

Stock Control Procedures

Annexes Applicable

for all

Types of Stock (including Consumables)

Annex A - NRV Valuation Scenario

Determine the NRV for each of the following items of stock:

Table 1

Item	Cost Price	Estimated market price ¹	Cost to complete / dispose off
Printer paper	2.00	3.50	0.50
Oil fuel	4.00	4.00	0.80
Spare parts	6.00	10.00	1.00
Toiletries	5.00	6.00	2.00
Cleaning supplies	1.00	1.20	0.25

The figure in bold and italics in Table 2 represents the value that should be used in valuing stock.

Table 2

Item	Cost Price	NRV		
		Estimated Market Price	Cost to complete/dispose off	= NRV
	Lm	Lm	Lm	Lm
Printer paper	<i>2.00</i>	3.50	0.50	3.00
Oil fuel	4.00	4.00	0.80	<i>3.20</i>
Spare parts	<i>6.00</i>	10.00	1.00	9.00
Toiletries	5.00	6.00	2.00	<i>4.00</i>
Cleaning supplies	1.00	1.20	0.25	<i>0.95</i>

Finally, the value of items in stock have to be calculated separately for those items valued at cost price and for those written down to NRV. The table below gives example of the valuation.

Table 3

Item	Cost Price	NRV	No of units	Units Valued at Cost	Units Valued at NRV
	Lm	Lm		Lm	Lm
Printer paper	<i>2.00</i>	3.00	500	1,000	
Oil fuel	4.00	<i>3.20</i>	1,000	0	3,200
Spare parts	<i>6.00</i>	9.00	750	4,500	
Toiletries	5.00	<i>4.00</i>	750	0	3,000
Cleaning supplies	1.00	<i>0.95</i>	2,500	<u>0</u>	<u>2,375</u>
			Total	<u>5,500</u>	<u>8,575</u>

¹ Use estimated market price taking into account the current state of the product, including obsolescence and damage

Annex B AVCO Valuation

Example 1

Department A currently produces machine components. The following information gives details regarding the receipts and issues of the stock items used in production during the month of May 2002.

May	Receipts	May	Issues
1	50 units at Lm30 per unit	6	40 units
8	40 units at Lm35 per unit	13	20 units
15	70 units at Lm42 per unit	20	80 units
22	60 units at Lm28 per unit	27	70 units
29	30 units at Lm32 per unit		

The valuation workings will be as follows:

AVCO Valuation

Date	Doc Ref	Receipts			Issues			Balance		
		Qty	Rate Lm	Value Lm	Qty	Rate Lm	Value Lm	Qty	Rate Lm	Value Lm
01-05-2002	GRN125	50	30	1500				50	30	1500
06-05-2002	REQ67				40	30	1200	10	30	300
08-05-2002	GRN131	40	35	1400				50	34	1700
13-05-2002	REQ70				20	34	680	30	34	1020
15-05-2002	GRN135	70	42	2940				100	39.60	3960
20-05-2002	REQ79				80	39.60	3168	20	39.60	792
22-05-2002	GRN140	60	28	1680				80	30.90	2472
27-05-2002	REQ85				70	30.90	2163	10	30.90	309
29-05-2002	GRN152	30	32	960				40	31.72	1268.80

Annex C - 1 Stock Ledger Card

Stock Ledger Card

Department Name: _____ Ministry Name: _____

Stores Location/No¹: _____ Valuation: (AVCO or NRV)²: _____

Stock Code: _____ Type³: _____

Item Description: _____ Category⁴: _____

Date	Doc Ref	Receipts			Issues			Balance			Remarks
		Qty	Rate	Value	Qty	Rate	Value	Qty	Rate	Value	
			Lm	Lm	Lm	Lm	Lm	Lm	Lm	Lm	

¹ Store location number applies where multi stores exist

²NRV is applied only in those circumstances when the cost of stock is higher than NRV

³ Type refers to whether the stock is Purchased, Manufactured or Donated.

