



SAP Treasury

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March, 2023

Nordic Battle of Treasury - Interest Rate Risk Management

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SAP S/4HANA Treasury Management

- **Motivation**
- **SAP S/4HANA Treasury Management,
Solution Overview**
- **Interest Rate Risk Management**
- **Your Journey**



SAP S/4HANA Treasury Management

- **Motivation**



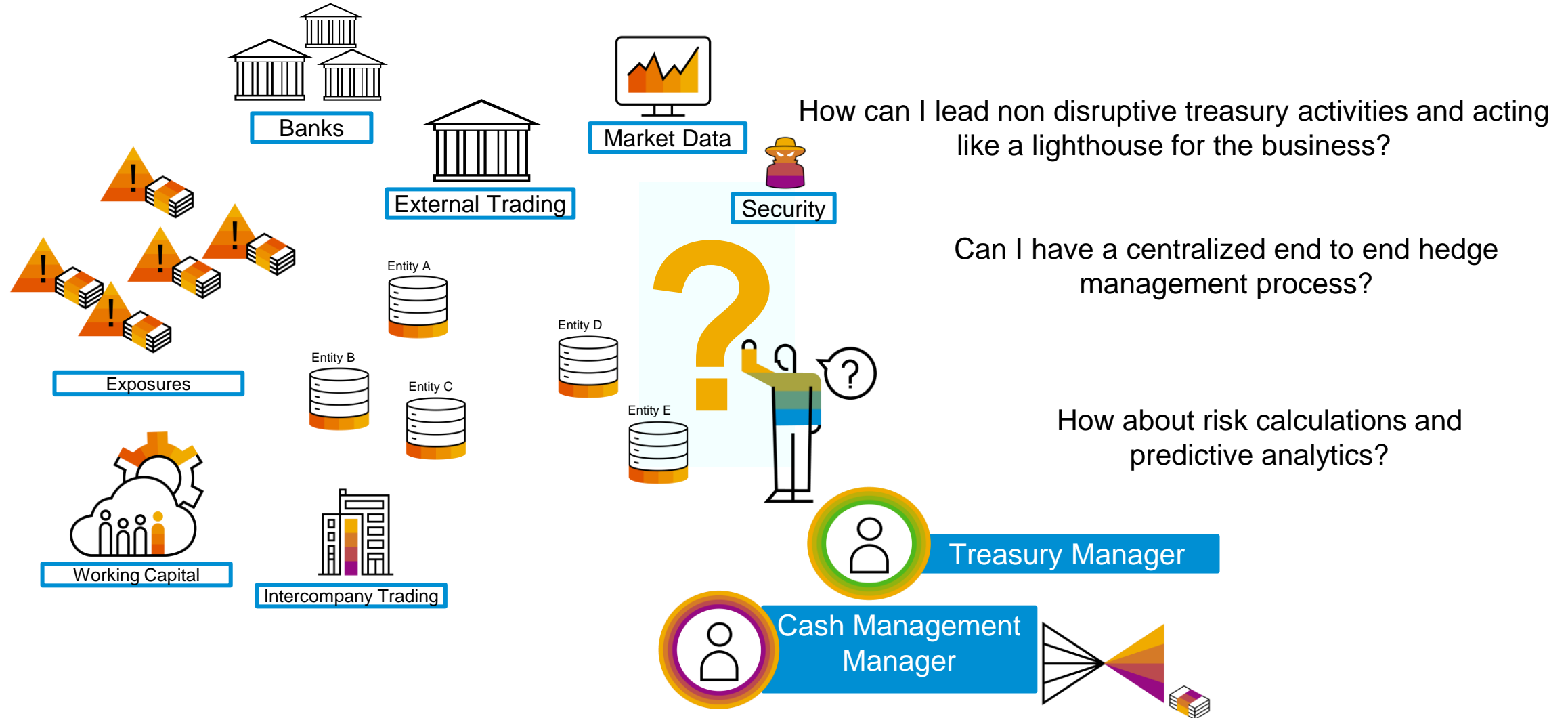
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Today's Hedge Management Challenges in a decentralized environment

Disparate, slow, opaque and costly



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SAP Treasury and Working Capital Management

