



Statistical coverage of financial institutions in Luxembourg: achievements, challenges and ways ahead

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Luxembourg financial industry is highly diversified: banks, investment funds, securitisation vehicles, insurance companies and special purpose entities (SPEs). Yet Banque centrale du Luxembourg (BCL) made the survey framework as harmonised and straightforward as possible, with a view to reducing the reporting burden. BCL developed an ad-hoc editing system in order to keep track of the SPEs population, which balance sheet changes very fast, to correct for non-response and to monitor the derivation of transactions, FX and price effects from granular SPEs positions. Problems specific to SPEs are valuation issues (overall for unlisted equities) and asymmetries, in particular cross border ones. As for the latter, the use of international standards not only for financial instruments (e.g. ISIN for securities) but also, in the medium run, to identify business units, would increase transparency and streamline statistical production.

Keywords: National accounts, external statistics, official statistics.

1. Introduction

This paper describes (though not exhaustively) some principles underlying BCL survey strategy to produce sectoral financial flows and positions at reasonable cost. BCL collects a minimum of input micro data, relies on auxiliary sources to derive remaining information and uses ad-hoc editing systems.

2. To collect positions only

The overall BCL survey strategy towards Luxembourg financial industry can be summarized as follow:

- To directly collect balance sheets (direct reporting system) instead of relying on custodian data (those custodian data remaining collected for non-financial companies, households and NPISHs),
- To collect positions only,
- To derive transactions by correcting monthly variations of positions from FX and price effects and by using auxiliary sources.

Luxembourg financial institutions provide BCL with two harmonized reports:

- A quarterly full balance sheet, without any detail on security positions,
- A monthly security by security form including information on currency, counterpart country.

The reporting forms are harmonized but remain somewhat targeted to each institutional sector, especially on the capital side:

- Investment funds shares issued for money market and investment funds,
- Technical reserves for insurance companies,
- Equity capital for remaining sectors.



Direct reporting of Luxembourg financial institutions in a nutshell

Mi = monthly Security by Security, overall ISIN

Mn = monthly Security by Security, overall non ISIN

Q = quarterly full balance-sheet, without any detail on security items

	Dep.-tak. Corp	Mon. mark. Funds	Inv. funds	Sec. vehicles	Captive fin. Instit.	Ins. corp.
SNA 2008	S122	S123	S124	S125	S127	S128
Ag. B/S bn euros 31/12/2016	764	292	3 956	209	9 380	186
Switch from custodian to direct reporting	2008	2008	2008	2010	2011	2015
1-Assets						
1-Loans to affiliated		Q				Q
1-Securitized loans					Q	
1-Deposits		Q	Q	Q	Q	Q
1-Bonds and bills	Mi	q	Mi	q	Mi	q
1-Equities	Mi	q	Mi	q	Mi	q
1-Participations in affiliated		Q	Q	Q	Q	Mn
1-Fixed assets		Q	Q	Q	Q	Q
1-Technical reserves						Q
1-Financial derivatives		Q	Q	Q	Q	Q
1-Remaining assets		Q	Q	Q	Q	Q
2-Liabilities						
2-Borrowing from affiliated		Q	Q	Q	Q	Q
2-Borrowing from banks			Q	Q	Q	Q
2-Deposits		Q				
2-Debt securities	Mi	q	Mi	q	Mi	q
2- Short sales of securities	Mi	q	Mi	q	Mi	q
2-Capital, reserves, provisions and results		Q			Q	Mn
2-Investment funds shares			Mi	Q	Mi	Q
2-Technical reserves						Q
2-Financial derivatives		Q	Q	Q	Q	Q
2-Remaining liabilities		Q	Q	Q	Q	Q

Source: Banque centrale du Luxembourg

3. To take profit of an external securities databases to derive transactions and other changes

The detailed derivation model is given on annex. It is rather straightforward for loans and deposits where price effects other than FX are usually small.

It is rather simple as well for listed bonds and shares, thanks to usually well known market prices. Yet a distinction is to be made between ISIN and non-ISIN securities.



ISIN securities

Most securities issued/held by Luxembourg companies other than captive financial institutions bear an ISIN code, the ISIN code being the International Securities Identification Number, widely used to identify tradable securities. In order to reduce the reporting burden, the only requested information is:

- the quantity of securities (number of shares, nominal for percentage quoted bonds),
- the outstanding amount (reported on the company balance sheet).

We derive the remaining attributes from an external source on securities, namely the Centralized Securities Database (CSDB), which holds information on securities relevant for the statistical purposes of the European System of Central Banks.

