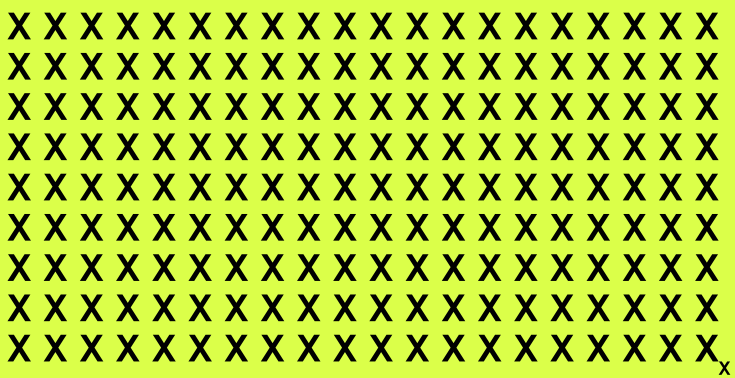
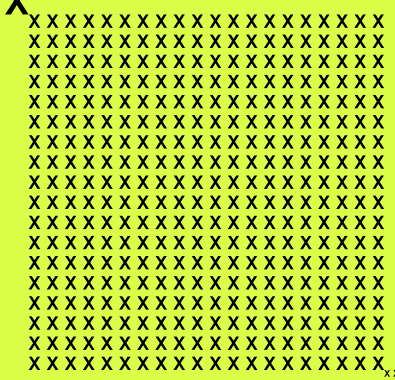
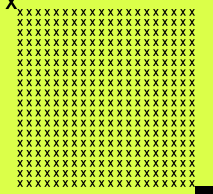






x1F

COMPIRICUS/ x1F

Interest Rate Hedge with (Cross-Currency) Swaps for Bond Issuances/ Long-Term Debts

July 1, 2025

x1F – International Financial Services Technology Consulting

Facts and Figures

+14 acquisitions since foundation in 2020

Locations in NA, Europe and Germany (HQ)

+ 1.300 employees

Global Service Portfolio

- Management Consulting
- Technology Consulting
- Cloud & Infrastructure
- Data Analytics
- Platform Implementation
- Security & Compliance

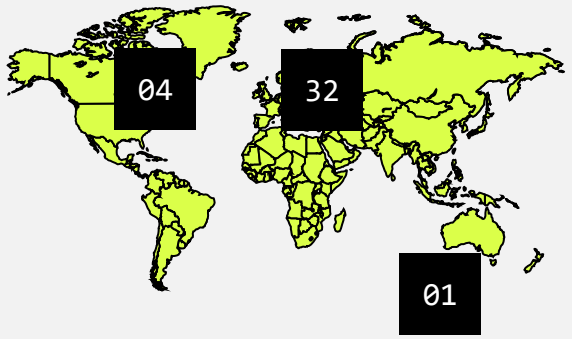
Ex Uno Fonte - everything you need to digitalize your financial services.

x1F – Service Offering

Business Areas

- Advisory + Consulting
- Asset-Based Consulting (Software Products)
- Managed Services

Global Delivery



Services & Industries

Service Offered
- Finance & Treasury Transformation
- SAP Advisory
- SAP Consulting
- Application Maintenance
- Upgrades
- Quality Assurance

Industries Covered
- Financial Services
- Corporates
- Public Sector

Technology

Tech Focus Areas

Financial Products Subledger (FPSL)
- Data Integration
- Accounting Integration
- Reporting and Analytics

Treasury & Risk Management (TRM)
- Debt & Investment Management
- Payments & Bank Communications
- Cash and Liquidity Management
- Reporting and Analytics

Service Delivery Models

- Integrated Implementation
- Integration as a service
- Managed Services / AMS
- Product Licensing

Delivery Accelerators that set us apart

Finance Transformation

SAP Application Enhancements
- FPSL Control Framework
  - Fiori Dashboards
  - Manual Journal Entries
  - Functional & Technical Recon
  - Error Handling
- FPSL Smart Derivation Comparator
- PaPM Regression Testing Tool

Treasury Transformation

Industry-Agnostic
- Financial Adapter; Treasury Data Hub
- Debt Management; Hedge Accounting; Investment Forecasting
- Process Automation Cockpit

