



EUROPEAN CENTRAL BANK

EUROSYSTEM

ECB-PUBLIC

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# **ESCB statistics and its main challenges ahead**

ECB Central Banking Seminar  
Tuesday, 10 July 2018

# Outline

- 1 Increased policy relevance of central bank statistics
- 2 ECB's production of statistics as a team effort
- 3 New data demands resulting from the crisis
- 4 Shift towards more micro-data
- 5 Challenges
- 6 Concluding remarks

# Increased policy relevance of central bank statistics



**ECB President  
Mario Draghi**

***“Policy-making and, indeed, decision-making are only as good as the information on which they are based”***

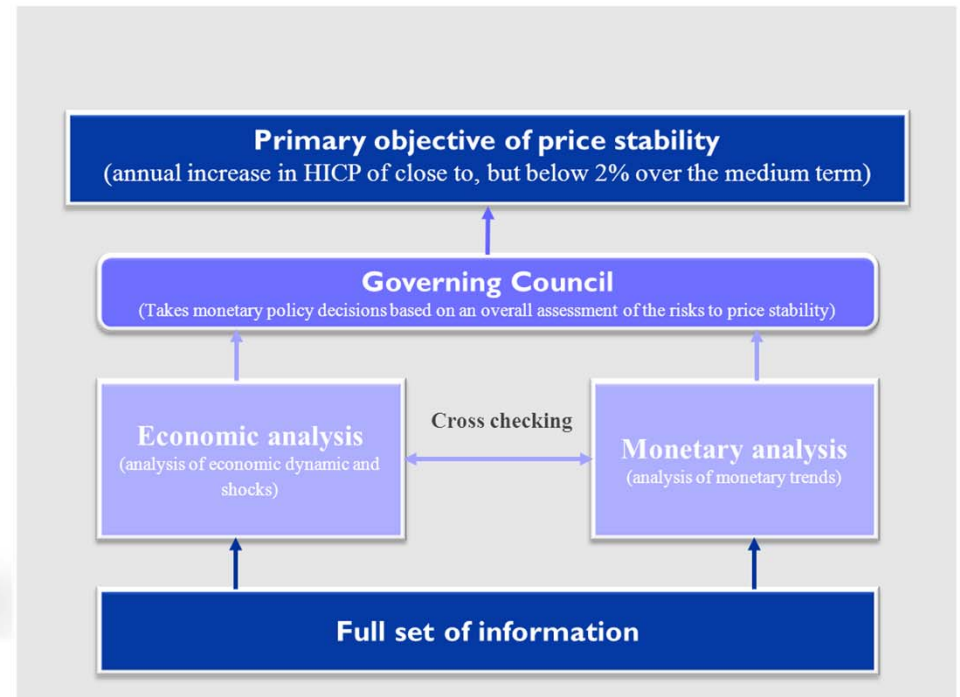
Seventh ECB Statistics Conference, Frankfurt am Main,  
15 October 2014

<https://www.ecb.europa.eu/press/key/date/2014/html/sp141015.en.html>

# Increased policy relevance of central bank statistics

ESCB statistics are vital for:

- ECB's **monetary policy**



- Other (growing) policy functions (financial stability, systemic risk and macro-prudential surveillance, payment systems oversight, risk management...)

# Increased policy relevance of central bank statistics

- ✓ Statistical support to the **Single Supervisory Mechanism (SSM)**
- ✓ Statistical support to the **European Systemic Risk Board (ESRB)**
- ✓ ESCB contributes to **G-20 initiatives** to close global data gaps
- ✓ ESCB statistics are also a **public good**

# Increased policy relevance of central bank statistics

Statistics are **key to EU policy-makers'** decisions

- The EU reforms following the crisis

Financial  
supervisory  
policies

Fiscal  
policies

Macro-  
economic  
policies

- Use indicators as alert mechanisms (early warning tools) and to enforce policy compliance

ESRB  
"Risk-Dashboard"  
For macro-prudential  
policy

Commission  
scoreboard  
for  
"macro-imbalance"  
Procedure

1 Increased policy relevance of central bank statistics

**2 ECB's production of statistics as a team effort**

3 New data demands resulting from the crisis

4 Shift towards more micro-data

5 Challenges

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# ECB is a big user and a big producer of statistics

## European statistics by the ESCB

Monetary and  
financial  
statistics

External  
statistics

Securities  
statistics

Quarterly  
euro area  
accounts

Other  
statistics

## Other statistics by the ESCB

Supervisory  
data

- European statistics produced by Eurostat and the national statistical offices (e.g. GDP, HICP, labour market and short-term business statistics)
- Principal Global Indicators (BIS, ECB, Eurostat, IMF, OECD, WB)
- Commercial data providers and market sources



