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The UK Flow of Funds Project: introduction, progress and future work

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Abstract

This article presents the initial findings of the Flow of Funds Project, which is conducted in partnership with the Bank of England. It includes previously unpublished statistics on from-whom-to-whom lending between the sectors of the economy.

Introduction

In late 2014, the Office for National Statistics (ONS) began working in partnership with the Bank of England to improve Flow of Funds statistics for the UK. This article provides an introduction to this project and potential benefits it will bring. It outlines the progress so far and gives an update on the future programme of work. This includes the new publication of a ‘from-whom-to-whom’ matrix for balance sheet levels of loans as experimental statistics, with a high level presentation of these new estimates included within this article.

What is Flow of Funds?

The term ‘Flow of Funds’ is used in a number of different ways, and can often be used to describe the financial account in general. In the specific context of this article however, the term ‘Flow of Funds’ relates to the development of from-whom-to-whom statistics for both financial account transactions and balance sheet levels. As illustrated in Figure 1, these data are often presented in matrices that give full counterparty information for a given instrument across assets and liabilities, thus showing the interconnections between the different institutional sectors within the economy.

Figure 1: European System of Accounts 2010 (ESA10) example of a from-whom-to-whom financial account matrix for debt securities

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Creditor sector \ Debtor sector		Non-financial corporations	Financial corporations	General government	Households and non-profit institutions serving households	National economy	Rest of the world	Total
		Net incurrence of debt securities by						
Net acquisition of debt securities by	Non-financial corporations	30	11	67		108	34	142
	Financial corporations	23	22	25		70	12	82
	General government	5	2	6		13	19	32
	Households and non-profit institutions serving households	65	43	124		232	43	275
	National economy	123	78	222		423	108	531
	Rest of the world	24	28	54		106		106
	Total	147	106	276		529	108	637

The use of the term 'Flow of Funds' in this context therefore differs from the use of the term in the UK Annual National Accounts (Blue Book) 2014 which included a new chapter entitled 'Flow of Funds' (Chapter 14). This new chapter provided no further information to that already published within the UK Economic Accounts (the UK's sector and financial accounts), but rather presented the data in a different way, showing the assets and liabilities of each sector alongside each other for each financial instrument. The Flow of Funds project aims to extend this work to show not only the total assets and liabilities of each sector for each financial instrument, but also a full sectoral counterparty breakdown below these totals.

Why is it important?

The development of from-whom-to-whom data for financial transactions and balance sheets has gained increasing international interest in recent years. The updated European System of Accounts manual (ESA10) and the United Nations (UN) System of National Accounts (SNA 2008) both recommend the implementation of Flow of Funds matrices into the National Accounts. The development of these data are further encouraged in a number of global data initiatives, including the International Monetary Fund's (IMF) Special Data Dissemination Standard Plus (SDDS+) and the G20 Data Gaps Initiative (DGI). Many comparable European countries are developing, or already publish, from-whom-to-whom data as part of their financial accounts, for example Portugal and Austria.

The National Statistics Quality Review of the National Accounts and Balance of Payments (Barker, 2014) made an explicit recommendation that ONS and the Bank of England should collaborate on this project[1]. The review considered these data as essential for identifying the build-up of risks in the financial sector and in understanding financial connections amongst the institutional sectors and sub-sectors within the economy. As an economy with a large financial sector, this is of particular importance for the UK. There are also broader benefits from the collection of these data in better understanding sectoral balance sheets and the flow and distribution of credit within the economy, which in turn are useful for the analysis of consumption and investment trends.

The enhancement of the financial accounts to include from-whom-to-whom data and an improved sector and instrument breakdown would also have wider-reaching benefits for the National Accounts. For the most part, the development of more granular financial account data would require new data sources that are likely to have applications beyond the financial accounts. For example, increased granularity on the sectoral stocks of, and transactions in, debt securities has potential to provide enhanced estimates of property income. This work could therefore potentially lead to future improvements in not only financial account statistics but throughout the sequence of accounts.

Producing data at a more granular level also provides the flexibility to respond to changing demands and areas of user interest. There may be areas within the economy today that do not attract widespread interest but, due to the rapidly evolving nature of the financial system, may be of interest in the future. By developing data at a more granular level by fully exploiting data available from existing sources there is therefore a degree of ‘future-proofing’ the accounts so that changing user needs can be addressed more efficiently.

Building on this, improving the quality and granularity of financial account statistics would meet the current increased data demands from both policy-makers and researchers. The Bank of England’s Financial Policy Committee (FPC) has been given a range of policy tools in order to deliver the Bank’s financial stability objective. In order to assess risks and calibrate the effects of its tools, it needs reliable data on both the UK financial system and the links between the financial sector and the wider economy. Enhanced financial accounts and from-whom-to-whom data may supply detail that is currently not available from the aggregate data; something which is of particular importance when deciding whether a macro- or micro-prudential tool is appropriate. Further sectoral breakdowns are also important in making decisions beyond the core banking sector. Several policy-makers have recently drawn attention to Flow of Funds statistics, providing further testament to its importance in public policy work.