Industry-Specific
- STAT Reporting
- TRM Alt. Investments & US Tax Acct.
- Loan Management

Main Principals of IFRS 9 Interest Rate Hedges (with Swaps)

- Focus on aligning accounting practices with risk management activities by establishing hedge relationships.
- Hedge relationships consist of two key components
  - Hedged Item (typically an asset or liability, in today's presentation liabilities/debts only) and often represented by a Hypothetical Derivative for hedge effect determinations
  - Hedging Instruments (generally eligible derivatives, in our presentation today (cross-currency) interest rate swaps)
- Two Types of Hedges will be discussed with distinct accounting impacts on fair value

Hedge Type	Hedge Adjustment Posting	Fair Value Recognition
Cash Flow Hedge	Only to the Hedging Instrument	Through OCI
Fair Value Hedge	To Hedged Item and Hedging Instrument	Through Profit & Loss

- Hedge Effectiveness (demonstrates an economic relationship between hedged item and hedging instrument)
- Documentation of hedge relationship, strategy, risk management objectives and more

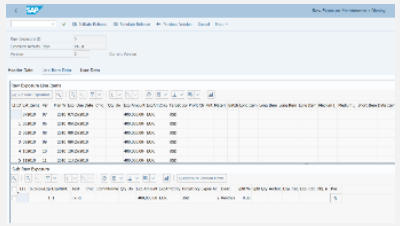
Typical Hedge Relationships for Cash Flow Hedges with Swaps

Hedged Item **Bond Issuances /** **Long-Term Debts (Private Placements)**	**Hedging Instrument** **Interest Rate Swap (IRS)** **Cross Currency Interest Rate Swap (CCIRS)**
Floating rate in local currency	Floating-to-fixed IRS in local currency
Floating rate in foreign currency	Floating-to-Fixed CCIRS
Fixed rate in foreign currency	Fixed-to-Fixed CCIRS

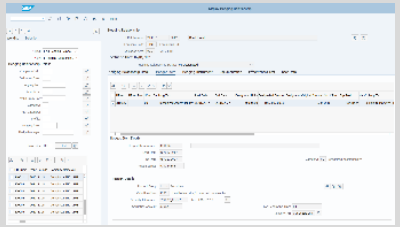
Typical Hedge Relationships for Fair Value Hedges with Swaps

Hedged Item **Bond Issuances /** **Long-Term Debts (Private Placements)**	**Hedging Instrument** **Interest Rate Swap (IRS)** **Cross Currency Interest Rate Swap (CCIRS)**
Fixed rate in local currency	Fixed-to-floating IRS in local currency
Fixed rate in foreign currency	Fixed-to-floating CCIRS

SAP offers 5 different Hedge Applications

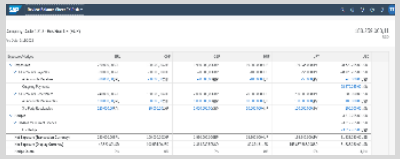


- Hedge for Exposures, the Hedge Solutions for interest and currency hedges (THMEX) based on Release ECC 6.0 and still in use.
- It is integrated into SAP's Exposure Management 2.0.
- According to our information no functional updates are made on this application (after ECC 6.0 EhP8)

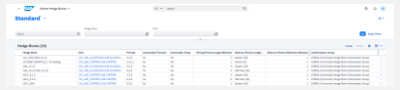


- Hedge for Position (TPM100) is used for Cash Flow Hedges and Fair Value Hedges for interest bearing financial instruments and shares as hedged items und various derivatives as hedging instruments.
- Also, the new FX Hedge, the Balance Sheet Hedge and Commodity Hedge (see below) use the infrastructure internally.
- Not supported: hedged items and swaps in foreign currency and „at cost" managed hedged items (such as bond issuances).

- FX Hedges for S/4HANA (and basic functionality in ECC EhP 8) (TOENE)
- optional trade requests for FX Forwards, FX Swaps und FX Options as hedging instruments and accounting functions according to US GAAP (ASU 2017-12) and IFRS 9.
- Typically, hedged items are operative exposures.



- Balance Sheet FX Hedges, for non-designated Hedges for FX risks with a direct integration into the account payable and receivable.



