

Article

# Economic Statistics Transformation Programme: Flow of funds - the international context

This article sets out the international context for the UK's enhanced financial accounts and flow of funds statistics. It compares the financial statistics publications of the G7 countries, and highlights the drivers for some of the enhanced financial accounts priorities. It shows that, on completion of the ambitious development of the enhanced financial accounts, the UK will be a world leader in flow of funds statistics.

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# 1 . Authors

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## 2 . Executive summary

We have ambitious plans to transform our economic statistics over the coming years, informed by our Economic Statistics and Analysis Strategy and with the aim of increasing the robustness and quality of UK economic statistics. Working in partnership with the Bank of England, a key element of our transformation work is the development of enhanced financial accounts – in particular more detailed “flow of funds” statistics – to meet evolving user needs.

Counterparty (“whom-to-whom”) information on stocks and transactions (the “flow of funds”) has been identified as a particular need, as this can help to assess the build-up of financial risks across economic sectors, and to better understand their interconnections. It is of particular importance to the UK, with its large and international financial sector, that good quality, detailed financial statistics are available to drive the robust analyses required by policy-makers, economists and market analysts in this area.

This article sets out the international context for flow of funds statistics, and highlights the drivers for some of the priorities.

In Section 3, the level of detail and whom-to-whom coverage published in the other Group of Seven (G7) countries’ financial statistics is compared with the current UK position and with the improvements proposed for the UK’s enhanced financial accounts. In general, the non-European G7 countries publish more granular statistics than their European counterparts, and the Euro Area countries publish more whom-to-whom information. The development of the enhanced financial accounts aims to improve both the granularity of UK financial statistics, and to develop full whom-to-whom statistics.

The fourth section compares the size and structure of the UK financial system with that of other G7 countries. The UK’s financial sector is much larger than that of the other G7 countries as a proportion of nominal gross domestic product (GDP), and shows structural differences in the size of the contribution from financial corporations and the size of its interactions with the rest of the world.

The objectives and timeline for delivery of the enhanced financial accounts are set out in detail in [the article Economic Statistics Transformation Programme: Developing the enhanced financial accounts \(UK Flow of Funds\)](#). It is envisaged that the project will be delivered in 5 years, with flow of funds implemented into the National Accounts in 2020. On completion of the development of the enhanced financial accounts, the UK’s financial statistics will compare very favourably with other leading producers of financial statistics, providing greater granularity and more comprehensive whom-to-whom statistics than national producers in comparable economies.

## 3 . A comparison of financial statistics publications by G7 country

The term “flow of funds” describes the flow of money (financial investment) between various sectors of the economy. It includes, but is not limited to, whom-to-whom statistics, where both debtor and creditor sectors (the counterparties) are identified for each financial instrument. This is important to note, as some countries describe their financial accounts as flow of funds, even where counterparty information is limited.

## Comparing the G7 countries

**Table 1: A comparison of the G7 countries' financial statistics, 2016**

<b>Country</b>	<b>Canada</b>	<b>France</b>	<b>Germany</b>	<b>Italy</b>
Name of financial accounts outputs	Financial flow accounts Financial and wealth accounts	Financial accounts Whom-to-whom statistics	Financial accounts Whom-to-whom statistics	Financial accounts Whom-to-whom statistics
Published by	Statistics Canada	Banque de France	Deutsche Bundesbank	Banca d'Italia
Reporting framework	SNA2008	ESA10 Euro area accounts	ESA10 Euro area accounts	ESA10 Euro area accounts
Number of sectors	30	15	15	15
Instrument breakdowns	40	37	37	37
Whom-to-whom statistics?	Some on bonds and life insurance and pensions instruments	Deposits Debt securities Loans Listed shares Investment fund shares and units	Deposits Debt securities Loans Listed shares Investment fund shares and units	Deposits Debt securities Loans Listed shares Investment fund shares and units
Comments	Statistics Canada have begun a five year project to build a security-by-security database	Bank de France recently completed a significant project to improve their production and analysis systems		

