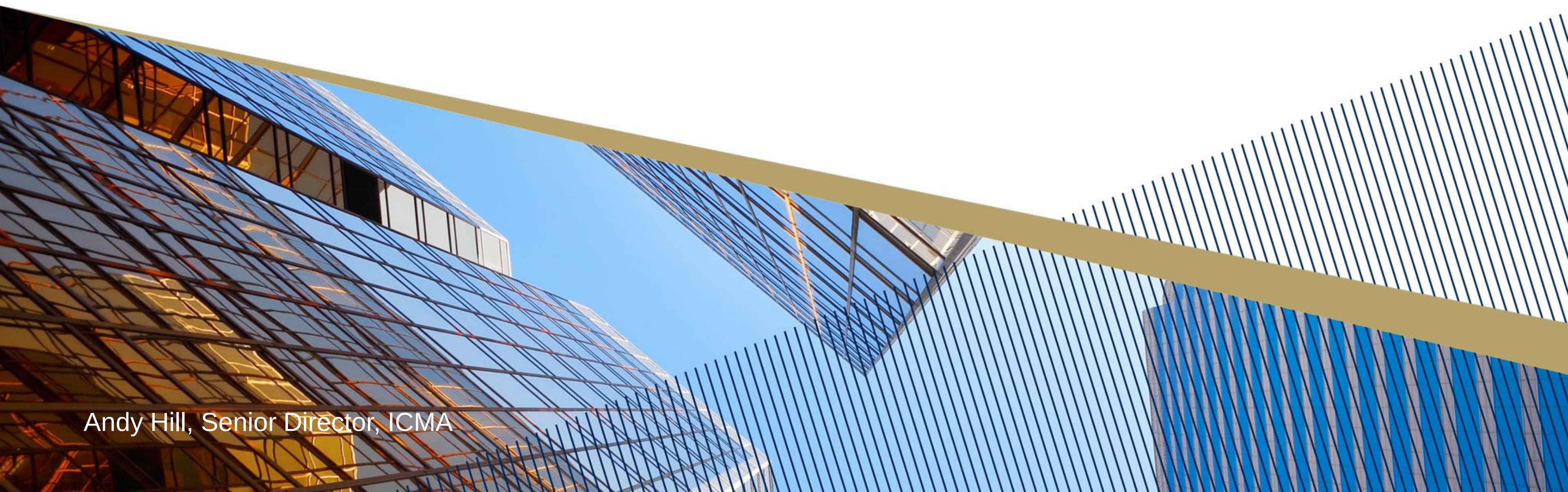
Cognitive dissonance: The impact of regulation on the European repo and collateral markets

ICMA Seminar: Developments in international and MENA fixed income and repo markets

Dubai, April 16 2018



Andy Hill, Senior Director, ICMA

cognitive dissonance

noun PSYCHOLOGY

the state of having inconsistent thoughts, beliefs, or attitudes, especially as relating to behavioural decisions and attitude change.

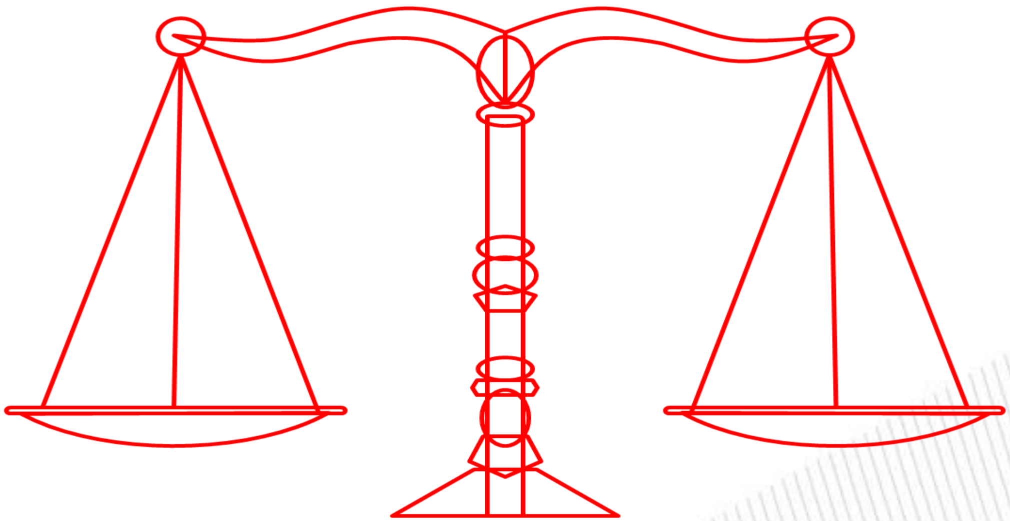
Belief no. 1

Collateral is good

Regulation defines and requires ‘good quality’ collateral for:

- Secured lending and borrowing
- Margining centrally cleared transactions
- Margining non-cleared derivate transactions

Collateral demand and supply



Estimated collateral demand

Organization	Incremental Collateral Required	High-Level Description of the Basis for the Incremental Collateral Requirement Estimate
IMF	$100bn-$200bn	The shift to CCPs will elevate collateral demand for Initial Margin (IM) and guaranteed funds
Bank of England	$130bn-$450bn	The IM required for IRS/CDS under normal market conditions, assuming no change in the gross notional volumes and 80% of trades being subject to central clearing
BIS	$720bn	IM required for dealers and non-dealers where all clearing for IRS/CDS takes place at only one CCP for each product (to reduce negative impact on netting).
Oliver Wyman / Morgan Stanley	$750bn by 2015 $1.4 trillion by 2018	A combination of increased requirements in IM in the near term for centrally cleared transactions and independent amount (IA) in the longer term for non-cleared transactions The increase will also be driven by the inability of firms to net across regions/CCPs
US Treasury	$800bn-$2tn	Quantum of new IM and stringent eligible collateral requirements will greatly increase the demand for high-quality collateral
CGFS	$4tn	Sum of estimates for increased requirements for liquidity regulations; IM for non-centrally cleared derivatives; and IM for centrally cleared derivatives

