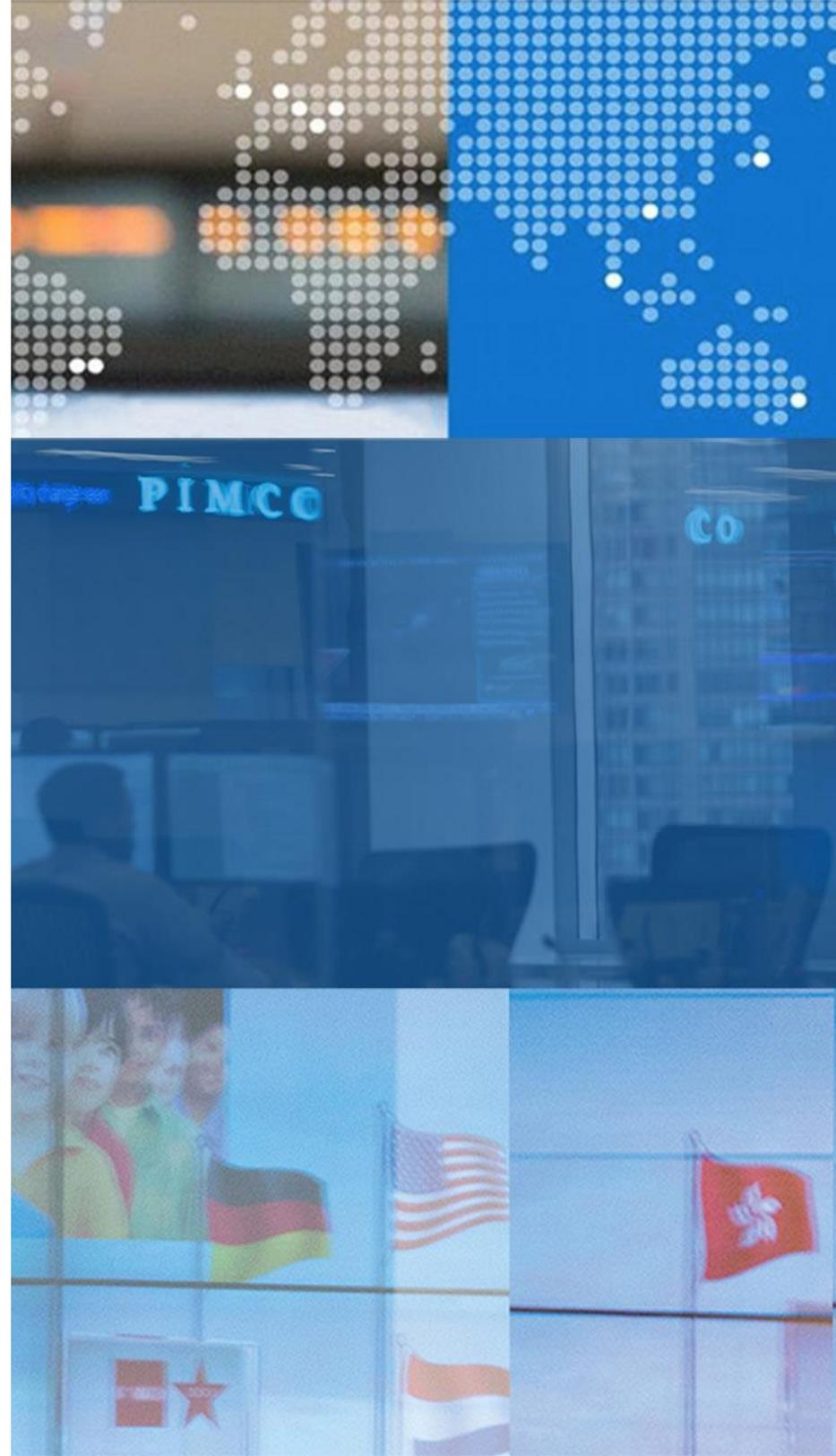


P I M C O

FIMSAC - July 16th, 2018

MiFID II Transparency Rules

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MiFID II : Executive Summary

MiFID II ("Markets in Financial Instruments Directive"):

- Updated EU financial markets regulation, effective **Jan 2018**
- Regulation is primarily designed for uniform and small transaction market (equity-like)
- Application to heterogeneous and large transaction market (i.e. fixed income) not straightforward

Focus on Transparency:

- **Pre-trade transparency** for "small-size" quotes
- **Post-trade transparency** of trade details, including price and volume for all trades.
- Choice of execution method (venue, counterparty, slicing/dicing) impacts level of transparency and reporting obligations.
- Liquid derivatives are subject to obligation to be traded on electronic venue.

