Standard Costing

Wednesday, January 22, 2025 7:19 PM

Standard costing is a system of cost control where standard values of costs and revenue are predetermined, and the actual results are compared to them to identify the variance (difference) and take suitable actions if required.

Variance refers to the difference between the actual performance and standard performance

variance = Actual Data − Expected data
(Standard data)

Variances are considered Favourable if the deviations from standards leads to higher profitability while variances are considered Adverse / Unfavorable if the deviation from standards leads to a lower profitability.

FLEXED BUDGET

Flexed budget is created at the end of the budget period by applying standards and expectations of the orginal Budget to the actual activity level.

Details	Budgeted data	Standard data (Flexed Budget) (S. Rates × Actual Qty)	Actual Data	variance (Standard − Actual)
Output (units)	5,000	6,000 ←	6,000	–
Revenue	$50 per unit ($50 × 5,000) = $250,000	$50 per unit ($50 × 6,000) = $300,000	$270,000	$30,000 (A)
Costs	$30 per unit ($30 × 5,000) = $150,000	$30 per unit ($30 × 6,000) = $180,000	$168,000	$12,000 (F)
Profit	R − cost = $100,000	= $120,000	= $102,000	$18,000 (A)

CALCULATIONS OF VARIANCES

- Sales variance
  - Sales volume (Qty)
  - Sales price
- cost variance
  - Material variance
    - Material usage variance
    - Material Price variance
  - Labour variance
    - Labour efficiency variance
    - Labour Rate variance
  - variable overhead variance
    - Variable overhead Expenditure variance
    - Variable overhead efficiency variance
  - Fixed overhead variance (Actual − Flexed)
    - Fixed overheads Expenditure variance
    - Fixed overheads volume variance
      - Fixed overhead capacity variance
      - Fixed overheads efficiency variance

→ Budgeted Rate = Budgeted overheads / Budgeted Labour hours

→ To calculate the main variance you just need to take difference of budgeted v/s actual value

Fixed overhead remain same with activity level.

SALES VARIANCE:-

(Standard quantity × Standard/Budgeted price) − (Actual quantity × Actual price)

Sales volume variance:
(Budgeted quantity × Budgeted Rate) − (Actual quantity × Budgeted Rate)

Sales Price variance
(Budgeted Price × Actual Quantity) − (Actual Price × Actual Quantity)

COST VARIANCE

Material variance
(Standard quantity × Budgeted Price) − (Actual quantity × Actual Price)

Material usage variance
(Standard quantity × Budgeted Rate) − (Actual quantity × Budgeted Rate)

Material Price variance
(Budgeted Price × Actual quantity) − (Actual Price × Actual quantity)

Labour variance
(Standard hours × Budgeted Rate) − (Actual hours × Actual Rate)

Labour efficiency variance
(Standard hours × Budgeted Rate) − (Actual hours × Budgeted Rate)

Labour rate variance:
(Standard rate × Actual Labour hours) −

variable overhead Expenditure variance (spending)
(Budgeted Rate per hour × Actual hours) − (Actual rate per hour × Actual hours)

variable overhead efficiency variance
(Standard hours for actual output × Budgeted Rate) − (Actual hours × Budgeted Rate)

Variable overhead variance

	Budgeted	Standard	Actual
output	300 units	400 units	400 units
Labour hours	900 hours	1200 hours	1000 hours
Variable overheads	$4,500	$6,000	$7,200
Overhead rate/hour	$5	$15 × 400 = 6000	
overhead rate/unit	$15 per unit.		

output: Fixed overheads; Labour hours; OAR − Per unit; OAR − Per hour

A.R. = $7200 / 1000 hours = $7.2

Variable overhead variance
Standard Overheads − Actual overheads
$6,000 − $7,200
= $1200 Adverse variance.

variable overhead spending variance.
(Budgeted Rate/H × Actual hours) − (Actual Rate/H × Actual hours)

	$
$5 × 1000 hours =	5,000
$7.2 × 1000 hours =	7,200
Adverse variance	2,200

Variable overhead efficiency variance
(Standard hours for × Budgeted Rate) −

If Labour hours are given we have to calculate

Fixed overheads Expenditure variance
(Budgeted overheads − Actual overheads)

Fixed overheads volume Variance.
(Budgeted quantity × Budgeted Rate) − (Actual quantity × Budgeted Rate)

Fixed overheads capacity variance
(Budgeted hours × Budgeted Rate P.H) − (Actual hours × Budgeted Rate P.H)

Budgeted	Standard	Actual
300 units	400 units	400 units
$8100	$10,800	$10,000
900 hours	1200 hours	1000 hours

Fixed overheads efficiency variance
(Standard hours for actual output × Budgeted Rate) − (Actual hours worked × Budgeted Rate)

$27	
$9	$10
	$25

Fixed overhead variance
Standard overheads − Actual overheads
= $10,800 − $10,000
= $800 Favourable variance.

