



Overview

- Setting the Scene
- Yield / Yield To Maturity?
- Bond market quote conventions
- Spreads levels of liquidity
- New issuance
- MiFID II



World Capital Market in 2013

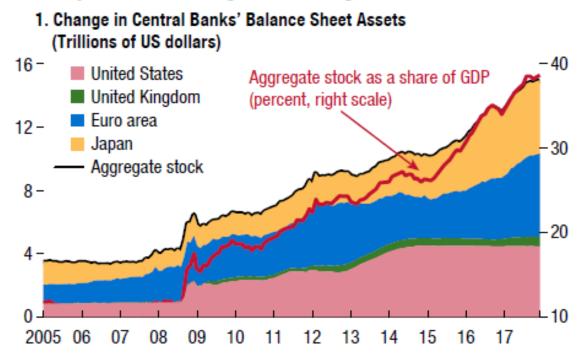
| | | Total | | | | Bonds, | Bonds, Equities, |
|---|--|-------------------------------|--|--|--|--|--------------------------------|
| | | Reserves | Stock Market | Total Debt | Bank | Equities, and | and Bank Assets ⁵ |
| | GDP | Minus Gold ² | Capitalization | Securities ³ | Assets ⁴ | Bank Assets ⁵ | (percent of GDP) |
| World | 75,470.9 | 12,127.7 | 62,552.0 | 97,288.6 | 126,744.1 | 286,584.7 | 379.7 |
| European Union¹ Euro area | 16,705.2 13,109.7 | 570.0 331.0 | 12,646.3 7,539.2 | 29,964.2 22,461.4 | 48,715.9 36,100.2 | 91,326.4 66,100.7 | 546.7 504.2 |
| North America Canada United States | 18,607.0 1,839.0 16,768.1 | 205.4 71.8 133.5 | 24,417.8 2,137.1 22,280.7 | 36,682.4 2,188.1 34,494.3 | 19,845.8 3,925.3 15,920.5 | 80,946.0 8,250.5 72,695.5 | 435.0 448.7 433.5 |
| Japan | 4,919.6 | 1,237.2 | 4,599.3 | 12,260.7 | 11,499.7 | 28,359.7 | 576.5 |

 $\underline{https://www.imf.org/^{\sim}/media/Websites/IMF/imported-flagship-issues/external/pubs/ft/GFSR/2015/01/pdf/_statapppdf.ashx}$



What has happened since 2013

Easy global financial conditions are underpinned by advanced economy central banks' large asset holdings.



https://www.imf.org/en/Publications/GFSR/Issues/2018/04/02/Global-Financial-Stability-Report-April-2018



Yield and Yield to Maturity

Yield

Your return for holding an investment over a length of time, calculated on an annualized basis and taking into account all cash flow associated with that investment

Yield to maturity

Bond Price =
$$\frac{CF1}{(1+YTM)^1} + \frac{CF2}{(1+YTM)^2} + \dots + \frac{CFn}{(1+YTM)^n}$$



Example

Par value = 100 Bond price = 98.5 Coupon = 2.5% per year Maturity = 5 years

Yield to maturity

$$98.5 = \frac{2.5}{(1 + YTM)^{1}} + \frac{2.5}{(1 + YTM)^{2}} + \frac{2.5}{(1 + YTM)^{3}} + \frac{2.5}{(1 + YTM)^{4}} + \frac{102.5}{(1 + YTM)^{5}}$$

| | D9 | ~ (| f_{x} | =D2/(1+ | D8)^C2+D3 | 3/(1+D8)^C | 3+D4/(1+D8 | 8)^C4+D5/(| 1+D8)^C5+ | D6/(1+D8) | ^C6 |
|---|--------|------------|------------|----------|-----------|------------|------------|------------|-----------|-----------|-----|
| | А | В | С | D | Е | F | G | Н | I | J | |
| 1 | Par | 100,00 | Year | Cashflow | | | | | | | |
| 2 | Coupon | 2,5% | 1 | 2,5 | | | | | | | |
| 3 | Price | 98,5 | 2 | 2,5 | | | | | | | |
| 4 | | | 3 | 2,5 | | | | | | | |
| 5 | | | 4 | 2,5 | | | | | | | |
| 6 | | | 5 | 102,50 | | | | | | | |
| 7 | | | | | | | | | | | |
| 8 | | | YTM | 2,825% | | | | | | | |
| 9 | | | Bond value | 98,50 | | | | | | | |



