Abacus Transactions

Module-Based Standard Software Solution for
Transaction-Based Reporting

REGNOLOGY

A compact solution for transaction-based reporting

The ever-increasing complexity of financial products and markets alongside the continuous growth of global trade volumes has caused a lack of risk transparency over the course of the last decades. At the outbreak and in the aftermath of the global financial crisis, these distressing shortcomings have come to the fore. Neither the supervisory authorities nor the market participants were able to assess the extent of the risks and dependencies quickly or comprehensively enough. The legal measures undertaken for the restoration of stability since the crisis have ushered in a significant paradigm shift. From now on, no financial market, no financial market participant and no financial product shall be excluded from appropriate regulatory supervision. In order for these regulatory reporting standards to be effectively implemented, the respective regulators have to be punctually provided with the relevant information detailing business transactional volumes and key figures. Numerous resolutions, including legislated schedules specifying regulatory reporting obligations have also recognized flaws, both in the area of exchange-traded and over-the-counter (OTC) derivatives, which have also been addressed appropriately.

The following regulations, among others, include a number of transaction-based regulatory requirements, as well as particular risk-reducing measures such as clearing, collateralization and trading venue obligation:

- European Market Infrastructure Regulation (EMIR),
- Money Market Statistical Reporting (MMSR),
- Markets in Financial Instruments Directive II / Regulation (MiFID II, MiFIR),
- Securities Financing Transactions Regulation (SFTR), and
- Swiss Financial Market Infrastructure Act (FMIA).

These regulations have come about in order to create transparency and to identify risks and imbalances in the financial markets at an early stage.

Abacus Transactions provides one software solution to synergise the requirements for several types of transaction-based reporting

Due to the mass of reporting obligations for various products and markets, which all have their own specifically defined reporting subjects and scope, banks are facing the challenge to maintain a flexible and ideally redundancy-free data storage.

Regnology's Abacus Transactions has directly addressed this concern by extending the Abacus Solution Suite with a standard software to deal with the particular requirements of transaction-based regulatory reporting. Abacus Transactions provides for increasing demands for more granular daily reporting obligations. With its TR2 module, the product already covers the reporting requirements according to EMIR (II), FMIA and CSA. The MMSR module helps clients to comply with the ECB regulation concerning money markets statistical reporting (MMSR). The MIFIR module supports transaction reporting under Article 26 of MiFIR as well as commodity derivates position reporting under Article 58 of MiFID II. The bank's relevant data from their front and back-office systems is usually delivered to Abacus Transactions via defined standard interfaces. Furthermore, the product has been enhanced by the SFTR module in May 2018.
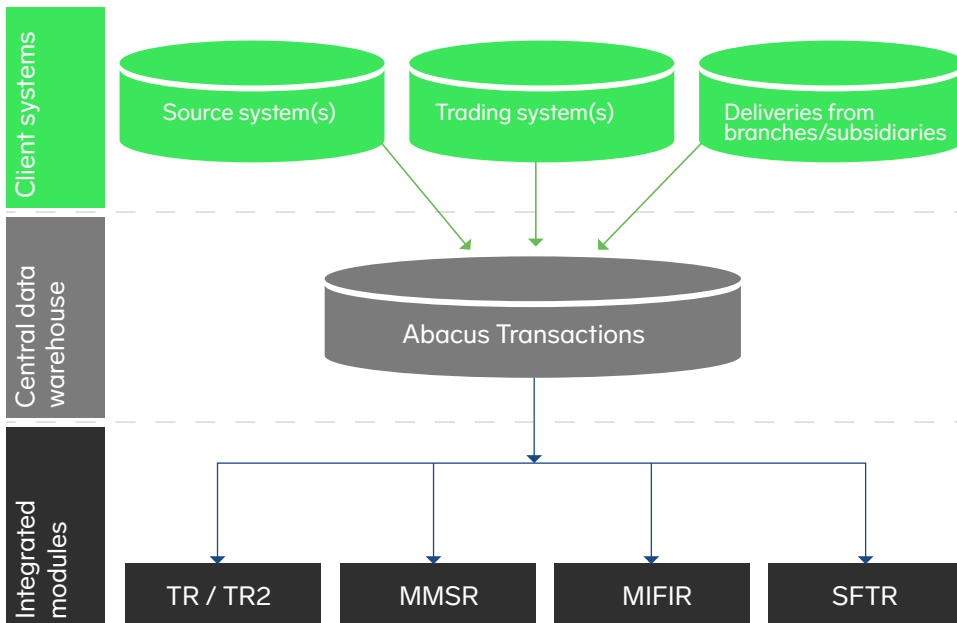

