

“Signs” in CO -PA

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Introduction

No, I am not referring to M Night Shyamalan’s movie on super-natural and mysterious behavior. By ‘signs’, what I mean is ‘+’ (plus) or ‘-’ (minus) signs assigned to numbers.

What is so special about “Signs” in CO-PA module? Didn’t SAP system take care of signs in Financials for Debits and Credits? Yes, to check whether accounting document is balanced, Financials assign ‘+’ (plus) sign to Debit entry and ‘-’ (minus) sign to Credit entry. In this paper, I want to demonstrate how signs are handled in CO-PA module.

Revenues in FI, SD and COPA

Lets look at how revenues are handled in FI and SD module for a typical Revenue posting (Dr Customer and Cr Revenues). For this case, Revenues are negative in Financials. However, for the same transaction, Revenues are posted as positive, in Sales and Distribution (SD) module. Similarly, Sales deductions or Costs are stored as positive in FI and negative in SD.

Now, revenues can be posted to CO-PA module from both FI (Record Type ‘B’) and SD (Record Type ‘F’) module. So, what sign should CO-PA assign to Revenues? If CO-PA also stores Revenues as negative and positive respectively, there will be major inconsistency. To avoid this kind of inconsistency, all revenues are posted as positive in CO-PA. To determine the Gross Margins, you can use Key Figure Schema in CO-PA reporting.

In sum, all amounts, whether revenues or costs/deductions are stored as positive in CO-PA. Therefore, you should transfer revenues, costs and deductions to separate value fields.

◆ For reverse transactions, e.g. for Returns and Credit memos, all signs are reversed, i.e. all amounts are stored as negative in CO-PA.

Thumb Rule being, for Invoice process, whether the posting has taken place in SD or FI, CO-PA stores all values as positive (reverse signs, i.e. negative for Cr Memos). This design makes sure that even if same values are stored with different signs in source modules, consistency is assured in CO-PA.

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Thumb Rule FI postings -> COPA Sign

Figure 1 shows the Sign Rules for FI postings to CO-PA. Note that CO-PA uses Cost Element Types to differentiate between Revenue and Deductions or Cost accounts.



Figure 1. Sign Rules for FI postings to CO-PA. Cost Element Categories differentiates between Revenue and Deduction Accounts.

Thumb Rule SD postings -> COPA Sign

Figure 2 shows the Sign Rules for SD postings to CO-PA thru Invoices or Cr Memos.

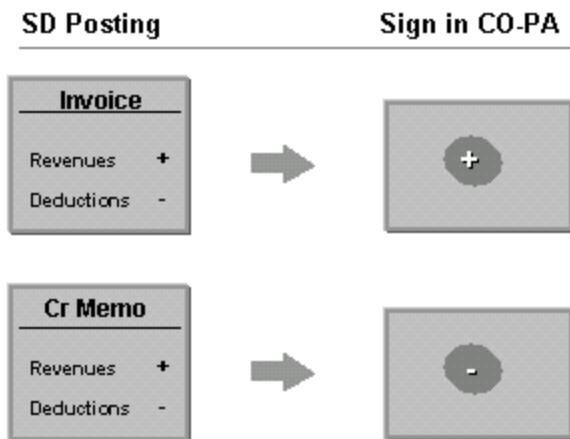


Figure 2. Sign Rules for SD postings to CO-PA. Invoice or Cr Memo process controls signs to CO-PA module.

Sign Logic problems

Now lets look at the problem associated with this design. You didn't think life was so easy, right? If design were so straightforward, I wouldn't have written this paper.

What if same condition type exists in billing document twice but with different signs? Let me give you specific example.

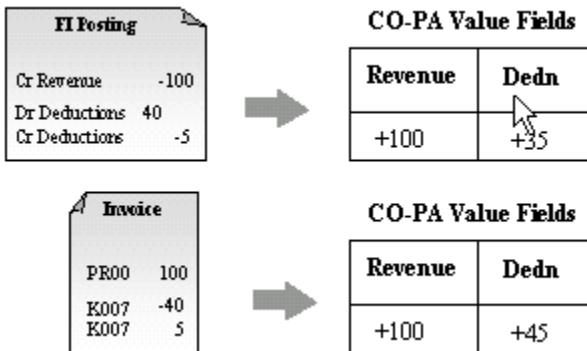
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An invoice with Revenue (condition PR00) for 100.00 and Net Discount of -35.00; however, discount condition (e.g. K007) exists twice: one with -40.00 and another with +5.00.