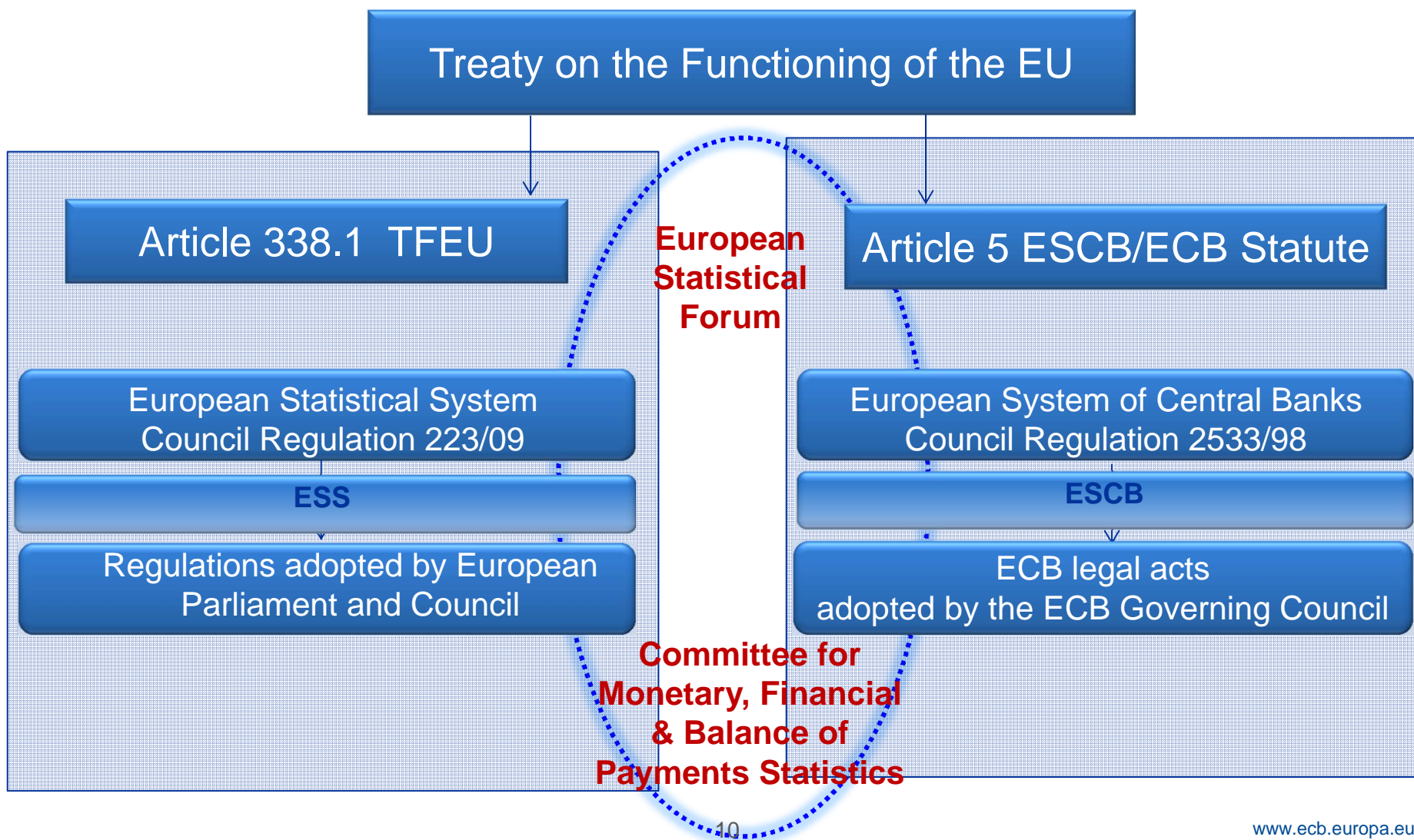
# ECB's production of statistics as a team effort

## Harmonisation and cross-country comparability are essential

- **A network of National Central Banks / National (Supervisory) Competent Authorities:**
  - Perform tasks in accordance with EU/ECB legal acts
  - Responsibility for meeting the ECB's/SSM requirement
  - Collect data from reporting agents, other national statistical authorities, other national sources
- **ECB:**
  - Quality assurance, compilation and publication of euro area aggregates
- **Shared tasks:**
  - Conceptual/development work, development of legal/technical infrastructure (ECB in lead)
  - Participation in European/international statistical committees

# ECB's production of statistics as a team effort

Teamwork of two European statistical systems cooperating under separate legal frameworks



# ECB's production of statistics as a team effort

## International teamwork

- The ECB cooperates closely with Eurostat, the European Banking Authority, BIS, IMF, OECD, UN ...
- The ECB and Eurostat are members of the Inter-Agency Group on Economic and Financial Statistics (IAG)



