

WHITEPAPER

Impact and Implementation of MiFID II and MiFIR Regulation on Banks and Trading Venues



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Management summary

The global financial crisis that began in 2007 highlighted clear weaknesses in the existing organisation of the financial markets, in terms of investor protection and market transparency, which ultimately revealed systemic risks affecting the entire financial system. In order to prevent the recurrence of a collapse of this kind, bank supervision initiatives were launched all over the world, such as the MiFID II directive and the associated MiFIR regulation in the European Union. As far back as 2007, MiFID's investor protection regulations were implemented by banks that provide asset management services for private clients. The provisions apply to banks, investment firms and stock exchange operators. These market participants are required to implement the MiFID II & MiFIR regulations by January 2018, which form part of the European Reporting Framework (ERF). In addition, local regulatory guidelines, such as the BaFin regulations for algorithmic and high-frequency trading are gaining in importance. The Basel Committee on Banking Supervision and the action areas described in BCBS 239 form a further regulatory pillar affecting matters such as a bank's IT architecture.

The coupling of regulatory reporting and a bank's risk management has now been implemented in the banks' IT systems. This means that reporting systems have become a central component of IT architecture planning, which is often supplemented by a reporting data warehouse. At the same time, the relevant data architecture and interfaces adhere to the framework statements of a bank-wide target IT architecture. Implementation of the new regulations, while focusing on consumer protection and capital market business (MiFID II & MiFIR), also demands an IT architecture-driven approach. Typical issues encountered when implementing such systems include the question of whether the new provisions can be implemented in the customer care system or whether implementation in the central portfolio management system would be more suitable for this purpose.

In the past, SQS has assisted banks with the development of reporting applications and IT-related aspects of implementing new regulatory requirements. The current implementation of the European MiFID II directive poses a challenge for many financial service providers. SQS currently acts as a MiFID II implementation partner for several banks.

Keywords

MIFID II

MIFIR

ERF

BCBS

BANKS

TRADING VENUES

Introduction

The MiFID I directive, which has been in force since 2007, focused exclusively on the stock markets and the associated investment advisory and investment processes. This instrument-related sphere of application is now being extended to cover all types of securities and financial derivatives. In particular, the directive addresses financial derivatives that were previously traded over the counter. Trading in these financial derivatives will be relocated, as far as possible, to trading venues with the appropriate

transparency. The fields of compliance, private banking and, more recently, the capital (trading) markets are the main stakeholders in these generally wide-ranging projects. The MiFID II & MiFIR provisions are complemented by further regulatory initiatives, in some cases upcoming ones such as rules governing market fraud. Figure 1 shows the additional regulatory initiatives, which need to be borne in mind when implementing MiFID II & MiFIR.

