

# FRONT OFFICE WORKFLOW

## Trade & Position (STP)

### FROM TRADE TO MATURITY FOR ALL TYPE OF PRODUCTS

The Symphony Trade & Position (STP) processes the book running and related front office workflow for all products from trade to maturity, including stocks, bonds, FX, MMI, various derivatives and structured products.

The STP is a tool that registers and captures trades, manages trade books and processes cancellations, repayments and analyses up to the maturity of the product.

The STP processes the life cycle of derivatives and structured products by automatically detecting events such as knock-in/out, fixing rate/price, hitting barrier/touch, accrual level, etc. The user is also able to easily adjust the settings of the STP to comply with their unique organizational structure and management hierarchy.

The STP provides a Trade Desk that is customized to the distinct characteristics of structured products and offers various angles of analyses for realized and unrealized profit/loss, margins, funding costs and aggregated risk factors. Ad Hoc position simulations on changes in market data and parameters are also supported.

# Key Features

## 1 Simple Trade Entry

Registrations on trade books are inputted quickly and easily, even for highly complex structures. With one click, the registration of the identical product traded between external and internal parties is completed at the same time.

Trade confirmations are generated automatically for various trades including hedge, speculation, back-to-back, etc. The Trade Blotter allows the user to organize various trades of multiple parties and take in the details at one glance.

## 2 User-based Book Management

The STP's user-defined book management hierarchy allows flexible, customized management. The user is able to organize the same product according to its own needs, based on the trade region, desk, and target, as well as on accounting, counterparty, and performance management. Furthermore, for any changes made in the company's organizational structure, the hierarchy reset processes automatic updates for the P/L, risk, performance analysis, etc.

## 3 Automatic Event Monitoring

The STP identifies whether booked products meet set conditions through the monitoring of market data, fixing data, holiday data, etc. Once a condition has been met, the system automatically and immediately alerts the user to process the events. This automatic event monitoring function of the STP greatly reduces the user's working process, and minimizes overhead cost.

## 4 Just-in-Time Position

A revaluation of a position is possible with the most updated market data at any point in time, and automatic, periodic revaluations can be set up by the user. For complex revaluations, the user is able to selectively compute specific fair values or risk factors, to achieve efficiency in work processes.

## 5 Position P/L Analysis

The STP calculates all P/L by the daily mark-to-market revaluation standard. It is also able to classify and process realized and unrealized P/L, as well as various fees. For any revaluations, the mark-to-market method is applied on the most updated data at the time of the revaluation. Furthermore, P/L can be computed for user-defined periods on all positions, as required by different management hierarchies.

## 6 Position Risk Analysis

The position Greeks summation is computed taking into account all risk factors for portfolios based on the position management hierarchy. The STP runs analyses on VaR (Value At Risk) for cross-asset correlation risk. Furthermore, with just-in-time revaluation, updated risk analysis is possible at any time desired by the user.

## 7 Position Cash Management

Cash movement and balance is managed for all external and internal trades, life cycle events, and settlements in the corresponding accounts. Statistical estimated cash flow of contracts and positions are also easily managed through mark-to-market revaluations. The Cash In/Out Schedule is managed through Event Monitoring.

## 8 Position Simulations

The STP has price and risk simulation functions for different market and parameter scenarios. While the SPC runs simulations on individual trades, the STP runs simulations on positions composed of multiple contracts. Simulations of multiple market scenarios can be done simultaneously for efficiency in portfolio P/L and risk analysis.

# Up-To-Date Technology

The STP synthesizes modern financial and mathematical theories, software engineering and technical expertise to provide trade and position management solutions for the most diverse and complex financial assets.

- Portfolio simulations of numerous contracts through grid processing on multiple computers
- API on Linux, Unix, Windows-based C, C++, C#, Java allowing external systems to interface transaction and position data for all STP trades and events
- Engine plug-in compatible with user-built pricing engines
- UI/UX based on RIA (Rich Internet Application)

## Product Control

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- Derivative and structured products design
- Pre-trade pricing, risk and cash flow estimation
- Scenario and comparison simulations
- Term sheet generation
- Pay-off graph generation
- User-based product management and product template generation
- Back-testing based on historical market data

## Trading

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- Trade entry and deal capture
- Internal and corresponding trade registration
- Hedge and strategy trade registration
- Unwinding and event operation

## Trade Monitoring

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- Barrier, touch, accrual level monitoring
- Price, rate and average, highest, lowest monitoring
- Redemption, option exercising, credit events monitoring
- Corporate action monitoring
- Events schedule monitoring

## Trade Confirmation

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- Trade
- Unwinding and events confirmation and affirmation
- Correction and cancellation confirmation and affirmation

## Position Analysis

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- Position information
- Mark-to-market revaluations
- Profit and loss analysis
- Position risk analysis
- Value at Risk analysis
- Ad Hoc position simulation

## Underlying Setting

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- Setting of underlying assets and reference assets
- Index generation
- Setting of reference interest rates
- Setting of currency pairs

## Curve Setting

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- Setting of interest rate curves
- Setting of credit spread curves
- Setting of volatility curves and surfaces
- setting of dividends, recovery ratio, correlation, etc

## Parameter Setting

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- Setting of market data parameters
- Setting of calibration parameters
- Setting of model parameters

## Market Information

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- Up-to-date market data
- Historical market data
- Interpolated market data
- Term structure

## System Setting

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- Registration by organizational structure
- User registration and authority assignment
- Workflow setting
- User-defined code registration
- Plug-in model registration