Figure 1: Synergy with one software solution

The delivered transactions and positions are independently processed in the respective Abacus Transactions modules. Therefore, the respective module relevance will be evaluated for each data set. Due to the layer structure, the user has the option of either using the modules separately or in any type of combination. Abacus Transactions offers a stand-alone solution based on the proven Abacus-framework, which has already been successfully used by many customers for a wide range of regulatory reports over the years.
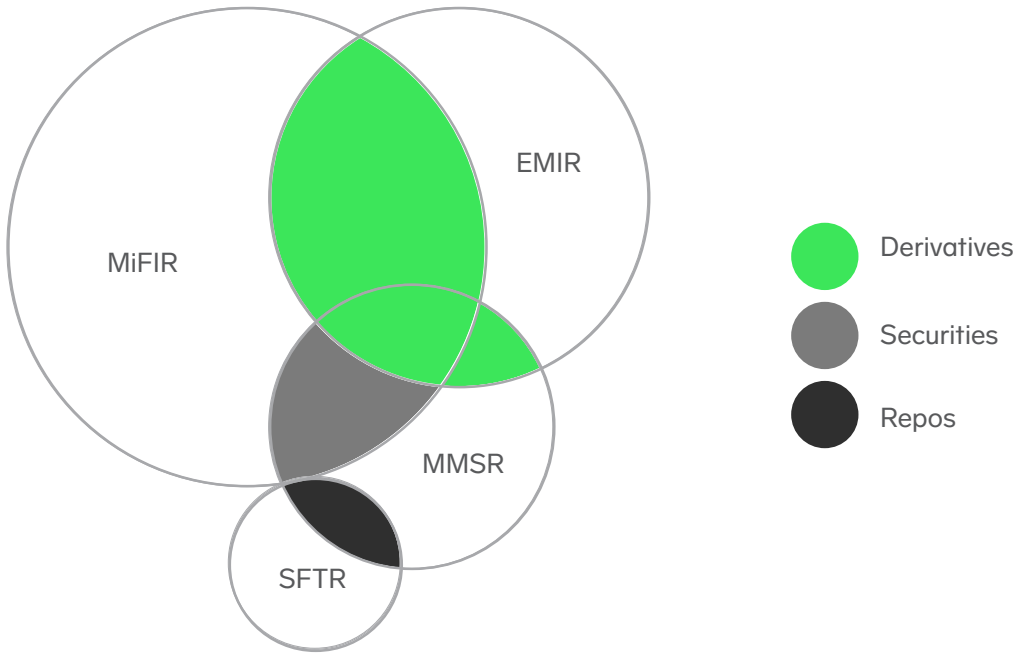

Figure 2: Product overlaps in regulations

The covered regulations have their common origin in the 2009 G20 Summit but examine market activities from different perspectives. There are certain overlaps in the scope of the products that are relevant for different reporting regimes (see Figure 2). At the same time, there are significant differences concerning "Life Cycle Events" that have to be reported (see Figure 3).

Affected institutions	EMIR	MMSR	EMIR II	MiFIR	SFTR
New	✔	✔	✔	✔	✔
Modify	✔	✔	✔	(Cancel + New)	✔
Correction	x	✔	✔	x	✔
Termination / Cancel	✔	✔	✔	x	✔
Compression	✔	x	✔	x	(✔)
Error / Cancel	✔	x	✔	✔	✔
Other	✔	x	x	x	x
Position component	x	x	✔	x	x
Valuation update	✔	x	✔	x	✔
Collateral update	✔	x	✔	x	✔

✔ report relevant   (✔) partially/potentially report relevant   x partially/potentially report relevant

Figure 3: Life cycle events

Benefits for customers using Abacus Transactions

- One common interface for several modules – flexibility in activating the modules
- Comprehensive user role concept for management of access authorization
- Various data delivery options through cluster separation, additive loading and subordinated portfolio
- Flexible connection to multiple source systems
- Consistency check of input data with configurable error levels
- Option to make manual corrections, for example, in case of consistency errors or "rejects"
- Results data presentation for every module
- Internal Portfolio Reconciliation with additional functionalities (Difference Report, Proposed Transactions) as well as identification of report-relevant transactions including Relevance Report
- Functional validation according to specified rules of the report recipient
- Generation of the submission files, including technical XSD Schema-validation (xml-files)
- Import and allocation of feedback notification from the report recipient
- Flexibility in the process management via the cockpit, the process menu or automatically via batch scripts
- Easy generation of several views / layouts
- "Copy Entries" functionality with multiple options to support an audit-proof correction process
- Historical View (historical course of trades across a defined reporting period)
- Analytical reporting (e.g. client reporting)
- Import and export functionality for tables (xml, csv / xlsx)
- Audit-compliance (extensive logging of manual changes)
- Archiving functionality
- User guides, training seminars, hotline / service desk, online-Wiki

