FINANCIAL MANAGEMENT CASE STUDIES

Introduction

This series of financial management case studies will be based around the business of Coverdrive Ltd, a manufacturer of high quality, hand made cricket bats.

Coverdrive Ltd is based in Whitby North Yorks and is an owner-managed company. It had been originally formed in the early 1980's as a partnership with the aid of some European funding.

It currently has a budgeted turnover of £2.75m with anticipated profit for the year of £0.40m.

This first case study focuses on the concept of standard costing, variance analysis and the reconciliation of budget to actual profit through an analysis of the main cost variances.

The scenario assumes that you work as an assistant in the SME business services unit of Dunn and Musgrave a firm of accountants and consultants. You have recently introduced, at Coverdrive Ltd a system of standard costing and budgetary control.

The objective of the system is to generate a monthly report to show the following:

Budget Operating Statement
Actual Operating Statement
Control Ratios

An analysis of variances to show:

Direct Labour Variances:

- Rate
- Efficiency

Direct Material Variances:

- Price
- Usage

Variable Overhead Variances:

- Expenditure
- Efficiency

Fixed Overhead Variances:

- Expenditure
- Volume:
  - Capacity
  - Efficiency

Sales Variances:

- Sales Price Variance
- Sales Margin Quantity Variance

Reconciliation budget to actual profit

Break-Even Point:

- Budget
- Actual

Standard Costing – a definition

"A control technique which compares standard costs and revenues with actual results to obtain variances which are used to stimulate improve performance." (CIMA)

The Objectives of Standard Costing and Variance Accounting

Terry Lucy in his excellent text "Management Accounting" outlined these as:

- "To provide a formal basis for assessing performance and efficiency.
- To control costs by establishing standards and analysing variances.
- To enable the principle of 'management by exception' to be practised at the detailed, operational level.
- To assist in setting budgets.
- The standard costs are readily available substitutes for actual average unit costs and can be used for stock and work-in-progress valuations, profit planning and decision making, and as a basis for pricing where 'cost-plus' systems are used.
- To assist in assigning responsibility for non-standard performance in order to correct deficiencies or to capitalise on benefits.
- To motivate staff and management.

- To provide a basis for estimating.

- To provide guidance on possible ways of improving performance".

In addition to the objectives stated by Lucy it can be said that, it can be the basis for 'good practice' in establishing not only cost control but cost reduction programmes.

In 'activity based' environments it can, by forcing a review of good practice, help in identifying activities and cost drivers.

An activity is defined as "a value adding process which consumes resources".

A cost driver is "an activity or factor which generates cost".

Variance Accounting

This is defined as "A method by which planned activities (quantified in budgets, standard costs, standard sales and standard profits) are compared with actual results. Provides a basis for variance analysis".

Variance analysis being "The analysis of performance by means of variances; used to promote management action at the earliest possible stages". (CIMA)

Control through Variance Accounting

The primary objective of standard costing technique is to monitor current performance against predetermined standards by the use of variance analysis.

Flexible budgetary control uses the same principles but standard costing informs a more detailed analysis of variances.

Variance analysis directs management attention to the reasons underpinning off-standard performance, so that corrective action is taken as early as possible.

Direct action can result in improved efficiency, greater utilisation of resources and in some cases reduction in cost.

Reporting systems should detail variances in such a way that through the mechanism of "responsibility accounting" individual managers should be held accountable for the specific variances.