The data will also offer a resource to researchers outside of a specific policy requirement. Researchers should benefit from both improvements to the aggregate data and increased granularity in sectors, instruments and interconnections. Researchers of financial markets in particular are increasingly interested in modelling networks and financial system complexity, both of which require from-whom-to-whom data, preferably at a granular level.

Looking to the international context, this project will improve the ability of the UK to meet the international recommendations for financial statistics from SDDS+ and the G20 DGI. Many European countries, particularly those within the euro-area, are already producing granular from-whom-to-whom data for selected financial instruments. In general, the UK’s data on the financial sector and financial flows are less detailed than those for many other advanced economies.

Notes

1. Development Recommendation 4

Programme of work undertaken between ONS and the Bank of England to date

The ONS and Bank of England work began in late 2014 to develop Flow of Funds statistics for the UK. Over the past six months, the project has been focused on identifying current data availability based on the existing data sources used to compile the financial accounts. The extent to which full from-whom-to-whom information is currently available differs for each financial instrument, with a number of matrices left with gaps that will require alternative data sources to fill.

A good example of where there are extensive data gaps is debt securities, where all institutional sectors in the economy other than households can potentially be on both the asset and liability side i.e. they can both issue and hold debt securities. In the current UK financial account estimates, information is available only on the total amounts issued and held by each sector, with very little counterparty information. There is no data source currently available within ONS that would provide information on inter-sectoral connections to enable a full sectoral breakdown of holdings for each issuing sector.

It has been possible, however, to develop full counterparty information from current data sources for loans, although filling the complete matrix with these data has involved some assumptions[1]. The counterparty relationships underlying the total asset and liability data published in the UK Economic Accounts have been identified, and thus a full from-whom-to-whom matrix has been developed for total loans[2] (Figure 2). This has been published alongside this article as an experimental table, with time series estimates from 2006 to 2013, and can serve as an example of what this project hopes to achieve.

Looking at Figure 2, it is clear that the development of Flow of Funds statistics will provide a substantial expansion to the UK financial accounts. The entries shown in bold and shaded in blue are those already available and published by ONS. The remaining entries shaded in green are all previously unpublished and provide further granularity on lending and borrowing across the different sectors. While these data are experimental and subject to revisions, they still illustrate the potential benefits of Flow of Funds statistics in better understanding the interconnections across sectors.

Figure 2: A from-whom-to-whom balance sheet matrix for total loans, 2013, unconsolidated [3] current prices, £ billion

	Liabilities:									
Assets:	PC[1]	PNFC	MFI	OFI	ICPF	CG	LG	HH+NPISH	RoW	Total
PC	0.8	0.1		- [2]	-	0.0	0.4	0.0	0.9	2.3
PNFC	0.4	-		51.7	-	4.7	0.0	0.0	214.9	271.8
MFI	0.2	406.0		752.9	17.1	4.4	10.7	1192.2	898.8	3282.4
OFI	0.0	44.7		3.6	-	-	0.0	140.9	40.7	230.1
ICPF	0.0	77.1		71.1	-	0.0	2.4	28.4	12.9	191.9
CG	1.3	5.5		0.0	-	-	64.2	119.7	3.7	194.4
LG	0.2	0.1		0.0	-	0.0	-	7.7	-	8.1
HH+NPISH	0.0	2.3		13.5	0.5	-	0.1	2.4	-	18.7
RoW	1.1	434.2		969.3	41.5	0.1	5.4	32.6		1484.2
Total	4.0	969.9		1862.2	59.1	9.3	83.4	1523.8	1172.0	

Notes:

1. PC = public corporations PNFC = private non-financial corporations MFI = monetary financial institutions OFI = financial institutions other than MFIs and insurance corporations and pension funds ICPF = insurance corporations and pension funds CG = central government LG = local government HH+NPISH = households and non-profit institutions serving households RoW = rest of the world
2. A '-‘ notates no estimate feeding into this cell, although theoretically data could exist here.

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Taking loans to households and non-profit institutions serving households (NPISH) as an example, we can see how the increased counterparty information adds value. From Figure 2 we can see that households borrow predominately from monetary financial institutions (MFIs) - this sector includes the Central Bank, commercial banks and building societies. But other sectors of the economy also lend money to households and the proportion of household borrowing that is from MFIs has changed over time. A large amount of lending to households also comes from other financial institutions (OFIs) for example, which include institutions such as finance companies, investment funds and securities dealers. Figure 3 presents a time series of these data showing the total amounts of loans outstanding to households and NPISH from each of the different sectors.

