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Measuring International Financial Flows of Households: Methods and Lessons Learned

DIRECTORATE GENERAL STATISTICS
Directorate Balance of Payments

**Measuring International Financial Flows of Households:
Methods and Lessons Learned**

Contribution to the Balance of Payments Committee
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This paper reflects the opinion of the author and does not necessarily express the views of Banque de France.

1. Introduction

One of the key axes of improvement of modern statistics has been to develop the “whom-to-whom” dimension of macroeconomics data. External statistics make no exception to this trend and with the Sixth Edition of the IMF’s Balance of Payments Manual (BPM6), statistics compilers are now producing more and more data on a whom-to-whom basis. In the BPM6 classification of institutional sectors, households are not yet isolated but are included in “other non-financial sector” together with non-financial corporations and NPISHs. But in principle, compilers have to collect information on international operations of households, even if the latter is rarely disclosed.

International financial flows of households encompass outward flows from resident households and inward flows from non-resident households. Both types of flows have to be recorded in the balance of payments (BoP) statistics in the financial account. But it might be too restrictive to solely focus on the flows of the financial account, since part of them are the counterparts of economic transactions involving households, recorded in the current account. Therefore the present document covers, for France, the financial flows – strictly speaking– such as cross-border real-estate acquisitions or securities holding by households, but also other flows attributable to households as travel expenses, cross-border workers compensation and remittances.

Measuring these flows is challenging since they consist in numerous transactions, relatively small compared to corporates’ or banks’ ones, but which can lead to significant cumulated amounts (and biases in the statistics if they are under-estimated). Besides, the number of economic agents involved in such transactions is potentially very large (both resident and non-resident households). One has also to take into account the concept of self-employed

¹ This paper has been prepared by Jeanne Pavot and Guillaume Cousin with the support of the divisions of BoP Directorate and Surveys Directorate. Any errors and omissions would be mine however.

natural persons. In the context of the growth of international trade in services, natural persons are involved in cross-border transactions and these transactions would have to be isolated as a specific category, if not allocated to the sector of non-financial businesses. Finally, measuring international flows of households, especially financial ones, has been made increasingly difficult, as far as the euro area is concerned, because the Single Payment Area does not enable to operate efficiently an International Transaction Reporting System (ITRS)². In this system, Balance of Payments compilation used to rely on the domestic banks which reported all cross-border operations on their own account and on the account of their customers, including households. As this settlement-based reporting has been progressively discontinued, alternative sources of information have to be found to cover the data gaps.

Underlining the past changes that affected data collection is a necessary introduction to the presentation of the methods currently used to estimate Balance of Payments flows related to households transactions. In the current compiling system in France not all these flows can be properly measured: the available sources or the possibilities of estimations vary from one item to another.

2. The International transactions of households are of from low to medium importance but statistically significant

Most of the BoP and International Investment Position (IIP) items present resident or counterpart sectors operations, with the most noticeable exception of goods and services that rely on a “product-type” classification. Still, in the current account some international flows are easily attributable to households, such as travel expenditure, compensation of cross-border employees and the remittances (see table below).

² Payments messages do not distinguish between residents, and non-residents of the monetary-union, unless an excessive reporting burden is imposed on reporting credit institutions.

Table 1: Residents and non-resident Households related flows and positions

2014 (EUR bn)						
Current account items				Position items		
	Credit	Debit	Balance	Assets	Liabilities	Net
Travel	43,2	36,7	6,6			
<i>as % of total*</i>	5,3	4,4				
Compensation of employees	18,5	1,0	17,5			
<i>as % of total*</i>	2,3	0,1				
Remittances	0,5	9,4	-8,9			
<i>as % of total*</i>	0,1	1,1				
Income-Portfolio Investment	0,7	NA	NA			
<i>as % of total**</i>	1,3	NA				
Memo: total current account	815,2	834,9	-19,7			
Financial account items				Position items		
	Change in Assets	Change in Liabilities	Net	Assets	Liabilities	Net
Direct Invest. (real estate)	3,2	4,2	-1,0	45,2	105,4	-60,2
<i>as % of total ***</i>				4,3	17,5	
Portfolio Invest.	-1,1	NA	NA	62,2	NA	NA
<i>as % of total ***</i>				2,7	NA	
Other invest.	NA****	NA****	NA****	16,6	33,7	-17,1
<i>as % of total ***</i>				1,0	1,9	

Notes: * total = either total credits or total debits of the current account

** total = total income from portfolio investment

*** total = either total stock of assets or stock of liabilities of each functional categories

**** Information is being collected since 2013 Q4 and undergoes the usual qualification process before being taken into account in the yearly revision of the Balance of Payments.