Sourced and adapted from: Barclays, 2014, ‘Much Ado about Collateral: Recent Changes in the Regulatory landscape for OTC Derivatives and the Potential Impact on Collateral’

Estimated collateral supply

Table 2: Encumbrance of high-quality collateral (US$ trillion)

Owner type	Holdings	Amount encumbered	Source of encumbrance	Unencumbered supply
Governmental institution	8.9	8.9	Inability to engage in securities lending	0.0
Commercial Bank	5.3	4.5	Liquid asset buffer or initial margin	0.8
Insurance company or pension fund	5.7	0.0		5.7
Central banks[11]	4.4	4.2	Mostly lending against other government bonds	0.2
Non-resident[12]	11.5	11.3	Foreign exchange reserves	0.2
Other[13]	6.0	3.5	Various	2.6
Total	**41.8**	**32.3**		**9.5**
Total post derivatives reform		**33.3**		**8.5**

Source: BIS, SIFMA, ECB, IMF. Numbers may not add up due to rounding.

Sourced from Bank of England Staff Working Paper No. 609, *The role of collateral in supporting liquidity*, Yuliya Baranova, Zijun Liu, and Joseph Noss, August 2016

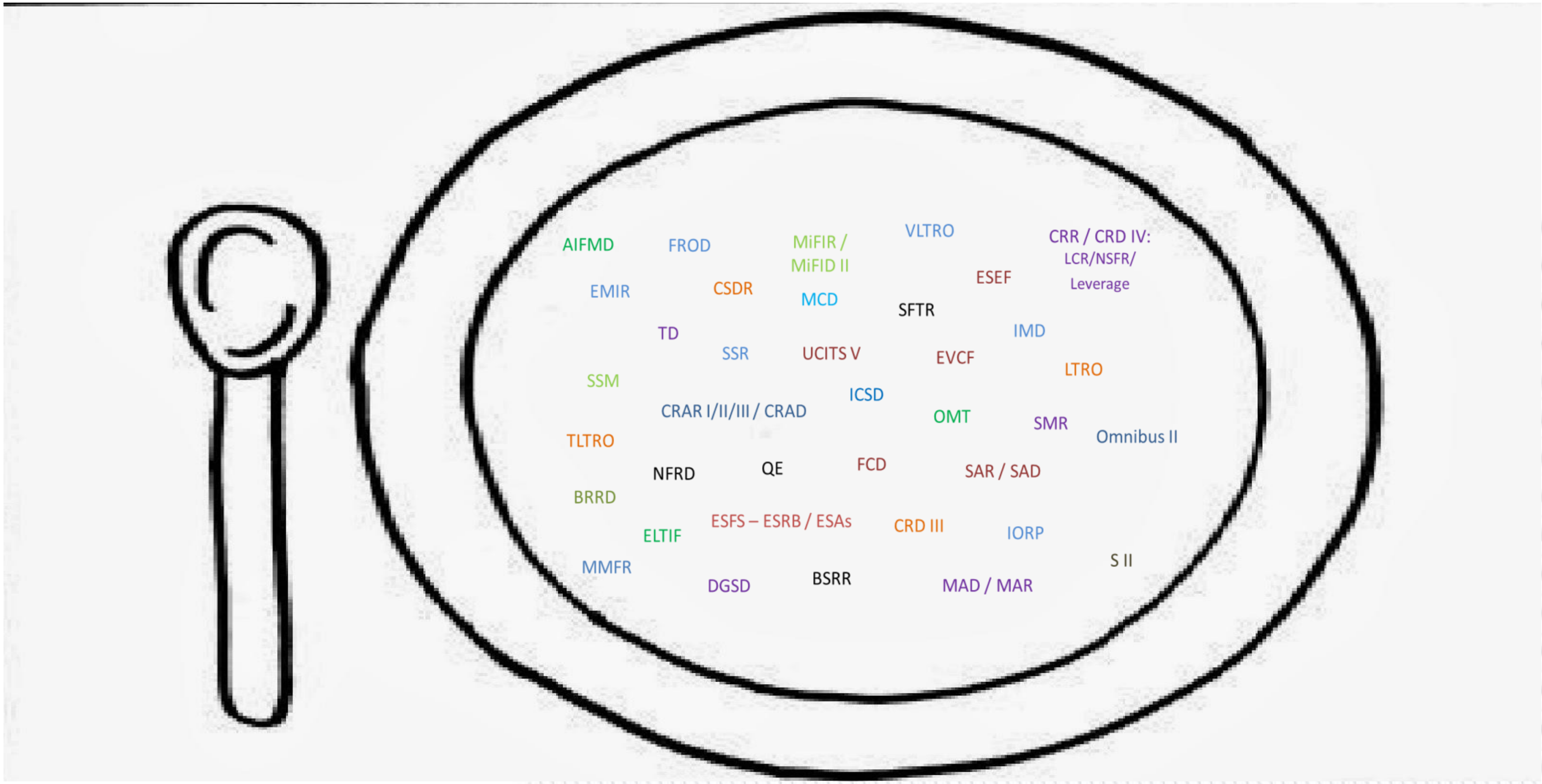
Belief no. 2

Repo is bad

The repo and securities lending markets are a source of:

- Excessive leverage
- Procyclicality
- Interconnectedness

So let's regulate….