⁴ Category refers to whether the stock is a Consumable Item, Raw Material, Finished Good or Non Stock Item. (eg. fixed asset in stores and any third party goods).

Annex C - 2 Stock Bin Card

Stock Bin Card

Department Name: _____ Ministry Name: _____

Stores Location/No¹: _____ Category²: _____

Stock Code: _____ Item Description: _____

Item Description: _____

Date	Doc. Ref.	Receipts	Issues	Balance	Remarks
		Qty	Qty	Qty	

¹ Store location number applies where multi stores exist

² Category refers to whether the stock is a Consumable Item, Raw Material, Finished Good or Non Stock Item. (eg. fixed asset in stores and any third party goods)

Annex C - 3 Summary Report by Stock Code

Summary Report by Stock Code

Department Name: _____ Ministry Name: _____

Date: _____

Stock Code	Total Receipts		Total Issues		Write-Offs		Actual Balances		Type*	Category**	Reason for Write-Offs
	Qty	Values Lm	Qty	Values Lm	Qty	Values Lm	Qty	Values Lm			

* Type refers to whether the stock is Purchased, Manufactured or Donated

**Category refers to whether the stock is Consumable, Raw Material, Finished Good or Non Stock Item

Annex D - 1 Sample Stocktake Report

Sample Stocktake Report

Page:

Department Name: _____

Ministry Name: _____

Date: _____

Stock Code	Ledger Quantities	Actual Quantities	Discrepancies	Stock Condition*	Remarks

*Stock Condition refers to whether the stock is Normal, Unserviceable or Surplus

Compiled By: _____

Reviewed By: _____

Signature: _____

Signature: _____

Name: _____

Name: _____

Position: _____

Position: _____

Annex D - 2 Sample Valuation Report

Stock Valuation Report

Department Name: _____ Ministry Name: _____

Quarter Ending Month: _____

	AVCO Lm	NRV Lm	Write-Offs Lm	Total Lm
Consumables				
Raw Materials				
Work in progress				
Finished Goods				
Non-stock items				
Total Value of Stocks				

Document Information

Compiled By:

Authorised By:

Signature _____ Signature _____

Name _____ Name _____

Position _____ Position _____

Annex D - 3 Statement of Stores Write-offs

Statement of Stores Write-Offs

Department Name: _____ Ministry Name: _____

Quarter ending Month: _____

Authority (File Number)	Date	Details	Value	Type*	Category**	Reason for Write-Offs

*Type refers to whether the stock is Purchased, Manufactured or Donated

** Category refers to whether the stock is a Consumable, Raw Material, Finished Good or Non Stock Item

Annex E – 1 Goods Received Note (GRN) 1 copy for stores officer
 1 copy for head of department
 1 copy for purchasing officer

Goods Received Note									
								GRN No (pre-numbered) : _____	
Department: _____				Ministry: _____					
Supplier: _____				Harmonised Code: _____					
Date: _____				Cost Center: _____					
Purchase order number	Invoice number	Item code	Stock item description	Physically inspected (tick as applicable)	Measuring unit	Quantity of stock items	Price per item	Value of stock items	Comments
Total :									
Stores officer: _____				Reviewed by Accounts: _____					
Purchasing officer: _____				Reviewer position: _____					

Annex E – 2

Stores Material Requisition Note (SMRN)

1 copy for stores officer or recipients

1 copy for head of department

Item code	Item description	Measuring unit	Quantity of items requested	Quantity of items issued	Quantity of items remaining in stores	Comments

Requested by: _____	Position: _____
Authorised by: _____	Position: _____

Recurrent											
Vote		Cost center		Responsibility center		Account					

Annex E – 3 Stores Material Transfer Note (SMTN)

1 copy for stores officer – sending department
 1 copy for stores officer – receiving department
 1 copy for head of department

Stores Material Transfer Note					
					SMTN NO (prenumbered) : _____
Department: _____			Ministry: _____		
Date: _____					
Issuing stores/location: _____			Receiving stores/location: _____		
Purpose for stock transfer: _____					
Item code	Item description	Measuring unit	Quantity of items transferred	Value *	Comments
Total:					
Requested by: _____ (Department: if applicable)			Position: _____		
Authorised by: _____			Position: _____		
Received by: _____			Position: _____		
* Applicable if transfer is between departments					