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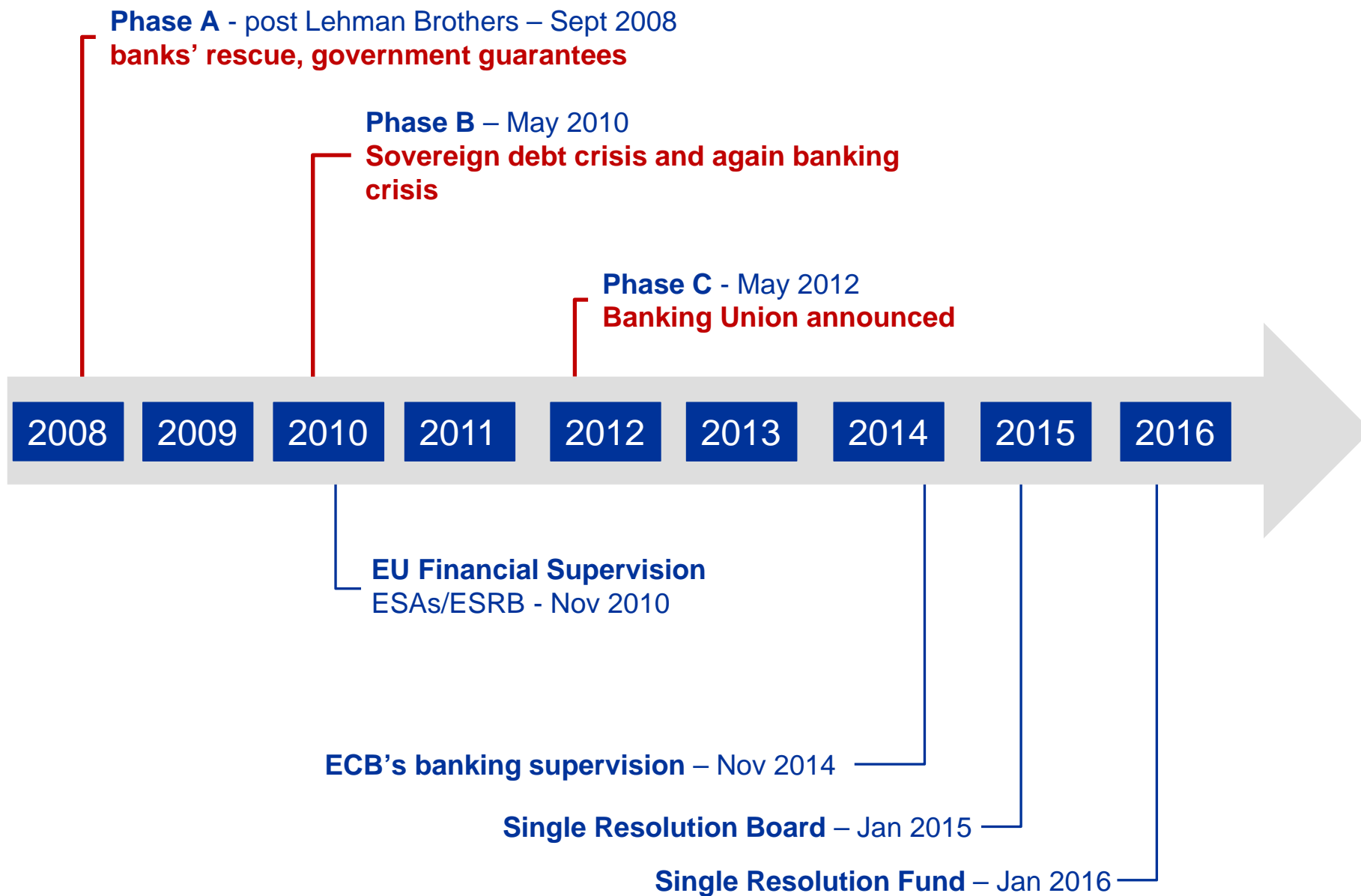
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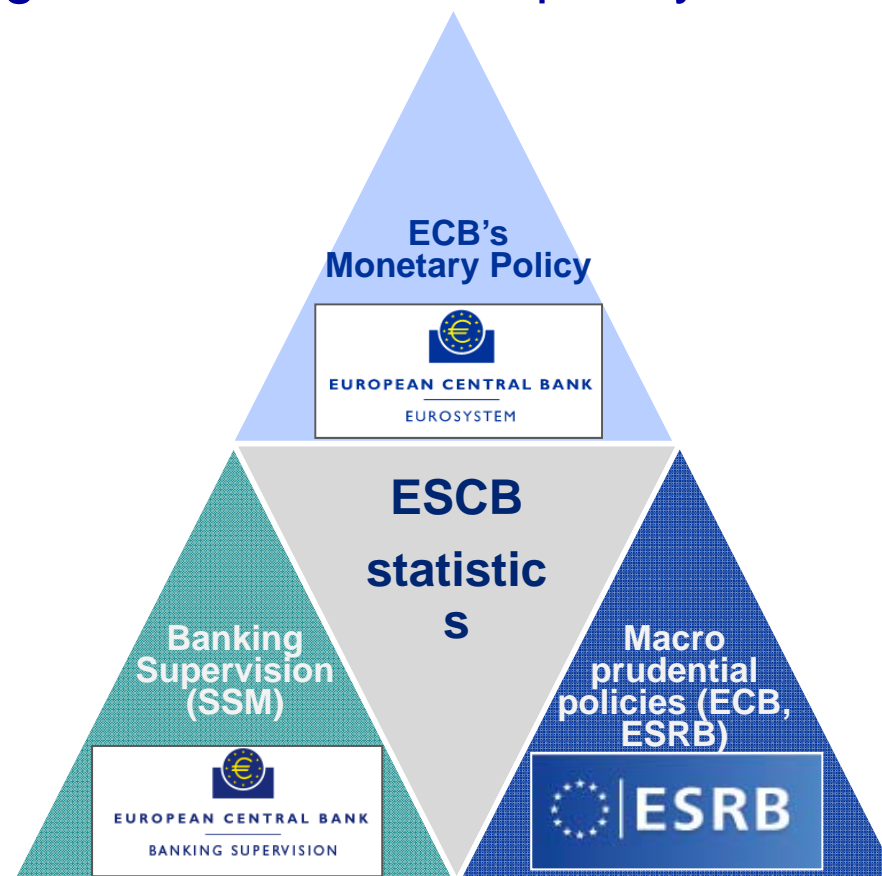
6 Concluding remarks

