



Framework for Financial Stability Data Enhancement

Robert Heath

ESCoE Occasional Paper 05

November 2025

ISSN 2515-4664

OCCASIONAL PAPER

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Abstract

Following the global financial crisis there were a number of initiatives addressing the data gaps that required filling and strengthening to meet financial stability analytical needs. While the ONS together with the Bank of England have been working to close the gaps identified, this paper recommends a more holistic approach to both the development and publication of data for financial stability analysis. The paper uses the analytical framework of the G-20's Data Gaps Initiative to assess the present U.K. situation, and compare it with comparator economies, before providing some recommendations for what could be done going forward.

Keywords: Data gaps, flow-of-funds, financial accounts, Data Gaps Initiative (DGI), financial soundness indicators, UK financial system

JEL classification: E44, C82

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Published by:
Economic Statistics Centre of Excellence
King's College London
Strand
London
WC2R 2LS
United Kingdom
www.escoe.ac.uk

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Executive Summary

Since the turn of the century financial stability policy has gained in prominence, drawing alongside monetary and fiscal policy in the task of managing an advanced economy. In response, new data requirements have emerged.

Standard sets of data are made publicly available by the ONS on a frequent basis for the monitoring of economic and fiscal developments, but no such approach is taken with regard to financial stability. This paper contends that as the U.K. is a country with one of the world's most advanced financial sectors, with myriad interconnections both domestically and with the global financial system, and given the growing policy importance, a strategy is needed to develop and publish a standard set of data to support financial stability policy making and analysis, and inform the general public. In doing so, the U.K. could become an intellectual leader in the development and publication of such data.

What needs to be done? This paper would not claim to have all or even many of the answers. Indeed, monitoring financial stability risks can involve a wide range of data the importance of which can vary over time, and needs to be augmented by effective intelligence gathering by central banks, supervisors and regulators. But it makes number of recommendations that are best summed in the following three key recommendations.

1. *A website for financial stability data be established*, launched with tables containing the macro-financial indicators recently agreed by IMF member countries, including the U.K., for country surveillance purposes. Indeed, as this paper demonstrates, a considerable amount of data relevant for financial stability analysis exists, mostly reported to international agencies. These data should be brought together on a public domestic website for use by policy makers and analysts, as well as the general public.

2. *A strategy for financial stability analysis data be established*. To this end, ESCoE could consider holding a conference along the lines “Data needs for financial stability analysis: what is required?” with the recommendations that emerge used to develop a holistic strategic plan that can be implemented. The conference should include domestic financial stability policy makers and analysts and representation from the Financial Stability Board (FSB) and IMF. It could be structured around (1) risks in the financial sector, and (2) vulnerabilities, interconnections and spillovers, and include covering the long-term development of financial accounts and from-whom to-whom data.

3. *Further research is needed into the detailed U.K. national accounts sub-sectoring of the non-bank financial institutions sector beyond the SNA breakdowns*. The proposed conference can help identify user needs, while the Bank of England's Financial Stability Reports, the FSB's annual non-bank financial institutions monitoring exercise, and the comparator country experiences of USA, Canada and Japan, including on data sources, could be drawn upon.

Introduction

1. The Governor of the Bank of England (Bank) stated in October 2024, “macro-prudential policy has to stay focused on risks that could threaten the system as a whole, taking account of concentrations, interconnectedness, and opacity.”¹ The monitoring of these risks needs data. While most macro-economic statistics have been developed and compiled primarily for macro-economic policy making, the period around the start of this century has also seen a focus on data sets that meet the needs of financial stability policy.²

2. Following the Asian financial crisis in 1997/98, new data to monitor financial soundness were developed. Then, after the global financial crisis (GFC) in 2008, a number of initiatives addressed the data gaps that required filling and strengthening to meet financial stability analytical needs. Domestically the Bean report highlighted the importance of flow-of-funds data for financial stability analysis, and the Barker report emphasised the user interest in going beyond standard national accounts.³ Internationally, the G-20 launched the Data Gaps Initiative (DGI).

3. The U.K. has made progress in meeting the new challenges in a number of areas, not least cross-border data, and it is evident from the paper published by the ONS in December 2024 that significant work to close gaps in the financial accounts is underway in cooperation with the Bank.⁴ Nonetheless, data gaps remain, and there is no domestic website that brings together data to monitor financial stability in a manner that mirrors that for economic and fiscal policy.

4. What are these data needs? From a review of financial stability analysis, both domestic and internationally, the need is for data to monitor (1) risks in the financial sector, and (2) vulnerabilities, spillovers and interconnections within and across economies. This analytical framework and associated data – see Chart 1, are used to assess the present U.K. situation, and compare it with comparator economies. A list of recommendations is provided at the end of the paper.