Problems with YTM

- Assumption all coupons are reinvested at the same rate (in the future)
- Investor may want to sell security early
- Issuer may default



Bond market quote conventions

- Rule of thumb:
 Pricing methodology is determined by the biggest price driver for the asset
- Bills = Yield to Maturity (No coupon, issued at a discount)
- Government bonds = Cash price
- Covered bonds = Spread over Mid-Swap rate
- Investment grade Credit = Spread over closest government bond
 IG Europe = Germany
 IG US = On the run Treasury
- High yield = Cash price
- This can change over time!



Example DIA









Liquidity

Many ideas and misconceptions about liquidity For me:

- Liquidity is being able to trade, what you want, in the size you want, at the time you want, without paying too much for it.
- Rule of thumb:
 Liquidity and price volatility are the inverse of each other
- Highly liquid -> tight bid/ask spread
- More illiquid -> wide(r) bid/ask spread
- Liquidity/spreads are not constant and will change over time and depending on the marcro environment



Example DIA







Fixed income new issuance

| Summary | v.1 (5) 5 | | 21 | 0.01 | | |
|--|-----------------|------------------------|--------|-------|--|--|
| Name | Volume (B) Curr | % Chg Top Ranked | Share | % Chg | | |
| 21) All Official Bond & Note Tables (1 | | | | | | |
| 201) US Investment Grade Corporat | 1,178.74 USD | -12.39 Bank of America | | +0.90 | | |
| 202) US High Yield Corporate Bonds | 185.93 USD | -36.98 JP Morgan | 9.46% | -1.03 | | |
| 203) European Bonds | 1,588.15 EUR | -5.74 HSBC | 6.58% | +0.42 | | |
| 204) Asia ex-Japan G3 Currency Bo | 235.13 USD | -15.63 HSBC | 7.49% | -0.88 | | |
| 205) Emerging Market Bonds | 1,689.22 USD | -2.02 Bank of China | 4.16% | +1.53 | | |
| 31) All Official Loan Tables (67) | | | | | | |
| 301) Global Loans | 3,969.68 USD | +5.01 JP Morgan | 10.10% | +0.80 | | |
| 303) US Leveraged Loans | 1,176.45 USD | -9.25 Bank of America | 10.77% | +0.12 | | |
| 305) EMEA Leveraged Loans | 128.68 EUR | -27.58 JP Morgan | 8.66% | +0.39 | | |
| 306) APAC ex-Japan Loans | 447.94 USD | +6.63 Bank of China | 12.52% | -2.55 | | |
| 41) All Official Equity Tables (82) | | | | | | |
| 401) Global Equity Offerings | 467.37 USD | -12.28 Morgan Stanley | 9.53% | +0.73 | | |
| 402) US Equity Offerings | 166.17 USD | -2.17 Morgan Stanley | 12.38% | +2.11 | | |
| 403) EMEA Equity Offerings | 108.25 USD | -32.27 JP Morgan | 9.96% | +2.25 | | |
| 404) APAC Equity Offerings | 165.54 USD | +2.57 Citi | 8.30% | +3.53 | | |
| 405) Latin America Equity Offerings | 16.06 USD | -32.00 Goldman Sachs | 12.16% | +8.12 | | |
| 51) All Official Municipal Tables (13) | | | | | | |
| 501) US Municipal Long Term | 282.59 USD | -13.95 Bank of America | 16.10% | +0.04 | | |
| 502) US Municipal Long Term Negoti | 206.76 USD | -14.75 Bank of America | 14.15% | +0.68 | | |
| 61) All Official Liability Management Tables (4) | | | | | | |
| 601) Global Liability Management B.,. | 992 Deals | -7.46 Citi | 19.83% | +1.80 | | |