Source: Banque de France – Balance of Payments statistics – BPM6

Within the current account, the most important flows³ are related to travel expenditure as France is the first country in terms of number of foreign tourists and in the top 5 in terms of tourism expenditure. The remittances outflows are also significant as France has been for decades and still is a country where immigration flows outpace emigration flows.⁴

Regarding financial international transactions of households, considering they are relatively small (see table 1), positions appear more telling.⁵ The largest positions are, on the one hand, the foreign securities holdings by resident households and, on the other hand, the stock of real-estate held by non-resident households in France. The first item amounts to EUR 62 bn in 2014 which is equivalent to 1% of the total foreign assets held by residents and less than 1.5% of all the financial assets (foreign or domestic) of French households.⁶ The second item amounts to EUR 105 bn or around 0.7% of total French liabilities vis-à-vis the rest of the world.

³ Time series shown in annex 1.

⁴ According to World Bank data, France ranks 8 in terms of remittances outflows.

⁵ Time series are available in annex 3.

⁶ According to Financial Accounts, the total financial assets of Households and NPISH were amounting to EUR 4,677 bn end 2014 (source: Banque de France).

3. Households' non-financial transactions are derived from surveys and other exogenous sources

Different methods are used to estimate the current account operations involving households. Surveys are a relevant instrument if the cross-border operations are not too rare and/or if probabilities (and therefore expansion factors) can properly be derived. Otherwise, other sources have to be used.

a. Travel surveys have been conducted for more than ten years in France

Travel is certainly one of the BoP items for which compilers have to rely on a wide variety of methods. First, it encompasses rather different activities: from border workers and students abroad to business trips and personal travel for leisure purposes. Second, geography imposes restrictions on the ways to collect travel data (e.g. islands vs. continental countries).

In France, the estimation of travel expenditure of residents abroad is derived from two different surveys: the survey on touristic demand, which is a monthly survey based on a panel of 20 000 households who are asked about their last travels abroad (destination, number of days, expenses...), and the survey on professional expenses made abroad, which is also a monthly survey based on a panel of 10,000 people⁷.

The estimation of French travel receipts also relies on a survey. The aim of this survey is to estimate on a quarterly basis the number of non-resident travelers and their expenses by country of residence. Around 80,000 foreign travelers are questioned each year when leaving the territory about the details of their travel. The number of travelers is then estimated by counting non-resident travelers in a sample of exit points and by multiplying it by the total number of travelers by transport mode. Their expenditures are estimated with the information collected in the questionnaires.

However, these surveys are relatively costly: over 1 million euros per year. For two of the three travel surveys, Banque de France has a partnership with the administration of tourism affairs and statistics. This partnership allows both institutions to share the costs of surveys that can be used for different kind of statistics.

Although surveys cannot be circumvented, they present practical difficulties in the case of France. On the one hand, France presents a relatively long terrestrial border; on the other hand, most of the neighboring countries belong to a free circulation area.^[1] Therefore, entering (or alternatively exiting) traffic of non-resident individuals is not easy to assess, which implies a specific process of data-checking and adjustment to gross data captured in the surveys. This is why Banque de France, in partnership with the administration of tourism

⁷ Regarding this latter survey, it is more related to expenses initiated by the sector of enterprises than by the sector of households.

^[1] For more details on Schengen area see <http://eur-lex.europa.eu/legal-content/EN/TXT/?uri=uriserv:l33020>

statistics, has recently decided to experiment the use of mobile network operators (MNO) for counting foreign visitors. Banque de France has also been collecting additional data related to cross-border credit card transactions which complement the results of surveys.

b. Mirror data is used for the estimation of compensation of employees and remittances flows

According to surveying theory, if the variable of interest is relatively rare, sample size will have to be very large (and therefore the survey very costly) especially if no screening procedure is possible. Yet resident cross-border workers represent only 1.2% of the workforce of France, and, if there is currently no estimations on how many households are *receivers* of remittances flows in France, one can reasonably suspect it is relatively marginal.⁸

Compensation of French cross-border employees is estimated using bilateral data from neighboring countries (for outflows). This source is usually reliable as the wages of non-resident employees are identifiable by social security administrations in the host countries. Symmetrically, debits are estimated using data from French social security administrations.