Leverage Ratio (LR)

$$\text{Leverage Ratio} = \frac{\text{Tier 1 Capital (CET1)}}{\text{Total on and off balance sheet exposures}}$$

- The Leverage Ratio (LR) is intended to be a simple, transparent, non-risk based ratio, designed to act as a credible supplementary measure to the risk-based capital requirements.
- Essentially, it is a simple, non-risk based "back-stop" measure to reinforce the Basel III risk based capital requirements.
- Basel recommends a minimum Leverage Ratio requirement of 3%.
- Large US banks are subject to a supplementary leverage ratio (SLR), taking the requirement to 5% at the group level and 6% for the individual entities. UK banks have a LR requirement of 3%, with potential add-ons for their countercyclical buffer and an additional LR buffer in the case of G-SIIs.

- LR disproportionately impacts high balance sheet usage, low-RWA activity, such as repo.
- LR is making repo far more expensive as an on-balance sheet product
- Estimated additional funding cost of a reverse repo due to LR is 40-50bp.
- Netting becoming key: driving different pricing (and liquidity).

Liquidity Coverage Ratio (LCR)

$$\frac{\text{Liquidity Asset Buffer (HQLA)}}{\text{30 day net cash outflows}} > 100\%$$

- LCR is designed to address a stressed funding scenario of 30 days.
- It requires banks to hold sufficient levels of high quality liquid assets (HQLA) to cover a net outflow of short-term funding in a stress scenario.
- The net effect is to increase the demand for HQLA and to lengthen the average term of funding.

Item	Factor
Stock of HQLA	
A. Level 1 assets:	
• Coins and bank notes • Qualifying marketable securities from sovereigns, central banks, PSEs, and multilateral development banks • Qualifying central bank reserves • Domestic sovereign or central bank debt for non-0% risk-weighted sovereigns	100%
B. Level 2 assets (maximum of 40% of HQLA):	
Level 2A assets	
• Sovereign, central bank, multilateral development banks, and PSE assets qualifying for 20% risk weighting • Qualifying corporate debt securities rated AA- or higher • Qualifying covered bonds rated AA- or higher	85%
Level 2B assets (maximum of 15% of HQLA)	
• Qualifying RMBS	75%
• Qualifying corporate debt securities rated between A+ and BBB-	50%
• Qualifying common equity shares	50%
Total value of stock of HQLA	

Net Stable Funding Ratio (NSFR)

$$\frac{\text{Available amount of stable funding (ASF)}}{\text{Required amount of stable funding (RSF)}} > 100\%$$

- NSFR is designed to ensure that banks hold more stable and longer term funding against their least liquid assets.
- The duration of your funding, and who you fund with, have the most important influence on the NSFR calculation. Critically, the funding counterparty type makes a difference to the perceived stability of the funding.
- From a repo perspective, short-term repo funding (<6mth), with most counterparties, is not considered as stable funding (ASF =0).
- However, short-term reverse repos (<6mth) with financial institutions generate a stable funding (>1yr) requirement (RSF = 10% or 15%, depending on the underlying asset quality).
- The net impact for repo is to make short-term reverse repos more expensive due to an additional long term funding requirement.

NSFR: SFT ASF & RSF Counterparty Values

Residual Maturity and Counterparty Type	Repo (ASF)	Reverse Repo Level 1 (RSF)	Reverse Repo Other Assets (RSF)
Counterparty types (≥ 1 year): Fin's Inst.	100%	100%	100%
Counterparty types (≥ 1 year): Non- Fin'l, <35% Risk Weighted	100%	65%	65%
Counterparty types (≥ 1 year): Non-Fin'l , >35% Risk Weighted	100%	85%	85%
All counterparty types (≥ 6 months and < 1 year)	50%	50%	50%
Residual Maturity < 6 months			
Sovereigns and PSEs	50%	50%	50%
Non-Financial Corporates	50%	50%	50%
Retail and Small Business customers	0%	50%	50%
Central Banks	0%	0%	0%
Banks and other Financial institutions	0%	10%(1)	15%

Reporting

EU SFT-Regulation

- Counterparties to **report the details of all SFTs concluded**, as well as any modification or termination thereof to a trade repository specifically authorized under SFTR
- Reporting **no later than on the working day following the conclusion**, modification or termination of the transaction (T+1)
- SFTR sets out **list of minimum reporting elements**, including in relation to the reuse of collateral.
- SFTR sets out more than 150 reporting fields, of which at least 80 are likely to be relevant, and most of which are required to match (double-sided reporting).
- Requirements apply to **EU counterparties** (incl. all (non-EU) branches) & **EU branches of third country firms**; except certain public bodies (Central Banks, DMOs, BIS).
- Reporting expected to start around mid-2019.

EU MiFID II/R transaction reporting (art. 26)

- SFTs generally exempt from transaction reporting under MiFIR, **except SFTs with EU central banks** (exempted from SFTR reporting)
- These will have to be reported based on MiFIR reporting templates set out in RTS 22
- Implementation timeline aligned with SFTR reporting

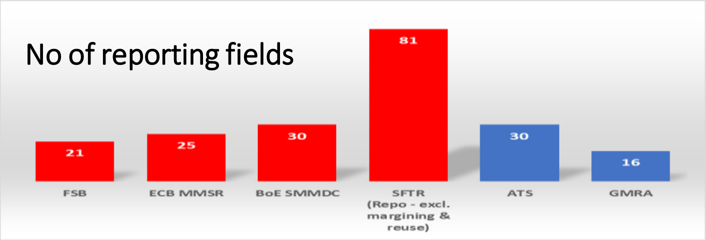
FSB initiative on global SFT data collection and aggregation

- Final standards and processes for Global SFT data collection (Nov 2015)
- Possible Measures of Non-Cash Collateral Re-Use, including proposals for the tracking of reuse (final version Jan 2017)
- Global data aggregation to start by end 2018 (re-use related data by Jan 2020)