Embedded by nature, insightful by design

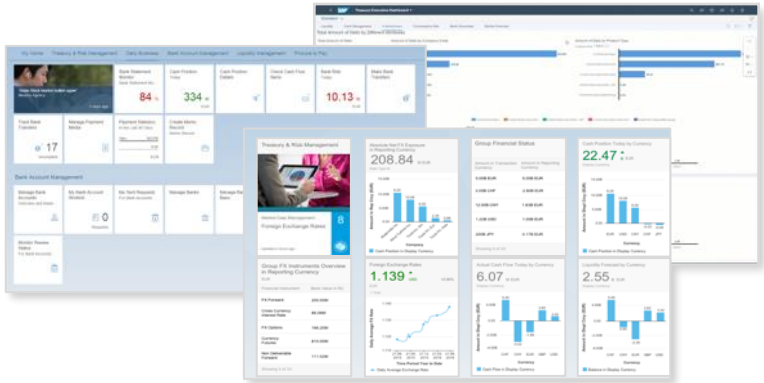
SAP Treasury Management

SAP Market Data Management

REFINITIV  Bloomberg

SAP Trading Platform Integration

  DEUTSCHE BÖRSE GROUP 
 Bloomberg 



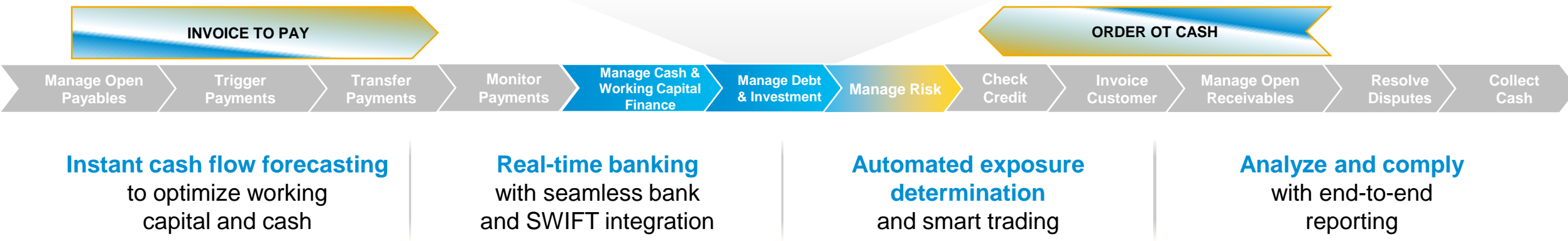
SAP Digital Payments

SAP Multi-Bank Connectivity



Payments and Bank Communication | Cash and Liquidity Management | Working Capital Optimisation | Financial Risk Management | Analysis and Compliance



SAP S/4HANA Treasury Management

- Motivation

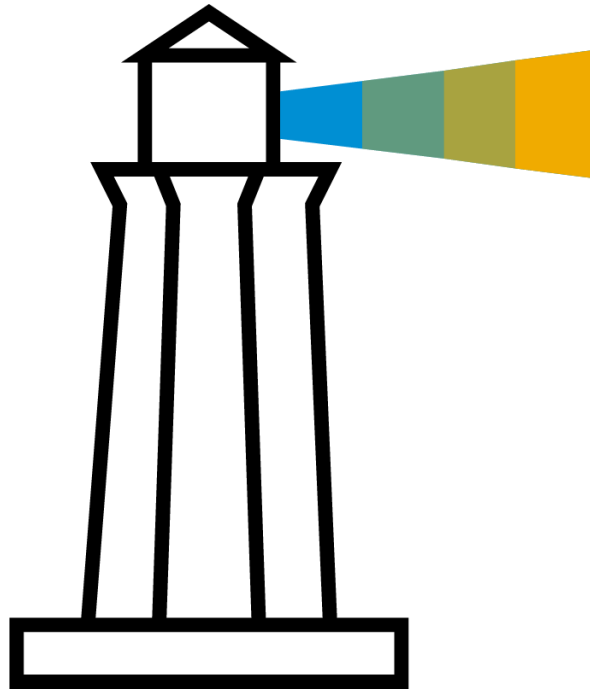
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Treasury as a lighthouse for Interest Rate Risk Management



1. Hedge & Exposure management and Deal end-to-end lifecycle

- You have to deal with identification, quantification and management of interest rate risk and end-to-end deal lifecycle.
- Dashboards and reports available provides the overview of the relevant exposures and the impact with and without the SWAP hedges.