<b>Country</b>	<b>Japan</b>	<b>UK</b>	<b>US</b>	<b>UK Enhanced Financial Accounts proposals</b>
Name of financial accounts outputs	Flow of funds accounts statistics	Financial accounts	Flow of funds	Flow of funds
Published by	Bank of Japan	Office for National Statistics	US Federal Reserve Bank	Office for National Statistics
Reporting framework	SNA1993 (SNA2008 from March 2016)	ESA10	SNA2008	ESA10
Number of sectors	45	11 (2017)	35	30-40
Instrument breakdowns	51	37	33 (does not include financial derivatives at present)	Additional breakdowns e.g. type of debt securities, secured and unsecured loans, original and residual maturities
Whom-to-whom statistics?	Household savings and loans Domestic debt securities	Limited in financial accounts Experimental statistics cover the majority of financial instruments	Limited	Full counterparty matrices

Comments	Bank of Japan identify financial derivatives, deposits and money, and private non-financial corporations' holdings of equity as of weak quality	Enhanced Financial Accounts development (flow of funds)	US enhanced financial accounts will include financial derivatives, consolidated accounts, syndicated loan portfolios
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Source: see Annex A for financial statistics publications for the G7 countries Source: Euro area: European System of Accounts, 2010 and Euro area accounts; UK: UK Economic Accounts; Canada, Japan, US: financial statistics publications - see Section 7 for links to publications for all G7 countries.

Canada, the US and Japan describe their financial statistics as “flow of funds”, although they currently publish little whom-to-whom information. Both the US and Canada have recently launched ambitious projects to develop their financial accounts, which include the development of some whom-to-whom statistics. Currently, unlike the EU countries, the US does not publish information on financial derivatives in their flow of funds accounts. Japan does, but considers their derivatives data weak ([Compilation Method of Japan's Flow of Funds Accounts](#)). In Canada, derivatives are included in the “other receivables” classification, which also includes accrued interest, interest receivable and prepaid expenses.

However, the US, Canada and Japan all publish more detailed accounts than the European countries. EU countries are required to publish accounts consistent with the [European System of Accounts 2010](#), where only 15 economic sector breakdowns are mandated.

The presentation of the US Flow of Funds has a good reputation amongst its users. The data are presented with [interactive metadata](#), and the data are easy to access and understand.

In the Euro Area, countries are required to publish whom-to-whom statistics for deposits, long and short-term debt securities, loans, listed shares and investment fund shares or units, in addition to the standard financial accounts. These have been published since the end of 2013.

The compilation of whom-to-whom statistics in the Euro Area has been aided by 2 significant initiatives by the European Central Bank (ECB). The [Centralised Securities Database](#) (CSDB), set up in 2009, holds information on all individual securities relevant for the statistical purposes of the European System of Central Banks (ESCB). This means securities issued by Euro Area residents; securities likely to be held in and transacted by Euro Area residents; and securities denominated in euros, whoever the issuer is and wherever they are held. In 2013, the [securities holdings statistics database](#) (SHSDB) was implemented. The SHSDB covers holdings data on a security-by-security basis, reported by 25 EU countries. The data are linked to the CSDB, to give full counterparty information for these securities.

The ECB also plans to implement [AnaCredit](#) (“analytical credit data sets”) by 2018. This will record, at an individual level, bank loans to corporations and other legal entities, including information on the size and sector of borrowers, and detail on the maturity and purpose of loans. The data will be sourced in part from existing national credit registers, and will help inform monetary policy and financial stability analysis.

Development of the enhanced financial accounts will significantly increase the granularity of financial statistics available for the UK. The number of both sector and instrument breakdowns will be increased to be more in line with the non-European G7 countries' publications, and whom-to-whom statistics will be published, as for the G7 Euro Area countries, although across a wider range of instruments. The precise nature of these breakdowns will depend on the availability of suitable data. More information is given on the plans for the enhanced financial accounts in [the article Economic Statistics Transformation Programme: Developing the enhanced financial accounts \(UK Flow of Funds\)](#).