Money market reporting

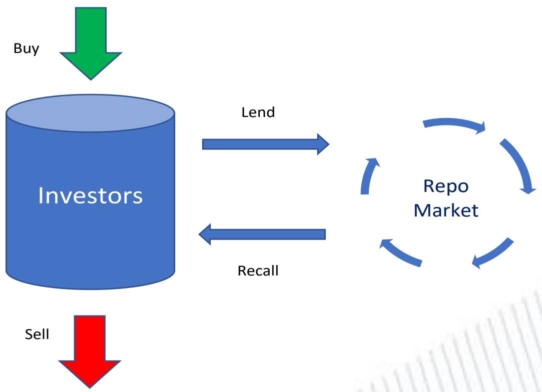
Euro area: ECB Money Market Statistical Reporting Regulation (MMSR) – daily reporting by 53 largest firms started in June 2016

UK: Bank of England: Sterling money market data collection – daily reporting started in July 2016



CSDR mandatory buy-ins

- The ability of the repo market to function efficiently depends on the willingness of holders of securities to lend.
- In the event that lenders do not get securities back, they run the risk of failing on any outright sales.
- The greater the risk of buy-ins, the less incentive to lend.
- Which reduces repo market liquidity…
- Which increases the likelihood of fails…
- Which increases the chances of buy-ins…
- Which is a disincentive to lending…



- CSDR mandatory buy-ins are intended to replace the existing discretionary buy-in remedies for OTC markets with a legal obligation to buy-in failing counterparties.
- Failing counterparties will not only face the normal costs of being bought-in (the buy-in premium), but will be further penalized should the market fall (the 'CSDR put').
- In the event that the buy-in is unsuccessful, the non-defaulting purchasing party will be forced to cancel the trade in return for 'cash compensation'.
- Short-term repos (<30 business days) are expected to be exempt.
- The regulation is expected to come into force in late 2020.

It keeps coming.....

Mandatory haircuts

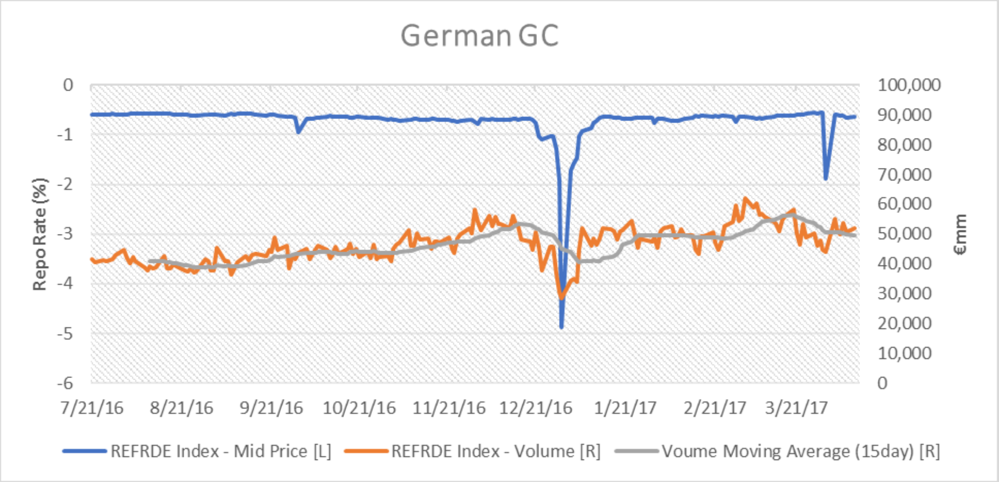
- The FSB has proposed mandatory haircuts for non-cleared SFTs in order to prevent a build-up of leverage outside of the banking system and to help reduce procyclicality.
- The proposal consists of two complementary elements: (i) qualitative standards; (ii) a framework of numerical haircut floors.
- The haircuts will provide yet another cost to transacting repo.

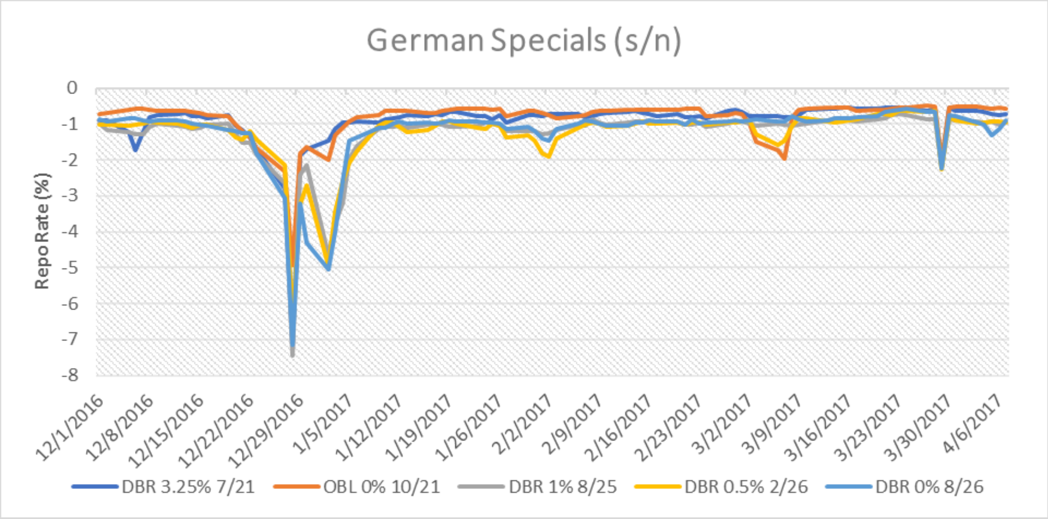
Measuring collateral re-use

- Academics at the FSB believe that collateral usage can be measured.
- The concern is that collateral reuse can create excess leverage, as well as increasing interconnectedness of market participants.
- The FSB have devised a number of models and metrics to estimate collateral re-use and the length of collateral chains (already included in SFTR).
- The rationale and methodologies overlook the concepts of both title transfer and collateral fungibility.

