PIPSO

Pacific Islands Private Sector Organisation

January 1

BUDGETS

2014

This Module looks at the budget planning process from purchase of inventory, through production to sale of goods, including an example & practice exercise. However, a budget also has a control function. The second part of this Module then looks at the use of the budget as a management tool used to monitor & control expenses.

MODULE 2.3

BUDGETS
(MODULE 2.3)

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Contents

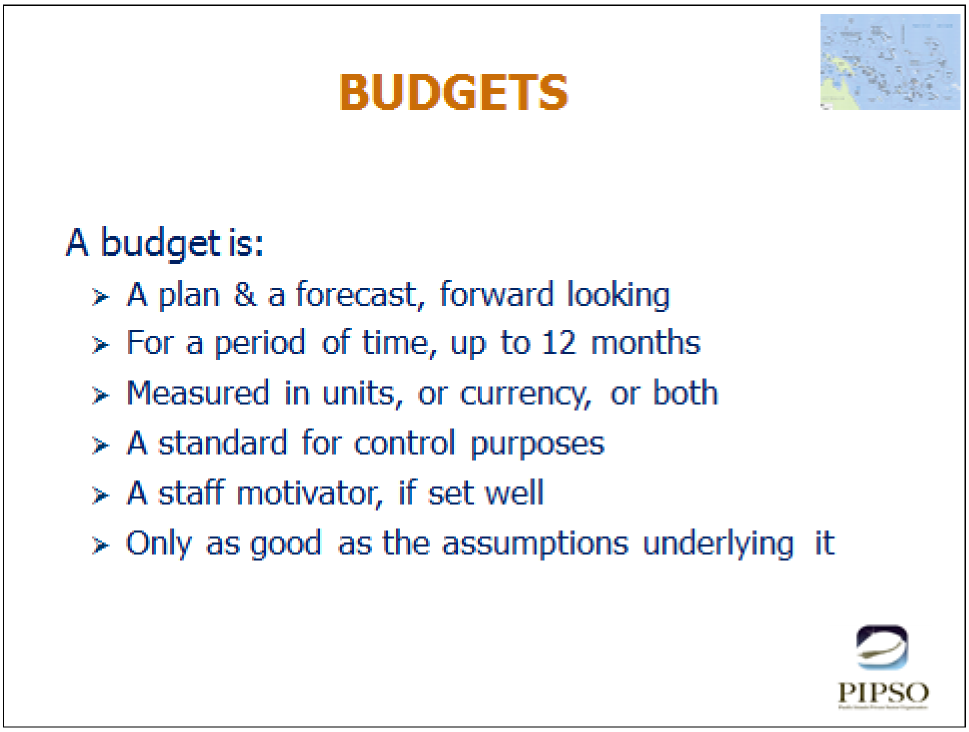
PURPOSE

This Module serves several purposes:

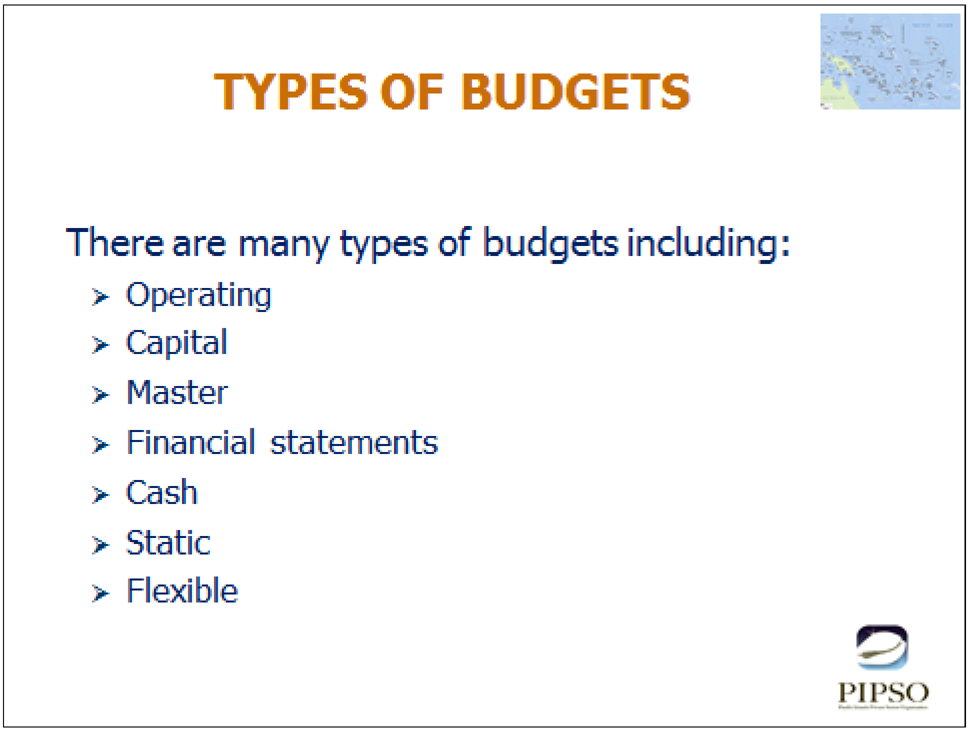
- To describe the features of a budget
- To outline the various types of budgets
- To consider the limitations of a budget
- To go through the process of preparing a static operating budget for all costs & expenses as follows:
    - Sales
    - Production
    - Purchases
    - Cost of production
    - Cost of sales (goods sold)
    - Operating expenses
- To illustrate the process with an example for participants to complete
- To illustrate how a budget, once prepared, is used as a yardstick against which business performance may be measured
    - Analysis format
    - Variance calculation
    - Example & discussion of reasons for variances

On completion of this Module participants should be able to prepare a simple budget for their business & use it as a control measure for future financial performance.

