FNSACC503A – Manage Budgets and Forecasts

WEEK 2 – CHAPTER 3 – SALES & REVENUE BUDGETS

Key learning outcomes:	By the end of the lesson, students will be able to: * Discuss qualitative and quantitative methods of forecasting revenue. * Discuss the factors affecting revenue forecasting. * Prepare a sales budget for a merchandising firm and a revenue (or fees) budget for a professional services firm.

CHAPTER 3 – SALES & REVENUE BUDGETS

There are six (5) parts to this lesson.

PART 1: Introduction to sales and revenue budgets

PART 2: What is forecasting?

PART 3: Forecasting methods

PART 4: Factors affecting revenue forecasting

PART 5: Sales budgets (practical questions)

PART 6: Fee income budgets (practical questions)

There are also some slides to accompany this document.

1. Introduction

* In last week's lesson, we learnt about MASTER BUDGETS and we learnt that all the budgets in a master budget are linked back to the **assumptions made about the quantity and the value of sales that are incorporated in the sales budget**.
* Example: Merchandising firm (Trading business)
The SALES BUDGET influences decisions made about how much of our product has to be purchased to satisfy projected sales levels. We use this information to produce the PURCHASES BUDGETS and the COGS BUDGET.
Our SALES BUDGET also affects other budgets such as the OPERATING EXPENSES BUDGET (e.g. storage costs, salaries paid to sales staff etc.)
Information from the sales and expenses budgets will be used to produce the INCOME STATEMENT BUDGET.
Sales and production levels may influence decisions about capital expenditure and as such, will be reflected in the CAPITAL EXPENDITURE BUDGET.
Expected sales figures will also feed into the CASH BUDGET in relation to both the cash sales and expected collections from debtors and this in turn will feed into the BALANCE SHEET BUDGET.

* From this, we can conclude that it is very (very) important to get the assumptions right upon which you will build your sales budget.
* In the first part of this week's lesson, we will look at:
a. different forecasting techniques that can be used; and
b. the various factors that can influence the selection and use of data during the process of estimating future sales.

2. Forecasting

* To prepare a revenue budget, you need to be able to forecast future events.

DEFINITION

* Forecasting is the art and science of predicting future events.
* How?

Use historical data and project it into the future using a mathematical model.
Use subjective or intuitive predicitions of the future.
Use a hybrid i.e. a mathematical model adjusted using management's good judgement.

AIM

* The aim of the forecasting process is to produce an estimate of the QUANTITIES and VALUES of all the products that a firm can realistically expect to produce and/or sell in the coming period.
* Revenue budgets are typically prepared by PRODUCT, PERIOD or SALES AREAS or a COMBINATION of these. Later on in the lesson, we are going to learn how to prepare each of these types of revenue budgets.
* The forecasting process is both time consuming and costly. As such, you need to weigh up the COST incurred to generate the forecast and the ACCURACY of the forecast produced.

3. Forecasting Methods

Qualitative methods – based largely on the subjective judgement, opinion and experience of the management team and their staff; used typically when a new produce is being launched or when historical data is limited or considered irrelevant.

Quantitative methods – use mathematical models based on historical data or causal variables.

* Common for businesses to use both methods together.

Qualitative methods → based on opinion, therefore subjective

1. Jury of executive opinion (the management team are consulted; they meet and use their combined judgement to arrive at an estimate of demand).

2. Sales force composite (the sales budget is made up of the estimates provided by individual sales staff; each salesperson submits an estimate of the sales they think they will achieve; these figures are then are reviewed by the relevant manager and then aggregated on either a regional or product level).

3. Delphi technique (similar to jury of executive opinion in that it is a method for combining the opinions of experts; different in that the opinions are obtained through completion of questionnaires rather than through the meeting of people face-to-face, the advantage being the the possibility of personal conflicts or one person unduly influencing another is avoided).

4. Market research (customers are surveyed to find out which products they want to buy and in what quantities).

Quantitative methods → make use of mathematical modelling (produced by either specialised computer software or by the use of spreadsheets), therefore objective

1. Time series models (statistical techniques are applied to historical sales data in order to predict the trend of sales for the coming period e.g. moving averages, exponential smoothing, trend projection using the least squares method).

2. Causal models (based on cause and effect with the assumption that the item being forecasted is linked to another variable and that if key causal variables are known, sales levels can be forecasted e.g. sale of building products predicted from number of new home building approvals – there is a correlation between the two; causual models use linear regression and correlation).

* Quantitative methods are explored in more depth in books on quantitative anlysis and statistics.

4. Factors affecting revenue forecasting

* Some factors affecting revenue forecasting are CONTROLLABLE while others are UNCONTROLLABLE.

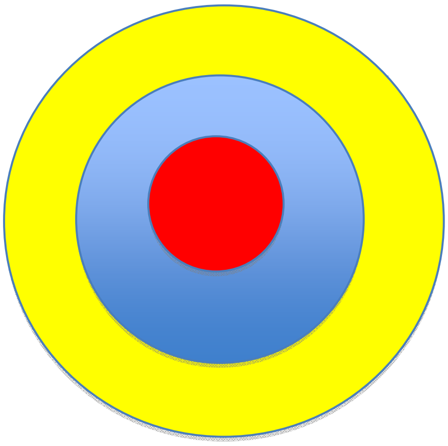
BUDGET PREPARATION → POSSIBLE SOURCES OF DATA INCLUDE:

* Last year's results
* Talk to key personel e.g. product manager; sales manager; production manager
* Other: Market surveys; Competitive Intelligence

COMPETITIVE INTELLIGENCE is the action of defining, gathering, analysing, and distributing intelligence about products, customers, competitors and any aspect of the environment needed to support executives and managers in making strategic decisions for an organization. The focus is on the firm's external environment.