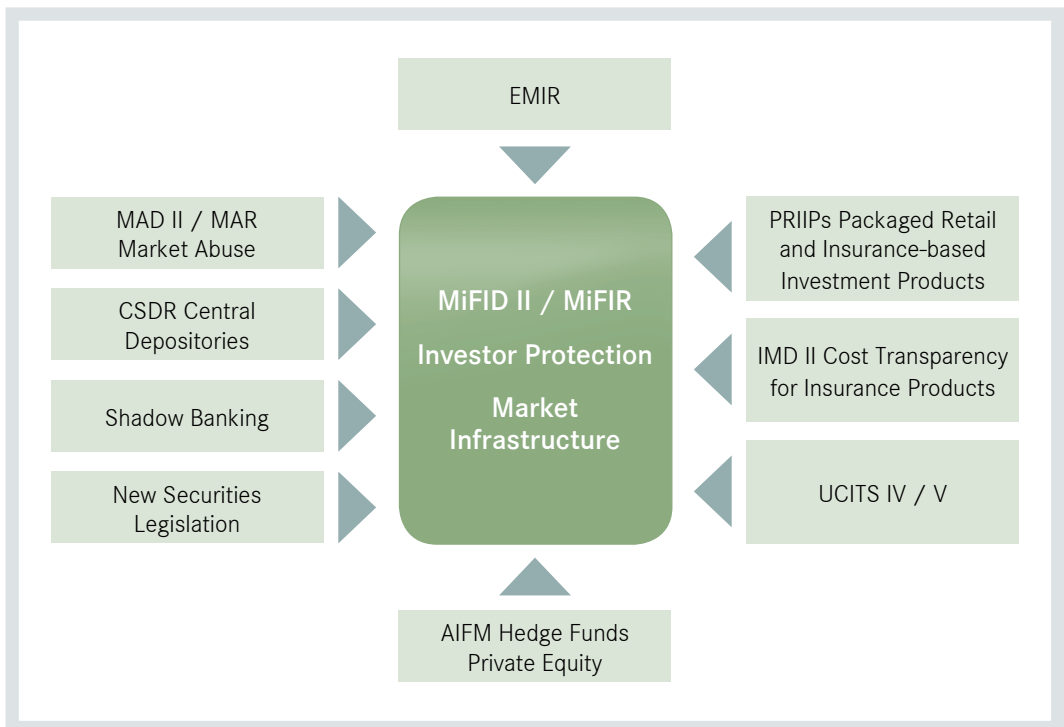


Figure 1: Regulatory environment [1,2]

Market analysis

The new MiFID II directive represents the most important capital market regulation directive of the last ten years and is closely linked to other financial market regulations. The complexity of the laws and regulations has now prompted banks, in particular, to initiate comprehensive IT projects. Surveys of financial institutions conducted in 09/2015 [e.g. [3], which focused on progress in terms of implementing regulatory requirements, revealed a level of IT readiness for MiFID II & MiFIR of approx. 30%.

Of the surveyed banks, 70% had already started to implement MiFID II & MiFIR. The majority of banks (over 80%) considered their need to take action regarding their IT systems to be significant. This also applied to the impact on the overall IT architecture of the financial institutions. European market participants are unanimous that implementing the MiFID II and MiFIR regulations will fundamentally change and even completely re-configure the European financial markets [4,5].

MiFID II / MiFIR timeline

The European Commission has proposed postponing the deadline for application of the MiFID II directive by one year. This would give national legislators, regulatory authorities and market participants until 3 January 2018 to comply with the provisions of the new directives (Figure 2).

MiFID II contains a variety of new provisions aimed at protecting investors. They affect the previous investor advisory process in relation to advisory records, the suitability of advice, financial product governance for issuers and distributors, reporting to clients during security transactions and cost information provided to clients. This whitepaper provides an overview of these new regulations.

The MiFIR regulation, which has already come into force, focuses on trading venues, market transparency and the market microstructure. A new kind of trading venue, known as an organised trading facility (OTF), is being introduced, which will be suitable for transactions previously conducted over the counter. It includes detailed regulations for pre- and post-trade transparency and transaction reporting. Special attention is given to algorithmic and high-frequency trading, including with regard to market making. This whitepaper takes a detailed look at the parts of banks and trading venues affected by the new regulations.

MiFID II & MiFIR cannot be considered in isolation from other current regulations. Dependencies exist between them and other directives and regulations, such as EMIR, MAD II/MAR, PRIIPs and UCITS. This whitepaper also looks at other regulations.