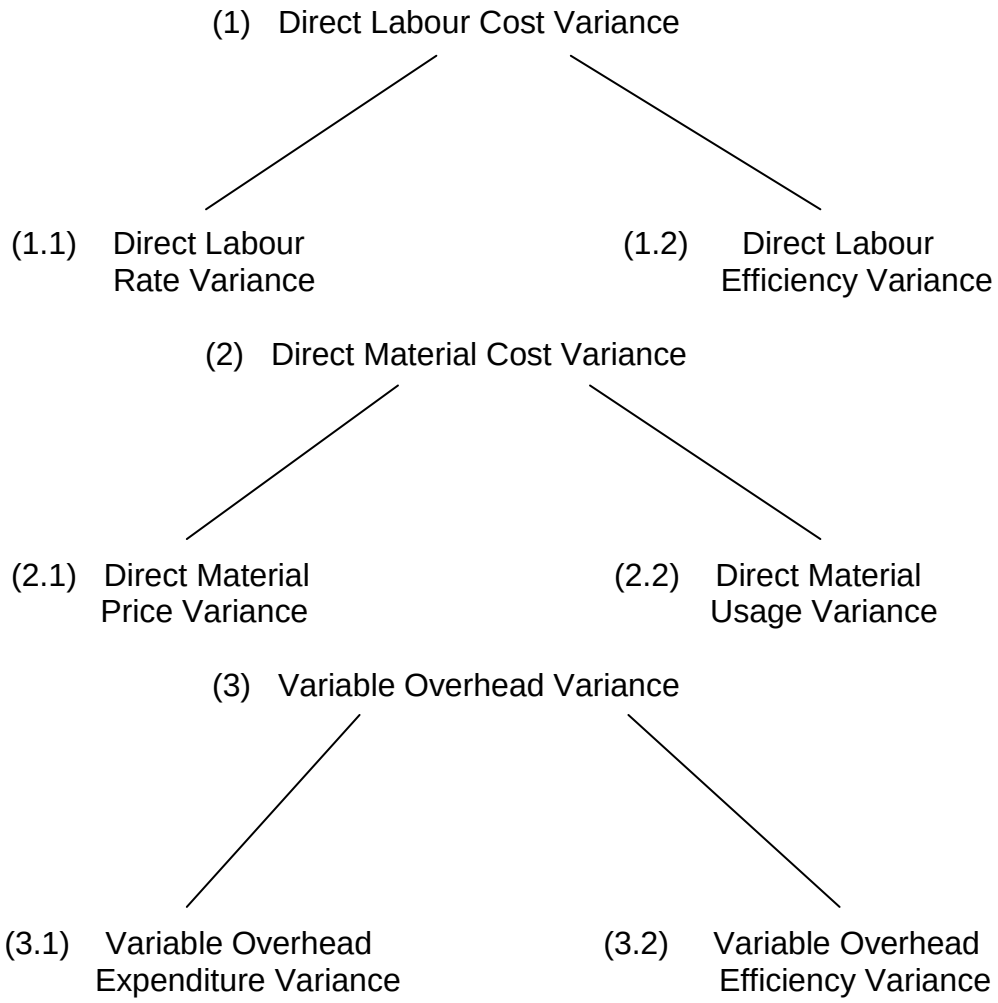
The objectives and principles outlined above are those which underpin the accounting methods and techniques visited in this case study.

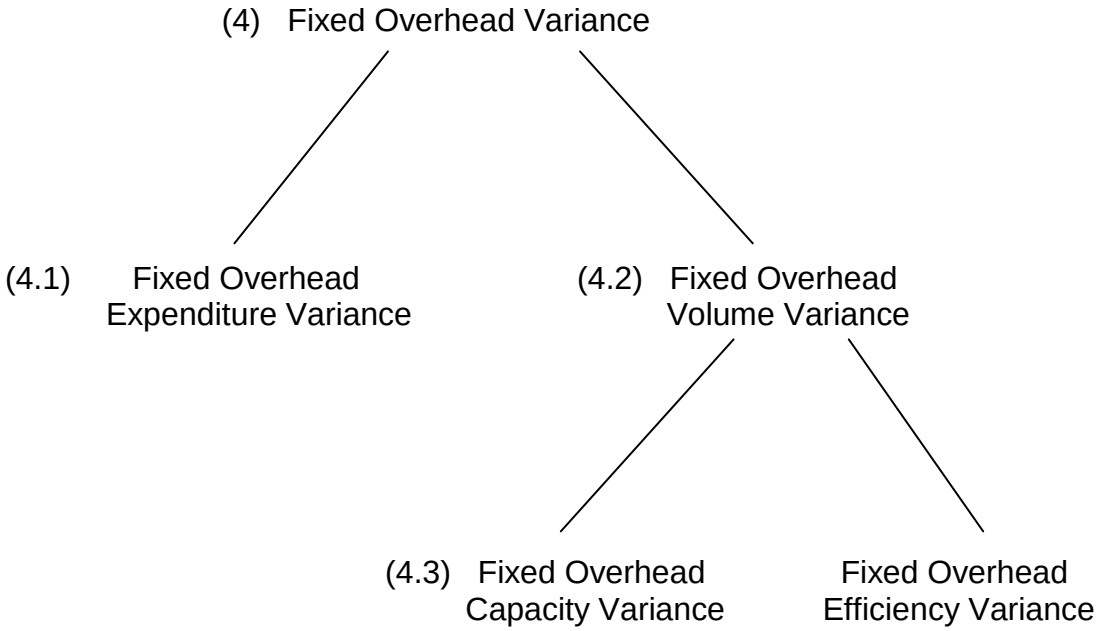
Financial Management Case Study (1)

Variance Accounting and Reporting

The purpose of this case study is to illustrate the principles of standard absorption costing and the reconciliation process of matching budget to actual performance by the use of variance analysis.

