Irving Fisher Committee on
Central Bank Statistics

BANK FOR INTERNATIONAL SETTLEMENTS

MANAGING DERIVATIVES TRADE DATA: THE CENTRAL BANK PERSPECTIVE. IFC SURVEY ON TRADE REPOSITORIES DATA

Jose Maria Serena Garralda

IFC Secretariat

Group of Experts on National Accounts: "Measuring Global Production"

* The views expressed here are those of the authors and not necessarily those of the Bank for International Settlements

INTRODUCTION. BACKGROUND

- The G20 OTC regulatory reform established the requirement to report OTC derivative transactions to trade repositories (TRs).
- Data held in TRs have significantly increased as a result, and many financial authorities have essayed to exploit them.
- Central banks face challenges since TR data are huge and quality is not always good.
- Important to share experiences on (1) policy interests; (2) availability and accessibility; (3) information gaps and quality issues; (4) actual use; and (5) policy initiatives for improvement.

INTRODUCTION. BACKGROUND

- The Irving Fisher Committee on Central Bank Statistics (IFC) conducted a survey among central banks' experiences in using TR data.
  - The IFC is a forum of central bank economists and statisticians, as well as others who want to participate in discussing statistical issues of interest to central banks, under the auspices of the Bank for International Settlements.
  - You can find information on activities and publications in the BIS website (including data standardization).
- IFC Report "Central banks and trade repositories derivatives data", October 2018 available at www.bis.org

INTRODUCTION. MAIN TAKEAWAYS

1. Macroprudential risk assessment constitutes the main policy interest.

2. Data availability differs across jurisdictions and appears higher among the largest ones.

3. There are data gaps, in particular in counterparty details; most central banks actively conduct quality checks.

4. Central banks plan to launch further initiatives to improve quality; importance is attached to coordinated activities.

5. Data standardization has a key role –outside the EU the LEI is often unavailable, even for firms active in markets.

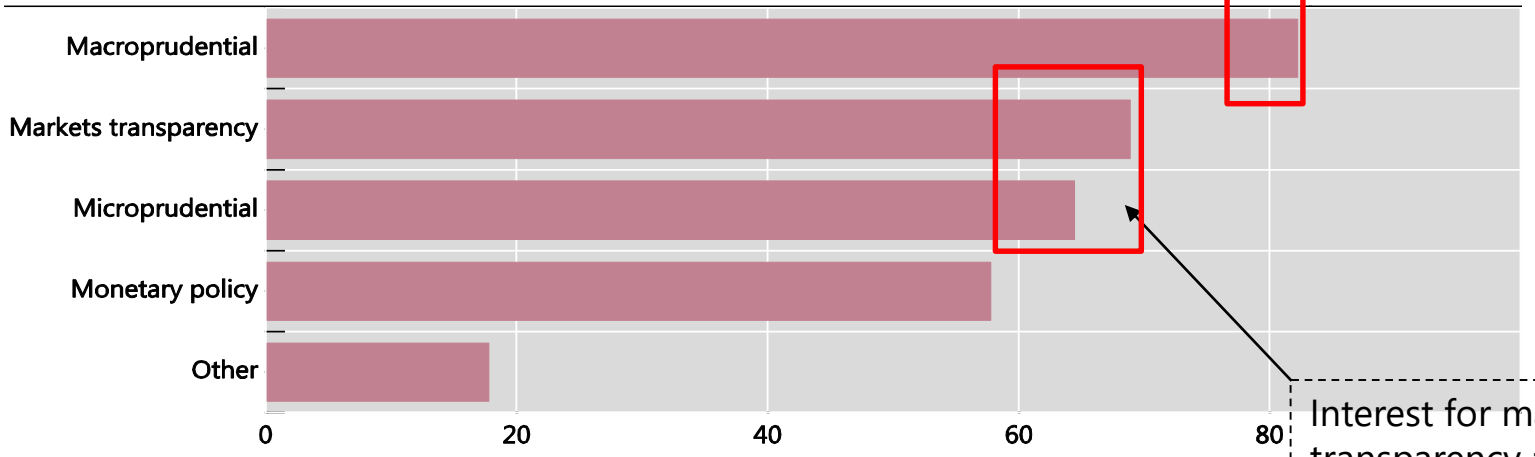
POLICY INTEREST IN TRADE REPOSITORY DATA

Macroprudential risk assessment is the main policy objective behind central banks' interest in TR data

Which policy objectives underlie central bank interest in TR data?[1]

In per cent

Graph 2



Interest for market transparency and microprudential supervision is also strong.

[1] Macroprudential includes systemic risk assessment and monitoring of interconnectedness; microprudential refers to micro-level supervision; markets transparency includes surveillance and functioning [i.e. Analysis].

Source: IFC survey on TR data, 2018

- Central banks' interests can reflect: (1) TR data granularity; (2) availability of alternative data sources (eg direct reporting from banks); and (3) lack of global coverage.

