

Market Conformity Check (MCC)

Market conformity check, price examination and monitoring of the best execution policy

MCC advantages:

Fully automated processes enable **time savings** and **cost optimisation**

Use of quality-assured data **increases price and check quality**

Optimized data collection processes and avoidance of own data storage **reduce data costs**

Automated process chains and fall-back procedures **reduce operational risks and manual processing efforts**

Directive-compliant, transparent checking and documentation of all asset classes **on one platform**

Audit reports to ensure the traceability of price identification and examination ensure **auditability**

Modularised processing levels enable **highly customised integration**

Optional operation in a BaFin-certified data centre **fulfils necessary outsourcing requirements**

Ongoing consideration of **regulatory guidelines** regarding sources and margins (Best Practice/User Group, proactive monitoring and optimisation)

The Market Conformity Check (MCC) meets the regulatory requirements for a systematic and transparent examination of trades as part of the market conformity check in accordance with MiFID II/ MaRisk and the price control in accordance with KARBV/ AIFMD.

The aim is to determine qualified spreads from several sources at the time of the trade or to deliver individual time series in order to carry out the subsequent check of the trades/customer transactions for execution in line with market conditions.

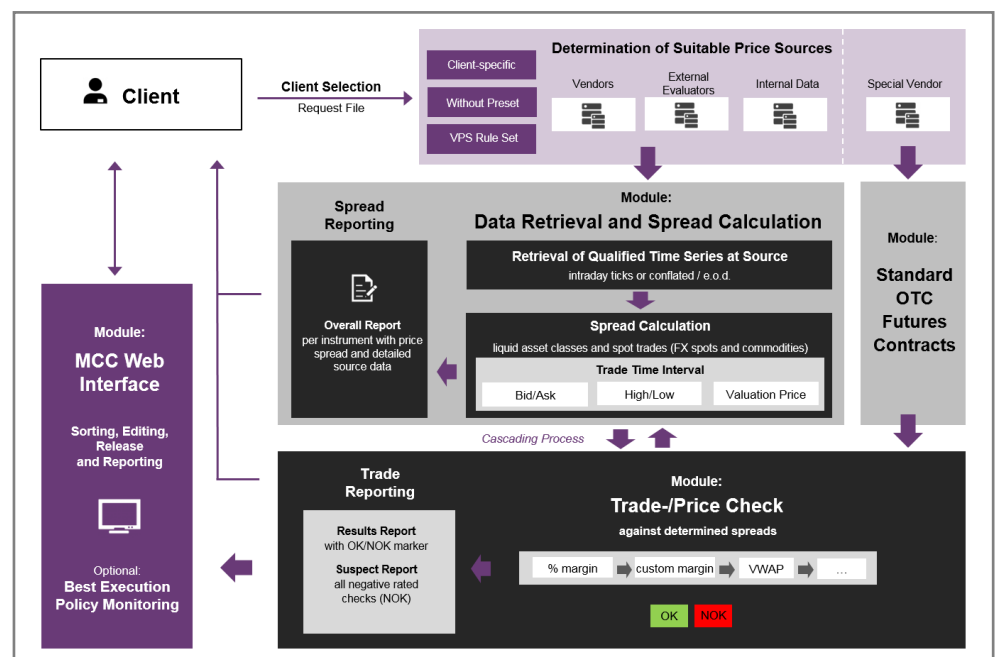
The necessary source and range determination is carried out via fully automated processes, which ensure the quality of the data sources and price data used through a large number of plausibility checks. Through the connection to various data sources, MCC enables the trade verification of all asset classes.

Furthermore, the MCC Service offers extensive reporting functions for internal and external audit purposes (e.g. best execution policy monitoring). Statistics on source and data usage facilitate decisions regarding necessary licenses, the choice of the "right" data provider or the possible useful addition of a further provider.

Thanks to the modular structure of the MCC Service, we can offer different processing levels, e.g. qualified data delivery for internal testing purposes as well as a fully comprehensive stand-alone service including web interface.

Module "Data Retrieval and Spread Calculation"

The necessary data determination and spread calculation for the examination are carried out via an automated process in the module "Data retrieval and



MCC Process Overview

Module	Data Retrieval and Spread Calculation	Module	Trade/Price Check	Module	Standard OTC Forward Contracts	Module	MCC Web Interface
	<ul style="list-style-type: none"> – Identification of qualified sources (without customer presetting) – Retrieval of time series depending on the trade time (asset class and price type specific) from the provider – Normalization of the time stamps of foreign exchanges/ different time zones – Conversion of currencies/ cross references even across several currency pairs – Generation of price spreads/cascading modules with extension of time intervals from e.g. one hour up to the fall back, i.e. determination of the last available valuation price – Input from own or 3rd party sources (model/ OTC prices, Exchange Traded Derivatives (ETD) such as options and futures) 		<ul style="list-style-type: none"> – Examination of trades and compilation of reports (OK/NOK) – Detection of price anomalies via standard deviation and VWAP – Parameterization of tolerated price variations / margins – Trade reporting (e.g. reason for source determination, display of the spread formed, spread violation in the case of trade checks) – Daily audit report 		<ul style="list-style-type: none"> – Fully automated examination of standard OTC forward transactions – Comparison of OTC trade price with a theoretical OTC reference price (determined using market data of liquid standard instruments at the time of trade) – Obtaining market data via a standard API from qualified special vendors 		<ul style="list-style-type: none"> – Web interface for simple and fast processing of trades that have been rated negative in advance (OK trades can also be checked randomly) – Configurable analyses and reports for clients and accounts in various formats – Monitoring of the execution quality (e.g. of individual brokers) through monthly and quarterly reports – Monitoring the Best Execution Policy – Roles and rights concept ensures processing and released by authorized persons

