



Eighth IFC Conference on *“Statistical implications of the new financial landscape”*

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## Recent ECB experience of rapidly evolving monetary policy and its statistical implications<sup>1</sup>

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<sup>1</sup> This paper was prepared for the meeting. The views expressed are those of the authors and do not necessarily reflect the views of the BIS, the IFC or the central banks and other institutions represented at the meeting.

# Recent ECB experience of rapidly evolving monetary policy and its statistical implications<sup>1</sup>

Jean-Marc Israël, Antonio Colangelo and Rodrigo Oliveira-Soares

## Abstract

Since the onset of the financial crisis, the ECB has adopted several unconventional monetary policy measures to promote the correct functioning of the monetary policy transmission channel. This paper reviews some initiatives developed in the area of monetary and financial statistics to support the design and implementation of these measures, as well as the analysis of their impact. Alongside new aggregated data on bank loans to the private sector, the ECB is now collecting and sharing across the Eurosystem individual banks' reports – protecting data confidentiality, as required – to better support monetary policy conduct. In addition, two major projects have been launched aiming at collecting granular data to monitor the wholesale money market (Money Market Statistical Reporting) and to assess in greater depth supply and demand factors in credit developments (Analytical Credit). Moreover, statistical concepts and measurements constitute the basis for implementation of the Targeted Long Term Refinancing Operations (TLTROs) launched by the Eurosystem in 2014 with the first series, and revamped in 2016 with the TLTRO-II programme.

Keywords: euro, European Central Bank, central banking, statistics, monetary policy, unconventional, transmission channel, credit, bank loans, money market.

JEL classification: E43, E51, E580, G21

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## Introduction

As a response to the financial crisis, the ECB expanded its operating framework by including non-standard monetary policy measures. In a first phase, before June 2014, these measures focused on a more flexible provision of liquidity to the banking system and on the outright purchase of assets targeting malfunctioning market segments. After June 2014 new credit easing measures were introduced with the final aim to improve monetary policy transmission, including negative interest rates on the deposit facility, targeted refinancing operations - the TLTROs, and new asset purchase programmes.<sup>2</sup>

The design and implementation of those tools as well as the need to monitor their impact on the monetary policy transmission have created new challenges for analysts, which have translated into new demands for monetary and financial statistics. Without being exhaustive, this paper provides an overview of some of the initiatives which were developed. First, users have faced the need to keep the headline aggregates fit for monetary policy, e.g. by taking into account financial innovation. This has resulted into new statistics on bank loans, which are reviewed in Section 1. In addition, the challenges arising from unconventional monetary policy measures have introduced new dimensions in the analyses, leading to a need for higher data granularity and timeliness. For monetary and financial statistics this has meant new user requests for access to data on banks on an individual level. Section 2 presents balance sheet and interest rate statistics which have been shared since 2012 across the Eurosystem at the level of individual Monetary Financial Institutions (MFIs) – protecting data confidentiality, as required; while the data were already available at

<sup>2</sup> For further insights, see ECB (2010, 2015a and 2015b).

Eurosystem national central banks (NCBs) for the purposes of compiling national and euro area aggregated MFI statistics, they had not been shared at Eurosystem level beforehand. In addition, new projects were initiated aimed at the collection of money market transactions and granular credit data; these projects are briefly introduced in Sections 3 and 4. Moreover, the design of the TLTROs represented a major challenge as the methodological framework of the programme was developed entirely on statistical concepts; this is discussed in Section 5, while Section 6 concludes.

## 1. New data on bank loans to the private sector

In 2015, the ECB released new data to improve the economic content of its statistics on bank loans. The first significant enhancement related to MFI balance sheet items (BSI) statistics,<sup>3</sup> which represent the primary source for the ECB monetary analysis. When a bank sells part of its loan portfolio to a third party (for instance in the context of securitisation activities) and removes those loans from its balance sheet, it reports a reduction in lending. At an aggregated level, to the extent loans are not transferred to another euro area bank, this will translate into a reduction in MFI lending, although the actual amount of financing received by the real economy remains unchanged. A need thus arises to construct measures of bank lending which are not affected by loan transfers off and onto banks' balance sheets.

With the aim of providing a measure of bank lending from the perspective of the lender, the ECB has been publishing loan series adjusted for sales and securitisation since December 2008. This method was based on the adjustment of loan transactions reported in a given month by the amount of loans removed from the MFI balance sheet (i.e. derecognised) owing to securitisation or outright sales to non-MFIs; the resulting adjusted transactions would then be used to derive growth rates.<sup>4</sup> This method, however, did not take into account the repayments of those loans that are no longer recorded on banks' balance sheets (derecognised loans), nor the outstanding amounts of derecognised loans in the calculation of the adjusted growth rates. In September 2015 the ECB released new data on loans adjusted for sales and securitisation based on a refined method which is taking into account these two effects, insofar as data are available.<sup>5</sup> The new data offer a more comprehensive view of all lending to the real economy originated by banks whether or not the loans are recorded on banks' balance sheets at the time of the reporting and ensure better comparability across countries.

<sup>3</sup> The statistical requirements of BSI statistics are specified under Regulation (EU) No 1071/2013 of the ECB of 24 September 2013 concerning the balance sheet of the monetary financial institutions sector (recast) (ECB/2013/33), OJ L 297, 7.11.2013, p. 1.

