



Harmonizing Profitability Analysis Models in SAP S/4HANA

PRESENTED BY:

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Introduction

- Anand Seetharaju is a certified SAP S/4HANA financial and management accounting consultant holds active CPA and CMA licenses.
- Author of SAP press books, including:
 - General Ledger Accounting with SAP S/4HANA
 - Implementing Central Finance with SAP S/4HANA
 - SAP Fiori Apps for SAP S/4HANA
 - Document Splitting with SAP S/4HANA
 - Profit Center Accounting with SAP S/4HANA
- Presenter: Several finance topics at SAP conferences.
- Hobbies: Outdoor adventure – Hiking / Trail running



Topics:

- 1 Profitability Analysis Overview
- 2 Profit Center Accounting vs. Margin Analysis
- 3 Costing-based vs. Margin Analysis
- 4 Migration Considerations
- 5 COPA Extensibility challenges
- 6 Key Takeaways
- 7 References
- 8 Questions and Answers

Topic #1 Profitablity Analysis overview

Introduction and overview of SAP S/4HANA Margin Analysis

Profitability Analysis overview

Methods of profitability statements

Cost-of-Sales / Functional-area approach

- Aligns expenses with earned revenues in real time. Classifies operational costs by business function (e.g., Sales, R&D, Administration) rather than expense type.
- Provides immediate granular profitability down to specific market segments, products, or customer groups.
- Automated Derivation: Functional Areas are automatically derived from master data (Cost Center, Material, WBS)

Period accounting / period-end allocations Approach

- Measures total operational activity by matching all revenues earned in a period against all expenses incurred during that same period, adjusted for stock changes.
- Captures non-transactional operational expenses (idle capacity, corporate overhead, fixed admin) that cannot be assigned to individual sales.
- Reconciles standard costs against actual production costs at period-end, settling variances (price, quantity) to Margin Analysis.
- Fulfills local GAAP requirements in regions where Period Accounting is legally mandated for corporate financial reporting.



Best-practice design leverages Cost-of-Sales for daily operational margin decisions and Period Accounting for final monthly P&L close

Topic #2 Profit Center Accounting vs. Margin Analysis

Profit Center Accounting vs. Margin Analysis

Both Profit Center Accounting and Margin Analysis are views of the Universal Journal (ACDOCA), but their design intent differs—organizational vs. market-segment profitability.

Profit Center Accounting (*who is accountable?*)

- Controlling – responsibility areas
- Tied to master data assignment (material, cost center, order, WBS, etc.)
- Derivation is static and object-driven.
- Profit center operates independently in the market and is responsible for its own cost and revenues
- To meet legal segment accounting and Internal requirements (e.g. ROA)
- Cost relevant/profit relevant business trans. updated in the hierarchy structure of the company
- Reporting by single dimension
- Cost of capital, return of investment, profit/sales ration, and economic profit

Margin Analysis (*where profitability arises?*)

- Tied to characteristics derived at posting time.
- Derivation is rule-based, transaction driven (dynamic) - based on the business transaction (SD, MM, PP, FI)
- Analyze profitability of market segment/Contribution margin by characteristics such as product customer etc.,
- The results of COPA can be analyzed with a multi-dimensional reporting tool
- Dynamic sorting and rearranging of data to provide multiple perspectives with a single report
- Margin analysis master data/account assignment
 - Profitability Segments
 - Characteristics
 - Characteristics values
 - Accounts

Design considerations – Profit Center Accounting/ Margin Analysis

Design Attribute	Profit Center Accounting	Margin Analysis
Intent	Who is accountable (organization View); Responsibility P&L	Where profit arises (Market View); Full contribution margin P&L
Data Model	Single dimension	Multidimensional characteristics (PA Segment)
Flexibility	Low	High
Derivation	Master-data / object driven	Rule-based, transaction driven
Reporting	PCA is reconciled but does not support contribution margin logic.	Margin Analysis is always reconciled with FI because it uses G/L accounts. Fiori apps/CDS views for custom reports.
Best use	Organizational P&L, legal segmenting; PCA tracks primary responsibility costs	Market segmentation, product/customer profitability; COGS splits, event-based variances, and market-level contribution margins