Territorial Scope:

- All trades done out of the EU or trades where one counterparty is regulated in Europe

Implementation Considerations:

- Multiple business areas involved (Legal & Compliance, Tech, Ops, Risk, PM, Client-Facing)
- Costly and time-consuming technology build-out

Expected Market Implications:

- Trading and markets will be mainly affected via **increased transparency on trade details**
- Potential **increase in liquidity premia**
- Potential **increase in cost of trading for programs** that are executed over an extended period of time
- Expect an **increase in frequency of frozen market episodes** when transfer of risk becomes difficult

MiFID II Overview : Regulatory Scope Across 4 Quadrants

1) Market Structure

- Trading Venues
- Systematic Internalizers
- Derivatives Trading Obligation
- Equities Trading Obligation
- Algos/GFT/DMA

2) Investor Protection

- Unbundling research
- Cost and Charges Disclosures
- Product Governance and Distribution
- Inducements
- Best Execution
- Suitability
- Appropriateness
- Enhanced Supervisory Powers
- Third country access

3) Transparency

- Product classification and liquidity definition
- Size thresholds
- **Pre-trade**
- **Post-trade**
- Enhanced Transaction reporting

4) Organisational Requirements

- Governance and Senior Management
- Remuneration
- Conflicts of Interest
- Compliance and Risk Requirements
- Client Classification

The screenshot shows a CNBC news article titled "Europe's financial sector is getting tougher rules and it will affect the whole world". The article discusses new rules taking effect in January and their implications for the finance industry, including standards for executing trades and concerns about analyst research. Below the article is a video player with the title "Mifid II 'the biggest change' to financial markets in 10 years: Pro".

Source: CNBC

Summary of Mifid II Regulatory Objectives (source: ICMA):

- **Move OTC trading onto trading venues** through a trading obligation for non-equities
- **Increase transparency and create a price discovery mechanism**, by expanding pre- and post-trade transparency requirements to non-equity instruments
- **Preserve liquidity** in already challenged markets:
- **Increase available data** (so that market participants are informed as to the true level of potential transactions)

MiFID II Transparency Framework (1) : Pre- versus Post-Trade

Pre-trade transparency

- A detailed **firm** (!) quote has to be made available to other market participants
- Level of disclosure is a function of security, size, and counterparty
- Quotes need to be published even in absence of trade taking place (i.e. expired quotes)

Post-trade transparency

- Details of the trade disclosed to the public
- Timing of disclosure (real time or deferred) is a function of security and size
- "Large" or illiquid trades made transparent from t+2 up to 4 weeks later
- Otherwise published within 15 minutes (to be reduced to 5 minutes by 2020)

Waivers and deferrals may not be uniform across the EU as they are determined by each national regulator

Example 1: Intraday Pre- and Post-trade Transparency (Spanish Tsy bond)



For illustrative purposes only.

Source: Bloomberg

Example 2: Pre-trade transparency for corporate bonds

View Chart Export Most Active Traded Bonds

MIFID MIFID (Rt.Trades) MIFID (Def.) MIFID (Canc/Amd) **MIFID (PreTrade)**

List All securities

Source MIFID (Pre Trade Sources) Bond Type Corp

Filters No filters selected.

Aggregated Trades Individual Trades Group None Period Today 07/05/18 - 07/05/18

Security	Description	ISIN	Maturity	Curr	B Px	A Px	B Sz	A Sz	Src	Time
21)	d HSBC 6 1/8 PERP	US404280BN80	PERP	USD	98.375	--	200M		BMFQ	12:52
22)	d GSK 3 7/8 05/15/28	US377372AN70	05/15/28	USD	101.346	--	50M		BMFQ	12:06
23)	d GS Float 05/15/26	US38141GXD14	05/15/26	USD	--	99.193		40M	BAFQ	11:30
24)	d KHC 4 06/15/23	US50077LAS51	06/15/23	USD	100.052	--	100M		BMFQ	11:17
25)	d HSBC 6 1/8 PERP	US404280BN80	PERP	USD	98.100	--	200M		BAFQ	10:57
26)	d GE 4 1/8 10/09/42	US369604BF92	10/09/42	USD	93.630	--	30M		BMFQ	10:54
27)	d HSBC 6 1/2 PERP	US404280BP39	PERP	USD	--	96.250		300M	BAFQ	10:53
28)	d KZOKZ 6 3/8 10/24/48	XS1807299331	10/24/48	USD	102.050	--	300M		BMFQ	10:50
29)	d WMT 3.4 06/26/23	US931142EK56	06/26/23	USD	100.923	--	32M		BMFQ	10:37
30)	d RY Float 04/30/21	US78013XKH07	04/30/21	USD	100.127	--	50M		BMFQ	10:36
31)	d GSK 3 3/8 05/15/23	US377372AL15	05/15/23	USD	100.242	--	2M		BMFQ	10:14

For illustrative purposes only.