Figure 3: Total loans to households, amounts outstanding by sector 2006 to 2013

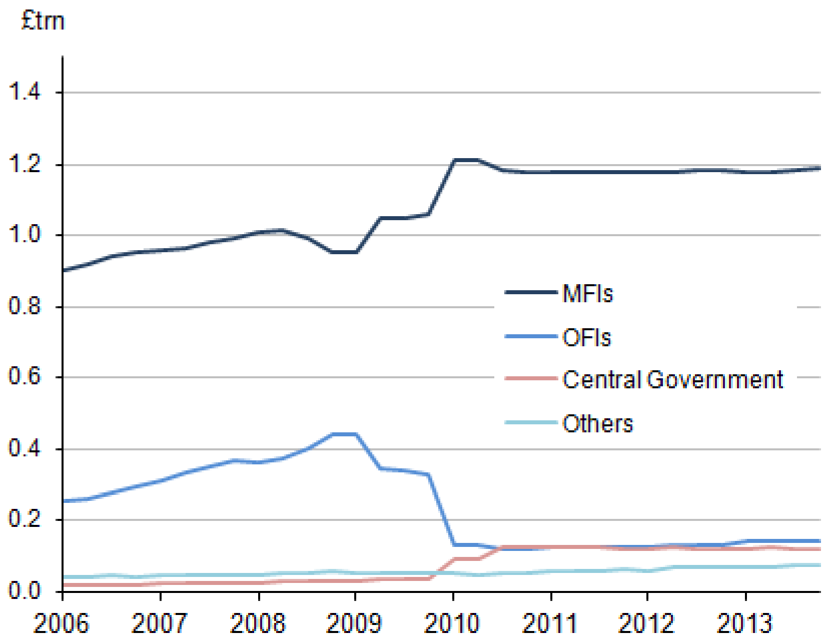

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Figure 3 shows the rapid increase in lending to households in the run up to the economic downturn, from both MFIs and OFIs, with an increasingly large proportion of total household borrowing from the OFI sector. This transition was predominantly due to the securitisation of household mortgage loans that were transferred into securitisation special purpose vehicles (SPVs) classified as OFIs within the National Accounts. The step change seen in 2010 relates to a change in reporting where the business of these SPVs was moved back onto the balance sheets of the banks that owned them. But regardless of this classification change, household borrowing from OFIs has been increasing over time, both in terms of absolute amounts outstanding and the proportion of total borrowing that it accounts for. This may not be surprising given the increased presence of institutions offering alternative sources of finance for households, such as payday loan companies and specialist mortgage lenders. These institutions extend credit but are not authorised to accept deposits and are therefore situated within the OFI sector.

We can also see the impact of reclassification of certain banks in 2010, whereby their specific loan books were transferred to public ownership. These loans are then seen as being extended by the central government as opposed to the MFI or OFI that originally issued the loan, resulting in an increased share of household borrowing from central government.

From this example, it is clear that analysis of this sort would be improved with a further breakdown and granularity of data. For example, by understanding the type of OFIs that households are increasingly borrowing from, or even knowing the names of the institutions themselves would enhance the potential policy use of the estimates.

Notes

1. For detailed explanation of the sources and methods used to construct these data please see the explanatory notes accompanying the new estimates.

2. This includes all components of loans currently published in the National Accounts i.e. short-term and long-term loans, including finance leasing, direct investment and loans secured on dwellings. Separate matrices of these different components may be published in the future.

3. These data are published on an unconsolidated basis i.e. intra-sector loans are included. If required, these can be translated into consolidated estimates by removing the intra-sector business shown in the table.

Looking forward

While good progress has been made on the project up to this point, the project is still in development with the scope of future work still to be determined. Looking to the immediate future, over the rest of the year ONS and the Bank of England will commence investigative work into alternative data sources. These are sources that could potentially be used either to improve the existing estimates or to fill the data gaps identified. The outcome of this work will outline the feasibility of developing data at differing levels of granularity.

Work over the rest of the year will also focus on assessing the quality of both existing and new data. By reviewing the construction of current financial account and balance sheet series in order to pull out available counterparty information this project also provides an opportunity to undertake a review of the methodology currently used in compiling the financial accounts. Based on this review, this project will make recommendations for improvements to be implemented in the official accounts at a later date. In the interim, new from-whom-to-whom estimates published on an experimental basis will take account of these improvements where possible, as well as bringing in alternative data sources as the project progresses. Ideally a full set of matrices would be published in Blue Book 2019.

Alongside this, work will continue to be progressed at ONS on the development of the financial surveys. This development will improve the sector breakdown within the financial accounts, particularly within the OFI sector and the splitting of pension funds from insurance companies. The newly developed surveys will also offer some additional counterparty information which could be used to fill several of the current gaps identified in building up the Flow of Funds datasets.

More ambitious would be to collect data at firm-level to build up the accounts from micro-data. The recent Bank of England Quarterly Bulletin article outlined many benefits of this approach. These benefits included additional understanding of the build-up of financial risk at the individual firm level, especially where risk is present due to the non-typical behaviour of a small group of firms, whose behaviour would be masked by analysis at a more aggregate level.

Achieving this level of aggregation would require investment in new data sources but would also involve the use of additional existing data, for example those collected for administrative and regulatory purposes. This would have benefits in reducing the duplication of data collection and would lessen the use of costly statistical surveys, and the burden placed on businesses in responding to them.

Future updates on work plans and progress of the project will be published on the dedicated Flow of Funds page on the ONS website.

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Background notes

1. Details of the policy governing the release of new data are available by visiting www.statisticsauthority.gov.uk/assessment/code-of-practice/index.html or from the Media Relations Office email: media.relations@ons.gsi.gov.uk

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