticipated sales and afterward may revise accordingly, the superintendent will rely upon his factory cost accountant to compile the manufacturing data, etc. After the department heads complete their estimates, they will then discuss them with the general manager, who will make such revisions as he deems necessary before giving his final approval.

It appears that the latter method is the preferable manner in which to compile the estimates as better results will be obtained if the parties responsible for the accuracy and working of the estimate are the ones who prepare it. It further seems to be a fact that department heads are better equipped to judge as to what the probable activities of their department will be.

### Periodical Reports Showing the Working of the Budget:

It is necessary that the executive in charge of the budgetary control system be furnished with periodic reports showing the accomplishment of each department, so that a comparison can be made with the estimated performance.

A particular point to be brought out here is that the periodic reports should be so compiled that when received by the executive they shall be in such form that proper comparisons can be made. While the department heads may be responsible for the compilation of the periodic reports, it seems preferable to have these periodic reports compiled by the accounting department, who shall be held responsible for their PROMPT preparation. Unless these reports are received promptly after the closing of the accounting period, it will be impossible to make the necessary revisions in the budget program in those instances where the report discloses the fact that such revisions are necessary.

### Method of Enforcing Budgets:

Each department, after preparing an estimate of its performance for the budget period, shall lay plans to carry out its estimate. UNLESS THIS IS DONE, THE BUDGET WILL SERVE VERY LITTLE, IF ANY PURPOSE.

Unless a well defined plan is laid down to enforce the departmental estimates, departments will vary widely in their actual performances and in the amount of expenses incurred with the result that such a budget has little or no value. It is therefore indispensable that a well defined enforcement plan be arranged before the budget routine goes into effect. Too much emphasis cannot be placed upon this requirement, as it is useless to go ahead with a budget program unless this enforcement plan is definitely decided upon and ultimately carried out.

### Proper Classification of Budget Expense Items:

In the preparation of the various expense budgets, it is well to keep in mind that for current purposes of comparison between the budget and actual monthly expenditures, and also to facilitate the preparation of the estimated profit and loss statement, that the classification of expenditures in the expense budgets should be the same as the classification of accounts in your general accounting procedure.

### CHAPTER III

### THE SALES BUDGET

### Sales Estimate, the Keystone of the Budget Program:

Every business desires to make a profit, and unless sales are made no profits are realized. Where sales show a satisfactory profit, most executives desire to increase their profits and therefore it becomes necessary to increase their sales. Plans and efforts are then made to accomplish that end. In some instances, even though the executive desires to further increase his sales, there may be certain market conditions which indicate the probability of a decrease rather than an increase in sales.

In making up the sales budget, it is necessary for the sales manager to estimate the amount of sales which he reasonably feels will develop during the proposed budget

period.

There are many difficulties encountered in preparing this budget, as some factors will actually decrease future sales, while other factors will increase them; therefore all these main factors should be carefully considered. Each sales manager, m studying the possibilities of sales a year ahead, should give considerable weight to such trade factors as follows:

1. New lines of goods added.

2. Old lines of goods dropped.

3. New territories and salesmen added.

4. New branches, warehouses or agencies established.

5. A greater or less advertising program.

6. Trade drives.

7. Cut in prices.

- 8. Credit situation in various districts.9. Market fluctuations in raw materials.
- 10. Business outlook in general:
  - (a) Savings Deposits.

(b) Condition of Crops.

- (c) Transportation Conditions.
- 11. Last year's sales, etc.

One of the outstanding traits which some men possess over others and why some concerns gain rapidly on others is their ability to see further ahead into the future and move accordingly. It behooves every concern to study and plan into the future and to closely observe the effects upon their business resulting from changes in business policy and also to carefully scrutinize the business horizon for those trade factors beyond their control, and to observe and estimate the probable effect upon their business.

### Necessity of Reliable Statistics of Past Periods:

Of vital importance in preparing the sales budget are the statistical records of sales of previous periods. The concern which keeps detail statistical records showing past activities in sales has a very valuable adjunct in preparing the sales budget. The

estimate of anticipated sales is determined by taking the sales of the preceding period and adding or subtracting certain amounts based upon a careful consideration of the probable effect of certain trade factors upon the future business.

Many manufacturers have their sales statistics developed in considerable detail as follows:—

- 1. By commodities or commodity groups
- 2. By customers
- 3. By salesmen
- 4. By territories

Some companies have their statistics so compiled as to show sales by types of customers where the margin of profit may vary as follows:—

- 1. Dealers
- 2 Jobbers
- 3. Railroads
- 4. Industrials
- 5. Marine
- 6. Export

Where a company operates one or more branches, it is necessary for each branch to compile a sales budget and later on for the general manager to consolidate all branch budgets with that of the home office into a general budget.

Where the salesmen are called upon to make an estimate of their future sales, they should be provided with the sales statistics covering the results of their past periods. This will assist them greatly in their calculations.

### Estimate of Sales:

In order to illustrate in a general manner how the sales estimate shall be prepared, an assumed budget period is taken as one calendar year. This budget shall be so prepared as to provide for a careful analysis and possible revision every three months. It is further assumed that the business carried on by the concern in question amounts to \$1,000,000 for 1923 and that the budget now being discussed contemplates the year 1924.