- Commodity Hedge, focuses on various commodity categories with different processes with a certain focus on back office

SAP TRM Functionality and x1F‘s Add-on

Hedged Item & Hedging Instruments

- All transactions are created and maintained with SAP standard functionality
- Position management & accounting is controlled by SAP TRM

Market Risk Analyzer

- SAP TRM‘s standard yield curve framework is used for composing various yield curves
- SAP TRM’s NPV Calculator

Accounting & Presentation

- SAP TRM‘s standard yield curve framework is used for composing various yield curves
- SAP TRM’s NPV Calculator
- SAP hedge cockpit for presentation purposes
- Month End Valuation with SAP

Hedge Cockpit

- Extra Functionality for Establishing the Hedge Relationship und Storing the Data within SAP TRM (this enables the usage of different currencies)

Hedge Adjustment Determination

- Creating synthetical Swaps with Calibration Logic
- Calculating Effective and Ineffective Portion
- Lower of Test

Flow Generation for Hedge Effects

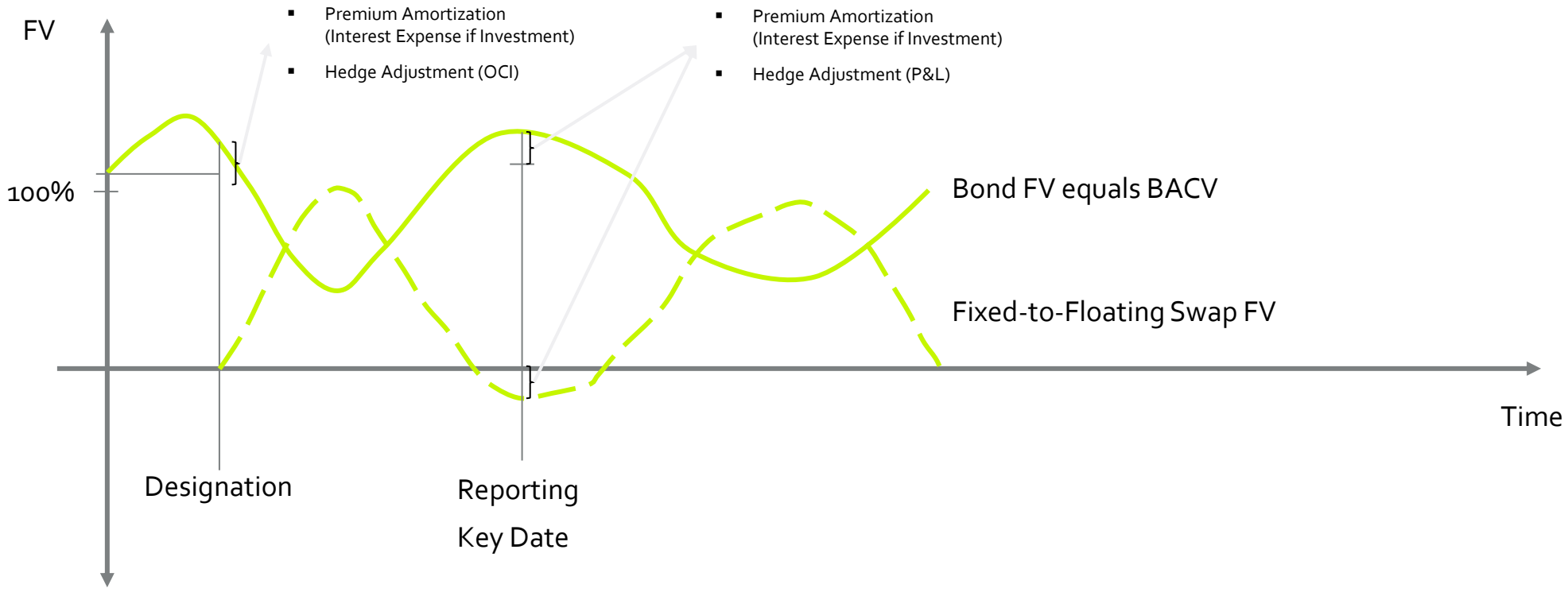
- Flows are created in the same way as SAP does it for SAP TRM
- Also, non-posting relevant results are created as flows for reporting purposes