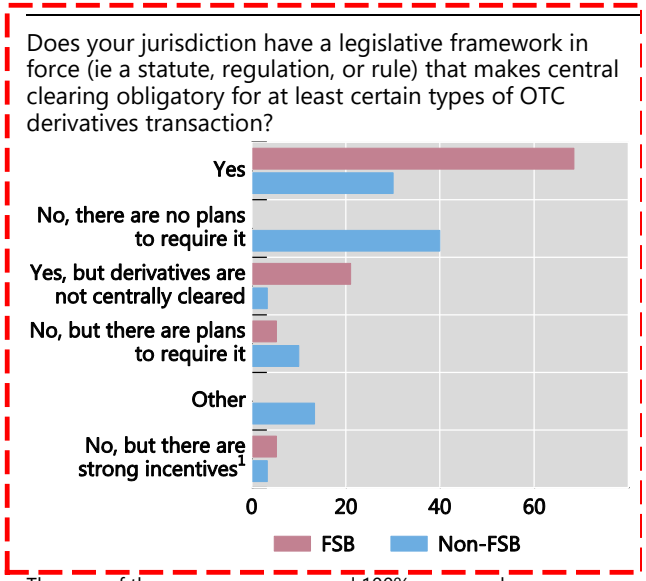
REPORTING REQUIREMENTS AND DATA AVAILABILITY

- Diversity in **central clearing requirements** results in differences in data availability across jurisdictions:

Differences in clearing and reporting requirements

In per cent

Graph 3



The sum of the responses can exceed 100%, as several answers are po

[1] Incentives include margins and higher capital requirements on non-centrally cleared derivatives. [2] Non-resident foreign-controlled institutions which are, for instance, counterparties of resident institutions involved in the reported trades.

Source: IFC survey on TR data, 2018

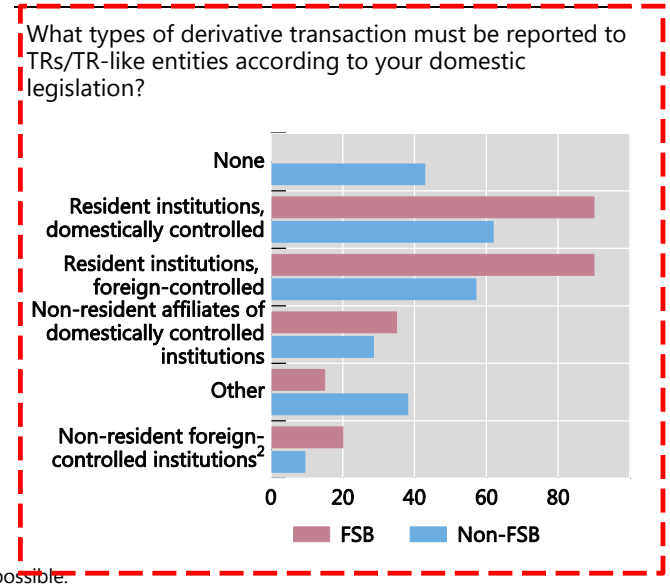
- Requirements are more frequent for **FSB members** (and among non-FSB members, EU countries subject to the EMIR).

REPORTING REQUIREMENTS AND DATA AVAILABILITY

- **Reporting requirements on counterparties** are uneven, and further increase differences in data availability.

Differences in clearing and reporting requirements

Graph 3



The sum of the responses can exceed 100%, as several answers are possible.

[1] Incentives include margins and higher capital requirements on non-centrally cleared derivatives. [2] Non-resident foreign-controlled institutions which are, for instance, counterparties of resident institutions involved in the reported trades.

Source: IFC survey on TR data, 2018

- Requirements are more frequent for **FSB members** (and among non-FSB members, EU countries subject to the EMIR).

CENTRAL BANKS ACCESS TO DATA

- Trade repositories collect transaction-level data (ie allowing counterparty identification); distinction between types of data accessible:
  - Granular data
    - Micro data: individual reporting units or specific transactions/instruments
    - Disaggregated data: data below the level of aggregated data and with a higher likelihood of identifying individual reporting units than in the aggregated data.
  - Aggregated data: data aggregates that have a low likelihood of identification of individual reporting units, such as those found in traditional datasets