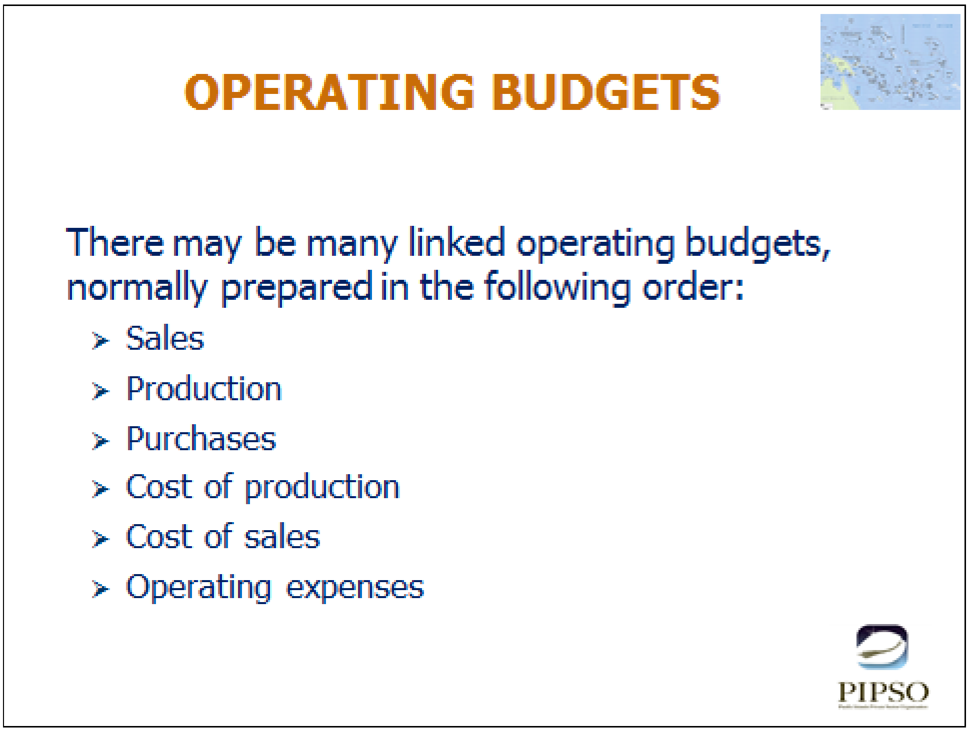
THE BUDGET PROCESS



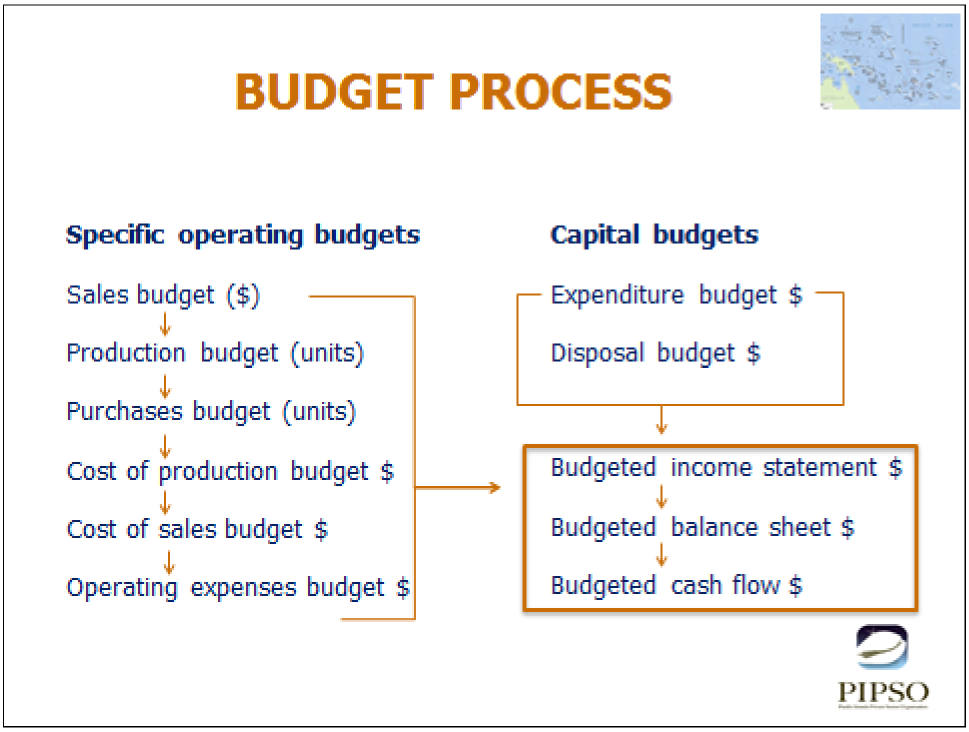
This is an extension of the cash plan or forecast introduced in Level 1, Module 6, Cash Flow Forecasting. It is still looking at budgeting on a cash basis. The focus for many manufacturing& retail businesses is on inventories planning to ensure that expected demand is met without under of overstocking, the cost of which was discussed in Level 1, Module 4, Working Capital.



We will look at the budgeting process using a static budget. It is the simplest form & provides a sound basis for planning.

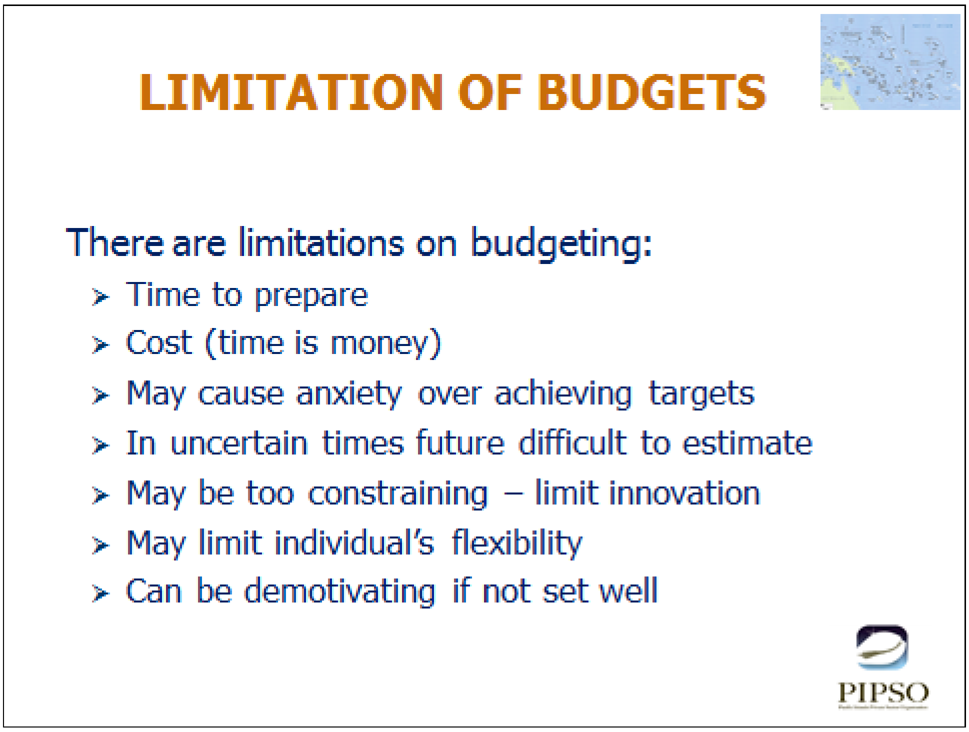


Operating budgets are linked via the inventory maintained at each level from purchase of raw materials to work in progress & finished goods awaiting sale. These links are important for the smooth operation &availability of goods for sale.