It is further assumed that near the expiration of the sales period of 1923, the sales manager will call into conference all his salesmen and carefully explain to them the important trade factors and any changes in the policies of the company and the probable effects of all these factors on future sales. He further goes into detail with each salesman regarding the sales potentialities of his territory by reviewing in a general way the leading accounts from the sales records. For the purpose of illustration, it is assumed that the sales records have been kept showing the sales by commodity groups for each quarterly period of 1923. The salesman is then advised to proceed with his estimate and to indicate on a conservative basis what he thinks will be the probable sales in 1924, and to set up the estimate so as to reflect the total sales of each customer by lines of goods for each quarter. The salesman is further advised specifically that the total amount of yearly sales per customer is more important as regards accuracy of estimation than the quarterly division.

The salesmen's estimates, when completed, shall be reviewed by the sales manager in conjunction with the salesmen. This will usually result in certain revisions upward or downward. The result of this analysis reflects itself in an estimate of 1924 sales for the company as shown on page 7. You will note that the estimate indicates the salesmen's estimates, the revision of the salesmen's estimates by the sales manager,

and the comparison between the revised figures approved by the sales manager and me actual sales of the previous year.

On Page 8 is shown the distribution of the 1924 estimated sales by quarterly periods, and the grand total of each quarter compared to the total actual sales of the

corresponding periods of the previous year.

On Page 8 is shown the distribution of the estimated sales for 1924 by types of customers by quarterly periods and the grand total of each quarter compared to the total actual sales of the corresponding period of the previous year. In all of the estimates referred to above covering the sales budget, the figures shown represent dollars of sales. For financial control purposes, it is neseccary that the amounts represent values as shown.

### ESTIMATE OF 1924 SALES

		Salesmen's Estimate of	Salesmen's Estimate for	1923 Gross
Name of		1924 Gross	1924—Revised	Sales
Salesmen	Terr. No.	Sales	by Sales Mgr.	Carco
John Jones	1	90,000	85,000	84,300
Chas. Green	2	63,000	63,000	61,700
Davy Jones	3	<i>52</i> ,000	55,000	49,000
Chas. Hinkel	4	40,000	42,000	40,000
Harry Crockett	5	39,000	45,000	38,000
Arthur Beeman	6	128,000	98,000	93,000
Dan Quinlan	7	38,000	42,500	32,500
Chas. Osterlee	8	51,000	50,000	45,000
Henry Klenke	9	41,000	44,000	38,000
Chas. Killian	10	38,000	36,000	30 000
Byron Moore	11	€2 000	65,000	55,000
John Dorsey	12	31,000	35,000	<b>2</b> 9,0 <b>0</b> 0
Arthur Youle	13	27,000-	25,000	20 000
Chas. Bastian	1 <b>4</b>	40,000	40,000	32 000
Davy Moon	15	42,000	42,000	32,000
Otto Frebel	16	28,000	28,000	20,500
House Orders		310,000	304,500	300,000
•		1,120,00Ò	1,100,000	1,000,000

# DISTRIBUTION OF ESTIMATED SALES FOR 1924 BY QUARTERLY PERIODS

Name of Salesmen	Terr. No.	1/1/24 to 4/1/24	4/1/24 to 7/1/20	7/1/24 to 10/1/24	10/1/24 to 1/1/25	Total Gross Sales
John Jones	1	11,000	30,000	29,000	15,000	85,000
Chas. Green	2	8,000	25,000	20,000	10,000	63,000
Davy Jones		17,000	20,000	15,000	3,000	55,000
Chas. Hinkel		11,000	16,000	9,000	6,000	42,000
Harry Crockett	5	14,500	15,500	9,000	6,000	45,000
Arthur Beeman	0	32,500	34,500	15,000	16,000	98,000
Dan Quinlan		11,250	15,750	8,000	7,500	42,500
Chas. Osterlee		12,000	22,000	10,000	6,000	50,000
Henry Klenke	9	12,000	15,000	10,000	7,000	44,000
Chas. Killian	10	9,500	15,500	8,000	3,000	36,000
Byron Moore		20,000	<b>25</b> ,000	10,000	10,000	65,000
John Dorsey	12	13,000	16,000	5,000	1,000	35,000
Arthur Youle	13	7,500	10,000	5,500	2,000	25,000
Chas. Bastian	14	12,000	16,000	8,000	4,000	40,000
Davy Moon		13,000	17,000	8,000	4,000	42,000
Otto Frebel	16	8,000	12,000	4,000	4,000	28,000
House Orders		119,750	86,750	68,100	29,900	304,500
Estimated Quarte		·	·	•	•	·
vision1924		332,000	392,000	241,600	134,400	1,100,000
Actual Quarterly		•	-		,	
sion—1923		<b>2</b> 77,000	370,000	192,000	161,000	1,000,000

# DISTRIBUTION OF ESTIMATED GROSS SALES FOR 1924 BY TYPES OF CUSTOMERS

Types of Customers	1/1/24 to 4/1/24	4/1/24 to 7/1/24	7/1/24 to 10/1/24	10/1/24 to 1/1/25	Total Gross Sales
Dealers	229,000	251,000	131,600	58,400	670,000
Jobbers	31,000	49,000	30,000	10,000	120,000
R. R. and Industrials	40,000	42,000	40,000	38,000	160,000
Jobbing Goods	32,000	50,000	40,000	28,000	150,000
Estimated Sales, 1924Actual Sales, 1924	332,000 277,000	392,000 370,000	241,600 192,000	134,400 161,000	1,100,000 1,000,000

In order, however, that the production department may compile its estimate of raw material and manufacturing expense requirements, it is necessary for the sales department to show their estimated sales for the budget period not in dollars and cents, but in actual units of volume, such as gallons for liquid goods and pounds for paste goods for all articles expected to be sold.