Fixed income league table





Daimler Debt Distribution





Daimler **New Issue step 1: Announcement**

Coupon:

*** NEW ISSUE 0MM DAIMLER AG EUR 3 TRANCHE ***

Credit Agricole CIB UK - 31 Jul 18 09:47 CEST

*** NEW ISSUE 0MM DAIMLER AG EUR 3 TRANCHE ***

Issuer: Daimler AG

Issuer Rating: A2 Moody's (stb) / A S&P (stb) / A- Fitch (stb)

Deal Size:

Target Market: Manufacturer target market (MIFID II product governance) is

eligible counterparties, professional clients and retail clients

(all distribution channels)

Format: Senior, Unsecured / Reg S TEFRA D / Bearer

EMTN / EUR 1k+1k / Luxembourg Stock Exchange / German Law Docs:

Tranche Name: Daimler 3yr EUR Daimler Long 5yr Daimler Long 8yr

EUR EUR Tranche Size: EUR 0mm EUR 0mm EUR 0mm Fixed (FXD),

Fixed (FXD), Fixed (FXD), Annually. Annually, Annually, Actual/Actual Actual/Actual, Actual/Actual, short first short first MS+45a MS+70a MS+85-90

IPT: 09-Feb-2027 (8.7 Maturity: 09-Aug-2021 (3 09-Apr-2024 (5.8

Years) Years) Years)

Settle Date: 09-Aug-2018 (T+7) JBR: BLB, CACIB, ING

JLM: DB

IPREO



Daimler Step 2: Updated guidance



*** GUIDANCE 0MM DAIMLER AG EUR 3 TRANCHE ***

ING Bank N.V. - 31 Jul 18 12:01 CEST

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*** GUIDANCE 0MM DAIMLER AG EUR 3 TRANCHE ***
Books to go subject at 11.15 UKT / 12.15 CET
Daimler 3yr EUR MS+30bp area +/-2bp WPIR
Daimler Long 5yr EUR MS+55bp area +/-2bp WPI
Daimler Long 8yr EUR MS+75bp area +/-2bp WPI
               Daimler AG
Issuer:
Issuer Rating: A2 Moody's (stb) / A S&P (stb) / A- Fitch (stb)
Deal Size:
Target Market: Manufacturer target market (MIFID II product governance) is
               eligible counterparties, professional clients and retail clients
               (all distribution channels)
               Senior, Unsecured / Reg S TEFRA D / Bearer
Format:
Docs:
               EMTN / EUR 1k+1k / Luxembourg Stock Exchange / German Law
Tranche Name: Daimler 3yr EUR
                                  Daimler Long 5yr
                                                         Daimler Long 8yr
Tranche Size: EUR 1-1.25bn (exp) | EUR 750-1bn (exp)
                                                          EUR 500mm (exp)
Coupon:
               Fixed (FXD),
                                  Fixed (FXD),
                                                        Fixed (FXD),
               Annually,
                                  Annually,
                                                        Annually,
               Actual/Actual
                                  Actual/Actual,
                                                        Actual/Actual,
                                   | short first
                                                        | short first
Maturity:
               09-Aug-2021 (3
                                  09-Apr-2024 (5.8
                                                        09-Feb-2027 (8.7
               Years)
                                  Years)
                                                        Years)
               09-Aug-2018 (T+7)
Settle Date:
JBR:
               BLB, CACIB, ING
JLM:
               DB
```



IPREO

Daimler Step 3: Final guidance/books close

NG ING

*** LAUNCHED 0MM DAIMLER AG EUR 3 TRANCHE ***

ING Bank N.V. - 31 Jul 18 13:00 CEST

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*** LAUNCHED 0MM DAIMLER AG EUR 3 TRANCHE ***
Orderbooks (pre rec at tight end of guidance):
- 3yr ~2.6bln
 long 5yr ~ 3.1bln
 long 8yr ~ 1.9bln
Daimler 3yr EUR EUR 1.5mm MS + 28 bps
Daimler Long 5yr EUR EUR 1mm MS + 53 bp
Daimler Long 8yr EUR EUR 500mm MS + 73 bp
Issuer:
              Daimler AG
Issuer Rating: A2 Moody's (stb) / A S&P (stb) / A- Fitch (stb)
Deal Size:
Target Market: Manufacturer target market (MIFID II product governance) is
              eligible counterparties, professional clients and retail clients
               (all distribution channels)
              Senior, Unsecured / Reg S TEFRA D / Bearer
Format:
Docs:
              EMTN / EUR 1k+1k / Luxembourg Stock Exchange / German Law
Tranche Name: Daimler 3vr EUR
                                   Daimler Long 5vr
                                                        Daimler Long 8yr
Coupon:
              Fixed (FXD),
                                  Fixed (FXD),
                                                        Fixed (FXD),
              Annually,
                                   Annually,
                                                        Annually,
              Actual/Actual
                                  Actual/Actual,
                                                        Actual/Actual,
                                   | short first
                                                        | short first
Maturity:
              09-Aug-2021 (3
                                    09-Apr-2024 (5.8
                                                          09-Feb-2027 (8.7
              Years)
                                  Years)
                                                        Years)
              DE000A194DC1
                                  DE000A194DD9
                                                        DE000A194DE7
ISIN:
Settle Date:
              09-Aug-2018 (T+7)
JBR:
              BLB, CACIB, ING
JLM:
```