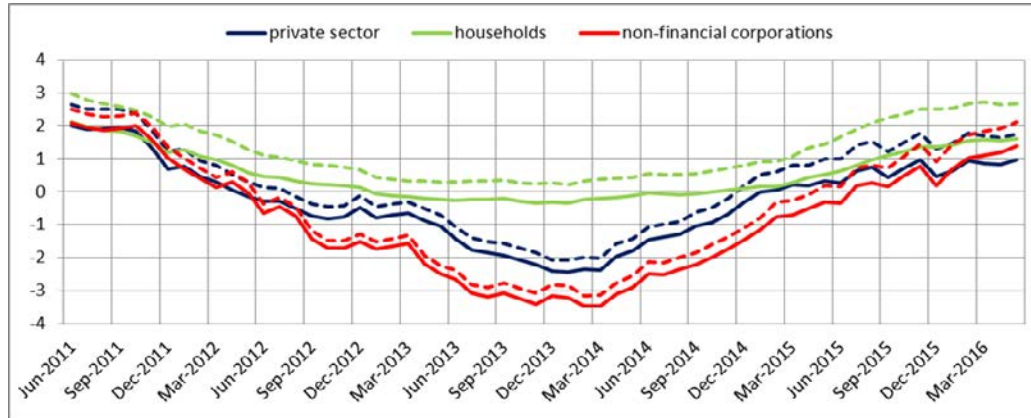
<sup>4</sup> See ECB (2009).

<sup>5</sup> See ECB (2015c).

Chart 1

MFI loans to the euro area private sector adjusted for sales and securitisation

(annual growth rates, seasonally adjusted)



Source: ECB

Note: The solid lines represent the new method and the dashed lines represent the former method. The last observation is for May 2016.

Chart 1 shows that the method of adjustment introduced in 2015 resulted in steady lower growth rates than using the former method. This difference is explained by flow and stock effects. First, repayments of derecognised loans result in somewhat lower adjusted flows of loans compared with the former method. Second, the inclusion of the stocks of derecognised loans increases the base on which the growth rates are computed, thereby reducing the growth rates in absolute value terms. In other words, the stock effect contributes to making positive growth rates lower, and negative growth rates less negative, under the new method than under the former method.

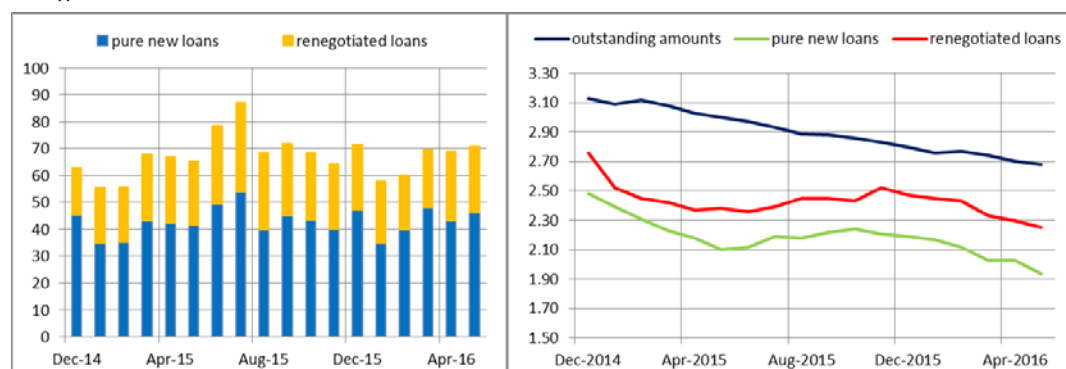
At the request of users, additional data were also introduced in the context of MFI interest rate (MIR) statistics,<sup>6</sup> which provide information on interest rates applied by banks to deposits and loans vis-à-vis households and corporations, relating to both new business and outstanding amounts. In particular, the data on new business comprise information laid down in new agreements between banks and their customers, thus reflecting the supply and demand conditions at the time of the agreement. These statistics enable an assessment of the pass-through of changes in policy rates to the lending and deposit rates faced by households and corporations. However, data on new business of loans have thus far not distinguished between new agreements related to renegotiations and pure new loans, while the distinction can be relevant for analysis. In 2015 new indicators were published that allow disentangling renegotiations of loans to households (broken down by purpose of the loan) and corporations.<sup>7</sup>

<sup>6</sup> MIR statistics are collected under the requirements of Regulation (EU) No 1072/2013 of the ECB of 24 September 2013 concerning statistics on interest rates applied by monetary financial institutions (recast) (ECB/2013/34), OJ L 297, 7.11.2013, p. 51.

<sup>7</sup> See also ECB (2015d).

## Chart 2

MFI loans to the euro area households for house purchase: new business volumes (left-hand side) and interest rates (right-hand side) (EUR billions (left-hand side), percentages per annum excluding charges (right-hand side))



Source: ECB

Note: The last observation is for May 2016.

Chart 2 (left-hand panel) shows that in the euro area from December 2014 to May 2016 over a third of the loans to households for house purchase recorded as new business were actually renegotiations of existing loans. Chart 2 (right-hand panel) also compares interest rates on loans to households for house purchase, showing that interest rates on true new loans were consistently lower than those on renegotiated loans between December 2014 and May 2016. Over the period, both interest rates were significantly lower, on average, than interest rates on outstanding loans for house purchase.

## 2. Use of individual banks' balance sheet and interest rate statistics

Data on euro area MFIs have been collected by the Eurosystem under the BSI and MIR statistical framework on an individual basis since 1999 and 2003 respectively. Traditionally, NCBs would share the data with the Eurosystem based on national aggregates only. While these aggregates remain a key component for the euro area indicators, granular BSI and MIR data have also become important for analysis to better analyse the monetary policy transmission channel and disruptions caused by fragmentation in the markets. Hence, the ECB has established since September 2012 a regular transmission of individual MFI data, with a view to sharing the dataset across the whole Eurosystem for monetary policy as well as macro-prudential and financial stability analysis, in line with the legal framework underlying the collection of statistical information by the ECB.<sup>8</sup> Tools and processes needed to be adapted so as to handle microdata. In addition, data confidentiality had to be protected.