Right at this point there appears to be good grounds for any manufacturer to ask what degree of refinement shall be followed in setting up an estimate of volume

from the estimate of sales shown in dollars and cents. It is the consensus of opinion that the amount of detail involved in preparing an estimate of each and every product by shades and by sizes of container would be so great and laborious and at the time of budget revision, so delayed on account of the intricate details, that such a plan of refinement would not be practical. It is believed, however, that if the sales department breaks down its estimated sales into specific commodity groups, upon which basis the salesmen compiled their estimates, that the production department will be supplied with very valuable data, which will enable them to get a close line on the quantities of leading raw materials required for the year, which analyzed alongsing of the purchases actually made during the preceding year, will give the purchasing agent an idea of the limits of his contract engagements, and assist him in intelligently specifying the rate of delivery on said contracts.

The distribution by lines of goods will also enable the production department to plan more intelligently their manufacturing expense estimate comprising payroll

and expenses, and also whether their present equipment is adequate or not.

Herewith is shown the distribution of the volume by sales by commodity groups by quarterly periods and by yearly totals. The figures have been inserted in a very arbitrary manner simply to explain in a general way the principle involved, and no attempt has been made to apply unit values to the quantities shown to see whether the extensions would agree with the total values shown on pages 7 and 8.

### DISTRIBUTION BY LINES OF GOODS ESTIMATED SALES FOR 1924

	lst	2nd	3rd	4th	
Kind of Goods	Quarter	Quarter	Quarter	Quarter	Totals
Barn Paints	7,000 gal.	13,000 gal.	6,000 gal.	4,000 gal.	30,000 gal.
Floor Paints	4,500 gal.	9,000 gal.	3,500 gal.	3,000 gal.	20,000 gal.
Best Outside House					
Paints	35,000 gal.	65,000 gal.	40,000 gal.	10,000 gal.	150,000 gal.
Other Outside House					
Paints	8,000 gai.	20,000 gal.	12,000 gal.	1,000 gal.	41,000 gal.
Flat Wall Finish	10,000 gal.	15,000 gal.	7,000 gal.	3,000 gal.	35,000 gal.
Enamel Paints	6,000 gal.	16,000 gal.	12,000 gal.	6,000 gal.	40,000 gal.
Shingle Stain	1,000 gal.	3,000 gai.	1,500 gal.	500 gal.	6,000 gal.
Mtr. Car Finish	1,500 gal.	3,500 gal.	2,000 gal.	1,000 gal.	8,000 gal.
Industrial Liquid					
Paints	9,000 gal.	10,000 gal.	11,0 <b>0</b> 0 gal.	10,000 gal.	40,000 gal.
W 1	ro 000 11	/ C 000 11	40.000 H	50 000 ti	004 000 11
Industrial Pastes	59,000 lbs.	65,000 lbs.	60,000 lbs.	50,000 lbs.	234,000 lbs.
Colors in Oil	8,000 lbs.	20,000 lbs.	7,000 lbs.	5,000 lbs.	
Colors in Japan	1,000 lbs.	3,000 lbs.	2,500 lbs.	1,500 lbs.	8,000 lbs.
Jobbing Goods-			·		
(a) Linseed Oil	8,000 gal.	25,000 gal.	16,000 gal.	1,000 gal.	50,000 gal.
(b) Turpentine	2,000 gal.		1,500 gal.	1,500 gal.	10,000 gal.
(c) White Lead	10,000 lbs.	40,000 lbs.	20,000 lbs.	5,000 lbs.	75,000 lbs.
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### CHAPTER IV

# THE SELLING, GENERAL AND ADMINISTRATIVE EXPENSE BUDGET

### Selling, General and Administrative Expense Estimate Necessary:

It is a comparatively easy task to increase sales if no attempt is made to keep down the "expense of doing business," such as the selling, general and administrative expenses.

A sales program, as outlined in the previous chapter, should therefore not be approved by the general manager until a reasonable assurance is shown that a satisfactory profit is to be realized. In estimating the probable profits, the largest item of expense to be considered in the paint industry is the selling, general and administra-

tive expenses.

There is no item of expense or cost in the industry which allows the working of a budgetary control system the opportunity to give evidence of its effectiveness and value as this particular type of expense. Many individual items are difficult to estimate in advance, as there is no basis or standard to judge by. This one reason in itself makes it so much the more necessary that a strict and reliable control be kept on the "expense of doing business."

### Selling, General and Administrative Expense Estimate:

As every concern has a list of what it considers selling and general and administrative expense accounts, no attempt will be made here to discuss their proper classifications. On page 12 is shown an estimate of selling, general and administrative expense for the year 1924 compiled on a monthly basis and showing each item of expense in total amount and in per cent of sales expectancies; also a comparison of the budget's yearly totals with that of the previous year.

