A flexible approach to credit statistics: the use of the Portuguese Central Credit Register for statistical compilation

Paula Casimiro[1]

"Information is the oil of the 21st century, and analytics is the combustion engine"

Peter Sondergaard, senior vice-president at Gartner

1. Some initial considerations on data needs for the compilation of statistics

The possible benefits of an information system should be measured against the its value-added to the concerned users. In the specific case of monetary and financial statistics. producing high-quality and timely data has been a key responsibility of National Central Banks (NCBs) and ensuring that these statistics remain adequate implies keeping pace with the developments at the level of the financial markets, assessing the statistical impact of financial innovation in an early stage and introducing the necessary amendments in timely manner. Ideally, these goals should be accomplished without overburdening the reporting agents.

In the recent years, new challenges to the statistical function of NCBs were driven by the rapid financial innovation – with a proliferation of new and increasingly sophisticated financial products in parallel with the appearance of new types of institutions as well as new and expanded roles for existing ones – and by an increased interconnectivity among financial institutions and markets. The international financial crisis that erupted at the end of the last decade exposed some information gaps of the current statistical framework, both at national and international level, in particular for the purposes of financial stability analysis.

New and more demanding data requirements and the need to keep the reporting burden for respondents at a reasonable minimum, gave a new impulsion to the issue of further exploring the statistical potential of micro-data, namely data available at the level of administrative individual registers. In general, the statistical use of micro-data is technically easy to implement, has relatively low costs associated and can provide a good coverage of the reference population. In return, the use of administrative data for statistical purposes can deliver significant reductions in respondent burden, high data quality and, above all, an enhanced capacity to respond to new information requests from the users.

The experience of *Banco de Portugal* in managing highly granular datasets, covering different areas of the economy and the financial markets – namely, securities issues and holdings, a credit register, a central balance sheet database

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[1]   Statistics Department, Banco de Portugal, pcasimiro@bportugal.pt.

and, more recently, micro data on interest rates and amounts of new loans granted by banks to non-financial corporations – shows that micro-databases and item-by-item reporting can help NCBs to overcome a number of shortcomings related to the more traditional, aggregated, data collecting systems.

The paper is organised as follows: the next section presents a brief overview of the Portuguese Central Credit Register (CCR); section three illustrates how CCR data is being used in the context of the compilation of credit statistics; and, section four, presents some examples of the combined use of CCR data with other micro-databases for the compilation of more valuable sets of statistical data. Lastly, section five concludes.

2. Brief overview of the Portuguese Central Credit Register (CCR)

The Portuguese CCR is an administrative database established in 1978 (the first legal act dates from 1967), at the time covering only the credit liabilities of non-financial corporations (households were included later, in 1993). Although the use of CCR data for the compilation of statistics was authorized since 1996, the responsibility for the management of the database and all related services was assigned to the Statistics Department in 1999. Since then, a number of developments were introduced aiming at improving its coverage and usability, namely the establishment of a bilateral exchange of individual credit data among the seven European countries that signed the MoU[2] (in 2005) or the inclusion of the potential credit liabilities of personal guarantors (in 2007). A major development occurred in January 2009, with the implementation of a new information system that introduced additional breakdowns at the level of credit data and a greater efficiency in identifying private individuals. More recently, the CCR coverage was extended to include new reporting institutions (essentially non-financial corporations that buy credit portfolios from the resident financial sector); a new analytical data system for data analysis and exploration was developed; additional details were included to allow for the individual identification of loans used as collateral in Eurosystem financing operations; and borrowers can now easily access their credit reports online, via the *Banco de Portugal* website.