The role of the budgeted financial statements is to bring together all components of the budget.For a business seeking external finance a budget using the above or similar process is mandatory.

LIMITATIONS OF BUDGETS



The major limitation is the time/cost constraint. There are many activities impacting on the availability of a business owner or manager& the time available to prepare a budget. Where there are staff involved in the business it is wise to include them in the data collection & budget preparation process as they may have specific knowledge that the proprietor does not. At the least it can be a motivator.

It is worth remembering that a budget is only as good as the data used to create it. Rubbish in equals rubbish out.

BUDGET TRENDS

A secular trend is one that revolves around religious events, holidays & like celebrations.

Cyclical trends are long term trends over a business cycle, usually 5 to 10 years or more.

Seasonal trends are patterns based on the changes in seasons, holiday periods & other like patterns of human behaviour.

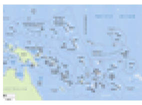
Erratic or random patterns are unpredictable & are, by far, the most difficult to budget for.A truly erratic trend is generally unpredictable & often budgeted uniformly with variances measured against the uniform pattern forecast.

Weather patterns may be influences in the short term, like cyclones or periods of heavy or persistent rain, heat or wind. These can affect consumer purchasing patterns in unexpected ways at the time of budgeting.

Other examples of a trend or pattern that may be relevant to planning on a daily or less frequent basis include:

1. Friday paydays weekly
2. Public service fortnightly paydays
3. School holidays
4. Population trends in the area, city, country or even worldwide
5. Age of local population; is it getting older or younger?
6. Fashion changes

SALES BUDGET



SALES BUDGET

A PRACTICAL EXAMPLE OF BUDGETING FOR MY BUSINESS			
SALES BUDGET			
Forecast is based on prior year sales & a recent survey of customers			
Month	Forecast sales (Units)	Selling price (Per unit)	Sales ($)
April			
Product A	2,500	5	12,500
Product B	1,200	8	9,600
May			
Product A	1,000	5	5,000
Product B	700	8	5,600
June			
Product A	3,000	5	15,000
Product B	1,800	8	14,400
Budgeted sales			62,100

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The variables that must be accounted for in a sales budget include:

- Units of time, usually months, but may be days or weeks
- Products or product groups, the number of which can quickly expand the size of the budget worksheet
- Quantity of each product that is budgeted or forecast to be sold during each unit of time, based on past experience & future expectations
- The price at which units of the product will be offered for sale, including any price changes expected due to cost or demand considerations

The series of linked budgets that follow in this presentation will follow Product A for My Business. Therefore the production budget that follows will continue using the unit sales for Product A for April, May & June, i.e. 2,500, 1,000 & 3,000 units.

PRODUCTION TO COST OF SALES BUDGETS

For a producer, manufacturer or processor of product from raw materials to finished goods ready for sale there are a series of budgets that require preparation. At each level there will be an input or inputs & an output. A business manager must control the level of inventory at each level as purchases or product grown will not equal the product processed or the product sold during any given period due to the time required to change the raw materials into saleable products.

The following series of operating budgets highlights the link between each level.

Note also the change from units to dollars during the budgeting process. We start in units & finish in dollars.

NOTE FOR PRESENTER

Explain in discussing the following two slides that:

1. If the stock at the beginning of a period is a set percentage of that month it is the same as saying that the closing balance of the previous month is set at that percentage of next month's forecast production
2. If the stock at the end of a period is a set percentage of that month it is the same as saying that the opening balance of the next month is set at that percentage of last month's forecast production

The slides should assist in showing this relationship.

PRODUCTION BUDGET

PRODUCTION BUDGET				
The stock of Product A at the beginning of each month is required to be 20% of that month's forecast sales volume				
	July	August	September	October
	Units	Units	Units	Units
Forecast sales	2,500	1,000	3,000	1,500
+ Closing stock	200	600	300	
- Opening stock	(500)	(200)	(600)	
Required production	2,200	1,400	2,700	

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Based on our expected sales volume we need to have a percentage of our monthly sales in stock at the commencement of the period. Some rule based on sales in the current month or next month is fixed as a budget requirement & then applied to the budget. Two such rules are used in this example.

PURCHASES BUDGET

PURCHASES BUDGET				
The stock of raw materials for Product A at the end of each month is required to be 25% of production for that month				
	July	August	September	
	Units	Units	Units	
Budgeted production	2,200	1,400	2,700	
+ Closing raw materials stock	550	350	675	
- Opening raw materials stock	(250)	(550)	(350)	(675)
Required purchases of raw material	2,500	1,200	3,025	

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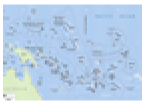
Note the variation in the rule re inventory.

COST OF PRODUCTION BUDGET



COST OF PRODUCTION				
Add other costs to raw materials cost ($0.75c per unit) & calculate total cost of production				
	July	August	September	Unit Cost
	Units	Units	Units	
Budgeted direct raw materials	2,200	1,400	2,700	
	$	$	$	
Budgeted direct raw materials cost	1,650	1,050	2,025	0.75
Budgeted direct labour cost	1,100	700	1,350	0.50
Budgeted factory overheads	550	350	675	0.25
Budgeted cost of production	3,300	2,100	4,050	
Budgeted cost per unit	1.50	1.50	1.50	

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For a retailer that buys goods in budgeted purchases is all that is required as there is no budgeted production occurring. Budgeted purchases go directly to the Cost of Sales Budget. There is no Cost of Production Budget.