Remittances are also assessed using mirror data coming from the World Bank, which gather data from countries receiving financial transfers from migrants. The latter are indeed usually better placed to measure them. Indeed, remittances are closely tracked by countries receiving large amounts, since these amounts can sometimes be greater than official development assistance receipts. In order to estimate remittances received by a country and coming from France, the total amount of remittances received by this specific country is multiplied by the share of migrants of this country living in France. Banque de France also collects data from Western Union, a leading operator of money transfer. These data are mostly used for cross-checking the other sources.

4. Households' financial international flows: loopholes in the compilation system

Since the termination of the ITRS, households' financial cross-border flows have been increasingly difficult to track as the sole obligation of banks now is to report their client transactions whose counterparty is located outside Single European Payments Area (SEPA) if the amount is greater than EUR 50,000, which is quite large for household's transactions.⁹

⁸ In term of amounts, remittances outflows represent 0.7% of household gross disposable income, while remittances inflows are virtually nil. Real disposable income of households amounts to EUR 1,342 bn in 2014 (source : INSEE).

⁹ For more details on SEPA see EU regulation 260/2012 <http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=OJ:L:2012:094:0022:0037:en:PDF>

a. Cross-border real estate acquisition is partially measured

Real estate acquisitions should be recorded as direct investments in BoP and IIP (through notional units). When the ITRS was still in place, Banque de France had access to data from *notaires*¹⁰ payment flows, through their banks, which allowed assessing the acquisitions of non-resident households.¹¹ Since the ITRS progressive expiration, the compilation is based on annual estimations based on aggregated data from the *notaires* database.

Regarding cross-border real-estate acquisitions of resident households abroad, no regular information is available. Positions in the IIP reflect to a large extent accumulated flows from past ITRS data, and some estimates that have been subsequently added when possible.

b. Households' securities holdings: progress has been made in the recent years

In 2006, in a speech on “Statistical challenges raised by globalization”, the ECB board member José Manuel González-Páramo was highlighting the loopholes in external statistics:¹²

“A limitation of reporting for external statistics is that, while it is aimed at reflecting a reality which is in essence cross-border, it typically relies on national legislation. As a consequence, statistics compilers are often not allowed to exchange confidential data among themselves, which severely hampers the elimination of statistical asymmetries. Furthermore, this situation leads to gaps in the statistics reporting, for instance because most national statistics exclude “third party holdings”, i.e. securities held in custody abroad by households.”

The recent financial crises reveal even further the existence of data gaps and the need of more granular information. Therefore, the European System of Central Banks (ESCB) has set up a Securities Holdings Statistics Database (SHSDB) containing security-by-security holdings. Each country also has to report cross-border third party holdings. Therefore, bilateral data can be used to properly assess resident households' holdings of foreign assets and more generally to build fully-fledged statistics on securities on a from-whom-to-whom basis. In the case of France, the information on securities holding statistics is collected on a quarterly basis and flows are derived from stocks.

c. Loans and Deposits of resident households abroad cannot be observed directly

¹⁰ “Notaires” is a specific profession regulated by Law. Their duties and area of expertise could be assimilated to those of conveyance and estate lawyers.

¹¹ The information can still be purchased directly from notaries professional order.

¹² For more details see <https://www.ecb.europa.eu/press/key/date/2006/html/sp061024.en.html>

The compilations of other investment statistics in the BoP currently results from information directly collected from banks (on their own cross-border operations) and from firms. As only domestic banks are reporting to Banque de France, only deposits of non-resident households in resident banks or loans granted by resident banks to non-residents can be tracked. Banks report stocks, and flows are derived.

To assess resident households operations with foreign banks, other statistics can be used, in particular the International Banking Statistics of the BIS (BIS-IBS). This source allows assessing the positions in the countries contributing to the BIS-IBS (locational banking position data set). Besides, households are not systematically isolated yet from other banks' non-financial clients because the extension to this specific breakdown is quite recent (starting as from December 2013) and not all contributors provide it yet.

5. Concluding remarks and issues for discussions: do we need to improve the measure of international financial flows of households and how to achieve it?

Households' flows, with often low unitary amount, could lead to cumulated biases in the statistics if unmeasured – or poorly measured. Generally speaking this potential source of bias deserves attention if one considers that individuals become increasingly financially active abroad, be it because of European Union¹³ and EMU or because changes in the tax environment might trigger non-captured flows.

