



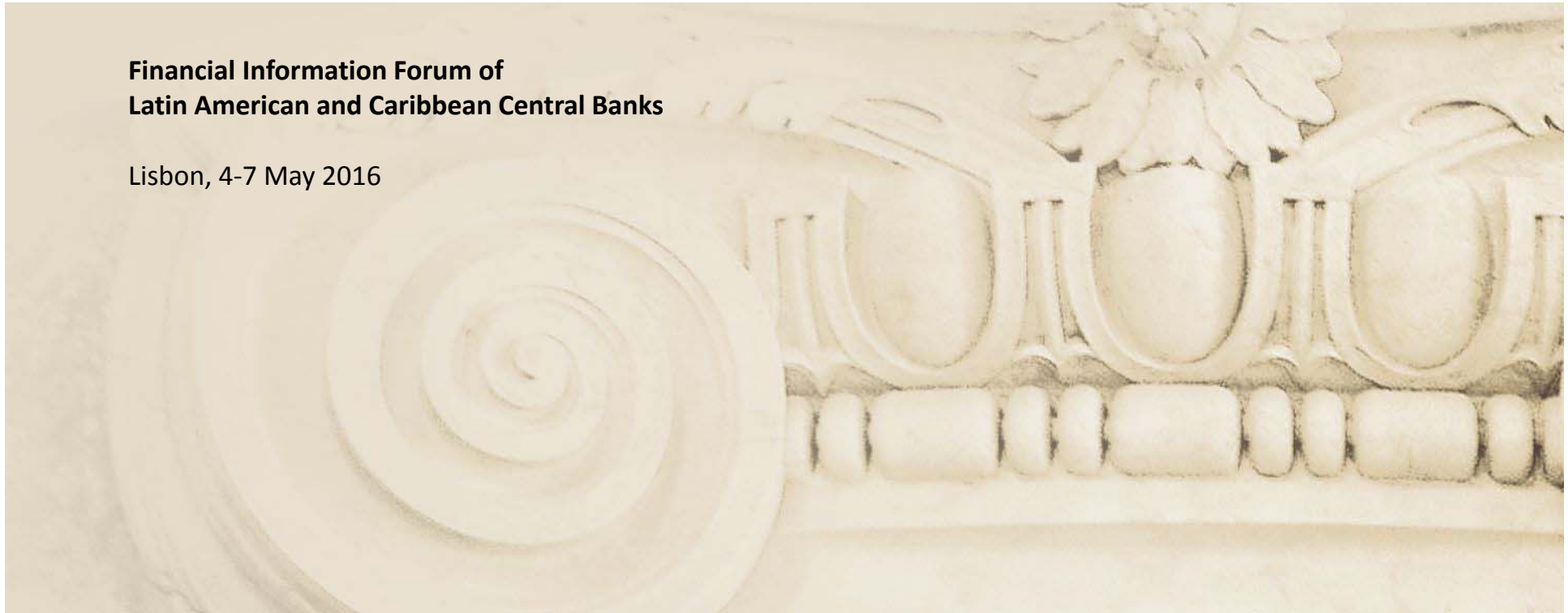
BANCO DE PORTUGAL
EUROSYSTEM

The road to integrate micro databases

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- **Microdata: Why?**
- **Micro databases managed @ BdP's Statistics Department**
 - The Securities Statistics Integrated System (SSIS)
 - The Central Credit Register (CCR)
 - The Central Balance-Sheet Database (CBSD)
 - Interest rate on new loans to NFC (MIR)
- **New concept on data usage and integration**



Producing high-quality and timely monetary and financial statistics is a key responsibility of National Central Banks (NCBs)

Ensuring that NCBs statistics remain fit-for-purpose implies:

- keeping pace with financial innovation,
- assessing the statistical impact of innovations at the earliest possible stage, and
- making the necessary amendments in a well-timed manner,

without overburdening the reporting agents and by using more efficiently the data already available



***Banco de Portugal* has been making use of the advantages entailed by the use of micro databases and item-by-item reporting:**