Attributed Profitability Segment for Margin Analysis, which automatically derives market characteristics even on balance sheet or overhead postings without waiting for settlement

Topic #3 Costing based COPA vs Margin Analysis

Profitability Analysis options

Solution	SAP ERP	SAP S/4HANA onPrem	SAP S/4HANA Private Cloud	SAP S/4HANA Cloud
Margin Analysis		 	 	 Mandatory
Costing-Based COPA				
Account-based CO-PA				
Combined CO-PA				

 Not available

 Available

 Available



SAP Note: 2609491 - Profitability analysis in S/4HANA

Costing Based COPA vs. Margin Analysis

Costing-based COPA

- Groups costs and revenue by value fields
- Stores data on its own tables CE*
- Derivation often happens via CO-PA transfer rules and costing logic (PA transfer structures and SD/MM integration)
- Reconciliation to FI can be complex and often requires reconciliation reports and periodic checks.
- Excels at contribution margin reporting and detailed cost allocations; often used with classic CO-PA reporting tools.
- Stores in operating concern currency and option to store company code currency

Margin Analysis

- Groups costs and revenue by G/L account
- Stores data in universal journal
- Native reconciliation (same ACDOCA record) — high auditability/simplifies audit trails.
- Analyze profitability of market segment/Contribution margin by characteristics such as product customer etc.
- Excels at multidimensional market analysis (customer, product, channel) and integrates well with SAC and embedded analytics.
- Stored in transaction currency, local currency and controlling are currency
- Reporting based on Fiori apps based on CDS views

Profitability analysis (COPA)

Value Field (COPA Cost.-Based)

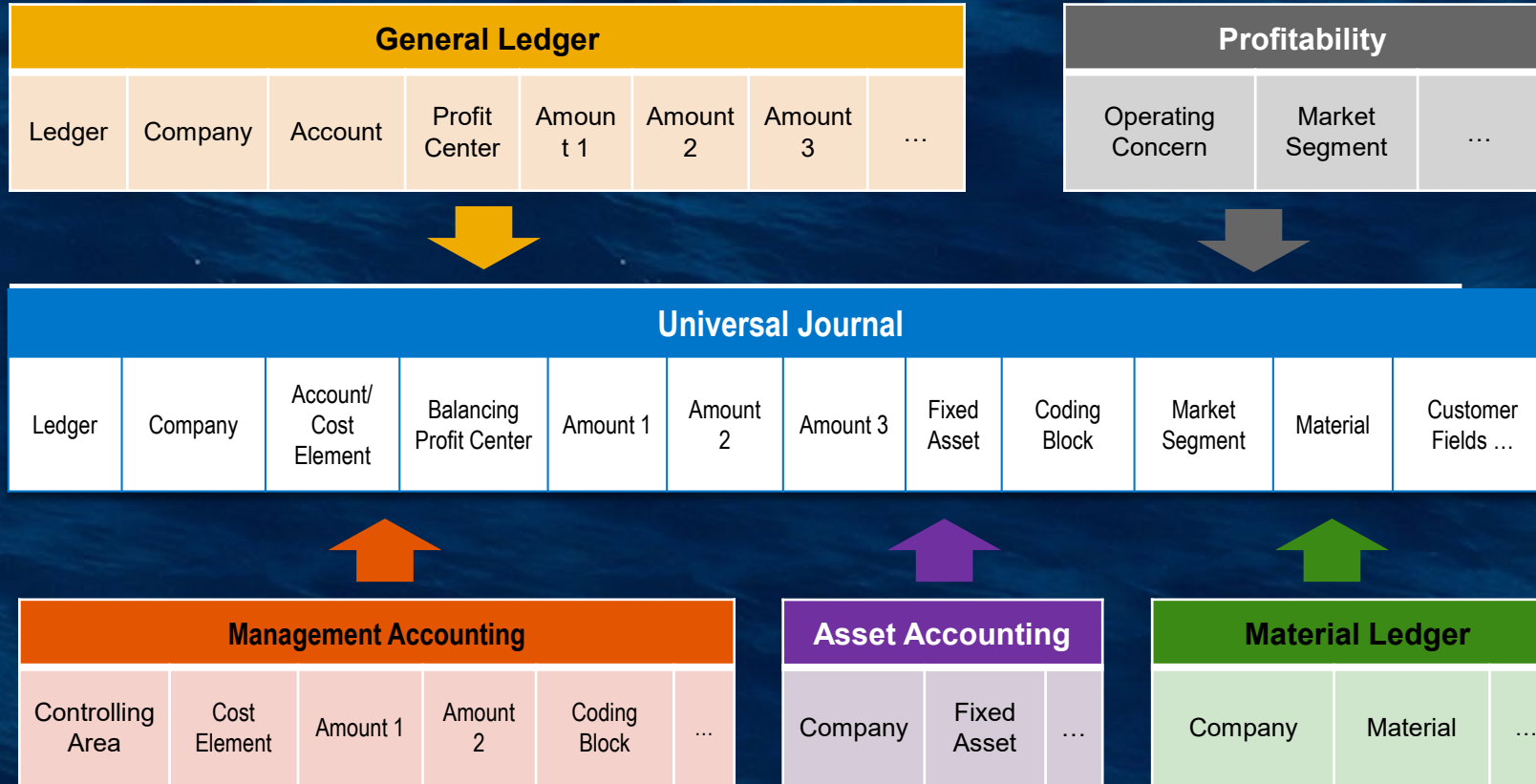
Cost Element (Margin Analysis)