Source: Bloomberg

MiFID II Transparency Framework (2) : Security Characteristics

- Level of transparency for a trade is a function of three security characteristics:
 - **Liquidity** (ISIN-specific) determined by regulator
 - **SSTI (Size Specific To Instrument)** threshold (asset class-specific). Size threshold that separates small trades from normal trades.
 - **LIS (Large In Scale)** threshold (asset class-specific). Size threshold that separates normal trades from large/block trades.
 - Relevant fixed income asset classes are:
 - Sovereign bonds
 - Other Public bonds
 - Corporate bonds
 - Covered bonds
 - Convertible bonds
 - IRS grouped by currency and maturity

Example: German Bund (deliverable into liquid 'RX' Futures) deemed "not liquid"

Bundesrepublik Deutschland Bundesanleihe			
Is Instrument TOTV	Yes	(as of 01/03/18)	
Is Instrument Liquid	No	←	
Calibration Date	07/01/18	Next Calibration Date	10/01/18
Pre Trade		Post Trade	
SSTI	EUR 700,000	SSTI	EUR 10,000,000
LIS	EUR 6,000,000	LIS	EUR 25,000,000
		Currency	EUR
		MiFid Currency Rate	1.000000
Classification		MiFID Pre/Post Trade Reporting Calculator	
MiFID Asset Class	Bonds	Security Name	DBR 0 3/ 02/15/28
MiFID Sub Asset Class	Sovereign Bond (EUSB)	ISIN	DE0001102440
MiFIR Identifier	BOND	Is Instrument Liquid	No
MiFID Seniority	SBOD	SSTI Pre Trade	EUR 700,000
Financial Instrument Class	Debt Instruments: Bonds	LIS Pre Trade	EUR 6,000,000
Complex Indicator	No	SSTI Post Trade	EUR 10,000,000
Complex Attribute	Standard/Fixed/TOTV	LIS Post Trade	EUR 25,000,000

For illustrative purposes only.

Source: Bloomberg

Example: Maltese government bond deemed "liquid"

Malta Government Bond			
Is Instrument TOTV	Yes	(as of 01/03/18)	
Is Instrument Liquid	Yes	←	
Calibration Date	07/01/18	Next Calibration Date	07/01/18
Pre Trade		Post Trade	
SSTI	EUR 700,000	SSTI	EUR 10,000,000
LIS	EUR 6,000,000	LIS	EUR 25,000,000
		Currency	EUR
		MiFid Currency Rate	1.000000
Classification		MiFID Pre/Post Trade Reporting Calculator	
MiFID Asset Class	Bonds	Security Name	MALTA 2.1 08/24/39
MiFID Sub Asset Class	Sovereign Bond (EUSB)	ISIN	MT0000012774
MiFIR Identifier	BOND	Is Instrument Liquid	Yes
MiFID Seniority	SBOD	SSTI Pre Trade	EUR 700,000
Financial Instrument Class	Debt Instruments: Bonds	LIS Pre Trade	EUR 6,000,000
Complex Indicator	No	SSTI Post Trade	EUR 10,000,000
Complex Attribute	Standard/Fixed/TOTV	LIS Post Trade	EUR 25,000,000