CENTRAL BANKS ACCESS TO DATA

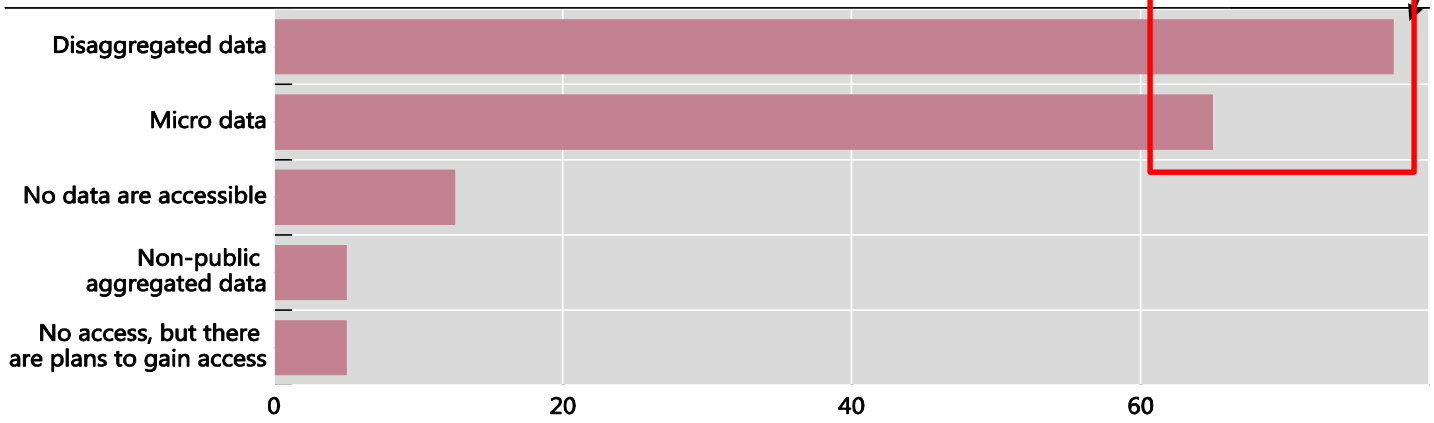
- More than 80% of central banks have access to data; however **micro data** (eg transaction-level) **are not always accessible**.

However micro data are not always accessible; data are highly confidential

Does your central bank have access to non-public derivatives data reported to TRs/TR-like entities (other than the central bank)?

In per cent

Graph 4



The sum of the responses can exceed 100%, as several answers are possible.

Source: IFC survey on TR data, 2018.

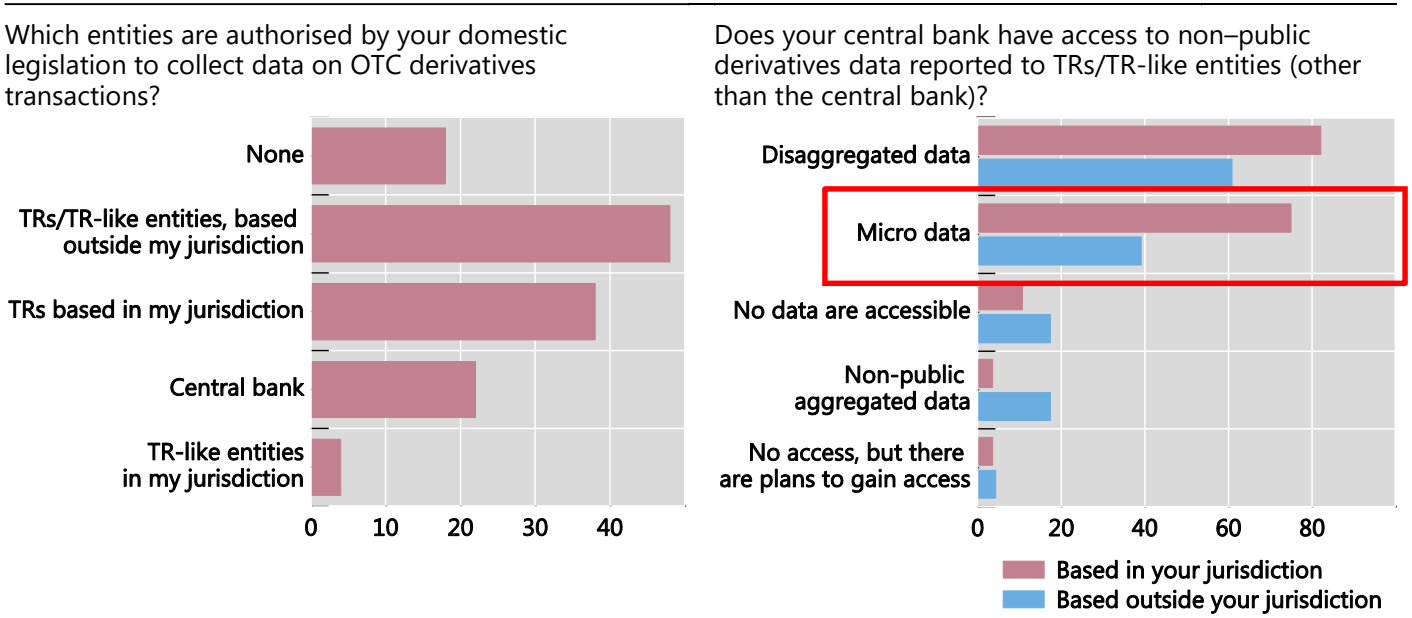
CENTRAL BANKS ACCESS TO DATA

- Legal aspects might limit access to micro data. Many TRs are located overseas; in these instances access to micro data is less frequent.