2. Financial Risk Management

- Your organization faces increasing financial risks originating from, interest rate fluctuations, foreign exchange volatility and commodity price variations.
- Because of correlation effects your team needs to have a holistic overview of the calculated risk figures, simulated deals and immediate overall impact on the managed portfolio.

3. Funding, monitor the forecast and precise Liquidity across enterprise

- Your organization growing complexity leads to an increasingly difficulty to gain an accurate real-time view of the company's cash full visibility, transparency and overall working capital.
- You need a single version of the truth, with a consolidated view of cash events from the entire working capital of the business with predictive liquidity analytics to support treasury as a lighthouse function.



Interest Rate Risk Management

Risk Calculations

- Establishing Portfolio valuation with Net Present Values calculations using flexible defined yield curves and risk valuation definitions
- Sensitivity analysis and simulations:
 - Duration calculations: Macaulay duration, Modified duration etc.
 - Margin calculations including fictive financial instruments scenarios
 - Stress tests – scenarios simulations
 - Debt/revenue ratios, S&P ratio etc.
- Analytical dashboards
- Performance calculation with an index
- Value at Risk, (historical, Monte Carlo, VarCovar), VaR Contribution, Marginal VaR, Mean Excess Loss, CFaR.

Market Data Shift: 10001

Short Name: RDB Shift 10001 (Int+5/FX+5)

Long Name: RDB Shift 10001 (Interest + 500 BP / FX + 5%)

Exchange Rates FX Swap Rates **Yield Curves** Credit Spreads Indexes Securities Volatilities

* Short Name	Curr...	YC ...	Ref. In	% Shift	Percentage	Shift Effect
+500 BP					5.0000000	All Yld Curves

Market Data Shift Simulation

04.10.2022 : Basic Key Figures MRA - PH 010 (PType Post)

Legend Cancel

Export Single Records Historical Trend Calc. Bases Log Key Figure Procedure

	NPV (EUR)	NVP with shift rule (E...	Clean Price (E...	Accrued Int...	BPV (E...	FWDur ...	Convexity	MacDu...	ModDu...
Σ Complete hierarchy	210.693.323,72	210.914.605,63	210.917.787,56	224.463,84-	2.246,85	-0,05332	10,664	8,15548	8,08812
1/2 Prod. type 52B Callm.int.	201.283.242,51	201.283.242,51	201.000.000,00	283.242,51	0,00	0,00000	0,000	8,65133	8,58078
1/2 Prod. type 55A IR-Ins.Ext	7.224.378,45	7.186.223,65	7.214.480,13	9.898,32	383,26-	0,26525	-53,051	0,53053	0,53136
1/2 Prod. type 60A FX: Ext.	17.801.925,79	17.801.117,53	17.849.687,13	47.761,34-	8,08-	0,00227	-0,454	0,00368	0,00369
1/2 Prod. type 52B Callm.int.	5.444.814,81-	5.444.665,64-	5.000.023,14-	444.791,67-	1,49	0,00137	-0,274	0,00274	0,00274
1/2 Prod. type 55A IR-Ins.Ext	10.098.471,99-	9.838.567,78-	10.073.420,33-	25.051,66-	2.634,78	1,30454	-260,909	2,60945	2,60945
1/2 Prod. type 60A FX: Ext.	72.936,23-	72.744,65-	72.936,23-	0,00	1,92	0,13151	-26,301	0,00000	0,00000

MM deals, Bonds, Swaps...