Picture 1 provides an overview of the coverage of the Portuguese CCR in terms of reporting institutions and data reported, whereas Picture 2 depicts the information flows between the CCR and the major external stakeholders. Some figures are worth mentioning: the reporting threshold is one of lowest for this type of registers (only 50 Euros); 204 institutions are currently providing information on a monthly basis; more than 285 thousand non-financial corporations and around 5.8 million private individuals are registered as borrowers in the database and 23 million records on credit data are reported, on average, every month. It should also be mentioned that the Portuguese CCR maintains for several years the first

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[2]   *Memorandum of Understanding on the exchange of information among national central credit registers for the purpose of passing it on to reporting institutions.* Besides Portugal, the other signatory countries were Austria, Belgium, France, Germany, Italy and Spain. In 2010, the Czech Republic and Romania also joined.

place in the ranking of the World Bank's "Doing Business" annual report in terms of its coverage of the population.
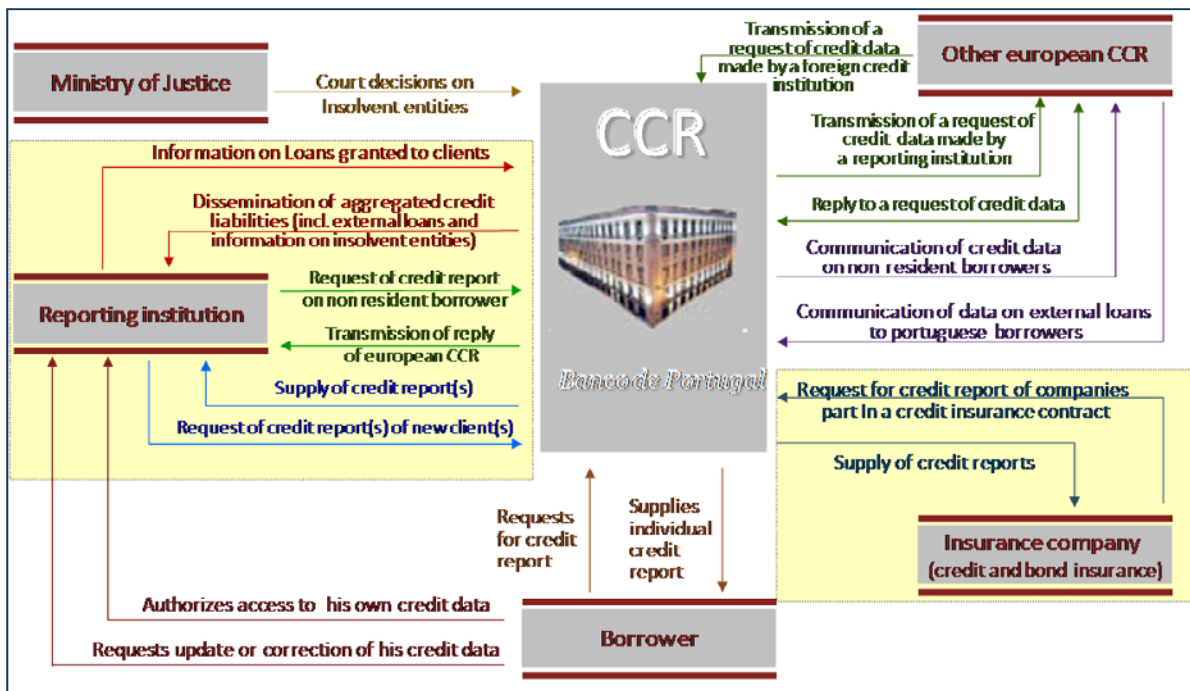

Reporting Institutions and data reported to the Portuguese CCR   Picture 1

Reporting Institutions	Data reported
Banks, savings banks and mutual agricultural credit banks (MFIs)	Borrowers ID (for residents, the tax payer number is used)
Other non-monetary financial institutions that grant credit	Credit drawn (amounts outstanding at the end of the month)
Public agencies that grant credit	Credit undrawn (irrevocable credit commitments)
Non-financial corporations buying loans from the resident financial sector	Personal guarantees (potential credit liability)
	Type/purpose of the loan
	Collateral (type and value)
Insurance companies undertaking credit and bond insurance can access CCR data, although they do not report.	Periodic repayments (for some types of loans granted to private individuals)
	Original and residual maturities
	Credit defaults and write-offs
	Specific flags for *Banco de Portugal* internal use of the data (e.g. securitised loans, loans used as collateral in Eurosystem financing operations)
	Inter-bank loans, securities and financial derivatives are excluded

