

CNV-2012 Materials - Accounting 1

1.0 Overview

Business Context and Application Overview

The Profit & Loss Integrated Costs or Integrated Margins application it's part of the Finance domain using data from SAP systems and non-ERP system information based on data already built for the Profit and Loss report using COPA data (Controlling - Profitability Analysis) a component from SAP CO module.

The goal of the Integrated Costs is to have the full profitability of a product at customer level.

- In standard reports the margin is given by legal entity,
- With the integrated margin report, the aim is to give the margin at Group or GBU level and get rid of legal entities constraints.

Application User Profile

For this Application the access is provided based on the BW menu and it's done via Service one.

Target Users:

GBU controllers, Site controllers and Marketing and Sales.

VERSION	DATE	MODIFIED BY	DESCRIPTION
0.01	01.08.2023	Inês Vilares	Initial draft

Application Type

Data Product Type

- Dashboard
- Report
- Advanced analytics
- AI
- Others <specify which one>

Technologies

- BW
- Tableau
- QlikSense
- Talend
- Dataiku
- Others <specify which one>

Data Sources

Note: list of all applications and various environment

- SAP PF1 (Production environment)
- SAP WP1
- SAP P11
- SAP CPX/WPX
- BW (versions)
- iCare CRM
- CORE CRM
- Others <specify the name of the source>

2.0 Business Process

Business Process

From the business process please see below the logic comparing the contribution margin with the integrated margin process for selling a product to a final customer where in this scenario, the product undergoes multiple stages involving several companies from Solvay, in its production. Throughout this process, there are internal margins between the companies which making it challenging to determine the real value of the external margin when the product is sold to the final customer, as these internal margins are already included into the overall flow.

To obtain a clearer view of the external margins, we have this process to not take in consideration the internal margins and only have the influence of the freight and duties. By doing so, we can present more transparent and easily comprehensible values of the contribution margins for each company involved.

Contribution Margin Concept:

Integrated Margin Concept:

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3.0 Application Feature Overview

Reports	Definition	Prompts	BW Workbook Query	Query Technical Name
P&L Integrated Margin - Freight & Duties Costs Tables	<p>This workbook is to be used to display freight costs used in the integrated margin calculation. For this we have 2 sheets:</p> <ul style="list-style-type: none">• Default Freight Cost - Table maintained manually;• Freight (TIERS) & Duties - Calculation done by BW based on TIERS (only when activated) <p>In the Process Detail section we can see in the more detail the information and how to use it in the reports.</p>			
P&L Integrated Margin - IM Cost Unit Query	<p>This workbook is to be used to display integrated costs by material / plant.</p>			
P&L Integrated Margin - Contribution Margin Query	<p>Workbooks to be used to have the P&L with the integrated margin.</p>			
P&L Integrated Margin - CM/GM Query	<p>Workbooks to be used to have the P&L with the integrated margin.</p>			
P&L Integrated Margin - Monthly CM /GM Query	<p>Workbooks to be used to have the P&L with the integrated margin.</p>			
P&L Integrated Margin - Monthly CM /GM Query (Month Selected)	<p>Workbooks to be used to have the P&L with the integrated margin.</p>			

4.0 Functional Specification

4.1 General Data/Calculations

For these reports, it's important to understand some general concepts which are transversal to all the reports which allows the users to work with the reports in the same way as the SAP system and BFC tool.