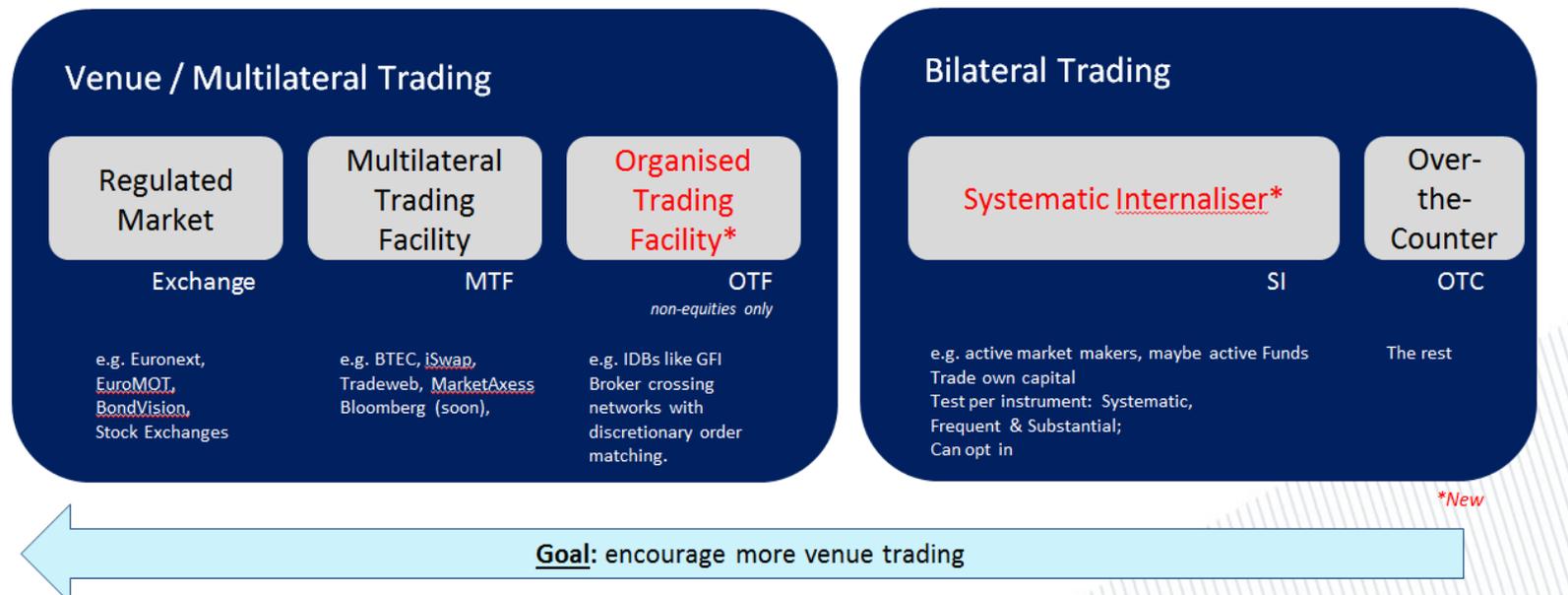
For illustrative purposes only.

Source: Bloomberg

MiFID II Transparency Framework (3) : Market Infrastructure

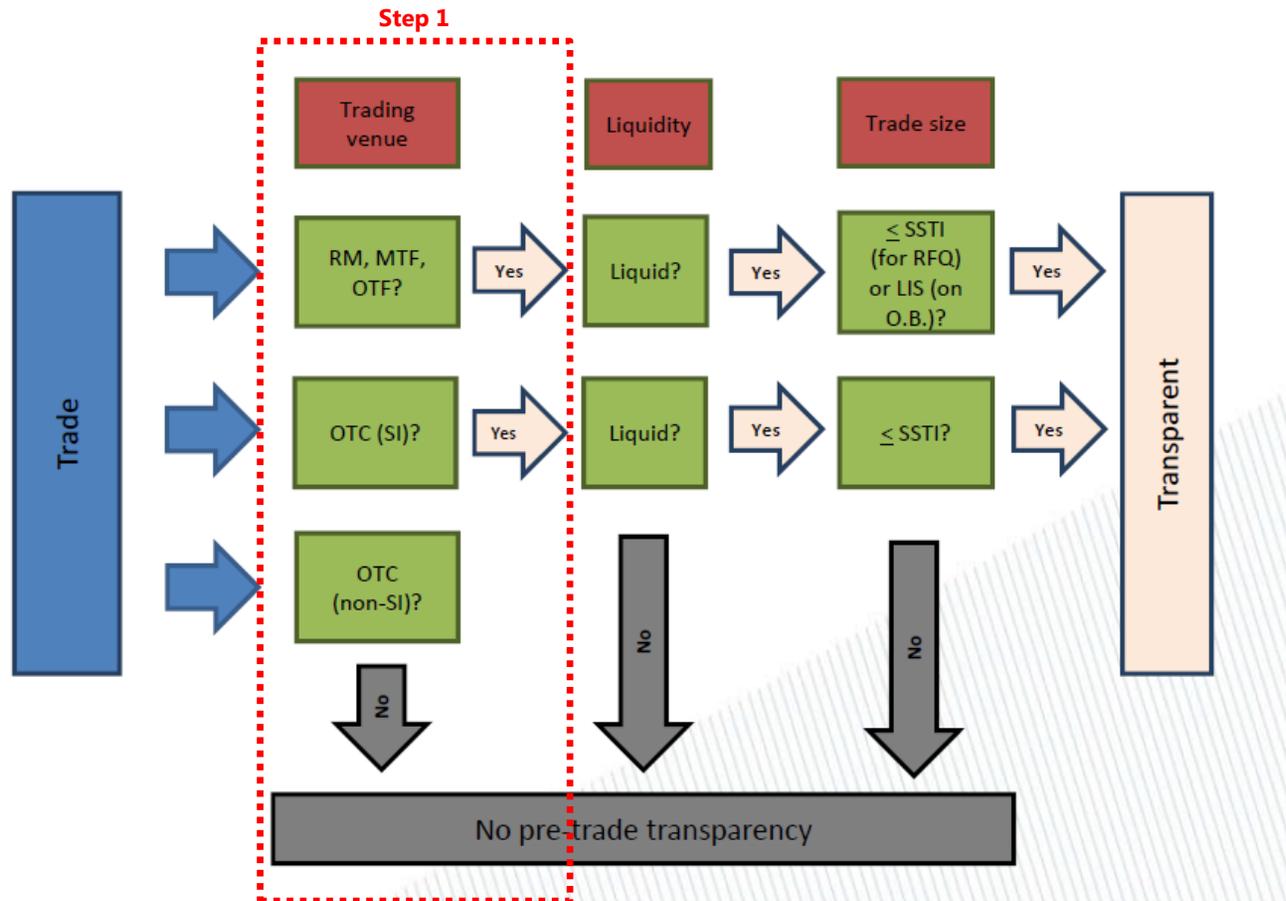
Transparency and trade publication requirements depend on where/how the transaction was conducted:

- If executing on a venue – **Venue** reports (e.g. Bloomberg, Tradeweb, etc)
- If executing with an SI – **SI** reports (e.g. Goldman Sachs, JPM, etc)
- If executing via OTC – OTC **“Seller”** reports (“Seller” investment firm)
- If executing with non-EU counterparty – EU party to the trade reports



Source: ICMA

MiFID II Pre-Trade Decision Tree (1): Trading Venue



Source: ICMA

RM: Regulated Market (e.g. exchange).
 MTF: Multilateral Trading Facility (electronic platform). OTF: Organized Trading Facility (dealer-only platform).
 SI: Systematic Internalizer (specialist on a security).
 SSTI: Size Specific to Instrument (threshold that separates small trades from normal trades).
 LIS: Large in Scale (threshold that separates normal trades from large/block trades).

MiFID II Pre-Trade Decision Tree (2): Liquidity Test

What is "Liquid"?

- If the trade is going to be executed via RM, MTF, OTF, or OTC (via SI), **then there is a liquidity test.**
- Liquidity is determined and reviewed periodically **by the regulator** based on pre-defined criteria
- This is done on the **ISIN level**
- Trading venues have to keep track of the latest liquidity determination and the associated transparency requirements

What is "liquid"?

ISIN-based assessment

Bond = liquid if trades at least:

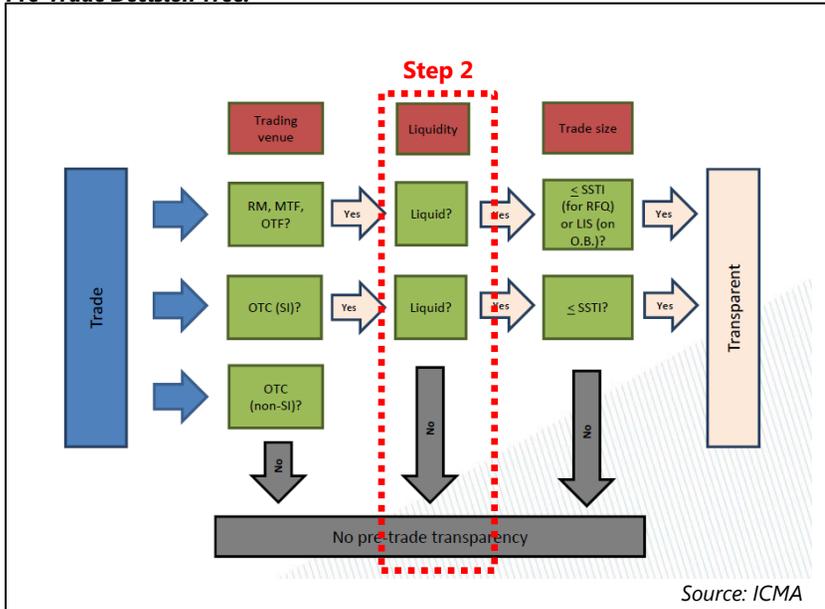
- 2x a day, on average.
- EUR 100k daily notional, on average.
- 80% of the days.

For new issues, "liquid" depends on bond type and issue size:

- Sovereign. New issue size > EUR 1 bln.
- Public/Corp/Convert/Covered. New issue size > EUR 500 mln.

