

Article

Economics Statistics Transformation Programme: enhanced financial accounts (UK flow of funds) – Shadow banking – S.124 non-money market investment funds

Latest article in a series of shadow banking flow of funds articles and summarises the data currently available for traditional investment funds.

Contact:
Jon Simpson and Keith Miller
FlowOfFundsDevelopment@ons.
gov.uk
+44 (0)1633 455545

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Table of contents

1. [Abstract](#)
2. [Introduction](#)
3. [Non-money market funds](#)
4. [S.124 non-money market funds](#)
5. [Domicile](#)
6. [Shadow banking \(market-based finance\)](#)
7. [ONS Trusts surveys](#)
8. [UK Economic Accounts data](#)
9. [Next steps](#)
10. [Acknowledgements](#)
11. [Relevant Links](#)

1 . Abstract

The Office for National Statistics (ONS) has previously announced a series of articles that will provide [separate experimental balance sheet statistics](#) for each of the [European System of Accounts 2010: ESA 2010](#) financial sub-sectors S.123 to S.127. This is the latest article in the series and summarises the data currently available for traditional investment funds in S.124 non-money market investment funds (NMMFs). Subsequent S.124 NMMFs articles will present data for non-traditional investment funds, such as hedge funds, exchange traded funds, private equity and venture capital.

NMMFs are the single largest component of the international [Financial Stability Board's](#) (FSB) narrow measure of shadow banking, that is, non-bank credit intermediation that may pose risks to financial stability. Given the global importance of NMMFs, this article examines NMMFs in the context of the UK's [National Accounts](#) and the [joint ONS and Bank of England \(BoE\) Enhanced Financial Accounts \(EFA\) "flow of funds" \(FoF\) initiative](#). The publication of S.124 NMMFs Experimental Statistics supports the [joint ONS-BoE flow of funds initiative](#), and will be used to improve the quality of the estimates in the [UK National Accounts'](#) financial sector.

Some important points from this article are that:

- traditional investment funds have assets of around £1.2 trillion
- equity funds account for about 50% of traditional investment funds' value
- equity asset holdings is the largest asset class within traditional investment funds
- equity funds are excluded from the FSB's narrow measure of shadow banking
- UK investors hold a high percentage of traditional investment funds domiciled in the UK
- hedge funds and money market funds (MMFs) are mostly domiciled overseas
- £271 billion of Cayman Island domiciled funds were managed from the UK in 2016

We welcome feedback on this article and the subsequent articles in this series. Please contact us via email at FlowOfFundsDevelopment@ons.gov.uk if you would like to share feedback with us.

2 . Introduction

The Office for National Statistics (ONS) has previously announced a series of articles that will provide [separate experimental balance sheet statistics](#) for each of the [European System of Accounts 2010: ESA 2010](#) financial sub-sectors S.123 to S.127. These experimental statistics will, after making any necessary improvements and in combination with other data sources, be used as the basis to improve the [UK National Accounts](#) for these financial sub-sectors. The articles will present experimental balance sheet statistics for each of the ESA 2010 sectors not separately published in the [UK National Accounts, The Blue Book 2017 edition](#), that is, S.123, S.125, S.126 and S.127. Experimental statistics will also be presented for S.124 non-money market funds (NMMFs).

This article is the fourth in the series of previously announced ONS shadow banking articles and follows on from the Shadow banking introductory, S.123 money market funds (MMFs) and [Financial Services Survey 266 \(FSS 266\)](#) articles. This article summarises the data currently available for traditional investment funds in S.124 NMMFs. The main differences between the investment funds in S.124 NMMFs and [S.123 money market funds \(MMFs\)](#) are that:

- NMMFs typically invest in assets with a longer residual maturity than MMFs
- S.124 NMMFs shares or units (F.522) are not close substitutes for deposits, unlike S.123 MMFs shares or units (F.521)

The aim of this article is to introduce NMMFs, present the currently available data on traditional NMMFs and to identify the next steps needed to obtain a comprehensive view of all investment fund types within S.124. Subsequent NMMFs articles will present data for non-traditional types of investment funds, such as hedge funds, exchange traded funds, private equity and venture capital. This article does, however, include some readily available information on hedge funds. Future NMMFs articles will provide additional information on hedge funds.

It should be noted that venture and development capital companies are specialised financial corporations within S.125 other financial intermediaries, rather than S.124, and corresponds to the [Standard Industrial Classification \(SIC\) code SIC 64.303 Venture and development capital companies](#). Many sources present data from private equity and venture capital as a single total, for example, the [British Private Equity and Venture Capital Association \(BVCA\)](#) notes that [£27 billion has been invested in more than 3,800 UK companies by private equity and venture capital in the past five years](#). Given that data are often presented in this combined format, the scope of this series of S.124 articles includes venture capital for completeness. In the case of private equity, the [ONS May 2017 Improving the economic sector breakdown article](#) places private equity within S.124 NMMFs.

This article examines the [ESA 2010 financial sub-sector S.124 non-money market funds \(non-MMFs\)](#) in the context of the UK's [National Accounts](#) and the [joint ONS and Bank of England \(BoE\) Enhanced Financial Accounts \(EFA\) "flow of funds" \(FoF\) initiative](#). Since December 2014, ONS and the BoE have been working in partnership to improve the [FoF statistics](#) for the UK. The EFA initiative builds upon the existing statistics that ONS already publishes in the [UK Economic Accounts \(UKEA\) and annual financial accounts \(Blue Book and Pink Book\)](#). The EFA initiative will present a full set of experimental "from whom-to-whom" (W2W) financial accounts and balance sheets in 2019, with the ambition of incorporating these statistics into the [UK National Accounts](#) in 2021.

The full set of Experimental Statistics published in 2019 will be consistent with the concepts and definitions in the [ESA 2010](#)), which is the legislative framework within the European Statistical System. The ONS-BoE FoF initiative aims to develop W2W estimates for financial account transactions and balance sheet levels, publishing the counterparty relationships for each financial instrument rather than the total asset and or liability position for each institutional sector in isolation.