A traditional approach to the variance analysis model is based on the following:





In addition to these variances are series of control ratios include:

- Efficiency Ratio - a measure of productivity
- Capacity Ratio - a measure of resource utilisation
- Activity Ratio - a measure of production volume

The Situation

Coverdrive Ltd is a company which manufactures high quality cricket bats. The business was originally formed in the 1980's by Steve Howe and Steven Ambrose and for some years operated as a partnership. It is located in Whitby, North Yorkshire.

The company now has a budgeted turnover of £2.75m with an anticipated profit for the current year of £0.4m.

You work for Dunn and Musgrave a firm of accountants and consultants and Coverdrive Ltd is one of your clients. Your role is in the business advisory unit and you have recently installed a monthly management accounting reporting system based on standard costing techniques.

In early February 2010 you receive the attached memo from Pauline Dunn your firm's senior regarding the reporting system.

Memo

From: Pauline Dunn 5 February 2010

To: Planning Assistant

Re: Coverdrive Ltd

As you are aware we recently installed a standard costing system at Coverdrive Ltd.

The details attached show the budget for the month of January, together with the standard specification for each product in the range.

Also shown is the budgeted fixed and variable overheads for the period.

Yesterday I called in at Coverdrive and Steven Ambrose supplied me with a printout from the computer showing a summary of actual output, hours worked, direct wages paid, material usage and material prices incurred; together with actual fixed and variable overheads for the period.

I have arranged a meeting for next Wednesday 12 February, to discuss the figures for the month of January.

Could you please prepare the following schedules by Tuesday am, so that we can review these prior to the meeting:

- Budgeted operating statement for January.
- Actual operating statement for the period.
- The control ratios, with brief comments on the figures.
- A variance analysis report showing the variances outlined in the model above – highlighting any areas for concern.
- A reconciliation of budget to actual profit for the month.
- The breakeven point in £ turnover and % capacity for both the budget and actual positions.

Coverdrive Ltd Budget Date January 2010

Production and Sales in Units		**Selling Price £**	**Standard Hours per Unit**
Coverdrive “Special”	1250	70	4
Coverdrive “Super”	1000	60	3.5
Coverdrive “Classic”	1250	55	3

Standard direct labour rate per hour £6

Standard material usage per unit of output:

"Special"	1.4
"Super"	1.3
"Classic"	1.2

Standard price per unit of material £10

Budgeted fixed costs for month £33550

Budgeted variable overhead for month £30500

Coverdrive Ltd – Computer Printout 4/2/02 SA/02 January 2010

Actual output and sales in units:

"Special"	1275
"Super"	1100
"Classic"	1220

Actual selling prices were as budgeted.

Actual hours worked (direct labour):

"Special"	5228
"Super"	3740
"Classic"	3721

Cost code: 100.01 Direct Labour

"Special"	£31629
"Super"	£22814
"Classic"	£22512

Cost code: 100.02 Direct Material:

	Cost	**Usage Units of Material**
"Special"	£18160	1798
"Super"	£14342	1420
"Classic"	£15029	1488

Cost code: 100.03 fixed overhead £34000

Cost code: 100.04 variable overhead £31000

Allocated and apportioned as:

"Special"	£12654
"Super"	£8857
"Classic"	£9489

Memo

To: Pauline Dunn 11 February 2010

From: Planning Assistant

Re: Coverdrive Ltd

In reply to your request of 5 February, I attach the report for January 2010.

My comments on the overall performance are included on each section of my report.

I look forward to discussing the results in our review meeting planned for tomorrow.