All other bond types on new issue: not deemed liquid.

Pre-Trade Decision Tree:



Liquidity information on venue side (Bloomberg):

United States Treasury Note/Bond		Next Calibration Date	
Is Instrument TOTV	Yes (as of 02/01/18)	Next Calibration Date	10/01/18
Is Instrument Liquid	No	Pre Trade	Post Trade
Calibration Date	07/01/18	SSTI	EUR 10,000,000
		LIS	EUR 25,000,000
		Currency	USD
		MiFid Currency Rate	1.199300
Classification		MiFID Pre/Post Trade Reporting Calculator	
MiFID Asset Class	Bonds	Security Name	T 3 02/15/48
MiFID Sub Asset Class	Sovereign Bond (EUSB)	ISIN	US912810SA79
MiFIR Identifier	BOND	Is Instrument Liquid	No
MiFID Seniority	JUND	SSTI Pre Trade	USD 839,510
Financial Instrument Class	Debt Instruments: Bonds	LIS Pre Trade	USD 7,195,800
Complex Indicator	No	SSTI Post Trade	USD 11,993,000
Complex Attribute	Standard/Fixed/TOTV	LIS Post Trade	USD 29,982,500
Relevant Competent Authority		Reporting Type	VENUE
Authority	GB	Quantity	USD 1,000 M
Identifiers		Pre Trade Publication	WAIVER
FISN Code	US T BONDS/3 DTD 20480215..	Post Trade Publication	DEFERRED
Official CFI Code	DBFTFR		

For illustrative purposes only.

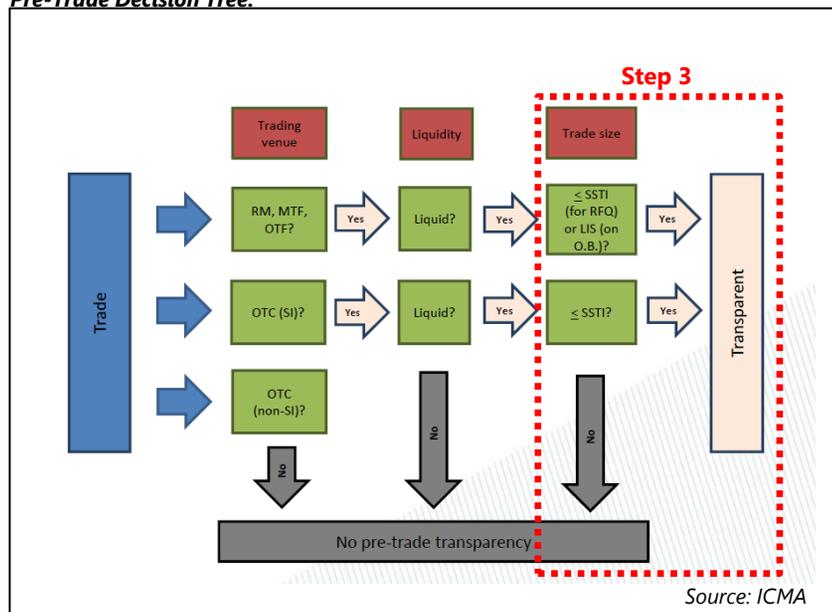
Source: Bloomberg

MiFID II Pre-Trade Decision Tree (3) : Trade Size Test

What is the trade size?

- If the trade is going to be executed via RM, MTF, OTF, or OTC (via SI), **and if** the security is officially deemed "liquid", **then there is a trade size test.**
- If the trade is "small" ("below SSTI") then there is a **real-time pre-trade transparency requirement**, which includes individual bids and offers
- If the trade is "medium" (between "SSTI" and "LIS") then there is a **real-time pre-trade transparency requirement**, for the average of the quotes only
- If it is "large" (i.e. "LIS" and above) then there is no transparency requirement
- The regulator determines and periodically reviews these thresholds for entire market sectors. German Bunds and Maltese debt are both treated as "sovereign bonds" with the same thresholds.
- Additionally, the **regulator makes no distinction between 1yr or 100yr bonds.**
- The thresholds are expected to go up by a factor of 3 to 5, thus increasing the scope for pre-trade transparency over time

Pre-Trade Decision Tree:



TRANSITIONAL TRANSPARENCY CALCS - BONDS

Asset class – Bonds				
Type	Levels to be applied			
	SSTI – pre-trade	LIS – pre-trade	SSTI – post-trade	LIS – post-trade
SOVEREIGN	700,000	6,000,000	10,000,000	25,000,000
CORPORATE	300,000	1,000,000	1,500,000	2,500,000
CONVERTIBLE	500,000	1,500,000	2,000,000	3,000,000
PUBLIC	400,000	3,500,000	5,500,000	15,000,000
COVERED	300,000	1,500,000	3,000,000	7,000,000
OTHER	300,000	2,000,000	4,000,000	15,000,000