Reporting requirements and accessible data

In per cent

Graph 5



Source: IFC survey on TR data, 2018

CENTRAL BANKS ACCESS TO DATA

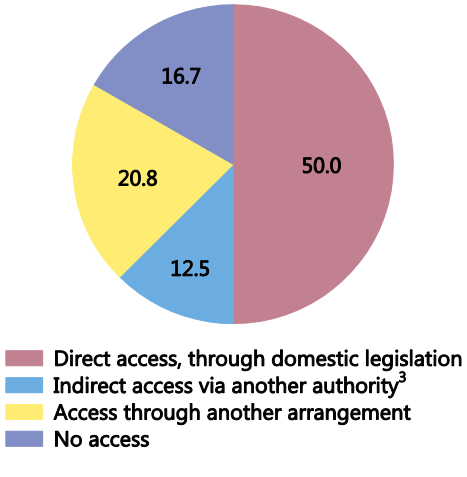
- Moreover the way of acceding to overseas TRs is more complex. Direct access falls from 75% to 50%, and often requires the authorization of another authority.

What types of arrangement govern your access to non-public derivatives data (involving a domestic counterparty) collected by TRs/ TR-like entities

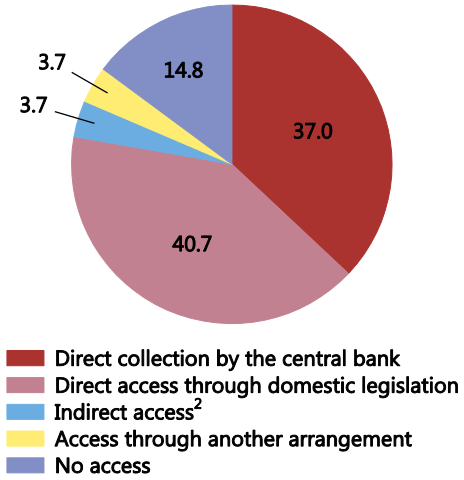
In per cent

Graph 6

Trade repositories based outside the jurisdiction



Trade repositories based in the jurisdiction



[1] Direct access through domestic legislation (since domestic counterparties can report derivative transactions to TRs/TR-like entities based outside my jurisdiction); Indirect access via another authority (ie by request of the primary authority with oversight of the TRs/TR-like entities) [2] Indirect access via another authority (ie by request of the primary authority with oversight of TRs/TR-like entities)

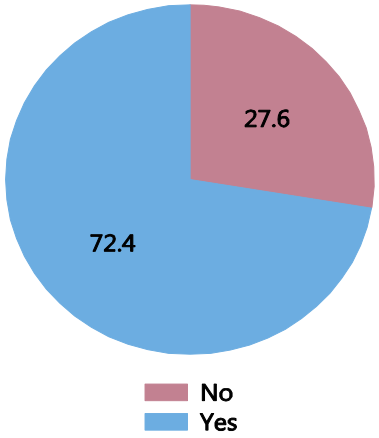
Source: IFC survey on TR data, 2018

DATA GAPS

- More than 70% of the central banks acceding to TR data consider that there are **data gaps**.

Are there any gaps in the TR data accessible by the central bank?

In per cent Graph 7



Source: IFC survey on TR data, 2018.

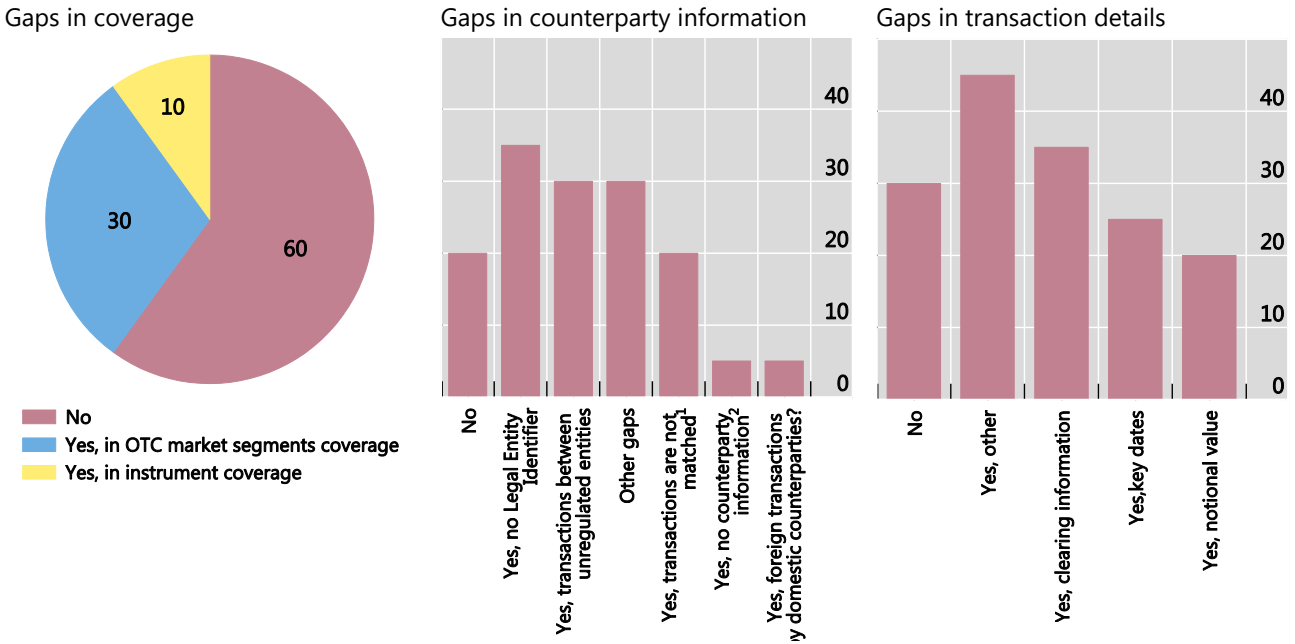
DATA GAPS

- Segment coverage is good (lhs graph), but data gaps exist in **counterparty information** and **transaction details**.

