

## Business One in Action - When Executing the Stock Valuation Report by FIFO, How Are the Items Costs Calculated?



### Applies to:

SAP Business One, [Logistics](#), [Stock](#)

### Summary:

This article examines how an item's cost is calculated when running the Inventory Valuation Report via the FIFO valuation method. It will explain and demonstrate this in detail including example from SAP Business One of this process in action.

**Author:** Noreen Armstrong, Senior Support Consultant, GSC, SAP Business One

**Company:** SAP

**Created on:** December 2009

### Author Bio:

Noreen Armstrong joined SAP in 2004 and is currently active as Senior Support Consultant for SAP Business One. She has worked as both technical and business consultant. She authored this article as a direct response to a partner enquiry during the Expert-on-Phone project, where she consulted on mainly logistics and administrative related topics.

## Table of Content

When executing the Stock Valuation Report by FIFO, how are the items costs calculated? .....	3
Related Contents .....	9
Copyright .....	10

## When executing the Stock Valuation Report by FIFO, how are the items costs calculated?

Consider this scenario:

In the 'Stock Valuation Report – Selection Criteria', the 'Calc. Method' is FIFO and the 'Display Method' chosen is the 'Row per Item'.

The screenshot shows the 'Stock Valuation - Selection Criteria' dialog box. The 'Calc. Method' is set to 'FIFO' and the 'Display Method' is set to 'Row per Item'. The 'Whse Code' 01 is selected in the warehouse list.

Location	Whse Code	Whse Name
<input type="checkbox"/>		
<input checked="" type="checkbox"/>	01	General Warehouse
<input type="checkbox"/>	02	Store 1
<input type="checkbox"/>	04	Consignment

When the report is executed, the item is given a value in the 'Stock Value' column. In the screenshot below, a 'Stock Value' of GBP 129.00 is shown for Item A2000. When multiplying the values in the 'Last Calculated Price' and 'Quantity' fields, the result is GBP 144.00 which does not match the GBP 129.00.

Last Calculated Price \* Quantity

$$= \text{GBP } 8.00 * 18$$

$$= \text{GBP } 144.00$$

The screenshot shows the 'Stock Valuation Report' with the following data:

Item No.	Item Description	Last Calculated Price	Quantity	Stock Value
A2000	Concentrated Apple Juice	GBP 8.00	18	GBP 129.00

The value in the 'Stock Value' column is the cumulative value of all layers for this item.

To view the details comprising this value, the report should be run with the option 'Detail Receipts/Releases' selected in the selection criteria window.

**Stock Valuation - Selection Criteria**

Code From **A2000** To **A2000**  
 Supplier From To  
 Item Group **All**  
 Properties **Ignore**

Posting Date To  
 Project From To  
 Calc. Method **FIFO**

By Location | **By Warehouse**

Location	Whse Code	Whse Name
<input type="checkbox"/>		
<input checked="" type="checkbox"/>	01	General Warehouse
<input type="checkbox"/>	02	Store 1
<input type="checkbox"/>	04	Consignment

Expand Collapse

OK Cancel

Display Method  
 Row per Item  
 Detail Receipts/Releases

FC Exchange Rate  
 Exchange Rate on Report Date  
 Transaction Rate  
 In Release Receipt Rate

Allow Negative Stock  
 Additional FC for Total

The report now shows each document where the item is included. The 'Price' column shows the unit price of the item in that specific document for stock receipt documents. For stock release documents, such as deliveries, the document shows the item cost as selected according to the FIFO's first open layer principle.

**Stock Valuation Report**

Calculation Method **FIFO** Currency **British Pound**  
 Item No. **A2000** Stock UoM Date to **28.01.09**  
 Item Description **Concentrated Apple Juice**

Posting Date	Document	Whse	Qty	Price	Total	Cumulative Qty	Cumulative Value	System Date	G/L Account
28.01.09	PD 158	01	10	GBP 10.00	GBP 100.00	10	GBP 100.00	28.01.09	130000
28.01.09	DN 173	01	-3	GBP 10.00	GBP -30.00	7	GBP 70.00	28.01.09	130000
28.01.09	PD 159	01	10	GBP 8.00	GBP 80.00	17	GBP 150.00	28.01.09	130000
28.01.09	DN 174	01	-7	GBP 10.00	GBP -70.00	10	GBP 80.00	28.01.09	130000
			-1	GBP 8.00	GBP -8.00	9	GBP 72.00		
28.01.09	PU 108	01	5	GBP 5.00	GBP 25.00	14	GBP 97.00	28.01.09	130000
28.01.09	RE 4	01	4	GBP 8.00	GBP 32.00	18	GBP 129.00	28.01.09	132000
						18	GBP 129.00		

OK

In this screenshot, 'Cumulative Value' of GBP 129.00 matches the Stock Value of GBP 129.00 when the 'Row per Item' is selected as the 'Display Method'. This cumulative value is reached by summing the 'Total' (Price \* Qty) for each transaction. The 'Price' displayed for stock receipt documents is the unit price as displayed in that document. The 'Price' displayed for stock release documents is selected according to the FIFO cost calculation rule.