5. At the outset, it must be stressed that data cannot solve all financial stability analytical needs. Rather, data provide pointers and warning signs for analysts to dig deeper.

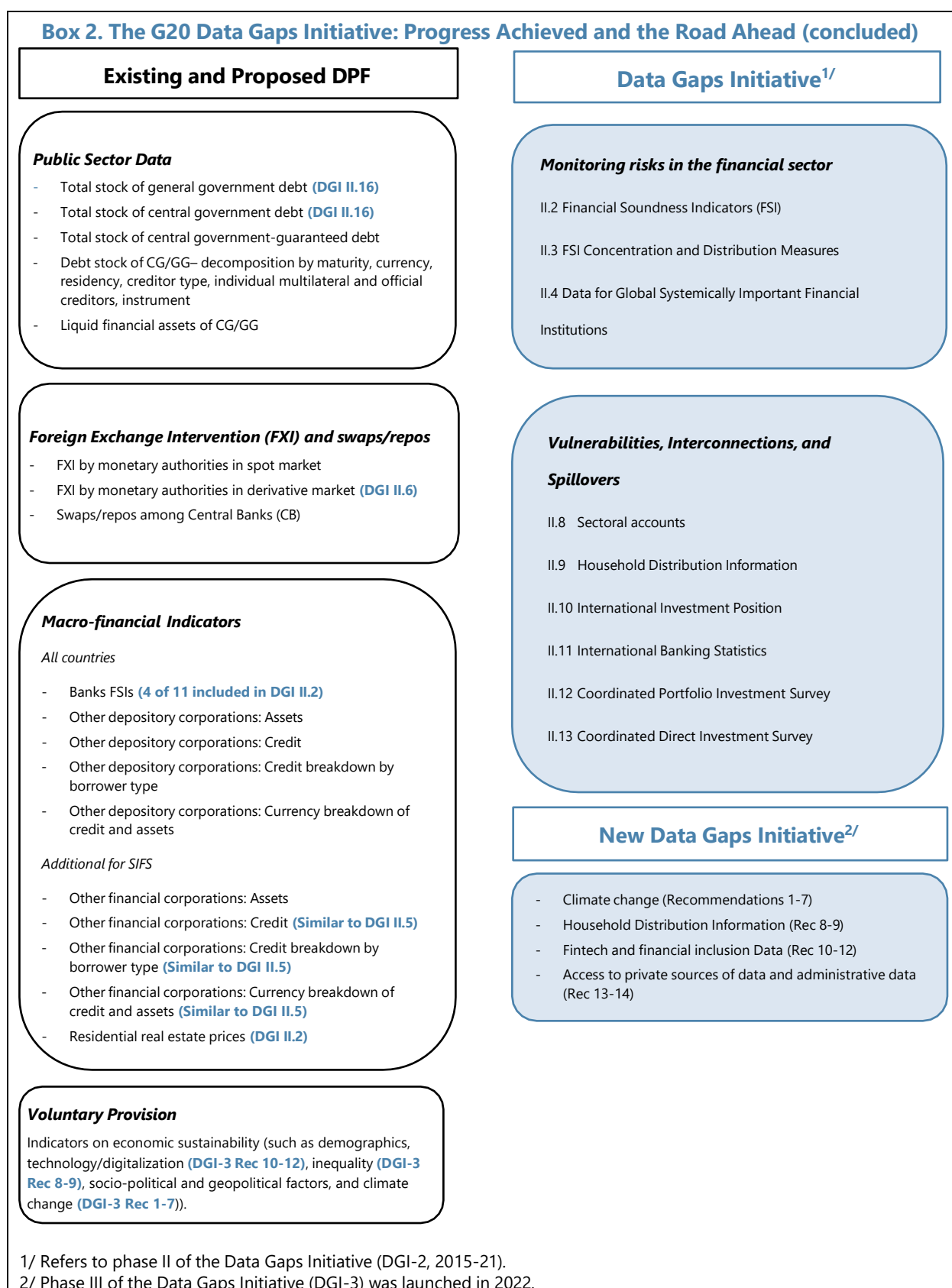
¹ “Today’s challenges in Financial Stability: the new and the not so new”: <https://www.bankofengland.co.uk/speech/2024/october/andrew-bailey-keynote-address-at-the-bloomberg-global-regulatory-forum>

² A comprehensive review of financial stability data needs was set out in a 2017 IMF Working Paper: “Financial Stability Analysis: What are the Data Needs?”

³ Independent Review of U.K. Economic Statistics (2016); and Barker Report on National Accounts and Balance of payments (2014).