As Experimental Statistics, they are still under active development and are not comparable with the UK National Accounts. Experimental Statistics are published to inform and involve users in the development process. The release of Experimental Statistics at the earliest opportunity is an objective of the ONS-BoE FoF initiative, as it provides users with early sight of developments and the opportunity to submit feedback. In this spirit, this article includes some readily available information on hedge funds, even though the scope of the article is traditional investment funds, which excludes hedge funds. Further work is required on the Experimental Statistics presented in this article.

For the 2021 UK National Accounts, the Experimental Statistics published in 2019 will be used in conjunction with data from other sources such as commercial data providers, the Bank of England and other ONS surveys. Data obtained from the nine ESA 2010 financial sub-sectors (S.121 to S.129) will be integrated to provide the most comprehensive and accurate FoF matrices, as required by the ONS-BoE FoF initiative. The [European System of Accounts 2010](#) (ESA 2010) financial sub-sectors are:

- S.121 central bank
- S.122 deposit-taking corporations – except the central bank
- S.123 money market funds (MMFs)
- S.124 non-money market investment funds (NMMFs)
- S.125 other financial intermediaries – except insurance corporations and pension funds
- S.126 financial auxiliaries
- S.127 captive financial institutions and money lenders
- S.128 insurance corporations (IC)
- S.129 pension funds (PF)

Publishing S.124 NMMFs Experimental Statistics will also assist with the provision of UK data to the international organisations that monitor shadow banking (market-based finance), such as the [Financial Stability Board \(FSB\)](#), [G20 Data Gaps Initiative \(DGI-2\)](#) and [IMF Special Data Dissemination Standard plus \(SDDS+\)](#).

Shadow banking, in the context of this article, is defined using the FSB's definition of [credit intermediation involving entities and activities \(fully or partly\) outside of the regular banking system \(PDF, 3.28MB\)](#). Note that not all S.124 NMMFs fall within the FSB's narrow measure of shadow banking, with equity funds being perhaps the most obvious example.

As noted in the [Global Shadow Banking Monitoring Report 2017 \(PDF, 3.28MB\)](#), some authorities and market participants prefer to use other terms such as “market-based finance” instead of “shadow banking”. The FSB uses the term shadow banking as this is the most commonly employed and, in particular, has been used in earlier G20 communications. This article adopts the FSB's approach by using the term shadow banking, however, the equivalent term of market-based finance is also shown in parentheses.

3 . Non-money market funds

Sectorisation

The financial crisis highlighted the need to improve the quality, coverage and granularity of economic sector breakdown, to compile from whom-to-whom (W2W) counterparty statistics and to identify the build-up of financial risk across sectors of the economy.

An initial proposal outlining [a more detailed economic sector breakdown for use in the flow of funds statistics](#) was included in an Office for National Statistics (ONS) article published in July 2016. That [initial economic sector breakdown \(sectorisation\) was updated in May 2017](#). This article describes our plans to publish Experimental Statistics for the [European System of Accounts 2010: ESA 2010](#) financial sub-sector S.124 non-money market funds (NMMFs) using the most recent economic sector breakdown (sectorisation), which goes beyond that published in May 2017.

Investment fund types

Investment funds can be sub-divided according to how they issue investment shares or units:

- closed-ended funds
- open-ended funds

The main difference between these two types of investment funds is whether there is a one-off issuance of investment shares, that is, closed-ended funds, or whether the investment shares are created or retired on demand as investors enter or exit the open-ended fund.

Closed-ended funds

Investors access a closed-ended fund by buying shares in the fund, which guarantees the shareholder a share of the profits (or losses) of the fund. These shares are fixed in number, so new shares are not created or retired when new investors want to enter or exit the fund.

Since closed-ended shares are not redeemable from the fund, they are either listed, and so traded on a stock exchange in the same way that shares in a listed company shares are traded, or they are not listed, as in the case of private equity funds (for example). Private equity funds are not, however, considered traditional funds.

In the UK, closed-ended funds are commonly known as investment trusts.

Open-ended funds

Open-ended funds can issue and redeem shares at any time and so investors purchase shares directly from the fund itself, rather than from existing shareholders or via a stock exchange. In the UK, unit trusts and open-ended investment companies (OEICs) are open-ended funds.

Funds by asset class

S.124 investment funds (both closed-ended and open-ended funds) can be broadly divided by type of asset class:

1. equity
2. fixed income
3. mixed
4. property: equity real estate funds and mortgage real estate funds
5. other
6. hedge funds
7. private equity
8. venture capital

Investment funds' assets

The [Investment Association](#) (IA), as the trade body that represents UK investment managers, collects data on some types of investment funds, particularly traditional investment funds, that is, excluding fund types such as hedge funds, private equity and venture capital. Its members collectively manage over £6.9 trillion on behalf of clients in the UK and the rest of the world.

Although the IA data are very useful, the IA's [Asset Management in the UK 2016 to 2017](#) report acknowledges that the IA's membership excludes a significant number of firms engaged in:

- hedge funds
- private equity
- commercial property management
- private client management

These types of investments, along with exchange traded funds and venture capital, are considered non-traditional investment funds in this article.

According to the IA, in 2017 its fund manager members were managing the fund types shown in Table 1 for UK investors.

Table 1: UK investors' funds under management by asset class, 2017

Fund Type	£ Billion	Percent
Equity	727	53%
Fixed Income	243	18%
Money Market	25	2%
Mixed Assets	222	16%
Property	31	2%
Other	114	8%
Total	1,361	100%

Source: Investment Association, PDF Archive of Statistics, April 2018, Table 3 Funds under management by asset class

Notes:

1. Money Market funds (S.123) are not part of S.124.

The Investment Association's (IA) mix of investment funds by asset class, as shown in Table 1, is broadly supported by the [Investment Company Institute's](#) (ICI) total net assets by type of fund data shown in [Supplement: Worldwide Public Tables, Fourth Quarter 2017, Data in Local Currency \(xls\)](#). The data from ICI and IA both suggest that equity funds account for approximately half of total assets.