If you buy products wholesale & repackage into smaller quantities for resale, your business will have two levels of inventory, raw materials & products for sale.

COST OF SALES BUDGET

COST OF SALES					
Begins with opening stock of finished goods at cost, add production and/or purchases, deduct closing stock of finished goods					
	July	August	September	Sep Qtr	Total A+B
	$	$	$		
Opening stock of finished goods at cost	750	300	900	750	2,840
+ Budgeted purchases/production	3,300	2,100	4,050	9,450	23,000
- Closing stock of finished goods at cost	(300)	(900)	(450)	(450)	(1,000)
Budgeted cost of sales	3,750	1,500	4,500	9,750	24,840

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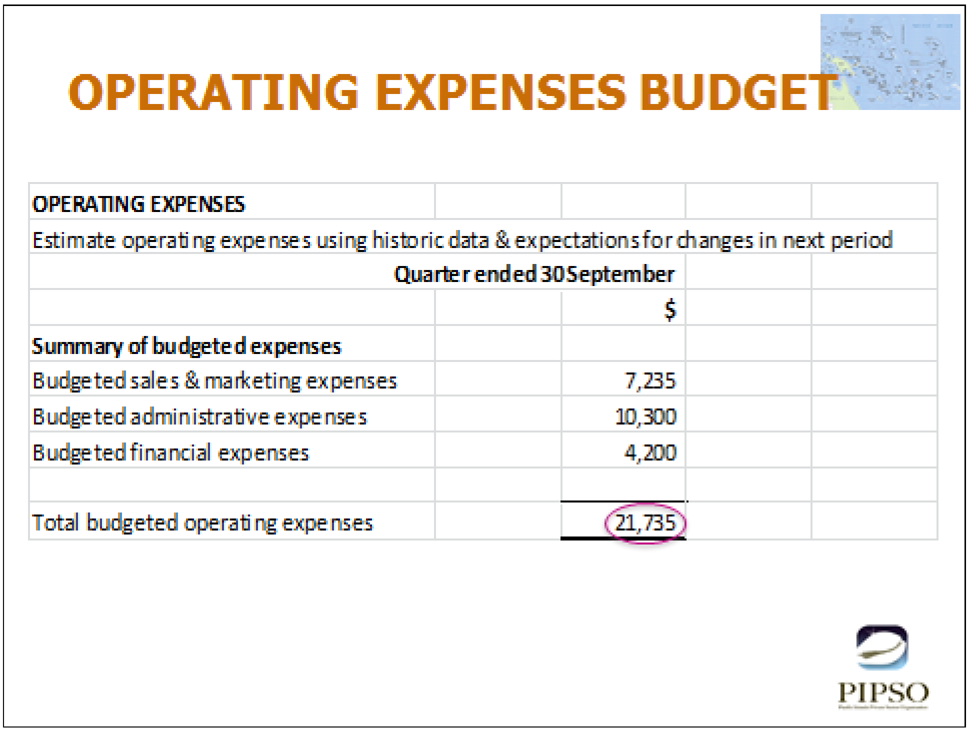
IMPORTANT: The format of the cost of sales budget above & the operating expenses budget that follows are both the same as the standard format for actual cost of sales in the financial statements. Therefore, a table comparing the budget & actual performance is easy to prepare on a periodic basis.

OPERATING EXPENSES & OPERATING STATEMENT



OPERATING EXPENSES BUDGET

OPERATING EXPENSES		
Estimate operating expenses using historic data & expectations for changes in next period		
	Quarter ended 30 September	
		$
Summary of budgeted expenses		
Budgeted sales & marketing expenses		7,235
Budgeted administrative expenses		10,300
Budgeted financial expenses		4,200
Total budgeted operating expenses		21,735

The operating expense budget is the sum of the items of expenses & may be split into the three categories presented in the slide.

It is usually prepared using the experience gained from past operating expenses plus any known or expected changes.

The simplest method is to estimate cash payments, but it may be done on an accounting accrual basis also.

BUDGETED OPERATING STATEMENT

CALCULATE BUDGETED NET PROFIT				
Use information generated so far to derive our budgeted net profit of 25% as follows				
My Business - Budgeted net profit for quarter ended 30 September				
		$		
Budgeted sales		62,100	100%	
- Budgeted cost of sales		24,840		
Budgeted gros profit		37,260	60%	
- Budgeted operating expenses		21,735		
Budgeted net profit		15,525	25%	

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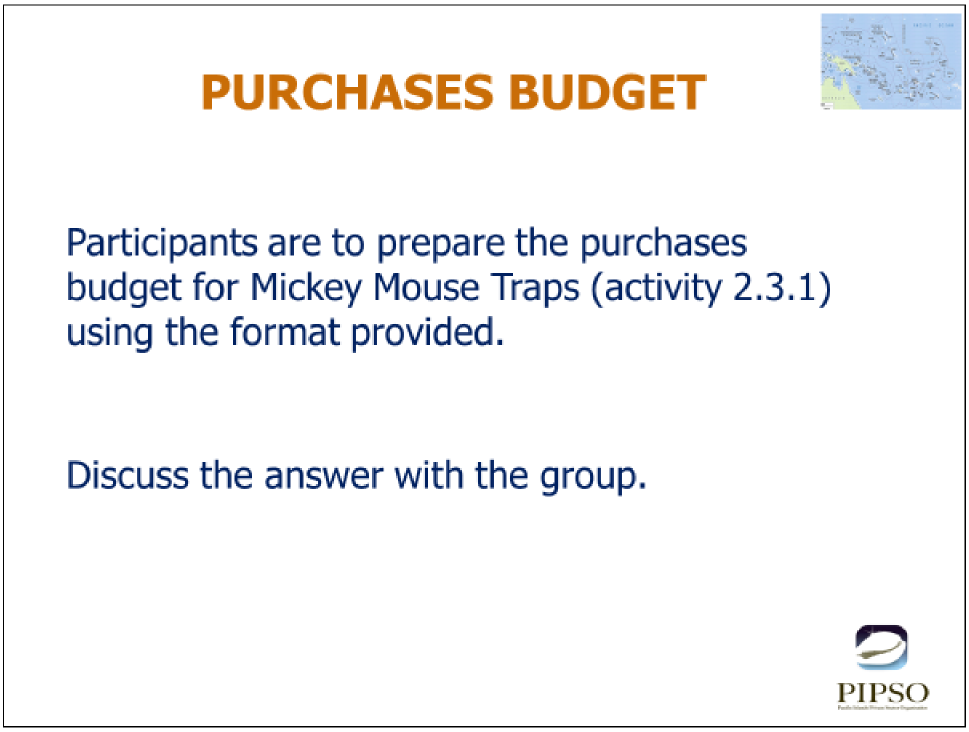
The operating statement is the final outcome from the master budgeting process, which when added to the actual balance sheet at the time the budget is prepared can be used to create a budgeted balance sheet & cash flow statement for the future period required bythe business.