Invoice		FI Posting	
PR00	100	Cr Revenue	-100
K007	-40	Dr Deductions	40
K007	5	Cr Deductions	-5

Figure 3. Invoice document with condition with negative and positive sign and corresponding accounting document.

Lets see what happens in CO-PA for these kinds of postings. Applying thumb rules described above, you will be surprised to know that the same posting from two different systems will have different answers in CO-PA. We know that the discount of 35.00 was given to customer, however, when this invoice was posted, it posted as 45.00 to CO-PA.



The diagram illustrates the mapping of data from the FI Posting and Invoice documents to CO-PA Value Fields. Two arrows point from the respective documents to a CO-PA Value Fields table.

CO-PA Value Fields	
Revenue	Dedn
+100	+35

The first mapping (top) shows the FI Posting data: Cr Revenue -100, Dr Deductions 40, Cr Deductions -5. The second mapping (bottom) shows the Invoice data: PR00 100, K007 -40, K007 5. The CO-PA Value Fields table shows Revenue +100 and Dedn +35 for the top mapping, and Revenue +100 and Dedn +45 for the bottom mapping.

Figure 4. Inconsistency in CO-PA module can arise for the same posting made from SD and FI modules.

Proposal: Transfer with +/- sign

Note that although actually the discount is for 35.00, since all values are posted as positive in CO-PA, it is posted as 45.00. The discount conditions are getting added, instead of getting balanced.

To resolve this problem described above, SAP provides a solution to transfer SD condition values to CO-PA with the same signs from SD module. The indicator ‘Transfer +/-’ in configuration step ‘Assign SD condition types to Value fields (transaction code KE4I) controls and Signs of Condition types are transferred to CO-PA.

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Op. concern	IDEA	Op. Concern IDES Manufacturing		
CTyp	Name	Val. fld	Description	Transfer +/-
AMIZ	Minimum ValueSurchrg	VV060	Other rebates	<input type="checkbox"/>
B001	Group Rebate	VV090	Accrued bonus	<input checked="" type="checkbox"/>
B002	Material Rebate	VV090	Accrued bonus	<input checked="" type="checkbox"/>
B003	Customer Rebate	VV090	Accrued bonus	<input checked="" type="checkbox"/>
B004	Hierarchy Rebate	VV090	Accrued bonus	<input checked="" type="checkbox"/>
B005	Hierarchy rebate/mat	VV090	Accrued bonus	<input checked="" type="checkbox"/>
B006	Sales Indpndt Rebate	VV090	Accrued bonus	<input checked="" type="checkbox"/>
EK01	Costs	VV140	Cost of goods sold	<input type="checkbox"/>
HA00	Percentage Discount	VV060	Other rebates	<input type="checkbox"/>
HB00	Discount (Value)	VV060	Other rebates	<input type="checkbox"/>
HD00	Freight	VV110	Accrued freight	<input type="checkbox"/>
HI01	Hierarchy	VV060	Other rebates	<input type="checkbox"/>
IV01	Intercompany Price	VV010	Revenue	<input type="checkbox"/>
IV02	Intercompany %	VV010	Revenue	<input type="checkbox"/>
K004	Material	VV040	Material discount	<input type="checkbox"/>
K005	Customer/Material	VV060	Other rebates	<input type="checkbox"/>

Figure 5. ‘Transfer +/-’ indicator controls that conditions are transferred to CO-PA with signs of Condition Types. CO-PA IMG Path: Flow of Actual values -> Transfer of billing documents -> assign value fields (transaction code KE4I).

With this configuration setting, i.e. Setting the ‘transfer +/-’ flag for this condition type, the amounts are balanced before transferring to CO-PA and as the name suggests, signs are transferred from Invoice document.

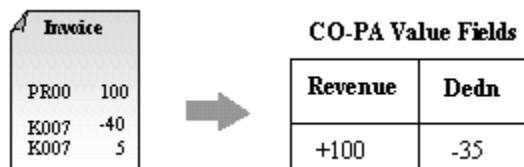


Figure 6. ‘Transfer +/-’ indicator balances the values and signs from condition values are transferred to CO-PA.