Consistency of Methods between TRM and Add-On

The x1F Add-On is embedded in SAP TRM and has identical approaches for:

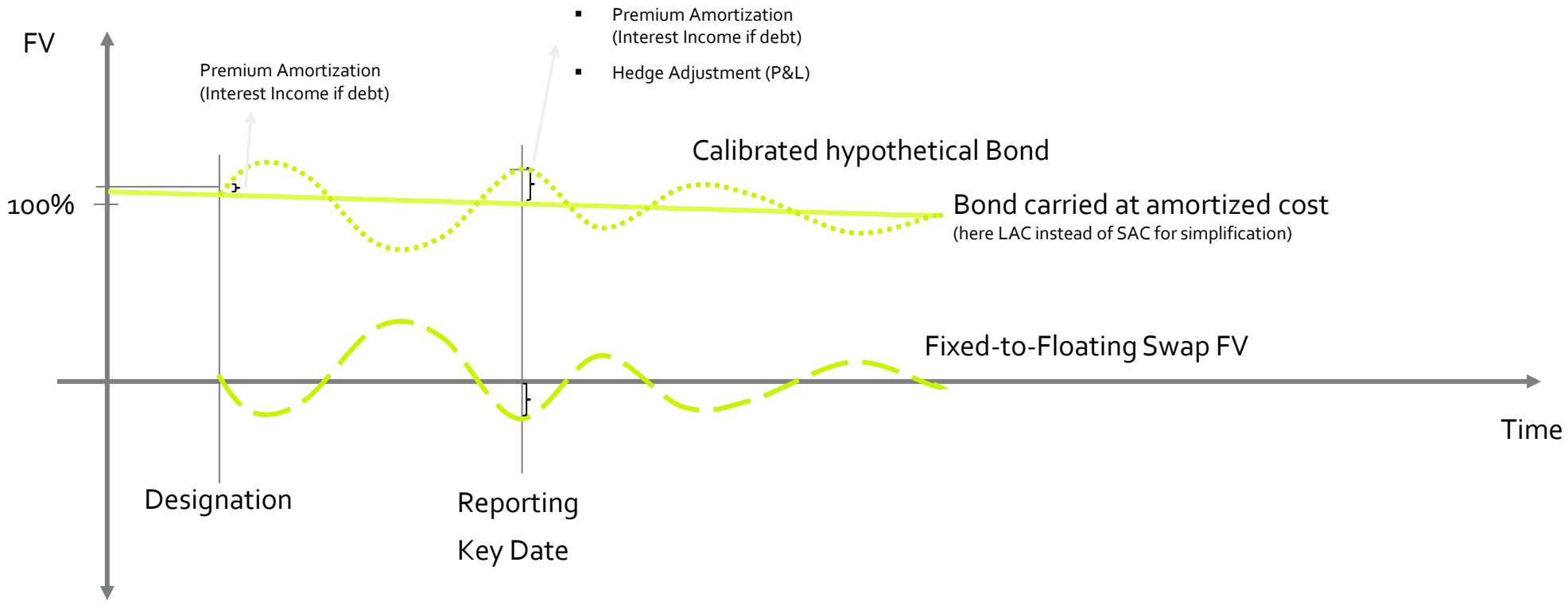
- Generating Cash Flows
- NPV Determination
- Effectiveness Test with Linear Regression
- Flow Generation at designation, month-end valuation and de-designation
- Hedge Profiles

FVH Effect in Case the Hedged Item is valued Mark-to-Market (simplified Example)