EXAMPLE OF PURCHASES BUDGET & TRADING STATEMENT

Participants now have the opportunity to prepare a simple budget for a retail business only.



NOTE FOR FACILITATOR

The example introduces the complication of a cost change & a price change at the same time, but has no production component. In real life prices of inputs & outputs may, or may not,changeat the same time.

IMPORTANT:

1. **The table in the template requires completion in units, not dollars**
2. **The last two lines only of the template are calculations in dollars**
3. **Participants will require explanation of the calculations for Trading Statement**

ACTIVITY 2.3.1

Question

An extract from the sales budget of Mickey Mouse Traps, a retailer of better mouse traps, is as follows:

Month	Units
January	120,000
February	125,000
March	120,000
April	100,000

Stock on hand at the beginning of each month should be 25% of the current month's sales. The cost of the mouse traps is currently \$5.20 each but the cost is expected to increase to \$6.25 from 1 March 2013. The mouse traps currently sell for \$10.00 each but there is also a planned price rise of \$2.00 per mouse trap from 1 March.

The FIFO system is used to issue all stock.

Required

(a) Prepare a purchases budget for the quarter ended 31 March 2013 showing full details of quantities and cost for each month

(b) Prepare a budgeted trading statement for the quarter ended 31 March 2013.

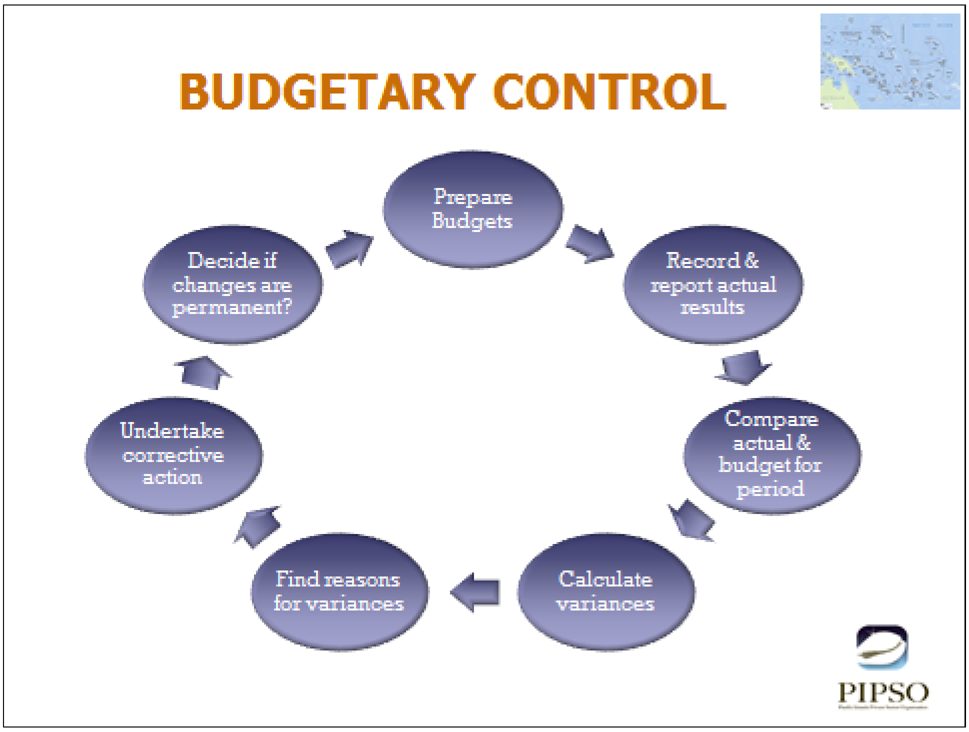
Purchases Budget of Mickey Mouse Traps
For the quarter ended 31 March 2013

	January	February	March	Quarter
Sales				
Closing Stock				
Total Stock				
Opening Stock				
Total Purchases				
Cost per unit				
Total Cost				

Budgeted Trading Statement of Mickey Mouse Traps
For the quarter ended 31 March 2013

	$	$
Sales		
Less Cost of Goods Sold:		
Opening Stock		
Plus Purchases		
Cost of goods available for sale		
Less Closing Stock		
Gross Profit		

BUDGET CONTROL& VARIANCE ANALYSIS



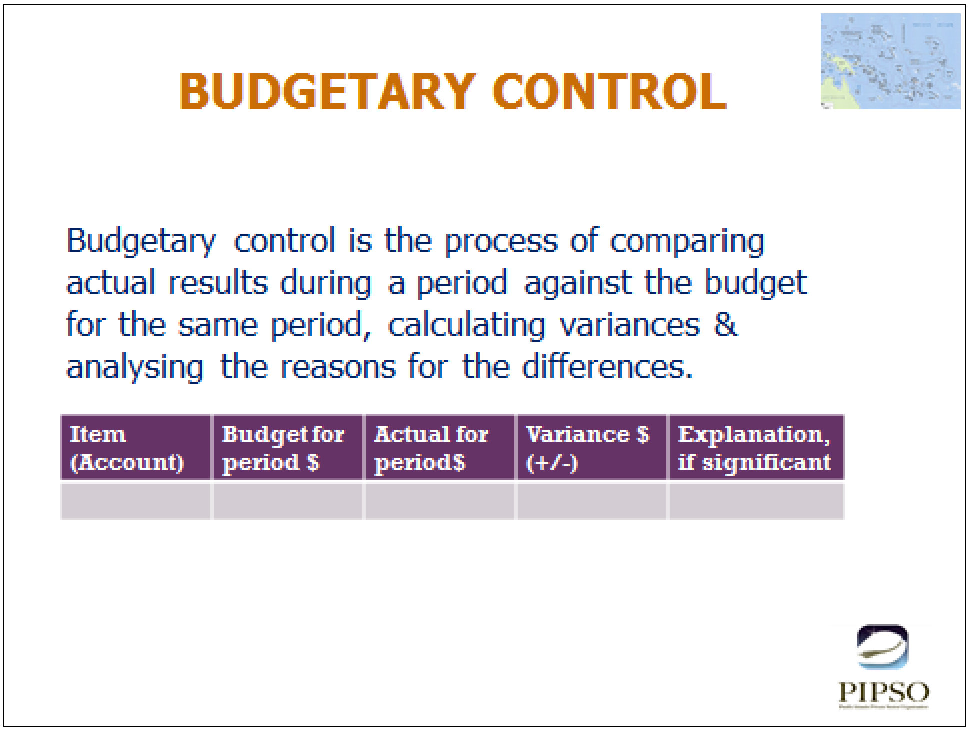
Preparing the budget is not an end in itself. It is only the first step in the budgetary process.The process is a cycle ultimately resulting in a new budget, if necessary.