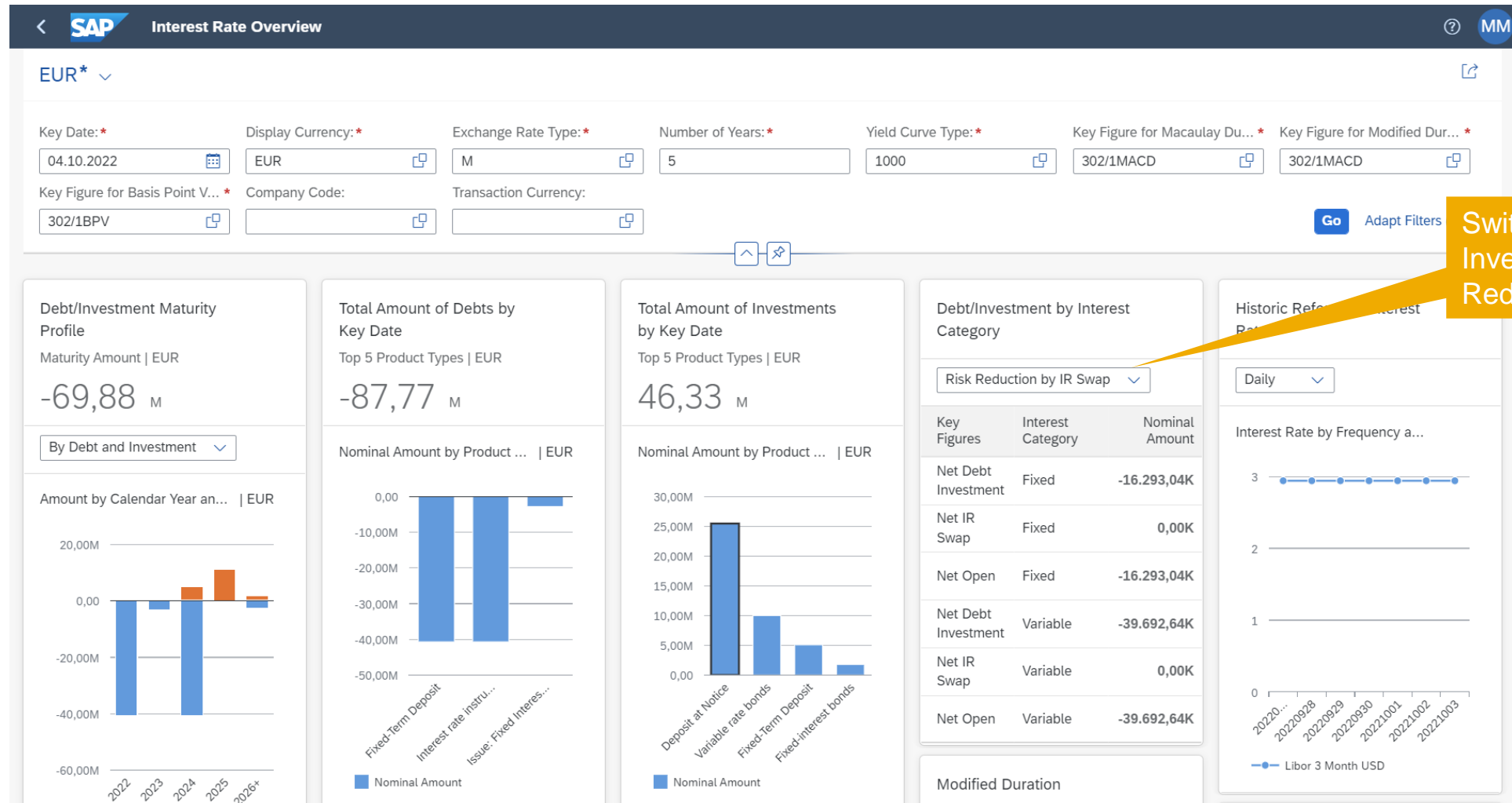
Key Date 04.10.2022 Portfolio hierarchy node Fxd bonds

Single Records Matur. Band

Main Portfolio	PType	Product Type	Pos...	CoCode	Pos.C...	Transaction	ID Number	Sec. Acct	Partner	Int./Ext.	NPV (EUR)	NVP with sh
TRM20XX	04I	Fxd bonds	T	T001	EUR		SDA31_2106U03	A_TRM20XX	UNICREDIT	EXT	1.001.409,17	
TRM20XX	04I	Fxd bonds	T	T001	EUR		SDA31_2106U02	A_TRM20XX	UNICREDIT	EXT	100.140.916,67	10
TRM20XX	04I	Fxd bonds	T	T001	EUR		SDA31_2106U01	A_TRM20XX	UNICREDIT	EXT	100.140.916,67	10
											201.283.242,51	20