Originally, from September 2012, the dataset was limited to the main items of the MFI balance sheet and covered a panel of about 250 MFIs representing 70% of

<sup>8</sup> Council Regulation (EC) No 2533/98 of 23 November 1998 concerning the collection of statistical information by the European Central Bank, OJ L 318, 27.11.1998, p. 8.

the euro area MFI sector in terms of total assets. The dataset then was gradually extended both in terms of indicators and institutions. Since October 2015, the coverage has increased to about 300 MFIs (representing 80% of the euro area MFI sector in terms of total assets) and the granularity of the indicators has also been extended.<sup>9</sup> For instance, for the balance sheet indicators a total of about 130 indicators on outstanding amounts and over 30 on transactions are made available to users. In particular, the dataset covers cash, loans, debt securities, money market fund (MMF) shares/units, non-MMF investment fund shares/units, equity, non-financial assets and remaining assets. On the liability side, deposits, debt securities, capital and reserves, and remaining liabilities are presented. Data are split by residency and sector of the counterparty, maturity (where relevant), purpose (for loans to households) and type (for deposits). Regarding interest rates, the dataset covers loans and deposits to euro area households and non-financial corporations (NFCs), and distinguishes between interest rates on outstanding amounts (13 indicators) and interest rates on new business (30 indicators, with the corresponding business volumes). The breakdowns broadly match those available for the balance sheet indicators in terms of maturity (or fixation period for the new business) and instrument type for deposits or purpose for loans to households. Loans to NFCs are additionally made available with a split for the amount of the loan.<sup>10</sup>

Since its establishment, this rich dataset has enabled to enhance monetary analysis with cross-sectional studies, as the responses of individual MFIs to monetary policy easing and unconventional measures became much affected by their individual characteristics. The standard ECB tool sets for assessing money and credit has thus been complemented with distributional analyses and cross-sectional studies using individual data. Besides the monetary policy transmission mechanism, the microdata can also be used to study the funding conditions of banks, not least as a consequence of prudential or regulatory changes, their profitability (e.g. interest rate margins) or balance sheet structure, allowing for analyses across business models, bank types and countries.<sup>11</sup>

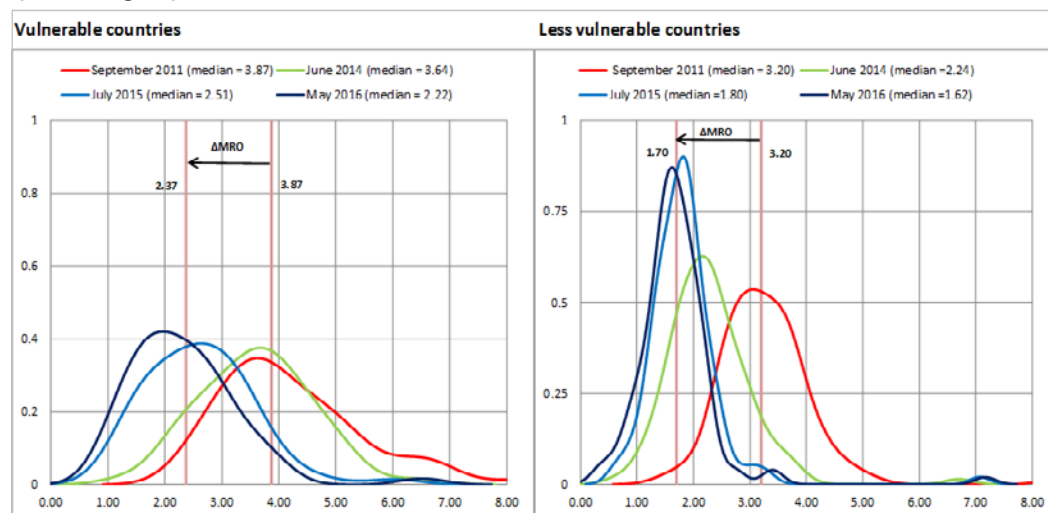
<sup>9</sup> The latest extension has also introduced micro-prudential supervision as one of the purposes for which the data can be used.

<sup>10</sup> For a more comprehensive description of the dataset and the technical challenges that were faced (especially in relation to the latest extension), see Bojaruniec and Morandi (2016).

<sup>11</sup> For instance, see ECB (2014a, 2015b, 2015e and 2016). Much academic research has also been performed in this context; for example, see Altavilla *et al* (2016) and Holton and Rodriguez d'Acri (2015).

Chart 3

Composite lending rates for NFCs: distribution of individual MFIs (percentages per annum)



Source: ECB

Note: The charts show the density of the lending rate distribution obtained from a sample of 56 MFIs in selected vulnerable countries (Ireland, Spain, Italy and Portugal) and 106 MFIs in less vulnerable countries (Belgium, Germany, France, the Netherlands and Austria) in four different periods (September 2011, June 2014, July 2015 and May 2016). The chart also shows that if the reduction in the MRO rate since September 2011 (i.e. 145 basis points) had been fully passed on to the median lending rates of that period (i.e. 3.87% for vulnerable countries and 3.20% for less vulnerable countries), the lending rate in May 2016 would have been 2.37% for vulnerable countries and 1.70% for less vulnerable countries.

Chart 3 extends the analysis of ECB (2015b) and shows that the pass through of successive cuts in the MRO rate to lending rates applied to NFCs was much slower for vulnerable countries than in less vulnerable ones. Comparing the distributions of lending rates of September 2011 (i.e. shortly before the first of a series of cuts in the rate of the ECB main refinancing operations (MRO) starting in November 2011) and June 2014, it appears that vulnerable countries did not experience a significant drop on the median rate (23 basis points) despite the 125 basis point reduction in the MRO rate. In contrast, this reduction was better reflected in the median rate for less vulnerable countries (96 basis points). Since the launch of the TLTROs<sup>12</sup> and the new asset purchase programmes in June 2014, the reduction in borrowing costs in vulnerable countries was significant, supporting the view that the measures have helped aligning the price of credit with the intended stance of monetary policy.