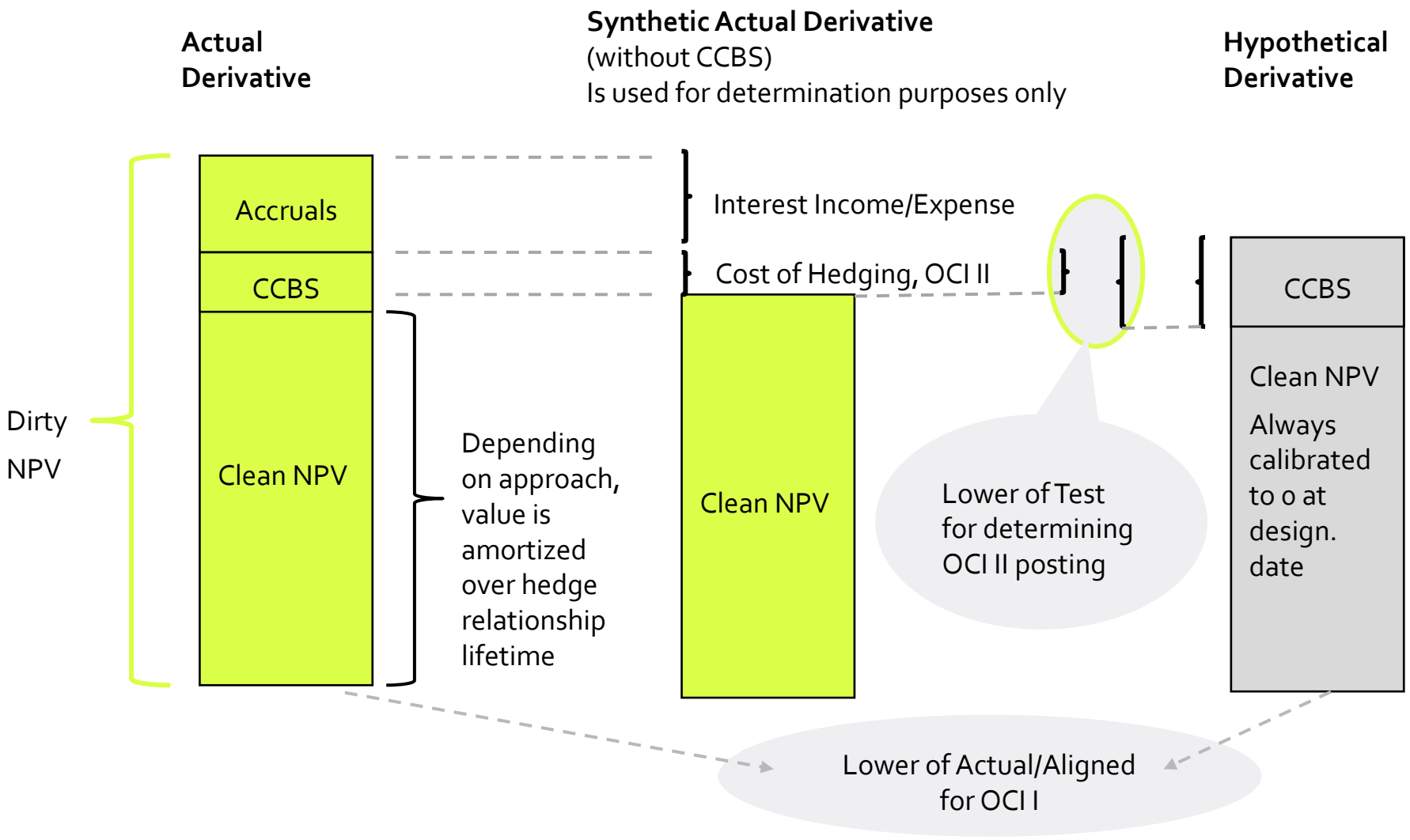
Remark: without credit spread

FVH Effect in Case the Hedged Item is carried at amortized cost (simplified Example)



