

Methodology of the Monthly Index of Services

Financial Intermediation excluding Insurance and Pension Funding Industry Review

Introduction

At the launch of the experimental Index of Services (IoS) in December 2000, a commitment was made to review and improve where practical, the sources and methods used to measure the service sector. This paper outlines the findings of the Financial Intermediation excluding Insurance and Pension Funding Industry Review.

Summary

The industry review for Financial Intermediation excluding Insurance and Pension Funding (known hereafter as financial intermediation) has recommended:

- To introduce bank fees to measure the directly provided services of banks
- To remove the building societies indicators and merge into bank indicators
- To introduce monthly investment and unit trust data to measure the output of other financial intermediation

Although the methodology will be changed all the way back to 1994 in the IoS and GDP(O) systems, only the period from 1995 will be revised.

How important is Financial Intermediation?

In terms of gross value added (GVA) weights in 2003, financial intermediation (SIC¹ Division 65) represents:

- 7.0% of the IoS
- 5.2% of Total GVA

The same methods are also used as part of the Financial Services Adjustment² (FSA), with weights as follows:

- -6.2% of the IoS
- -4.6% of Total GVA

¹ The SIC is the Standard Industrial Classification, and this is the classification system used in the UK to define industrial groupings. The 4-digit refers to the level of detail and is generally the level at which data is collected and aggregated from within GDP(O) and IoS. More detail on this can be found in the IoS Methodology documentation

² See next section for an explanation of the Financial Services Adjustment

Financial Intermediation is published as part of the Business Services and Finance³ component within the IoS.

Explanation of Financial Intermediation Services Indirectly Measured

Before explaining the methodological change for this division, it is worth setting out the theory of Financial Intermediation Services Indirectly Measured (FISIM) as this has an important bearing on this industry.

In essence, financial institutions provide services in two ways; by direct charging (overdraft fees, mortgage arrangement fee), and by an interest differential: that is paying depositors less interest than they charge borrowers. FISIM is the imputed indirect charge for these services. For example, current accounts are usually maintained free by financial institutions, and the associated costs are met by the difference between the low interest payments awarded on credit balances maintained in such accounts whilst the bank lends funds from such accounts at a higher rate to borrowers.

Whilst the supply of FISIM is relatively straightforward in the national accounts, its use has always been a problem. Ideally the FISIM consumed by institutional sectors and industries should be allocated to those sectors and industries, but this has been consistently problematic.

To get around this problem, a Financial Services Adjustment was included in the SNA68⁴. This permitted countries to have a nominal industry which has no output and just the intermediate consumption of the FISIM, hence negative value added. It was recognised that final consumption of FISIM should be excluded – but accepted that it would be difficult to separate out. In the SNA93 it was proposed that FISIM must be recorded as being either intermediate or final consumption, but continued to recognise the difficulty in doing this and stated that “countries may wish to continue the convention proposed in the 1968 version”⁵.

In 1998, the UK adopted SNA93/ESA95⁶ and re-labelled the SNA68 concept of FSA with the SNA93 concept of FISIM and improved the way it was presented, but rather than change the scope of the FSA, continued with the SNA68 convention.

In the IoS and GDP(O) this translates as two industries with the same indicators but one with positive GVA weights and the other negative GVA weights.

A much fuller explanation of how FISIM is treated in the national accounts can be found in Tily and Jenkinson (2005).

³ This covers the following sections of the UK SIC: J Financial Intermediation and K Real Estate, Renting and Business Activities

⁴ The SNA is the System of National Accounts and is the guide for measuring national accounts. The manual was first released in 1953, with subsequent updates in 1968 and 1993.

⁵ United Nations et al (1993) System of National Accounts, para 6.126

⁶ ESA95 is the European framework of the SNA for the European Union

Methodology

Previous methodology⁷

Within Division 65 there are five 4-digit SICs⁸. Table 1 below gives the detail of the groups as well as the methodology that was previously used:

Table 1 – Previous Methodology

SIC	Description	Div 65 GVA wt	FSA GVA wt	Net wt	Indicators
6511 & 6512/1	Central banking and banks	11.4	0.0	11.4	1. Direct financial services (fee based) – Employment (ONS)
		0.4	-8.3	-8.0	2. Financial transactions – card transaction volumes (APACS)
		20.5	-27.9	-7.5	3. FISIM services - stocks of loans and deposits deflated by RPIY (BoE)
6512/2	Building Societies	2.1	0.0	2.1	1. Number of employees (ONS)
		0.0	-0.04	-0.03	2. Number of advances outstanding (BoE)
		0.3	-1.5	-1.2	3. Number of advances made (BoE)
		0.3	-1.5	-1.2	4. Deflated total liabilities (BoE)
6521	Financial leasing	1.3	-1.5	0.2	General output indices weighted by gross capital stock (ONS)
6522	Other credit granting	2.5	-2.8	-0.3	Deflated consumer credit outstanding (unsecured) (ONS)
6523	Other financial intermediation nec	0.3	-0.4	-0.04	1. Deflated End year IT/UT/PUT assets and investments (ONS)
		0.3	-0.3	-0.04	2. Deflated purchases and sales of assets (ONS)
Total		39.4	-44.3	-4.9	

Footnote: APACS – Association of Payment and Clearing Systems, BoE – Bank of England and ONS – ONS Inquiry

For banking, employment and card transaction data have been used to measure the directly measured output of banks. The stock of loans and deposits deflated by a general price deflator was used to measure the indirectly measured output of banks (FISIM).

Separate indicators were used for building societies, including number of employees, the number of advances made, number of advances outstanding and deflated total liabilities.

For other financial intermediaries, financial leasing was measured using output indices weighted together using gross capital stock weights. Other credit granting was measured using the stock of outstanding consumer credit. Other financial intermediation was measured by proxies for unit, investment and property trusts, based on transactions and end-year levels.

⁷ In this report, the previous methodology refers to the methodology used prior to Blue Book 2006, and the new methodology to the methodology taken on at Blue Book 2006

⁸ See SIC 2003 documentation for details of the full breakdown of division 65 in the UK SIC - <http://www.statistics.gov.uk/sic2003>

Reasons for review

The main reasons for reviewing the financial intermediation industry were as follows:

- the structure of the industry has changed since the current methodology was introduced
- fee-based banking output and financial leasing were being proxied using indirect methods
- the other credit granting indicator only covered part of the lending provided by other credit granters
- the trust data was deflated using an inappropriate price index
- there are also wider initiatives within the ONS regarding the measurement of FISIM and this should be accounted for in these methods
- according to Eurostat regulations, the allocation of FISIM across industries should be introduced by member states by November 2005
- progress has been made by Eurostat on guidance for price and volume measurements – embodied in the manual published October 2001.

What should we be doing?

In 2001, Eurostat (European Union's Statistical Office) published the '[Handbook on Price and Volume Measures in National Accounts](#)'. The handbook provides guidance by product, on what price and volume methods should ideally be used (A methods), are acceptable methods (B methods) and those methods that should not be used (C methods). The handbook has been written in the context of annual data but the same rules apply to sub-annual data.

The output of financial intermediary services has two main components that the Eurostat price and volume handbook suggest should be treated separately.

Financial Intermediation outside FISIM

Where separate prices exist for charged-for-services price indices can be used. They must be representative of the entire range of charged for services and would be an A method. Price indices without quality adjustments must be given a B rating. Detailed volume indicators that reflect output can also be rated as a B method according to the Eurostat guidance. If the charges are ad valorem detailed volume indicators should be used. For financial leasing the value of outstanding credits deflated by a price index that measures the change in the purchasing power of money would be rated as a B method. Output prices or volume indicators that represent a limited range of products or services, input methods and the use of general price deflators would all be given a C rating according to Eurostat's price and volume handbook.

FISIM

The Eurostat Price and Volume Handbook states that no suitable A rated method exists for measuring FISIM. Eurostat recommends two B methods. The first approach uses detailed output indicators, for example the number of bank accounts. The indicators must cover all activities that generate FISIM. The second method involves the application of base period interest margins on loans and deposits to the stocks of loans and deposits re-valued to base period prices. Deflators need to measure the actual change in money, therefore possible deflators are the GDP deflator or the overall CPI. The indicators for both of these methods need to reflect the differences between the business and consumer markets.

Issues faced by the industry review

65.11 – Central banking⁹

This group is not currently measured explicitly. The review concluded that this is only a small component of the banking industry and the rationale that central banking output moves in the same way as general banking output should continue.

65.12/1 - Banks (fee based output)

Key features

This group includes monetary intermediation of banks excluding the Bank of England (BoE). For this section we are only considering the directly measured component of output – i.e. fees, commission, charges, etc.

Previously this activity was measured using the number of employees engaged in division 65. Three series on card transactions were also used to measure fees, although with very small weights.