### 3. New daily granular data on money market transactions

Monitoring money markets is crucial for the analysis of the monetary policy transmission (as well as for macro- and micro-prudential supervision), especially in a situation of high market fragmentation. In a situation where such fragmentation was expected to remain very high, in 2014 the Eurosystem decided to establish a legal

<sup>12</sup> See Section 5 for further details.



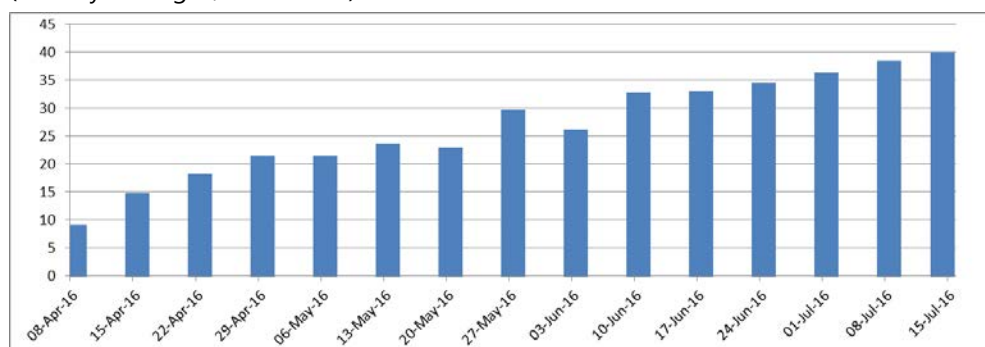
framework to collect statistical data on money market transactions.<sup>13</sup> This dataset provides the Eurosystem with daily, accurate, timely (in the early morning on the working day following the deal) and comprehensive data on transactions concluded by the reporting credit institutions, which will allow an improved monitoring of the transmission of monetary policy decisions in money markets, as well as on market expectations for the future evolution of policy rates. This new granular dataset covers four segments of the euro money markets, namely unsecured, secured, foreign exchange swaps (FX swaps) and overnight index swaps (OIS) transactions denominated in euro. The new collection framework requires the daily reporting of transaction-by-transaction information on unsecured and secured lending and borrowing transactions in euro with a maturity of up to one year. All FX swap transactions involving euro and OIS transactions denominated in euro must also be reported. The detailed trade data to be provided include the volume, rate, counterparty type and collateral type, together with the time at which the transaction was conducted.<sup>14</sup>

Following the adoption of the relevant legal act, the ECB started on 1 July 2016 to collect statistical data from the 52 euro area credit institutions with the largest market share in money market segments. With a view to limiting the impact of teething problems and ensuring full automation from 1 July 2016, credit institutions started to send data on 1 April 2016. This three-month interim period was deemed necessary to fine-tune the reporting process before the legal obligation came into force on 1 July. As shown in Chart 4, the number of transactional records already reached ca. 35,000 per day by mid-July 2016. The data are available at 07:30 in the morning of the next working day, allowing an early assessment to be used as input to the daily monitoring of liquidity by the ECB. The data granularity will also allow more in-depth analysis of market developments. This granularity and timeliness requires that the statistical analysis, e.g. on consistency and plausibility, is run with highly effective and automated processes, part of which will need to be developed and enhanced while gaining experience. In this regard, a full standardisation of the underlying taxonomy and data transmission format based on the ISO 20022 standard has been introduced by the Eurosystem. A set of four reporting messages and a status message containing feedback information have been jointly submitted by the ECB, the Deutsche Bundesbank, the Banco de España and the Banque de France and subsequently been approved by the ISO Registration Authority.

<sup>13</sup> Regulation (EU) No 1333/2014 of the European Central Bank of 26 November 2014 concerning statistics on the money markets (ECB/2014/48), OJ L 359, 16.12.2014, p. 97.

<sup>14</sup> For further information, see ECB (2016*b* and 2016*d*).

Chart 4  
 Transactional records collected  
 (Weekly averages, thousands)



## 4. The Analytical Credit datasets

The ECB has adopted a strategy to develop and produce new ESCB granular statistics on credit and credit risk with the aim to support the Eurosystem in the performance of its tasks, including those related to monetary policy analysis and operations, risk management, and financial stability surveillance. The granular data will also be used to produce new indicators of credit intermediation and increase the quality of existing statistical datasets.

To this end, a new statistical regulation was adopted in May 2016,<sup>15</sup> according to which granular credit and credit risk data are to be collected based on harmonised ECB statistical reporting requirements, with a view to establishing a common granular credit dataset (i.e. “AnaCredit”) shared between the Eurosystem members and comprising input data for all euro area countries. The AnaCredit dataset will cover credit and credit risk information to broadly monitor the performance of the whole euro area credit market; it is therefore essential for the ECB that the relevant database contains complete, accurate and timely information on the credit situation in the financial system. The new legal framework calls upon a first stage of implementation with a focused scope, namely lending and credit lines by credit institutions to all legal persons, in particular NFCs. The scope may later on be extended to other lenders and other instruments. A phased-in approach makes the overall endeavour more manageable, while the data model, definitions and granularity of data allow any future enrichment to be processed in a non-disruptive manner.