Daimler Step 4: Priced



*** PRICED 0MM DAIMLER AG EUR 3 TRANCHE ***

Credit Agricole CIB UK - 01 Aug 18 09:55 CEST

*** PRICED 0MM DAIMLER AG EUR 3 TRANCHE ***

Issuer: Daimler AG Issuer Ticker: DAIGR

Issuer Rating: A2 Moody's (stb) / A S&P (stb) / A- Fitch (stb)

Deal Size: EUR Ømm

Target Market: Manufacturer target market (MIFID II product governance) is

eligible counterparties, professional clients and retail clients

(all distribution channels)
No PRIIPs KID has been prepared

Format: Senior, Unsecured / Reg S TEFRA D / Bearer

Docs: EMTN / EUR 1k+1k / Luxembourg Stock Exchange / German Law

Free To Trade: 01-Aug-2018 16:15 UKT

A S&P (stb) / A- | A S&P (stb) / AFitch (stb) | Fitch (stb)
Fixed (FXD), 0.25%, | Fixed (FXD),

Coupon: Fixed (FXD), 0.25%, | Fixed (FXD), | Fixed (FXD), 1.5%, Annually, | 0.875%, Annually, | Annually, | Actual/Actual | Actual/Actual, | Actual/Actual, | short first | short first | Second Fixed Fi

bps | bps | bps | bps | bps | bps | Benchmark: OBL 0% 09-Apr-2021 | DBR 1.75% | DBR 0.25%

/ 101.38 (Spot) | 15-Feb-2024 / | 15-Feb-2027 / 99.9 | 110.31 (Spot) | (Spot)

Maturity: 09-Aug-2021 (3 | 09-Apr-2024 (5.8 | 09-Feb-2027 (8.7 Years) | Years | Years | Years | Years | Years | PEARAU194DF7

ISIN: DE000A194DC1 | DE000A194DD9 | DE000A194DE7 Hedge Ratio: 109% | 93% | 94%

Restrictions: As per Daimler's EMTN Programme. Sales to Qualified investors
(as defined in the Prospectus Directive) only. No action has

been or will be taken to permit a public offering.