From Table 1 it can be seen that equity funds are the single largest asset class, accounting for approximately half of the total value of UK investor funds managed by the Investment Association's fund manager membership. This is an important conclusion as the international Financial Stability Board's (FSB) [Global Shadow Banking Monitoring 2018 Report \(PDF, 3.28MB\)](#) excludes equity funds that principally invest in equity securities from the FSB's narrow measure of shadow banking, as equity funds do not undertake credit intermediation. The FSB also excludes mixed funds from the FSB's narrow measure of shadow banking if they hold 80% or more of their assets under management in equities, as again they are not considered to be undertaking credit intermediation.

Table 2: UK investors' funds by fund domicile, 2017

Fund Domicile	£ Billion	Percent
UK Domiciled	1,073	88%
Overseas Domiciled	147	12%
Total	1,220	100%

Source: Investment Association, PDF Archive of Statistics, April 2018, Table 2 Funds under management by domicile (PDF 139 KB)

Notes:

1. The total of £1,220 billion in Table 2 is smaller than in Table 1's total of £1,361 billion, since it excludes investments in funds of funds, and instead measures what these funds of funds are actually invested in.

Table 3: UK domiciled funds by investor domicile, 2016 to 2017

Investors Domicile	2016	2017
UK Investors	954	1,073
Overseas Investors	67	87
Total	1,021	1,159

Source: Investment Association, PDF Archive of Statistics, April 2018, Table 2 Funds under management by domicile

By way of comparison, the [UK Economic Accounts \(UKEA\)](#) (table 4.3.11A) shows that S.124 non-money market funds (NMMFs) had financial assets of £1.257 trillion at the end of 2016. Taking the UKEA and IA data together suggests that traditional investment funds had assets of approximately £1.2 trillion in 2017.

The presented IA's tables (Tables 1 to 3) provide two important messages about UK investors and traditional investment funds:

- UK investors have a high percentage of their traditional fund investments in UK domiciled funds
- UK investors have around half of their traditional investment funds' assets in equity funds

Since at least some mixed assets funds include equities in their portfolios, the percentage of total financial assets held as equities in UK investors traditional investment funds will exceed 50%. Equities therefore account for the majority of assets held in traditional investment funds.

4 . S.124 non-money market funds

The last section introduced the different types of investment funds by asset class. This section provides the national accounts definition of S.124 non-money market funds (NMMFs) using the [European System of Accounts 2010: ESA 2010](#).

To understand S.124 non-money market funds (NMMFs) we begin by describing how they differ from the [S.123 money market funds \(MMFs\)](#) described in a previous article. MMFs investment funds shares or units (F.521) are close substitutes for deposits, and MMFs make investments primarily in money market fund shares or units, short-term debt securities, and or deposits.

NMMFs by contrast, consists of all collective investment schemes, except those classified in the S.123 MMFs sub-sector, which are principally engaged in financial intermediation. Their business is to issue investment fund shares or units (F.522) that are not close substitutes for deposits, and, on their own account, to make investments primarily in financial assets other than short-term financial assets and in non-financial assets (usually real estate).

In summary, NMMFs typically invest in financial assets with a longer remaining maturity than MMFs, with MMFs typically investing in financial instruments with a maturity less than one year. In addition, NMMFs' investment fund shares or units (F.522) are not close substitutes for deposits, unlike S.123 MMFs' shares or units (F.521).

ESA 2010: S.124 non-money market funds definition

Office for National Statistics (ONS) uses the [ESA 2010](#) classification system to prepare the [UK National Accounts, The Blue Book](#). The ESA 2010 classification is an internationally comparable EU accounting framework for a systematic and detailed description of an economy.

ESA 2010 defines S.124 non-money market funds (NMMFs) as consisting of the following.

[2.82](#) – All collective investment schemes, except those classified in the MMF sub-sector, which are principally engaged in financial intermediation. Their business is to issue investment fund shares or units that are not close substitutes for deposits, and, on their own account, to make investments primarily in financial assets other than short-term financial assets and in non-financial assets (usually real estate).

[2.83](#) – Non-MMF investment funds cover investment trusts, unit trusts and other collective investment schemes whose investment fund shares or units are not seen as close substitutes for deposits.

[2.84](#) – The following financial intermediaries are classified in sub-sector S.124:

- open-ended investment funds whose investment fund shares or units are, at the request of the holders, repurchased or redeemed directly or indirectly out of the undertaking's assets
- closed-ended investment funds with a fixed share capital, where investors entering or leaving the fund must buy or sell existing shares
- real estate investment funds
- investment funds investing in other funds ("funds of funds")
- hedge funds covering a range of collective investment schemes, involving high minimum investments, light regulation, and a range of investment strategies

ESA 2010: non-money market funds investment fund shares or units (F.522)

ESA 2010 defines S.124 NMMFs' F.522 shares or units as follows.

[5.165](#) – Other investment fund shares or units other than MMF shares or units that represent a claim on a portion of the value of an investment fund other than an MMF. These types of shares and units are issued by investment funds.

[5.166](#) – Other unlisted investment fund shares or units other than MMF shares or units are usually repayable on request, at a value corresponding to their share in the own funds of the financial corporation. Such own funds are revalued regularly on the basis of the market prices of their various components.

[Annex 7.1](#) – Investment fund shares or units other than money market funds or units represent a claim on a portion of the value of an investment fund other than a money market fund. Investment fund shares or units other than money market fund shares or units are issued by investment funds that invest in a range of assets including debt securities, equity, commodity-linked investments, real estate, shares in other investment funds and structured assets.

SNA 2008: S.124 non-money market funds definition

The global framework for compiling internationally-comparable national accounts, the [United Nations' System of National Accounts 2008: SNA 2008](#), and on which ESA 2010 is based, provides further information on S.124 non-money market funds.

[4.108](#) – NMMF investment funds are collective investment schemes that raise funds by issuing shares or units to the public. The proceeds are invested predominantly in financial assets, other than short-term assets, and in non-financial assets (usually real estate). Investment fund shares or units are generally not close substitutes for deposits. They are not transferable by means of cheque or direct third-party payments.

SNA 2008 defines the fundamental difference between non-money market funds (S.124) and money market funds (S.123):

[11.97](#) – MMFs typically invest in money market instruments with a residual maturity of less than one year, are often transferable and are often regarded as close substitutes for deposits. NMMFs typically invest in longer-term financial assets and possibly real estate. They are not transferable and are typically not regarded as substitutes for deposits.