Issues

- Suitability of BoE fees data
- Should we maintain the use of transaction series
- What price indices are available to deflate bank fee data

i) BoE PL form data

The BoE have collected data on fees since 1998. In 2004 a more detailed Profit and Loss form¹⁰ (PL) was introduced. The survey is conducted quarterly and results are available ten weeks after the end of the quarter. The survey has almost complete coverage of fees charged by banks and has a very high response rate. The data has been quality assured through the industry review process and is regarded as a robust data series that is fit for purpose.

ii) Transactions series

These data were supplied by the Association for Payment Clearing Services (APACS), and measured the number of credit and debit card transactions as well as the number of cheques and credits being cleared. However the income generated from these activities are included in the BoE fee series.

iii) Options for deflation

Options are limited for the deflation of the fees series. Whilst there is a Corporate Services Price Index¹¹ (CSPI) available for banking, this only covers FISIM output. In terms of the

⁹ In the UK this covers the central bank – Bank of England

¹⁰ More information on the PL form can be found on the Bank of England website at: <http://www.bankofengland.co.uk/statistics/reporters/defs/defs.htm#PL>

¹¹ The Corporate Services Price Index is a quarterly survey of prices charged for a range of services provided by businesses to other businesses and government. It is conducted by the Office for National Statistics.

household side, Retail Price Index¹² (RPI) collect data for the personal finance component, but this has only covered some of the basic banking services accounting for approximately a quarter of the household products. Aligned with the fact that half of the series have only been collected for the past 2-3 years, the review concluded that we should wait before introducing RPI components as a deflator.

The review did look at the US Producer Price Index¹³ for investment banking, on the basis that banking is a global business and price models are likely to be relevant across international borders. Again this would only cover a small part of the bank fee income (16 per cent), but the series does exhibit a number of level shifts, and the review felt that this index would not be relevant for measuring UK output.

The final deflator that was evaluated was the Average Earnings Index¹⁴ (AEI) for financial intermediation. This can be justified on the theory that bank output prices are based to a significant part to movements in the wages and salaries of their staff. This approach is used elsewhere in the service sector. In order to be consistent with the application elsewhere the review recommended using the AEI excluding of bonuses and adjusted for changes in productivity¹⁵.

Recommendation

1. Introduce BoE data on fees deflated by the AEI for financial intermediation

65.12/1 – Banks - indirect measurement

The UK is required under EU regulation to provide their national accounts with the FISIM allocated across sectors and industries. The UK is currently planning to introduce this at Blue Book 2007. As part of this, a central method for the volume of FISIM will be used across the accounts.

It is planned to introduce this series at Blue Book 2007, but for the interim no new methods have been recommended for this group. It is worth noting that the current method and proposed future method are both the second method described earlier (i.e. the application of base period interest margins on loans and deposits to the stocks of loans and deposits revalued to base period prices).

¹² The Retail Price Index is an average measure of change in the prices of goods and services bought for the purpose of consumption by the vast majority of households in the UK. It is compiled and published monthly by the Office for National Statistics.

¹³ US Producer Price Indices (PPI) are a measure of the average change over time in the selling prices received by domestic producers for their output. The prices included in the PPI are from the first commercial transaction for many products and some services. The survey is conducted by the Bureau of Labour Statistics.

¹⁴ The Average Earnings Index (AEI) is Great Britain's measures how earnings in the latest month compare with those for the last base year. The AEI is based on information obtained from ONS' Monthly Wages and Salary Survey (MWSS).

¹⁵ Note that the methodology for productivity adjustments will also be updated for Blue Book 2006. Please see [<http://www.statistics.gov.uk/iosmethodology>]

65.12/2 - Building societies (65.12/2)

Key features

This sub-class includes monetary intermediation of building societies. The sub-class has been getting smaller in recent years due to the demutualisation of many building societies.

Issues

- Should building societies be measured separately?
- Input methods are used for measuring output

Should building societies be measured separately?

As mentioned previously, at Blue Book 2007, a central volume measure for FISIM will be introduced across the national accounts as part of the allocation of FISIM. This series will include building societies, thereby negating the need for a separate set of indicators.

It is also worth reflecting that since 2001 following the demutualisations, building societies are not as significant component of the financial sector as they were (building societies accounted for 23% of banks and building societies in 1999 by GVA weight to 8% in 2003). Over time, banks and building societies have also converged in terms of the products they offer to households.