Are there any gaps in the TR data accessible by the central bank?

In per cent

Graph 8



[1] Information does not allow matching transactions between two reporting entities. [2] No information whatsoever on any counterparty of the transaction is available (data only records contract type, amount, notional value etc).

Source: IFC survey on TR data, 2018.

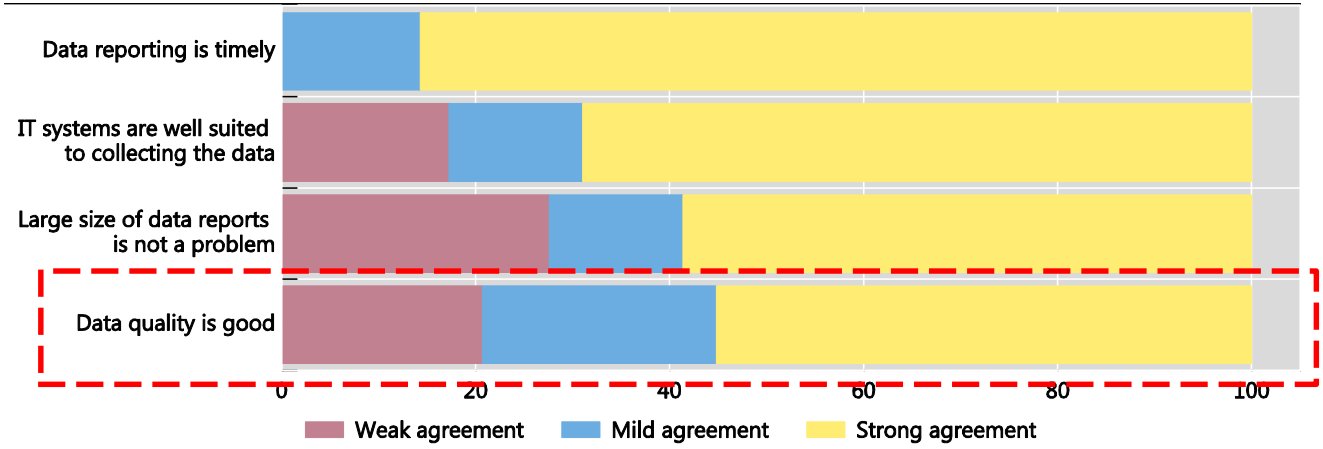
PROCESSING DATA TO ENSURE QUALITY

- Data needs to be processed to ensure quality. IT systems can cope with large size of datasets, but are struggling with data quality.

How would you describe the processing of TR data?

In per cent

Graph 9



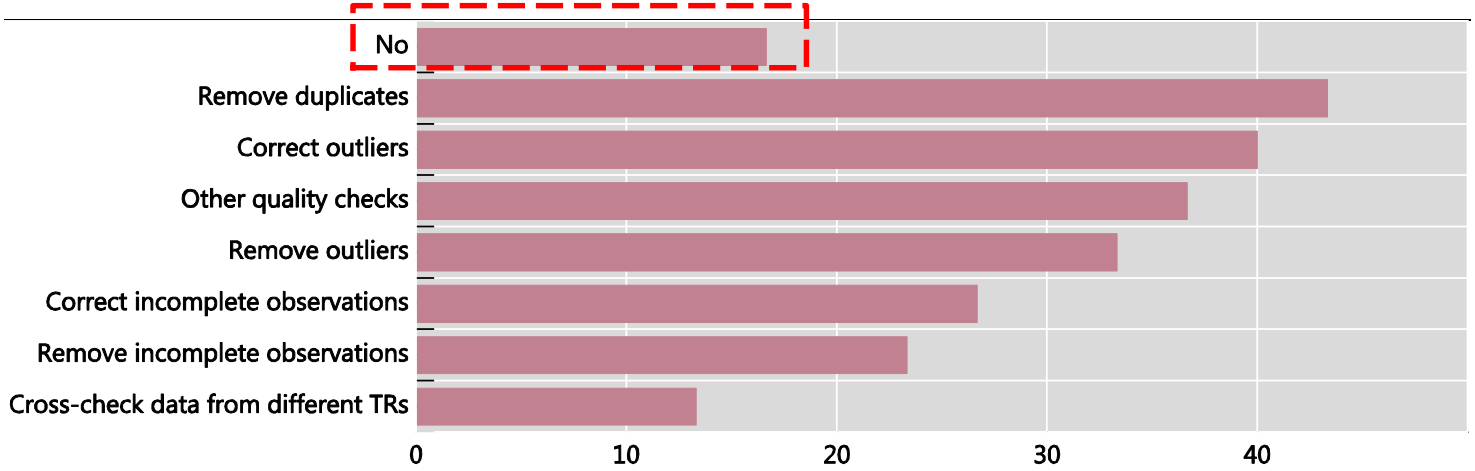
Source: IFC survey on TR data, 2018.

