

Counterparts to changes in M4: a user guide

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The Bank of England publishes two presentations of counterparts to M4 data: 'MFIs' balance sheet counterparts to M4' and 'Counterparts to changes in M4: alternative presentation'. This article explains the relationships between the two sources of counterparts data. It also sets out the reasons for the Bank's decision to discontinue publication of the 'alternative' counterparts in autumn last year and why publication of these data will now be resumed.

Introduction

In September 2008 the Office for National Statistics (ONS) included data for the Bank of England and Northern Rock in the Public Sector Finances (PSF) First Release. As a result, Table A3.2 in this publication – 'Counterparts to changes in M4: alternative presentation' – was discontinued. This article first explains how that table relates to the main balance sheet counterparts to M4 (published in Table A3.1 'MFIs' balance sheet counterparts to M4' in this publication). It then sets out why the alternative counterparts table was discontinued last year and why the Bank will resume publication with effect from this month.

MFIs' consolidated balance sheet counterparts to M4

The European System of National and Regional Accounts (ESA 95) was implemented in UK National Accounts statistics in 1998. Since May 1998, as part of that change in statistical standards, the Bank of England has published data on the monetary financial institutions' (MFIs') balance sheet counterparts to M4 (in Table A3.1 in this publication). M4 is defined as the sterling liabilities of UK MFIs to the M4 private sector (consisting of households, private non-financial corporations and other financial corporations), plus the M4 private sector holdings of notes and coin.

The purpose of the MFIs' balance sheet counterparts presentation is to show how M4 can be calculated by adding up all other (non-M4) components of the MFIs' consolidated balance sheet¹. Table 1 shows a simple version of the MFIs' consolidated balance sheet in *flows* terms (that is changes from one period to the next), with M4 shown as a sterling liability to the private sector at the top. M4 lending is defined as MFIs' sterling lending to the UK private sector and is shown in the table as MFIs' sterling assets with the private sector. Using Table 1, the change in M4 equals the change in all MFIs' assets minus the change in all non-M4 liabilities of MFIs. Table 2 shows the calculation of these counterparts to changes in M4 in greater detail, considered from the perspective of MFIs. Figures in bold show the

contributions to M4 by the various sectors, broken down into sterling and foreign currency (FC).

| | | £ millions | |
|--------------------|----------------|----------------|----------------|
| Liabilities | | Assets | |
| Private sector | £ -6,602 | Private sector | £ -12,405 |
| | (M4) | (M4 lending) | |
| | FC 44,020 | FC | 39,754 |
| Public sector | £ 6,416 | Public sector | £ 29,190 |
| | FC 160 | FC | 740 |
| Non-residents | £ -12,557 | Non-residents | £ 6,084 |
| | FC 48,339 | FC | 56,111 |
| Other liabilities | £ -3,865 | Other assets | £ -2,746 |
| | FC 32,006 | FC | -8,811 |
| Total | 107,917 | Total | 107,917 |

| £ millions | |
|--------------------------------------|----------------|
| Private sector £ assets (M4 lending) | -12,405 |
| Plus private sector FC assets | 39,754 |
| minus private sector FC liabilities | -44,020 |
| | -4,266 |
| Plus public sector £ assets | 29,190 |
| minus public sector £ liabilities | - 6,416 |
| plus coin | 1 |
| | 22,775 |
| Plus public sector FC assets | 740 |
| minus public sector FC liabilities | -160 |
| | 580 |
| Plus non-residents £ assets | 6,084 |
| minus non-residents £ liabilities | -(-12,557) |
| | 18,641 |
| Plus non-residents FC assets | 56,111 |
| minus non-residents FC liabilities | -48,339 |
| | 7,772 |
| Plus other £ assets | -2,746 |
| minus other £ liabilities | - (-3,865) |
| | 1,119 |
| Plus other FC assets | -8,811 |
| minus other FC liabilities | -32,006 |
| | -40,817 |
| Equals private sector £ liabilities | -6,602 |
| plus coin | 1 |
| M4 | -6,601 |

¹ A small part of M4 reflects private sector holdings of coin. As coin is not a liability of MFIs but of central government, these holdings of coin have to be added to the counterparts calculation. For details about the construction of the MFIs' consolidated balance sheet, see <http://www.bankofengland.co.uk/statistics/ms/articles/art2j199.pdf>.