- reducing respondents' burden
- enhancing quality control
- cross checking elementary/raw data
- taking advantage of the centralised management of these databases
- improving responsiveness to ad hoc information requests



The different micro-databases managed by the *Banco de Portugal* are frequently combined to obtain more integrated perspectives of the financial conditions of the various sectors of the economy

- In economic research and financial stability analysis
- In the conception of *who-to-whom* analysis
- To address additional user data needs

The integrated use of these databases make use of a common infrastructure for reference data, in particular a business register

***A business intelligence* architecture, comprehending a statistical data warehouse, is being developed to foster and facilitate the integration of data**



**Securities Statistics
Integrated System
(SSIS)**
(s-b-s/ i-b-i)

- **Securities holdings and issues**
- **MFI statistics**
- **BOP and IIP statistics**
- **Financial accounts statistics**

**Central Credit
Register (CCR)**

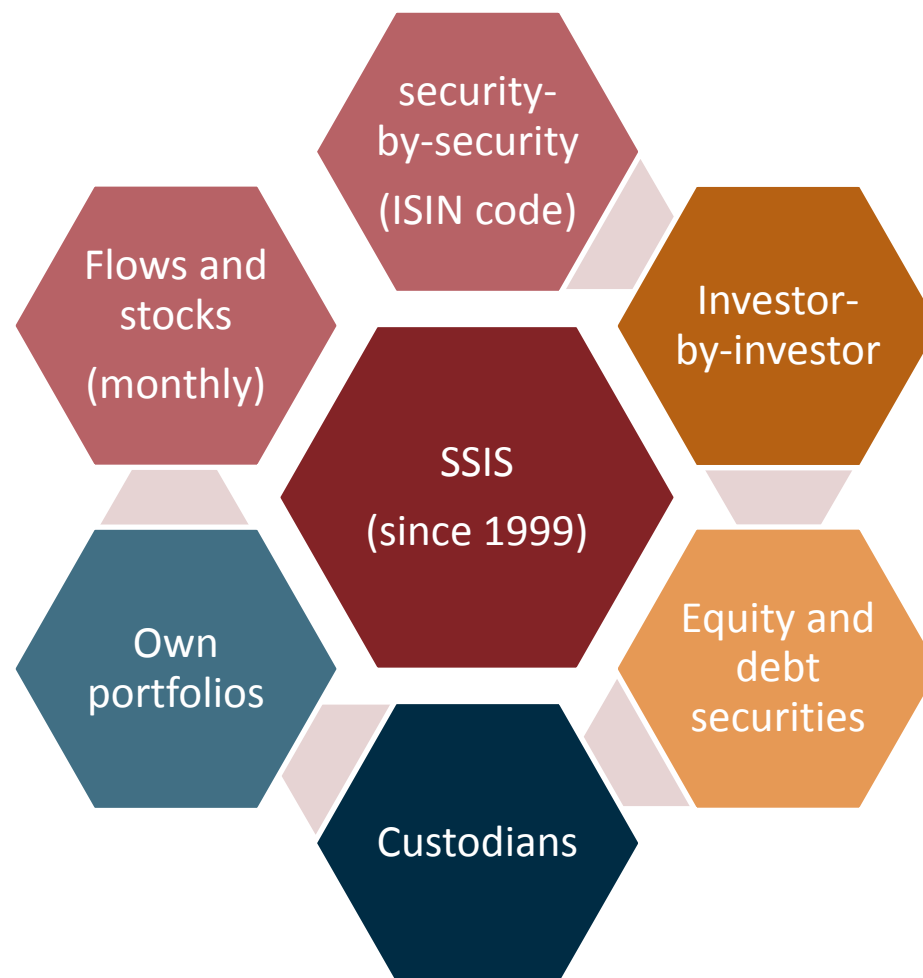
- **MFI statistics**
- **Financial accounts statistics**

**Central Balance
Sheet Database
(CBSD)**

- **NFC statistics**
- **BOP and IIP statistics**
- **Financial accounts statistics**