Revenue	1,000,000
Sales deductions	100,000
Net revenues	900,000
Var. material costs	400,000
Var. production costs	190,000
Quantity variances	3,000
Price variances	7,000
Contribution margin 1	300,000
Material overhead costs	50,000
Total production overheads	50,000
Contribution margin 2	200,000
Research & develop.	10,000
Marketing	50,000
Sales and administration	40,000
Contribution margin 3	100,000



SAP recommends Margin Analysis for new S/4 implementations; migration planning required.

Margin Analysis in Universal Journal (ACDOCA)



- ACDOCA field catalog
- Parallel currencies and valuation areas from financial accounting
- Account-Based CO-PA lays the foundation (unlimited G/Ls vs. Max. 200 value fields)
- Re-usage of well-proven functionalities from both CO-PA approaches
- Operating concern
- Definition of characteristics
- posting logic on the profitability segment
- powerful derivation tool
- Margin analysis without operating concern (attribution)
- Manual posting to PA (using prediction ledger)
- Profitability Characteristics on certain B/S items (Attributed /Event based revenue)
- Fiori apps/CDS views and other modern tools

Topic #4 Migration considerations

Migration & coexistence considerations

★ S/4HANA allows coexistence during transition, but careful evaluation is required for readiness

Attribute	Migration consideration	Recommendation
Characteristics	Inventory existing costing-based value fields and allocations.	Define characteristics by business decisions; catalog and assign owners.
Value Fields	Map value fields to G/L accounts and identify required characteristics.	Derive characteristics in real time for Margin Analysis; document rules and fallbacks.
Derivation	Design PA transfer structures and derivation rules.	Map legacy value fields to G/L + characteristics; pilot and validate.
Extensibility	Use transaction KEA5 or the Custom Fields (CFD) Fiori app / SCFD_EUI	Use Custom Fields (CFD) + SCFD_EUI for new characteristics; avoid migrating KEA5 characteristics into CFD
Specific functionality/Features	COGS details, Variance, Statistical conditions, allocations, natively integrated	New functionality offered; COGS split, variance split, attributed profitability analysis, universal allocations
Reporting	Reconciling important reports	Consider standard Fiori apps/CDS views SAC reports