Annex E – 4 Bill of Material (BOM) 1 copy for stores officer
 1 copy for head of department
 1 copy for technically competent authority

Bill Of Material *

BOM No (pre-numbered): _____

Department : _____ Ministry: _____
 Issue Date: _____ Cost center: _____
 Delivered to location: _____

To be filled by technically competent authority					To be filled by stores and accounts officer					Comments
Item code	Item description	Ref.	Measuring unit	Quantity requested	Opening stock quantity	Quantity issued	Price	Value	Closing stock quantity	
Total:										

Finished Item Details

Stock code: _____ Quantity made: _____
 Stock description: _____ Unit price: _____

Requested by: _____ Position: _____
 Authorised by: _____ Position: _____

* BOM is applicable only for stock items issued for the manufacturing process by a technically competent authority

Annexes Applicable
for all types of Stock
Excluding
Consumables and Raw Materials

Annex F - 1 Valuation Examples

Example (a): Construction

During 2001, Department C was responsible for the construction of a housing property. At year-end, the total amount incurred in respect of raw materials totalled Lm150,000. The amount of labour hours spent amounted to 10,000 hrs @ Lm6.00/hr, 2,000hrs @ Lm9.00/hr and 200 hrs @ Lm15.00/hr. Lm10,000 were spent on consultancy and architect fees specific for this project. Overheads spent during the year amounted to Lm20,000 insurance on plant and machinery and Lm30,000 administration expenses. This project is to absorb 50% of these overheads*.

In addition, Lm30,000 of electrical installation and finishing works were subcontracted to ABC Ltd. By the end of the financial year, 30% of the contracted work was certified as complete but still unpaid. Another 20% of the contracted work were complete but uncertified. In both cases, supplier's invoices have been submitted.

Calculation of Work-in-progress:

	Lm
Raw Materials	150,000
Labour Costs (10,000 x 6)	60,000
(2,000 x 9)	18,000
(200 x 15)	3,000
Consultancy and Architect Fees	10,000
Direct Overheads Absorbed	
Insurance (Lm20,000 * 50%)	10,000
Administration Costs (Lm30,000 * 50%)	15,000
Subcontracted work	
Complete but unpaid (30% * Lm30,000)	9,000
Complete but uncertified (20% * Lm30,000)	6,000

	281,000
	=====

Note: This example does not apply to the construction of fixed assets but only to the construction of products for re-sale.

* For the purpose of this exercise, the absorption rate is taken to be without any specific reference to the absorption costing technique which is explained in **Annex F - 2**.

Example (b) : Manufacturing

Department XYZ manufactures furniture components. The following gives details regarding the production of Job 123 in the manufacture of furniture components::

Direct Materials per unit	Lm250.00
Direct Labour: (Refer to example in Annex F - 2)	Assembly 7.0 hrs @ Lm21.43/hr Finishing 8.0 hrs @ Lm15.63/hr Packaging 6.5 hrs @ Lm10.77/hr
Direct Production Expenses to be absorbed: (Refer to example in Annex F - 2 - table 11)	Assembly 7.0 hrs @ Lm2.886/hr Finishing 8.0 hrs @ Lm2.136/hr Packaging 6.5 hrs @ Lm2.314/hr

Calculation of Work-in-progress

		Lm
Direct Materials		250.00
Direct Labour	(7hrs x Lm21.43)	150.00
	(8hrs x Lm15.63)	125.00
	(6.5hrs x Lm10.77)	70.00
Direct Production Expenses To be absorbed:	(7hrs x Lm2.886)	20.20
	(8hrs x Lm2.136)	17.09
	(6.5hrs x Lm2.314)	15.04
Cost of production per unit		----- 647.33 =====

In case of quarter ending 31st March 2003, the cost of production of Job 123 in the manufacture of furniture components for 15 such jobs during the said period would be:

$$\text{Lm}647.33 * 15 \text{ cost units} = \text{Lm}9,709.95$$

Note: This example does not apply to the internal manufacturing of fixed assets for own use but only to the manufacturing of products for re-sale or the provision as part of a service.