**Interest rates on new
loans to NFC –
individual operations
(MIR)**

- **MIR statistics**
- **Exploratory statistics and analysis**





Inputs

SSIS - Issues

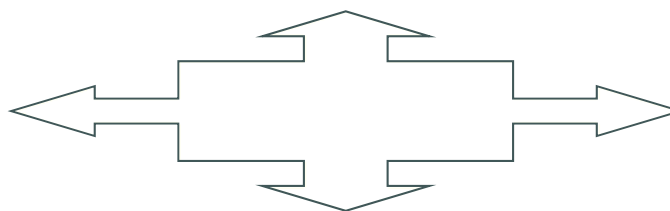
- EURONEXT
- Securities Market Commission
- General Government
- *Interbolsa* (ISIN NNA)
- Commercial Databases
- Financ. Institutions (Intermediaries)
- NF Corporations (issuers abroad)

SSIS - Portfolios

- MFIs, dealers and brokers
- Banco de Portugal
- Securities Market Commission
- Other resident entities

Domestic Securities Database

Foreign Securities Database



Transactions

Positions

Outputs

SSIS - Issues

- Issues in PT
- Residents' issues abroad

SSIS - Portfolios

MFS

- MFIs securities portfolios
- Investment Funds statistics
- FVC / Securitisation statistics

Balance of Payments

- PT portfolio invest. abroad
- Foreign portfolio invest. in PT
- Portfolio investment income

Financial Accounts

- Securities other than shares, excl. financial derivatives
- Shares and other equity



Administrative database created in 1978 to provide credit-related information to the participants for their assessment of the risks attached to extending credit.

Use of CCR data for statistics: business register, data quality control, complementary data, separate statistical outputs

CCR

Use of CCR data for banking supervision and regulation: assessment of credit risk and concentration of risk exposures both at micro and macro level, improvement of on-site inspection practices

Use of CCR data for economic research and monetary policy: structural analysis, identification of loans used as collateral in Eurosystem financing operations