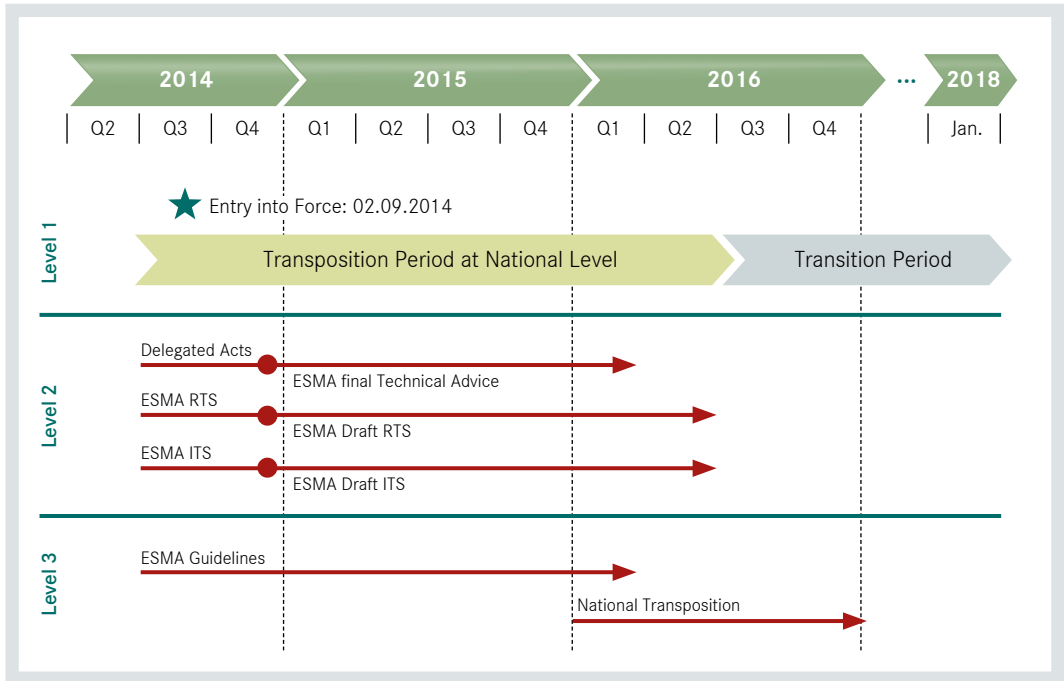


Figure 2: MiFID II / MiFIR timeline

Transposition on national legislation

From mid-2016 onwards, the European rules and ESMA specifications will be transposed into national law [6,7,8]. In Germany, this implementation in national law takes the form of the Markets in Financial Instruments Directive Implementation Act (Finanzmarktrichtlinie-Umsetzungsgesetz – FRUG), in conjunction with the Investment Services

Conduct of Business and Organisation Regulation (Wertpapierdienstleistungs-, Verhaltens- und Organisationsverordnung – WpDVerOV). The German Securities Trading Act (Wertpapierhandelsgesetz – WpHG) is particularly affected by these changes. This is in addition to BaFin circulars and announcements (Germany), such as the MaComp.

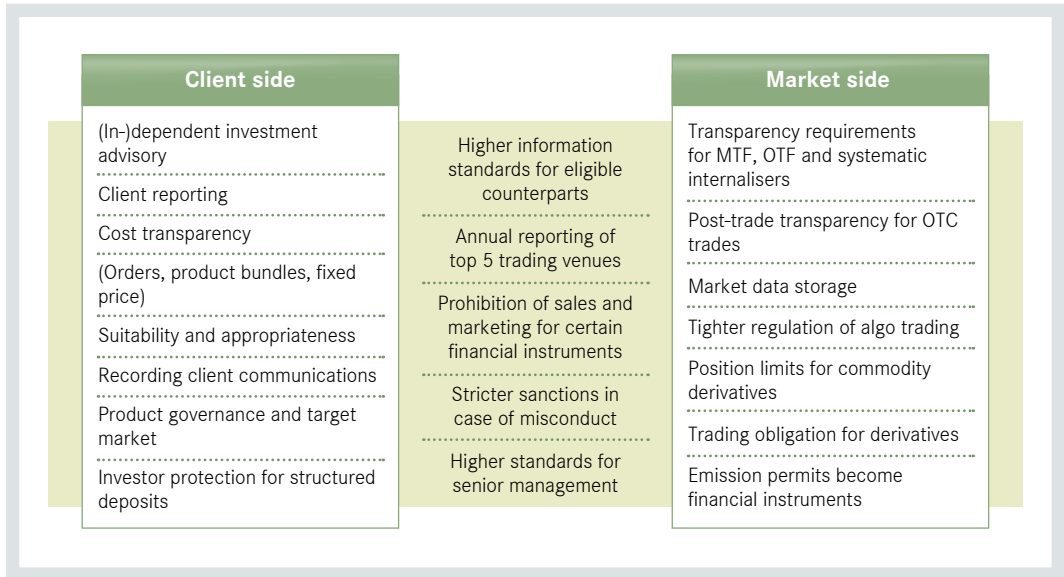


Figure 3: Overview of MiFID II innovations and essential implications [1]

MiFID II topics and key themes

In terms of content, the principal changes brought about by MiFID II and MiFIR can be divided into two main blocks: **Intermediary and investor protection-related issues (client side)** and **market and trading venue-related issues (market side)**. See Figure 3 for details. The principal changes include the introduction of a new form of trading venue, known as Organised Trading Facilities (OTF), by means of an extended transparency regime, new reporting requirements for trading financial instruments and reference data on these financial instruments, a trading obligation for shares and derivatives, which are subject to a clearing obligation pursuant to the EMIR, as well as new regulations for high-frequency trading and market microstructure. MiFID II and MiFIR provisions aimed at improving investor protection concern more stringent requirements in the fields of portfolio management, independent investor

advice, remuneration, product governance, product intervention and record-keeping obligations. If the consequences are divided between the **client side** and **market side (capital market)**, the following regulatory changes will need to be implemented:

Customer view on MiFID II: increased investor protection

One of the principal aims of the financial markets directive is to guarantee investors a uniformly high level of protection in relation to investment services. For example, MiFID I, which came into force back in 2007, first introduced the MiFID questionnaire for asset management. Within the asset management work flow, for example, the obligation to explain risks to clients was documented.