- Values applied until 31MAY19
- Liquidity assessment due before 01DEC17

Source: ESMA <https://www.esma.europa.eu/policy-activities/mifid-ii-and-mifir/mifid-ii-transitional-transparency-calculation>

Asset class – IRS

Type	Levels to be applied			
	SSTI – pre-trade	LIS – pre-trade	SSTI – post-trade	LIS – post-trade
EUR TTM_4Y_5Y	20,000,000	55,000,000	125,000,000	150,000,000
EUR TTM_5Y_6Y	20,000,000	35,000,000	70,000,000	125,000,000
EUR TTM_9Y_10Y	15,000,000	35,000,000	55,000,000	80,000,000
USD TTM_5Y_6Y	25,000,000	50,000,000	90,000,000	100,000,000

- Liquidity and SSTI/ LIS
- Values applied until 31MAY19

Asset class – CDS

ITRAXX	Levels to be applied			
	SSTI – pre-trade	LIS – pre-trade	SSTI – post-trade	LIS – post-trade
EUR 5Y	7,500,000	55,000,000	175,000,000	225,000,000
EUR CROSSOVER 5Y	5,500,000	20,000,000	45,000,000	55,000,000

- Liquidity and SSTI/ LIS
- Values applied until 31MAY19

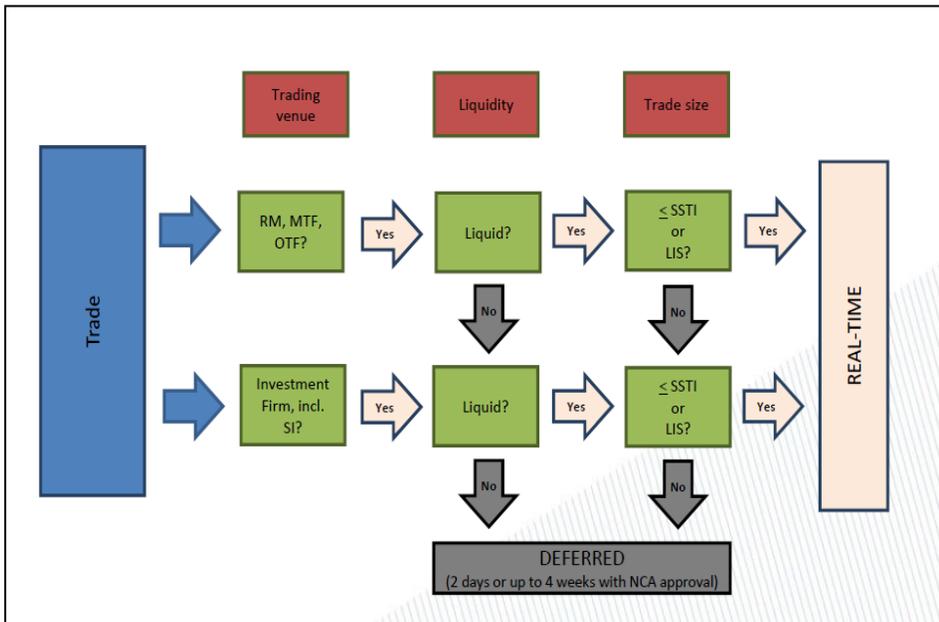
For illustrative purposes only.

Source: Bloomberg

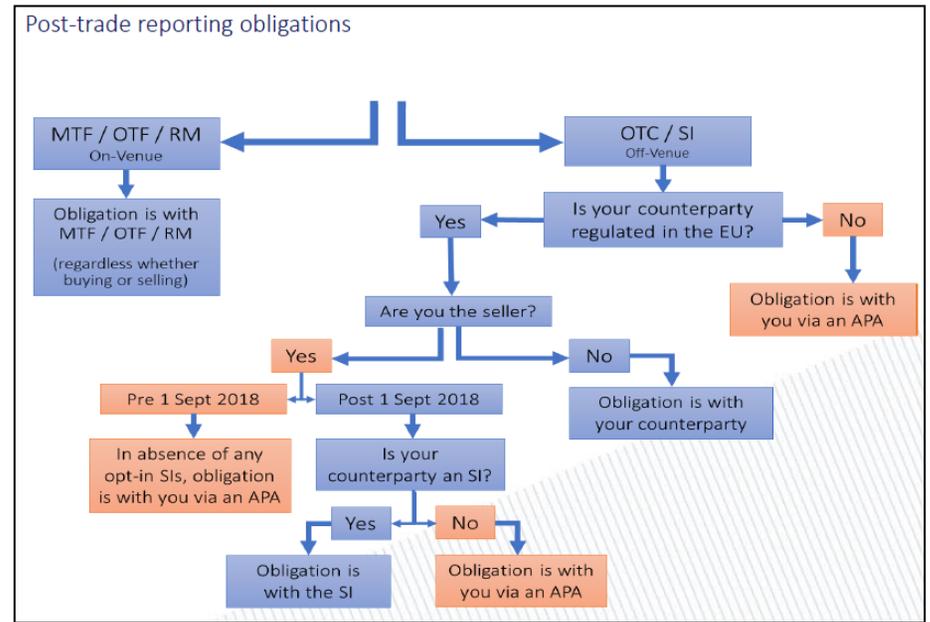
MiFID II Post-Trade Decision Tree(s)