PROCESSING DATA TO ENSURE QUALITY

- More than 80% of central banks consider that data processing takes time; this reflects that quality checks are frequent - particular effort is attached to treatment of duplicates.

Does the central bank conduct quality checks on TR data?[1]

Graph 10



The sum of the responses can exceed 100%, as several answers are possible.

[1] Incomplete observations are those with missing fields.

Source: IFC survey on TR data, 2018.

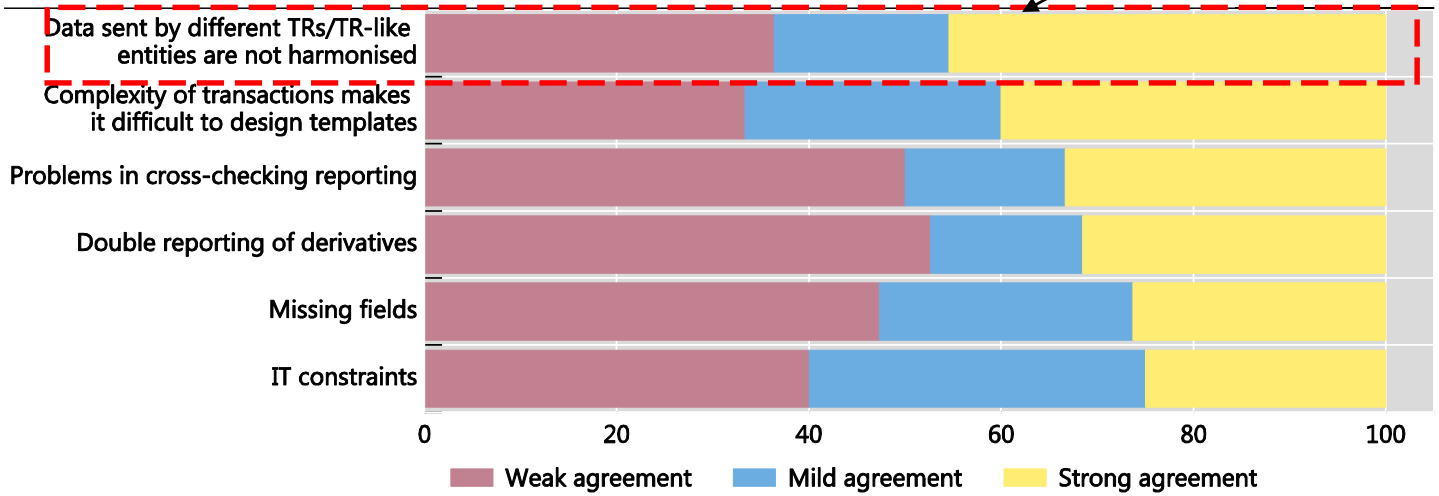
PROCESSING DATA TO ENSURE QUALITY

- Duplicates are an issue for data aggregation -key for systemic risk assessment. Lack of data, data quality, complexity of data processing challenge it.

In particular lack of data harmonization seems the main challenge –will be reflected in CB's strategies

Does your central bank face problems in the aggregation process of data collected by TRs/TR-like entities?

Graph 11



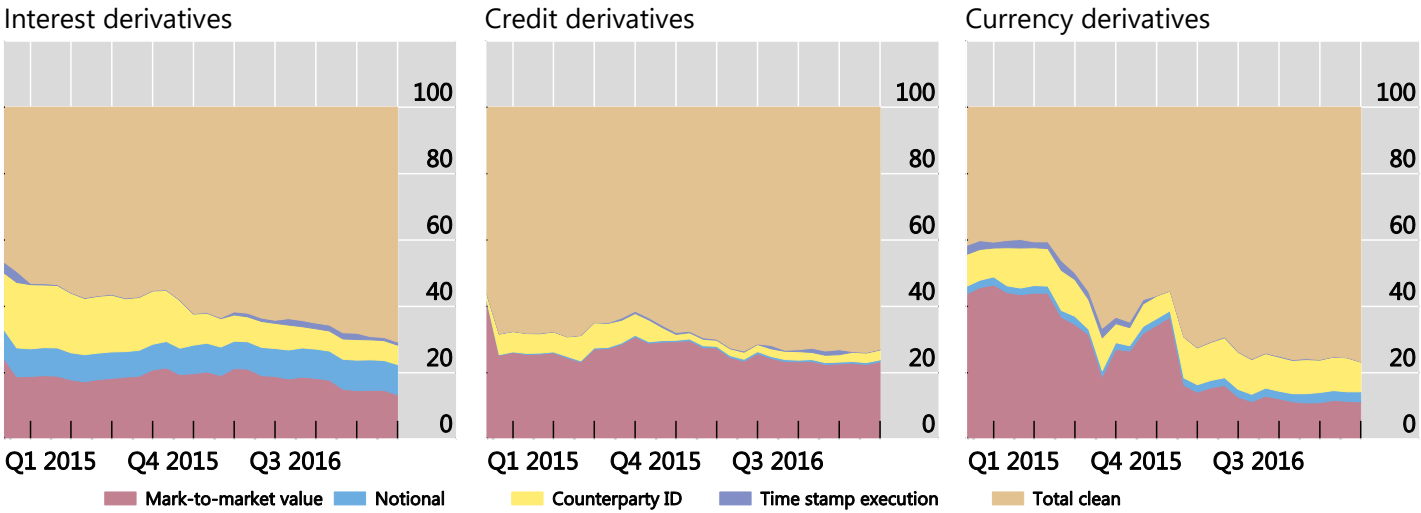
Source: IFC survey on TR data, 2018.