Regardless of the EU member state, in which shares, fund units or derivatives are purchased or sold, the same high level of protection for investors will exist in the future. Table 1 gives an overview of key investor-side implementation topics.

MiFID II implementation focus areas
Best execution policy
Client categorisation
Client reporting
Complex financial instruments
Conflicts of interest and code of conduct
Cost transparency
(In-)dependent investment advisory and honorary investment advisory
Inducements
Investment advisory process: suitability and advisory protocol
Product governance and target market
Recording client communications

Table 1: Overview of investor protection topics

Cost transparency

In addition, investment firms or banks that market a financial instrument must notify their clients of all other costs and overheads in connection with their provision of investment services linked to this financial instrument.

This disclosure obligation, taking the form of ex-ante information on all costs imputable to each order in connection with custody business, is a novelty of MiFID II.

A statement showing the anticipated personalised costs in relation to an order submitted by the client must be provided immediately before the order is executed. Possible special conditions for the client must also be taken into account. All own and third-party costs must be listed. These include (i) transaction-related costs, (ii) product-related costs, (iii) management-related costs and (iv) remuneration and allowances (inducements) paid to and received from third parties.

This ex-ante disclosure of all indirect or hidden costs poses a particularly serious IT challenge for banks and investment firms. Currently, this cost information is often either unavailable or cannot be obtained in the necessary detail for each individual trade or product bundle component. A detailed cost breakdown is generally difficult to obtain for fixed-price transactions between banks and clients. As a concrete example, let us consider a bank, which sells an index certificate to a client. The issuer off-sets the costs for licensing and managing the index directly against the index level, which serves as the assessment basis for the end client.

Best execution policy

In the wake of the increasing liberalisation and restructuring of the stock exchange landscape, which began with Regulation NMS (NMS = National Market System) in the USA, followed by the sanctioning under MiFID I of private stock exchanges known as multilateral trading facilities (MTF) in Europe, a fragmentation of exchange trading in financial instruments has taken place. Whereas previously a given share class, for instance, would largely be traded solely on its home stock exchange, this same class may now be listed simultaneously and internationally on several trading venues.

As a result, a variety of different trading venues can be considered for the execution of a client order. Ideally, at any one time no price differences should exist (no-arbitrage bounds condition). However, in reality, parallel trading venues differ in terms of liquidity/market depth and costs.

This means that a financial institution must apply a best execution policy when executing client orders. This policy aims to ensure that the best possible outcome is achieved for clients when their orders are executed. It goes without saying that a best execution policy only makes sense if the client does not specify a stock exchange when placing his order. The introduction of a best execution policy is not a change brought about by MiFID II. MiFID II aims to make the best execution policy of a bank or broker more transparent for clients. The previous best execution policy in line with MiFID I is not considered to be very effective.

Market view on MiFID II

Table 2 provides an overview of the financial market-related topics addressed by MiFIR.

MiFIR implementation focus areas
Algorithmic trading (AT) and high-frequency trading (HFT)
Data reporting services provider: ARM, APA and CTP
Post-trade transparency
Pre-trade transparency
Systematic internaliser
Trading obligation
Trading venues. Especially OTF
Transaction reporting

Table 2: Overview of MiFIR impact on capital market areas

Organised trading facilities (OTF)

One major novelty is the creation of a new form of trading venue, known as organised trading facilities (OTF). The purpose of setting up an additional type of multilateral trading venue is as follows:

- OTFs are intended for organised trading in financial instruments, which were usually traded over the counter (OTC) in the past.
- Broker crossing networks (BCN), most of which represent ‘dark pools’ (i.e. there is no trading transparency), could switch to the new OTF type of trading venue.
- OTFs are considered a suitable trading venue for commodity derivatives previously traded OTC.

OTFs are subject to the following restrictions:

- Trading in shares and certificates representing shares (ADRs) is not permitted on OTFs.
- Operating an OTF and a systematic internaliser (SI) within the same company is not permitted.