The budget is a window to the desired or expected future. Measuring actual performance against it & making changes as required by new circumstances gives the budget meaning.

A format follows for comparing budgeted & actual performance.

Standard practice is to indicate whether variances are positive or negative (favourable or unfavourable) as follows:

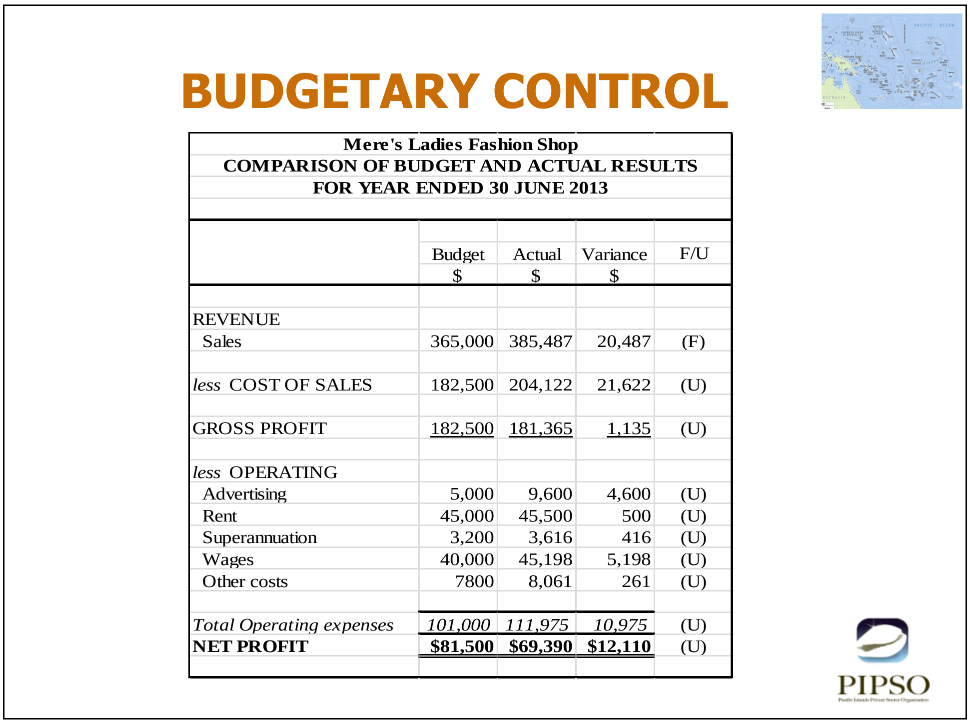
- A variance in costs or expenses is positive or favourable when the actual dollar amount is lower than budget
- A variance in costs or expenses is negative or unfavourable when the actual dollar amount is higher than budget
- A variance in revenues is positive or favourable when the actual dollar amount is higher than budget
- A variance in revenues is negative or unfavourable when the actual dollar amount is lower than budget



Having completed calculation of variances, an owner or manager must:

1. Determine whether a variance is favourable or unfavourable
2. Identify, in particular, significant variations
3. Seek the reasons for the variation
4. Identify whether the cause of the variances is:
    a. Price
    b. Volume
    c. Efficiency
    d. Budgeting error
5. Determine whether variances are:
    a. Controllable
    b. Uncontrollable
6. Act to correct variance as follows:
    a. Where a cost variance is unfavourable, but controllable, take action to bring the cost down& deal with any internal failure
    b. Where a revenue is unfavourable, but controllable, take action to increase revenue& deal with any internal failure
    c. Where the revenue or cost variance is favourable & controllable, recognise good performance, encourage it& amend budget accordingly when next set
    d. Where a cost or revenue variance is uncontrollable it may be favourable or unfavourable. Either way, note the change& amend the next budget after considering any strategic actions availableto mitigate future negative impacts or take advantage of good fortune

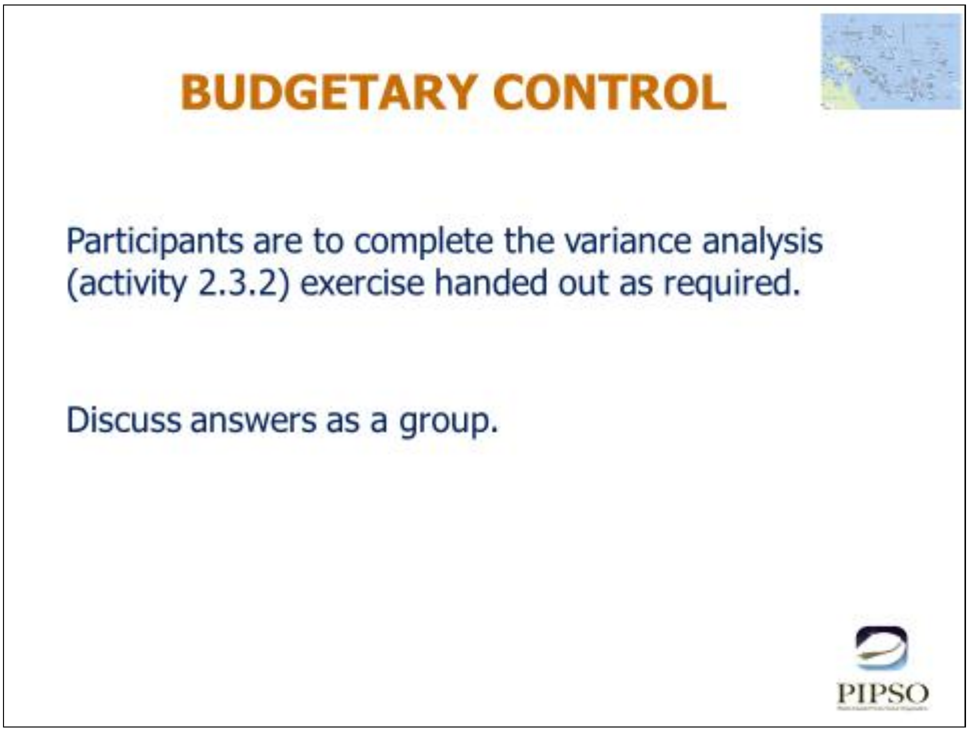
An example of a table forbudgetary comparison & control follows.