Durations

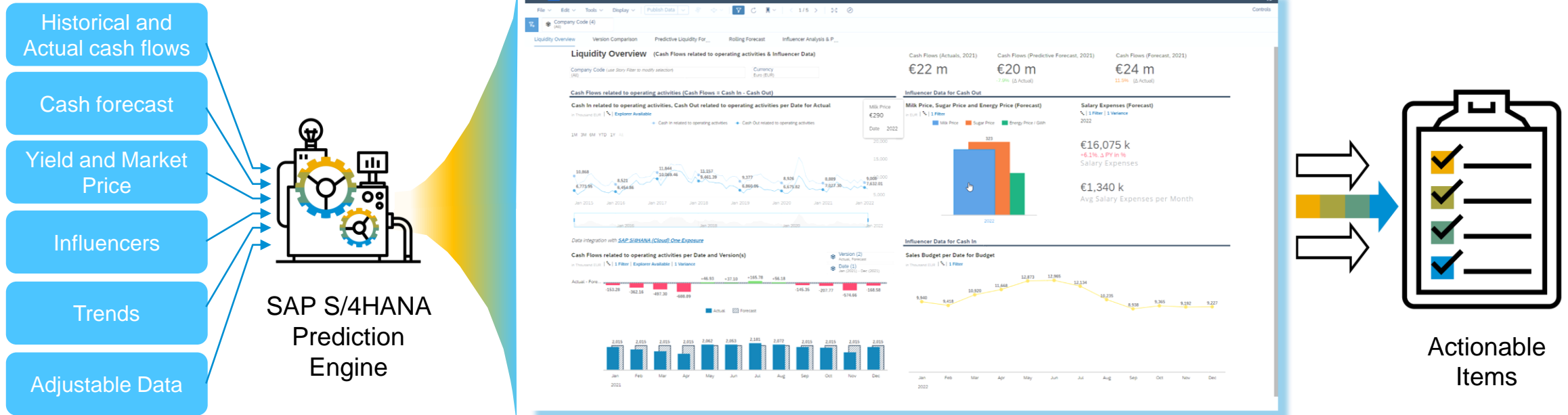
...or drilldown on various Interest rate dashboards



Switch between Debt and Investments side or Risk Reduction by IR Swaps.

Predictive Liquidity Management

Treasurer's lever for working capital optimization



- Cover payments without delays
- Deploy cash effectively
- Reduce short-term borrowing costs
- Continuously optimize working capital

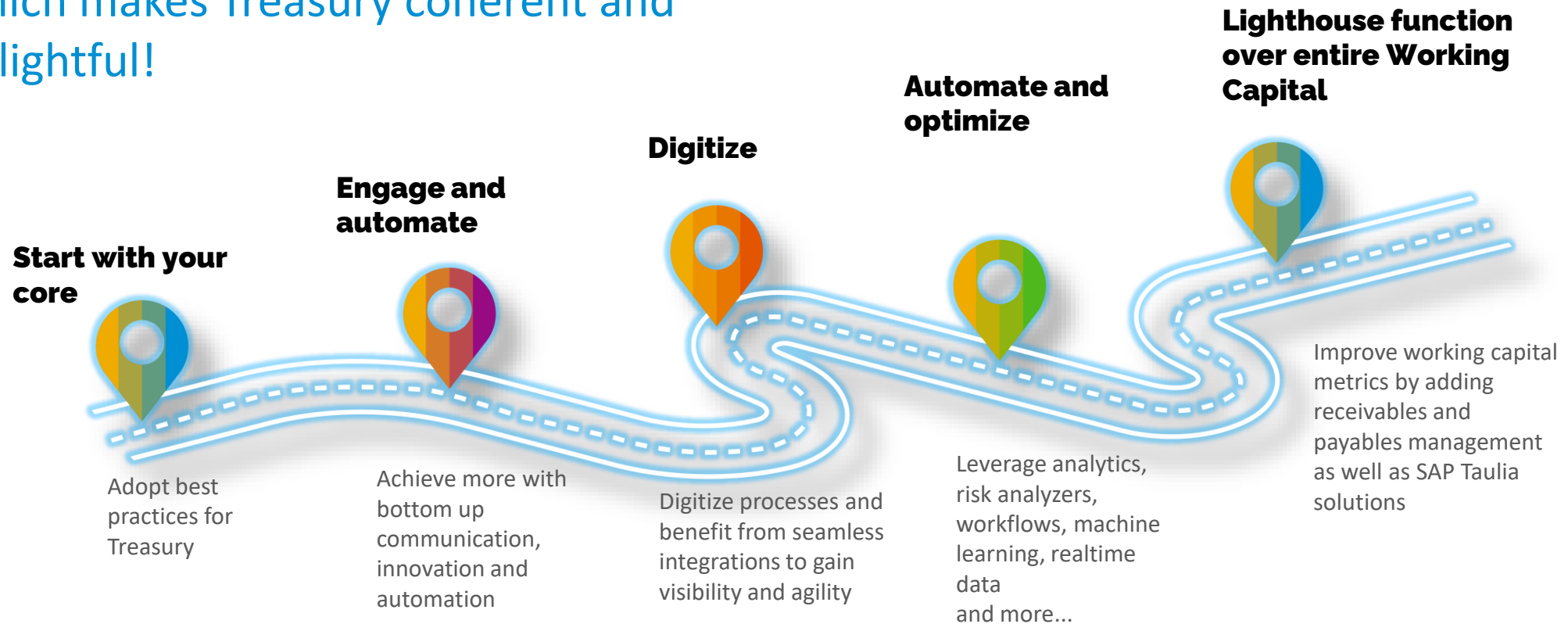
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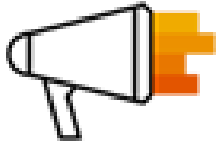