In the detailed report, the first receipt transaction pertains to Goods Receipt PO 158 resulting to a cumulative value of GBP 100.00.

Document Type	Doc No.	Qty	Open Qty	Price (GBP)	Total (GBP)	Cumulative Total (GBP)
Goods Receipt PO	158	10	10	10.00	100.00	100.00

The Delivery document is then created taking its cost from the first open layer, in this case the Goods Receipt PO 158 at a price of GBP 10.00. As a result, the Cumulative Total is reduced by GBP 30.00 to GBP 70.00.

Document Type	Doc No.	Qty	Open Qty	Price (GBP)	Total (GBP)	Cumulative Total (GBP)
Goods Receipt PO	158	10	7	10.00	100.00	100.00
Delivery	173	-3	--	10.00	-30.00	70.00

As another receipt layer is added, Goods Receipt PO 159, the cumulative total increases to GBP 150.00 as follows:

Document Type	Doc No.	Qty	Open Qty	Price (GBP)	Total (GBP)	Cumulative Total (GBP)
Goods Receipt PO	158	10	7	10.00	100.00	100.00
Delivery	173	-3	--	10.00	-30.00	70.00
Goods Receipt PO	159	10	10	8.00	80.00	150.00

When Delivery 174 is posted for 8 units, the system obtains their costs from the next available FIFO layer. In this case, the 8 units are taken from:

Goods Receipt PO 158 – 7 Units

Goods Receipt PO 159 – 1 Unit

At this stage, only Goods Receipt PO 159 has an open layer, at 9 units. Goods Receipt PO 158 is already closed as its 10 units were already included in release transactions. The cumulative total is now reduced to GBP 72.00.

Document Type	Doc No.	Qty	Open Qty	Price (GBP)	Total (GBP)	Cumulative Total (GBP)
Goods Receipt PO	158	10	0	10.00	100.00	100.00
Delivery	173	-3	--	10.00	-30.00	70.00
Goods Receipt PO	159	10	9	8.00	80.00	150.00
Delivery	174	-7	--	10.00	-70.00	80.00
Delivery	174	-1	--	8.00	-8.00	72.00

When AP Invoice 108 is posted for 5 units, a new open layer is created increasing the cumulative total to GBP 97.00 as follows:

Document Type	Doc No.	Qty	Open Qty	Price (GBP)	Total (GBP)	Cumulative Total (GBP)
Goods Receipt PO	158	10	0	10.00	100.00	100.00
Delivery	173	-3	--	10.00	-30.00	70.00
Goods Receipt PO	159	10	9	8.00	80.00	150.00
Delivery	174	-7	--	10.00	-70.00	80.00
Delivery	174	-1	--	8.00	-8.00	72.00
AP Invoice	108	5	5	5.00	25.00	97.00

When a subsequent sales return based on a delivery is posted, the system takes it FIFO cost from the Delivery document. If there are two FIFO costs, the system takes the FIFO cost of the recently posted layer.

For Sales Return No. 4, the document was based on Delivery 174.

**Return**

Customer: C1000  
 Name: Funsports UK  
 Contact Person: David Moore  
 Customer Ref. No.:  
 Local Currency:

No.: Primary 4  
 Status: Closed  
 Posting Date: 28.01.09  
 Value Date: 28.01.09  
 Document Date: 28.01.09

Contents | Logistics | Accounting

#	Item No.	Quantity	Unit Price	Disc...	VAT C...	Total (LC)	Total i...
1	A2000	4	GBP 18.00	0.00	%0	GBP 72.00	

Sales Employee: Andy Step  
 Owner:  
 Remarks: Based on Delivery 174.