Non-ISIN securities

By contrast, non ISIN securities need to be reported together with all required metadata, for instance on bonds held.

Variables to report at Security by Security basis

Bond held by a Luxembourg company

ISIN bond	Non ISIN bond
ISIN number	Internal code
Nominal	Nominal
Outstanding amount	Outstanding amount
	Issuer country
	Sector of the issuer
	Issuance date
	Maturity date
	Periodicity of coupon payment
	Date of last coupon paid
	Coupon rate
	Currency of the security

Source: Banque centrale du Luxembourg

Reporting ISIN securities has therefore several strong points for all stakeholders:

- Reduced burden (only two basic figures to report) for the reporter,
- Reduced burden for the compiler, who does not need to train the reporter about some concepts specific to official statistics (e.g. SNA institutional unit sector),
- Reduction of international asymmetries, as soon as many countries use the same reference database.

As a matter of fact, most banks or investment funds overall report ISIN securities. Yet the picture is different for captive financial institutions.

4. To request granular information from captive financial institutions

Those institutions, the aggregate balance sheet of which is very high, are of two sorts:

- Some of them raise bonds (usually with an ISIN code) in open markets and lend the proceeds to their parent corporation.



- The largest part only holds/issues equity or debt instruments inside the group i.e. with no contact with markets. Most corresponding financial instruments therefore do not bear an ISIN code and the above mentioned information needs to be collected.

In this context, the derivation of transactions from positions proves challenging, in particular in the following situations:

Perception of a super dividend

Exceptional payments that are made out of accumulated reserves or sales of assets are not to be treated as dividends but as withdrawals of equity, and therefore recorded in the financial account, in accordance with SNA 2008 § 7.131.

Issuance of a share premium, the number of shares being unchanged

A standard capital increase brings about a more or less parallel increase of the number of shares and outstanding amounts, so that the system generates a transaction. Yet the capital increase may also be generated by the perception of a share premium. If so, the number of shares remains unchanged so that the system does not, ex ante, derive any transaction. Yet in statistical terms the share premium perceived is indeed a transaction, which needs to be generated “by hand”.

More broadly, BCL edits both large transactions and large other changes generated by the collection system. We often come back to the reporter on tricky cases to find out whether a large variation of position reflects either a transaction or a price effect (impairment, etc...). The granularity of our collection system (“participation by participation”) and its high frequency (monthly reports) helps to improve data quality.

5. To use a reference database to identify business units (in the medium run)

Captive financial institutions operations strongly contribute to Luxembourg Foreign Direct Investment operations. The IMF disseminates in its Coordinated Direct Investment Survey annual bilateral FDI positions. In particular because of the captive, those bilateral Direct Investment positions often display significant asymmetries. International organizations started to address this asymmetries issue, which is not specific to FDI, a long time ago and turned to national compilers in order to reduce them.

Yet bilateral “reconciliation exercises” remain difficult if entities are only identified with their name. The G-20 Legal Entity Identifier (LEI) initiative, a uniform global system to identify parties to financial transactions, might bring about the medium term infrastructure to identify the business units in a harmonized way.

In the following instance, Luxembourg ENT2 holds an equity participation in ENT1 from country 1. The Luxembourg reporter currently uses an internal code to identify ENT1. All data related to ENT1 are collected from the resident ENT2 unit.

If both entities were identified by their LEI:

- The reconciliation exercises would be much easier. Luxemburg and country 1 could quickly find out whether ENT 1 is covered in country 1 survey and report consistent figures.



- Luxembourg could ideally derive some ENT1 information from a reference database, as for ISIN instruments, which are very well known to all market participants. To that respect, the European RIAD (Register of Institutions and Affiliates Database) system, which provides reference data relevant for both statistics and market operations, needs to be mentioned.

**Luxembourg equity participation in country 1
Future matching through Legal Entity Identifier**

ENT1 Country 1		ENT2 Luxembourg	
A	L	A	L
Instrument ?		Instrument	F5 equity
		Resident identifier	LU ENT2 identifier
Country 1 ENT1 identifier	≠	Counterpart identifier	Internal ENT1 identifier
Counterpart sector ?		Resident sector	S127 Captive Fin. Inst.
Resident sector ?		Counterpart sector	S11 Non fin. Corp.
Counterpart country ?		Resident country	LU
Resident country Country 1		Counterpart country	Country 1
% of capital held by ENT2 ?		Share in ENT1 capital	60%
Functional category ?		Functional category	Direct investment
Ultimate controlling parent			
Market value ?		Market value	100
Investment income ?		Investment income	2