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Information flows in the Portuguese CCR   Picture 2

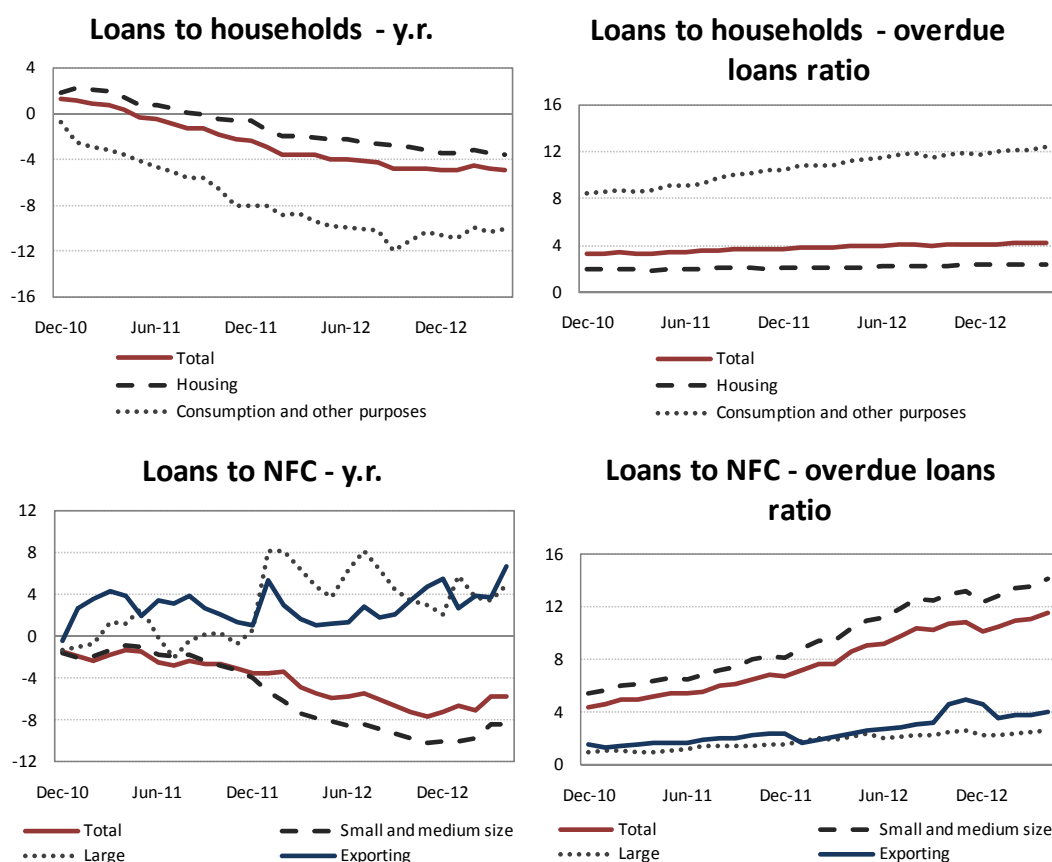# 3. The use of CCR data for the compilation of credit statistics

The main objective of the CCR is to contribute for the financial sector stability by assisting financial institutions in assessing the credit risk of their current or new credit clients. However, the prevailing CCR legal framework already foresees that data can be used in the context of specific functions of the Central Bank, such as supervision, research, financial stability analysis, monetary policy and statistical compilation.

In the domain of banking supervision and regulation, CCR has been used in the assessment of credit risk and concentration of risk exposures, both at micro and macro level, and for improvement of on-site inspection practices. Economic research has been using CCR micro data for several research papers and analysis, e.g., structural analysis, frequently combining this data with other micro data sources, like the central balance sheet database. Finally, within the monetary policy framework, CCR has been used in the identification of loans used as collateral in Eurosystem financing operations.

The use of CCR data in the context of monetary and financial statistics (MFS) has been facilitated given the fact that both domains share the same data source, i.e. the same reporting institutions, the content of the reported information is the similar since the CCR covers a complete range of credit liabilities, they both have identical reporting frequency and timeliness and, last but not least, both the CCR and MFS are integrated in the same division in the Statistics Department.