Covering loans to NFCs in the initial phase, the AnaCredit dataset will allow a better understanding of the monetary policy transmission channel, particularly regarding small and medium-sized enterprises (SMEs) – the backbone of the economy in terms of investment and employment opportunities. AnaCredit should provide high-quality and timely information on debtors and the different credits they were granted (i.e. type of credit, outstanding debt, number of days past due date, date of origination and contractual maturity, type of interest rate and currency of the credit). This will help assessing their indebtedness and creditworthiness. Furthermore,

<sup>15</sup> Regulation (EU) 2016/867 of the European Central Bank of 18 May 2016 on the collection of granular credit and credit risk data (ECB/2016/13), OJ L 144, 1.6.2016, p. 44.

on the lenders' side information on any risk mitigation measures securing the credits (e.g. credit derivatives, guarantors, financial collateral received) is useful to estimate the severity of losses in the event of default. Finally, the dataset should support reliable debtor identification (e.g. full name and unique ID number, address or location, type of obligor (SME or corporate obligor)) as unique identification is essential for capturing the total indebtedness of debtors accurately, especially if there are cross-border exposures.<sup>16</sup> In this respect, such a credit dataset also calls for an accurate business register. The entities in the financial sector are already covered within the European System of Central Banks' "Register of Institutions and Affiliates Dataset" (RIAD). RIAD is foreseen to be expanded to also cover the non-financial entities that will be reported in AnaCredit.

## 5. The statistical basis of the TLTROs

In June 2014 the Eurosystem decided to introduce the TLTROs, a new type of monetary refinancing operations targeted to support bank lending to NFCs and households. The idea underlying the operations is to provide incentives to credit institutions to use the liquidity obtained from the Eurosystem for lending to the non-financial private sector. The first TLTRO programme, conducted from September 2014 to June 2016 with eight quarterly operations (maturing in September 2018), entitled monetary policy counterparties to borrow in the first two operations 7% of the total amount of their loans eligible for the programme (i.e. loans to the euro area non-financial private sector, excluding loans to households for house purchase) outstanding on 30 April 2014. Additional amounts could be borrowed in the subsequent operations depending on the banks' lending activities. The second TLTRO series (TLTRO-II) was launched in March 2016 to reinforce the Eurosystem's accommodative monetary policy stance, and consists of four additional quarterly operations (maturing four years after settlement) to be conducted between June 2016 and March 2017. Counterparties are entitled to borrow in the operations a total amount of up to 30% of their loans eligible for programme outstanding at 31 January 2016, less any amount still outstanding from the first two TLTRO operations conducted in 2014. The incentive scheme of TLTRO-II is based on a pricing mechanism where the interest rate to be paid depends on the lending pattern of the counterparties. Under the two programmes, eligible counterparties could choose to participate either on an individual basis or as part of a "TLTRO group" through a "lead institution", which conforms to Eurosystem eligibility criteria.<sup>17</sup> Chart 5 shows the bids under the first and second TLTRO series.

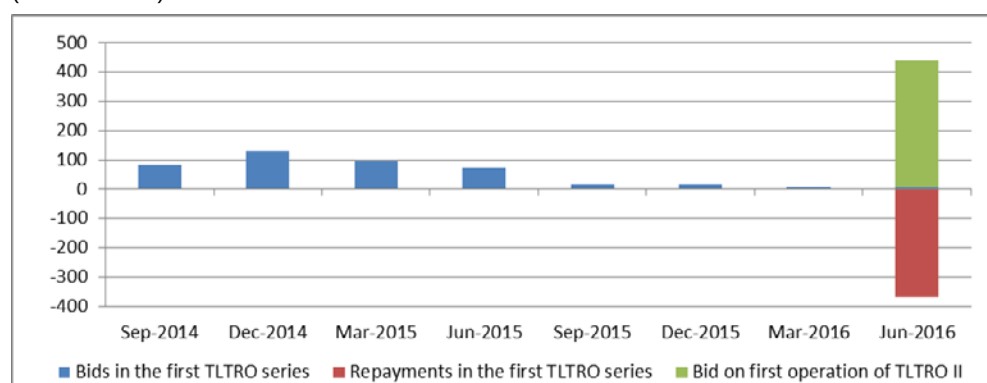
<sup>16</sup> For further information, see ECB (2015f).

<sup>17</sup> See ECB (2014b and 2016c) for further information on the two series of operations.

## Chart 5

### Liquidity provisions under the TLTROs

(EUR billions)



Source: ECB

*Note: In June 2016 many counterparties decided to repay the amounts borrowed under the first series of TLTROs in favour of TLTRO-II.*

The design of the TLTROs represented a major challenge for statisticians as it required the development of a dedicated statistical reporting for TLTRO participants which allows the measurement of the loan variables to be used for the calculation of the allowances and the evaluation of the banks' performance. In fact, data already collected by the Eurosystem in the context of BSI statistics were not sufficient as, e.g., small MFIs can be granted derogations. In addition, some important indicators for the TLTROs are not covered in BSI statistics. Still, the TLTRO dedicated reporting was anchored to the BSI methodological framework, so as to ensure common definitions and understanding by the credit institutions, comparability of data and, most notably, to enable the Eurosystem to carry out some consistency checks on the received data.

The reporting template was structured trying to guarantee an equal playing field across participants, for instance taking into account the impact of securitisation on the development of eligible loans and not fully harmonised reporting practices across the euro area. Specifically, the concept of "eligible net lending" used in the programme to monitor the lending behaviour of TLTRO bidders considers new MFI loans and repayments of principal in the reporting period, excluding the impact of loan acquisitions and disposals (including in a securitisation). In terms of national recording practices, the derecognition from the balance sheet of loans securitised in a traditional securitisation is not fully harmonised and loans may be reported net of provisions in some countries; the TLTRO template thus had to reflect these aspects as well.

Statisticians were also given a very active role in the implementation of the programmes, especially in the light of their experience to handle the data flows and guarantee the proper level of confidentiality protection for the exercise as a whole. In particular, Statistics Departments of NCBs are collecting the data from counterparties, verifying their consistency and, in many NCBs, also performing the calculation of the variables relevant for the programme. In this context, a focused data exchange of individual BSI data across NCBs concerned allowed the validation of the TLTRO reporting of cross-border TLTRO groups.