This affects stock exchanges or firms that intend to establish a trading venue taking the form of an OTF in the future. Typically companies pursuing this goal are joint ventures set up by universal or investment banks. MiFID II’s investor protection regulations lead to the adaptation and extension of a large number of applications, which create the need for a dedicated new IT project. For a more extensive discussion see [9].

Transaction reporting

The aim of transaction reporting is to facilitate the identification and investigation of potential market abuse. Transaction reporting aids the process of monitoring the fair and orderly functioning of markets.

Market participants are obliged to report executed transactions in financial instruments to the competent authority. The transaction must be reported as soon as possible, and at the latest by the end of the following working day (T+1). This reporting requirement applies to the following instruments:

- Financial instruments listed and traded at a trading venue.
- Financial instruments whose underlying is a financial instrument, which is listed on a trading venue and traded there.
- Financial instruments whose underlying is an index or basket composed of financial instruments, which are listed and traded at a trading venue.

The reporting requirement also applies to the following business transactions:

- Purchases, sales, exercise of options (put or call) and close-outs must be reported.
- Whereas security finance transactions (repos, securities lending), portfolio compressions (EMIR) and contractual final maturities (e.g. of bonds), for example, do not need to be reported.

Execution means any action leading to a transaction. In other words, the transaction is the outcome, while execution is the activity leading to that outcome.

Algorithmic trading and high-frequency trading

In algorithmic trading (AT), computers are directly linked to the trading platform. The algorithms place orders without any human intervention. The computers monitor market data and, if necessary, other information at a very high frequency, based on their algorithms, they generate and send trading instructions to the electronic trading system.

A wide variety of different algorithms are used:

- Some seek out arbitrage opportunities in the form of minimal differences between the exchange rates for three currencies.
- Others look for optimum executions of large orders, in order to minimise costs.
- Others attempt to implement long-term trading strategies.

High-frequency trading (HFT) is a sub-category of algorithmic trading. HFT requires extremely fast order routing. The time span between the algorithmic trading decision and execution on the trading system may be no more than a fraction of a second.

Table 3 lists the characteristics of algorithmic and high-frequency trading.

The tighter regulations laid down in MiFID II mean that all trading firms using any form of trading algorithm (including most forms of electronic trading) need either to invest in a new way of testing their algorithms or cease trading. Senior management will be held responsible for any lack of testing that leads to their trading causing or contributing to market disorder. Firms must now certify that they have tested their trading algorithms to prevent them contributing to market disorder. SQS is now working in partnership with TraderServe to provide a managed testing service, combining TraderServe's proven and sophisticated AlgoGuard test environment, which emulates real world market micro structures, coupled with the testing consultancy expertise of SQS [10].

Common characteristics of AT and HFT	Special characteristics of HFT
Automatic order generation and dissemination	Extreme low latency requirement
Automatic order management	Focus on high liquid instruments
Market data observation in real-time	Profit generation from buy and sell
Direct electronic market access (DMA)	No end of day positions
No human intervention	Co-location and proximity hosting
Usage by professional traders	Very fast Order cancellation
Pre-structured trading decisions	Very high number of orders
	Small margins pro trade
	Very small holding period
	Typically proprietary trading

Table 3: Characteristics of algo trading and high-frequency Trading

MiFID II / MiFIR implementation projects

In order to implement MiFID II and MiFIR, affected banks, investment firms and trading venues have set up wide-ranging projects, which are not only characterised by their complex IT implementations. In some cases, the new requirements for banking processes will influence business models. The European Commission's recent postponement of the mandatory introduction of MiFID II for one year is a testament to the cost and complexity of the various banks' MiFID II projects. For a universal bank, the implementation process does not simply involve putting in place a single new application system. For a universal bank, up to a hundred existing applications will have to be fine-tuned. On top of this, the associated business processes also have to be adapted. High-frequency trading strategies involving market abuse, which potentially lead to market manipulation on trading venues subject to the provisions of MiFID II, represent a further factor.

Prohibited trading practices, such as spoofing or layering give rise to a greater demand for a financial instrument on a (futures) exchange than actually exists, so that the seller can achieve a better price. The legal foundation for monitoring market manipulation is the MAD II directive.