The UK's experimental flow of funds statistics represent the widest range of sectors and instruments for whom-to-whom accounts for balance sheets published by G7 countries.

To summarise, the non-European G7 countries currently publish very limited counterparty information, similar to the level of counterparty information published in the UK's financial accounts, but they publish more detailed breakdowns than the UK. The Euro Area countries publish, by sector and instrument, a level of detail similar to the UK. They also produce some official whom-to-whom statistics, although these do not cover as wide a range of instruments as the UK's experimental statistics.

While the new whom-to-whom experimental statistics published by ONS are more detailed than many other countries, there is still a lot of work to be done. On completion of the development of the enhanced financial accounts, UK financial statistics will be a world leader in flow of funds data, delivering more granular breakdowns, and a wider coverage of whom-to-whom statistics than financial statistics producers in comparable economies.

## The UK's financial statistics

Financial flows have been published by the Bank of England, and ourselves and our forerunners since the 1960s, as the UK's financial accounts. Annual and quarterly financial balance sheets and flows are currently published back to 1997, and in some cases to 1987.

The UK publishes the financial accounts in accordance with the [European System of Accounts 2010](#) (ESA10) framework, as do other European Union countries. Recent and upcoming developments in the UK's financial accounts include:

- from 2014, the inclusion of an additional chapter in the [UK Annual Accounts \(Blue Book\)](#), which [presents stocks and flows of financial assets and liabilities by economic sector and financial instrument](#) in a flow of funds format
- we and the Bank of England have begun to [assemble longer time series](#), by reconstructing historical financial balance sheets and financial accounts as far back as the 1920s for some series, which were produced using very different methodologies, classifications and data sources
- in 2017, the financial accounts will be presented for a more detailed breakdown by economic sector, increasing the number of sectors published from 9 to 11; this includes separating the not-for-profit institutions serving households from the households sector, and increasing the number of breakdowns in the financial corporations sector
- also in 2017, ONS will publish information on revaluations and other changes in volume, in addition to financial stock levels and transactions

Perhaps the most exciting flow of funds development in the UK has been the publication of [experimental whom-to-whom estimates](#). These are estimates of balance sheet financial assets by economic sector, together with the counterparty sector holding the liability, from 1997 to 2014, for the majority of financial instruments. These were first published in 2015, and will be updated in August 2016, to be consistent with Blue Book 2016. As the article [The UK Flow of Funds project – comprehensive review of the UK financial accounts](#) describes in detail, these are experimental statistics, which include some fixed assumptions about some of the counterparty allocations. In addition, some counterparty sectors are, at present, unknown. However, this is the fullest set of whom-to-whom accounts for balance sheets published internationally in terms of the range of instrument and sector breakdowns. The objective of enhancing the financial accounts is to improve the quality of these experimental statistics, to identify the currently unknown counterparties, and to provide more granular detail by both sector and instrument.

An [interactive visualisation of the UK's whom-to-whom statistics](#), by instrument and economic sector, has also been published. This visualisation brings to life the financial interactions between different sectors of the UK economy, and the instruments through which they interact. This visualisation will also be updated in August 2016.

## Working with international colleagues

With the Bank of England, we have been working with international colleagues to share best practice. Visits to the Portuguese, Austrian, French and Irish central banks were undertaken in early 2015. These countries produce their financial accounts from record-level data, or have recently implemented new technology to compile their financial accounts. The main lessons learned were:

- a small set of record-level databases covering most of what is required is desirable, such as security-by-security databases
- the UK is unusual in that we, as the national statistical institution, produce the financial accounts, rather than the central bank
- unique international identifiers for firms and transactions make compilation easier, for example, the Legal Entity Identifier (LEI) and Euro Groups Register for firms, and the International Securities Identification Number (ISIN) for transactions, which can be used to track both issuers and holders of financial instruments
- the countries visited used a range of technology, for example, Excel, SAS, R, Python, and commercial database solutions, to compile their financial accounts