How is regulation impacting the market?

2016 year-end

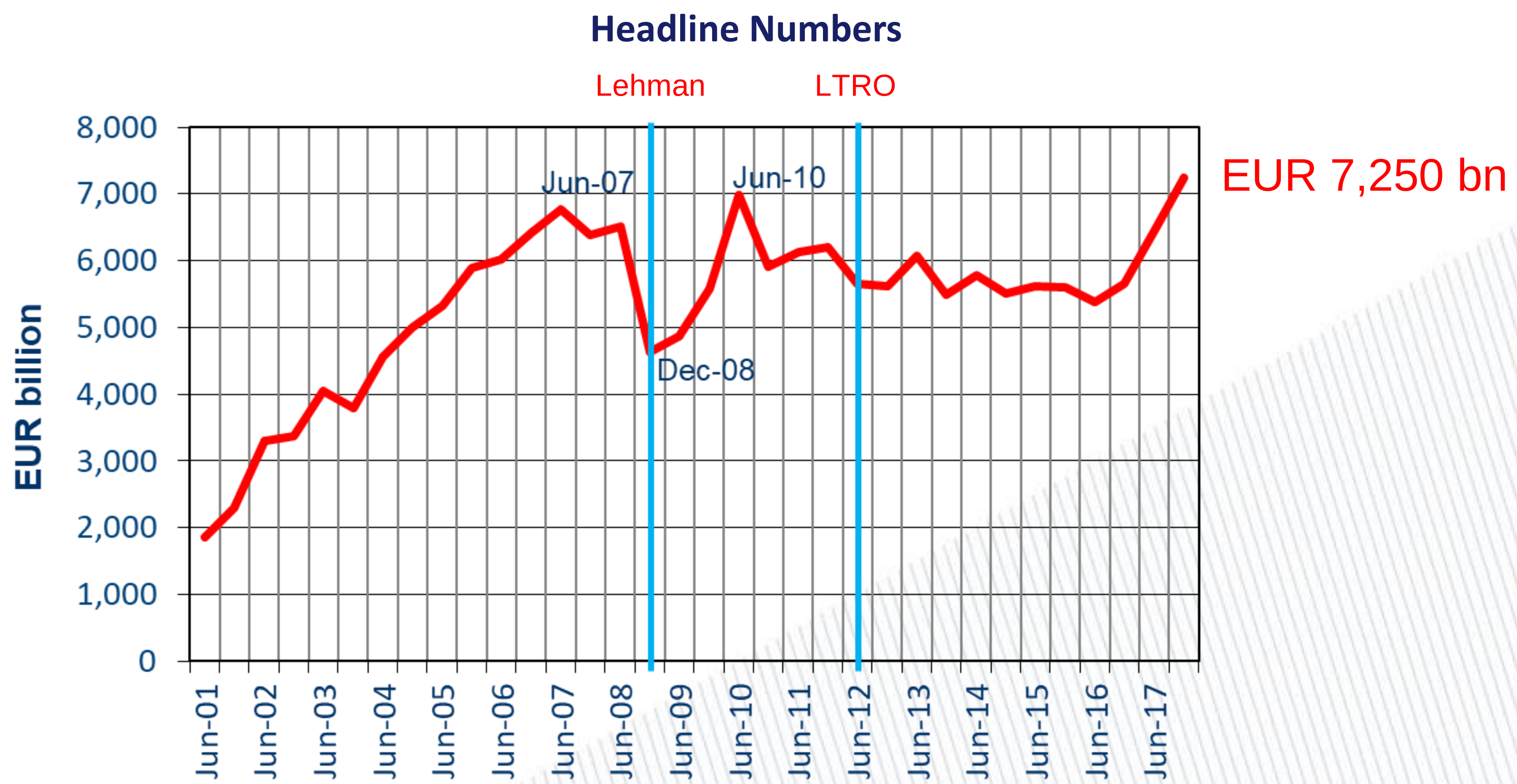




Source: Nex Data Services Ltd – BrokerTec Repo

How is regulation impacting the market?