In order to facilitate the successful, efficient implementation of MiFID II, preliminary studies and implementation projects, consultancy firms have been developing tools, which help investment service providers' systems to access the relevant MiFID II legal texts and national legislation in a structured way, thus ensuring that they can support every phase of their MiFID II projects as effectively as possible. One of these tools is the Bearing Point MiFID II Navigator. For regulatory projects, it is vital to conduct a detailed impact assessment before starting work on the IT implementation.

Overview of the task packages required for a MiFID II implementation project

Typically, the following tasks need to be completed:

- Prioritisation and relevance evaluation of MiFID II topics (Figure 4)
- Approval of an implementation road map
- Approval of the program planning and overall steering of implementation
- Coordination of the necessary system adjustments as part of a global MiFID II project
- Assessment of the regulatory environment in relation to the bank-wide architecture
- Identification and adoption of specialist and technical requirements
- Drawing up technical plans
- Conduct of an impact and gap analysis, analysing and optimising processes
- Evaluating interfaces and satellite systems
- Coordination of system connections and system integration

In the overall context of a bank's MiFID II project, the bank often sets up a phase model, which includes the following principal project phases:

- Project set-up
- Gap and impact analysis
- Implementation planning
- Implementation
- Testing and acceptance

Figure 5 shows a typical project organisation structure at a universal bank.

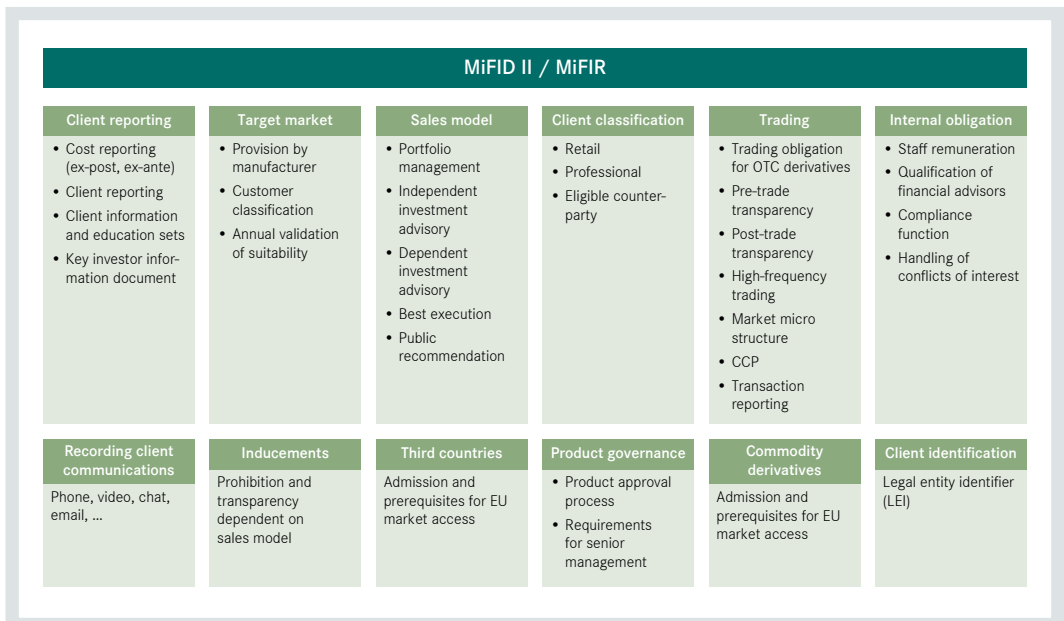


Figure 4: MiFID II / MiFIR topic map [11]