We and the Bank of England are also working closely with international organisations such as the International Monetary Fund (IMF), the European Central Bank (ECB) and the Bank of International Settlements (BIS) to understand their financial accounts initiatives, and to ensure that the UK is consistent with international best practice in developing the enhanced financial accounts. Major initiatives from the IMF include the [G20 Data Gaps Initiative Phase 2](#) (DGI), a set of 20 recommendations on the enhancement of economic and financial statistics, and the [Special Data Dissemination Standard plus \(SDDS+\)](#). The IMF established the SDDS+ to provide guidance to countries that have access to capital markets on how to disseminate key data so that users in general and financial market participants, in particular, have adequate information to assess the economic situations of individual countries. The recommendations for the enhanced financial accounts for the UK are consistent with, and go further than, the recommendations of the G20 DGI and SDDS+.

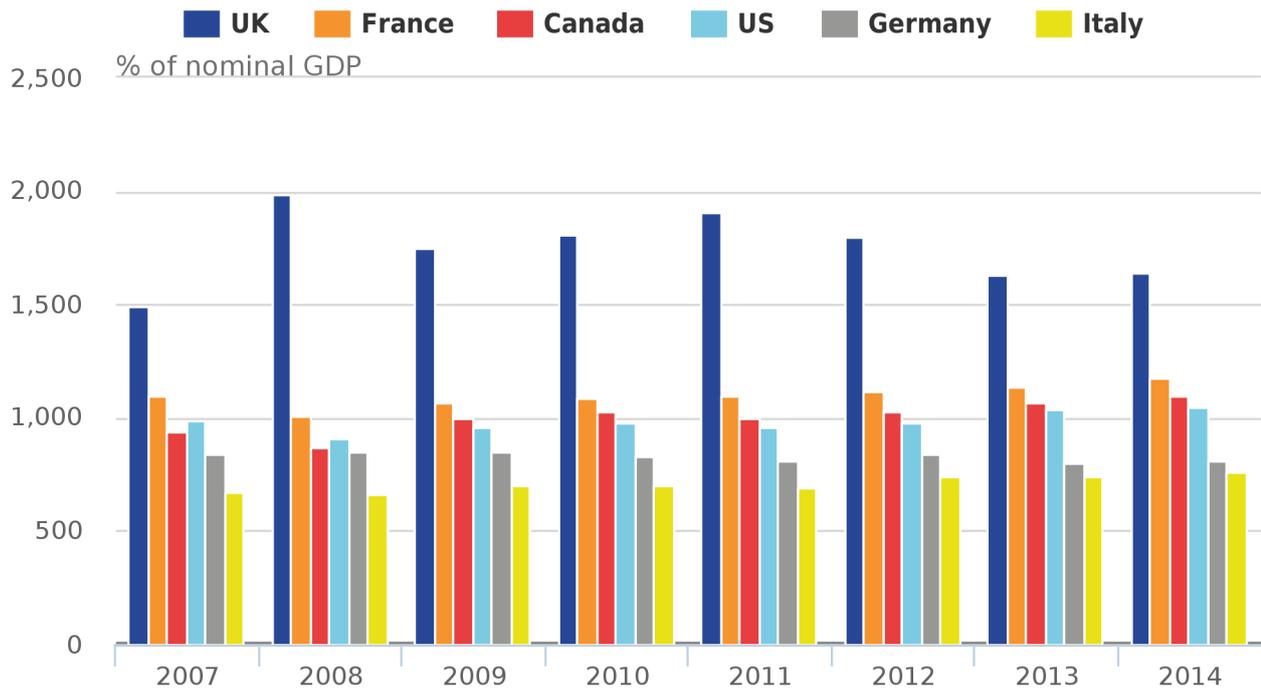
## 4 . The size and structure of the UK's financial sector

Figure 1 shows the relative sizes of the G7 countries' domestic financial balance sheet assets as a percentage of nominal GDP. It can clearly be seen that, using this measure, the UK's financial balance sheets are significantly larger than that of the other G7 countries, relative to their nominal GDP, peaking at twice the size of France's – the next largest G7 financial economy – in 2008.