Annex F - 2 Absorption Costing

Definitions

Production cost is made up of prime cost i.e.: direct labour, direct material and direct expenses; and production overheads of both a fixed and variable nature.

Fixed production overheads are those indirect costs of production that remain relatively constant regardless of the volume of production, such as depreciation and maintenance of factory buildings and equipment, and the cost of operational management.

Variable production overheads are those indirect costs of production that vary directly, or nearly directly, with the volume of production, such as indirect materials and indirect labour.

Cost unit is a quantitative unit of product or service in relation to which costs are identified and calculated.

Cost centre is a location, section or function, or group of these, within a department in respect of which costs may be identified and allocated.

Absorption costing is the principle whereby fixed as well as variable production overheads are assigned to cost units or products.

Cost allocation is the allotment of whole items of cost directly identifiable to cost centres or cost units.

Cost apportionment is the allotment of overheads to two or more cost centres on a proportional basis in relation to the benefit received.

Allocating overheads to production and support departments

It is necessary to allocate all the production overheads to their cost centres. Some overhead expenses, such as machine depreciation² or indirect materials and indirect labour can be directly *allocated* to production cost centres.

There are certain items of overhead expenditure, however, that cannot be directly attributed to specific cost centres because they are incurred for the benefit of many cost centres. In respect of these items, it is necessary to establish a logical basis for *apportioning* the overheads to cost centres. The following tabulation gives examples of commonly used apportionment bases:

Table 1

Cost	Basis of apportionment
Rent, electricity and lighting, repairs to building, water	Area occupied by specific cost centre
Employee-related expenditure: operational management, engineering, supervisory and technical staff, works canteen, health and safety	Number of employees
Depreciation and insurance of plant and machinery, repairs to plant and machinery	Value of items of plant and machinery

² Depreciation should apply when the respective policy is issued by the Ministry of Finance.

Reapportionment of support cost centre overheads to production cost centres

Support cost centres are those sections within departments that exist to provide diverse support to production cost centres of the organisation, for example stores and maintenance sections. Therefore, it is not possible to allocate costs to products passing through these cost centres. Costs must be apportioned to production cost centres that actually work on the manufactured product. The method that is chosen to apportion these support costs to production cost centres should be related to the benefits that the production cost centres derive from the support given.

Table 2

Support cost centre	Basis of re-apportionment
Canteen, personnel, security, wages	Number of employees
Cleaning	Floor area
Stores	Number of material requisitions
Purchasing	Number of purchase requisitions

Calculation of appropriate cost centre overhead rates

The next stage is to allocate the overheads of each production cost centre to products passing through that cost centre. The allocation bases used are volume-related or time-related in each production cost centre i.e.: direct labour hours, machine hours and number of cost units produced by that cost centre. Overhead absorption rate has to be computed for each cost centre. A different overhead absorption rate may be used for separate cost centres depending on their applicability. An estimate for the time needed to complete a product or service has to be prepared and reviewed annually to establish a common benchmark.

Choice of overhead absorption rate

The following are the three overhead absorption rates of which one rate has to be chosen on the basis of its applicability:

a) Cost unit rate

Where units passing through a cost centre are the same, each unit receives an equal share of the overhead. In an entity providing services, one service may take 20 hours, whereas another might take 2 hours. So it would not be appropriate to charge each different service with the same amount of production overhead.

b) Direct labour hour rate

Most production overhead costs vary with the amount of time spent producing the cost units. For example, if the number of direct labour hours were to increase by 50%, additional indirect staff, such as storekeepers and canteen assistants, would need to be employed to support the increase in the direct labour force. Therefore, production overheads are apportioned on the basis of the length of time taken to produce a cost unit, so that products or services which make the most use of production / service facilities would reflect an appropriate higher share of the overheads. This method is suitable where the majority of production operations are carried out manually. Hence, it is necessary to ensure that there is an appropriate record of activity time in order to obtain the number of hours worked on each cost unit.

c) Machine hour rate

Where production is largely mechanised, most overhead costs are attributable to the use of a cost centre using plant and machinery. In such circumstances, a machine hour rate is to be used to absorb the overhead.