### Preparation of Selling, General and Administrative Expense Budget:

The selling, general and administrative expense estimate should be prepared under the direction of the sales manager, and such other official as the general manager designates. Where there are branch offices, each individual branch should prepare an estimate of its own, and after being approved by the branch manager, should be forwarded to the sales manager at the general office.

Each individual item of expense should be gone over very carefully. The amount of expense incurred for the corresponding period of the previous year should be carefully analyzed to note whether some eliminations can be made or whether some reductions can be effected. To this shall be added any increase of expense due to the contemplated increase of sales. This does not necessarily follow on all items. In the event the increase in sales is primarily due to increase in prices, rather than to increase in volume, extreme care should be taken in making revisions, as no additional expense will be incurred in the handling of the goods.

In connection with the estimate covering warehouse and shipping expense and outward freight and cartage, it is well to have the head of the shipping department prepare it for the sales manager.

The advertising expense is sometimes treated as a separate item in budget prep-

aration. Due to the fact that the largest proportion of advertising expenditures are incurred during the first half of the year, but that the benefits derived therefrom extend over the entire year, the question is often advanced as to the proper distribution of this expense against the twelve months of the year. Some companies pro-rate it evenly over the twelve months, others pro-rate it against the twelve months on the basis of the anticipated sales program, while others make two unequal divisions based upon the previous year's sales for the first six months as compared to the last six months and then in turn divide each division by six and charge each month in the first or second half of the new year accordingly.

In preparing the selling, general and administrative expense budget, some definite plan of distribution should be agreed upon, so that each month shall be

charged accordingly.

After this extensive budget has been carefully prepared, it shall be presented to the general manager for final approval.

### Control of the Selling, General and Administrative Expense Budget:

Too much emphasis cannot be placed upon the necessity of the enforcement of this budget. In order to accomplish this, it is necessary to exercise control through a proper system of monthly reports by which the actual expenditures can be checked with the estimated expenditures. The accounting department shall make a careful comparison of each and every item and submit copies of monthly reports prepared in accordance with the form shown on page 13 to both the general manager and the sales manager. The general manager, on reviewing these reports, will then take what action he deems necessary either in the way of reducing future expense or revising his budget accordingly.

In connection with salesmen's traveling expenses, monthly detail reports should be prepared in duplicate, one copy to be retained by the sales manager and the other copy to be sent to the salesman showing:

o be sent to the satesman showing.

1. Actual amount of sales and estimated amount of sales.

2. Actual amount of traveling expenses and estimated amount of traveling expenses.

3. Indicate (1) and (2) comparisons in per cent.

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# MONTHLY REPORT-SELLING, GENERAL ADM. EXPENSE BUDGET

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### CHAPTER V

### THE PRODUCTION BUDGET

There are certain industries outside of the paint industry where the sales budget can be immediately followed by the preparation of a comprehensive and reliable production budget, which can be adopted by the factory in scheduling its future output. Such production schedules operate very conveniently, for instance, in an automobile factory where an output of a fixed number of the same kind of automobiles is planned, where each machine is made up of the same kind and same number of

piece-parts and assemblies, etc.

In the paint industry, however, an entirely different problem presents itself. Even though the sales program definitely stipulates the particular lines of goods to be made and the volume to be turned out, the specifications cannot go much further. As a result of such meager specifications, what particular production program can be planned? The sales department, for instance, may estimate very closely, both in dollars of sales and in gallons of output the total amount of outside house paint to be sold during the first three months of 1924, but what about the division of the total output in gallons by the various shades and colors, and what about the division by the various sized containers? One might suggest the manufacture of the shades and the sizes that prevailed during the same period of the previous year. The fact of the matter is, it sometimes happens that a shade which was extremely popular the previous year becomes comparatively inactive the next year.

The usual procedure for most concerns is to carry a pretty good assortment of standard goods in stock of the various shades in the various sized containers; and that when the various inventories approach certain minimum balances, the stock is replenished. Special goods made on special formulae are made at the time of re-

ceiving the order.

It, therefore, does not appear practical in the paint industry to map out a very comprehensive production program, so far as committing the factory to a complete schedule, say three months in advance. However, the sales budget in stipulating the volume of goods to be sold by commodity groups furnishes the factory with valuable information from the viewpoint of raw material commitments and in a general way with scheduled outputs.

### CHAPTER VI

### THE RAW MATERIALS BUDGET

### Estimate of Raw Materials Essential:

In the operation of a budgetary control system, it is very important for the general manager to know what the probable disbursements are so that he can arrange to obtain the necessary funds with which to meet the disbursements. Since the cost of raw materials consumed in manufacture constitutes the largest proportion of all disbursements, it is therefore very essential that a raw materials budget be prepared as near correct as possible under the approximate specifications developed by the sales department, where the output is stated in gallons and pounds by lines of goods regardless of shades and sizes.

The raw material budget is also necessary for the preparation of the estimated

statement of profit and loss for the budget period, which is discussed later.

This budget is also necessary for the purchasing agent, so that he can make plans to buy the necessary raw materials and arrange to have them in the factory at

the time they are needed in production.

Most manufacturers will probably agree that as far as the production end of the business is concerned, more money is lost in buying than in any other activity. In many cases, losses are suffered in purchasing, due to the fact that the purchasing agent is not properly informed as to the correct quantities required and the exact time it is needed.

It is appreciated that where commitments are made over future periods, as is often done in the case of leading raw materials, such as linseed oil, lead, zinc, lithopone, etc., and where contracts stipulate the rate of deliveries per month, it is very essential to budget the requirements carefully by periods.