It should be noted that although the reporting framework for the countries in this comparison is the same, there will be differences in their precise compilation methodology and underlying data sources. A significant difference is that the US financial accounts do not include financial derivatives. For the US to have a higher proportion of its GDP in financial assets than the UK, US financial derivatives would have to account for around one-third of their total financial assets, compared with around one-fifth in the UK. Japan has not been included in this analysis, as its financial accounts are not yet provided on the same basis as the other countries, i.e. non-consolidated and consistent with the System of National Accounts 2008 (SNA 2008), for these time periods.

**Figure 1: Domestic financial assets as a percentage of nominal GDP**

Balance sheets, non-consolidated, SNA 2008 basis

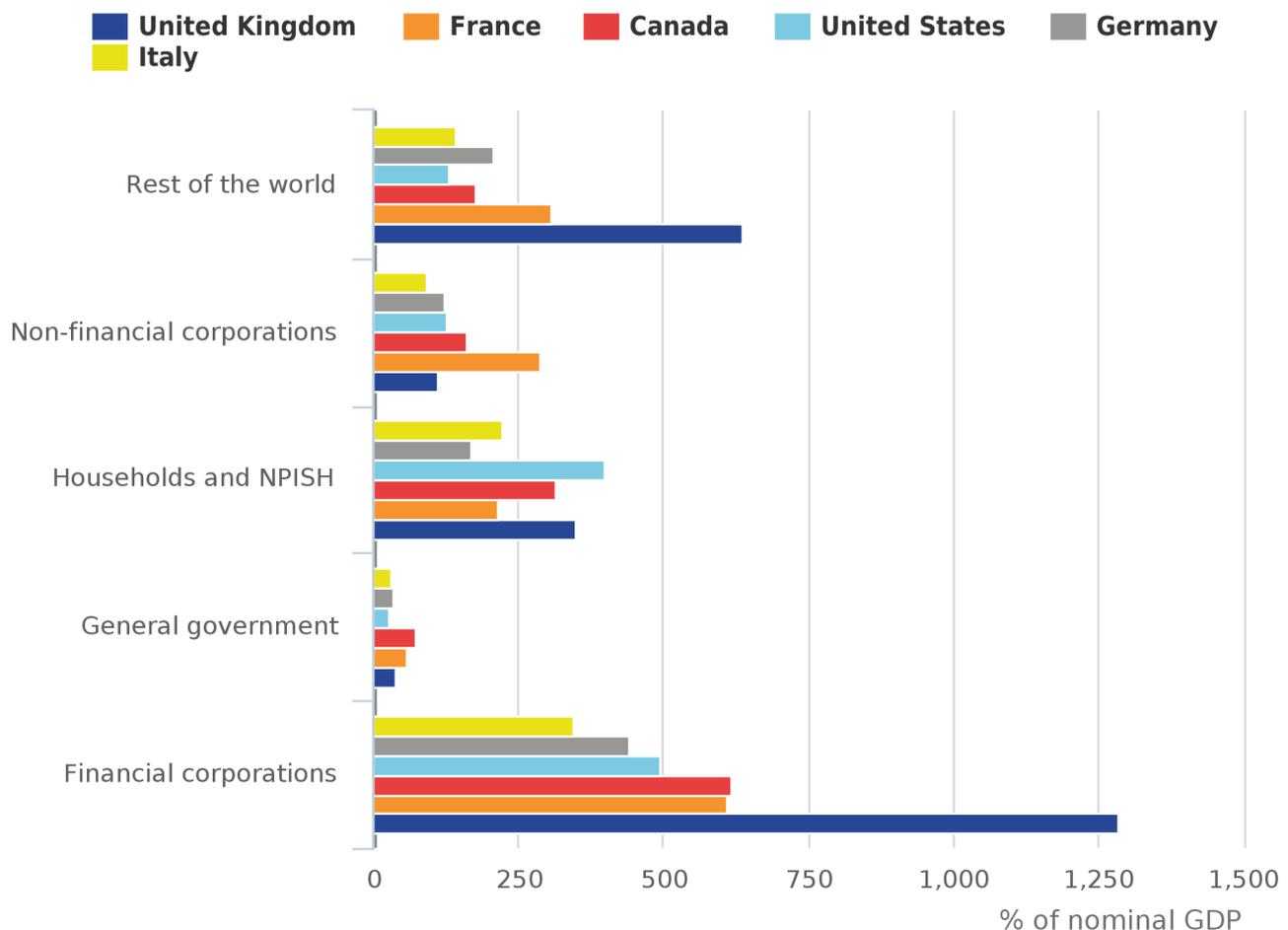


Source: Organisation for Economic Co-operation and Development (OECD)

In Figure 2, financial assets – again as a proportion of nominal GDP – are presented by the five headline economic sectors for the G7 countries. It can clearly be seen how significant financial corporations (nearly 1300% of nominal GDP) and financial interactions with the rest of the world (over 600% of nominal GDP) are to the UK financial economy. More detailed sub-sectorisation of the UK's financial corporations, and a better understanding of the counterparties to financial corporations, are vital to a better understanding of the UK's financial system. These are priorities for the enhanced financial accounts.

**Figure 2: Total financial assets by economic sector as a percentage of nominal GDP, 2014**

Balance sheets, non-consolidated, SNA 2008 basis



Source: Organisation for Economic Co-operation and Development (OECD)

## 5. Conclusions

The objectives of the enhanced financial accounts are to:

- improve the quality of the experimental whom-to-whom statistics