5 . Domicile

One of the major difficulties with estimating UK investors' holdings of non-money market funds (NMMFs) is the international nature of the financial sector. The [Investment Association](#) (IA), the trade body that represents UK investment managers, publishes [data by domicile](#).

Table 4: Funds under management by domicile - Investment Association, UK, 2012 to 2017

Year	UK Investors			UK Domiciled Funds		
	Total funds under management	of which held in UK domiciled funds	of which held in overseas domiciled funds	Total funds under management	of which held by UK investors	of which held by overseas investors
2012	703,621	650,738	52,882	680,349	650,738	29,611
2013	820,437	753,689	66,748	799,311	753,689	45,622
2014	892,469	817,553	74,916	843,167	817,553	25,614
2015	929,733	839,813	89,920	901,817	839,813	62,005
2016	1,061,275	953,617	107,658	1,020,727	953,617	67,111
2017	1,219,810	1,072,585	147,225	1,159,223	1,072,585	86,638

Source: Investment Association

There is an element of international investment that is difficult to measure, that is, overseas investors investing in UK domiciled funds, but also UK investors investing in overseas domiciled funds. Table 4 is based on data from the Investment Association's fund manager membership and so does not capture all UK investments in overseas domiciled funds. For example, in a previous article in this series on [S.123 money market funds \(MMFs\)](#), it was shown that the UK's holdings of overseas domiciled MMFs are estimated to be significantly higher than the value of UK domiciled MMFs.

Data from the IA show that the IA's members collectively manage over £6.9 trillion on behalf of clients in the UK and the rest of the world. See the IA's [Asset Management in the UK 2016 to 2017 report](#) for further details.

From the discussion it can be concluded that just because an investment fund is managed in the UK, it does not necessarily imply that fund has exclusively UK domiciled investors. This is an important point to remember during the subsequent discussion on hedge funds and investment funds that are domiciled in the Cayman Islands.

The Cayman Islands is an example of a jurisdiction that has overseas domiciled funds into which UK investors invest. From a national accounts and enhanced financial account flow of funds initiative perspective, it is important to know how UK investors' investments are split between UK domiciled and rest of the world domiciled investment funds.

Hedge funds

One of the more obvious examples of international investment funds and non-traditional investment fund is hedge funds. Most of the world's hedge funds are domiciled in the Cayman Islands, but managed in other jurisdictions by fund managers. For example, the [Report on the Fourth IOSCO Hedge Funds Survey \(PDF, 890KB\)](#) found that hedge funds domiciled in the Cayman Islands accounted for 53% of the global total hedge funds by net asset value (NAV) in 2016.

The [Financial Conduct Authority \(FCA\) Hedge Fund survey published in June 2015](#) surveyed 132 qualifying funds, but crucially found that none of them were domiciled in the UK, despite them managing US \$265 billion out of the UK. The FCA survey used September 2014 data. The FCA survey of hedge funds covered about 13% of the estimated global hedge fund assets under management. The FCA 2015 survey found that 69% of the hedge funds surveyed were domiciled in the Cayman Islands, equivalent to approximately 90 hedge funds.

The [Financial Stability Board's \(FSB\) Global Shadow Banking Monitoring Report 2017 \(March 2018\) \(PDF, 3.3 MB\)](#) estimated that in 2016, 87% of all (not just UK) hedge fund assets were resident in the Cayman Islands. The FSB report found that hedge funds had assets of US \$3.7 trillion (£2.7 trillion) in 2016, based on data from the UK, Canada, the Cayman Islands, France, Germany, India, Ireland, Italy, Luxembourg, the Netherlands, Russia, Singapore, South Africa, Spain and Turkey.

According to the International Organisation of Securities Commission's (IOSCO) November 2017 [Report on the Fourth IOSCO Hedge Funds Survey \(PDF, 890KB\)](#), hedge funds global total assets under management (AUM) in 2016 were US \$3.2 trillion (£2.4 trillion). Hedge funds managed primarily in the UK accounted for roughly 10% of this global total equivalent to US \$320 billion (£240 billion). The IOSCO estimate of 10% of global hedge funds managed in the UK is similar to the FCA survey's 13% estimate.

Although the FSB and IOSCO surveys for 2017 reported similar aggregate hedge fund statistics, US \$3.7 trillion and US 3.2 trillion respectively, the FSB report states that they are not directly comparable because:

- reporting in the FSB's monitoring exercise is based on the legal residence of the relevant entities to avoid double-counting of investment funds that are managed and or marketed in multiple jurisdictions
- in the FSB exercise, where possible, the size of investment funds, particularly hedge funds, is reported based on total financial AUM without netting of any liabilities
- the sample of jurisdictions differs between the FSB exercise and the IOSCO survey

Note both the FSB and IOSCO data relate to the domicile of hedge funds generally and not just the domicile of hedge funds used by UK investors or managed by UK fund managers.

Cayman Islands domiciled funds

The last section demonstrated that the Cayman Islands is a popular domicile for hedge funds. This section presents some general statistics on investment funds domiciled in the Cayman Islands, with a particular emphasis on those having either UK investors or are managed by UK fund managers. As already noted, the Cayman Islands is an example of a jurisdiction that has overseas domiciled funds into which UK investors invest.

From a national accounts and enhanced financial accounts flow of funds initiative perspective, it is important to know how UK investors' investments are split between UK domiciled and rest of the world domiciled investment funds. It is also useful to know in which jurisdictions UK fund managers manage overseas domiciled investment funds.

According to the [Cayman Islands Monetary Authority's 2016 Cayman Islands Investments Statistical Digest \(PDF, 2.36MB\)](#) in 2016 there were 999 investment funds domiciled in the Cayman Islands but managed from the UK. In 2016, these UK managed, but Cayman Island domiciled, funds had net assets of US \$367 billion (£271 billion). Furthermore, they accounted for approximately 10% of the total number of funds or net asset of funds registered in the Cayman Islands. Total net assets of all Cayman Island domiciled funds was US \$3.6 trillion (£2.7 trillion) in 2016.

In terms of ownership of investment funds domiciled in the Cayman Islands, in 2016, 858 of 7,790 unique investment funds had UK legal holders owning more than 10% of the fund. Therefore, 11% of Cayman Islands domiciled funds had UK legal holders owning more than 10% of the fund.