(i) Fixed overhead Expenditure variance.
Budgeted overheads − Actual overheads

(Standard hours × Budgeted Rate) –
(Actual hours × Budgeted Rate)

Adverse variance 2,200

Labour rate variance:
(Standard rate × Actual Labour hours) –
(Actual rate × Actual Labour hours)

Variable overhead efficiency variance
(Standard hours for actual output × Budgeted Rate) –
(Actual hours × Budgeted Rate)

		$
1200	× $5	= 6,000
1050	× $5	= 5,000

Favourable variance 1,000

A = $2,200 – F.V = $1,000 = $1200 A

= $10,800 – $10,000
= $800 Favourable variance.

(i) Fixed overhead Expenditure variance:
Budgeted overheads – Actual overheads
= $8100 – $10,000
= $1900 Adverse variance.

(ii) Fixed overhead volume variance:
(Budgeted Qty × Budgeted OR) –
(Actual Qty × Budgeted OR)
= (300 × $27) = $8100
= (400 × $27) = $10,800
Favourable variance $2,700

A = $1,900 – $2,700 F = $800 F

if direct labour hours are given then further we need to calculate "capacity" and "efficiency" variance to verify "Fixed Overhead Volume Variance"

i) Fixed overhead capacity variance
(Budgeted hours × Budgeted OR) –
(Actual hours × Budgeted OR)

(900 hours × $9) = $8100
(1000 hours × $9) = $9,000
Favourable variance $900

(ii) Fixed overhead efficiency variance
(Standard hours × Budgeted OR) –
(Actual hours × Budgeted OR)

1200 hours × $9 = $10,800
1,000 hours × $9 = $9,000
Favourable variance. $1,800

F = $900 + F $1800 = F $2700

SALES VARIANCE

	Budgeted Data	Actual Data
Quantity	300 units	400 units
Price	$150	$140
Sales	$45,000	$56,000

(i) Sales variance = Budgeted data ($) – Actual data ($)
= $45,000 – $56,000
= $11,000 Favourable variance.

(ii) Sales volume variance = (Budgeted qty × Budgeted Price) –
(Actual qty × Budgeted Price)

= 300 units × $150 = $45,000
400 units × $150 = $60,000
Favourable variance $15,000

(iii) Sales Price variance = Budgeted Price × Actual qty
Actual Price × Actual qty

= $150 × 400 units = $60,000
$140 × 400 units = $56,000
Adverse variance $4,000

F = $15,000 – UF $4,000 = $11,000 F

COST VARIANCE

	Budgeted Data	Standard Data ✓	Actual Data
output	300 units	400 units	400 units
Raw Material qty	3000 kg	4000 kg	3600 kg
Price of Raw Material	$3 per kg	$3 per kg	$3·5 per kg
cost of Raw Material	$9000	$12,000	$12,600

Material variance = Standard data ($) – Actual data ($)
= $12,000 – $12,600
= $600 Adverse variance.

Material usage variance = (Standard qty × Standard Price) –
(Actual qty × Standard Price)

= 4,000 kg × $3 = $12,000
3,600 kg × $3 = $10,800
Favourable variance $1,200

Material price variance = Standard Price × Actual qty
Actual Price × Actual qty

= $3 per kg × 3600 kg = $10,800
$3·5 per kg × 3600 kg = $12,600
Adverse variance $1,800

F = $1200 – UF $1,800 = $600 UF

LABOUR VARIANCE

	Budgeted Data	Standard Data	Actual Data
output	300 units	400 units	400 units
Labour hours	900 hours	1200 hours	1000 hours
wage Rate	$20	$20	$21
wage cost	$18,000	$24,000	$21,000

Labour variance = Standard data ($) – Actual data ($)
= $24,000 – $21,000
= $3,000 Favourable variance.

Labour efficiency = (Standard hours × Budgeted Rate) –
(Actual hours × Budgeted Rate)

		$
= 1200	× $20	= 24000
1050	× $20	= 20,000

Favourable variance $4000

Labour Rate variance = (Standard Rate × Actual hours) −
(Actual Rate × Actual hours)

= $20 × 1000 = $20,000
= $21 × 1000 = $21,000.
Adverse variance $1000

FV 4000, AD 1000 = $3000 favourable variance.