- identify the currently unknown counterparties
- provide more granular detail by both sector and instrument
- implement these changes into the financial accounts

The UK has a large financial sector, with much of the activity carried out by financial corporations and through transactions with the rest of the world. Therefore, 2 of the main priorities for the enhanced financial accounts are:

- a more detailed sub-sectorisation of financial corporations, beyond what the UK and other European countries currently publish
- an improved understanding of the UK's financial interactions with the rest of the world

## 6 . Further information

[Flow of Funds archived background information](#)

10 March 2016 Article – [Identifying Sectoral Interconnectedness in the UK Economy](#)

24 February 2016 Article – [Improvements to the Sector & Financial Accounts](#)

12 January 2016 Article – [Historical Estimates of Financial Accounts & Balance Sheets](#)

6 November 2015 Article – [Comprehensive Review of the UK Financial Accounts](#) including explanatory notes for each financial instrument covered in the article

13 July 2015 Article – [Introduction Progress & Future Work](#)

### Financial Statistics Expert Group

[21 October 2014](#)

[22 January 2015](#)

[22 July 2015](#)

7 December 2015 can be requested from [FlowofFundsDevelopment@ons.gsi.gov.uk](mailto:FlowofFundsDevelopment@ons.gsi.gov.uk)

## 7 . Annex A: Where to find other countries' data

### Canada

[Financial and wealth accounts](#)

### Euro Area Accounts, including France, Germany and Italy

[Euro Area accounts](#)

### Japan

[Flow of funds accounts](#)

[Compilation method of Japan's Flow of Funds Accounts](#)

[Guide to Japan's Flow of Funds Accounts](#)

### UK

[Experimental flow of funds statistics](#)

[UK Economic Accounts](#)

**US**

[Enhanced Financial Accounts Project](#)

[Flow of funds release](#)

[Financial Accounts Guide](#)