In 2016, UK managed funds in the Cayman Islands were the second largest number of funds domiciled in the Cayman Islands. Only the US had a larger number of funds domiciled in the Cayman Islands, with 56% of funds by number and 70% by asset value. See the [2016 Cayman Islands Investment Statistical Digest](#) for further details.

The Cayman Islands Investment Statistical Digest also examines the contribution of funds domiciled in the Cayman Islands to shadow banking. Using an approach derived from the FSB, the 2016 Cayman Islands total for shadow banking was US \$4.4 trillion (£3.2 trillion), of which 75% (US \$3.3 trillion or £2.4 trillion) was in hedge funds. For further details see the Cayman Islands Investment Statistical Digest.

Domicile summary

This section has illustrated the importance of not just considering UK investors' investments in UK domiciled investment funds, but also their investments in investment funds domiciled overseas. It is equally important to consider overseas investors' investments in UK domiciled funds. Identifying these cross-border investment holdings will assist with the publication of a full set of experimental whom-to-whom statistics in 2019.

These 2019 Experimental Statistics will include the rest of the world (RoW) as a separate sector, and wherever possible individual country counterparties will be identified, for example, the Cayman Islands in the case of hedge funds. The 2019 Experimental Statistics will be followed by the flow of funds (FoF) and whom-to-whom (W2W) data being incorporated into the UK National Accounts Blue Book 2021.

6 . Shadow banking (market-based finance)

The introductory article in this series described [shadow banking \(market-based finance\) in detail](#) and so this section only provides a brief introduction to shadow banking. Readers who wish to know more are referred to the [Shadow banking introductory](#) article in this series.

The international [Financial Stability Board](#) (FSB), which is responsible for producing the annual [Global Shadow Banking Monitoring 2018 Report \(PDF, 3.28MB\)](#), defines shadow banking as “credit intermediation involving entities and activities (fully or partly) outside of the regular banking system”, that is, non-bank credit intermediation. The FSB’s narrow measure of shadow banking was \$45.2 trillion in 2016.

As noted in the [Global Shadow Banking Monitoring Report 2017 \(PDF, 3.28MB\)](#), some authorities and market participants prefer to use other terms such as “market-based finance” instead of “shadow banking”. The FSB uses the term shadow banking as this is the most commonly employed and, in particular, has been used in earlier G20 communications. This article adopts the FSB’s approach by using the term shadow banking, however, the equivalent term of market-based finance is also shown in parentheses.

Introduction to shadow banking

In addition to improving the UK National Accounts, publishing S.124 non-money market funds (NMMFs) Experimental Statistics will assist the UK with providing shadow banking (market-based finance) data to international organisations that monitor shadow banking (market-based finance), such as the [Financial Stability Board \(FSB\)](#), [G20 Data Gaps Initiative \(DGI-2\)](#) and [IMF Special Data Dissemination Standard plus \(SDDS+\)](#). This section provides further details on the FSB’s monitoring of shadow banking (market-based finance) and how the S.124 NMMFs Experimental Statistics will assist with providing the FSB with UK shadow banking (market-based finance) data.

Shadow banking, in the context of this article, is defined using the FSB’s definition of [credit intermediation involving entities and activities \(fully or partly\) outside of the regular banking system \(PDF, 3.28MB\)](#). Note that not all of the non-money market investment funds included within S.124 fall within the FSB’s narrow measure of shadow banking, with equity funds (which account for around half of UK non-money market funds investment funds) being perhaps the most obvious example. Equity funds are excluded from the FSB’s narrow measure of shadow banking as they do not undertake credit intermediation.

Financial Stability Board

The FSB is an international body that monitors and makes recommendations about the global financial system. The FSB is responsible for monitoring international shadow banking (market-based finance). Each year the FSB publishes an international Global Shadow Banking Monitoring Report, and to which the UK submits data. The [Global Shadow Banking Monitoring Report 2017 \(PDF, 3.28MB\)](#) identifies 10 core other financial intermediaries (OFIs) sectors:

1. money market funds (S.123)
2. hedge funds (part of S.124)
3. other investment funds (part of S.124)
4. real estate investment trusts (REITs) and real estate (RE) funds
5. trust companies
6. finance companies (part of S.125)
7. broker-dealers (part of S.125)
8. structured finance vehicles
9. central counterparties (part of S.125)
10. captive financial institutions and money lenders (S.127) (for example, holding companies)

Other investment funds, hedge funds and real estate funds fall within the [European System of Accounts 2010: ESA 2010](#) financial sub-sector S.124 non-money market funds.

The [FSB Policy Framework \(FSB \(2013\)\)](#), breaks down its narrow measure of shadow banking into five economic functions (EFs), each of which involves non-bank credit intermediation that may pose risks to financial stability. This economic function approach to measuring shadow banking ensures that the narrow measure of shadow banking excludes entities that are not typically part of a credit intermediation chain or, if they are, they are not involved in significant maturity or liquidity transformation and or leverage.

More detail on the Classification by Economic Functions can be found in Table 5. It should be noted, however, that some entity types may be classified into more than one economic function (EF).

Table 5: Classification by Financial Stability Board Economic Functions

Economic Function (EF)	Definition	Typical Entity Types
EF1	Management of Collective Investment Vehicles (CIVs) with features that make them susceptible to runs	Money market funds (MMFs), Non-money market funds, e.g. fixed income funds, mixed funds, credit hedge funds, real estate funds
EF2	Loan provision that is dependent on short-term funding	Finance companies, leasing/factoring companies, consumer credit companies
EF3	Intermediation of market activities that is dependent on short-term funding or on secured funding of client assets	Broker-dealers, securities finance companies
EF4	Facilitation of credit creation	Credit insurance companies, financial guarantors, monolines
EF5	Securitisation-based credit intermediation and funding of financial entities	Securitisation vehicles, structured finance vehicles, asset-backed securities

Source: Global Shadow Banking Monitoring 2018 Report, exhibit 4.1

The FSB's Economic Function 1 (EF1) relates to collective investment vehicles (CIVs) with features that make them susceptible to runs. In many circumstances, CIVs can act as shock absorbers in the financial system as losses from an entity's distress or insolvency or from adverse financial market conditions are shared among a disparate group of investors. In extreme circumstances, some CIVs with maturity or liquidity transformation and or leverage can be susceptible to runs.