Note that now you need to change your key figure schema accordingly to calculate Contribution Margin. You should add deductions value field to revenues to determine margin.

Still Inconsistency?

You didn’t expect any inconsistency now, right? Did you? Although it appears to have solved SD transfer values to CO-PA, there is an issue from FI to CO-PA transfer rule.

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Note that in this case, now the deduction amount is stored as -35.00 in CO-PA from SD side. However, the same posting from FI posted $+35.00$.

✓Tip

To resolve this kind of issue, it is advisable to post to TWO separate value fields; one for SD and another for FI. In CO-PA use Key Figure Schema to determine Margin calculations.

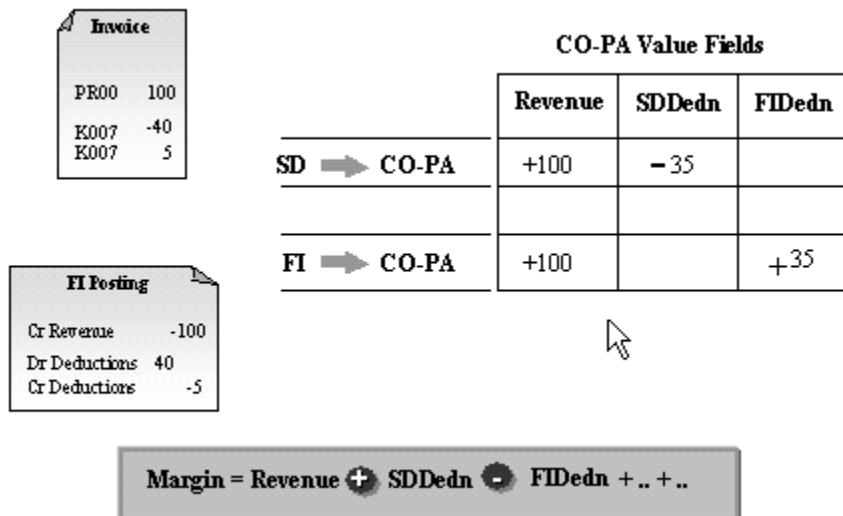


Figure 7. Use separate value fields in CO-PA to differentiate postings from SD and FI. Change Key Figure Schema to determine the Margin.

Summary

Signs are handled differently in different systems. To maintain consistency CO-PA uses different rules to assign signs to value fields.

Here is the summarized overview of how signs are assigned to: (1) SD conditions posted to CO-PA and (2) Corresponding FI postings.

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Invoice			Cr Memo				
	Without +/- Sign	With +/- Sign	FI Posting		Without +/- Sign	With +/- Sign	FI Posting
Cr postings (e.g. Revenues)	+	+	+	Dr postings (e.g. Revenues)	-	-	-
Dr postings (e.g. Deductions)	+	-	+	Cr postings (e.g. Deductions)	-	+	-

Figure 8. Overview of Sign rules for postings made from SD and FI. Note the possible conflict of signs for deduction postings made from different modules.

To avoid this possible conflict and associated inconsistency, you can follow these guidelines.

- As described above, the inconsistency can occur when you use ‘Transfer +/-’ indicators. Try to use this indicator in fewer situations. As you can observe in standard IDES system, only few conditions are set with this indicator.
- Try to avoid the situation where the same condition can have different signs. You can do this by creating two separate condition types: one for positive condition value and another for negative value. Check whether you can create two separate conditions and mapping these conditions to different CO-PA value fields.
- If it is always not possible, especially in case of volume-based rebates conditions, set ‘Transfer +/-’ flag so that balanced amount is posted to CO-PA. However, create two separate value fields: one for posting from SD and another for posting from FI. Use CO-PA key figure schema to calculate margins.



Mitresh Kundalia is a FI/CO consultant with over six years of SAP Consulting experience. With MBA degree in Finance, Mitresh concentrates on Financial and Controlling Modules with emphasis on Profitability Analysis, Cost Center Accounting, General Ledger, Sub-Ledgers and Special Ledger. He also has experience with Information Consolidations, SIS and Business Warehouse. He regularly writes for ‘FI/CO Expert’ magazine and can be reached by e-mail at mitresh@yahoo.com.