Look & Feel
High recognition value through standardised process step.
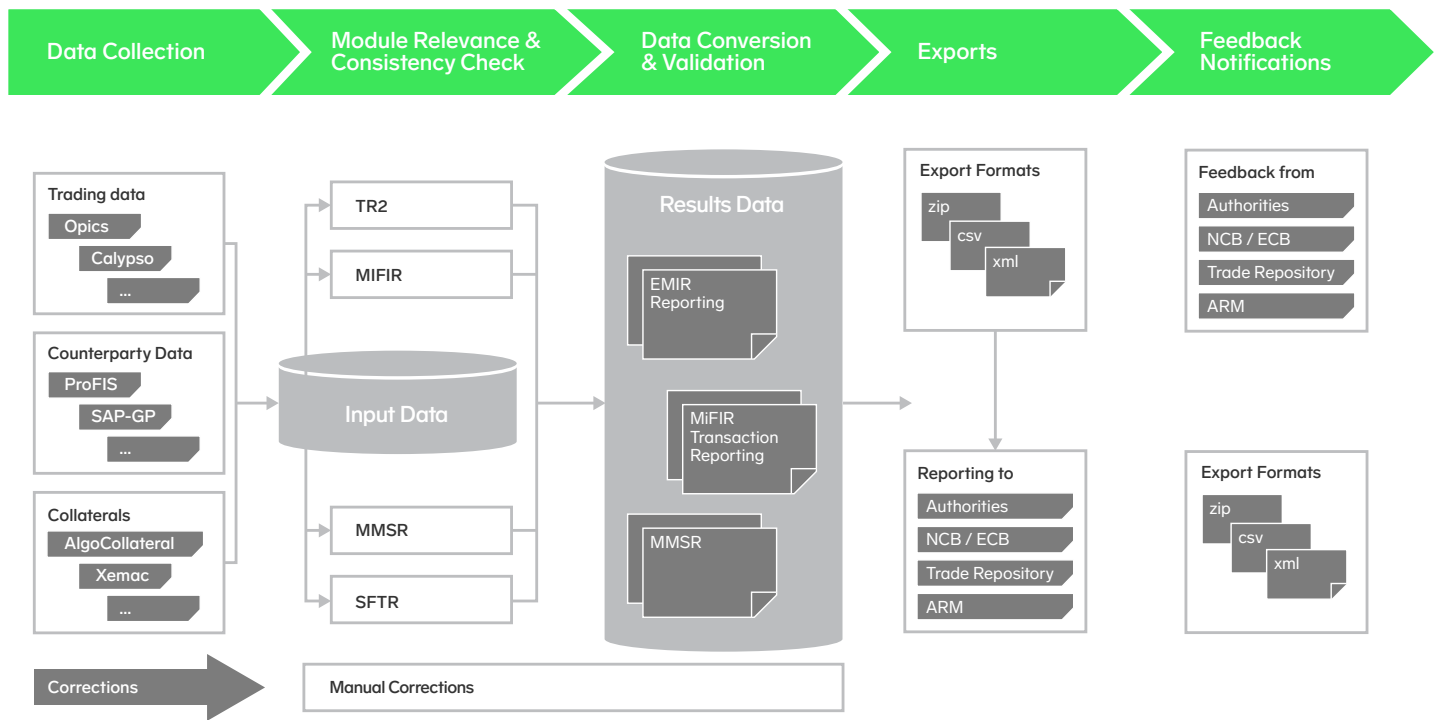High recognition value through standardised process steps in the respective modules.

Figure 4: From the source system to the report - an overview of the working process

Module TR2

Regulatory requirements

European Market Infrastructure Regulation (EMIR)

The objective of EU-Regulation No. 648/2012 (EMIR) is to increase market transparency and to monitor concentrations of systemic risks in the financial derivatives market. Since becoming effective on August 16, 2012, EMIR can now be regarded as the beginning of comprehensive transaction-based reporting in Europe. According to EMIR Article 9, financial, non-financial, and central counterparties shall ensure that each conclusion, modification or termination of any derivative contract — no matter if exchange traded ("ETD") or over-the-counter ("OTC") — shall be reported to an authorized trade repository until the end of the business day following the transaction. The scope of the reporting has been defined by the European Securities and Markets Authority (ESMA) through technical standards (ITS / RTS).

In May 2015, ESMA's Regulatory and Implementing Technical Standards (ITS / RTS) have been modified and refined to a large extent. On January 21, 2017, the revised RTS and ITS were published in the Offcial Journal of the European Union and have been applicable since October 30, 2017. Abacus Transactions covers the reporting requirements under EMIR in the TR2 module for the DTCC and RegisTR trade repositories.