The FSB's EF1 includes S.123 money market funds (MMFs) and S.124 non-money market funds (NMMFs), such as fixed income funds, mixed funds, credit hedge funds and real estate funds. EF1 does not include equity funds. We have previously published [an article on S.123 money market funds \(MMFs\)](#).

According to the FSB's [Global Shadow Banking Monitoring 2018 Report \(PDF, 3.28MB\)](#), EF1's financial assets were US \$32.3 trillion in 2016. Exhibits [5.1](#) and [5.5](#) from the FSB's report in combination show that in 2016, 16% of EF1's financial assets were held by S.123 MMFs (approximately US \$5.2 trillion). This implies that in 2016, the S.124 NMMFs EF1 assets were approximately US \$27.1 trillion.

7 . ONS Trusts surveys

UK Economic Accounts data

According to the [UK Economic Accounts \(UKEA\) data](#), S.124 non-money market funds' (NMMFs') financial assets were approximately £1.2 trillion at the end of 2016 and 2017.

Table 6: S.124 UK Economic Accounts assets, 2015 to 2017

£ Billions	Assets	Liabilities
2015	1,018	1,035
2016	1,181	1,119
2017	1,257	1,212

Source: UK Economic Accounts: sector - financial corporations (published end-June 2018)

The main source of the UKEA S.124 NMMFs' data is the quarterly [ONS Trusts surveys](#). Details on the quarterly ONS Trust surveys can be found in the methodology articles, [MQ5: investment by insurance companies, pensions funds and trusts QMI](#) and the [Background information on the institutions covered in the MQ5 release](#).

The latest results from the ONS Trusts surveys can be obtained from the [MQ5: Investment by insurance companies, pension funds and trusts statistical bulletin](#).

ONS Trusts surveys data

The quarterly ONS Trusts surveys collect data from investment fund managers.

The ONS Trusts surveys consists of three distinct balance sheet surveys:

- [Investment Trusts](#) (closed-ended funds)
- [Unit Trusts](#) (including Open-Ended Investment Companies)
- [Property Unit Trusts](#)

Table 7: ONS Trusts surveys assets, UK, 2015 to 2016

ONS Trusts Surveys	2015	2016	2016	2016
Investment Trusts	£ million	£ million		
short-term assets	3,194	4,743		
long-term assets	68,830	85,474		
Total	72,024	90,217	7%	
Unit Trust and Property Units Trusts				
short-term assets	65,130	78,978		
long-term assets	904,513	1,048,937		
Total	969,643	1,127,915	93%	
All ONS Trust surveys				
short-term assets	68,324	83,721		7%
long-term assets	973,343	1,134,411		93%
Total	1,041,667	1,218,132	100%	100%

Source: Tables 5.2 and 6.2 from ONS Trust Survey

In each of the three distinct ONS Trusts balance sheet surveys, it is the fund managers that are being surveyed about the investment funds they manage, rather than surveying the investment funds directly. For each reporting quarter, we produce a statistical bulletin and a [spreadsheet containing the ONS survey data, along with data for insurance companies and pension funds](#).

Since it is the fund managers being surveyed, and not the investment funds themselves, it is not possible to separately identify S.123 MMFs and S.124 NMMFs from the ONS Trust surveys' data submissions. Since, however, the May 2018 ONS shadow banking article on [S.123 money market funds \(MMFs\)](#) estimated that UK resident MMFs financial assets were around £20 billion and the total ONS Trust surveys total assets were £1.218 trillion in 2016, it can be estimated that UK domiciled MMFs are only likely to be around 2% of total ONS Trust surveys' assets.

The scope of the ONS Trusts surveys corresponds to the following four [Standard Industrial Classification](#) (SIC) codes:

- 64.301: Investment Trusts (that is, closed-ended funds)
- 64.302: Unit Trusts
- 64.304: Open-Ended Investment Companies (OEICs)
- 64.305: Property Unit Trusts

The scope of the ONS Trusts surveys also corresponds to the following two [European System of Accounts 2010: ESA 2010](#) financial sub-sectors:

- S.123 money market funds (MMFs)
- S.124 non-money market investment funds (NMMFs)

In a previous [Financial Services Survey 266 \(FSS 266\)](#) article, it was noted that the [Financial Services Survey](#) samples 20 SIC codes. So, taken together the ONS Trusts surveys and the Financial Services Survey cover 70% (24 of the 34) of the UK's financial SIC codes. Combined they cover most of the heterogenous financial activities outside of banking, insurance and pension funds.

Table 8: ONS Trust Surveys assets, UK, 2015 and 2016

Assets	Investment trusts		Unit trusts and property unit trusts	
	2015	2016	2015	2016
UK government securities denominated in sterling	244	415	41,824	49,352
UK government securities denominated in foreign currency	0	0	n/a	n/a
UK local authority investments	0	c	n/a	n/a
Other UK public sector investments	0	0	n/a	n/a
UK ordinary shares			249,355	268,812
Quoted	20,551	22,918	n/a	n/a
Unquoted	2,224	3,940	n/a	n/a
Overseas ordinary shares	36,880	47,519	298,515	361,606
Other corporate securities				
UK	427	529	64,615	65,598
Overseas	698	531	88,047	94,286
UK authorised unit trust units	331	394	n/a	n/a
Overseas government, provincial and municipal securities	c	c	26,171	38,918
UK existing buildings, property, land and new construction work	216	379	17,432	24,207
Other longer-term assets not elsewhere classified	c	8,665	118,554	146,158
Short-term assets	3,194	4,743	65,130	78,978
Total Assets	72,024	90,217	969,643	1,127,915

Source: Tables 5.2 (Investment Trusts) and 6.2 (Unit Trusts and Property Unit Trusts) from ONS Trust Survey

Notes:

1. c = Suppressed to avoid the disclosure of confidential data.