### Determining Raw Material Requirements:

It is not an easy matter in the paint industry to estimate closely the raw material requirements a half a year or a year ahead. There are so many different commodities made and so many different shades and sizes involved that it would be almost a hopeless task to work out a complete schedule of several hundred different raw materials.

Instead of estimating, therefore, the quantities of raw materials for each commodity to be manufactured, it is much simpler to estimate the future requirements of each item of raw material on the basis of past experience modified either upward or downward in accordance with the ratio of expected production. Although the sales budget is prepared upon a quarterly basis, this does not signify that the raw material budget should be compiled on that same basis. The manufacturer will probably find it advantageous, after his schedule of production has been determined, to set up the raw material budget on a monthly basis, thereby affording a proper basis for ordering by the purchasing agent.

In order to prepare a budget of raw materials, particularly to assist the purchasing agent, it is necessary to take into consideration the inventory at the beginning and ending of the period. For instance, the factory records show an inventory of linseed oil at the beginning of the budget period of 1,000 gallons, and the esti-

mated requirements for the first month of 1924 is 10,225 gallons, and it is further estimated that at the end of the first month, an inventory of linseed oil shall be 2,500 gallons. The estimate of linseed oil to be purchased for the first month will be 2,500 plus 10,225 gallons less 1,000 gallons, or 11,725 gallons.

It is, therefore, intended that each raw material item, which appears on the budget, shall be calculated in this way if an accurate estimate is to be prepared.

One of the real problems of the purchasing agent is to obtain deliveries of raw materials, so that sufficient amounts are on hand at all times to take care of production and at the same time tie up the least amount of working capital. The difficulty is made more simple by budgetary control.

### Raw Material Budget Form:

A suggested raw material budget form is shown on page 17. It is designed on a monthly basis to cover a yearly period. The estimated inventory at the close of the month is obtained by adding the estimated purchases to the beginning inventory and subtracting the estimated consumption.

The analysis of the beginning and ending inventories is of much interest to the general manager, for any outstanding difference, particularly an increase, should be

explained satisfactorily by the purchasing agent.

### Raw Material Budget Control:

The raw materials budget should be checked up monthly to detect errors and to make corrections. In order to do this, it is necessary to compile a report showing comparisons between the amounts of raw materials as actually purchased and as

estimated. On page 18 is shown a report designed for this purpose.

By a study of this report, the general manager will be in a position to make such revisions as he deems necessary in the raw materials budget. Such revisions shall be given to the purchasing agent. The general manager should also be furnished with a statement monthly showing the total disbursements compared with the total estimated purchases of raw materials.

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### CHAPTER VII

### THE FACTORY PAYROLL BUDGET

### Estimate of Payroll Necessary:

A careful estimate of the factory payroll is as necessary in a budgetary controlsystem as the estimates of the sales program, selling expense, etc., and for similar reasons advanced herein before as follows:

- 1. That the general manager will know the probable expenditures of the factory payroll and thereby assist him in making plans to secure the necessary funds.
- 2. That the general manager will see the financial requirements of the proposed sales and production plans at the time he is prepared to examine and O. K. the various budgets.
- 3. That the estimated profit and loss statement can be compiled as the payroll enters into the cost of sales.

### Preparation of Payroll Budget:

It seems most advantageous for the factory superintendent to prepare the factory payroll budget with the assistance of the cost accountant. The production program shall be obtained from the sales department, who prepare the sales program and subsequently reduce the sales values to sales volumes showing the output of the various lines of goods.

On page 21 is shown a factory payroll budget by monthly periods and the grand total for the year. It is noted that the number of employees and the amount of payroll is estimated for each productive and non-productive department. In order to estimate the payroll for each department, no set rule can be given. Comparisons first must be made between the volume of output between the previous period and the budget period and the amount of payroll expended on the previous period. In some instances a particular production department can absorb a reasonable increase in output without any increase in payroll. This should be carefully analyzed by the superintendent. In other cases, any increase or decrease in payroll of productive departments may be arrived at by employing the ratio method, taking into consideration the output of previous periods compared to that of the estimated period times the amount of payroll of the previous period.

In the non-productive departments, the estimating will be comparatively simple, as a slight fluctuation in the output of the factory in one period as compared to another should make practically no difference in the non-productive payroll.

After the payroll budget has been prepared by the factory cost accountant and carefully reviewed and approved by the superintendent, it shall be submitted to the general manager for final approval.

### Control of the Factory Payroll Budget:

The factory payroll budget must be kept under strict control like all other budgets. Undoubtedly certain economies of operation will result in factory costs provided an effective budget is installed and operated under careful control.

On page 22 is shown a monthly report of the factory payroll budget. monthly report shall be compiled by the accounting department and shall show the increase or decrease by departments as between the estimated payroll and the actual payroll. It shall also indicate the comparison in output of classes of goods such as liquid paints and paste goods as between the estimated quantities and the actual quantities. One copy shall be furnished to the general manager and one to the superintendent. The general manager will then be in a position to make such revisions in the factory payroll budget as he deems necessary.

The shipping and cartage department wages have not been included, as this

character of payroll is considered in most instances as a part of the selling expense.