PROCESSING DATA TO ENSURE QUALITY

Observations dropped at each step of the ECB cleaning procedure

Number of trades, as a percentage

Graph 12



Source: ECB calculations, based on EMIR confidential data. We thank Grzegorz Skrzypczyński and Sébastien PérezDuarte (ECB) for this analysis.

Pérez-Duarte, S. and G. Skrzypczynski "Two is company, three's a crowd: Automated pairing and matching of two-sided reporting in EMIR derivatives' data" (forthcoming at IFC Bulletin No 49

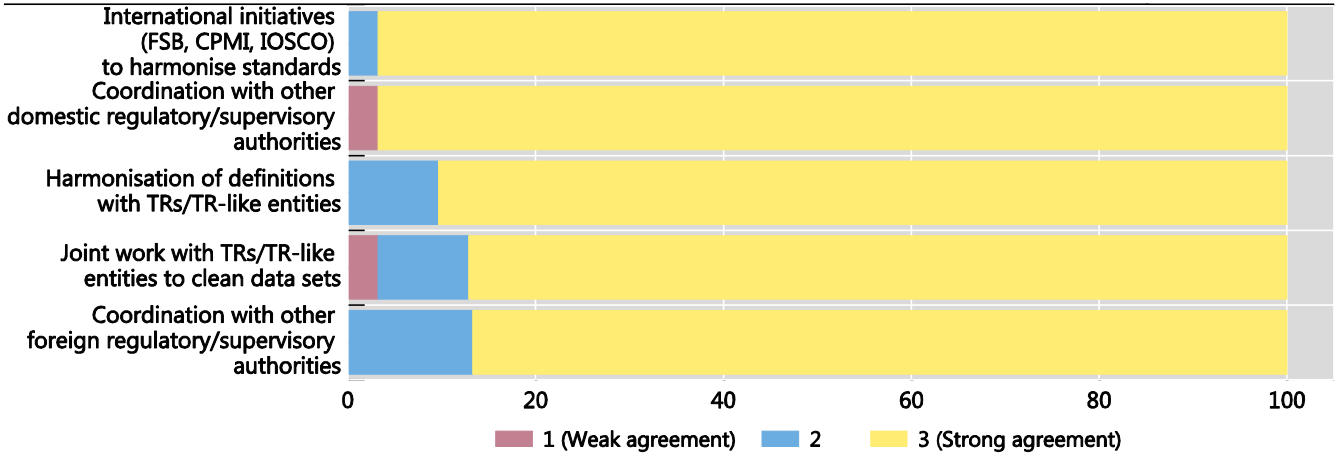
PROCESSING DATA TO ENSURE QUALITY

- One key insight: strong agreement on the importance of coordinated initiatives to harmonize standards.

Could coordinated initiatives between the central bank and other institutions/entities improve TR data quality/coverage in your jurisdiction?