Trade Date: 31-Jul-2018

Time Of Exec: 01-Aug-2018 15:49:00 UKT
Settle Date: 09-Aug-2018 (T+7)
UOP: General Corporate Purposes

JBR: BLB, CACIB, ING JLM: DB (HM)

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Daimler Secondary performance



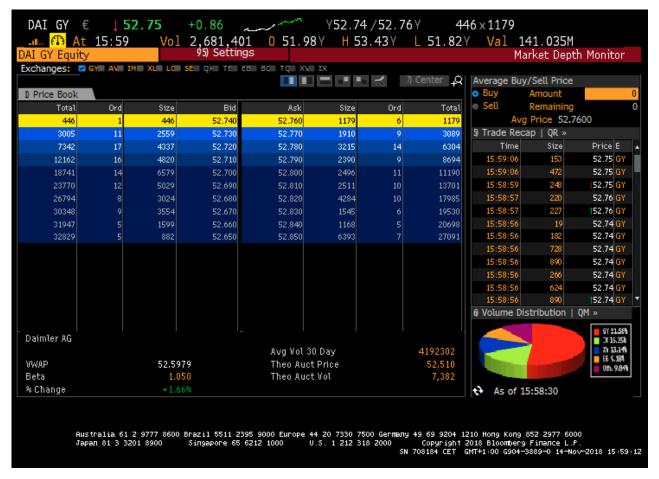


Daimler Secondary trading





Daimler Equity



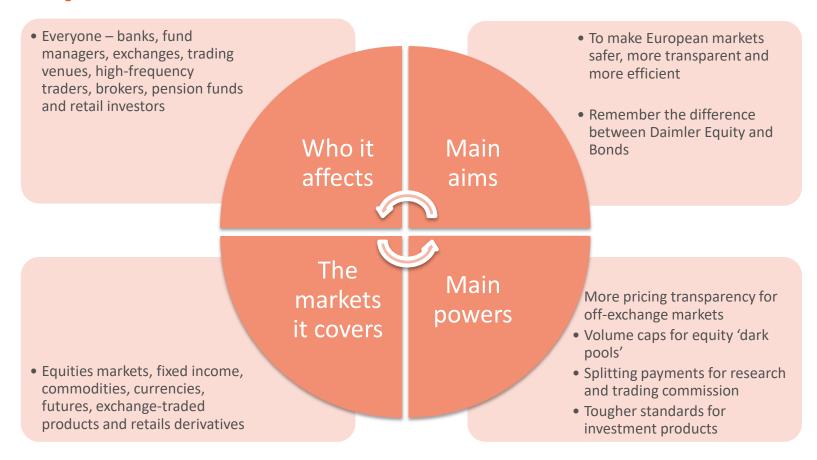


Background Mifid II

- MiFID I was implemented on 1st Nov 2007 and was mainly focussed on the Equity markets. MiFID II has come into effect 3rd Jan 2018 and the biggest impact focus was on Fixed Income.
- The MiFID regulation has 1.4mio!! paragraphs of text. This is a very brief summary.



What you need to know





Trading Venues – *Under MiFID II*

Regulated Market

Multilateral system operated and/or managed by a market operator, which brings together or facilitates the bringing together of multiple third-party buying and selling interests in financial instruments – in the system and in accordance with its non-discretionary rules – in a way that results in a contract

- CME Group
- Furex
- Intercontinental Europe

Multilateral Trading Facility

Multilateral system, operated by an investment firm or a market operator, which brings together multiple third-party buying and selling interests in financial instruments – in the system and in accordance with non-discretionary rules – in a way that results in a contract

- Bloomberg Trading Facility
- Tradeweb
- MarketAxess

Organised Trading Facility

OTFs are applicable to non-equities only, and are defined as a multilateral system which is not a Regulated Market or MTF and in which multiple third-party buying and selling interests in bonds, structured finance products, emission allowances or derivatives are able to interact in the system in a way that results in a contract

Current expectation is that interdealer brokers will operate as OTFs

Systematic Internaliser

"Execution Venue" under MiFID Not a "Trading Venue"

An investment firm which, on an organised, **frequent**, **systematic and substantial basis**, **deals on own account** by executing client orders outside a regulated market

All the main banks



Greater Transparency

Under MiFID II, certain instruments that are traded will fall under a new regulatory standard which aims to provide greater transparency. The standard highlights two terms called **Pre-Trade Transparency** and **Post-Trade Transparency**.