Coverdrive Ltd
Actual Operating Statement January 2010

	"Special"	**"Super"**	**"Classic"**	**Total**
Production and sales in units	1275	1100	1220	3595
	£	**£**	**£**	**£**
Sales	89250	66000	67100	222350
Less Variable Costs:				
Direct labour	31629	22814	22512	76955
Direct material	18160	14342	15029	47621
Variable overhead	12654	8857	9489	31000
	62443	46013	47030	155486
Contribution				66864
Fixed costs				34000
Profit / (Loss)				£32864

Coverdrive Ltd
Budgeted Operating Statement January 2010

	"Special"	"Super"	"Classic"	Total
Production and sales in units	1250	1000	1250	3500
	£	£	£	£
Sales	87500	60000	68750	216250
Less Variable Costs:				
Direct labour	30000	21000	22500	73500
Direct material	17500	13000	15000	45500
Variable overhead	12449	8714	9337	30500
	59949	42714	46837	149500
Contribution	27551	17286	21913	66750
Fixed costs				33550
Profit / (Loss)				£33200

Coverdrive Ltd January 2010

	"Special"	"Super"	"Classic"	Total
Budgeted production (units)	1250	1000	1250	3500
Standard hours / units	4	3.5	3	
Budget in standard hours	5000	3500	3750	12250
Actual production (units)	1275	1100	1220	3595
Standard hours produced	5100	3850	3660	12610
Actual hours worked	5228	3740	3721	12689

Efficiency Ratio:

$$\frac{\text{Standard hours produced}}{\text{Actual hours worked}} \times 100/1$$

Capacity Ratio:

$$\frac{\text{Actual hours worked}}{\text{Budgeted hours}} \times 100/1$$

Activity Ratio:

$$\frac{\text{Standard hours produced}}{\text{Budgeted hours}} \times 100/1$$

Control Ratios Summary

	"Special"	"Super"	"Classic"	Total
Efficiency	97.55	102.94	98.36	99.38
Capacity	104.56	106.86	99.23	103.58
Activity	102.00	110.00	97.60	102.94

The overall efficiency for the month was almost as planned, although efficiency on "Special" and 'Classic" was marginally adverse. This was offset by the favourable efficiency on "Super".

Capacity was approximately 4% greater than forecast, with extra capacity allowed on "Special" and "Super" lines. This resulted in the overall activity on level of production volume being approximately 3% more favourable than planned.

Variance Analysis Report
January 2010

Direct Labour (NB: F = favourable, (A) = adverse)

Product	Standard Cost of Actual Production	Actual Cost	Variance F (A)
"Special"	1275 x 4 STD hrs 5100 STD hrs @ £6 / hr £30600	5228 hrs @ £6.05 £31629	(1029)
"Super"	1100 x 3.5 STD hrs 3850 STD hrs @ £6 / hr £23100	3740 hrs @ £6.10 £22814	286 F
"Classic"	1220 x 3 STD hrs 3660 STD hrs @ £6 £21960	3721 hrs @ £6.05 £22512	(552) (1295)

The total direct labour cost variance is adverse, as the actual labour cost for the period is greater than that allowed for the actual production volume.

Direct Labour Efficiency Variance:

(Standard hours produced – actual hours worked) standard rate

			F (A)
"Special"	(5100 – 5228)	£6	(768)
"Super"	(3850 – 3740)	£6	660
"Classic"	(3660 – 3721)	£6	(366)
			(474)

There is a net adverse efficiency variance, as in the case of "special" and "classic" the actual hours worked were greater than that allowed for 'the actual volume of output'. "Super" however showed higher productivity.

Direct Labour Rate Variance:

(Standard rate – actual rate) actual hours

"Special"	(£6.00 – £6.05)	5228	(261)
"Super"	(£6.00 – £6.10)	3740	(374)
"Classic"	(£6.00 – £6.05)	3721	(186)
			(821)

The net variance is adverse, as in all cases the actual labour rate was greater than specified.

		£
Summary:	Efficiency	(474)
	Rate	(821)
	Total Variance	£(1295)

Direct Material

	Standard Cost of Actual Production	Actual Cost	Variance
"Special"	1275 x 1.4 = 1785 units @ £10 £17850	1798 units @ £10.10 £18160	(310)
"Super"	1100 x 1.3 1430 units @ £10 £14300	1420 units @ £10.10 £14342	(42)
"Classic"	1220 x 1.2 1464 units @ £10 £14640	1488 units @ £10.10 £15029	(389)
			(741)

The net total material variance is adverse as the actual cost in all cases, is greater than the cost specified for the volume achieved.

Direct Material Usage Variance:

(Standard usage – actual usage) standard price

"Special"	(1785 – 1798)	£10	(130)
"Super"	(1430 – 1420)	£10	100
"Classic"	(1464 – 1488)	£10	(240)
			(270)

The net usage variance is adverse as in the case of "special" and "classic" the actual usage of material is greater than that specified for the volume of output achieved. "Super" showed an efficient use of material.