Your journey with SAP Treasury...

...provide one fluid, intuitive experience which makes Treasury coherent and delightful!

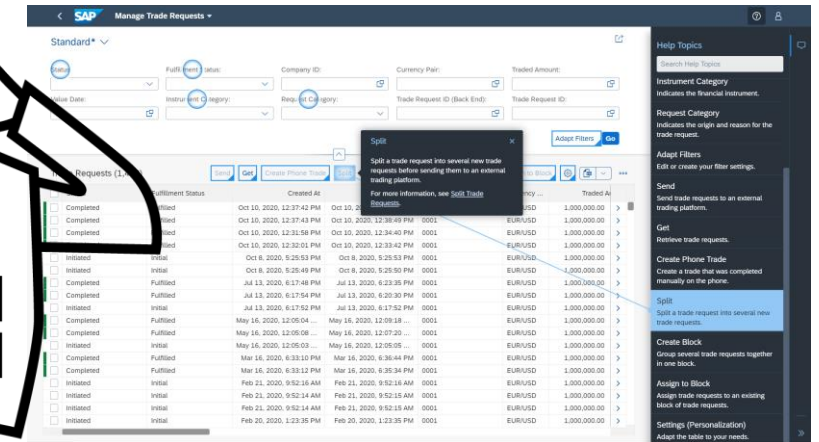


SAP Treasury Roadmap

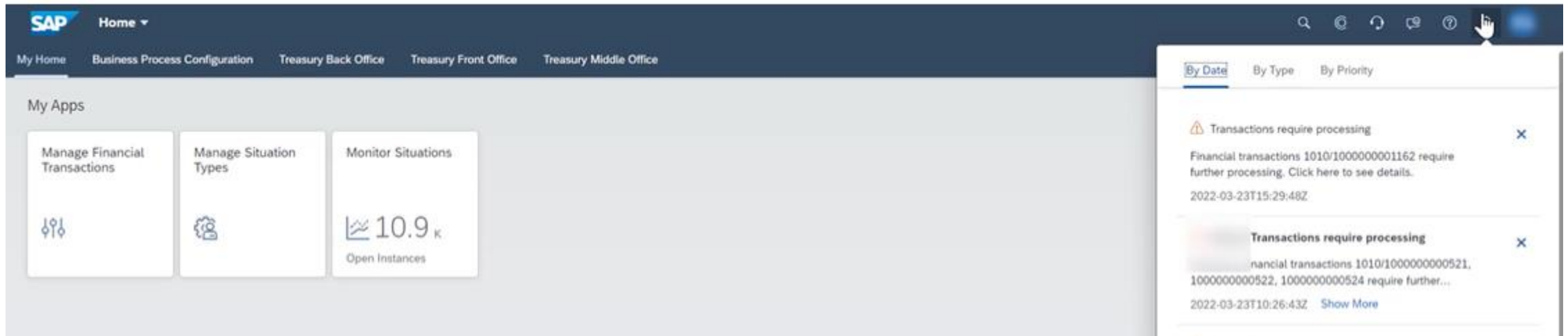


What's New

<https://roadmaps.sap.com/board?BA=40F2E9281A631ED892E93978197740DC&range=CURRENT-LAST#Q3%202022>



InApp Documentation - WebAssistant



Thank you.