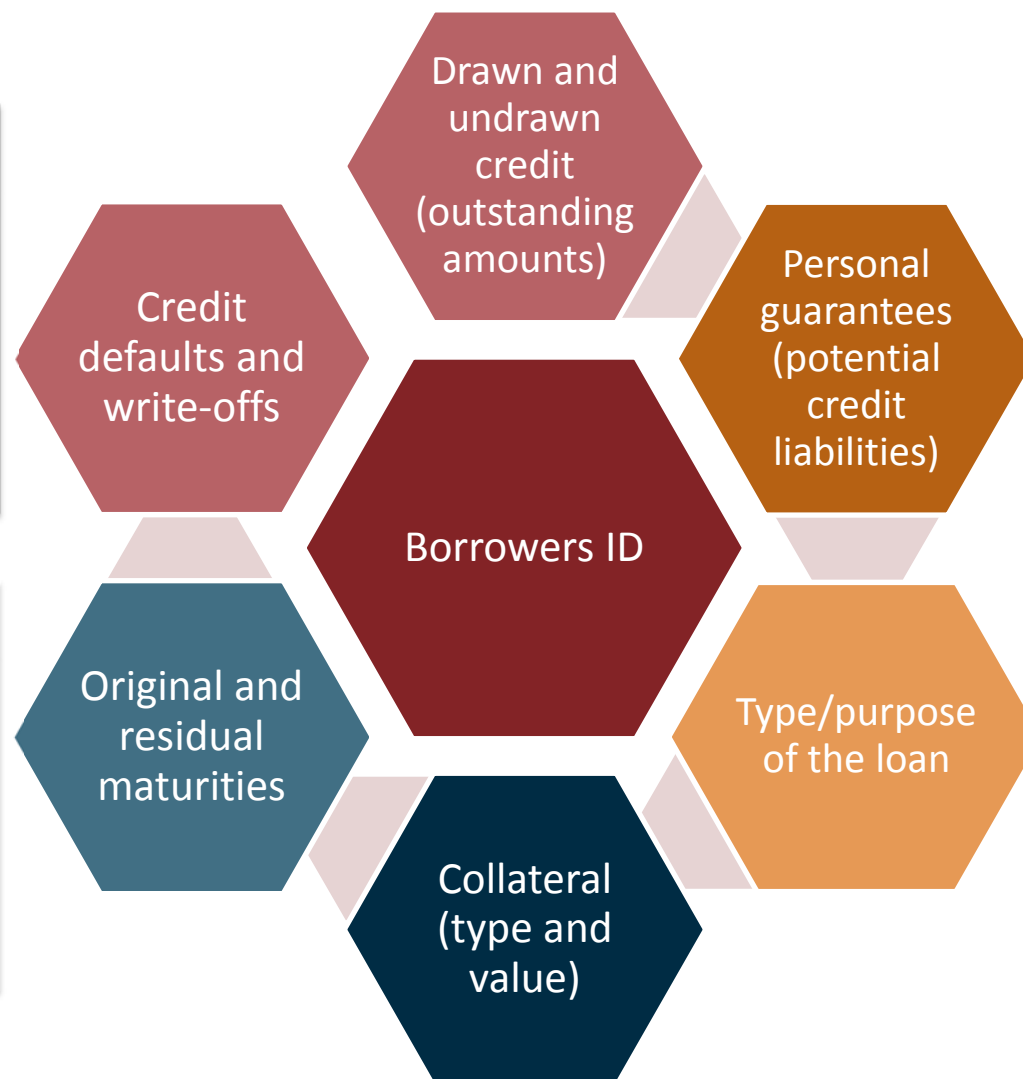


Information on actual or potential liabilities related to loans granted by the reporting institutions to all type of credit clients (natural or legal persons, resident and non resident)

Inter-bank loans, securities and financial derivatives are excluded

Reporting Institutions

- Banks, savings banks and mutual agricultural credit banks (MFIs)
- Other non-monetary financial institutions that grant credit
- Public agencies that grant credit
- NFC buying loans from the resident financial sector