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### CHAPTER VIII

### THE MANUFACTURING EXPENSE BUDGET

### Necessity of Manufacturing Expense Budget:

As indicated in the previous chapter, a budget shall be set up for manutacturing expense items. These expenses combined with the payroll constitutes the "manufacturing cost," and the "manufacturing cost" combined with the raw material cost constitutes the total factory cost.

This estimate is necessary for the same reasons as cited heretofore for the other budget estimates, such as assistance to the general manager in furnishing funds, necessity in preparing estimated profit and loss statement for the budget period, control of expenditures, etc.

### Manufacturing Expense Items:

The most important items which compose the manufacturing expense in the paint industry are:

- 1. Purchased Power.
- 2. Outside Repairs.
- 3. Misc. Supplies such as:
  - (a) Rags and Waste.
  - (b) Small Tools, etc.
- 4. Fuel and Supplies for Power Plant.
- 5. Water and Gas.
- 6. Rent where Company does not own its plant.
- 7. Insurance.
- 8. Taxes.
- 9. Depreciation, etc.

There are many other items besides those indicated above, and every manufacturer should arrange to compile a general classification which will serve best his own requirements.

### Estimating Manufacturing Expense:

The various items of manufacturing expense in most instances are ascertained from purchase invoices, with the exception of fixed charges. In estimating for this budget, the thought should be kept in mind that manufacturing expenses as shown above, which includes fixed charges (indirect labor being included in the payroll budget) do not vary in proportion to the fluctuation in production.

By a careful analysis of each item of expense of previous periods modified upward or downward by comparative volumes of output, the amount for the budget can be determined. In the case of fixed charges such as taxes and insurance, very little, if any difference will occur. In the case of depreciation on buildings or even on machinery, a difference in output as between two periods, say of 10 to 25 per cent, would

hardly justify any difference in the rates of depreciation.

On page 25 is shown a manufacturing expense budget prepared on a monthly basis. This shall be prepared by the cost accounting department and carefully reviewed and approved by the superintendent before submitting it to the general manager for his final approval.

### Control of Manufacturing Expense Budget:

Like other budgets, the manufacturing expense budget shall be subjected to monthly reports, to show the comparison between the estimated expenses and the actual expenses incurred. The factory cost accountant will prepare these reports. On page 26 is shown a summary by items of the actual expenses incurred and as compared to the estimated expenses, together with the increase or decrease by items. It further indicates a comparison between the estimated and actual production by a broad division of goods.

Any increase or decrease in the amount of manufacturing expenses might be explained by an increase or decrease in output which is, therefore, shown in the com-

parison.

The general manager shall be provided with these periodic reports. He will study them and make such revisions in the manufacturing expense budget as he deems necessary. A copy shall also be given to the superintendent of the factory.

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### CHAPTER IX

### THE FINANCIAL BUDGET

### Necessity for Financial Budget:

Many concerns fail in business because they do not properly plan ahead for their future requirements of money. The leading credit agencies state as a matter of acknowledged fact that the main reason for financial failures is "lack of capital."

It is a common occurrence for some companies to wait up to the very moment of needing capital badly before they start to plan when and where to get it. The fact of the matter is, had proper financial planning been resorted to sufficiently ahead of time, such an urgent situation probably would not have arisen, as an effective working financial program would have indicated the limitations of the company's capital.

In every business, money is coming in and going out daily. In order to be able to pay all bills, it is needless to state that cash receipts must be in excess of the cash disbursements. In other words, a certain cash balance has to be maintained at all times.

The custody of cash receipts, the maintenance of a proper cash balance and a proper control of cash disbursements is a very important function in every business. In order to handle these financial factors properly, it is necessary first to know in advance in approximately correct form, when, and in what amounts cash will be received and then to go ahead and plan how the estimated disbursements are to be taken care of.

Some firms attempt to prepare financial budgets without first making departmental budgets. The results are usually unsatisfactory.

It is, therefore, an essential part of a budgetary control system to provide for a financial budget. The suggestions cited hereinafter in regard to the operation of such a budget contemplate what is termed "short time financing," although the principles involved will apply to "long time financing." Before proceeding with the details, the thought should be clear in the reader's mind that a financial budget is not a departmental budget. On the contrary, it is a statement prepared by the general manager from all the budgets and shows what funds are needed to properly finance the activities of all departments.

### Estimating Cash Receipts:

It is necessary in estimating cash receipts to analyze all sources from which cash is obtained. The principal source, of course, is sales. There may be other sources, as interest on Liberty Bonds, dividends from investments in outside securities, etc.

At the beginning of a budget period, there will be cash received from accounts receivable and notes receivable of former budget periods; there will be accounts receivable and notes receivable covering sales of the present budget period, and in the case of retail store sales there will be daily cash receipts from that source.

The cash from retail store sales can be very closely estimated on the basis of the ratio of cash sales to total sales as disclosed by former periods for the store.

This cash is associated with the particular month in which the sales are made. In regard to the charge sales, the manner of estimating cash receipts from the ac-

counts receivable depends upon the terms of sale and is much more difficult to determine.

Then again, there are occasional special terms made where goods are shipped considerably in advance and concessions granted in the way of payments to be made in four or five months. On regular terms, a study can be made of past experiences of sales which shows in many cases a fairly uniform ratio between sales and collections. This ratio will vary as between seasons under normal conditions of credit, and between years and between sections of the country due to abnormal conditions of credit and market conditions. In any case, however, satisfactory working ratios can be employed to estimate the cash receipts by months. No method suggested can determine precisely the cash which will come in each month. Each concern should take into consideration its terms of sales which may vary by types of customers and which may involve special concessions.