In that regard, there is a case for improving our measures of the international financial flows of households. Nevertheless, as illustrated in table 1, the relative importance of households' flows is not very high. Moreover, these flows are generally less volatile than the flows of other economic agents (see for instance the profile of remittances). Efforts to improve the measurement of households' flows in the balance of payments could follow several directions:

At the national level, BoP compilers should seek for access new sources of information, including administrative sources. One may assume that the current trend towards more transparency regarding fiscal arbitrage practices would offer new sources, such as information on revenues and assets abroad resulting from emerging international tax data-sharing arrangements. However, access to these data for finalities beyond the scope set by the legal framework is not warranted. Moreover it may prove very difficult to build proxies from tax data. In the case of France, individuals have to report to the tax administration their foreign holdings. The Government has recently encouraged households to report their foreign bank accounts and holdings generating untaxed revenues against lower penalties than those normally imposed when there is evidence of tax evasion¹⁴. However, this information is not sufficient per se to estimate the outstanding amounts of personal wealth located abroad.

¹³ In the European Union, the Single Market means the ability for Citizens to conduct financial operations abroad, such as opening bank accounts, buying shares in non-domestic companies, investing, and purchasing real estate. See Articles 63 to 66 of the Treaty on the Functioning of the European Union (TFEU) <http://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:12012E/TXT&from=FR>

¹⁴ The French tax administration has received in two years about 40 000 demands of disclosure and has been able to collect 2 bn of tax regularisation.

Existing surveys on the income and wealth of households (such as the Fed Survey on Consumer Finance and the Eurosystem Household Finance and Consumption Survey) could provide interesting benchmarks if there was a possibility to capture, as an additional dimension, some data related to the geographical diversification of households' wealth. As a matter of fact, there is some knowledge today in these surveys about the securities purchased from non-resident issuers. The key data gaps are related to property abroad and loans and deposits abroad. However difficulties to capture this range of data and build estimates with a reasonable degree of robustness may be really difficult to overcome. Survey specialists generally emphasize that the insertion of questions related, even indirectly, to estimates of the fiscal basis, trigger a loss of confidence from respondents and put at risk the ability to conduct efficiently the whole survey (risk of collapse of the response rate). Therefore, indirect observation (use of mirror data, data reported by custodians...) may still be preferred. Yet, some qualitative questions¹⁵ in existing direct surveys about the investment behavior regarding geographical diversification could provide useful insights in trends and provide some guidance to Balance of Payments' compilers, regarding the area they ought to focus on.

It is also worth revisiting the potential of settlements data. Even if ITRS has been totally or almost dismantled in many countries, settlements data, together with big-data techniques, might still be useful to track households' operations.

At the international level, there have been several successful examples of useful international cooperation and data sharing between data compilers. Indeed, each country might be better placed to identify specific cross-border flows such as transfers of deposits to retail bank accounts, acquisitions of real-estate property by non-residents, or the holdings of securities managed by a non-resident custodian (or non-monetary union custodian in the case of euro area countries) custodian. By exchanging information, Balance of Payments compilers might be able to fill some data gaps. In that respect, CPIS could further evolve to include third-party holding reporting.

Last, further evolutions of the IMF's Balance of Payments Manual could support this data sharing. For some specific items, households' operations could be isolated, which would increase incentives for compilers to collect information. This could notably be the case for portfolio investment. Real-estate acquisitions could also become a specific sub-item of Direct investment in the form of equity. By allocating all categories of flows of the Balance of payments to a more granular sectoral breakdown of the economy, further progress could be achieved in the analysis of discrepancies between the national accounts and the balance of payments. Beyond these benefits related to the quality of the statistics, the analytical use of the balance of payments would be further enhanced.