Annex F - 2 (Cont.)

Example: Absorption costing technique

Department XYZ has three production cost centres, Assembly, Finishing and Packaging, and a support cost centre, Cleaning. The overhead costs incurred during the year 2002 were:

Table 3

	Lm	Lm
Supervisory and management salaries:-		
Cost centre Assembly	4,000	
Cost centre Finishing	3,000	
Cost centre Packaging	3,500	
Cost centre Cleaning	<u>2,500</u>	
Total supervisory and management salaries		13,000
National insurance contribution		780
Rent		600
Repairs to plant, machinery and equipment		600
Depreciation of plant and machinery		450
Repairs to furniture and fittings		300
Water and Electricity		560
Insurance		350
Health and Safety		200

The basis of apportionment for the cost centres is listed in the table below:

Table 4

		Assembly	Finishing	Packaging	Cleaning	Total of cost centres
Area	Square meters	10,000	8,000	7,000	5,000	30,000
Number of employees	Employees	20	12	15	13	60
Book value of plant & machinery	Lm	10,000	12,000	6,000	2,000	30,000
Machine power	CC	120	95	55	10	280

Step 1: Overheads allocation

Carry out direct allocation to cost centres. The only example of such costs in the expenses list as per **table 1** are the supervisory and management salaries.

Table 5

	Assembly	Finishing	Packaging	Cleaning	Total Cost Centres
	Lm	Lm	Lm	Lm	Lm
Supervisory and management salaries	4,000	3,000	3,500	2,500	13,000

Step 2: Overhead Apportionment

Carry out the apportionment of overhead to the four cost centres. In order to illustrate the calculations that follow, **rent** is being used as an example apportioned on an area basis:

Table 6

Cost Centre	Rent		Area		Total Area	Cost apportionment
	Lm		Square meters		Square meters	Lm
Assembly	600	*	10,000	/	30,000	200
Finishing	600	*	8,000	/	30,000	160
Packaging	600	*	7,000	/	30,000	140
Cleaning	600	*	5,000	/	30,000	100

Step 3: Support cost centre costs re-apportionment

The next step is to allocate the total cost of each support cost centre to those cost centres using the service. The same procedure is adopted; the costs are allocated where possible, otherwise they are apportioned using some suitable basis of apportionment. It is possible to allocate the costs of the maintenance cost centre if employees engaged on maintenance work keep a record of the time spent in each cost centre. The costs of other service cost centres like the cleaning will have to be re-apportioned to the production cost centres. Examples of bases used for support cost centres were explained in **table 2**.

Table 7 below lists the department expenses apportioned on the most applicable basis and the re-apportionment of the costs of the cleaning cost centre, which is the only support, cost centre in this case.

In case of re-apportionment, the basis of re-apportionment has to exclude the part apportionable to the support cost centre and hence the total basis of re-apportionment has to be re-computed. The total number of employees will add up to 47 by excluding the employees in the cleaning cost centre.

Table 7

Cost	Amount	Basis of apportionment	Assembly	Finishing	Packaging	Cleaning
	Lm		Lm	Lm	Lm	Lm
Cleaning personnel	1000					1000
Indirect material - consumables	500					500
Supervisory and management salaries	13,000	Allocation	4,000	3,000	3,500	2,500
National insurance	780	Indirect wages and salaries	240	180	210	150
Rent	600	Area (sq. ft.)	200	160	140	100
Repairs to plant, machinery and equipment	600	Book value	200	240	120	40
Depreciation of plant and machinery	450	Book value	150	180	90	30
Repairs to furniture and fittings	300	Area (sq. ft.)	100	80	70	50
Water and electricity	560	HP of machines	240	190	110	20
Insurance	350	Book value of plant and machinery plus average stock	120	135	75	20
Health and safety	<u>200</u>	No of employees	<u>70</u>	<u>40</u>	<u>50</u>	<u>40</u>
Sub-Total	18,340		5,320	4,205	4,365	4,450
Re-apportionment of cleaning support centre		No of employees	<u>1,894</u>	<u>1,136</u>	<u>1,420</u>	<u>-4,450</u>
Total	<u>18,340</u>		<u>7,214</u>	<u>5,341</u>	<u>5,785</u>	-