An input method is used

The main indicator has been based on employment, which is an inappropriate method. Whilst data on Building Societies are collected by both the Building Societies Association and Financial Services Authority, the review concluded that the building societies indicators should be merged with banking. This was justified on the following grounds:

- an output based indicator of banking is likely to be more appropriate than an input based method for building societies
- building Societies now only account for a small proportion of financial intermediation
- will be replacing indicators again at Blue Book 2007 anyway

Recommendation

2. Remove the building society indicators from the methodology and allocate the building societies GVA weight to the FISIM component of banking

65.21 – Financial Leasing

No new methods have been recommended for this group at this time.

65.22 – Other credit granting

No new methods have been recommended for this group at this time.

65.23 – Other financial intermediation nec

Key features

This industry covers the following:

- 65.23/1 Activities of investment trusts
- 65.23/2 Activities of unit trusts
- 65.23/3 Security dealing on own account
- 65.23/4 Activities of bank holding companies
- 65.23/5 Activities of venture and development capital companies
- 65.23/7 Activities of open-ended investment companies
- 65.23/8 Activities of property unit trusts
- 65.23/9 Financial intermediation not elsewhere classified

This industry is predominately made up of trust and investment companies. The previous methodology measured investment, unit and property trust companies, but had three key problems. Firstly, the unit trust performance indicator was inappropriate as a deflator as it was more akin to an output indicator. Secondly, some of the indicators used the sale and purchase of assets as a proxy for the output of the trusts, which is not appropriate. The third issue was that the components that were conceptually appropriate were only available annually.

Issues

- Availability of alternative indicators
- Missing coverage

Alternative indicators

The review concluded that there were two main options for improvement:

- a) Investment Management Association (IMA) total funds deflated by a general deflator
- b) Association of Investment Trust Companies (AITC) total funds deflated by a general deflator

a) Investment Management Association total funds

The IMA is the trade body for the UK's asset management industry. The money their members manage is in a wide variety of investment vehicles including authorised investment funds, pension funds and stocks and shares ISAs. It was formed in February 2002 as a result of a merger between the Fund Managers' Association (FMA) and the Association of Unit Trusts and Investment Trusts (AUTIF).

The IMA publish monthly data just after the end of each month. They have near total coverage of the Retail Unit Trust and Open Ended Investment Companies (OEICs). The data has been published on a consistent basis from 1992, and the IMA have close links with the ONS; their data are already published in Financial Statistics.

The total funds series is derived by multiplying the total number of units in issue, on the last dealing day of the month for which data are being entered, by the last officially calculated offer price in use on that day.

As the fund is a £m series, it should be deflated by a series that reflects the underlying asset prices, and the review concluded that the best option for this is the FTSE Actuaries All Share Index.

b) Association of Investment Trust Companies total funds

The AITC is the non-profit making trade body of the investment trust industry and was formed in 1932. Individual trusts are the AITC's members and they provide the Association's funding. As with the IMA, AITC also publish data on investment trusts on a monthly basis.

The data has been published on a consistent basis from 1960, and has been available monthly since 1995. As with the IMA the total funds series is derived by multiplying the total number of units in issue, on the last dealing day of the month for which data is being entered, by the last officially calculated offer price in use on that day. As with the IMA data the £m series should be deflated by the FTSE Actuaries All Shares Index.

Recommendation

3. Introduce the IMA and AITC data deflated by FTSE Actuaries All Shares index for other financial intermediation

Financial Services Adjustment

As explained under the previous methodology, the same data sources are used for both division 65 and FSA, with the exception of non-FISIM data sources. Therefore, for Blue Book 2006, division FSA will mirror the changes set out for division 65.

There is one point of departure however; previously credit card transactions were included as an indicator for division FSA. Since this is a non-FISIM activity, that weight has now been allocated to the FISIM indicators representing banks and building societies.

Who was consulted as part of the Industry Review process?

Within the ONS, there was comprehensive consultation with relevant teams both within National Accounts and in the survey areas. In terms of external consultations we are grateful to the assistance received from:

- Association of Investment Trust Companies
- Association of Payment and Clearing Systems
- Bank of England
- British Banking Association
- Building Societies Association
- Eurostat
- Factoring and Discounting Association
- Finance & Leasing Association
- Financial Services Authority
- Fitzrovia
- Investment Management Association
- Standard and Poors

New methodology

In summary the industry review for financial intermediation has made the following recommendations that were implemented at Blue Book 2006:

- To introduce bank fees to measure the directly provided services of banks
- To remove the building societies indicators and merge into bank indicators
- To introduce monthly investment and unit trust data to measure the output of other financial intermediation

Benefits and assumptions of new methodology

Benefits	V	Assumptions
Increased proportion of direct measurement of services across the division	V	The output of building societies move in the same way as banks
Monthly measures introduced for unit and investment trusts		Bank fees moves in the same way as wages
Removal of transaction data from being included in FSA		Other financial intermediation moves in line with the output of unit and investment trusts
		Movements in outstanding consumer credit reflects the output of all other credit granting

Impact of new methodology

The graph below shows the impact of the new methodology on Division 65 and the FSA. The data have been revised back to January 1995. This in line with the period open for revisions set-out in the National Accounts Revisions Policy for Blue Book 2006.