A reliable product strategy Regulatory changes and extensions are timely implemented

Swiss Financial Market Infrastructure Act (FMIA/FinfraG)

Within the context of international efforts to regulate derivative markets as well as a consolidation of several Swiss laws regarding the regulation of financial markets, the Swiss Federal Department of Finance has developed FMIA (FinfraG), which became applicable on October 1, 2017. This regulation closely resembles EMIR in mandating several reporting obligations from market participants, including the fundamental requirement of having to report all derivatives to a trade repository. The obligatory reporting requirements must adhere to a specified hierarchy which is oriented by the counterparty as type of industry (financial / non-financial), its market significance (+ / -) and the country of domicile (domestic / non-domestic). The TR2 module facilitates the reporting of derivatives in accordance with FMIA / FinfraG regulation for all counterparty classes reporting to the RegisTR trade repository.

Canadian Securities Administrators TR Rules (CSA)

The CSA constitutes an important step from the Canadian government to establish a securities regulatory system. Rules for the reporting of derivatives were proposed and developed by regulators from each province and territory, who work together as the Canadian Securities Administrators (CSA).

The regulation was formed as a result of the G20-Summit in the context of provisions to establish a new regulatory regime for the OTC derivatives market in Canada. Its mission is to develop a "national system of harmonized securities regulation, policy and practice". In this case, the reporting is carried out unilaterally to a trade repository (TR). The obligatory reporting requirements must adhere to a specified hierarchy which is oriented by the counterparty as type of industry (financial / non-financial), its market significance (+ / -) and the country of domicile (domestic / non-domestic). Abacus Transactions supports the CSA-reporting requirements for smaller market participants to the DTCC trade repository.
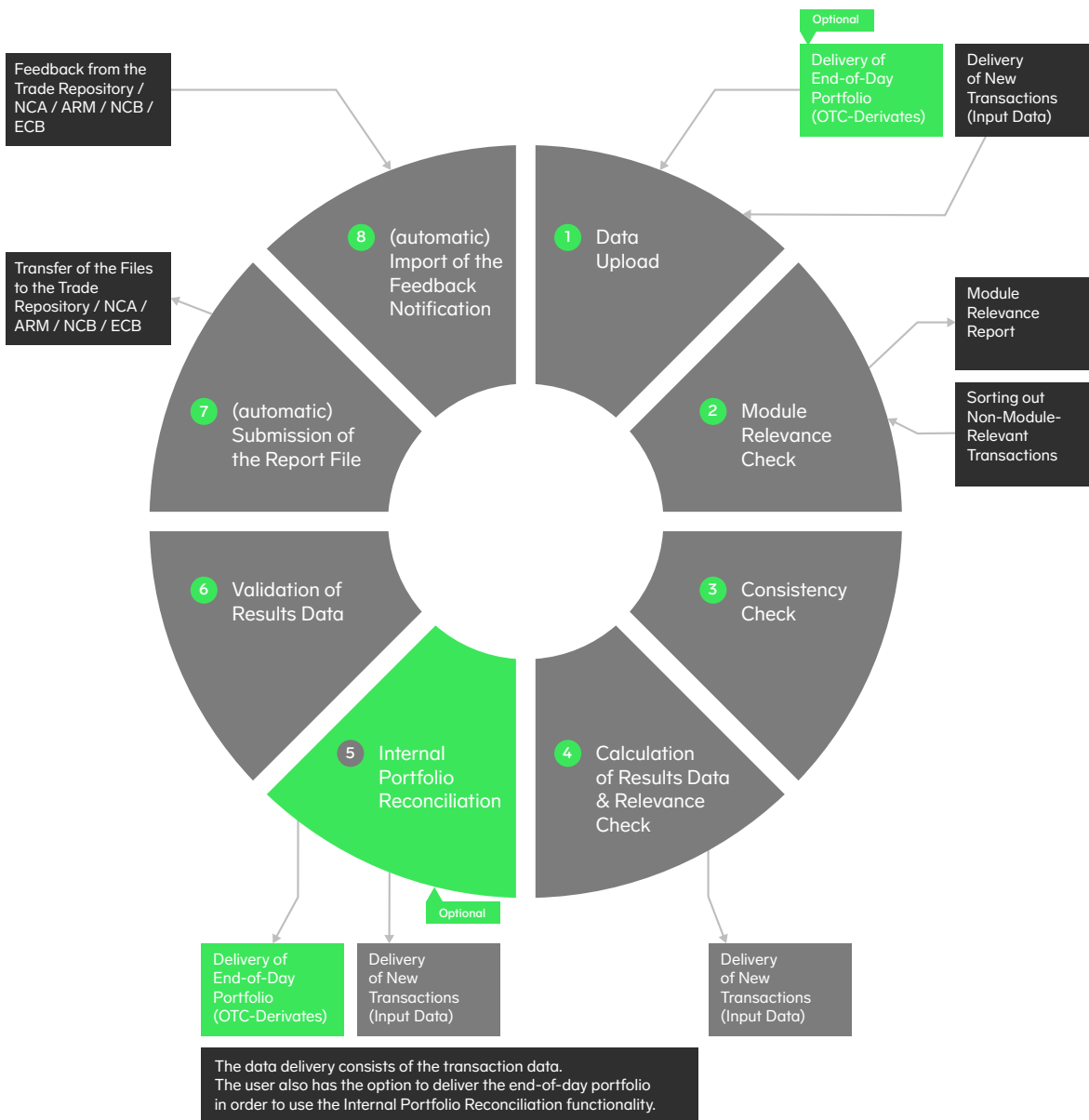
Our solution