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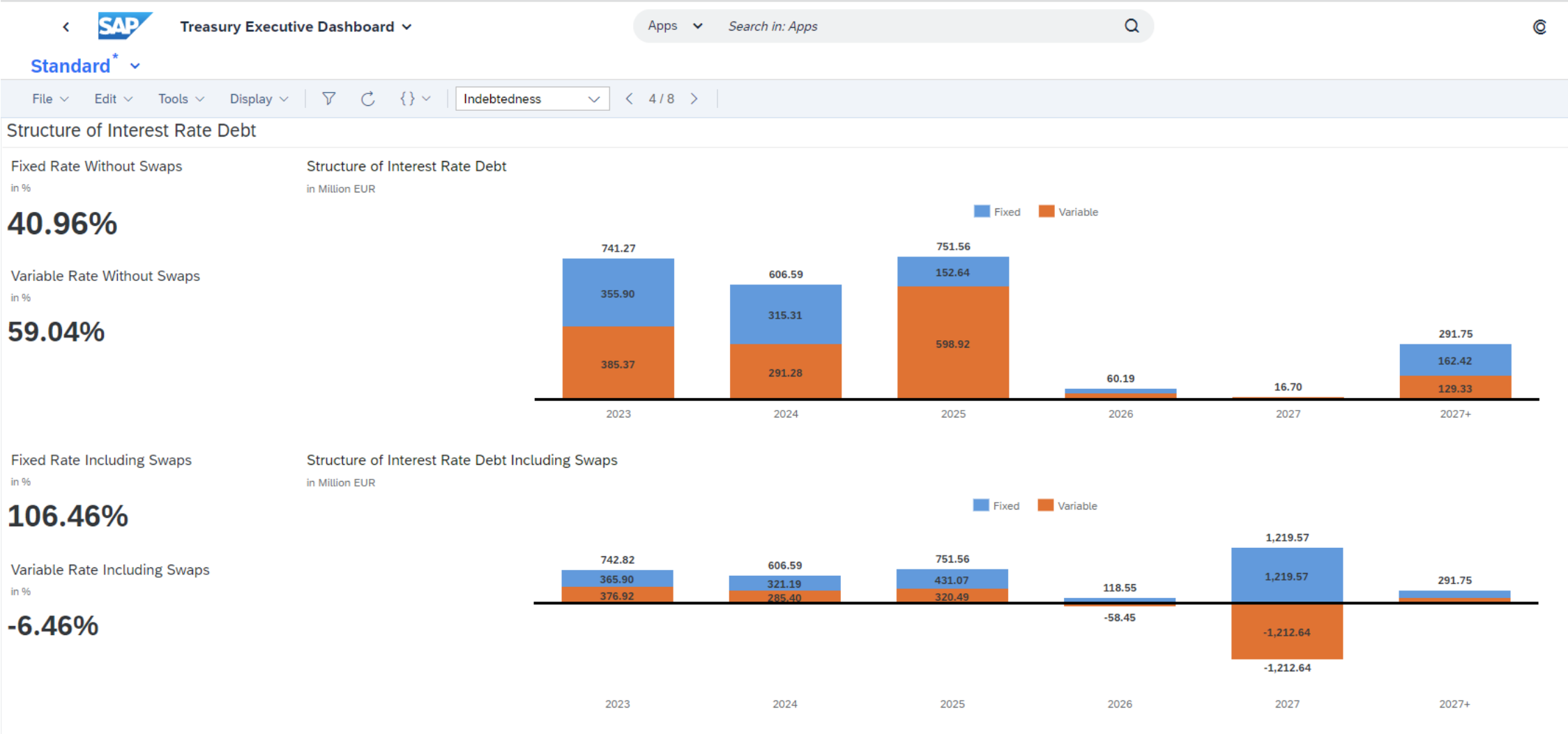
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Example Reporting – Treasury Executive Dashboard