Alternative counterparts to changes in M4

Whereas the data for the balance sheet counterparts are obtained from a single data source (balance sheet data provided to the Bank of England by all banks and building societies resident in the United Kingdom), the alternative counterparts are compiled using data from various sources, including the Bank of England, the ONS, HM Treasury and the Debt Management Office. Table 3 shows how the main elements in the alternative counterparts version can be replicated using series from the consolidated balance sheet version. For example, the public sector contribution to M4 in the alternative

counterparts version (£22,776mn) is equivalent to MFIs' net sterling lending to the public sector (calculated as MFIs' public sector £ assets of £29,190mn minus MFIs' public sector £ liabilities of £6,416mn plus the private sector's holdings of coin of £1mn).

One important difference between the alternative counterparts and the MFIs' consolidated balance sheet version is that the former are available only in changes terms. The MFIs' balance sheet version can be compiled both in changes and balance sheet level (amounts outstanding) terms.

Table 3 Relationships between the two versions of counterparts to changes in M4

| Alternative counterparts version | | MFIs' consolidated balance version | |
|--------------------------------------------------------------------------------------------------|----------------|--------------------------------------------|----------------|
| | | £ millions | |
| M4 lending | -12,405 | Private sector £ assets (M4 lending) | -12,405 |
| Public sector net cash requirement (+) | 8,501 | <i>Plus</i> public sector £ assets | 29,190 |
| M4 private sector net purchases of public sector debt (-) | 5,610 | <i>minus</i> public sector £ liabilities | - 6,416 |
| External and foreign currency finance of public sector (-) | 8,665 | <i>plus</i> coin | 1 |
| Public sector contribution^(a) | 22,776 | | 22,775 |
| MFIs' external and foreign currency flows (net external and foreign currency liabilities (-)) | -18,090 | <i>Plus</i> private sector FC assets | 39,754 |
| | | <i>minus</i> private sector FC liabilities | -44,020 |
| | | <i>plus</i> public sector FC assets | 740 |
| | | <i>minus</i> public sector FC liabilities | -160 |
| | | <i>plus</i> non-residents £ assets | 6,084 |
| | | <i>minus</i> non-residents £ liabilities | -(-12,557) |
| | | <i>plus</i> non-residents FC assets | 56,111 |
| | | <i>minus</i> non-residents FC liabilities | -48,339 |
| | | <i>plus</i> other FC assets | -8,811 |
| | | <i>minus</i> other FC liabilities | - 32,006 |
| | -18,090 | | -18,090 |
| MFIs' net non-deposit £ liabilities (-) ^(a) | 1,118 | <i>Plus</i> other £ assets | -2,746 |
| | | <i>minus</i> other £ liabilities | - (-3,865) |
| | 1,118 | | 1,119 |
| | -6,601 | <i>Plus</i> private sector £ liabilities | -6,602 |
| | | <i>plus</i> coin | 1 |
| M4 | -6,601 | M4 | -6,601 |

(a) Differences between two versions are due to rounding.

Changes to ONS concept of the public sector

By including data for the Bank of England and Northern Rock for the first time in the PSF statistics in September 2008 the ONS widened the public sector coverage to include banks as well as non-bank public sector organisations.