The TR2 module of Abacus Transactions covers generation and submission of reports under EMIR II to the RegisTR and DTCC trade repositories. It includes both individual institutions as well as groups of institutions. The TR2 module also supports derivative reporting according to FMIA / FinfraG to the RegisTR trade repository as well as reporting according to the CSA (for the asset classes FX and Interest Rates, DTCC) to the supported trade repositories.

Beyond the proper generation of reports, the TR2 module supports additional functionalities, such as the Module Relevance Check, Consistency Check, Internal Portfolio Reconciliation, validation of results data, an audit-proof correction process (for consistency errors, among other items), the importing and exporting of tables (xml, csv / xlsx) as well as analytical reporting. Following the delivery of the submission files, the feedback notifications generated by the trade repositories can be imported into the TR2 module and allocated to the respective transactions. In the course of this, all of the relevant information is managed within a singular solution and can consequently be edited and analyzed further.

The Internal Portfolio Reconciliation, including the generation of Proposed Transactions that have been established in Abacus Transactions, supports both a comprehensive report submission as well as a consistent, coordinated control of the data between the systems. The process management can be flexibly carried out, either via the cockpit (GUI), the process menu or automatically via batch scripts.

Well-positioned in transaction-based reporting
The optional Internal Portfolio Reconciliation supports a harmonized data storage

Optional

Delivery of
End-of-Day
Portfolio
(OTC-Derivates)

Delivery
of New
Transactions
(Input Data)

Feedback from the
Trade Repository /
NCA / ARM / NCB /
ECB

8 (automatic)
Import of the
Feedback
Notification

1 Data
Upload

Module
Relevance
Report

Transfer of the Files
to the Trade
Repository / NCA /
ARM / NCB / ECB

7 (automatic)
Submission of
the Report File

2 Module
Relevance
Check

Sorting out
Non-Module-
Relevant
Transactions

6 Validation of
Results Data

3 Consistency
Check

5 Internal
Portfolio
Reconciliation

4 Calculation
of Results Data
& Relevance
Check

Optional

Delivery of
End-of-Day
Portfolio
(OTC-Derivates)

Delivery
of New
Transactions
(Input Data)

Delivery
of New
Transactions
(Input Data)

The data delivery consists of the transaction data.
The user also has the option to deliver the end-of-day portfolio
in order to use the Internal Portfolio Reconciliation functionality.

Module MMSR

In consideration of the structural changes in the financial markets that have taken place, there is currently a much more urgent need for monetary policy to regulate how the money markets and their respective activities function than in the past. For this reason, the European Central Bank (ECB) passed the regulation (EU) No. 1333/2014 on November 26, 2014, which takes up the issue of statistics on the money markets (ECB/2014/48).

Regulatory requirements

Regulation of the ECB concerning statistics on the money markets (MMSR)

The objective of this EU-Regulation is the retrieval of information about money market activities and conditions in the European Monetary Union. In order to do this, the ECB has gathered statistical data on money market trades in EUR since April 2016. This initiative is related to transaction-based reports which provide the ECB with a comprehensive view of the activities in the money markets in order to assess the effciency of monetary policies and to support the fulfillment of their duties in maintaining the stability of the financial markets. Furthermore, this measure is intended to strengthen the Single Supervisory Mechanism (SSM) with the required analytical and statistical reports, in compliance with Regulation (EU) No. 1024/2013 of the council. Following a three-month test phase, productive reports have been submitted to the Deutsche Bundesbank since July 1, 2016 (before 6:30 am CET) or to the ECB (before 7:00 am CET) on the business day following the transaction day (t+1).