INTERNAL (RED CIRCLE) → EXTERNAL (BLUE RING) → REMOTE (YELLOW RING).

The firm has some influence/control over factors existing within its **external** environment. However, the firm has little or no influence/control over factors existing within its **remote** environment.



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We will now look at the UNCONTROLLABLE factors (part of external and remote environments of the firm) as well as the CONTROLLABLE factors (part of the internal environment of the firm) which could affect the revenue forecast of the firm…

UNCONTROLLABLE (EXTERNAL) FACTORS		**DESCRIPTION**
1	* demographic trends	(issues that describe the population make-up e.g. age, gender, population growth rates; general population growth may not translate into industry growth e.g. no. elderly people increases as life expectancy increases resulting in higher growth rates for retirement homes, hospitals etc.)
2	* general economic trends affecting all industries	(i.e. is the economy growing?' "boom and bust" business cycles; if the economy is in recession then recovery likely; high growth rates unlikely to continue for next 3-5 years; changes in GDP, interest rates, unemployment rates, tax rates, exchange rates etc.)
3	* economic trends affecting the industry within which the firm operates	(e.g. in the petrol industry, changes in personal travel could lead to a change in the demand for petrol).
4	* social/cultural trends	(i.e. general attitudes towards life e.g. demand for convenience foods, organic foods, longer shopping hours, more child care places, single dating agencies, internet chat rooms)
5	* technological trends	(incl. issues that influence how the industry either produces or delivers its goods/services to its customers e.g. internet; genetic engineering; new materials)
6	* sustainability trends	(incl. environmental issues where applicable to the industry e.g. global warming; pollution → TBL (triple bottom line) reporting (economic, environment & community (social) measures of performance) e.g. recycling; energy efficiency, waste management etc.)
7	* political and/or legal events	(incl. issues derived from political influences such as government policy and party politics and issues derived from legislative or legal frameworks or precedents e.g. child care rebate and impact on demand for child care; tax incentives to use alternative energy sources and impact on demand for petrol)
8	* the likely actions of competitors	
9	* market research studies	
10	* new product launches (released by competitors)	(e.g. car company announces the development of a car that will run on battery power which will reduce the demand for petrol)

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CONTROLLABLE (INTERNAL) FACTORS		DESCRIPTION
11	* new product launches (released by the firm)	(e.g. car company announces the development of a car that will run on battery power which will reduce the demand for petrol)
12	* past sales levels and trends	(those of the firm and the industry within which the firm operates)
13	* firm pricing policy	
14	* planned advertising and product promotions	
15	* production capacity	
16	* choice of customers or market segments	

Please can you now refer to the LESSON SLIDES for this week. Go to the STUDENT ACTIVITY starting on SLIDE 7.

Read through each of the case studies provided and see if you can guess which of the sixteen (16) factors the case study is referring to. The correct answer will be revealed on the slide following the case study.

How many can you guess correctly?

*** * ***

What did you learn from this activity?

You will notice that in each case study, either the PRICE or the QUANTITY of the product is being influenced by the relevant factor, hence why the sales forecast has to be revised (either up or down).

$$\textbf{Total Revenue Forecast} = P_{FORECAST} \times Q_{FORECAST}$$

In Parts 5 and 6, you will be introduced to the types of sales and fee income budgets which you will need to know how to prepare for this unit. Please refer to the following document which provides you with worked examples A to G referred to below:

WEEK 2_FNSACC503A_Budgeting_WORKED EXAMPLES

5. Sales budgets

* Merchandising and manufacturing firms prepare sales budgets.
* There is no difference in the preparation of the sales budget for both types of organisations.
* Sales budgets for merchandising firms → this chapter; Sales budgets for manufacturing firms → CHAPTERS 5 and 6.
* Can be prepared by PRODUCT, by PERIOD, by AREA or a combination of these.

P x Q

a. SALES BY PRODUCT

Est. sales volume (units) x Est. sales price ($) = Est. total sales ($)

(PRODUCT 1 volume) x (PRODUCT 1 price)

Example : Hays Ltd (A); Gourmet Biscuits Ltd (B)

b. SALES BY PERIOD

Est. sales volume (units) x Est. sales price ($) = Est. total sales ($)

(PERIOD 1 volume) x (PERIOD 1 price)

Example : Canon Ltd (C)

c. SALES BY PRODUCT and PERIOD

Est. sales volume (units) x Est. sales price ($) = Est. total sales ($)

(PRODUCT 1; PERIOD 1 volume) x (PRODUCT 1; PERIOD 1 price)

Example : Sarah Lee (D)

d. SALES BY AREA

Est. sales volume (units) x Est. sales price ($) = Est. total sales ($)

(AREA 1; PERIOD 1 volume) x (AREA 1; PERIOD 1 price)

Example : Apple Inc. (E)

6. Fees income budgets

* Prepared by firms providing a service / selling their expertise e.g. accountants; lawyers; doctors; educational institutions
* Fee income budgets are based on est. hours of work x est. hourly rate (similar formula to that used for merchandising/manufacturing firms).

Est. sales volume (units)	**x**	**Est. sales price ($)**	**=**	**Est. total sales ($)**
(hours of work)	**x**	**(hourly rate)**	**=**	**(total fees income)**

Example : Janet Hardy & Associates (F)

FEES INCOME by TYPE and PERIOD

Example : Carol Stewart – Naturopath (G)

HYBRID : Merchandising / Professional service provider

* Some businesses fall into both the merchandising and professional service provider category.
* In addition to this, many organisations earn income from other sources e.g. income from investments etc.
* The following example illustrates what a revenue budget could look like that takes into account income from various sources.

Example : Vet (they provide a vet service to your pet and they sell pet-related products in-store)