## 6. Conclusions

The financial crisis gave rise to an unprecedented market fragmentation which impaired the smooth functioning of the monetary policy transmission mechanism. Policy makers have responded by introducing a broad range of new monetary policy instruments whose design and implementation has required the development of more complex analyses going beyond traditional aggregated datasets.

The statistics function of the Eurosystem was, thus, required to meet new resource-intensive demands under high time pressure. Value for analysis of the data has further much increased.

These demands have translated into significant operational challenges, which in turn also allowed strengthening statistical processes. For instance, the richness of the AnaCredit dataset may in the near future allow rethinking the way aggregated statistics are compiled and collected from reporting agents and, going forward, could possibly lead to a decrease in data requirements in the context of BSI and MIR statistics. In addition, the interaction and cooperation among business areas has become much closer than before, enhancing the awareness of statistical producers on the use of their datasets and, ultimately, the scope of their efforts.

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EUROSYSTEM

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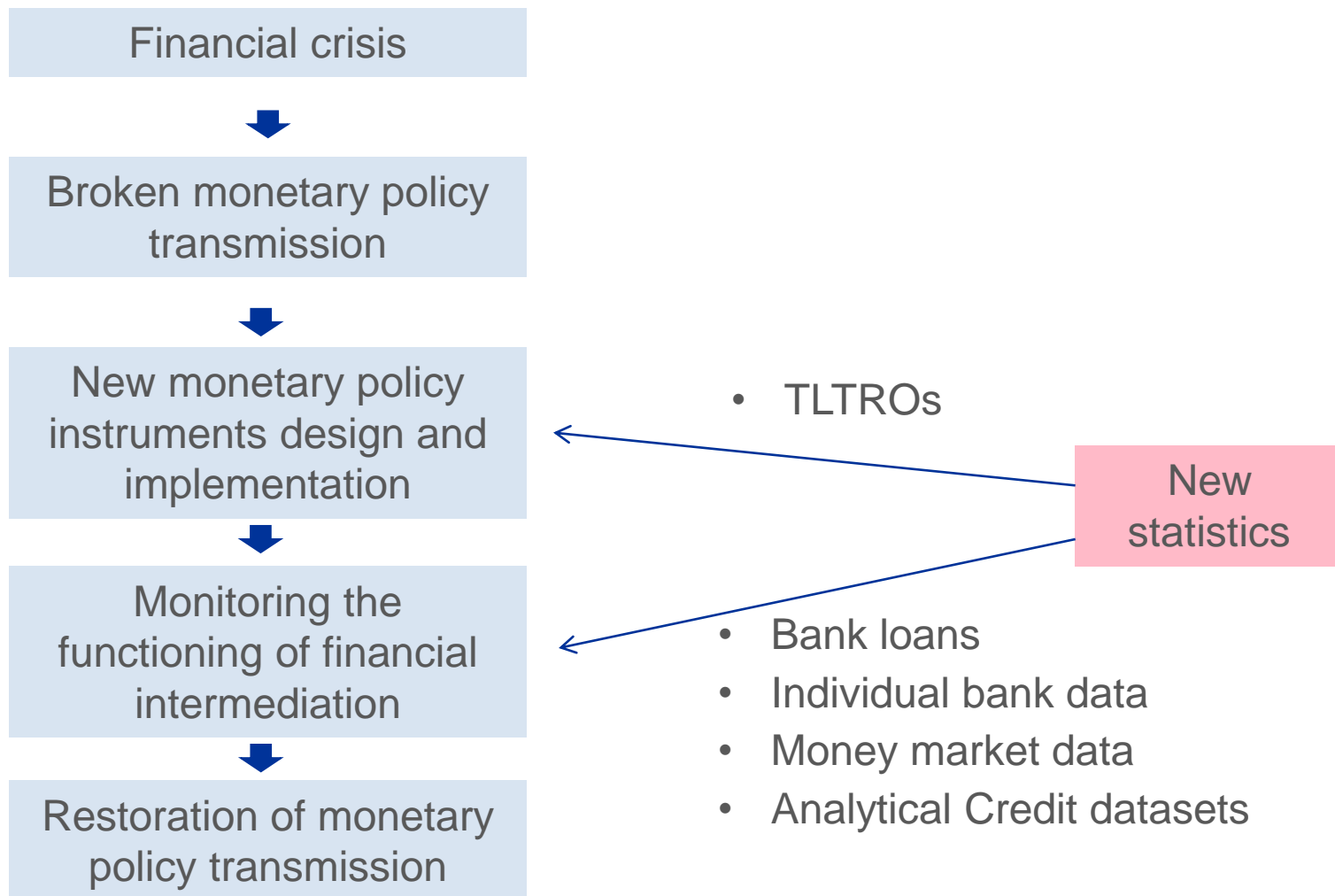
# **Recent ECB experience of unconventional monetary policy and its statistical implications**