Our solution

The transaction data required for the report in accordance with the ECB Money Market Statistical Reporting is delivered from the source systems (e.g. front and back office systems) by pre-defined standard interfaces on a daily basis. Due to the layer structure, the customer has the option to use the MMSR module separately as well as in combination with other Abacus Transactions modules. The process chain from the data import to the submission of reports has also been standardized to a considerable extent.

Beyond the proper generation of reports, the MMSR module supports additional functionalities, such as the Module Relevance Check, Consistency Check, the identification of report-relevant transactions, Internal Portfolio Reconciliation with Proposed Transactions, the validation of results data according to the rules from the report recipient, an audit-proof correction process (for consistency errors, among other items), the importing and exporting of tables (xml, csv / xlsx) as well as analytical reporting.

The Intraday and Across Days Relevance Check and the Consolidation of Data Sets in the Reporting Date should be noted in particular. These processes are optional and take the MMSR-specific provisions from the ECB into account, which specify that only one relevant data set per trade and reporting date shall be reported to the ECB. Certain correction options have also been integrated in the MMSR module, such as the ability to copy entire market segments, which could not be delivered to the ECB / NCB and have to be reported on the next reporting day. Moreover, special processes for the new automatic daily reporting of Call Money and Open Repos have been implemented.

The Internal Portfolio Reconciliation, including the provision of Proposed Transactions and the identification of non-relevant transactions, has been implemented in Abacus Transactions to ensure a comprehensive report submission as well as a consistent, coordinated data workflow between systems. The process management can be flexibly carried out, either via the cockpit (GUI), the process menu or automatically via batch scripts.

Intraday and across days relevance check Implemented logic to determine the correct reporting state for each transaction (PTI).

Module MIFIR

The revised directive for markets in financial instruments (Markets in Financial Instruments Directive, MiFID II) and the accompanying regulation (Markets in Financial Instruments Regulation, MiFIR) have defined the rules for the delivery of services in the area of securities for a variety of financial instruments in regulated, multilateral and organized trading venues.

Regulatory requirements

Markets in Financial Instruments Regulation (MiFIR)

This new legislative framework came into force on July 1, 2014. Its implementation has been delayed by one year to January 3, 2018.

The directive and the accompanying regulation are to extend the applicable transparency guidelines under MiFID I and are also intended to stabilise and realign the financial market infrastructure. Significant aspects in relation to these measures are the introduction of a new trading venue category, the so-called "Organised Trading Facility" (OTF), a trading venue obligation for certain financial instruments and a clearing obligation for derivatives traded on regulated markets.

Pursuant to MiFIR Article 26, investment firms and trading venue operators are obliged to report all changes to their or their customers' positions in certain financial instruments to the relevant authority by the end of the business day following the transaction day.

This reporting obligation refers to financial instruments

- which have been admitted to a trading venue or have applied for admission,
- whose base value conforms to these criteria,
- whose base value is an index or basket and whose components conform to these criteria.

The scope of this reporting has been defined by the European Securities and Markets Authority (ESMA) in the form of Technical Standards (ESMA/2015/1464, RTS 22) as well as Level III Guidelines (ESMA/2016/1452).

This report must be filed with the respective National Competent Authority (NCA) either directly, by the trading venue or via a so-called Approved Reporting Mechanism (ARM) by the end of the business day following the transaction day (t+1). The technical report format is xml, based on the ISO20022 standard.

Our solution

The MIFIR module can generate reports to the NCAs (ISO20022) and the Deutsche Börse Group ARM service. It includes both individual institutions as well as groups of institutions.

Beyond the proper generation of reports, the MIFIR module supports additional functionalities, such as the Module Relevance Check, Consistency Check, the identification of report-relevant transactions, Internal Portfolio Reconciliation for OTC-derivatives, the validation of results data according to the rules from the report-recipient, an audit-proof correction process (for consistency errors, among other items), the importing and exporting of tables (xml, csv / xlsx) and analytical reporting.

The transaction data required for the report is delivered from the source systems (e.g. front and back office systems) via pre-defined standard interfaces on a daily basis. Due to the layer structure, the customer has the option to use the MIFIR module separately as well as in combination with other Abacus Transactions modules.

The process chain from the data import to the submission of reports has also been standardized to a considerable extent.

The Internal Portfolio Reconciliation and the provision of Proposed Transactions as well as the identification of non-relevant transactions facilitate a comprehensive submission of reports and a consistent, coordinated data workflow between systems. The process management can be flexibly carried out, either via the cockpit (GUI), the process menu or automatically via batch scripts.