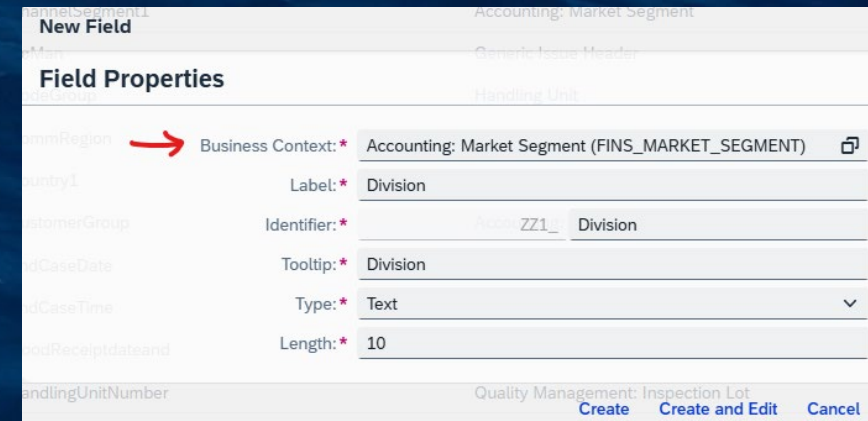
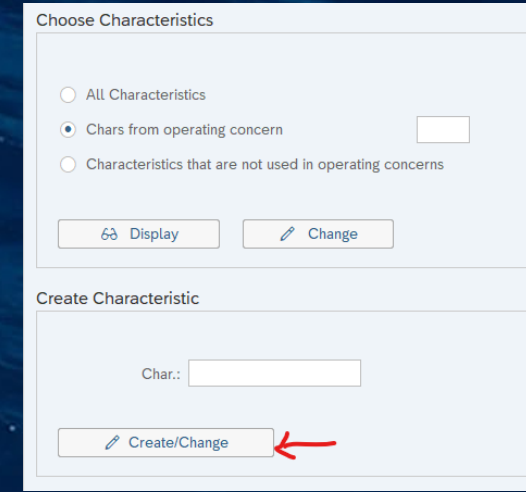
Topic #5 COPA Extensibility

Extensibility – user defined COPA characteristics

Approaches in SAP S/4HANA

Option 1: Classic CO-PA custom Characteristics (Transaction KEA5); Run report FCO_ADD_COPA_FIELD_TO_ACDOCA in the background, then reactivate and regenerate in KEA0

Option 2: Extensibility options via FI-GL via Classic coding block transaction OXK3 transaction and CI_COBL structure and Custom Fields Fiori app (using the business contexts: Accounting: coding block (FINS_CODING_BLOCK), Accounting: Journal Entry Item (FINS_JOURNAL_ENTRY_ITEM), and Accounting: Market Segment (FINS_MARKET_SEGMENT)).



Use **Custom Fields (CFD) + SCFD_EUI** for new characteristics; avoid migrating KEA5 characteristics into CFD

Extensibility – user defined COPA characteristics continued..

Dimension	KEA5 – Classic CO-PA Characteristics	Custom Fields App – “Market Segment” Context
Availability	- On-Premise and Private Cloud in SAP S/4HANA only - NOT in Cloud Public Edition	- On-Premise and Private Cloud (2020+ onwards); - Cloud Public Edition (from launch)
Field limit	60 custom fields per operating concern	60 in On-Premise/Private Cloud 200 (Cloud Public Edition)
Data types	CHAR / NUMC only; 18 chars max (40 for MATNR-based, Note 3365605)	- Code List/Text/Numerical Text - Same 18-char limit
Transaction/Fiori app	Transaction KEA5 (Maintain Characteristics)	Custom Fields app (app IDF1481); or append to INCL_EEW_MARKET_SEGMENT_PS + SCFD_EUI for standard-table fields (old way)
Derivation	KEDR derivation tool	KEDR (On-Premise/Private Cloud) / Manage Substitution & Validation Rules app (Cloud)
CDS analytics / Fiori	- NOT automatic — requires manual ABAP CDS view extension (EXTEND VIEW in Eclipse) - Refer to SAP 3005736	Automatic — available in all relevant CDS-based cubes, queries and Fiori apps
Best suited for	Compounded characteristics (e.g. region), product hierarchy PAPH[x] fields, predefined partner roles, conversion-exit-based fields especially they were created prior to S4 migration	Everything else — the default, SAP-recommended choice for extensibility in SAP S/4HANA

Five Takeaways

- 1 • Maintain legacy costing-based CO-PA and new Margin Analysis in parallel during transition; define clear cutover criteria and phased scope (e.g., top customers/products first).
- 2 • Create a detailed mapping matrix (legacy value field → target G/L → PA characteristic → derivation rule) and validate with sample transactions (e.g Revenue, discounts, freight)
- 3 • Build a PA characteristic catalog, owners, and change control before migration; enforce controlled value lists to avoid cardinality explosion.
- 4 • Automate end-to-end tests: source document → ACDOCA → CO-PA segment (run reconciliation reports)
- 5 • Extensibility considerations (CDS development/Fiori app functionality)/Create CDS views for custom reports.