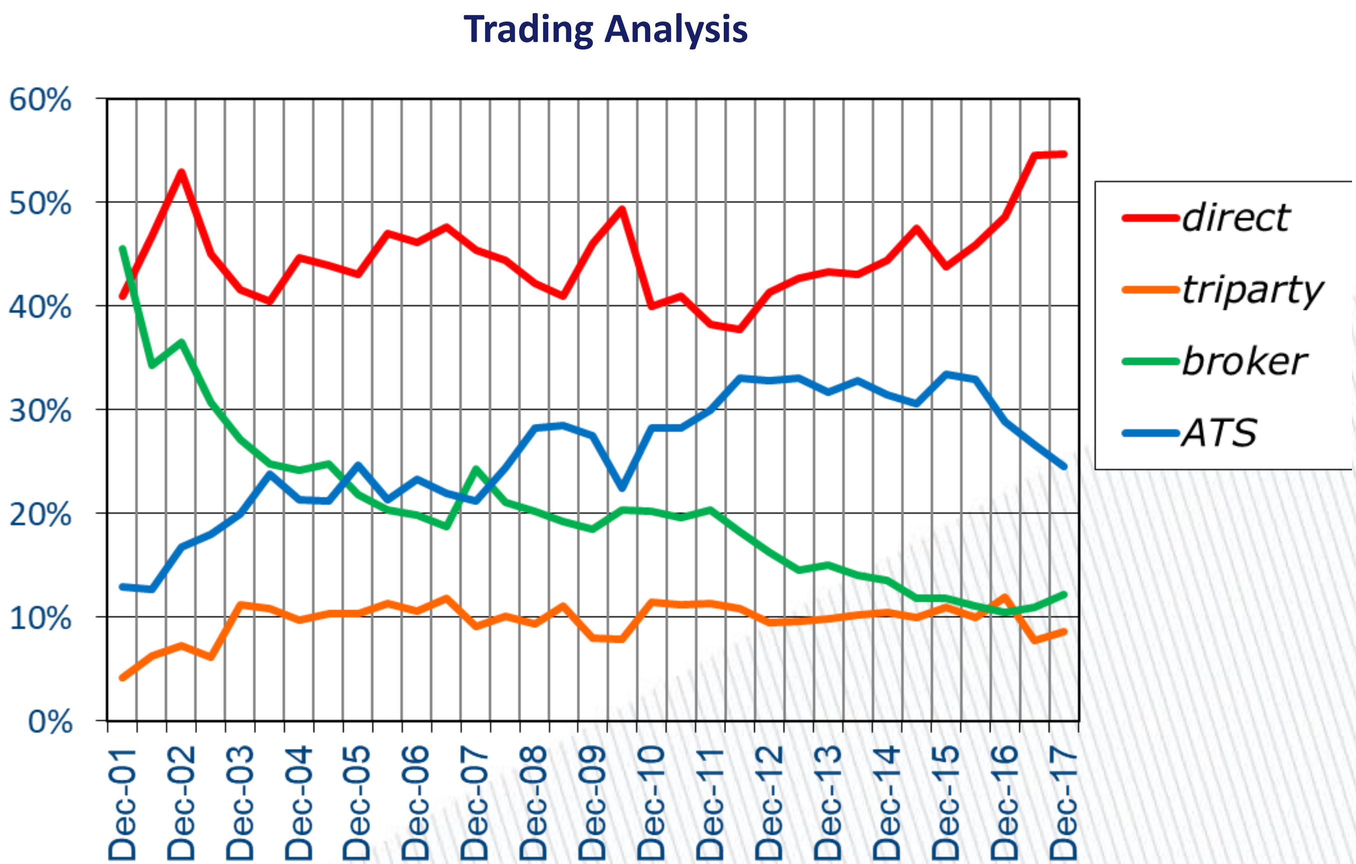
ICMA Repo Survey: December 2017



Source: ICMA ERCC 34th semi-annual European Repo Market Survey

How is regulation impacting the market?

ICMA Repo Survey: December 2017



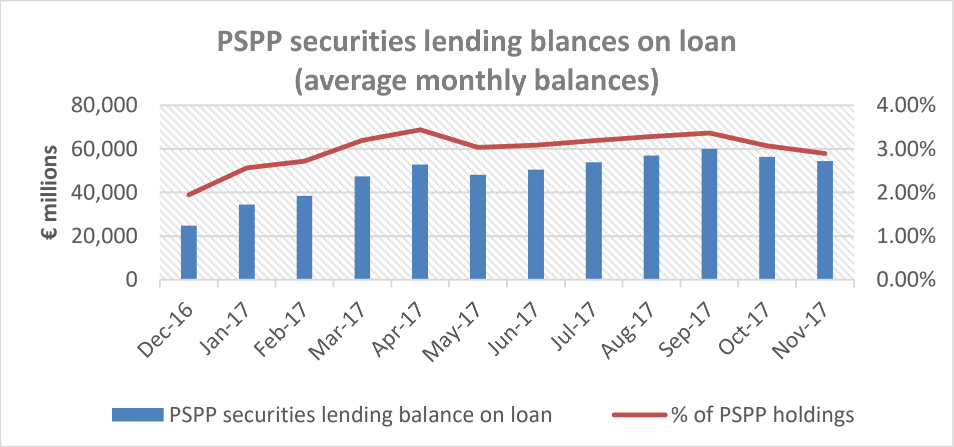
Source: ICMA ERCC 34th semi-annual European Repo Market Survey

How is regulation impacting the market?

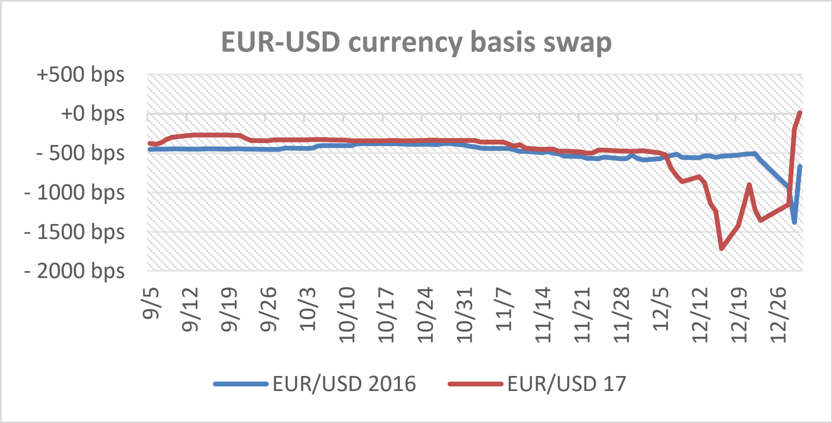
2017 year-end

Why not as dramatic as 2016?