# New data demands resulting from the crisis



# New data demands resulting from the crisis

- ECB's new responsibilities for macro- and micro-prudential policies
- Heterogeneity: relevance of country and sectoral imbalances
- Market fragmentation and complexity of financial instruments

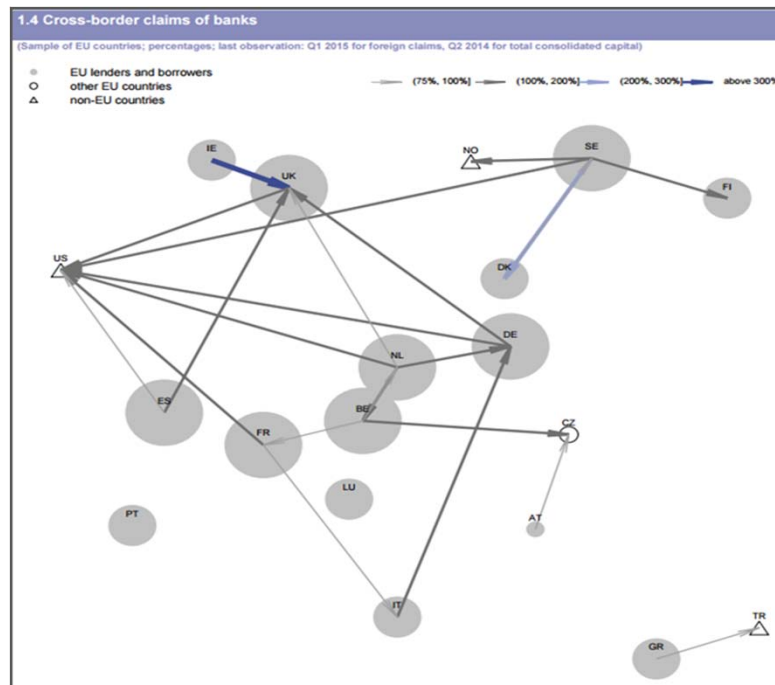


# Macro-prudential supervision

ECB and ESRB's macro-prudential supervision need **detailed data on EU financial interlinkages**

## ESRB Risk Dashboard: objectives

- RDB as a risk assessment tool (input to further systemic risk analysis)
- RDB as communication tool



## 50 indicators, 6 risk typologies

### Risk Categories

Interlinkages and composite measures of systemic risk

Macro risk

Credit risk

Funding and Liquidity

Market risk

Profitability and Solvency

ESRB Risk Dashboard:

<http://www.esrb.europa.eu/pub/rd/html/index.en.html>

And also in SDW:

<http://sdw.ecb.europa.eu/reports.do?node=1000003268>

## Supervisory data

SSM Regulation 1024/2013  
Quarterly reporting

Ad hoc collections  
to cover data gaps

Harmonised  
COREP  
FINREP  
(EBA ITS)