The CCR in figures



50 € reporting threshold



194 reporting institutions



15 different types of loans



440 thousand corporations registered



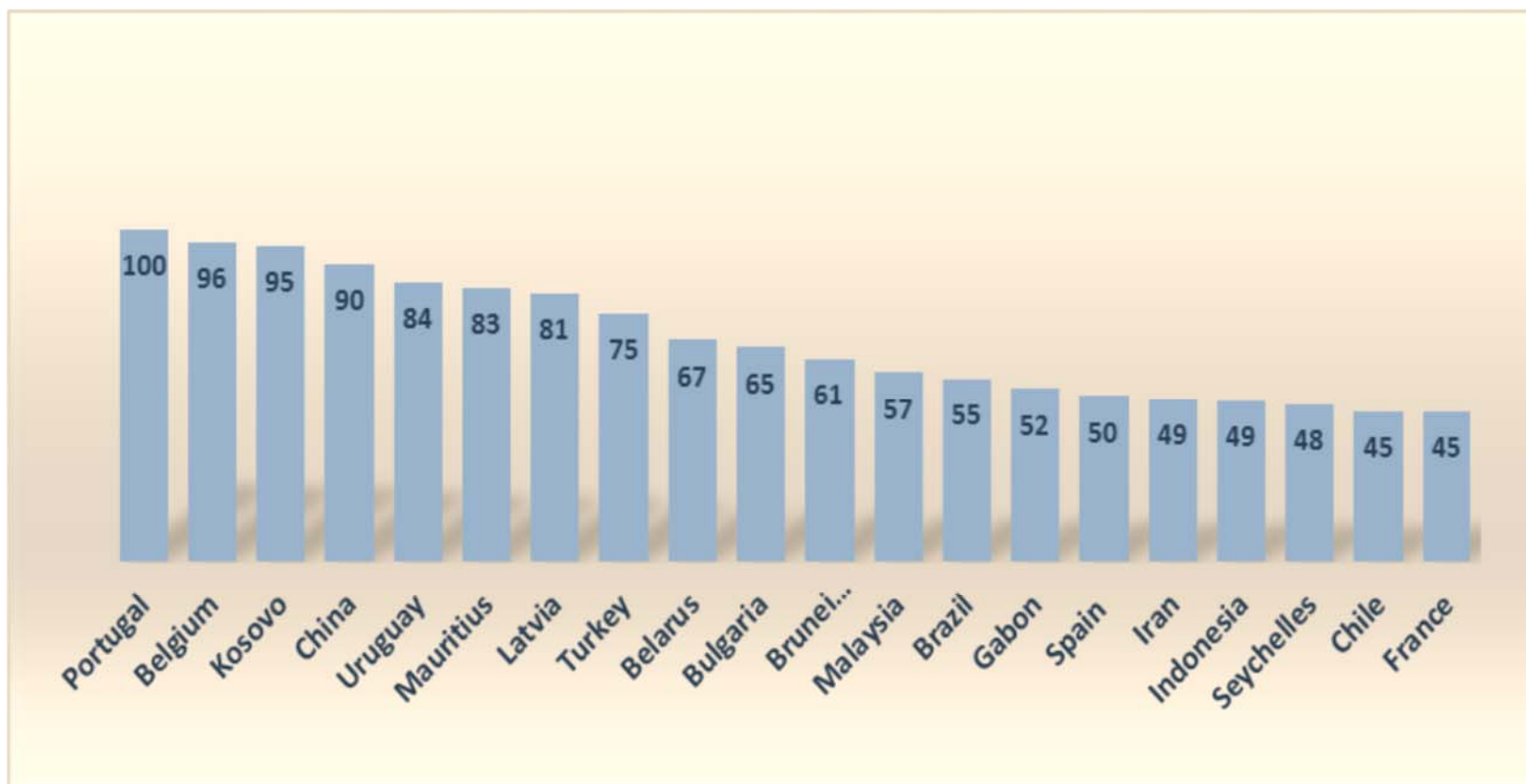
7.4 million private individuals registered