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# Recent ECB experience



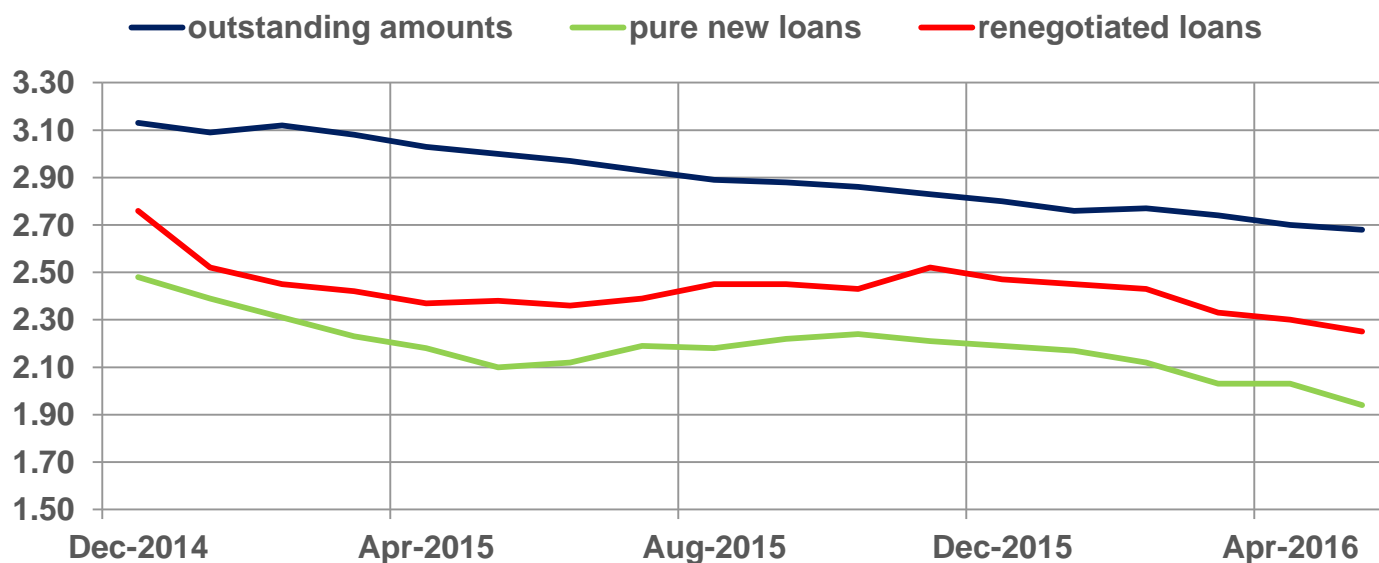
- 1 The statistical basis of the TLTROs
- 2 New data on bank loans to the private sector
- 3 Individual banks' balance sheet and interest rate statistics
- 4 New daily granular data on money market transactions
- 5 The Analytical Credit datasets

# The statistical basis of the TLTROs

- Targeted Long Term Refinancing Operations
  - *Incentivise bank lending* to non-financial private sector
- Interest rate depends on lending pattern
- Statistical reporting
  - Based on the methodological framework of banking statistics
  - Used to *calculate allowances*
  - Used to *evaluate performance* by banks

# New data on bank loans to the private sector

- Balance sheet statistics
  - New indicators for *total lending originated by banks*
- Interest rate statistics
  - Earlier indicator reflected total *new business*
  - New business now split into: *true new loans* + *renegotiated loans*
  - Recently, rates for true new loans lower than rates for renegotiated loans



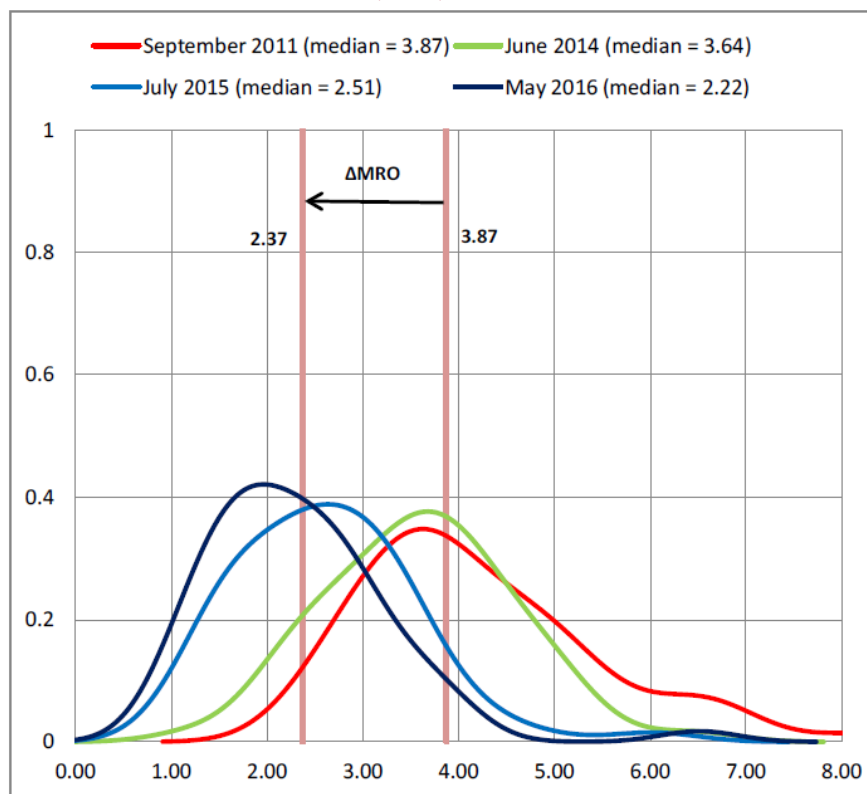
# Individual banks' balance sheets and interest rates

- Euro area individual bank data
  - Shared within the Eurosystem since 2012 (expanded in 2015)
- Confidentiality protection – limited number of users
- *Granular data for 300 banks* ca. 80% of total assets
- By bank
  - 160 indicators on balance sheet items
  - 43 indicators on interest rates
- New data allow analysing *distributions* across
  - Countries
  - Business models
  - Bank types
- Since TLTROs, *reduction in borrowing costs* in vulnerable countries