Markets in Financial Instruments Directive II (MiFID II)

In addition to transaction reporting according to Article 26 of MiFIR, Abacus Transactions also supports commodity derivatives position reporting under Article 58 (2) and (3) of MiFID II. Abacus covers not only position reporting to the Regulatory Reporting Hub of the Deutsche Börse Group, but also reporting of exchange-traded contracts to the respective trading venues as well as position reporting to national competent authorities (ISO20022). The data is processed in accordance with the established Abacus functionalities, while there is an additional process „EEOTC-Check", which identifies economically equivalent OTC contracts (EEOTC) for the delivered ETD positions. Once the individual positions have been determined and consolidated, the report files are generated in compliance with the regulatory requirements as well as the feedback notifications are processed.

Module SFTR

The Securities Financing Transactions Regulation (SFTR)(Regulation (EU) 2015/2365), which amends the European Market Infrastructure Regulation (EMIR)(Regulation (EU) 648/2012) and concerns the transparency of securities financing transactions (SFTs) and the re-use of collaterals entered into force on January 12, 2016.

Regulatory requirements

Securities Financing Transactions Regulation (SFTR)

As a "sister regulation", the SFTR closely resembles the EMIR, especially in terms of reporting obligations. According to the Article 4 of the SFTR, financial, non-financial and central counterparties shall ensure that each conclusion, modification or termination of any SFT shall be reported to an authorised trade repository (TR) by the end of the business day following the transaction day. The reporting scope has been defined by the European Securities and Markets Authority (ESMA) in the form of technical standards (ITS / RTS). The SFTR closes existing regulatory gaps in the area of securities financing markets. Furthermore, the SFTR introduces extended transparency requirements for managers of investment funds (UCITS and AIF) and enacts further reporting obligations concerning the re-use of collaterals.

In a similar way to EMIR Article 9, SFTR Article 4 distinguishes between financial and non-financial counterparties. The stated reporting obligations are generally applicable for both groups; however, the responsibility for fulfilling the reporting obligations in regards to a SFT between a financial counterparty and a non-financial counterparty lies with the financial counterparty, as long as the non-financial counterparty has not exceeded at least two of the three following threshold values on their balance sheet dates: (i) EUR 20,000,000 balance sheet total, (ii) EUR 40,000,000 net sales, and (iii) an average of 250 employees during the financial year. The following instruments are subject to this reporting obligation:

- Pension Funds,
- Securities- / Commodities Lending,
- Repurchase Agreements / Buy-Sell Backs, and
- Lombard Trades.

Transactions with central banks are excluded from this reporting obligation.

Reporting requirements were published by ESMA in the form of technical standards (ITS / RTS) and submitted to the European Commission for approval on March 31, 2017. Analogous to EMIR, the report must be filed with an authorised trade repository by the end of the business day following the transaction day (t+1).

The ESMA technical standards came into force on April 11, 2019. The reporting obligation according to the Article 4 of the SFTR will gradually become applicable for different counterparty classes, starting with credit institutions and investment firms on April 11, 2020.

Advantages of market maturity
Adaption of the EMIR reporting logic and infrastructure already implemented in Abacus Transactions for the SFTR module.

The new reporting obligation will also be applicable for existing SFTs, as long as they have a maturity of more than 180 days on the initial reporting date (fixed term contracts) or are still active for at least 180 days after this point in time (unlimited contracts). Since the reporting start depends on the category of the institution, the backloading period, which has been set to 190 days, also starts on that date.

Affected institutions	Applicability (after the ITS/RTS have come into force)
Credit institutions and investment firms	+12 months: April 11, 2020
Central counterparties as defined by EMIR	+15 months: July 11, 2020
Insurance and reinsurance companies, manager of undertakings for collective investments in transferable cecurities (UCITS) or alternative investment funds (AIF), and occupational pension funds	+18 months: October 11, 2020
Non-financial counterparties	+21 months: January 11, 2021

Figure 6: Application of the regulation by type of institution

Our Solution

The transaction data required for the SFTR reporting is delivered from the source systems (e.g. front and back office systems) via pre-defined standard interfaces on a daily basis. Due to the layer structure, the customer has the option to use the SFTR module separately as well as in combination with other Abacus Transactions modules. The process chain from the data import to the submission of reports has also been standardized to a considerable extent.

The SFTR module generates reports to the RegisTR and DTCC trade repositories for both individual institutions and groups of institutions.

Beyond the proper generation of reports, the SFTR module supports additional functionalities, such as the Module Relevance Check, Consistency Check, the identification of reporting relevant transactions, Internal Portfolio Reconciliation, the validation of results data according to the report-recipient's rules, an audit-proof correction process (for consistency errors, among other items), the import and export of tables (xml, csv / xlsx) and analytical reporting.