❑Positioning
❑PSPP lending programmes
❑FX basis
❑Preparedness



Source: ECB



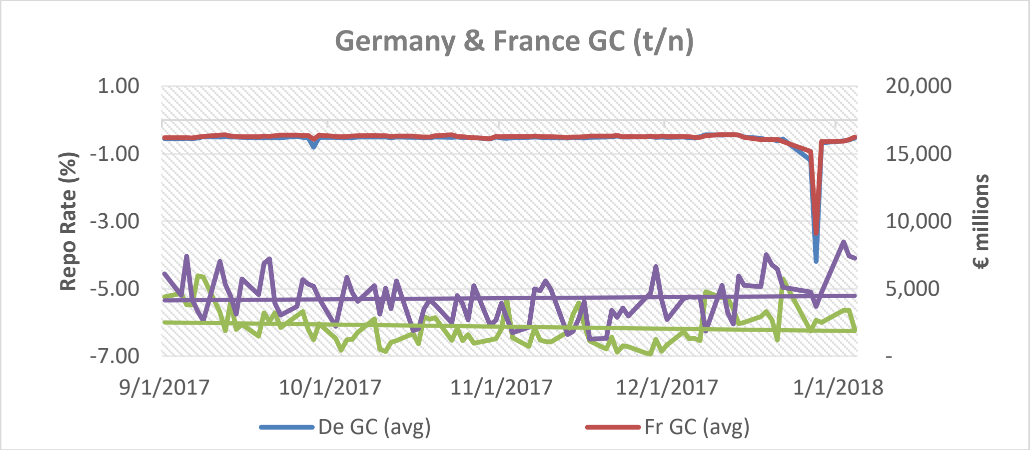
Source: Reuters

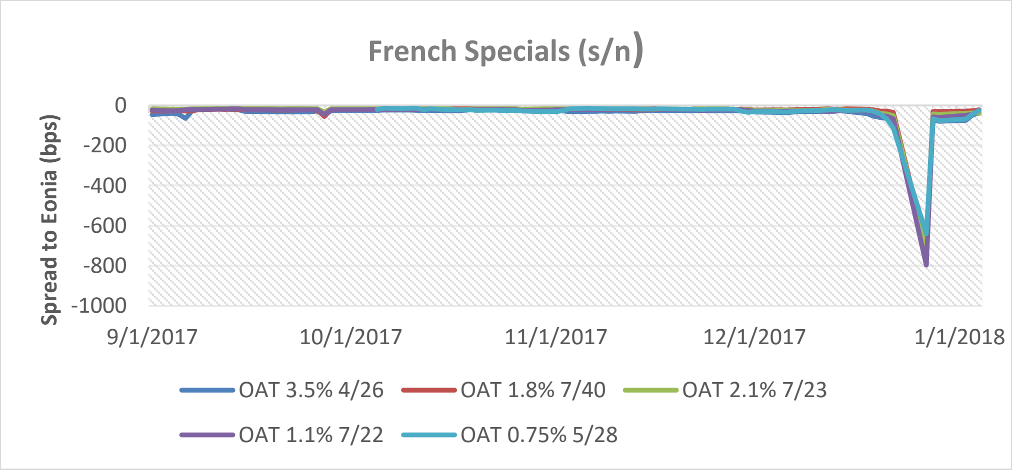
But…still closed for business:

❑Basel reporting
❑Bank levies
❑G-SIB capital surcharge

How is regulation impacting the market?

2017 year-end





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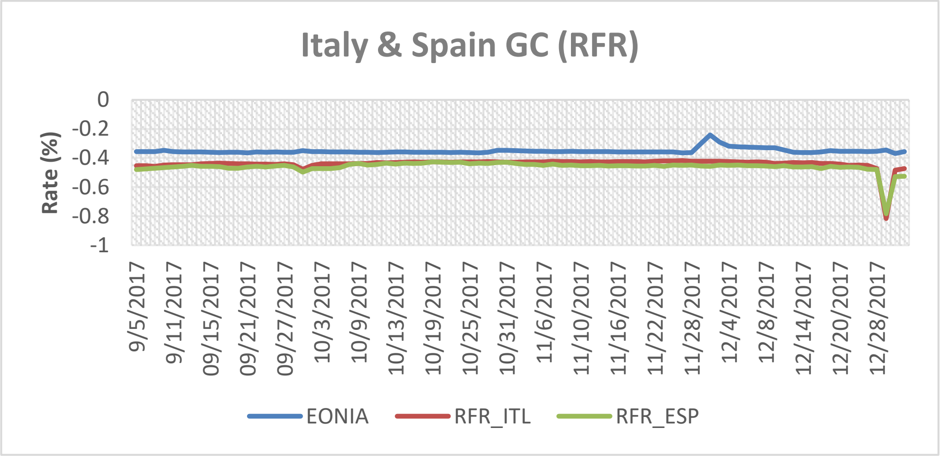
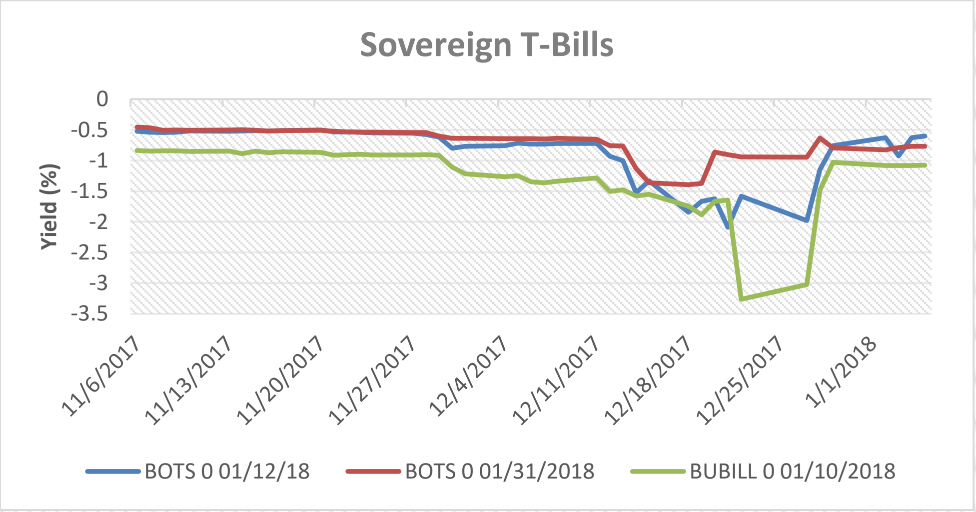
How is regulation impacting the market?