Total Before Discount: GBP 72.00  
 Discount: %  
 Freight: →  
 Rounding  
 Tax:  
 Total: GBP 72.00

Buttons: OK, Cancel, Copy From, Copy To

For this Delivery, there are two FIFO costs (GBP 10.00 and GBP 8.00) as shown in the previous table. When the sales return document is posted for 4 units, the item takes the GBP 8.00 as its FIFO receipt cost. Hence:

Document Type	Doc No.	Qty	Open Qty	Price (GBP)	Total (GBP)	Cumulative Total (GBP)
Goods Receipt PO	158	10	0	10.00	100.00	100.00
Delivery	173	-3	--	10.00	-30.00	70.00
Goods Receipt PO	159	10	9	8.00	80.00	150.00
Delivery	174	-7	--	10.00	-70.00	80.00
Delivery	174	-1	--	8.00	-8.00	72.00
AP Invoice	108	5	5	5.00	25.00	97.00
Sales Return	4	4	4	8.00	32.00	<b>129.00</b>

The stock value for the valuation report, when run by FIFO is GBP 129.00 which is visible in the Cumulative Total column and in the stock value column in the summary report.

*Note:* The Stock Valuation Report is intended as a managerial report to check what-if scenarios. For instance, you can see what happens to an item using a Moving Average valuation, if the costing method has been set as FIFO. This report is not intended to be used as a report for auditing. For auditing purposes use the Stock Audit Report.

As the report is only for analysis purposes, the calculation method selected cannot be the same as that defined for the item in the Item Master Data window.



## Related Contents

- [SAP Business One in Action Catalog Page](#)
- [Link to DRC](#) documentation
- Note [1099696](#)
- For more information, visit the [Business One homepage](#).

## Copyright

© Copyright 2009 SAP AG. All rights reserved.

No part of this publication may be reproduced or transmitted in any form or for any purpose without the express permission of SAP AG. The information contained herein may be changed without prior notice.

Some software products marketed by SAP AG and its distributors contain proprietary software components of other software vendors.

Microsoft, Windows, Excel, Outlook, and PowerPoint are registered trademarks of Microsoft Corporation.

IBM, DB2, DB2 Universal Database, System i, System i5, System p, System p5, System x, System z, System z10, System z9, z10, z9, iSeries, pSeries, xSeries, zSeries, eServer, z/VM, z/OS, i5/OS, S/390, OS/390, OS/400, AS/400, S/390 Parallel Enterprise Server, PowerVM, Power Architecture, POWER6+, POWER6, POWER5+, POWER5, POWER, OpenPower, PowerPC, BatchPipes, BladeCenter, System Storage, GPFS, HACMP, RETAIN, DB2 Connect, RACF, Redbooks, OS/2, Parallel Sysplex, MVS/ESA, AIX, Intelligent Miner, WebSphere, Netfinity, Tivoli and Informix are trademarks or registered trademarks of IBM Corporation.

Linux is the registered trademark of Linus Torvalds in the U.S. and other countries.

Adobe, the Adobe logo, Acrobat, PostScript, and Reader are either trademarks or registered trademarks of Adobe Systems Incorporated in the United States and/or other countries.

Oracle is a registered trademark of Oracle Corporation.

UNIX, X/Open, OSF/1, and Motif are registered trademarks of the Open Group.

Citrix, ICA, Program Neighborhood, MetaFrame, WinFrame, VideoFrame, and MultiWin are trademarks or registered trademarks of Citrix Systems, Inc.

HTML, XML, XHTML and W3C are trademarks or registered trademarks of W3C®, World Wide Web Consortium, Massachusetts Institute of Technology.

Java is a registered trademark of Sun Microsystems, Inc.

JavaScript is a registered trademark of Sun Microsystems, Inc., used under license for technology invented and implemented by Netscape.

SAP, R/3, SAP NetWeaver, Duet, PartnerEdge, ByDesign, SAP Business ByDesign, and other SAP products and services mentioned herein as well as their respective logos are trademarks or registered trademarks of SAP AG in Germany and other countries.

Business Objects and the Business Objects logo, BusinessObjects, Crystal Reports, Crystal Decisions, Web Intelligence, Xcelsius, and other Business Objects products and services mentioned herein as well as their respective logos are trademarks or registered trademarks of Business Objects S.A. in the United States and in other countries. Business Objects is an SAP company.

All other product and service names mentioned are the trademarks of their respective companies. Data contained in this document serves informational purposes only. National product specifications may vary.

These materials are subject to change without notice. These materials are provided by SAP AG and its affiliated companies ("SAP Group") for informational purposes only, without representation or warranty of any kind, and SAP Group shall not be liable for errors or omissions with respect to the materials. The only warranties for SAP Group products and services are those that are set forth in the express warranty statements accompanying such products and services, if any. Nothing herein should be construed as constituting an additional warranty.