Step 4: Methods of Overhead Absorption

There are a number of methods for calculating absorption rates, each one involving the use of a different base. Those most commonly used are listed below together with the relevant formulae:

Table 8

Direct labour hour rate	=	Total overhead of cost centre	/	Direct labour hours
Machine hour rate	=	Total overhead of cost centre	/	Machine hours
Cost unit rate	=	Total overhead of cost centre	/	Cost units

Example:

The following cost statement has been prepared for Department XYZ for the year ending 2002:

Table 9

	Assembly	Finishing	Packaging	Total
	Lm	Lm	Lm	Lm
Direct material cost	10,000	11,500	8,500	30,000
Direct labour cost	4,000	5,000	5,500	14,500
Direct expenses	<u>1,000</u>	<u>800</u>	<u>1,200</u>	<u>3,000</u>
Prime cost	15,000	17,300	15,200	47,500
Production overhead (as per Table 7)	<u>7,214</u>	<u>5,341</u>	<u>5,785</u>	<u>18,340</u>
Cost of production	<u>22,214</u>	<u>22,641</u>	<u>20,985</u>	<u>65,840</u>

Table 10

Cost units produced			1,500	units
Direct labour hours			2,500	hours
Machine hours			2,000	hours

Calculate an overhead absorption rate for production overhead using the methods of overhead absorption as per Table 8.

Table 11

	Assembly	Finishing	Packaging
	Lm	Lm	Lm
Cost unit rate	$7,214 / 1,500 = 4.809$	$5,341 / 1,500 = 3.561$	$5,785 / 1,500 = 3.857$
Direct labour hour rate	$7,214 / 2,500 = 2.886$	$5,341 / 2,500 = 2.136$	$5,785 / 2,500 = 2.314$
Machine hour rate	$7,214 / 2,000 = 3.607$	$5,341 / 2,000 = 2.671$	$5,785 / 2,000 = 2.893$

Step 5: Application of overhead absorption rates

The overhead absorption rate for a cost centre is then applied to the cost units passing through that cost centre.

Example. During the year 2002, work was carried out on Job 123. The following costs and times were recorded:

Table 12

	Assembly	Finishing	Packaging	Total
	Lm	Lm	Lm	Lm
Direct material cost				250
Direct labour cost	150	125	70	345
Direct expenses				<u>102</u>
Prime cost				<u>697</u>

	Assembly	Finishing	Packaging	Total
Direct labour hours	7	8	6.5	21.5
Machine hours	5	4.6	4.2	13.8

Using the overhead rates computed in Table 7, show the production overhead that would apply to Job 123 for each method adopted.

Table 13

Method	Assembly	Finishing	Packaging	Total
As	Lm	Lm	Lm	Lm
Cost per unit rate (Table 11)	4.809	3.561	3.857	12.23
Direct labour hour rate (Table 11)	2.886	2.136	2.314	
* Direct labour hours (Table 12)	* 7	* 8	* 6.5	
	= 20.20	= 17.09	= 15.04	52.33
Machine hour rate (Table 11)	3.607	2.671	2.893	
* Machine hours (Table 12)	* 5	* 4.6	* 4.2	
	= 18.04	= 12.29	= 12.15	42.48

If the direct labour hour rate is applicable, the cost of production for job 123 would be:

Table 14

	As per	Lm
Prime cost	Table 12	697.00
Production Overhead	Table 13	<u>52.33</u>
Cost of production of Job No. 123		<u>749.33</u>