Table 8 shows that in 2015 to 2016 just over half of total financial assets held by ONS Trust survey respondents were equities, with overseas equity holdings exceeding UK equity holdings. Other corporate securities accounted for 13% of financial assets. A further 4% was held as UK government securities. In 2016 around 7% of assets were held as short-term assets.

The finding that just over half of total financial assets held by ONS Trust survey respondents in 2015 to 2016 were in equities is important, as the international [Financial Stability Board's](#) (FSB's) [Global Shadow Banking Monitoring 2018 Report \(PDF, 3.28MB\)](#) excludes equity funds that invest principally in equity securities from the FSB's narrow measure of shadow banking, as equity funds do not undertake credit intermediation.

8 . UK Economic Accounts data

In addition to the [ONS Trusts surveys](#) data discussed in the last section, we also publish balance sheet and flows data for S.124 non-money market investment funds (NMMFs) on an annual basis in the [UK National Accounts \(Blue Book\)](#) and on an annual and quarterly basis in the [UK Economic Accounts](#) (UKEA). These data sources are themselves, however, primarily based on the ONS Trust surveys.

UKEA balance sheet data for S.124 NMMFs published at the end of June 2018 are shown in Table 9.

Table 9: UK Economic Accounts financial balance sheet, UK, 2015, 2016 and 2017

Financial Assets		2015		2016		2017	
		Assets	Liabilities	Assets	Liabilities	Assets	Liabilities
IV.3	Financial balance sheet at end of period						
AF.2	Currency and deposits						
AF.21	Currency	0		0		0	
AF.22	Transferable deposits						
AF.22N1	With UK monetary financial institutions	32,348		36,579		37,923	
AF.221N2	Of which: foreign currency deposits with UK MFIs	6,982		8,145		9,443	
AF.22N9	With rest of the world monetary financial institutions	200		281		322	
AF.29	Other deposits	4,706		5,260		6,019	
AF.2	Total Currency and Deposits	37,254		42,120		44,264	
AF.3	Debt securities						
AF.31	Short-term						
AF.31N2	Issued by UK local government	0		0		0	
AF.31N5	Issued by UK monetary financial institutions	4,950		9,496		15,976	
AF.31N6	Money market instruments issued by other UK residents		30		17		17
AF.32	Long-term						
AF.32N5-6	Issued by UK monetary financial institutions and other UK residents	61,734	1,503	62,468	1,521	63,740	1,239
AF.32N9	Issued by rest of the world	115,022		133,918		150,637	
AF.3	Total Debt Securities	235,789	1,533	263,568	1,538	289,312	1,256
AF.4	Loans						
AF.41	Short-term						
AF.41N1	Issued by UK monetary financial institutions		3,380		4,620		4,269
AF.41N12	Of which: foreign currency loans by UK banks		1,520		2,264		1,855
AF.41N9	Issued by the rest of the world		729		579		523
	Long-term						
AF.421	Direct investment		0		0		0
AF.423	Finance leasing		0		0		0
	Other long-term loans						
AF.424N1	Issued by UK residents		1,499		2,143		2,240

AF.424N9	Issued by the rest of the world			237		255		260
AF.4	Total Loans			5,845		7,597		7,292
AF.5	Equity and investment fund shares/units							
AF.51	Equity							
AF.511N1	Listed UK shares	264,844		287,007		311,321		
AF.512N1	Unlisted UK shares	2,999		4,911		3,638		
AF.519N7	UK shares and bonds issued by other UK residents	0		0		0		
AF.519N9	Equity issued by the rest of the world	335,395		409,125		426,373		
AF.52	Investment fund shares/units							
AF.52N1	UK mutual funds' shares	85,451	1,012,706	101,184	1,088,474	106,291	1,182,175	
AF.52N9	Rest of the worlds mutual funds' shares	39,303		50,650		58,095		
AF.5	Total Equity and investment fund shares/units	727,992	1,012,706	852,877	1,088,474	905,718	1,182,175	
AF.6	Insurance, pensions and standardised guarantee schemes							
AF.61	Non-life insurance technical reserves	2		2		2		
AF.6M	Pension schemes		574			675		684
AF.6	Total	2	574	2	675	2	684	
AF.7	Financial derivatives and employee stock options	12,698	14,367	18,475	20,623	12,405	20,259	
AF.71	Of which: Financial derivatives	12,698	14,364	18,475	20,619	12,405	20,255	
AF.8	Other accounts payable	4,637	0	4,053	183	5,350	684	
AF	Total financial assets/liabilities	1,018,372	1,035,025	1,181,095	1,119,090	1,257,051	1,212,350	

Source: UK Economic Accounts: sector - financial corporations (published end-June 2018)

The main points from the UKEA table for 2015 to 2017 are:

- equities, both UK and rest of the world issued, account for more than 70% of total financial assets
- debt securities account for more than 20% of total financial assets
- liabilities are 97% dominated by the NMMFs' issuance of investment shares or units

9 . Next steps

This article has presented Experimental Statistics on S.124 non-money market investments funds (NMMFs) using data from a variety of sources including:

- Investment Association
- ONS Trusts surveys
- UK Economic Accounts and UK National Accounts
- Cayman Islands Monetary Authority

The Cayman Islands' data demonstrate the international nature of the investment industry, particularly for hedge funds. They are also important as they provide guidance on the jurisdictions in which UK investors invest in overseas domiciled investment funds, and similarly the overseas fund management activities of UK fund managers. It has been demonstrated that most hedge funds appear to be domiciled outside the UK. A similar conclusion for money market funds was reached in the [S.123 money market funds \(MMFs\) article](#).

It has also been shown that equity funds account for approximately half of UK domiciled traditional investment funds. Furthermore, equities are by far the largest asset class held in traditional investment funds. This finding is important as the Financial Stability Board's (FSB's) [Global Shadow Banking Monitoring Report 2017 \(PDF, 3.28 MB\)](#) excludes equity funds from its narrow measure of shadow banking, as equities do not undertake non-bank credit intermediation.