Receipts available from other sources such as interest on customers' notes receivable, interest on Liberty Bonds, dividends from securities held in outside companies can be estimated much more accurately.

A comparatively simple form to be used in estimating cash receipts is shown on page 30.

### Estimating Cash Disbursements:

In order to present a complete financial budget, it is necessary to prepare a reliable estimate of the cash disbursements. This will require a summary of the expenditures set up in the various departmental budgets.

The largest item of expenditures will be in connection with the purchase of raw materials. This disbursement will be taken from the raw material budget.

The disbursements for labor such as hereinbefore discussed in connection with the factory payroll, salaries of the officers, managers, salesmen, administrative help, etc., will be obtained from their respective budgets and are payable within the month in which it has occurred.

Current expenses such as salesmen's traveling expenses, postage, rentals, officers' and managers' traveling expenses, interest on notes payable, etc., payable within the month, will be ascertained from the various budgets.

Manufacturing expenses, advertising and general office expenditures, such as

stationery, telephone, telegraph, etc., will be taken from the various budgets.

Notes payable will be determined actually from the record of outstanding notes

There are other items which can be treated in a similar manner.

A simple form for summarizing the cash disbursements on a monthly basis is shown on page 31.

### Comparison of Estimated Cash Receipts and Estimated Cash Disbursements:

After the statements have been compiled showing the estimated cash receipts and the estimated cash disbursements, a turther analysis should be made showing the relation between the two by months for the entire year.

A form which will indicate this comparison is indicated on page 32.

In the event the comparison shows for any one month that the estimated disbursements exceed the estimated cash receipts, such excess will have to be met by a bank loan. On the contrary, if the estimated cash receipts are in excess of the estimated cash disbursements, such excess may be used to pay up some bank loans negotiated during previous periods when the disbursements exceeded the receipts.

In calculating the amounts of necessary bank loans, consideration should be

given to the cash balance at the beginning of the period and a desirable cash balance at the close of the period. Where a line of credit is established at the bank, it is usually with the understanding that a certain minimum average balance shall be maintained in the account with the bank, and this average balance goes up as the line of credit is increased.

### Control of the Financial Budget:

In order to exercise effective control over the financial budget, it is necessary to properly control the disbursements and receipts of the various departments since the financial budget, as hereinbefore stated, is made up of the budgets of all departments. Emphasis is, therefore, placed upon the necessity of all departments keeping their expenditures within the limits of their estimates, unless for some well defined reason they secure the approval of the general manager to exceed the estimate.

Monthly cash reports shall be compiled and submitted to the general manager showing:

- (a) A comparison between the estimated and actual collections during the month.
- (b) A comparison between the estimated and actual disbursements during the month.

With these cash reports before him, the general manager has the information to check up and if necessary, revise his estimated cash balances at the beginning of the new month, and to note whether such revisions are sufficient to change the original financial plans.

It must also be kept in mind that in the event the general manager makes any revisions in the various departmental budgets, he must also revise his cash budget figures, which comprise the estimated cash receipts and cash disbursements, and correspondingly analyze the effect of such revisions upon the original financial plans.

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Accts. Rec:  Dealers  Jobbers  Railroads  Industrials  NOTES REC:  Dealers  Misc.  (Ash Saless  Retail Store  Factory  Warehouse  Miscellahrouse  Miscellahrou	Source	JAN.	FER	MAR.	APRIL	MAY	JUNE	ፓሀኒሃ	Aug.	SEPT	OCT.	Nov	DEC.	YEARLY TOTAL
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Industrials	Railroads													
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### CHAPTER X

### THE ESTIMATED PROFIT AND LOSS STATEMENT

### How to Prepare an Estimated Profit and Loss Statement:

An estimated profit and loss statement shall be compiled showing what gross and net profits are to be realized at the end of the year as a result of the sales budget.

This estimate shall be compiled in the same manner as the regular profit and loss statement prepared semi-annually and annually by most concerns, and as prepared monthly by many other concerns.

The source of information by which this profit and loss statement shall be compiled are the various budgets prepared and discussed hereinbefore. On page 35 is shown the set-up of a suggested profit and loss statement. In the event you operate selling and general and administrative expense accounts slightly differently, your profit and loss statement will, of course, be slightly different.

### Total Amount of Net Sales:

The total amount of estimated gross sales shall be taken from the sales budget. In order, however, to arrive at the total amount of net sales, it is necessary to estimate very closely the total amount of returns and allowances which will occur during the budget period. This amount can be reasonably determined by using the ratio which prevailed on previous periods modified either upward or downward by any future conditions which it is felt will effect that ratio.

### Total Cost of Goods Sold:

The total cost of the goods sold includes the cost of the beginning inventory of finished goods, work in process and raw materials plus the purchases of raw materials, factory payroll and manufacturing expense during the budget period less the ending inventory of finished goods, work in process and raw materials.

Assuming that the estimated profit and loss statement is compiled at the beginning of the budgetary control period, the beginning inventory figures will therefore be available. The estimated cost of raw material to be purchased, the estimated factory payroll and the estimated manufacturing expense will all be taken from their respective budgets.