The aim of the two terms are as follows:

Pre-Trade Transparency:

- 1. Public price dissemination: Make prices pre-trade transparent to the public if providing a firm quote to a client
- 2. Firm prices to clients: Prices must be made available to other clients based on a Commercial Policy

Post-Trade Transparency:

1. Requirement to make public key economic attributes such as price, size, instrument, date/time, as real time (within 15mins) as technically possible



New terminology

There are a few new acronyms that are important to clarify:

- 1. SSTI Size Specific to Instrument & LIS Large In Size
 Under MiFID the **SSTI** and **LIS** are stipulated for transaction sizes for which pre-trade
 transparency may be waived and post-trade transparency may be deferred and further
 specifies the deferred publication at the discretion of the competent authorities
- 2. NCA National Competent Authority
- 3. TOTV Traded on a Trading Venue
- 4. APA Approved Publication Arrangements



Pre-trade Transparency criteria

Traded on a trading venue

• MTF

• OTF

• RM

• SI

Liquidity test

• # trades

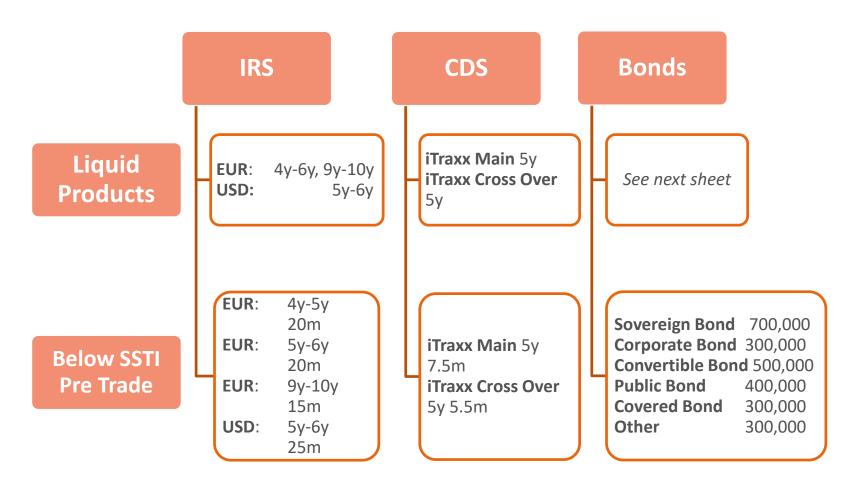
• Daily notional amount

• % days traded (bonds only)

• SI



Pre Trade Transparency





Liquid bond list Q2/3 2018

| | # Bonds | Notion | nal |
|------------|---------|--------|-----------|
| Government | | 330 | 6.300 bln |
| SNAT | | 50 | 148 bln |
| Corporate | | 86 | 41 bln |

| SENIVITA SOCIAL ESTATE | Corporate | 6,50 | 12/05/2020 | EUR | DE | 50.000.000 | 12/05/2015 |
|------------------------|-----------|------|------------|-----|----|--------------|------------|
| PUBLITY AG | Corporate | 3,50 | 17/11/2020 | EUR | DE | 50.000.000 | 17/11/2015 |
| DAIMLER INTL FINANCE | | | | | | | |
| BV | Corporate | 1,00 | 11/11/2025 | EUR | NL | 1.250.000.00 | 11/05/2018 |



Post Trade Transparency

Once a trade is executed under post-trade transparency requirements, there are two possible scenarios:

1. Real time publication (<15 minutes):

If instrument is **liquid** and **below SSTI** notional 80th percentile there is a requirement to

publish. For example the following:

10:16:00 € 105.32

Time Price

IT0005240830 500k

ISIN Volume

2. Deferrals (T+2 maybe 4 weeks depending on NCA):

This means that during the deferral period if the instrument is **Illiquid** and **above SSTI notional 80**th **percentile** there is no need to publish until the period expires (most likely four weeks after trade date). For sovereign debt it has been confirmed to have indefinite deferrals. This will change depending on the NCA.