To summarise the main messages of this article:

- traditional investment funds have assets of approximately £1.2 trillion
- equity funds account for about 50% of traditional investment funds value
- equity asset holdings is the largest asset class within traditional investment funds
- equity funds are excluded from the FSB's narrow measure of shadow banking
- UK investors hold a high percentage of traditional investment funds domiciled in the UK
- hedge funds and MMFs are mostly domiciled overseas
- £271 billion of Cayman Island domiciled funds were managed from the UK in 2016

Areas identified as requiring further investigation include:

- hedge funds
- private equity and venture capital
- exchange traded funds (ETFs)
- rest of the world (RoW) domiciled investment funds held by UK investors
- rest of the world (RoW) domiciled investment funds managed UK fund managers
- UK domiciled funds held by RoW investors
- improved counterparty identification
- improved information on the assets composition of NMMFs portfolios
- using overseas financial regulatory sources to obtain UK NMMFs data

Subsequent S.124 NMMFs article(s) will present Experimental Statistics for non-traditional investment funds, for example, hedge funds, private equity, venture capital and exchange traded funds (ETFs), to complement the traditional S.124 NMMFs Experimental Statistics presented in this article.

The areas identified for further investigation will be completed in time for the publication of the full set of experimental “from whom-to-whom” (W2W) financial accounts and balance sheets in 2019. To meet this deadline, it will be necessary to complete these workstreams by early 2019. The remaining S.124 NMMFs articles will also be published according to this timetable.

We welcome feedback on this article and the subsequent articles in this series. Please contact us via email at FlowOfFundsDevelopment@ons.gov.uk if you would like to share feedback with us.

10 . Acknowledgements

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11 . Relevant Links

[Flow of funds archived background information](#)

Explanatory notes:

- [Institutional sectors and financial instruments](#)
- [AF.2 Currency and deposits](#)
- [AF.3 Debt securities](#)
- [AF.4 Loans](#)
- [AF.5 Equity and investment fund shares or units](#)
- [AF.6 Pensions, insurance and standardised guarantee schemes](#)
- [AF.71 Financial derivatives](#)

3 July 2018 – [Economic Statistics Transformation Programme: enhanced financial accounts \(UK flow of funds\) – using Beahurst data to better understand the economy](#)

2 July 2018 – [Economic Statistics Transformation Programme: enhanced financial accounts \(UK flow of funds\) – Financial Services Survey 266 – quarterly return of assets and liabilities](#)

11 June 2018 – [Experimental financial statistics for UK insurance sector using Solvency II data](#)

8 May 2018 – [Economic Statistics Transformation Programme: enhanced financial accounts \(UK flow of funds\) – shadow banking, money market funds](#)

2 May 2018 – [Economic Statistics Transformation Programme: enhanced financial accounts \(UK flow of funds\) – using Equifax data to better understand the economy](#)

1 May 2018 – [Economic Statistics Transformation Programme: enhanced financial accounts \(UK flow of funds\) – shadow banking introductory article](#)

30 April 2018 – [Experimental financial statistics for insurance using Solvency II regulatory data – enhanced financial accounts \(UK flow of funds\)](#)

15 February 2018 – [Economic Statistics Transformation Programme: enhanced financial accounts \(UK flow of funds\) – historic households and non-profit institutions serving households \(NPISH\) sectors data on currency and deposits](#)

23 January 2018 – [Economic Review: January 2018 – Economic Statistics Transformation Programme: a flow of funds approach to understanding quantitative easing](#)

17 November 2017 – [Economic Statistics Transformation Programme: enhanced financial accounts \(UK flow of funds\) – 2017 matrix update](#)

23 October 2017 – [Economic Statistics Transformation Programme: enhanced financial accounts \(UK flow of funds\) – progress on commercial data use](#)

25 September 2017 – [Economic Statistics Transformation Programme: enhanced financial accounts \(UK flow of funds\) reconciling sources of historic data for households and the non-profit institutions serving households \(NPISH\) sectors](#)

12 September 2017 – [Economic Statistics Transformation Programme: enhanced financial accounts \(UK flow of funds\)– A flow of funds approach to understanding financial crises](#)

31 August 2017 – [Economic Statistics Transformation Programme: enhanced financial accounts \(UK flow of funds\) estimating the value of other accounts receivable or payable in the UK economy](#)

21 July 2017 – [Economic Statistics Transformation Programme: enhanced financial accounts \(UK flow of funds\) improving the measurement of company quarterly profits](#)

3 July 2017 – [Economic Statistics Transformation Programme: enhanced financial accounts \(UK flow of funds\) progress on financial derivatives data](#)

5 June 2017 – [National Accounts articles: The UK Enhanced Financial Accounts; the introduction of the new securities dealers survey data and expansion of financial sub-sector detail](#)

31 May 2017 – [Economic Statistics Transformation Programme: enhanced financial accounts \(UK flow of funds\) commercial data use](#)

31 May 2017 – [Economic Statistics Transformation Programme: enhanced financial accounts \(UK flow of funds\) improving the economic sector breakdown](#)

27 April 2017 – [Economic Statistics Transformation Programme: enhanced financial accounts \(UK flow of funds\) employee stock options](#)

24 April 2017 – [Financial intermediation services indirectly measured \(FISIM\) in the UK revisited](#)

29 March 2017 – [Economic Statistics Transformation Programme: enhanced financial accounts \(UK flow of funds\) government tables for the special data dissemination standards plus \(SDDS plus\)](#)

30 January 2017 – [The UK Enhanced Financial Accounts: changes to defined contribution pension fund estimates in the national accounts: part 2 – the data](#)

16 January 2017 – [The UK Enhanced Financial Accounts: changes to defined contribution pension fund estimates in the national accounts: part 1 – the methodology](#)

8 August 2016 – [Economic Statistics Transformation Programme: UK flow of funds experimental balance sheet statistics, 1997 to 2015](#)

14 July 2016 – [Economic Statistics Transformation Programme: flow of funds – the international context](#)

14 July 2016 – [Economic Statistics Transformation Programme: Developing the enhanced financial accounts \(UK flow of funds\)](#)

10 March 2016 – [Identifying sectoral interconnectedness in the UK economy](#)

24 February 2016 – [Improvements to the sector and financial accounts](#)

12 January 2016 – [Historical estimates of financial accounts and balance sheets](#)

6 November 2015 – [Comprehensive review of the UK Financial Accounts](#)

13 July 2015 – [Introduction, progress and future work](#)