Resources

Blog:

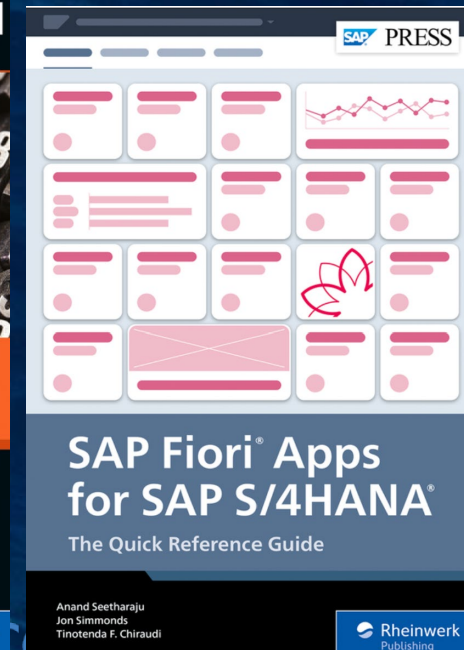
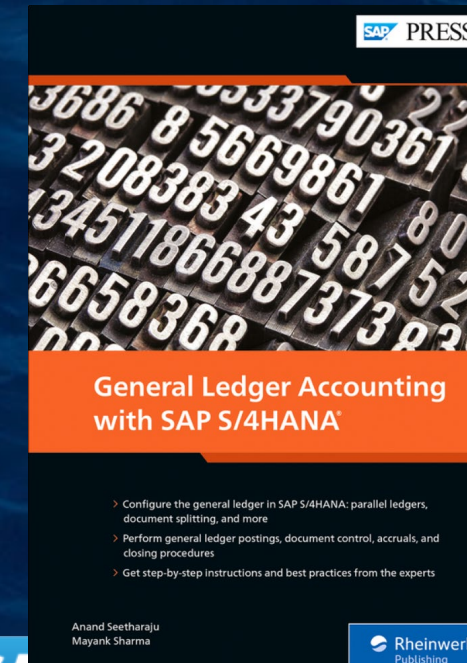
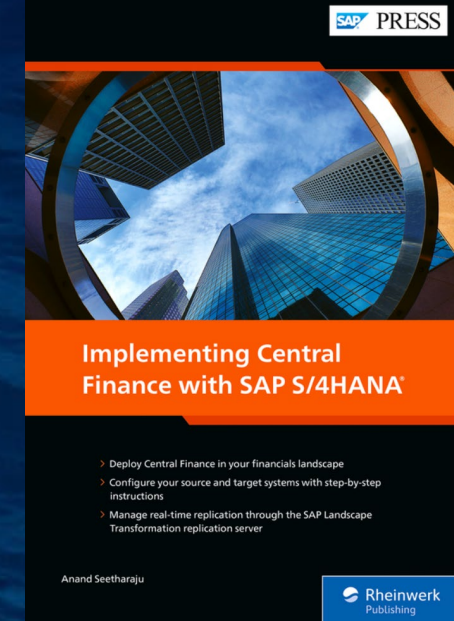
<https://erpcorp.com/sap-controlling-blog/extensibility-options-in-sap-margin-analysis>

Books

- *Migrating from Costing-Based to Account-Based COPA in SAP S/4HANA*
Isbn: 978-1-4932-1949-0
- *Implementing Central Finance with SAP S/4HANA*
ISBN 978-1-4932-2608-5
- *General Ledger Accounting with SAP S/4HANA*
ISBN 978-1-4932-2365-7
- *SAP Fiori Apps for SAP S/4HANA (Available for pre-order)*
ISBN 978-1-4932-2724-2

Important OSS Notes:

- 3095004 : How to add user-defined characteristics in Margin Analysis Fiori Apps
- 3005736 - User-defined fields/characteristics in business context "Accounting: Market Segment" in SAP S/4HANA
- 2453614 - FAQ Universal Journal Extensibility



Questions & Answers

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