Mere's Ladies Fashion Shop
COMPARISON OF BUDGET AND ACTUAL RESULTS
FOR YEAR ENDED 30 JUNE 2013

	Budget $	Actual $	Variance $	F/U
REVENUE				
Sales	365,000	385,487	20,487	(F)
less COST OF SALES	182,500	204,122	21,622	(U)
GROSS PROFIT	182,500	181,365	1,135	(U)
less OPERATING				
Advertising	5,000	9,600	4,600	(U)
Rent	45,000	45,500	500	(U)
Superannuation	3,200	3,616	416	(U)
Wages	40,000	45,198	5,198	(U)
Other costs	7800	8,061	261	(U)
Total Operating expenses	*101,000*	*111,975*	*10,975*	(U)
NET PROFIT	**$81,500**	**$69,390**	**$12,110**	(U)

It is time to work throughan activity using the comparative technique & consider what the results mean.



When doing this activity, understanding the reasons for significant variances is far more important than the calculation skills as the numbers mean little without the understanding of why the actual was different. Consideration of likely scenario(s) for under or over performance is a key element of the comparative process & there may be clues, connections&direct or indirect links between variances on several lines of the table.

To an owner or manager, these links should be intuitive based on your understanding of the link between the financial reports & the production & sales outcomes.

Activity 2.3.2

BUDGET VARIANCES

Section A: Increase or Decrease

If you start a budget process by estimating sales, would you expect sales volume to **increase** or **decrease** as a result of the following internal or external changes in outlook for the forecast year?

1. You intend to increase advertising.
2. Due to cost pressure you will increase prices
3. A major supplier has indicated that there is a shortage of stock
4. A new competitor is about to open nearby
5. Existing competitors have just increased their prices
6. Local population has increased as new housing estates have opened
7. There are new legal restrictions
8. You intend to reduce the number of sales personnel

Section B: Short Question

For the year ended 31 December 2012 My Business had budgeted sales of $320,000 & total expenses of $262,000. Actual results for this year were sales of $316,000 & total expenses of $248,000.

Calculate the net profit variance. Is it favourable or unfavourable?

Section C: Variance Analysis Exercise

A table prepared to analyse variances for My Retail Business for the year ended 30 June 2013 follows.

Required

1. Complete the table by adding the variances & stating for each whether the variance is “favourable” or “unfavourable” **as per the two that are completed as an example**.
2. What possible reasons could there be for the variances?
3. What corrective action is appropriate to remedy each issue identified?

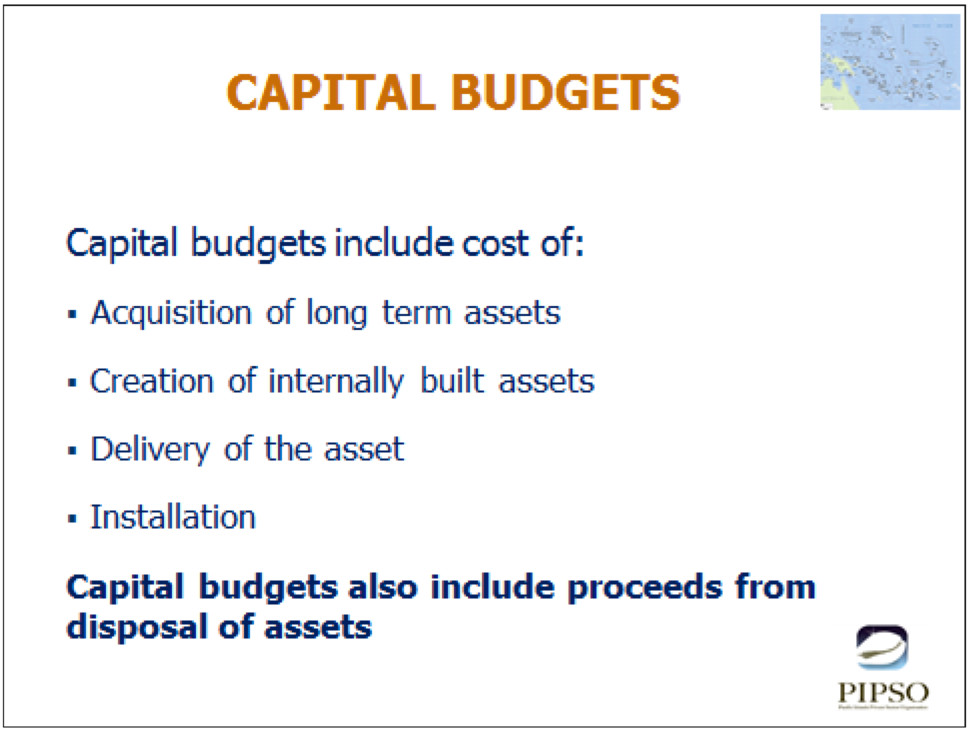
My Retail Business

COMPARISON OF BUDGET AND ACTUAL RESULTS

FOR YEAR ENDED 30 JUNE 2013

	Budget $	Actual $	Variance $	Variance $	
REVENUE					
Sales	491,062	458,580	32,482		
less COST OF SALES	343,743	334,764	8,979		
GROSS PROFIT	147,319	123,816	23,503		
less OPERATING EXPENSES					
Accounting fees	676	560	116	116	(F)
Advertising	4,039	5,168	1,129	-1,129	(U)
Bank charges	254	240	14		
Depreciation	632	632	0		
Electricity	809	762	47		
Insurances	1,477	1,650	173		
Interest paid	1,600	1,600	0		
Legal fees	208	210	2		
Rent	43,354	41,945	1,409		
Office expenses	822	791	31		
Wages	36,343	38,750	2,407		
Superannuation	3,271	3,488	217		
Telephone	930	1,936	1,006		
Total Operating expenses	*94,415*	*97,732*	*3,317*		
NET PROFIT	**$52,904**	**$26,084**	**$26,820**	**-$26,820**	

CAPITAL BUDGETS



The capital budget takes into account the purchase or the internal creation of intangible assets to be used for future productive purposes. It also includes the sale or scrapping of existing assets no longer required, too expensive to maintain or that have reached the end of their useful life.