Extension of  
FINREP to  
Significant  
Institutions

Extension of  
FINREP to  
Less  
Significant  
Institutions

Network on  
User needs  
for  
Supervisory  
Reporting  
(USR NW)

ECB Banking  
Supervision  
defines the  
requirements

DGS: Pilot  
Exercises  
and  
structured  
Short Term  
Exercises  
(STE)



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# Shift towards micro-data

- **Micro data databases**
  - Centralised Securities Database (CSDB)
  - Securities Holdings Statistics (SHS)
  - Register Institutions and Affiliates Database (RIAD)
- **Individual banks' balance sheet data**
- **Small and Medium Enterprises (SME) Access to Finance**
- **Eurosystem survey on household finance & consumption**
- **Money Market Statistical Reporting**
- **Analytical granular credit and credit risk dataset (loan-by-loan)**
- **Securities Holding statistics for Large Banking Groups (LBGs)**
- **RIAD incl. Banking and Insurance Groups**

## Money market statistical reporting (MMSR)



individual transactions relating to various segments of the money market



- **When?** since 1 April 2016
- **What?** daily operations on a transaction-by-transaction basis in **four market segments**: secured, unsecured, FX swaps and OIS
- **Who?** 52 largest banks in the euro area
- **Why?** information on the **transmission mechanism** of monetary policy decisions;  
provide information to market participants on **market functioning**
- **Legal basis?** ECB Regulation ECB/2014/48

# Micro-data on a “security-by-security” basis

Centralised Securities Database  
(CSDB)

-  
Who issues what?

Securities Holdings Statistics  
Database (SHSDB)

-  
Who holds what?

## Example:

**Issuer A** issues a **security B** which is held by **Holder C** at the **amount of X EUR**



### Issuer reference data

Issuer identifier

Issuer name

Issuer sector

Issuer country

...

### Instrument reference data

Instr. Identifier

Instrument type

Amount outstanding

Price

...

### Holder reference data

Sector

Country

...

...

...

### Holding data

Holding amount

Amount type

Valuation type

Consolidation flag

...

## Analytical Credit Dataset (Anacredit)



Multipurpose set of harmonised granular data on credit and credit risk [*under development*]



- **When?** to be implemented in a stepwise approach; the first stage in late 2018
- **What?** bank loans (and guarantees) to legal entities above €25,000 e.g. *non-financial corporations* (not households, at least in the first stage!)
- **Who?** all banks in the euro area
- **For whom?** central banking purposes e.g. monetary policy, research, risk management, macro prudential supervision... and statistics
- **Legal basis?** ECB regulation

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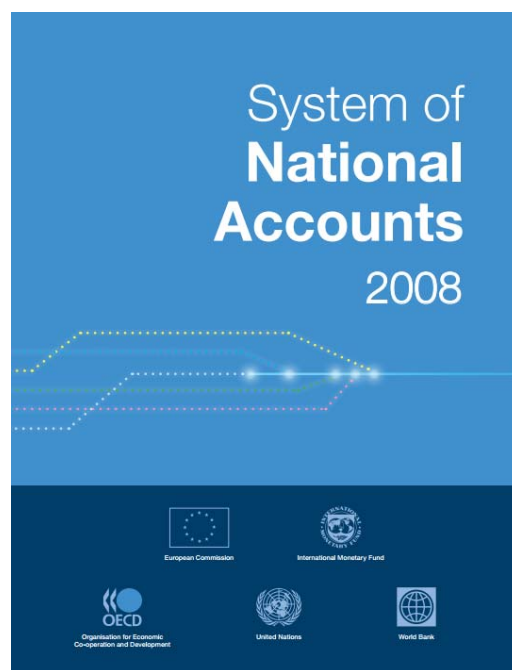
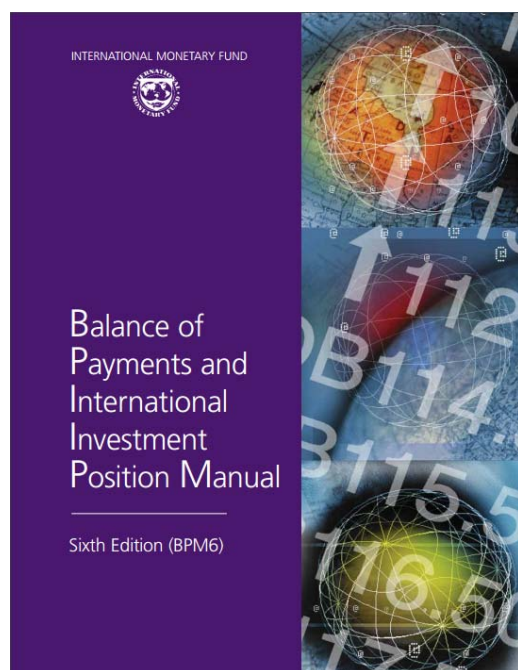
4 Shift towards more micro-data

5 **Challenges**

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# Challenges: 1. Standardisation

ECB statistics conform to the extent possible to and influence international standards for macro statistics



## Challenges: 1. Standardisation

International cooperation and effort needed!!