This change in coverage introduced a conceptual difficulty for the 'alternative counterparts' analysis. That analysis is based on the assumption that an institution is either included in the banking sector or in the public sector, but not in both. Inclusion of some banks in the public sector would affect the interpretation of the public sector contribution to M4 in particular. An important element of that contribution is 'M4 private sector net purchases of public sector debt'. This concept is based on the assumption that the M4 private sector can hold its wealth, among other assets, in the form of public sector debt (such as gilts and Treasury bills) or as M4 balances (deposits at banks and building societies). In other words, the alternative counterparts table assumes that an increase in M4 private sector holdings of public sector debt leads to a decline in M4. If some banks were

classified as part of the public sector, their debt would be counted in both public sector debt and in M4 – at least to the extent that these banks issued debt by taking deposits from the M4 private sector. The alternative counterparts would therefore no longer add up to M4. In other words, the PSNCR based on the new ONS definition of the public sector was incompatible with the definition of M4 (which continued to include liabilities of the Bank of England and Northern Rock to the UK-resident M4 private sector).

Because of these conceptual complications, the Bank decided to maintain the traditional definition of the public sector (ie excluding banks) throughout its statistical releases. But publication of data using that measure would have compromised the confidentiality of underlying data for the two public sector banks. Data users could have deduced the contribution to the PSNCR of the Bank of England and Northern Rock through straight comparison of the ONS PSF First release data with Bank of England data published two weeks later. That could have revealed potentially sensitive information about these banks' operations at that time. That would have contravened the Bank's Statistical Code

of Practice, which states that ‘Individual respondents will not be identifiable within published statistics’ and that ‘Any statistic containing source data from fewer than three respondents will be withheld from publication unless the respondents’ consents have been given’². Given these concerns about confidentiality, Table A3.2 was discontinued, although many individual series components continued to be published elsewhere in this publication.

In November 2008 the ONS announced the reclassification of Bradford & Bingley to the public sector, to be introduced retrospectively back to September 2008 data. Bradford & Bingley data were included for the first time in the January 2009 PSF First Release. In addition, the ONS announced in February this year that Royal Bank of Scotland and Lloyds Banking Group were also reclassified to the public sector (and, within that, as public corporations, in line with the other public sector banks), to be backdated to October 2008. Data for the latter two banking groups have not yet been incorporated in the PSF statistics, due to the complex structure of both institutions.

As a result of the inclusion of Bradford & Bingley in the public sector, there are now three banks that contribute to the public sector finances, such that the previous confidentiality issues no longer apply. The Bank has therefore decided to resume the publication of Table A3.2 in its entirety, with effect from this edition of *Monetary & Financial Statistics*. The table now includes data back to August 2008 and will be fully updated each month. Table A3.2 now uses a Bank estimate of the PSNCR based on the traditional definition of the public sector, ie excluding public sector banks. That estimate can differ slightly from the PSNCR figures that can be derived from published ONS statistics.

Other sources to estimate alternative counterparts data

Although the alternative counterparts were discontinued in table format last autumn, the Bank has continued to publish several of its component series that were not subject to sensitivities. Various series were added to Table A7.1 ‘Liquid Assets Outside M4’ (see Table A in the Annex for details). These were all components of: ‘M4 private sector’s net purchases of central government debt’; ‘M4 private sector net purchases of other public sector debt’; and ‘External and foreign currency finance of the public sector’. Series showing the component breakdown of M4 lending have been available on the Bank’s ‘interactive database’. Other series – such as ‘MFIs’ external and foreign currency flows’ and ‘Net non-deposit sterling liabilities’ – have not been directly available from other sources, but could be calculated using combinations of other series. Table A in the Annex provides further details. For example, banks’ net sterling deposits from non-residents can be calculated as the sum of series VYBY and VYDQ minus the sum of items VYCO, VYCU, VYEG and VYEM.

Users could have used ONS data to compile a reasonable proxy for the traditional PSNCR around four weeks after

publication of the PSF First Release. That could be calculated as the sum of the net cash requirement of central government and local government (both published in Table 1.1E of *Financial Statistics*) and that of public corporations excluding public sector banks (published in Table 1.4A of *Financial Statistics*).