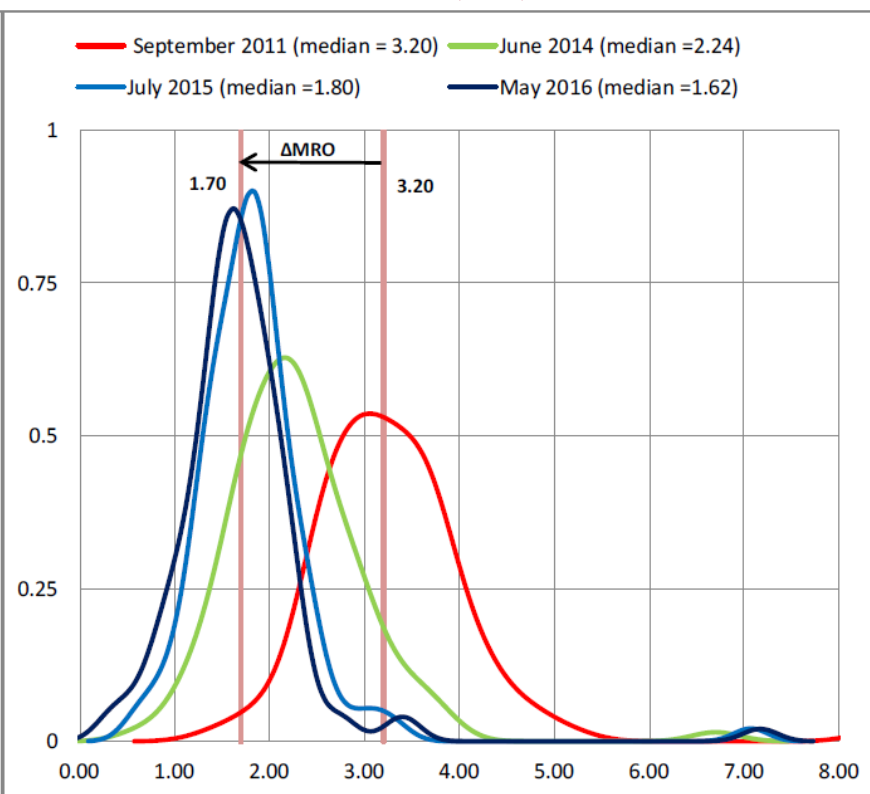
# Individual banks' balance sheets and interest rates

Composite lending rates for NFCs: distribution of individual MFIs  
(percentages per annum)

**Vulnerable countries IE, ES, IT and PT**

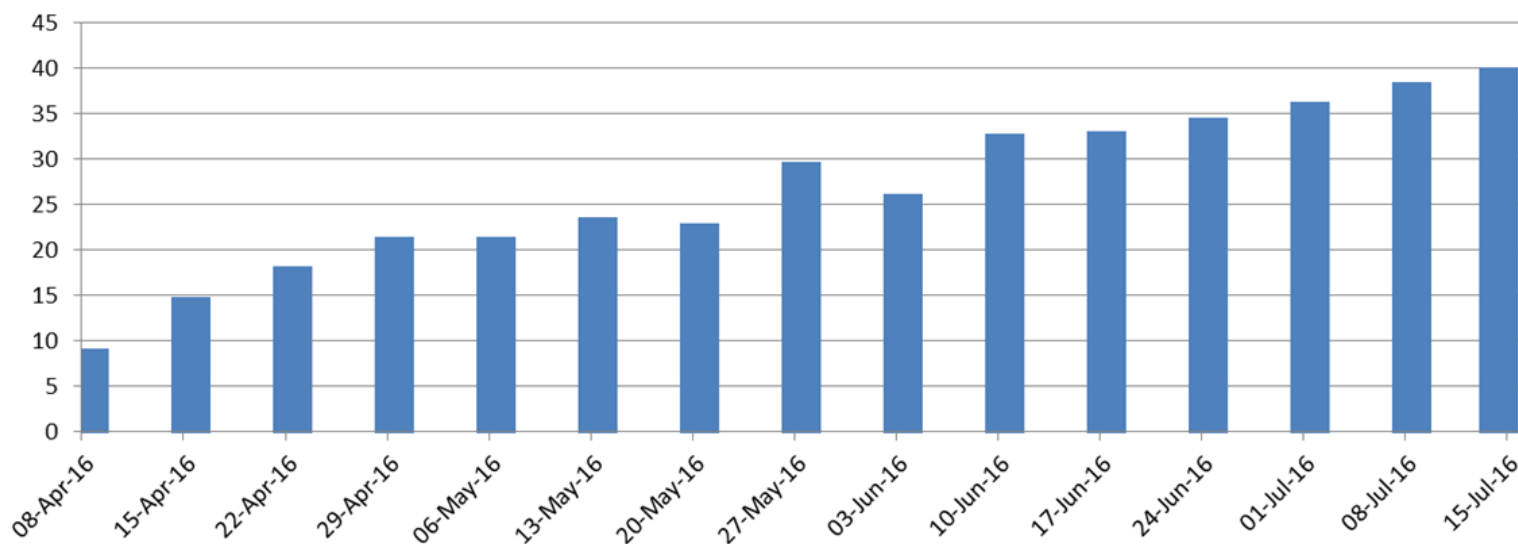


**Less vulnerable countries BE, DE, NL and AT**



# Daily granular data on money market transactions

- *Timely* monitoring of monetary policy transmission (7:00 am next day)
- *Trade-by-trade data* – ISO 20022 standard allowing full automation
  - Volumes, rates, time, counterparties, collateral types
- *Market segments*
  - Unsecured, secured, foreign exchange swaps, overnight index swaps
- *40,000 daily transactional records* from 52 large banks



# The Analytical Credit datasets

- Multi-purposes, multi (central banking, supervision) users
- Banks' *credit* and *credit risk*
- Lending to legal persons
  - in particular to *Non-Financial Corporations* (ESA sector S.11)
- Granular information: *loan-by-loan*
  - identification of *debtors* and *guarantors*
  - details on *loan contracts*, including rates, duration
  - (limited set of data on) *risk mitigation measures*
- Supported by the ESCB business register (RIAD)
  - credit institutions, and potentially other financial lenders (ca. 200,000)
  - to be expanded to cover non-financial corporations (ca. 20,000,000)