ECB supports and contributes to develop standards for micro statistics

- Legal Entity Identifier (LEI)
- Unique Trade and Product Identifier (UTI, UTP)
- Mandatory use of ISIN
- Money Market Statistical Reporting (MMSR) is ISO 20022 standard compliant
  - ISO approved *in January 2016* MMSR messages for being officially and globally recognised



## Challenges: 2. Integration



ECB President  
Mario Draghi

*“The **big challenge** for statistics in the coming years is not only “many more numbers”, but, perhaps much more so, **the reconciliation of statistical information** collected in support of monetary policy and financial stability with the until now rather separate world of supervisory information”*

Seventh ECB Statistics Conference, Frankfurt am Main,  
15 October 2014

<https://www.ecb.europa.eu/press/key/date/2014/html/sp141015.en.html>

## Challenges: 2. Integration

### Integration

managing different areas of statistical and supervision information as parts of a single system

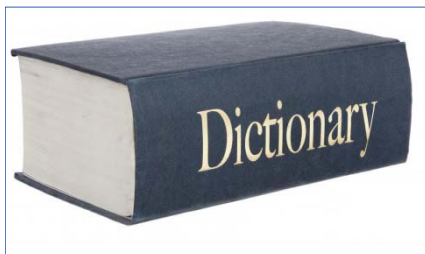


### Long-term harmonisation

of practices, methodologies and processes currently followed for data production

# Challenges: 2. Integration

## Three key elements



### **Banks' Integrated Reporting Dictionary (BIRD)**

Common language with the industry

Logical description of data at the banks and transformation rules to produce existing reports



### **ECB Single Data Dictionary (SDD)**

Common language within the ECB

Methodological and semantic integration of existing European reporting frameworks



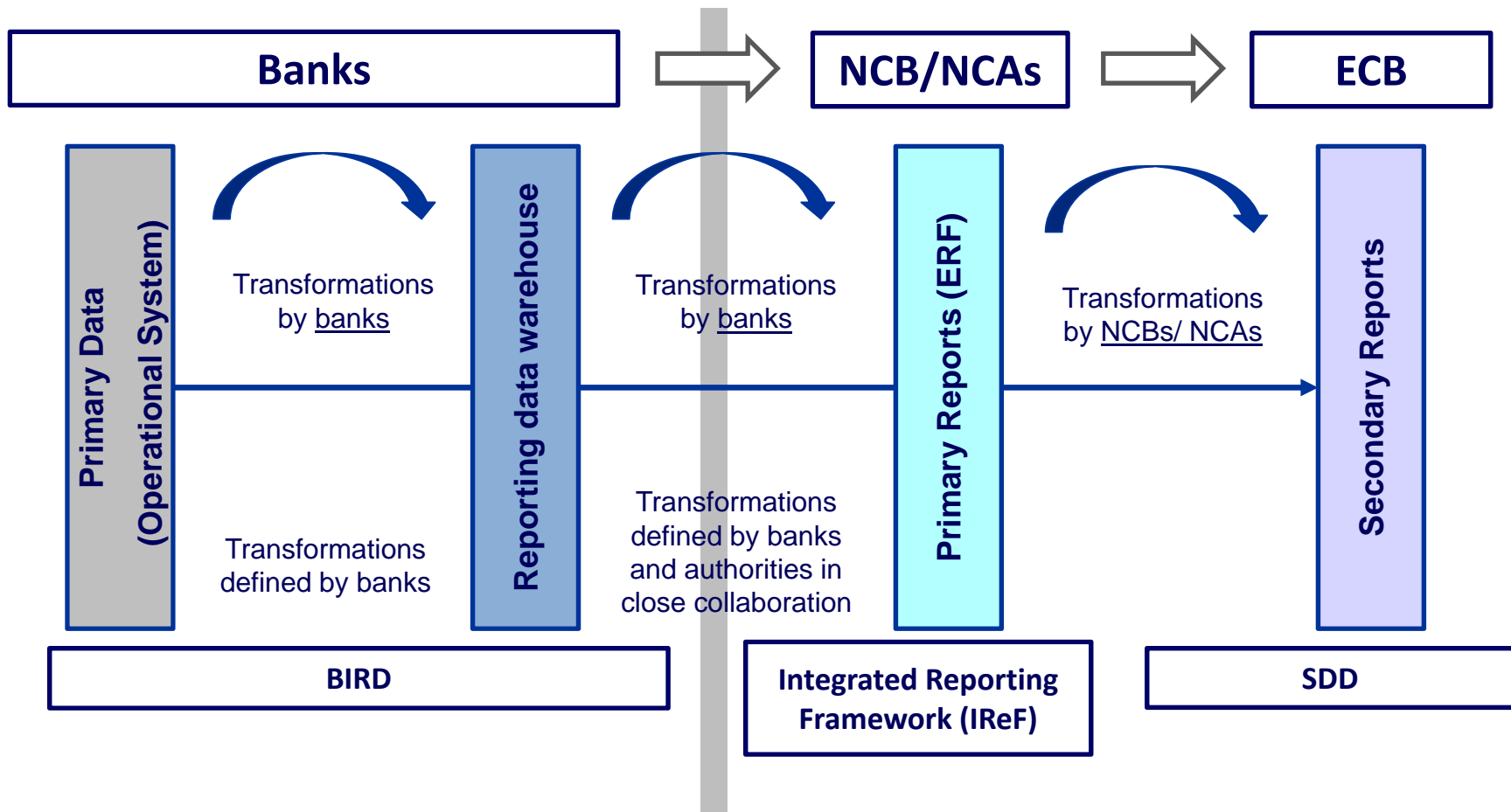
### **Integrated Reporting Framework (IReF)**