20 million records reported per month



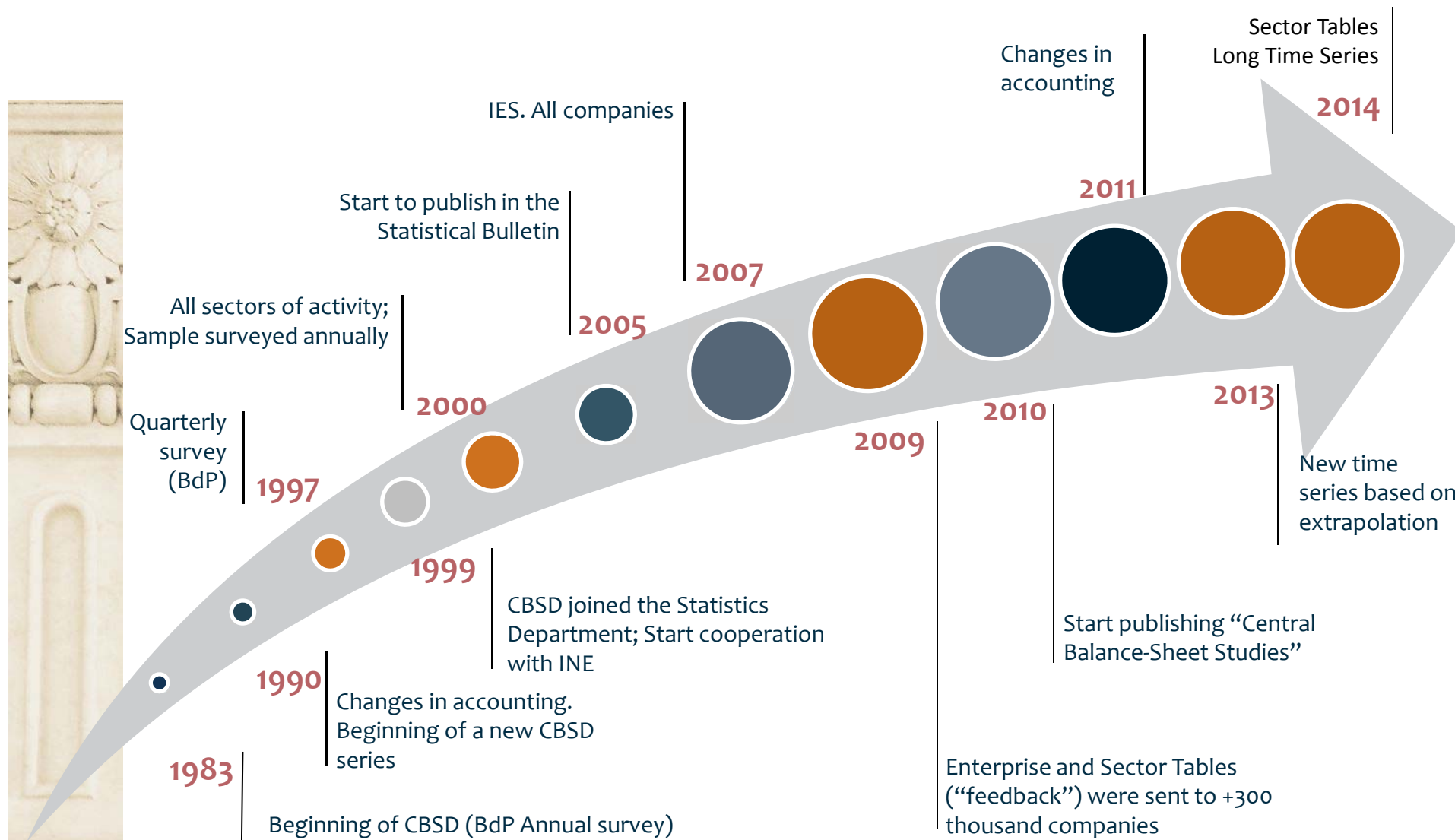
Ranking of Public Credit Registry Coverage - TOP 20



Source: World Bank, *Doing Business 2016*



The CBSD





Sources of information:





	<u>BEFORE</u>	<u>AFTER</u>
Companies (level of adherence)	5%	100%
Formats	Mostly automatic	Totally automatic
Timeliness	10/12 months	6,5 months
Level of detail	+ 600 items	+ 3 000 items



ONE FORMAT – Informação Empresarial Simplificada (IES)



	QUARTERLY DATA	ANNUAL DATA
Sources	ITENF – Quarterly Survey (1999)	IES – Annual Survey (2006)
Institutional Cooperation	INE, BP	MF, MJ, INE, BP
Mandatory	YES	YES
Format	100% electronic	100% electronic
Timeliness	1.5 months	6.5 months
Sample / Coverage	3,600 NFC / +40% (Turn)	+350,000 NFC (all)
Nr. Items	80	+3,000
Content (Non-consolidated data)	General features Balance Sheet Income statement External trade	General features Balance Sheet Income statement Notes on the accounts External trade Additional information



Launch of a new collection system for individual data on interest rates and amounts for new loans to NFC followed a request from research and financial stability internal users

Data collection started in July 2012, reference period June 2012 (smaller institutions were exempted)
Only loans to NFC are covered, data is reported for all individual new business and NFC are individually identified.