Figure 1 – Impact on division 65

Financial Intermediation except Insurance and Pension Funding (SIC03 division 65) constant prices seasonally adjusted

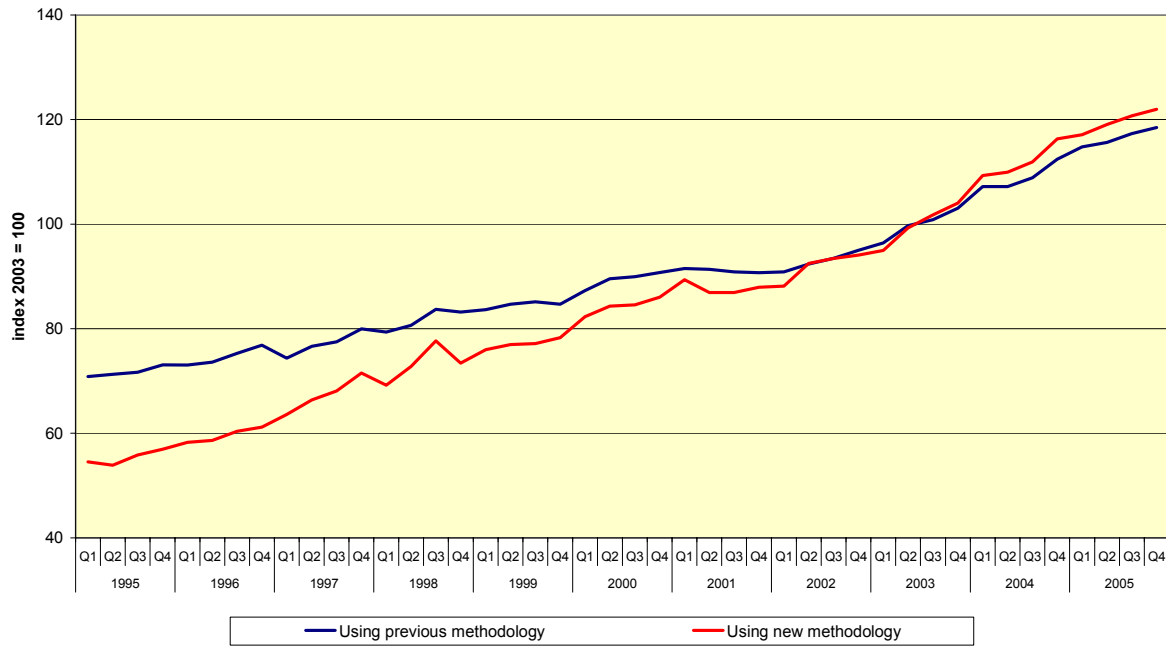
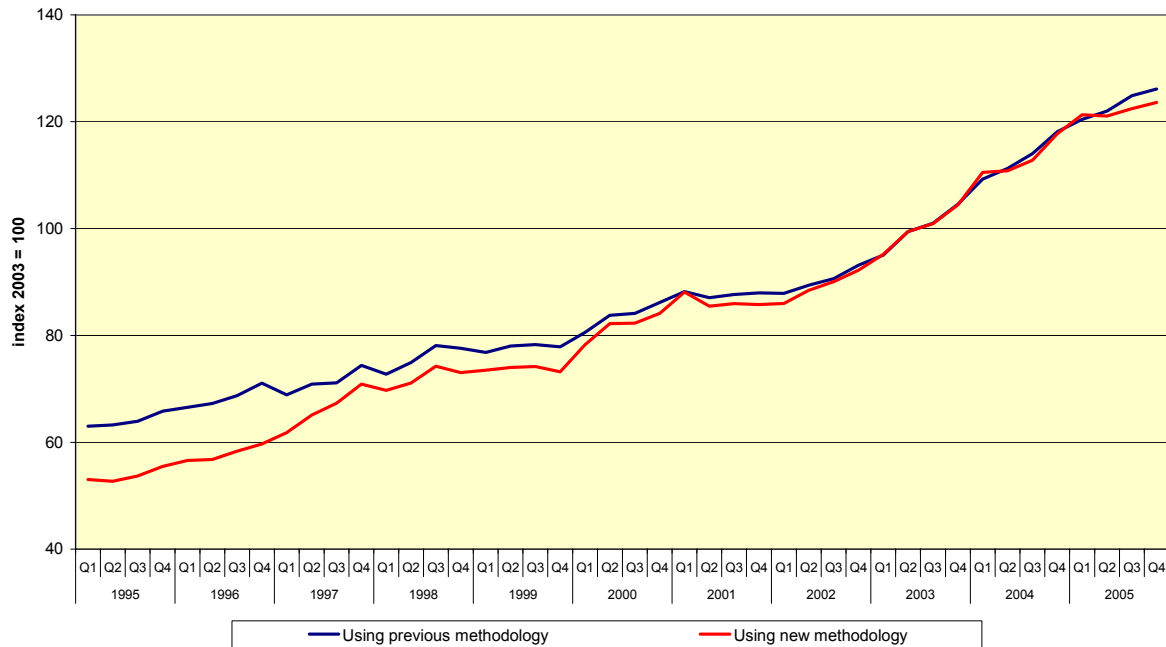