“One report” replacing the multiple, overlapping reports

Vision: single and integrated RF for the ECB, and possibly also EBA (ITS)

## Challenges: 2. Integration

### The Role of BIRD, IReF and SDD



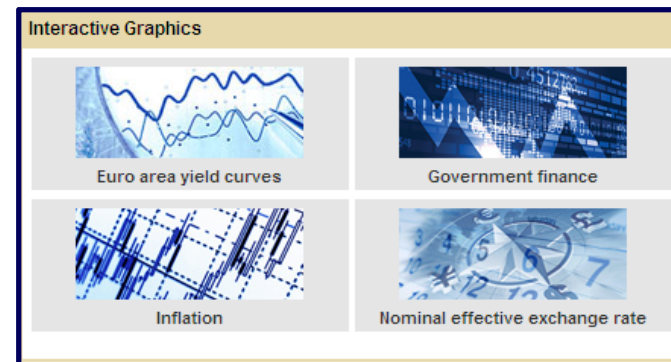
# Challenges: 3. Improving communication of ESCB statistics

Challenge of overwhelming information

Need to:

- distinguish official sources of information from fake news
- provide descriptive statistics supported by visualizations

Strategy: multiple channels & user-friendly access



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## Concluding remarks

- Challenges to meet users needs are always present in a dynamic world
- Advancements in technology provide an opportunity to be more agile in responding to data needs
- Standardisation efforts, European and international cooperation are crucial to make it work

Thanks you for your attention!!



Any questions?





# Annex

**1** Increased policy relevance of central bank statistics

**2** ECB's production of statistics as a team effort

**3** New data demands resulting from the crisis

**4** More micro-data

**5** Standardisation

**6** Integration

**7** Improving communication of ESCB statistics

## Monetary & financial statistics

- Monetary aggregates and counterparts
- Balance sheet statistics of Monetary Financial Institutions (MFIs), Investment Funds (IFs), Financial Vehicle Corporations (FVC) as well as Insurance Corporations (IC) and Pension Funds (PF)
- Statistics on average interest rates (deposits from / loans to households for consumption or housing; deposits from / loans to firms)
- Securities issues statistics, yield curves, financial markets price and volume statistics, payments and securities settlement statistics
- Financial stability statistics and indicators – also to support the ESRB and the SSM, Financial integration indicators, STEP Market statistics

## External statistics

- Balance of payments, international investment position (including international reserves), effective exchange rates, international role of the euro

## Euro area accounts

- Integrated quarterly accounts (non-financial and financial) by institutional sector encompassing transactions, other flows and balance sheets

## Government finance statistics

- Revenue, expenditure, deficit, debt, deficit-debt adjustment

## Surveys

- Survey on the access to finance of Small and Medium Enterprises in the euro area
- Household Finance and Consumption Survey

## General economic statistics

- Seasonally adjusted HICP, residential property price indicator, short-term indicators, timely labour market statistics (e.g. euro area negotiated wages developments)

# Monetary and financial statistics

- **Monetary aggregates and counterparts**, minimum reserves
- Granular credit and credit risk (***AnaCredit***)
- **MFI interest rates**; Long Term Interest Rates (for convergence)
- Securities issues and **securities holdings**
- **Investment funds**
- **Financial Vehicle Corporations**
- **Insurance Corporations**; *Pension Funds*
- **Money Market** statistical reporting (MMSR)
- Financial soundness indicators; financial integration indicators
- Financial stability statistics, of which Consolidated Banking Data
- Financial market statistics - yield curve, PDFs –