Consolidation View	<p>The query takes the integration rate of the company and the partner from a table managed by GAR (Group Accounting Reporting).</p> <ul style="list-style-type: none"> • If Conso method = 50 (Equity) , 20 (Not Conso.) or 60 (Not Equity), Rate = 0%; • If Conso method = 10 (Fully Conso), Rate = 100%; • If Conso method = 30 (Prop), Rate = Integration percentage <p>The formula to retrieve the consolidated sales is in line with BFC:</p> <p>Consolidated Sales = Amount * Max [0, Integration Rate of CY (tingsoc) - Integration Rate of Partner (tingpart)]</p> <p>Internal Sales = Amount * Min [Integration Rate of CY (tingsoc), Integration Rate of Partner (tingpart)]</p> <p>The integration rate of the partner is managed on the TRADING PARTNER. For specific cases some external customer must be considered as internal for certain company code (joint venture for example) . For cases the Partner integration rate is taken at the crossing Sold To/Company code.</p> <p>In this way, the user has 4 options:</p> <ul style="list-style-type: none"> • Option 0 - Legal view: No intercompany eliminations are taking into account; • Option 1 - Consolidated view (for Solvay group): Takes into account the intercompany eliminations (using company code master data); • Option 2 - same logic as option 1 but the data is the consolidated view for Eco Companies • Option 3 - same logic as option 1 but the data is the consolidated view for Sco Companies
GBU Assignment	<p>The concept for GBU doesn't exist in SAP but it's a requirement to have in BW since in BFC we have this definition.</p> <p>This GBU assignment is different for WP1 and PF1 and it will be explain in detail in the Process Definition section.</p>
Exchange Rate	<p>P&L Exchange will be explain in detail in the Process Definition section. See below some links useful for the exchange rates:</p> <ul style="list-style-type: none"> • Values can be checked In the finance team site. Under Exchange Rate. "Moyen / Average": https://aodocs.altimao.com/?locale=en_US&aodocs-domain=solvay.com#Menu_listDoc/LibraryId_QLsALxhAuXNKLSz74H/ViewId_QLsANWb3IkRIe5nnjN/Filter_%257B%2522QLsALAY014DXTQRuXH%2522:%25220B0Km5zvG_rngN2p2YTBvSjEtSjQ%2522%257D • Or in the Solia CICC Online, Financial And Credit Tools: http://solia.solvay.com/irj/portal/CICCOOnline_FinancialAndCreditTools • Definition for each Exchange Rate: https://wiki.solvay.com/display/ISAPPSUP/Exchange+rates
PRS Concept	<p>The PRS is one dedicated SAP environment (based on PF1) whose aim is to unify some structural information as Master Data information for customers, vendors, company codes, etc. For this, depending on each master data we are referring to, we have specific tables created to maintain the data and have the configuration from source systems to BFC definition and alignment.</p>
Value Fields concept	<p>CO-PA is an hypercube (like a pivot table in excel) where figures are posted to value fields. Value fields are mapped to BFC accounts in the interface tables.</p>
Annual Closing	<p>Each end of year, the main BW master data (about the structure) which are not time-dependent need to be frozen = no more loading from ECC or flat file on these main master data. To avoid the impact of the new evolution scheduled for next year on the yearly closing a freeze is applied to block the loading to allow the yearly closing period with the same scope done for the year and not with inputs for next year, for some master data, the loading are freeze in the middle of December until end of January. So when there is a new organization, historical data is restated in BW (not in SAP and BFC).</p>

4.2 Process Detail

4.2.1. Report/Process Definition

Domain	Finance
Application	BW reports under P&L folder
Provider	MVCOPA01, MVCOPA04 and MVCOPA06

The P&L Integrated Margin application is linked with P&L data and providers BW and BO reports with details of the calculation of the integrated costs.

In this section we will approach:

- [SAP BW High Level View](#)
- [Integrated Margin for PF1](#)
- [Integrated Margin for WP1](#)
- [Program Z_M_INT](#)
 - [CPX Cases](#)
 - [LER Cases](#)
 - [Cross-System Cases](#)
 - [Aero Fields: Solstice Companies \(Composite Materials\)](#)
- [UPIS- Unrealized Profit in Inventories](#)

SAP BW High Level View

To see the data from the source systems see below how the information is organized in the BW perspective:

Part of MVCOPA01 provider:

Used for WP1 and PF1 Logic.

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MVCOPA04 & MVCOPA06 providers:

Only used for WP1 Logic

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Integrated Margin for PF1

The logic for PF1 is using a specific program ZZCONACT where it's manage in PF1 system and we only load the data into BW. **To be checked with Ludovic**

Integrated Margin for WP1

3 Steps for the Integrated Margins in WP1

In order to include the necessary information in the P&L statement, please refer to the following three steps to acquire this information:

1^o Step: Costing Run

In WP1, the costing run is marked on D-2 or D-1 and released on D1. It is used as a reference for the calculation of the integrated costing.



"Costing run" refers to a process in which costs are calculated and assigned to various objects within a business or production process. Typically involves the calculation of costs associated with materials, products, or services.

During a costing run, the system calculates costs based on various factors such as direct materials, labor, overhead, and other expenses.


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2^o Step: Special Procurement Codes (SPK)

They are used to determine from which plant a material comes from. It can be maintained by the Supply Chain or the finance team. The SPK should reflect the reality of the flow and every time a flow is created or changed, the SPK should be updated.

The SPK is maintained in WP1 in the Material Master Data (MM03) and it can be maintained in the view MRP 2 or in the view Costing 1.

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 When there is a code in each view, the one used in the integrated costing calculation is the one in the Costing 1 view.

3^o Step: Freight and Duties

The average freight & duties can be determined: With a table manually maintained and uploaded in BW and using a calculation done in BW with data coming from the application TIERS (Transport Integrated and Enhanced Reporting Solution).

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For this part, we have a workbook **BW_WBK_PL_0006 P&L Integrated Margin – Freight & Duties Costs Tab** where we have two tabs:

- Default Freight Cost - Table maintained manually;
- Freight (TIERS) & Duties - Calculation done by BW based on TIERS (only when activated).