gd inside Financial Gateway – The digital transfer, processing and monitoring platform

MCC Service Modules

spread calculation".

For this purpose, all customer-specific available sources per trade are determined through a core set of rules and processed in the next step (module "Trade/Price Check"). Depending on the activation and provision of the data by the provider(s), they are collected, normalized and processed according to the rules and regulations. Optionally, it is also possible to provide the MCC service including the necessary market data.

Qualified Time Series (for import into a system) or qualified spreads are determined at the trading time point (period and starting time point are defined by the customer). Spreads can be built over any data or price fields (e.g. Low/ High Bid/ Ask, Open/Close).

In case reference rates are not available, an optional currency conversion at the time of trade is carried out via corresponding cross currencies, even across several currency pairs if necessary.

The integration of internal data or 3rd party sources (e.g. external evaluators) is possible at any time and is integrated into the automated overall process.

Module "Trade/Price Check"

In addition to the delivery of qualified data, the delivered trades can also be checked directly against the deter-

mined spreads using the "Trade/Price Check" module. The module automatically checks whether a price target lies within a range. A trade gets the result (status code) "OK" if the price is within the range, otherwise "NOK" (not OK).

The result is displayed in the output file/ database with an OK/NOK character. For checked trades, all parameters necessary for the examination, such as prices, price sources or OTC relevant parameters, are output in addition to the examination result. The margins to be considered can be customised.

It is equally possible to determine a customer-specific VWAP (Volume Weighted Average Price) across various sources and to check/eliminate price outliers by standard deviation.

Module "Standard OTC Forward Contracts"

Special data and calculation methods are required for checking OTC transactions (FX spots, FX forwards, FX swaps and interest rate spots). In order to simplify the examination process and to reduce the costs for data collection, the MCC Service has an interface that enables the collection and processing of the necessary market data from qualified specialized vendors.

To carry out the examinations, the OTC trade price is compared with a theoretical OTC reference price, which is calculated using market data of liquid

Typical applications of the MCC Service:

Intraday examination of trades within the scope of market conformity checks

Audit of liquid and illiquid asset classes (including FX and commodities)

Review of **standard OTC transactions**

Automated **calculation of price ranges** based on market levels according to **IAS39**

Checking the plausibility of exchange rates by calculating a **standard deviation**

Verification of the **Best Execution Policy (MiFID II)** by plausibility check of the order execution (in particular for block orders) by calculating a customer-specific **VWAP**

Examination of trades against a determined **arrival price** according to the **PRIIP regulation**

standard instruments at the time of the trade.

The MCC Service provides a calculated model price for each trade and a theoretical price range around the model price (valuation corridor). If the traded price lies within the specified valuation corridor, it can be classified as being in line with the market (status code "OK"). Outliers can be classified as not in conformity with the market (status code "NOK").

Module "MCC Web Interface"

The module "MCC Web Interface" provides a user-friendly system for processing and releasing the automatically generated test results.

Via the Web Interface, the checked trades can not only be displayed, but also commented, edited, released and stored in an audit-proof manner, either individually or in blocks.

The examination results of each processing run can be viewed and analysed in detail on instrument level

via the web interface. It is also possible to select trades using the status code (OK, NOK). Each trade can then be commented on individually or in blocks by an authorized employee and provided with a new status code.

All editing and approval procedures (commentary history including time stamp, employee and status code) are logged for traceability of the price determination and price check and are made available in an automated audit report at the end of each month.

Extensive filter and research functions provide answers to questions such as: Were there any conspicuous aspects of certain trades? Were trades executed at the "Best Trading Venues"? What was the execution quality of individual brokers? Are there any particular anomalies with certain clients or instruments?

How much turnover was generated in which securities with which brokers?

It is possible to filter the data supplied by the client and stored in the data-

Advantages MCC Web Interface:

Reduction of manual efforts by simple and fast handling of trades that have failed the market conformity check

Transparency of the verification process through visualization of the market data at the time of trading

Roles and entitlement concept ensures **audit-proof process control**

Logging of all editing and release sequences ensures **transparency in the examination process**

Monthly and quarterly reports as well as RTS 28 report enable a **continuous monitoring of the execution quality** (e.g. of individual brokers or trading venues).