ENT1 Country 1		ENT2 Luxembourg	
A	L	A	L
Instrument	↔	Instrument	F5 equity
		Resident identifier	LEI ENT2
LEI ENT1	≠	Counterpart identifier	LEI ENT1
Counterpart sector	↔	Resident sector	S127 Captive Fin. Inst.
Resident sector	↔	Counterpart sector	S11 Non fin. Corp.
Counterpart country	↔	Resident country	LU
Resident country Country 1	↔	Counterpart country	Country 1
% of capital held by ENT2	↔	Share in ENT1 capital	60%
Functional category	↔	Functional category	Direct investment
Ultimate controlling parent	↔	Ultimate controlling parent	US
Market value	↔	Market value	100
Investment income	↔	Investment income	2

Source: Banque centrale du Luxembourg

However, a future implementation of a supranational register of financial entities, while very useful for statistical purposes, would leave the well known problem of unlisted equities valuation unchanged.

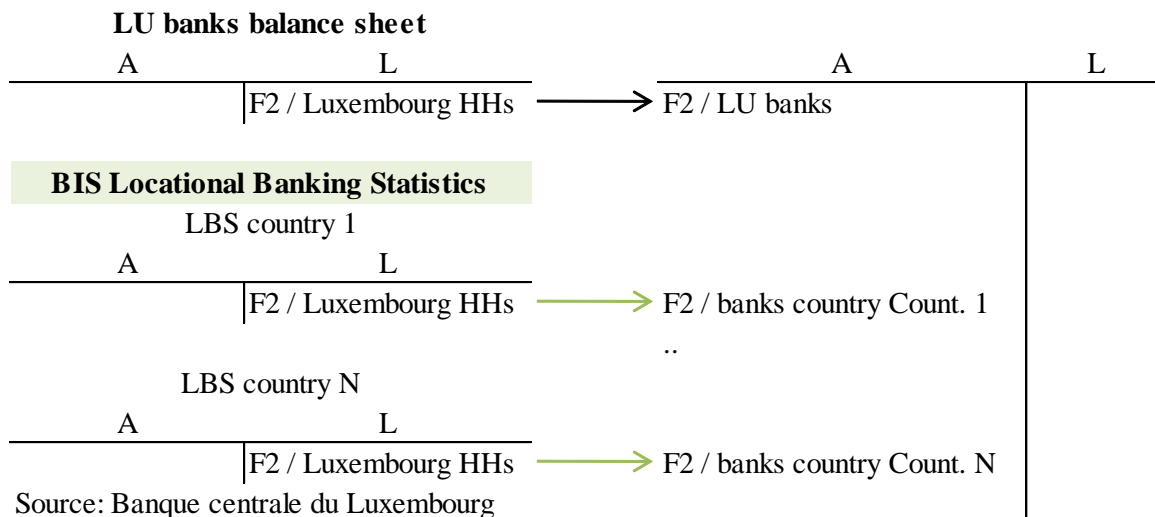
6. To use BIS Locational Banking Statistics

BIS Locational Banking Statistics provide the compiler with (amongst other) banks loans and deposits vis-à-vis detailed sector for each counterpart country. This information is very useful either as a benchmark or directly as an input to the financial account.



In Luxembourg, a direct use of BIS data has long not been possible, because the level of counterpart sector was only “banks / non-banks”, most non-banks being already covered, as has been previously emphasized, by our direct reporting system. Yet the database has become much more detailed and complete over time. BCL now takes profit of the LBS database to derive loans taken by / deposits of Luxembourg households.

Deposits of Luxembourg households



7. Conclusions

The growing complexity of financial integration requires bold reactions from official statisticians, in order to carry on producing high quality macroeconomic statistics. Although there remains room for improvements, Luxembourg survey strategy made it possible to produce high quality financial account and external statistics, both for national purposes and in accordance with European legal acts. Luxembourg took profit of various international databases relevant for statistical purposes.

Reference

Tissot, Bruno “Development of financial sectoral accounts: New opportunities and challenges for supporting financial stability analysis”, IFC Working Papers No 15, November 2016
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Annex – Derivation of monthly transactions

Derivation of monthly Balance Sheets

We derive the balance sheet of months which are not end of quarter by integrating quarterly and monthly reports:

- Linear interpolation of quarterly Balance Sheet on non security items,
- Monthly security by security reporting on security items,
- Fine tuning on non security items to get total assets = total liabilities.

Derivation of monthly transactions

The final step is the derivation of monthly flows based on those (derived) monthly balance sheets.

- Derivation of transactions for each item,
- Fine tuning on non security items to get total transaction assets = total transaction liabilities.