IMPORTANT: The cost of customs duty on imported equipment, delivery costs & installation costs are a capital cost, not an expense for both accounting 7 taxation purposes in most countries. If in doubt, check with local taxation authorities.

Repairs & maintenance costs & any other routine or annual costs associated with an asset are an expense & included in the calculation of a business's profit or loss.

ANSWERS TO ACTIVITIES

Activity 2.3.1

Purchases Budget of Mickey Mouse Traps
For the quarter ended 31 March 2013

	January	February	March	Quarter
Sales	120,000	125,000	120,000	365,000
Closing Stock	31,250	30,000	25,000	25,000
Total Stock	151,250	155,000	145,000	390,000
Opening Stock	30,000	31,250	30,000	30,000
Total Purchases	121,250	123,750	115,000	360,000
Cost per unit	5.20	5.20	6.25	5.54
Total Cost	630,500	643,500	718,750	1,992,750

Budgeted Trading Statement of Mickey Mouse Traps
For the quarter ended 31 March 2013

	$	$	
Sales		3,890,000	245,000 units @ $10 plus 120,000 units @ $12
Less Cost of Goods Sold			
Opening Stock	156,000		30,000 units @ $5.20)
Plus Purchases	1,992,750		
Cost of goods available for sale	2,148,750		
Less Closing Stock	156,250		25,000 units @ $6.25
Cost of Goods Sold:		1,992,500	
Gross Profit		1,897,500	

Activity 2.3.2

BUDGET VARIANCES

Section A: **Increase or Decrease**

If you start a budget process by estimating sales, would you expect sales volume to **increase** or **decrease** as a result of the following internal or external changes in outlook for the forecast year?

1. You intend to increase advertising. **Increase**
2. Due to cost pressure you will increase prices **Decrease**
3. A major supplier has indicated that there is a shortage of stock **Decrease**
4. A new competitor is about to open nearby **Decrease**
5. Existing competitors have just increased their prices **Increase**
6. Local population has increased as new housing estates have opened **Increase**
7. There are new legal restrictions **Decrease**
8. You intend to reduce the number of sales personnel **Decrease**

Section B: **Short Question**

Variance is $316,000-$248,000-$320,000+$262,000=$10,000 Favourable

Section C: **Variance Analysis Exercise**

My Retail Business

Reasons for variances may include:

1. Gross profit is down by 16% while sales is down by only 6.6% & cost of sales by 2.6%
   - Sale of product at discount prices or a higher cost of purchase
   -Lower selling price due to obsolete/old stock found in stocktake
   -Lower prices as new business opens or competition gets more aggressive
   -An unbudgeted/unexpected increase in the supplier price of items sold
   -A build up in stock due to a change in consumer preferences, e.g. fashions, tastes
   -Poor buying by the business's buyer leading to sales @ low prices or overstocking
   -Corrective action will depend on the reason for the variance
   - Sale of product at discount prices or a higher cost of purchase
   -Lower selling price due to obsolete/old stock found in stocktake
   -Lower prices as new business opens or competition gets more aggressive
   -An unbudgeted/unexpected increase in the supplier price of items sold
   -A build up in stock due to a change in consumer preferences, e.g. fashions, tastes
   -Poor buying by the business's buyer leading to sales @ low prices or overstocking
   -Corrective action will depend on the reason for the variance
   -The major contributor, a sales or purchasing problem?
2. Audit fees below budget by 17.2%
   -A clean audit, thank those responsible
3. Advertising above budget by 28%
   -If an unbudgeted sale to clear old stock, this would explain
   -More advertising due to increase in competition
   -unsuccessful advertising to clear items or increase sales

-Corrective action will depend on reason & whether the programme was an issue or other factors

4. Insurance premium was 11.7% below budget
   -Is this due to a better record with insurer or better negotiation with them?
   -Based on management assessment, thank relevant staff &/or officer handling insurances
5. Although only up 6.6%, wages & super account for a negative variance of $2,600
   - Need to know whether this was cost of, say casual staff for a sale or overtime processing orders or a stocktake timing issue etc
   -If related to another problem, it should be fixed by solving the problem otherwise it will require action
6. Telephone costs 108% over budget
   -If related to another problem it should settle
   -If unrelated, do telephone records reveal improper use or is there a sound reason
   -Action will depend on the reason

What other reasons may have caused these variances?

My Retail Business
COMPARISON OF BUDGET AND ACTUAL RESULTS
FOR YEAR ENDED 30 JUNE 2013

	Budget $	Actual $	Variance $	Variance $	
REVENUE					
Sales	491,062	458,580	32,482	-32,482	(U)
less COST OF SALES	343,743	334,764	8,979	8,979	(F)
GROSS PROFIT	147,319	123,816	23,503	-23,503	(U)
less OPERATING EXPENSES					
Accounting fees	676	560	116	116	(F)
Advertising	4,039	5,168	1,129	-1,129	(U)
Bank charges	254	240	14	14	(F)
Depreciation	632	632	0	0	
Electricity	809	762	47	47	(F)
Insurances	1,477	1,650	173	-173	(U)
Interest paid	1,600	1,600	0	0	
Legal fees	208	210	2	-2	(U)
Rent	43,354	41,945	1,409	1,409	(F)
Office expenses	822	791	31	31	(F)
Wages	36,343	38,750	2,407	-2,407	(U)
Superannuation	3,271	3,488	217	-217	(U)
Telephone	930	1,936	1,006	-1,006	(U)
Total Operating expenses	*94,415*	*97,732*	*3,317*	*-3,317*	(U)
NET PROFIT	**$52,904**	**$26,084**	**$26,820**	**-$26,820**	**(U)**