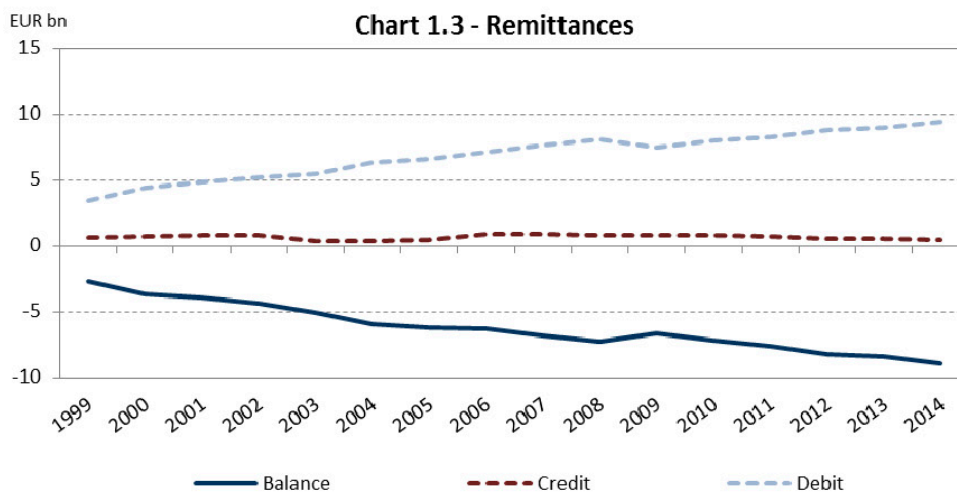
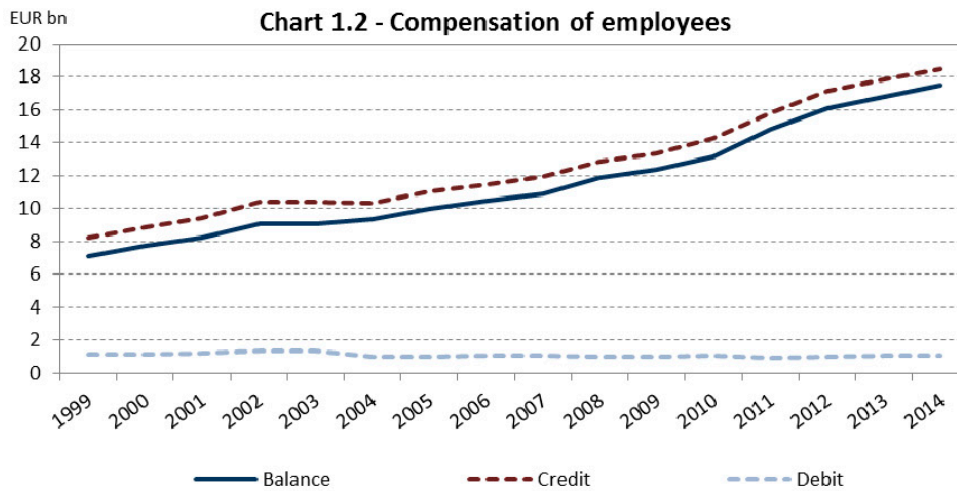
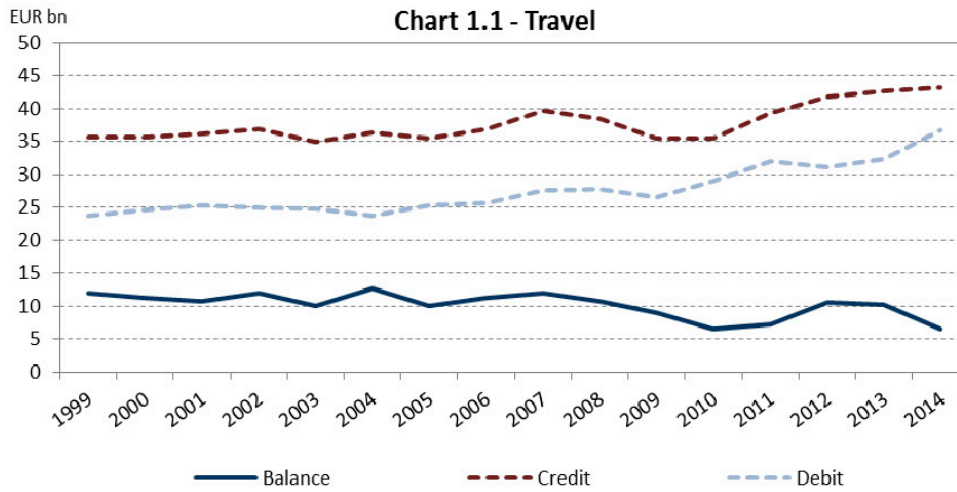
¹⁵ See for instance the approach « shopping for financial services » included in the report of the Fed Survey on Consumer Finance.