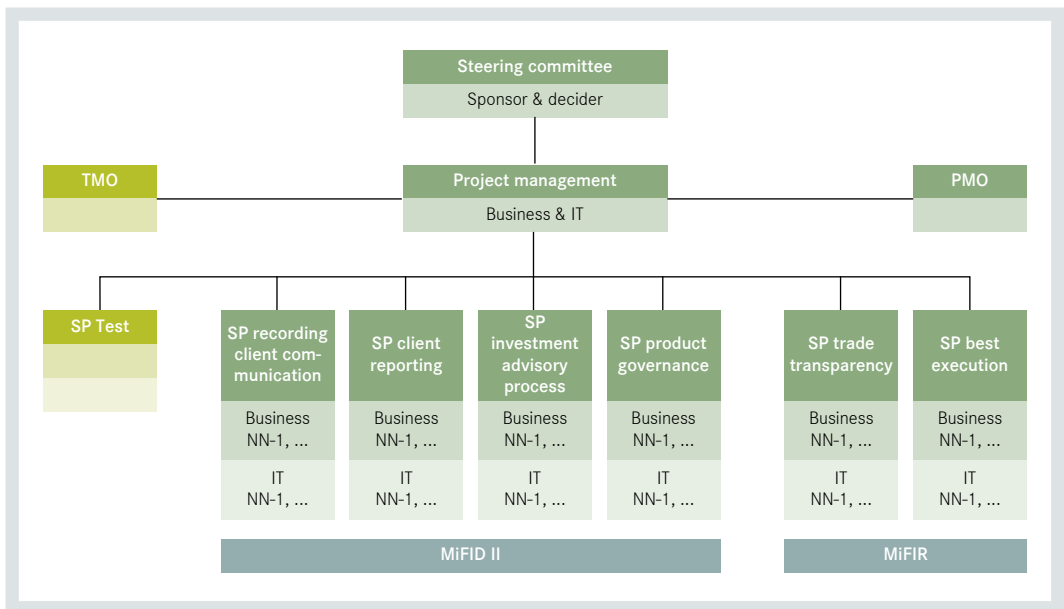


Figure 5: Exemplary project organisation for an implementation project

MiFID II & MiFIR impact assessment

The impact of the MiFID II & MiFIR requirements on a bank's specific business model must be assessed:

- Analysis of financial instruments
- Analysis of client categories
- Analysis of process chains

Workshops involving the affected departments must be held:

- Clarifying the regulatory requirements
- Impact assessment
- Devising solutions
- Prioritisation of implementation issues
- Drawing up implementation plans (release, project and budget planning)

Test and quality management in MiFID II & MiFIR projects

A major characteristic of MiFID II & MiFIR implementation is the sheer number of systems affected and resulting specialist and technical project work streams. Because of this, it is vital to put a reliable procedure into place for coordinating and documenting all requirements. As a rule, the higher-level project-related SQS Requirement Management assists with requirements analysis in connection with MiFID II & MiFIR projects. It covers such matters as ensuring that a systematic requirements catalogue is built up during the phase impact analysis. All requirements are specified and adopted by applying the chosen project methodology. Testing the MiFID II implementation represents another key challenge. The large number of affected applications often leads to excessively high testing costs. For this reason, SQS PractiQ® provides methods, techniques and tools, which support you throughout the testing

process, beginning with the development of test cases. All test cases are recorded by a testing tool and released before the start of the relevant test phase. One of the consequences of the large number of applications affected by the new European regulations is the decentralised structure of the test objects. At the same time, an incremental project procedure enables the MiFID II & MiFIR system adaptations to be developed and tested in parallel work streams. The overriding SQS test management coordinates the test objects and test case preparation for each work stream and is able to provide information, at any time, on the status and quality of all testing activities.

Alongside the creation of test case collections, in addition to test and requirements management, SQS AG also completes the following tasks for financial service providers during MiFID II & MiFIR implementation:

- Test planning
- Requirements analysis

- Test management
- Test case analysis
- Test execution
- Test data generation
- Release and go live planning

During the process, SQS expertise in the field of test environments also generates benefits, in terms of targeted creation and operation of system environments:

- Service virtualisation for efficient test environments
- Requirements-based and automated creation of test environments
- Controlled processes for all aspects of test environment management
- Efficient deployment processes using standardised virtual test environments
- Cost efficiency through IT asset management

Conclusion and outlook

The large number of statutory provisions, which financial service providers currently have to implement, requires methods, techniques and tools that can also be used for other regulatory projects. These include overriding regulatory architecture planning for the IT system landscape and a methodical approach to impact analysis. A project-wide requirements repository in HPQC, for example, ensures the coordinated collection of all requirements and supports system and acceptance testing during later stages in the project. A binding

testing procedure ensures a structured, efficient test process. A test management tool is used for both test case preparation and test execution. Criteria and quality standards are laid down for the following test and go live-relevant quality gates:

- Start system test Devise test cases and test planning
- Start acceptance test
- Go live and roll-out

These criteria and quality standards must be met during all regulatory implementation projects.

In the past, SQS has assisted banks with the introduction of reporting applications and IT-related aspects of implementing new regulatory requirements. The current implementation of the European

MiFID II directive poses a major challenge for many financial service providers. SQS is currently acting as the MiFID II implementation partner for several banks. Clients who have been on our books for many years appreciate our methodical approach, as well as the high quality awareness of our consultants.

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