The Internal Portfolio Reconciliation and the provision of Proposed Transactions as well as the identification of non-relevant transactions facilitate a comprehensive submission of reports and a consistent, coordinated data workflow between systems. The process management can be flexibly carried out, either via the cockpit (GUI), the process menu or automatically via batch scripts.
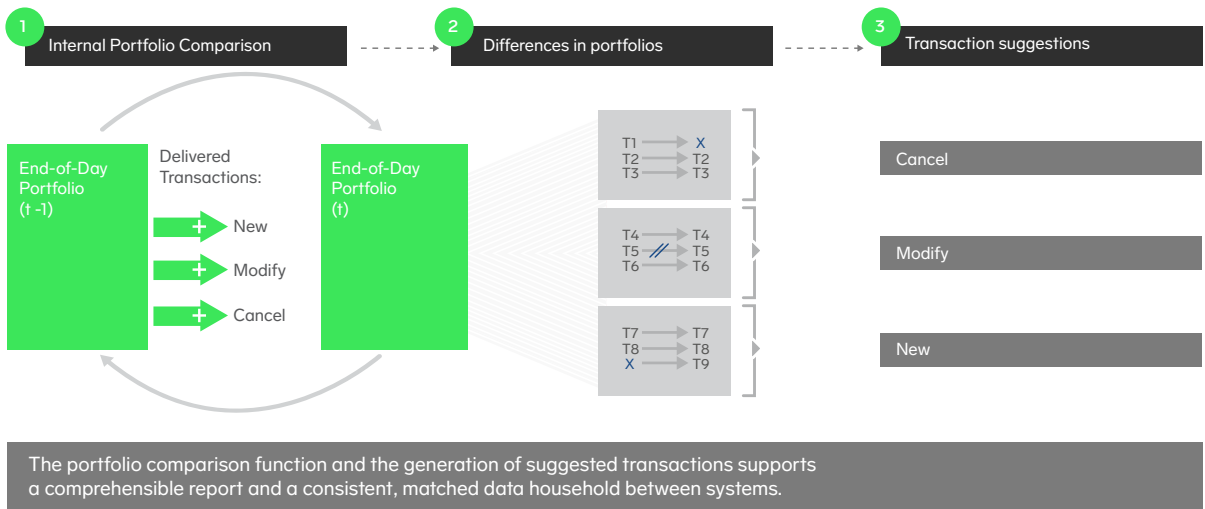

The portfolio comparison function and the generation of suggested transactions supports a comprehensible report and a consistent, matched data household between systems.

Figure 6: Application of the regulation by type of institution

Why is Abacus Transactions the right choice?

The development of Abacus Transactions is based on 20 years of experience in the area of regulatory reporting software. As users benefit from Regnology's continuous maintenance of the solution, Abacus Transactions is positioned as a modern product for transaction-based reporting. The data delivery for the modules is carried out via defined standard interfaces and this enables the connection to various source systems. The individual modules can also be flexibly activated and managed. In order to meet the demands for increased security and data protection, beyond the comprehensive user and role concept for managing access authorizations, Abacus Transactions provides a high level of audit compliance by logging all of the data changes in the audit trail ("Change log"). The software is available as an on-premise solution as well as SaaS (software as a service).

Fast implementation and comprehensive customer support

In particular, Abacus Transactions customers benefit from our quick adjustments of our software due to amendments of the corresponding regulatory requirements, both in terms of functional and technical changes. Our customer service comprises a telephone and an e-mail hotline, a web-based ticket system (OTRS) as well as our online service offering documentation, downloads of software packages and a host of other resources. Beyond these offerings, our Abacus Transactions Wiki, Release Plans and user group meetings provide a variety of options for meaningful exchanges and information sharing in relation to new regulations and product strategies between the users and Regnology.
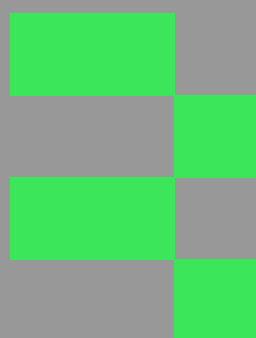
About Regnology

Regnology is a leading international provider of innovative regulatory and supervisory technology solutions (RegTech and SupTech), of AEOI and tax reporting products, as well as of services along the Regulatory Value Chain for financial services. Regnology has been a partner for banks and regulators for 25 years. Until the end of 2020, the company was part of BearingPoint group and operated under the name BearingPoint RegTech. Since the sale of the RegTech business to private equity firm Nordic Capital, the company has been independent. In June 2021, the company joined forces with Vizor Software and recently changed its name to Regnology. In total, Regnology serves more than 7,000 financial services firms with reporting solutions. At the same time, the company enables more than 50 regulators and tax authorities on five continents to collect data from 34,000 firms in 60 countries. Regnology has a total workforce of over 770 employees at 17 office locations in 12 countries.

More information:
www.regnology.net