In per cent

Graph 1



[1] Authorities refer to domestic regulatory and supervisory authorities

Source: IFC survey on TR data, 2018

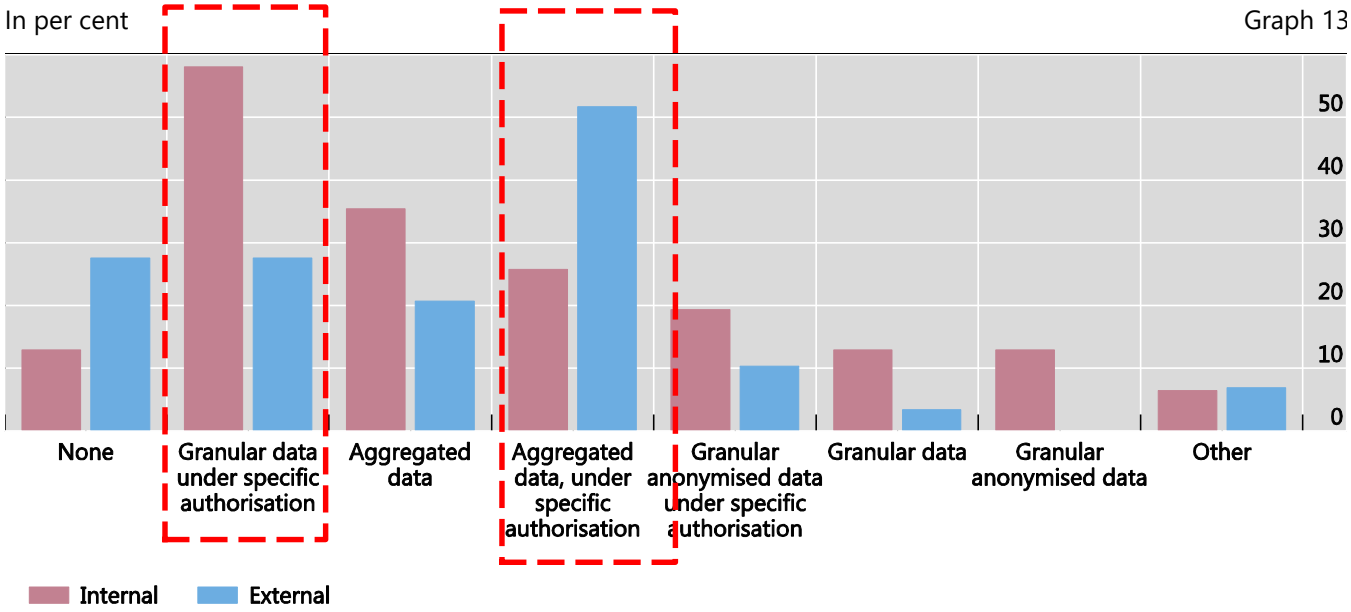
- Probably an example of how important data standardization is for central banks managing "financial big data" (Draghi, 2018; Coure, 2018, Mazzaferro, 2018))

USE OF TRADE REPOSITORY DATA

What type of non-public derivatives data can the central bank share with users?[1]

In per cent

Graph 13



The sum of the responses can exceed 100%, as several answers are possible.

[1] Granular data refer to micro or disaggregated data (Box 3).

Source: IFC survey on TR data, 2018.

Internal users have access to granular data; often require specific authorisation

External users more rarely access to granular data; in many instances access to aggregated data, under autorisation

FURTHER WORK. POLICY INITIATIVES

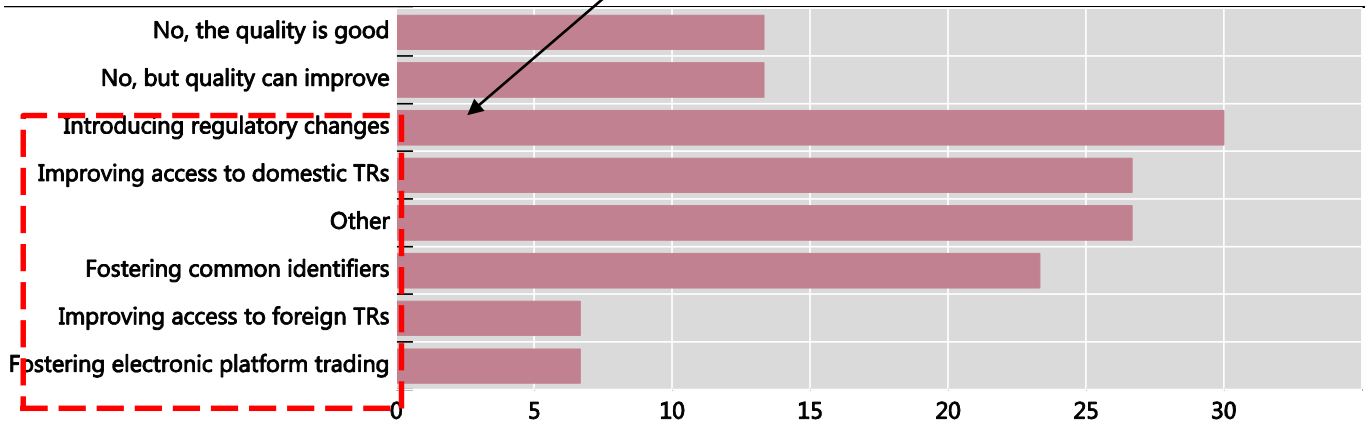
- Most central banks think that quality can improve, and have strategies:

However these strategies are very diverse…

Does the central bank have a strategy for enhancing the quality/coverage of the TR data that it can access?[1]

In per cent

Graph 14



The sum of the responses can exceed 100%, as several answers are possible.

[1] Regulatory changes refer to measures to broaden the reporting market segments/institutions/instruments; domestic/foreign TRs refer to TRs/TR-like entities based in/outside the corresponding jurisdiction (Box 1); electronic platform trading refers to the introduction of mandatory electronic platform; common identifiers refer to initiatives to foster the use of common identifiers (eg LEIs).

Source: IFC survey on TR data, 2018.

THANK YOU FOR YOUR ATTENTION

IFC Report "Central banks and trade repositories derivatives data", October 2018 available at www.bis.org