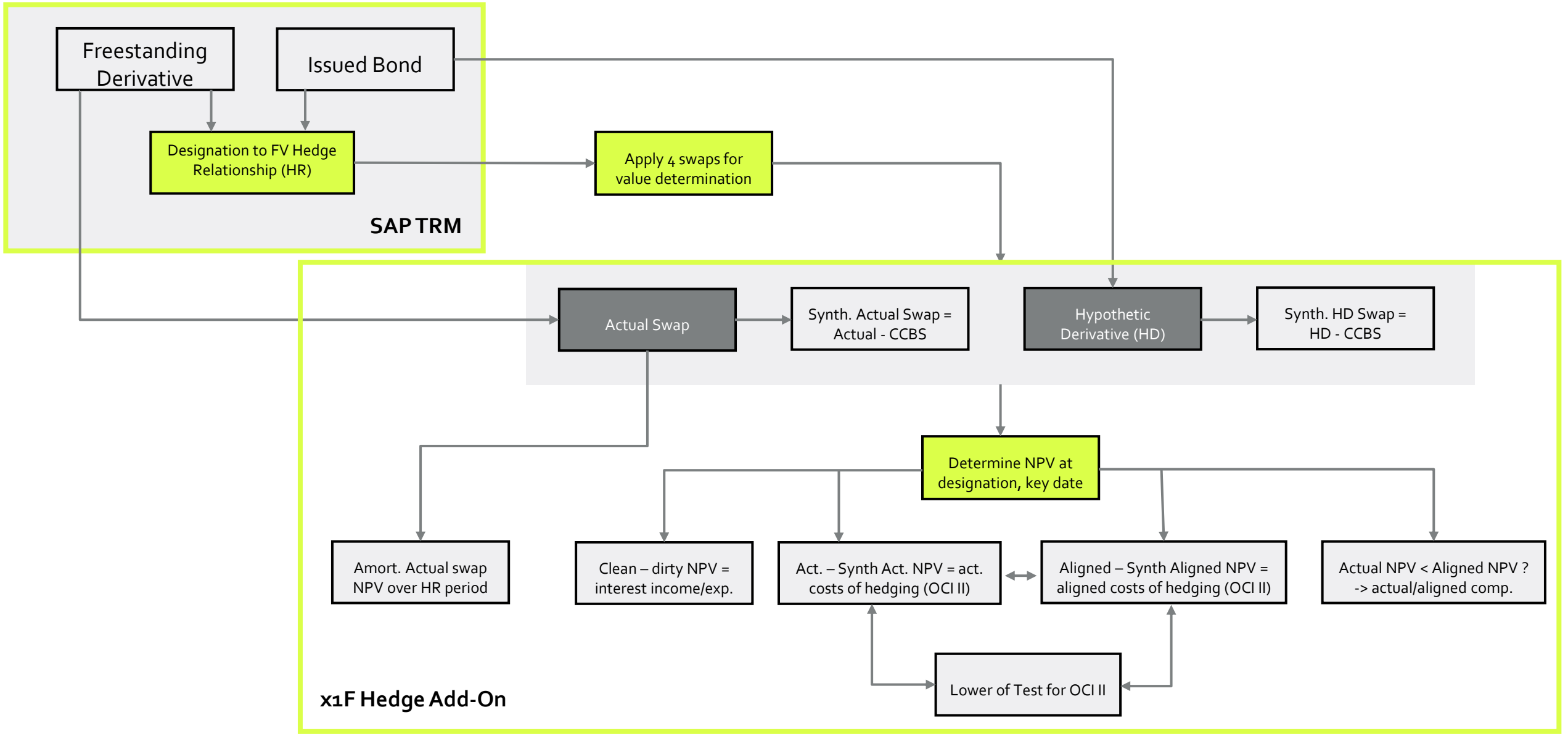
Remark: without credit spread

Components of a CCIRS NPV



Remark: without credit spread

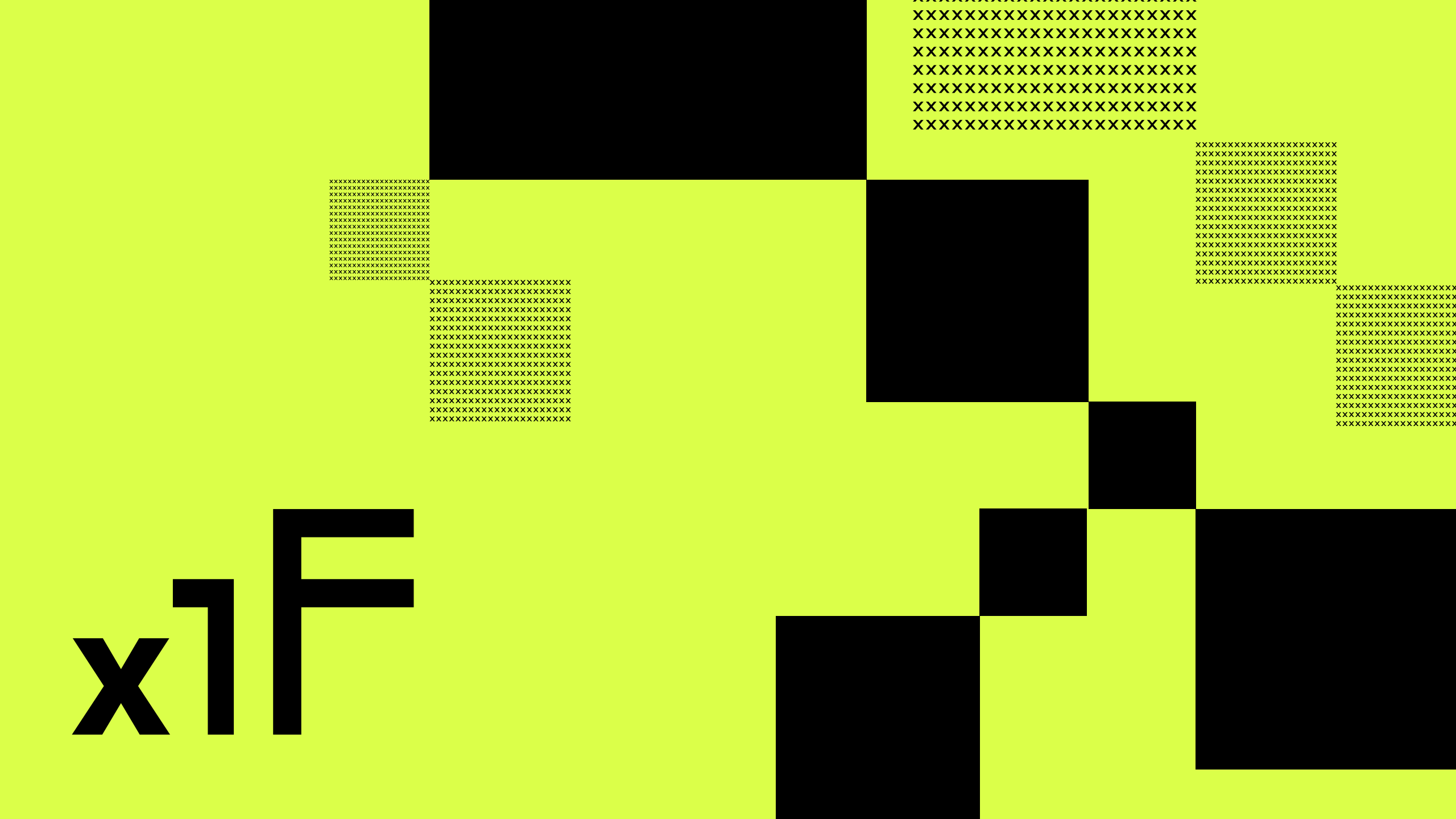
FVH: Process Steps for a hedge with CCIRS and Hypo Derivative



FVH: Supported Hedge Adjustment Determination Features

Method	Calculation of Hedge Adjustment	Impact
Short-Cut Method (not allowed anymore under IFRS but according to US GAAP)	NPV change of Hedging Instrument applied to Hedged Item (with reversed sign)	Change of hedged item completely offset by hedged item
(pure) Benchmark-Method (also called Hypothetical Loan Method)	Hedge adjustment of the hedged item calculated based on NPV change of benchmark cash flow. Hedge adjustment of hedging instrument equals NPV change	Differences between hedge adjustments of hedged item and hedging instrument
Hypothetical derivative method (using benchmark interest cash flow)	▪ Construct a hypothetical derivative (copy of the hedging instrument, replacing the outgoing interest with the benchmark interest flows of the hedged item) ▪ Hedge adjustment of the hedged item calculated based on NPV change of hypothetical derivative (with reversed sign) ▪ Hedge adjustment of hedging instrument equals NPV change	Increased effectiveness of hedge relation (compared to pure Benchmark Method)
Lower-of-Test for Calculation the "Cost of Hedging"	▪ OCI II is determine by extracting the CCBS value in local currency from the clean NPV with a lower of test between actual/aligned	For this determination 4 swaps have to be handled in parallel

QUESTIONS?


x1F