Reporting and calculation of different Key Figures

Risk Key Figures

- NPV
- Sensitivities
 - Duration
 - Convexity
- Cash Flow at Risk
- Value at Risk (historical, Monte Carlo, VarCovar)
- VaR Contribution
- Marginal VaR
- Mean Excess Loss

Market data is the basis for determining market-driven values and evaluating risk analyses

- FX Rates
- Security Prices
- Commodity Prices
- Reference Interest Rates
- Indices
- FX Swap Rates (Forwards)
- FX Volatilities
- Security Volatilities
- Index Volatilities
- Interest Rate Volatilities

Legend

Single Records Historical Trend Calc. Bases Log Key Figure Procedure

	NPV current Market Rates (EUR)	Clean Value (EUR)	NPV Shift Yield Curves + 100BP (EUR)	Delta Shift +10...	NPV Shift EUR/USD +5% (EUR)	Delta Shift USD...
Complete hierarchy	296.546.286,53	292.246.350,24	298.337.577,55	1791291,02	313.721.247,72	17174961,19
CoCode 1000 BestRun Germany	296.546.286,53	292.246.350,24	298.337.577,55	1791291,02	313.721.247,72	17174961,19
Prod. type 04H Floaters	1.204.730,87	1.187.397,54	1.127.378,11	-77352,76		
Prod. type 04I Fxd bonds	103.030.067,80	101.043.845,58	103.021.439,57	-8628,23		
Prod. type 04J Zero bond	18.787.381,05	18.787.381,05	17.713.660,27	-1073720,78		
Prod. type 04X	44.856.733,71	44.856.733,71	41.586.478,80	3270254,91		

Risk Reporting

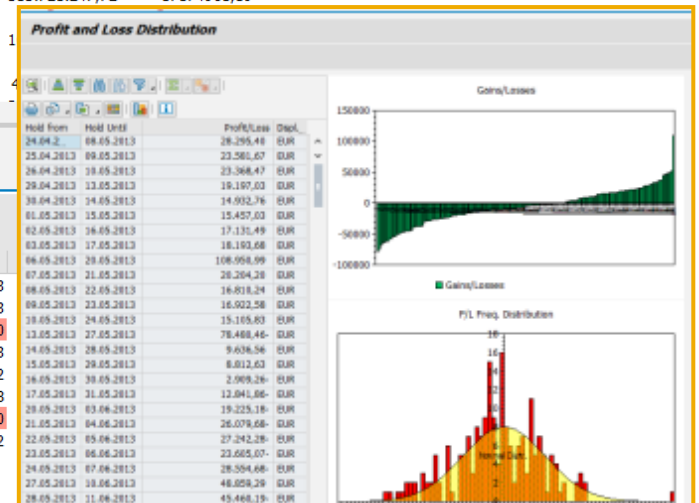
- Portfolio hierarchies
- Current and historical Data
- Stresstests / Marketdata shifts
- What-if Analysis

Key Date 13.02.2014 Portfolio hierarchy node BestRun Germany / FTD: Ext.

Single Records Risk Hierarchy

Single Records Key Date P/L Simul. Scen. Calc. Bases Log Key Figure Procedure

	VaR 200/01/95 (EUR)	Mean Excess Loss (200/01/95) (EUR)	VaR 200/10/99 (EUR)	Mean Excess Loss (200/10/99) (EUR)
Risk total	18.050,46	29.843,53	80.188,93	85.721,63
Currencies	2,56	5,99	11,41	11,63
EUR/GBP	0,00	0,00	0,00	0,00
EUR/USD	2,56	5,99	11,41	11,63
Interest Rates	18.050,63	29.842,70	80.197,13	85.725,42
Interest Rates EUR	10.648,99	21.594,96	68.876,37	73.877,48
Interest Rates GBP	0,00	0,00	0,00	0,00
Interest Rates USD	12.632,17	19.466,34	50.795,52	51.387,62



The Next Leg of SAP S/4HANA Treasury Innovations

Working Capital Dashboard Powered by SAP Analytics Cloud



A holistic Working Capital view combining different dimensions of Cash conversion cycle