Direct Material Price Variance:

(Standard price – actual price) actual usage

"Special"	(£10 – £10.10)	1798	(180)
"Super"	(£10 – £10.10)	1420	(142)
"Classic"	(£10 – £10.10)	1488	(149)
			(471)

The net material price variance is adverse as the actual unit price of material is greater than the predetermined or standard price.

		£
Summary:	Usage	(270)
	Price	(471)
	Total Variance	(741)

Variable Overhead Variance:

Variable Overhead Recovery Rate

$$\frac{\text{Budget variable overhead}}{\text{Budget, standard hours}}$$

$$\frac{£30500}{12250} = £2.48980 \text{ per standard hour}$$

Variable overhead recovered in production achieved:

Standard hours produced x variable overhead recovery rate

12610 standard hours

x £2.48980

= £31396

Actual variable overhead	£31000
Over-recovered favourable variance	£396

The amount recovered in production achieved is greater than the actual incurred.

Variable Overhead Efficiency Variance:

(Standard hours produced – actual hours worked) VORR

(12610 – 12689) £2.48980 (197)
adverse
under-recovered

The marginal lack of efficiency of labour results in an under-recovery here.

Variable Overhead Expenditure Variance:

(STD VORR – Actual VORR) Actual Hrs

(£2.48980 – * £2.4431) 12689 593
Favourable
Underspend

*actual overhead
actual hours

= £31000 = £2.4431 per hour
12689

The underspend is due to the operating cost per hour being less than standard.

		£
Summary:	Efficiency	(197)
	Expenditure	593
	Total Variance	£396

Fixed Overhead Variance:

Fixed overhead recovery rate:

= Budget fixed cost
Budget, standard hours

= £33550 / 12250 £2.73878 per std hour

Fixed overhead recovered in the month:

Standard hours produced x FORR

= 12610 x £2.73878 £34536

Actual fixed cost £34000

£536

favourable, over-recovery

The amount recovered is greater than that incurred.

Fixed Overhead Expenditure Variance:

	£
Budgeted fixed overhead	33550
Actual fixed overhead	34000
Adverse, over-spend	£(450)

There is a marginal overspend in some area of Fixed Costs.

Volume Variance:

(Standard hours produced – budget hours) FORR

(12610 – 12250) £2.73878 = £986

favourable

over-recovery

The additional volume achieved is the factor which influences this over-recovery.

The volume variance is sub-divided to:

Capacity and;

Efficiency

Fixed Overhead Capacity Variance:

(Budget hours – actual hours) FORR

(12250 – 12689) £2.73878 £1202

favourable

over-recovery

A greater capacity was utilised.

Fixed Overhead Efficiency Variance:

(Standard hours produced – actual hours) FORR

(12610 – 12689) £2.73878 £(216)
adverse
under-recovery

The marginal lack of efficiency is highlighted here.

Summary:

	£	F/(A)
Total variance	536	
Expenditure	(450)	
Volume *	986	
	536	

	£
* Efficiency	(216)
Capacity	1202
	986

Coverdrive Ltd

Reconciliation Budget – Actual Profit
January 2010

	£	F/(A)
Budget Profit	33200	
Actual Profit	32864	
Profit Variance	(336)	

Summary of Cost Variances:

Direct Labour Rate	(821)
Direct Labour Efficiency	(474)
Direct Material Price	(471)
Direct Material Usage	(270)
Variable Overhead Efficiency	(197)
Variable Overhead Expenditure	593
Fixed Overhead Expenditure	(450)
Fixed Overhead Volume	986
	(1104)

Sales Margin Quantity Variance:

* Units x STD margin / unit

"Special"	25	x	£11.08	277	
"Super"	100	x	£7.70	770	
"Classic"	(30)	x	£9.31	(279)	768
					(336)

The adverse variance on direct labour is due to the incidence of overtime worked.

The efficiency of labour and usage of material is well within line with predetermined levels planned.

These marginal adverse elements are offset by both the variable overhead expenditure and fixed overhead volume variances.

Fixed overhead expenditure was almost as planned.

The performance for the month was most acceptable.

* This is the additional or shortfall in units ie: budget to actual

Break-Even Point

£ Turnover

Fixed Costs
(Contribution / Sales)

	Budget	**Actual**
	£33550 (66750 / 216250)	£34000 (66864 / 222350)
	= £108692	= £113064
% Capacity	50.3%	50.85%