² <http://www.bankofengland.co.uk/statistics/about/code.htm>

Annex

Table A Other sources to construct proxies for alternative counterparts

| Series title | Series code | Alternative series | Source |
|------------------------------------------------------------------------------|-------------|--------------------|---------------------------------------------|
| M4 private sector (M4PS) net purchases (-) of Central Government debt | | | |
| M4PS net purchase of gilts | AVBY | VRDY | <i>Bankstats</i> Table A7.1 (sign reversed) |
| M4PS net purchase of sterling Treasury bills | VQLK | AUZK | <i>Bankstats</i> Table A7.1 (sign reversed) |
| M4PS net purchase of tax instruments | VQLG | AGLW | <i>Bankstats</i> Table A7.1 (sign reversed) |
| M4PS net purchase of National Savings | VQLJ | VSTS | <i>Bankstats</i> Table A7.1 (sign reversed) |
| M4PS net purchase of other central government debt | VQLI | B9P2 | <i>Bankstats</i> Table A7.1 (sign reversed) |

| M4PS net purchases of other public sector debt | | | |
|-------------------------------------------------------|------|------|---------------------------------------------|
| M4PS net purchase of local government debt (-) | VQLL | VRQT | <i>Bankstats</i> Table A7.1 (sign reversed) |
| M4PS net purchase of public corporations' debt (-) | VQLO | B9P3 | <i>Bankstats</i> Table A7.1 (sign reversed) |
| Other public sector purchases of M4PS debt (+) | VQLQ | B9P4 | <i>Bankstats</i> Table A7.1 (sign reversed) |

| External and foreign currency finance of public sector | | | |
|---------------------------------------------------------------|------|------|---------------------------------------------|
| Non-residents' purchases of gilts (-) | VQCZ | B9P6 | <i>Bankstats</i> Table A7.1 (sign reversed) |
| Non-residents' purchases of sterling Treasury bills (-) | VRME | B9P7 | <i>Bankstats</i> Table A7.1 (sign reversed) |
| Other | VQOC | B9P8 | <i>Bankstats</i> Table A7.1 (sign reversed) |

| M4 Lending | | | |
|---------------------------------|------|------|----------------------|
| Banks' advances | VQLX | VQLX | Interactive database |
| Banks' acceptances etc. | VQJE | VQJE | Interactive database |
| Banks' investments | VQLR | VQLR | Interactive database |
| Building societies' loans | VYFU | VYFU | Interactive database |
| Building societies' investments | VYGA | VYGA | Interactive database |

| MFIs' external and foreign currency flows | | | |
|------------------------------------------------------------|-------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------|
| Banks' net sterling deposits from non-residents (-) | VVXH | (VYBY+VYDQ) – (VYCO+VYCU+VYEG + VYEM) | <i>Bankstats</i> Tables B2.2 and B2.2 |
| Banks' net foreign currency liabilities (-) | VQLY | (VYBV + VYBX + VYBZ + VYCB + VYDN + VYDP + VYDR + VYDT) – (VYCL + VYCN + VYCP + VYCR + VYCT + VYCV + VYCX + VYED + VYEF + VYEH + VY EJ + VYEL + VYEN + VYEP) | <i>Bankstats</i> Table B2.2 and B2.3 |
| Building societies external and foreign currency flows (-) | AVBL | ((VYFF + VYFH + VYFI + VYFJ + VYFL) – (VYFV + VYFX + VYFY + VYFZ + VYGB + VYGD+ VYGE + VYGF + VYGH))*-1 | <i>Bankstats</i> Table B2.4 |
| Total external and foreign currency flows | AVBW | VVXH + VQLY + AVBL | |

| Net non-deposit sterling liabilities (-) | | | |
|-------------------------------------------------|------|----------------------------------|--------------------------------------------------------|
| Building societies | VQSA | VYFK - VYGG | <i>Bankstats</i> Table B2.4 |
| Banks | AGGG | AUZI – AVBS – VQSA – AVBW – AVBF | <i>Bankstats</i> Tables A2.2.1/A3.1 and A3.1 and above |