See the example below to understand how this works:

Example

Default Freight Cost vs Freight Costs (TIERS) & Duties – Case: Freight costs from China to South Korea – May 2018

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For this process, we can outline the following information regarding this topic:

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To get the information to calculate the integrated cost in P&L, based on this information gathered in the 3 steps, exist a program Z_M_INT which will fill the data into P&L for the respective headings based on the outputs from the 3 steps.

Program Z_M_INT

The Z_M_INT program it's very complex and huge to calculate the integrated margins for P&L.

On a high level view this is the process for the Z_M_INT:

Steps	Definition
Step 1	Identification of ALL CCR (Costing Run) Items to address: Process TOP/DOWN
Step 2	Removing duplicate CCR (we keep the lowest CCR) and classification CP / CNP / AMO of the CCR lines
Step 3	Calculation of CP/CNP/AMO: DOWN/TOP process

 This is done for each material/plant/variant.

Step 1

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Step 2

In all Costing Run found and "treated", program removes duplicate Costing Runs , keeping only the Costing Run from the first component at the most detailed level of the BOM. Each component is calculated one time in the global process.

Step 3

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i When we have 2 plants:

Business Rule

- We search CP / CNP / AMO components of the origin plant calculated for the current month in the previous steps and add it to CP / CNP / AMO of the treated material.
 - Case of currency change or unit change are taken into account
 - For the currency conversion TCURR table is used type CAR1. The exchange rate is the one on the 1st day of the month of the Costing Run.
- We add Freight costs from **Tiers freight table** at the Plant of origin / Destination Plant /material level & Duties Costs
- If nothing is found in the Tiers Tables we use the **default Table** at Plant of origin / Destination Plant level
 - if the route does not exist it creates an entry in the default Freight Table in BW with a Freight cost = 0
 - no currency change for freight cost. Freight costs must in Departure plant currency
- The lot size changes are taken into account in the calculations.

The program uses the issuing plant (8035) of the Costing Run . This plant in the Costing Run is coming from the Special Procurement Code of the material (105180 of the plant 7900)

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After these calculations the program will provide the final values to be in the P&L headings specific for this scope. Normally they are identified with a "C".

The transaction **Z_INT_COST - Integrated costs Details** can be used in WBP to have as in SAP (CK13N), the full BOM & Routing explosion but using the complete integrated structure across all companies within Solvay WP1 System.

For this process we have some specific cases:

- CPX Cases;
- LER Cases;
- Cross-System Cases.

Please find below a brief definition for each case.

CPX Cases

CPX is a mini BW system of SOLSTICE and for the integrated margins they have a special process to have the values into the Z_M_INT program.

- 1 - Transfert source data from WBP to CPX.
- 2 - Calculation of IM in CPX side with data from WBP and WPX.
- 3 - Transfert the result of IM in CPX to WBP and take it into account in the calculation of IM in WBP.

LER Cases

Cross-System Cases

Aero Fields: Solstice Companies (Composite Materials)

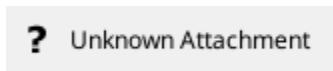
When the Cytec companies were acquired by Solvay they had to integrate the companies under the project Solstice.

Before the acquisition the data from these companies were reported into Cognos (from BAAN and PE1 system). The project was to migrate the data into WP1 in different steps were they started 1st with the BAAN companies to be in WP1 system and after the PE1 companies.

Within the migrations several processes were adjusted to integrate these companies and for the integrated margins this was adjusted to have the correct information also with there way to report under the guidelines for their scope.

To see more information please check the following links:

In this way, exist a special workflow for this please see on a functional perspective the flow:



i Flows

Flow 1: The list of Spec is sent to the Sales Order line (C_ITM_SD) as a master data place;

Flow 2: sent this data to the Dynasis scope.

Then the P&L side receives the information from the invoices (**flow A**);

After on Dynasis side the data sent to the C_ITM_SD is the Main Spec information (**flow 3**) and that information will add content to the P&L side (**flow B**).

Also on Dynasis side they work the information and split the data with a different structure and values with the Program, Market and Program Percentage (**flow 4**) which will be sent to the P&L to complete the information for reporting purpose (**flow C**). This part runs on a daily basis to update in P&L side the fields Program, Market and the Program Percentage to be align on the way the users analyze the data for these companies.

UPIS- Unrealized Profit in Inventories

This information was to provide data for logistic side to be available for the Integrated Margin concept. It's coming from a upload of a file in ZPL_UPIS Transaction. (for the moment not used)

4.2.2. KPI's/Calculations/Indicators

Indicators available:

- XXXX
- XXXX

Indicadores/KPI's	Definition	Calculation/Extraction of data
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Can be a field, a program, something that was created or the report	What are we looking for ? Why has this KPI been created /developed? What is the goal of monitoring this data ?	How is the calculation, or if it's a program what are the steps or how the data is extracted if it's by files

5.0 Non-functional Descriptions

Please populate the relevant section and delete those that are not applicable.