The use of CCR data for statistical purposes has allowed, inter alia, an improvement in the quality of monetary financial institutions (MFIs) and other financial institutions (OFIs) balance sheet statistics (e.g., greater accuracy in the MFIs' classification of the institutional sector of the counterparties receiving credit), a better assessment of credit developments and the conception of new statistical products, without imposing additional reporting requirements and burden on respondents (e.g. CCR data was particularly useful to meet the ECB requirements on securitisation without having to increase the reporting burden on Financial Vehicle Corporations).

Statistics on loans granted by the resident financial sector to non-financial corporations and households compiled based on the CCR are regularly published on the Statistical Bulletin and on the BP*stat | Statistics Online*, the interactive dissemination database available at *Banco de Portugal* website, and include information on outstanding amounts of loans, default ratios and number of borrowers with default loans. Available breakdowns comprise the purpose of the loan, institutional sector, economic activity, region or size of the company. Picture 3 exemplifies some of the indicators currently published.

Loans to households - y.r.

Total
Housing
Consumption and other purposes

Loans to households - overdue loans ratio

Total
Housing
Consumption and other purposes

Loans to NFC - y.r.

Total   Small and medium size
Large   Exporting

Loans to NFC - overdue loans ratio

Total   Small and medium size
Large   Exporting

4. The integration of CCR data with other micro-databases

Economic research and financial stability analysis have been extensively using and combining micro data coming from different databases managed by the Statistics Department. CCR data is used in internal models (e.g. for estimating the probabilities of default under different macroeconomic scenarios) and in several scholarly research papers, frequently combined with other micro datasets, notably with the central balance sheet database.

In the first half of 2011, with the deepening of the Portuguese sovereign debt crisis, Portugal requested for joint EC/ECB/IMF financial assistance, which terms and conditions were laid down in an Economic Adjustment Programme. Under this Programme, a balanced deleveraging of the banking sector was deemed critical, necessarily resulting in a reduction of credit available for the economic agents, namely non-financial corporations and households. Given the elevated indebtedness level of these sectors and their high dependence on the resident financial sector for financing, concerns arose around their funding pressures and debt refinancing activities. On the one hand, it is important to safeguard adequate financing of those more dynamic sectors to spur growth and, on the other, it is no

less important to monitor the evolution of the non-performing loans, which put additional pressure on the resident banks' balance sheet.

Several statistical products have been developed to meet the huge increase in user demand stemming from the need to adequately monitor all developments on the financing conditions, both from the creditor and the debtor perspectives. Some of these outputs address ad-hoc requests of data, whereas other became more permanent and gave origin to new statistics published on a regular basis (e.g. new chapter in the Statistical Bulletin on the non-financial sector indebtedness).

Some of these new statistical products combine data coming from several statistical domains – monetary and financial statistics, securities statistics, balance of payments and international investment position and financial accounts – and from different micro datasets – central credit register, central balance sheet database and securities issues and holdings – making use of a common infrastructure for reference data, in particular a business register.

5. Conclusion

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 the quality control and cross checking of elementary data and improving responsiveness to ad hoc information requests from users. Pursuing this path it has taken advantage of the centralised management of these databases.

Notwithstanding the Portuguese Central Credit Register has been created with the objective of providing the participating institutions with relevant information to better access the risk associated with a specific credit contract or borrower, it holds also nowadays a significant potential for other purposes, namely compilation of statistics, economic research and financial stability analysis.

The data reported to the CCR has gained relevance with the current indebtedness situation of the Portuguese economy combined with the pressing need of economic agents in all sectors to deleverage their activity, including the banking sector. CCR data combined with other micro databases (namely securities holdings and issues and corporate balance-sheet data) has been a key factor in meeting all the data demands in the context of the economic and financial assistance programme.

For an efficient use of micro data and to fully explore its value for statistical compilation and analysis two major requirements do exist, namely when combining different micro data-sources: the need for a comprehensive and up-to-date business register and flexible analytical tools to explore the information.

References

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