Figure 2 – Impact on FSA

Financial Services Adjustment (SIC03 division 6X) constant prices seasonally adjusted



Contact Information

Any questions or comments on this article are welcome, as are offers to participate in the process of improving industry sources and methods. Any enquiries should be addressed to:

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Annex - Comparison of new and old methods

SIC	Industry	Class	PREVIOUS METHODS				NEW METHODS				
			Current output indicator	M/Q/A	Current deflators	New Group	New Class	Proposed output indicator	M/Q/A	Proposed deflator	GVA wt
6511 & 6512 /1	Central banking and banks	651101	Employees - full time equivalents (thousands) adjusted for changes in productivity	Q		Banks & BS – fee income	651101	Fees and commissions received from P&L form (<i>BoE</i>)	Q	AEI for financial intermediation excluding bonuses – adjusted for changes in productivity	9.7
		651102	Number of clearings by GB banks: credits (thousands)	M							
		651103/4	Number of clearings by GB banks: debits and credit card transactions (thousands)	M							
		651105/6	UK banks deflated outstanding: a) Sterling loans to UK public and private sector (£ million)	M	RPIY	Banks & BS – FISIM income	651205/6	UK banks deflated outstanding: a) Sterling loans to UK public and private sector (£ million)	M	RPIY	5.6
		651107	b) Sterling loans to overseas sector (£ million)	M	RPIY		651207	b) Sterling loans to overseas sector (£ million)	M	RPIY	0.8
		651108/9	c) Non-sterling loans to the UK public and private sector (£ million)	M	RPIY US \$ middle closing spot rate at end-period		651208/9	c) Non-sterling loans to the UK public and private sector (£ million)	M	RPIY US \$ middle closing spot rate at end-period	1.0
		651110	d) Non-sterling loans to overseas sector (£ million)	M	RPIY US \$ middle closing spot rate at end-period		651210	d) Non-sterling loans to overseas sector (£ million)	M	RPIY US \$ middle closing spot rate at end-period	7.2
		651111/2	e) Sterling deposits by UK public and private sector (£ million)	M	RPIY		651211/2	e) Sterling deposits by UK public and private sector (£ million)	M	RPIY	4.4
		651113	f) Sterling deposits by the overseas sector (£ million)	M	RPIY		651213	f) Sterling deposits by the overseas sector (£ million)	M	RPIY	0.2
		651115/6	g) Non-sterling deposits by UK public and private sector (£ million)	M	RPIY US \$ middle closing spot rate at end-period		651215/6	g) Non-sterling deposits by UK public and private sector (£ million)	M	RPIY US \$ middle closing spot rate at end-period	0.8
		651117	h) Non-sterling deposits by overseas sector (£ million) (<i>BoE</i>)	M	RPIY US \$ middle closing spot rate at end-period		651217	h) Non-sterling deposits by overseas sector (£ million) (<i>BoE</i>)	M	RPIY US \$ middle closing spot rate at end-period	1.0
		651114	Deflated total outstanding interest in National Savings (£ million)	M	RPIY	National Savings	651214	Deflated outstanding interest in National Savings (£ million) (<i>DNS</i>)	M	RPIY	0.4

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