*Note: in bold, statistics collected under ECB regulations; in italics, regulations in preparation*

# ECB statistical support for the ESRB

- ✓ Council Regulation 1096/2010:  
The ECB has to provide **statistical support** to  
the European Systemic Risk Board (ESRB)
- ✓ **Main sources** of data for the ESRB are:
  - ✓ Data exchange with the European Supervisory Authorities (EBA, ESMA, EIOPA)
  - ✓ Statistical support from the ECB/ESCB
  - ✓ Commercial data providers and other datasets
  - ✓ Ad-hoc surveys
- ✓ ECB, STC and its WGs involved in several workstreams
- ✓ Examples: identify main datasets for the ESRB;
  - setting up the **Risk Dashboard, Analysis of National Banking Systems**;
  - help shaping the data flows between the ESCB and the European System of Financial Supervisors
  - setting up of **macro-prudential database** (first release: Oct. 2015)

# External statistics

- ✓ **Euro area balance of payments and international investment position**
  - Monthly balance of payments
  - Quarterly balance of payments – more detail, including a breakdown by main partners
  - International investment position (balance sheet) and link to balance of payments
- ✓ **ECB and Eurosystem international reserves**
- ✓ **Nominal and real effective exchange rates of the euro and Harmonised Competitiveness Indicators (HCIs)**
- ✓ **The geographic breakdown of the euro area current and capital account, international investment position and trade in goods is published in the ECB Economic Bulletin**

# Government Finance statistics

- ✓ **Protocol on the EDP: 3% and 60% of GDP as reference values for government deficit and debt reserves**
- ✓ **Complete set of government accounts**  
(revenue, expenditure, debt and deficit-debt adjustment) providing an integrated overview of the government balance and debt in annual frequency
- ✓ **Fiscal discipline is essential for the stability of the euro**
  - **keeping price stability:** direct (e.g. VAT) and indirect effects (wages)
  - **containing inflation expectations:** rising government debt may lead to pressure on the ECB to tolerate higher inflation to erode the real value of debt
  - **keeping financial markets stable:** interest rate on government debt in one country is affected by the evolution of other countries deficits and debts  
quarterly breakdown by main partners



# Euro area accounts

- ✓ Complete description of **euro area economic and financial developments: whole economy and by institutional sector**
  - Financial and Non-financial corporations;
  - Government;
  - Households; Rest of the world
- ✓ **Integrates monetary, financial and economic statistics**
- ✓ Consistent statistical basis for **quarterly economic analysis, with integrated non-financial accounts and financial accounts**
- ✓ **Enables analysis of interrelations between key macro-economic policy indicators**
  - e.g. household saving rate, indebtedness and changes in wealth; entrepreneurial income of non-financial corporations; government debt

# General economic statistics

- Other European statistics used by the ECB (Eurostat primary responsibility):
  - Harmonised Index of Consumer Prices (HICP)
  - GDP
  - Business indicators: industrial production, retail trade, etc.
  - Employment, unemployment, labour costs, etc.

# Reference reporting population for ECB statistics

- Central banks, other MFIs
- Other (non-monetary) financial intermediaries
- Post office giro institutions
- Entities holding cross-border positions or carrying out cross-border transactions
- Issuers of securities or e-money

The reference reporting population is confined to entities resident in the euro area

but the ECB may collect from them consolidated data including information relating to their branches outside the euro area

*This is all set out in Community legislation Regulation No 2533/98 - notable amendment in Reg. No 951/2009 is extension of reference reporting population to include insurance corporations and pension funds*

# Compiling euro area aggregates

- Usual approach: build from national contributions
- Importance of: harmonisation of the national contributions
- Some euro area aggregates are a simple sum of (harmonised) national data, but some are not
- National money stock includes deposits held by residents with banks located in the country concerned. Euro area money stock includes deposits held by residents of all euro area countries with banks (MFIs) anywhere in the euro area
  - *it exceeds the sum of national money stocks by the amount of cross-border depositing within the euro area*
- National balance of payments statistics measure all cross-border transactions of residents of the country concerned
  - the euro area b.o.p. excludes cross-border transactions within the euro area
  - **gross flows in the euro area b.o.p. fall short of the sum of national b.o.p. flows** by the amount of these cross-border flows within the area

# National and euro area monetary aggregates

In German M3

Deposits held by  
Germans with MFIs  
in Germany

In neither German nor Austrian M3

Deposits held by  
Germans with MFIs  
in Austria

Deposits held by  
Austrians with MFIs  
in Germany

In Austrian M3

Deposits held by  
Austrians with MFIs  
in Austria

*All the above are components of euro area monetary aggregates*