2017 year-end



Source: Repo Funds Rate

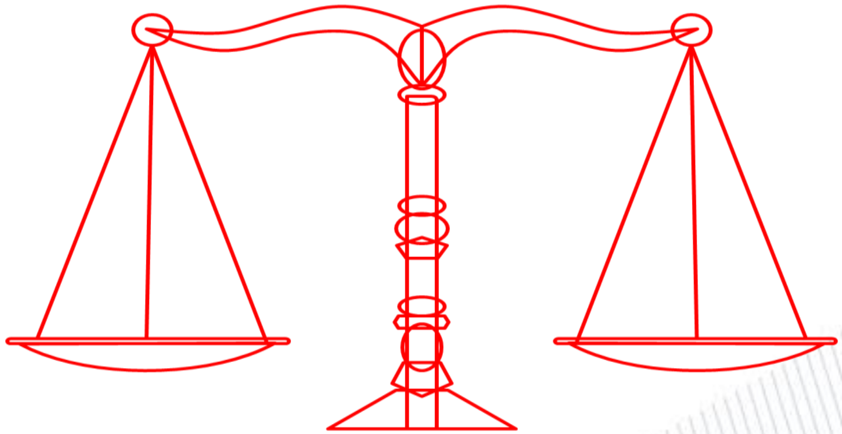


Source: Bloomberg

Back to collateral.....

Some participants sit on collateral and do nothing with it

Some participants are long cash but need collateral



Some participants have the wrong kind of collateral

Some participants are long collateral but need cash

If only there was a market for collateral....

Some participants sit on collateral and do nothing with it

Some participants are long cash but need collateral

Sovereign Wealth Funds

Insurance Funds

Investment Banks

Central Banks

Corporate Treasuries

Money Market Funds

Asset Managers

Pension funds

Commercial Banks

Hedge Funds

Some participants have the wrong kind of collateral

Some participants are long collateral but need cash

Wait, there is!

Some participants sit on collateral and do nothing with it

Some participants are long cash but need collateral

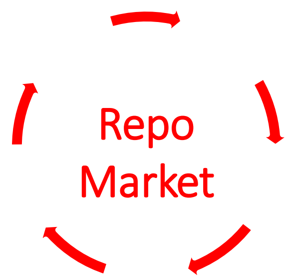
Sovereign Wealth Funds

Insurance Funds

Investment Banks

Central Banks

Corporate Treasuries



Money Market Funds

Asset Managers

Pension funds

Commercial Banks

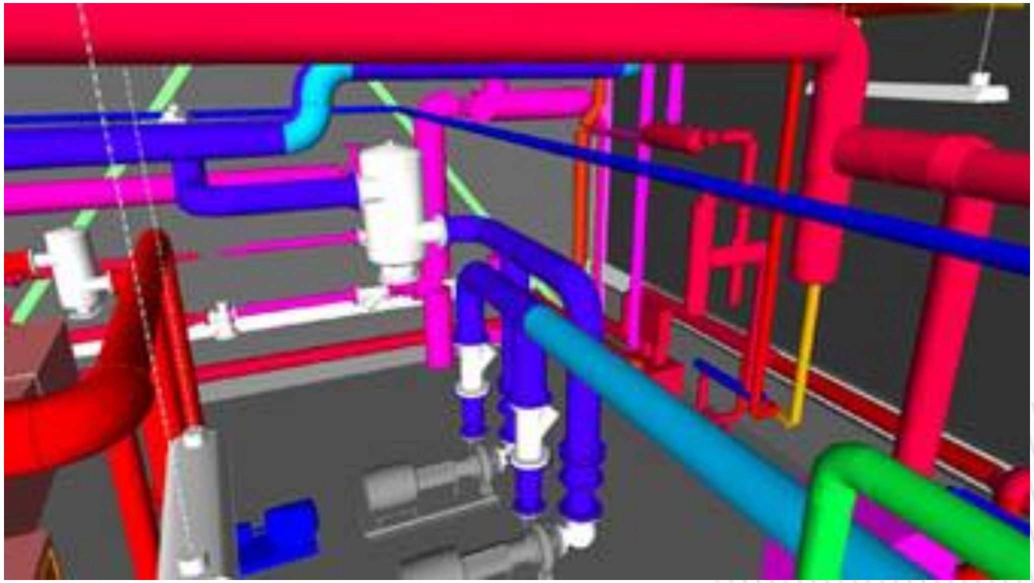
Hedge Funds

Some participants have the wrong kind of collateral

Some participants are long collateral but need cash

Collateral fluidity

Collateral Demand ≡ Available collateral supply x Collateral fluidity



The repo market is the 'pump' that sources, prices, and mobilizes collateral through the financial system.

If we want efficient and resilient markets underpinned by collateral, then we need a vibrant and liquid repo market. You can't have one without the other.

ICMA's European Repo and Collateral Council (ERCC)

The ICMA European Repo Council (ERC) was established in December 1999, to represent the cross-border repo market in Europe. In 2015, the ERC's name was changed to European Repo and Collateral Council (ERCC) in recognition of the increasingly intimate relationship between repo and collateral and the group's substantial focus on collateral.

The ICMA ERCC is today the main industry representative body for repo and collateral markets, developing consensus solutions for issues arising in a rapidly evolving marketplace and consolidating and codifying best market practice. The Council also plays a significant role in nurturing the development of the repo market and supporting its wider use in Europe and globally by providing educational courses and market information, such as the bi-annual survey of the European repo market which has become established over the past two decades as the authoritative indicator of market size and structure and the dominant trends.

The ICMA ERCC Committee is the governing board of the ERCC which is elected on an annual basis by all ERCC member firms.

Membership of the ERCC is open to ICMA members who transact repo and associated collateral business in Europe. The ICMA ERCC currently has around 100 members, comprising the majority of firms actively involved in this market.

https://www.icmagroup.org/Regulatory-Policy-and-Market-Practice/repo-and-collateral-markets/

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