The ending inventory is the item necessary to complete the cost of sales. It comprises all work in process, finished goods and raw materials. The estimated inventory on raw materials can be taken from the raw material budget. The estimated amount of finished goods and work in process must be arrived at by use of past experience and previous inventory periods as a basis.

Another way to estimate the cost of net sales is to analyze the net sales by various types of customers and apply an anticipated gross profit per cent to each division of sale.

The difference between the estimated amount of net sales and the estimated amount of gross profit so determined will give the estimated cost of the net sales. It will probably assist matters to use both methods to arrive at a satisfactory cost of net sales.

### Expenses of Doing Business:

The estimated amount of each class of expense of doing business such as ware-house and shipping expense, outward cartage and freight, salesman's salaries and traveling expenses, etc., will all be taken from the selling, general and administrative expense budget.

In connection with interest received and interest paid, both items are combined and the difference is shown as an expense of doing business, as the interest paid is usually in excess of that received. Both of these items can be estimated, based on ratios of previous periods, such as the ratio of interest received is based on the sales estimate and the interest paid is based on the bank loans estimate.

In a similar manner, discount allowed and discount earned are combined and the difference, which is usually in favor of discount allowed, is shown as an item of expense of doing business. Both of these items can be estimated based on the ratios of previous periods such as the ratio of discounts allowed is based on the sales estimate and discounts earned is based upon the total purchases.

Many accountants prefer to show discount earned and interest received as other additions to income and discount allowed and interest paid as other deductions from income rather than show it in the expenses of doing business.

### ESTIMATED PROFIT AND LOSS STATEMENT

### Period January 1st, 1924 to December 31st, 1924, Inclusive

			Estimated for 12-31-24	Actual 12-31-24
	Total Amount of Gross SalesLess Returns and Allowances		\$0,000,000.00	
(c) 1 (d) 2	Total Amount of Net Sales (a-b)		0,000,000.00	
(e) 1	Fotal Gross Profit (c-d)		000,000.00	
5	Selling Expens	e:		
7	Warehouse and Shipping\$	00.000.00		
	Outgoing Cartage and Freight	00,000.00		
	Salaries and Exp. of Sales Mgrs. and Assts.	00,000.00	)	
	Salaries & Commissions of Salesmen	00,000.00		
	Fraveling Expense of Salesmen	00,000.00		
	Advertising, Color Cards, Etc.	00,000.00		
	Miscellaneous	0,000.00		
•	-			
(f)	Total Selling Expense	00,000.00		
	General and Administrati	_	e:	
S	Salaries of Officers	00,000.00		
7	Craveling Expense of Officers	0,000.00		
S	Salaries of Officers' Assistants	00,000.00		
S	Stationery, Supplies and Postage	-0.000.00		
7	Telephone and Telegraph	0,000.00		
V	Water, Light and Heat	0,000.00		
F	Fixed Charges	0,000.00		
	Credits and Collections	0,000.00		
	Bad Debt Losses	0,000.00		
	Discount	0,000.00		
	nterest	00.000.00		
	Miscellaneous	0,000.00		
(g) (h) [	Total General and Adm. Expense	00.000.000	000,000.00	
(11)	Total Selling, Sen. & Adm. Exp. (1   g)			
	Total Net Profit on Sales (e-h)Addition to Income, Other Sources		00,000.00 0,000.00	
			00 000 00	
-			00,000.00	
I	Deduction from Income, Other Sources		0,000.00	
Т	Γotal Amount of Net Income		00,000.00	

### CHAPTER XI

### CONCLUSION

A budgetary control system as just outlined is no doubt something new to many general managers. Consequently, it will take a reasonable length of time to become acquainted with the preparation and use of the various budgets. In commencing such a system, it is therefore best to begin gradually and to thoroughly acquaint one's self with the purpose of the system.

In order to point out clearly the benefits to be derived from the operation of a

budgetary control system, it is first necessary to state its limitations:

(1) Budgets, once prepared, will be of no value unless they are enforced.

(2) Budgets are based upon estimates. In the event these estimates are arbitrarily prepared and not based upon previous records and sound judgment, the results obtained will be unsatisfactory.

(3) A budgetary control system cannot be perfected in a short space of

time.

(4) A budgetary control system is not intended to replace or relieve in any part, the administrative duties of the general manager, but rather to furnish him information by which the administration of the business is carried on more efficiently and under better control.

Where a budgetary control system is properly installed and enforced, the advantages to be derived are as follows:

(1) Outlining in a definite manner all future plans, thereby enabling the company to attain more closely that final goal of anticipated sales and profits.

(2) Increasing the co-ordination between all departments and particu-

larly as follows:

(a) Between the sales department, the factory and the purchasing department in connection with the planning of production and the purchasing of raw materials to properly provide for sales.

(b) Between the sales department and the factory and the financial department in connection with proper financial

requirements.

(3) Preparing a definite financial program, thereby enabling the company to provide in ample time and at a minimum cost suffi-

cient funds to properly run the business.

(4) Centralizing the activities of all departments under the supervision of the general manager, enabling him to determine monthly how all departments are operating and co-operating and what progress is being made towards the goal of anticipated sales and profits.

(5) Controlling the expenditures of all departments, thereby making it possible to realize the profits anticipated and to retain those

profits once they are realized.