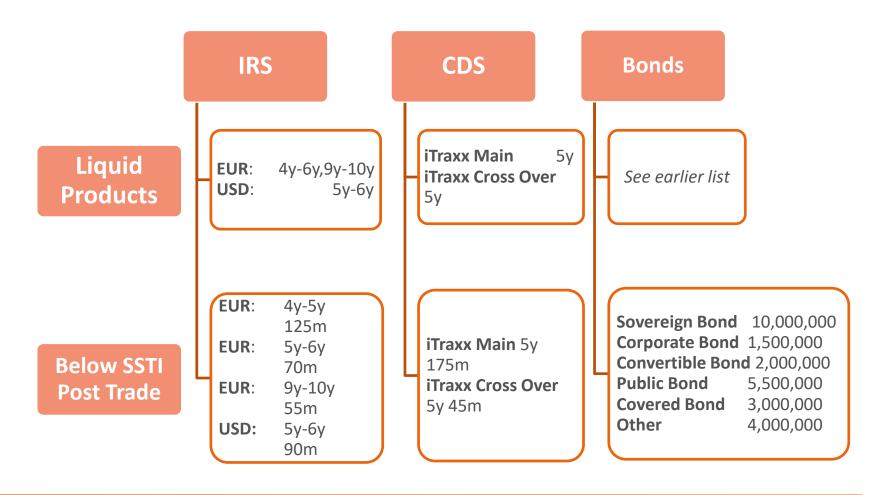
Deferral regime

The UK NCA (FCA) has published its deferral regime which is likely to be followed by the other main NCAs - AFM has yet to publish.





Post Trade Transparency





| 1. Derivatives Trading Obligation | 2. Pre Trade Transparency | 3. Post Trade Transparency | 4. Quality of Execution Reporting |
|--|---|--|---|
| Product scope: Listed on EU Venue Derivatives Clearing Mandated Liquid Benchmark Swaps | Product scope: Liquid (15 trades a day going down to 2 trades in 2021) Trade size below 700k gov and 300k for corp MiFID venue or SI | Product scope:FCA regime delays; 10 mio Gov, 1.5 mio corp | Product scope: • All instruments |
| Obligation: All trades in scope must be traded on EU Venue (MTF/OTF) RFQ to 1 possible | When instrument is in scope, quote needs to be made public by SI or MTF | Obligation: Trades are made public within 15mins unless deferrals are in place Above post trade SSTI deferrals is weekly aggregation and up to 4 weeks later | Obligation: Mainly a bank requirement Quarterly reports on quality of execution e.g. hit rates for voice, time to quote etc. etc. |
| Virtually all benchmark tenors in EUR, USD On the run iTraxx Main 5y and Xover 5yr and previous on the run | • All products | Government bonds, corporate, IRS, Swaps, FX derivatives, CDS Index and CDS Single name | • All products |
| Possible market reaction: Further bifurcation on bilateral market | Possible market reaction: More small trades routed to venues. Uncertainty on who needs to report | More difficult to slice trades to below deferral trade size Uncertainty on aggregation leading to more defensive pricing | A lot of quoting requirements with sell side. Leads to big impact on the sales trader workflow. Leading to longer time to quote Smarter routing of trades to banks who quote competitive |



MIFID 2 in practice

- MIFID 2 versus US Trace (pros/cons)
- Way and timing of implementation
- Difficult to use the extra data
 - Shear amount of data
 - Quality of data false prints ?!
 - Delay makes it not really relevant
- Data aggregation works better
- Industry didn't really have time to digest