Extensive filtering options and configurable ad-hoc reports enable **case-related research**

Extensive statistics on source and data usage **support internal cost control** with regards to market data usage

Special reporting for the monitoring of the **Best Execution Policy**



Recherche

STATIC

InstrumentIdType: ISIN

IntervalFrom: 01.03.2020 IntervalTo: 08.03.2020

TRADE

TransactionId: CustomerId: BrokerId:

Status: NOK

MARKET-(GDI)

MCC-(broker):

Suchen...

Filter and search mask

ALLGEMEINE DATEN

Type: S Trade Volume: 198 Trade Price: 3.85 Spread Type: T-1_HIGH-LOW Deviation: -0.1348315

Tief

Price: 4.45 Date/Time: 20200206 23:59:59 Price Field: HIKU_LOWPRICE

895/Canadian National Stock Exchange

BTV,BTV_BESTSPRD,BTV_MLTV_CCY1,BTV_NBASPRD

Hoch

Price: 4.57 Date/Time: 20200206 23:59:59 Price Field: HIKU_HIGHPRICE

895/Canadian National Stock Exchange

BTV,BTV_BESTSPRD,BTV_MLTV_CCY1,BTV_NBASPRD

STATUS ÄNDERUNGEN (1)

Änderungsdatum: 05.03.2020 - 12:12:43

Statuswechsel: NOKINOK → OKJOK GDI

Bearbeiter: demo@financial.gateway.de

Orderausführung gemäß Kundenweisung

Status code change of a trade

Übersicht

Quartal	Status	Datum	# Kommentare	Details	Monatsbericht	Monatsabschluss	Quartalsbericht
Quartal 4 - 2019	○	2019-12	0 / 0		Erzeugen	Erzeugen (14189)	
	○	2019-11	0 / 0		Erzeugen	Erzeugen (127373)	
	○	2019-10	0 / 0		Erzeugen	Erzeugen (117922)	
Quartal 3 - 2019	○	2019-9	0 / 790		Erzeugen		

Compilation of month-end closing and monthly/ quarterly report

base, e.g. in freely defined periods according to ISIN; by general execution quality; by broker, client or stock exchange; by cost; within stored margins of tolerance; or according to the order verification status reports determined by the MCC Service.

The results of these manual queries can be compiled as a report and downloaded in various output formats. In the event of an audit, it is thus possible, for example, to provide retroactive information at any time on the execution quality of individual brokers or trading venues and the corresponding available market data.

In addition to the reports generated automatically per run (spread report, results report (OK, NOK) and suspect report), customer-specific, multitenant reports in various formats and time periods can also be generated (e.g. RTS 28 report; monthly and quarterly reports for monitoring the execution quality).

The integrated roles and entitlements concept guarantees audit-proof process control and the editing and release of trades/transactions exclusively by authorized users.

Short profile

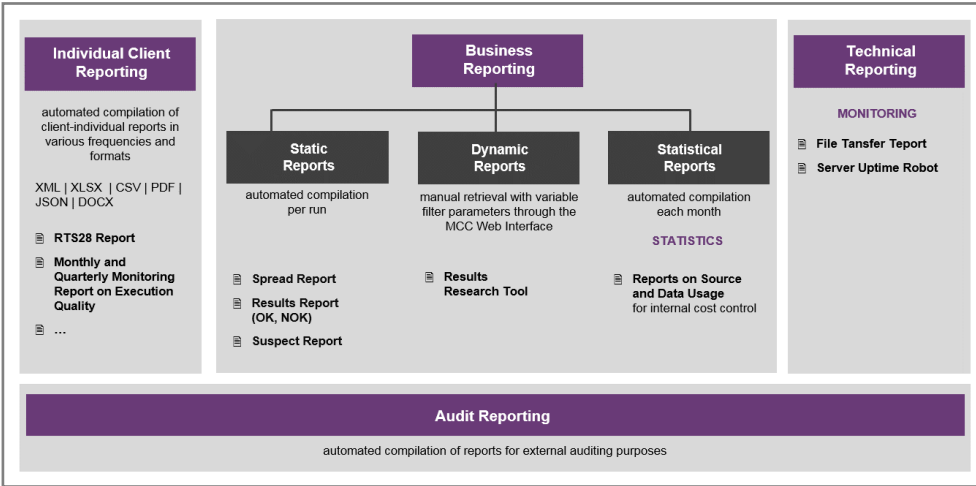
gd inside offers modular solutions and services with a focus on multi-provider connections in market data and process management.

The independent, owner-managed company with many years of specialist market data and IT expertise acts as an interface between functional/regulatory requirements and technical implementation, and as a link between the vendor and the customer.

On request, gd inside can provide all the relevant services within a market data project - from expert advice, the procurement of special data, technical integration and development to the operation of individual components or entire solutions including business logic and continuous support during operation.

In addition to professional and technical consulting, the range of services includes tried-and-tested services in the areas of market conformity testing, best execution monitoring, transaction cost determination, valuation, reporting and monitoring.

The technical core is the gd inside Financial Gateway transfer, processing and monitoring platform, on which all services and customer-specific developments are set up and operated as integrated solutions or individual modules.



MCC Reporting

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