Post-Trade Transparency:

- Depending on liquidity and size, the post-trade requirement is either real-time, deferred up to 4 weeks, or waived (at the discretion of NCA)
- Execution data is currently scattered across different trading venues, with no consolidated data source and no common reporting format.
- **Access has not been free of charge**, however, ESMA have recently clarified they expect full machine-readable access without subscription fees.
- In the case of swaps, there is no cap on the reported trade size (unlike Dodd-Frank). This means asset managers using MAC swaps have to change trading behaviour otherwise market participants can infer their total book size.



Source: ICMA



Source: ICMA

RM: Regulated Market (e.g. exchange).
 MTF: Multilateral Trading Facility (electronic platform). OTF: Organized Trading Facility (dealer-only platform).
 SI: Systematic Internalizer (specialist on a security).
 SSTI: Size Specific to Instrument (threshold that separates small trades from normal trades).
 LIS: Large in Scale (threshold that separates normal trades from large/block trades).
 NCA: National Competent Authority (e.g. Bafin in Germany)

Additional MiFID II Transparency : Public Disclosures

Top 5 execution venues

- Asset managers will have to disclose on annual basis its Top 5 execution venues.
- Venues include: platforms, brokers, business entities.
- Disclosure to be broken out by 13 regulatory asset classes and by volume.
- Volume reporting is in gross notional, i.e. not adjusted by risk (e.g. short-duration vs long-duration).

Account-level costs and charges estimates

- Asset managers will have to publish:
 - Transaction cost estimates using methodology prescribed by regulator.
 - Explicit costs.

Disclosure implications

- Potential news flow, based on disclosure of top trading venues.
- Client questions and comparisons, particularly on reported transaction costs.

Mifid II Transparency : Market and Trading Implications

Expected Market Implications:

- Transparency on trade details, both pre and post, will impact the way markets operate and potentially affect liquidity in unintended ways.
- Expect more frequent episodes of illiquid markets where market participants are unable/unwilling to facilitate transfer of risk.
- **Impact may differ across bond market sectors:**
 - Limited impact on **illiquid securities** (European Non-Agency RMBS, ABS, certain Corporates). They are “protected” by pre-trade transparency waiver and post-trade reporting deferral.
 - **Highly liquid securities** (German bunds) may become more commoditized.
 - **However:**
Securities with liquidity “in-between” (e.g. Portugal, Greece, EM sovereigns) may see a decline in liquidity and more frequent episodes of illiquidity, due to pre/post-trade reporting obligations.
- **Potential impact for large strategic program trades**, as multi-month execution of non-government bonds (e.g. swaps) is given full post-trade reporting transparency over the life of the program.
- Market functioning will become critically dependent on infrastructure provided by electronic trading venues

APPENDIX:

List of MiFID II Acronyms

APA	Approved Publication Arrangement
EC	European Commission
EMIR	European Market Infrastructure Regulation
ESMA	European Securities and Markets Authority ("SEC")
ICMA	International Capital Markets Association ("SIFMA")
KIDS	Key Information Documents
LIS	Large in scale ("Block Size")
MiFID	Markets in Financial Instruments Directive ("Dodd Frank")
MiFIR	Markets in Financial Instruments and Amending Regulation
MTF	Multilateral Trading Facility (e.g. SEF)
NCA	National Competent Authority
PRIIPS	Packaged Retail Investment and Insurance-based Products
OTF	Organized Trading Facility (e.g. Dark Pools)
RM	Regulated Market
RTS	Regulatory Technical Standard
SI	Systematic internalizer ("Authorized Market Maker")
SSTI	Size specific to instrument
TOTV	Traded on trading venue ("Made Available to Trade")

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