MANAGERIAL ANALYSES AND REPORTS

① Cost Types

Variable costs:	Total cost changes in proportion to volume of activity
Fixed costs:	Total cost does not change in proportion to volume of activity
Mixed costs:	Cost consists of both a variable and a fixed element

② Cost Sources

Direct materials:	Raw materials costs directly linked to finished product
Direct labor:	Employee costs directly linked to finished product
Overhead:	Costs indirectly linked to finished product

③ Costing Systems

Job order costing:	Costs assigned to each unique unit or batch of units
Process costing:	Costs assigned to similar products that are mass-produced in a continuous manner

④ Costing Ratios

Contribution margin ratio = (Net sales − Variable costs)/Net sales
Predetermined overhead rate = Estimated overhead costs/Estimated activity base
Break-even point in units = Total fixed costs/Contribution margin per unit

⑤ Planning and Control Metrics

Cost variance = Actual cost − Standard (budgeted) cost
Sales (revenue) variance = Actual sales − Standard (budgeted) sales

⑥ Capital Budgeting

Payback period = Time expected to recover investment cost
Accounting rate of return = Expected annual net income/Average annual investment
Net present value (NPV) = Present value of future cash flows − Investment cost
NPV rule: 1. Compute net present value (NPV in $)
2. If NPV $\geq$ 0, then accept project; If NPV $<$ 0, then reject project
Internal rate of return rule: 1. Compute internal rate of return (IRR in %)
2. If IRR $\geq$ hurdle rate, accept project; If IRR $<$ hurdle rate, reject project

⑦ Costing Terminology

Relevant range:	Organization's normal range of operating activity.
Direct cost:	Cost incurred for the benefit of one cost object.
Indirect cost:	Cost incurred for the benefit of more than one cost object.
Product cost:	Cost that is necessary and integral to finished products.
Period cost:	Cost identified more with a time period than with finished products.
Overhead cost:	Cost not separately or directly traceable to a cost object.
Relevant cost:	Cost that is pertinent to a decision.
Opportunity cost:	Benefit lost by choosing an action from two or more alternatives.
Sunk cost:	Cost already incurred that cannot be avoided or changed.
Standard cost:	Cost computed using standard price and standard quantity.
Budget:	Formal statement of an organization's future plans.
Break-even point:	Sales level at which an organization earns zero profit.
Incremental cost:	Cost incurred only if the organization undertakes a certain action.
Transfer price:	Price on transactions between divisions within a company.

⑧ Standard Cost Variances

Total materials variance = Materials price variance + Materials quantity variance

Total labor variance = Labor (rate) variance + Labor efficiency (quantity) variance

Total overhead variance = Overhead controllable variance + Fixed overhead volume variance

Overhead controllable variance = Actual total overhead − Applied total overhead from flexible budget

Fixed overhead volume variance = Budgeted fixed overhead − Applied fixed overhead

Variable overhead variance = Variable overhead spending variance + Variable overhead efficiency variance

Fixed overhead variance = Fixed overhead spending variance + Fixed overhead volume variance

(Variable overhead variance + Fixed overhead variance) = Total overhead variance

Materials price variance = [AQ × AP] − [AQ × SP]

Materials quantity variance = [AQ × SP] − [SQ × SP]

Labor (rate) variance = [AH × AR] − [AH × SR]

Labor efficiency (quantity) variance = [AH × SR] − [SH × SR]

Variable overhead spending variance = [AH × AVR] − [AH × SVR]
Variable overhead efficiency variance = [AH × SVR] − [SH × SVR]
Fixed overhead spending variance = Actual fixed overhead − Budgeted fixed overhead

where AQ is actual quantity of materials; AP is actual price of materials; AH is actual hours of labor; AR is actual rate of wages; AVR is actual variable rate of overhead; SQ is standard quantity of materials; SP is standard price of materials; SH is standard hours of labor; SR is standard rate of wages; SVR is standard variable rate of overhead.

⑨ Sales Variances

Sales price variance = [AS × AP] − [AS × BP]

Sales volume variance = [AS × BP] − [BS × BP]

where AS = actual sales units; AP = actual sales price; BP = budgeted sales price; BS = budgeted sales units (fixed budget)

Manufacturing Statement
For _period_ Ended _date_

Direct materials	
Raw materials inventory, Beginning	$ #
Raw materials purchases	#
Raw materials available for use	#
Raw materials inventory, Ending	(#)
Direct materials used	#
Direct labor	#
Overhead costs	
Total overhead costs	#
Total manufacturing costs	#
Add goods in process inventory, Beginning	#
Total cost of goods in process	#
Deduct goods in process inventory, Ending	(#)
Cost of goods manufactured	$ #

Contribution Margin Income Statement
For _period_ Ended _date_

Net sales (revenues)	$ #
Total variable costs	#
Contribution margin	#
Total fixed costs	#
Net income	$ #

Flexible Budget
For _period_ Ended _date_

	Flexible Budget: Variable Amount per Unit	Flexible Budget: Fixed Cost	Flexible Budget for Unit Sales of #
Sales (revenues)	$ #		$ #
Variable costs			
Examples: Direct materials, Direct labor,			
Other variable costs	#		#
Total variable costs	#		#
Contribution margin	$ #		#
Fixed costs			
Examples: Depreciation, Manager		$ #	#
salaries, Administrative salaries		#	#
Total fixed costs		$ #	#
Income from operations			$ #

Fixed Budget Performance Report
For _period_ Ended _date_

	Fixed Budget	Actual Performance	Variances†
Sales: In units	#	#	
In dollars	$ #	$ #	$ # *F or U*
Cost of sales			
Direct costs	#	#	# *F or U*
Indirect costs	#	#	# *F or U*
Selling expenses			
Examples: Commissions,	#	#	# *F or U*
Shipping expenses	#	#	# *F or U*
General and administrative expenses			
Examples: Administrative salaries	#	#	# *F or U*
Total expenses	$ #	$ #	$ # *F or U*
Income from operations	$ #	$ #	$ # *F or U*

† *F = Favorable variance; U = Unfavorable variance.*

Master Budget Sequence