Reference:

Banque de France BoP/IIP compiling guide is available online (available in English October 2015):

https://www.banque-france.fr/fileadmin/user_upload/banque_de_france/Economie_et_Statistiques/BDP-Methodologie_072015.pdf

Annex 1: Current Account items



Source: Banque de France – Balance of Payments statistics – BPM6

Annex 2: Geographical Breakdown

Table 2.1 : Travel 2014, EUR bn

Country	Credit	Debit	Balance
Germany	6,8	2,9	3,9
Belgium	4,9	1,9	3,0
United Kingdom	4,7	2,6	2,1
Switzerland	3,8	1,9	1,9
Italy	3,0	3,5	-0,5
Other	20,0	23,9	-3,8
Total	43,2	36,7	6,6

Table 2.2 : Remittances 2014, EUR bn

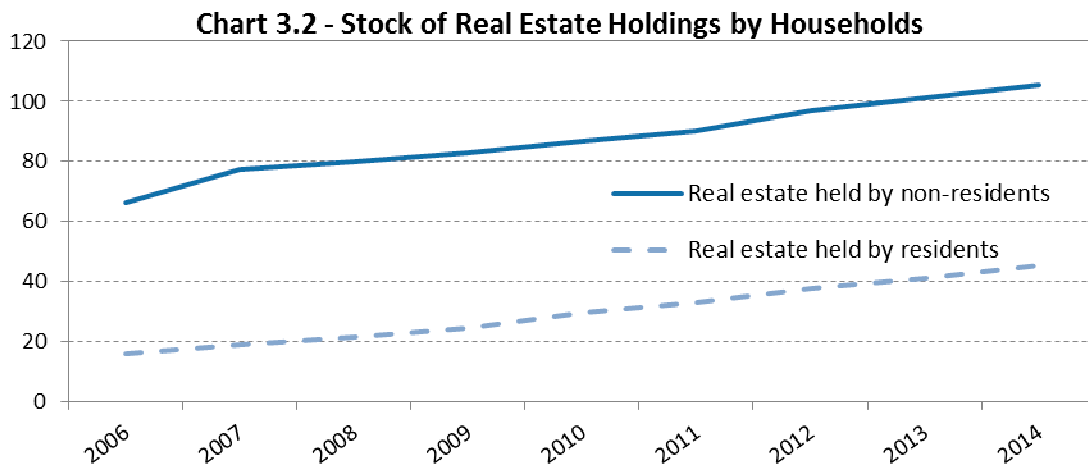
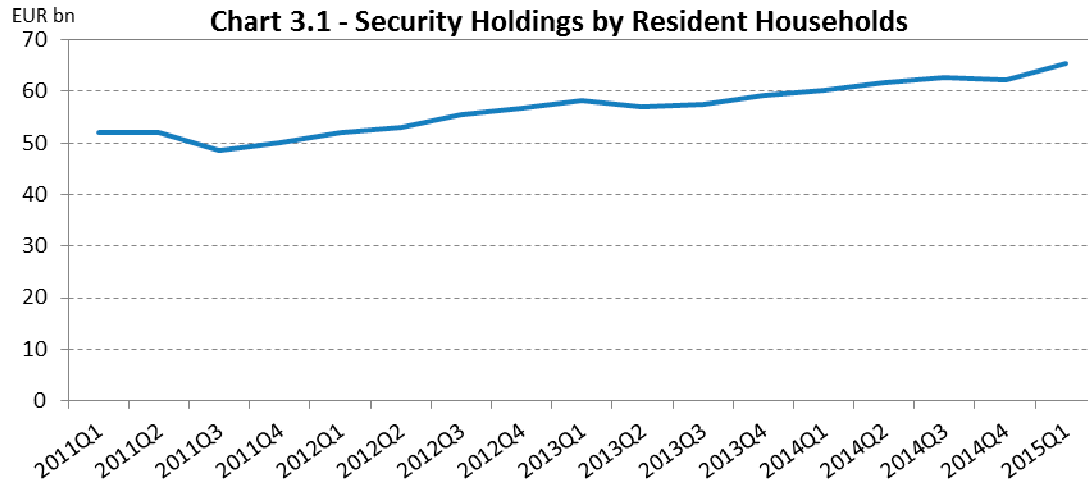
Country	Debit
Morocco	1,4
Portugal	1,2
Algeria	1,2
Spain	1,1
Tunisia	0,8
Other (212)	3,6
Total	9,4

Table 2.3 : Compensation of employees 2014, EURbn

Country	Credit	Debit
Switzerland	9,2	0,0
Luxembourg	4,3	-
Germany	2,5	0,1
Belgium	1,9	0,3
Other	0,6	0,6
Total	18,5	1,0

Source: Banque de France – Balance of Payments statistics – BPM6

Annex 3: Households related position



Source: Banque de France – Balance of Payments statistics – BPM6