MIR

Very useful data for analysing further the costs of NFC banking financing (Research Department / Statistics Department - MFS in collaboration with CBSD)

This data collection system is now extended to all reporting MFIs (since December 2014) and the aggregated reporting was dropped



Business architecture: statistical value chain

Core tasks



Support tasks



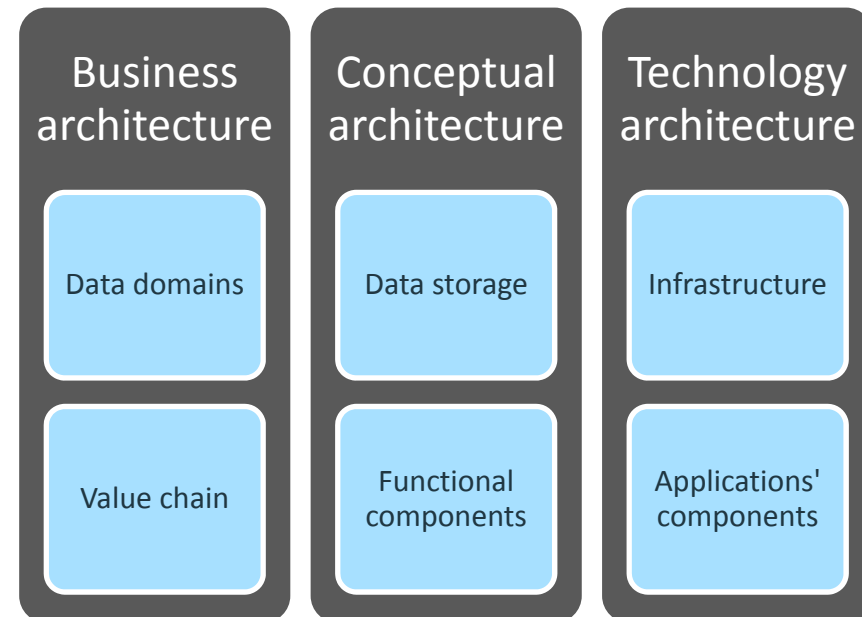


New architecture framework

Three layers approach built

on:

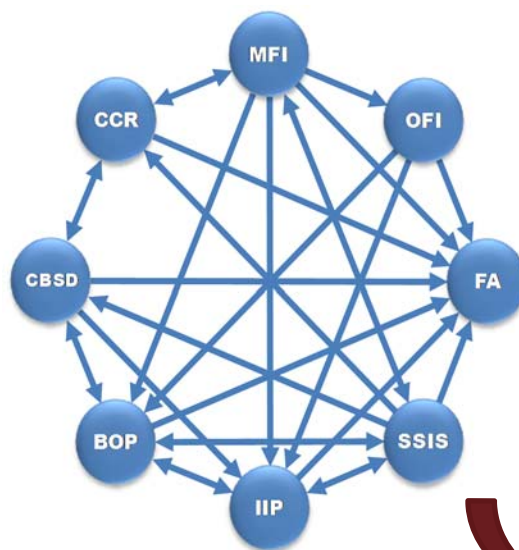
- A data warehouse
- Centralised reference tables
(countries, currencies,
business register, ...)
- A common IT platform



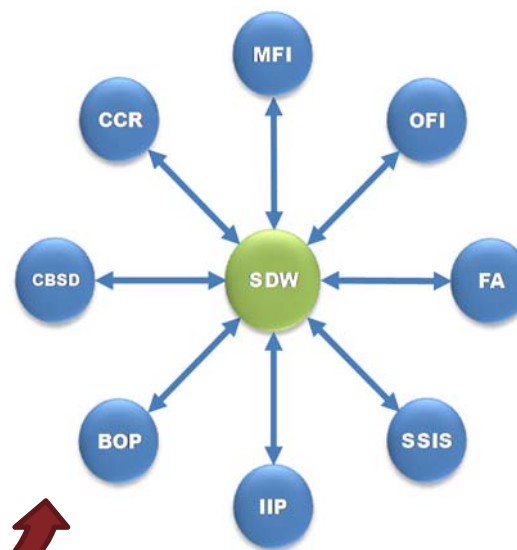


New concept on data usage and integration

From



To





For an efficient use of micro data and to fully explore its value for statistical compilation and analysis **two major requirements** do exist:

- Comprehensive and up-to-date business register
- Flexible tools to explore the information, namely if combining different micro data-sources: data warehousing and data mining





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Thank you for the attention!

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