5.1 Usability

Usability is about the ease with which a User can learn to start using the solution and the ease with which they can use the system. In addition to ease of learning and ease of use, usability also includes areas such as ease of recall, error avoidance and handling, accessibility among others e.g., 99% of metadata entry Users who have use the Maintenance Dashboard should be able to change filters, extract etc., when required. Maintenance data will be centrally stored in the Google Cloud platform, which will be available to other applications e.g., and Dashboards if needed.

5.2 Regulatory Compliance

Software systems must comply with legal and regulatory e.g., GDPR requirements, this can change depending on country, organisation industry and / or region. The software systems must be secure from unauthorized access. The Maintenance Dashboard will comply with Solvay's regulations and compliance e.g., access only granted to authorized Users.

5.3 Security

Security refers to essential aspects that assure a solution and its components will be protected against unauthorized access or malware attacks. Important considerations related to security aspects of a system are User authentication, User authorization or User access privileges, data theft, malware attacks, data encryption, and maintaining audit trails, e.g., only Users with administrator access shall be able to create new accounts and assign data access privileges to the new accounts e.g.,

- All data will be encrypted in the dashboard
- Only authorised Users / Administrative Users will be able to access data.
- Maintenance data will be split between either SCO or ECO, and Users will only have authority to one Entity data.

5.4 Performance

Performance defines how fast a software system or a particular section of it responds to certain User actions under a certain workload. In most cases, this metric explains how long a User must wait before the target operation happens e.g., the page renders, a transaction is processed, etc., given the overall number of Users now. Performance requirements may describe background processes invisible to Users, e.g., backup and speed of data transfers.

5.5 Reliability

Reliability is the ability of a solution or its component to perform its required functions without failure under predefined conditions for a specified time / period. Reliability can possibly be specified in terms of average time system runs before failure occurs, percentage of operations completed successfully within a time / period, maximum acceptable failure probability, or number of failures within a period. Reliability aspects are in reference to (but not limited to) evaluation of the system to be considered as reliable, classification of reliability defining failures vs. regular failures, and the impact of failure on business operations. The Maintenance Dashboard will display data from the previous refresh of data.

5.6 Scalability

Scalability refers to the degree to which a solution can evolve to handle increased amounts of work. The increased amount of work could be in terms of the user base, transactions, data, network traffic, or other factors e.g., the system should be able to handle an additional load of a maximum of 5,000 Users every month for the next 6 months without any noticeable performance impacts.

5.7 Compatibility

Interoperability is the degree to which the solution is compatible with other components. It is a measure of how effectively the system interoperates with other software systems and how easily it integrates with external hardware devices.

Interoperability aspects to be discussed during elicitation are in reference to (but not limited to) software systems to be interfaced with along with data / messages to be exchanged and any standard data formats, hardware components to be integrated with, and any standard communication protocols to be followed e.g., Order Management system will push the order file into a secured file transfer protocol server from where it will be loaded into the system through a daily job. To guarantee between Google Cloud platform and SAP BW Queries e.g., BW_QRY_MVPMOR01_0002, Solvay has introduced a new tool called Xtract (Xtract).

5.8 Availability






Availability is the degree to which the solution is operable and accessible when required. It is a measure of time during which the system is fully operational e.g., available for use and sometimes included as a Service Level Agreement (SLA) considering its criticality to the business, e.g., the system shall be at least 99% available on weekdays between 09:00 to 18:30 Central European Time (CET).

5.9 Refresh of the Data

This process to have the integrated margins is done once per month in the closing time.

Workflow history

This view shows the 5 most recent entries. The complete workflow log is available from the 'Document Activity' menu item.

Mar 24, 2026	Actor	Type	Activity	Version
Approved	 NAVANDAR-ext, Divya	State	changed state to Approved at 3:20 pm	v38
Revision under Review	 NAVANDAR-ext, Divya	State	gave <i>Minor change</i> approval at 3:20 pm	
		State	changed state to Revision under Review at 3:20 pm	v38
Mar 18, 2026				
Revision in Progress	WENNINGER-ext, Sascha	State	changed state to Revision in Progress at 5:48 pm	v38
From Nov 10, 2025 to Feb 24, 2026				
Edited following Approval	BAJAJ-ext, Manoj and GANESAN-ext, Shivkumar	Edit	multiple updates from  BAJAJ-ext, Manoj and  GANESAN-ext, Shivkumar	
	 BAJAJ-ext, Manoj	State	changed state to Edited following Approval at 3:18 pm	v32