⁴ See U.K. Financial Accounts Update, December 2024 at <https://www.ons.gov.uk/releases/ukfinancialaccountsupdate>

Chart 1: Framework for Financial Stability Analysis⁵



⁵ The chart is from the 2024 IMF paper on Data Provision to the Fund for Surveillance Purposes (DPF), setting out not only the DGI II framework on the right hand side, but also the new mandatory data series to be reported to the Fund on the left hand side. A discussion of how DGI-II meets financial stability analytical needs see “G-20 DGI II: Meeting the Policy Challenge,” IMF Working Paper 16/43.

Section 1: Monitoring Risks in the Financial Sector

6. The financial sector consists of deposit-takers and non-bank financial institutions (NBFI), as well as financial markets and infrastructure. The financial stability risks associated with the two “sectors”⁶ differs, so are considered separately in this section.

7. Financial market data include, inter alia, interest rates and derivative spreads, and asset prices such as for equities and debt securities. As such data are readily available, this paper does not address these data needs, but a selection of key statistics from these markets should be included in any financial stability website. Financial stability risks can arise from the operational resilience of financial market infrastructure, such as payment and clearing systems - indicators can include data such as on margin calls,⁷ and/or number of failed transactions. This paper does not explore further, but suggests the topic of data to monitor financial infrastructure resilience could be included in the proposed ESCoE conference.

Deposit-takers

8. As is clearly evident, the deposit-taking sector is closely regulated, and data collected, by the supervisory agencies for both micro- and macro- prudential purposes. Since around the turn of the century there have been numerous policy-related initiatives, including: domestically, the establishment of the Bank’s Financial Policy Committee (FPC) and the publication of semi-annual Financial Stability Reports (FSR); internationally, the strengthening of banking regulations; the creation of the Financial Stability Board (FSB);⁸ the creation of a monitoring database of globally significantly important financial institutions; and the IMF’s Financial Sector Assessment Programme (FSAP), mandatory every 5 years for countries, such as U.K., with systemically important financial centres.

9. The first major statistical initiative designed with financial stability analysis specifically in mind was the Financial Soundness Indicators (FSIs) launched by the IMF in the early 2000s. The data are designed to help in the assessment of the strengths and vulnerabilities of financial systems, with the focus of the core (essential) FSIs on the deposit-taking sector. The core FSIs cover indicators of deposit-takers’ capital adequacy, asset quality and liquidity. The Bank compiles and publishes virtually all the core set, including all those

⁶ In this paper, NBFI is described as a sector, with sub-sectors. In the SNA, financial corporations is a sector.

⁷ For instance, the Bank’s November 2024 Financial Stability Report noted that during March 2020, initial margin requirements at U.K. CCPs increased by around 31% to £58 billion, with a maximum daily increase of £10 billion, and average daily variation margin calls were five times higher than in January and February 2020. And as noted below, the 2024 FSB report (page 9) reported a large decrease in asset holdings at U.K. central counterparties between end-2022 and end-2023.

⁸ The FSB has a small secretariat based at the BIS and is often reliant on its member institutions (i.e. national central banks and supervisory agencies, etc) to carry out any substantive work.

in the Special Data Dissemination Standard (SDDS) Plus,⁹ on a quarterly frequency through the IMF FSI website. The Bank also publishes banking sector regulatory capital data on a quarterly frequency.¹⁰

10. In the 2010s, the IMF introduced templates to measure concentration and distribution for a set of core deposit-takers FSIs. Around 20 countries, not including U.K., reported data. Reporting countries included USA, Germany and Italy among the G7, and countries like Australia, Brazil and Spain. Like other distributional measures, these data can highlight, for instance, whether the average sector-wide ratios are clustered around this average, or spread over a wide range, and whether there are deciles or quintiles of institutions whose financial performance is significantly different from the average with potential to cause systemic issues.

Non-Bank Financial Institutions (NBFI)

11. According to U.K. data, financial assets owned by NBFIs in the U.K. account for around 50% of those owned by the U.K. financial sector,¹¹ and amount to around three and half times GDP.

12. The Bank's Governor noted in his October speech, "the non-bank sector is very large and growing. It is disparate in nature, opaque in important places and the interlinkages...therefore complex and hard to observe," and "we have a shift of financial intermediation towards non-banks." He reinforced this message in February 2025.¹²

13. Parliament is also taking an interest: at the April 2024 hearing for the new Bank of England Deputy Governor for Monetary Policy, the House of Commons Treasury Committee asked her views on the "risks arising from the growing non-bank financial intermediary sector and its relationship to the banking sector."¹³

14. The IMF's 2021 FSAP mission assessment was: "Data gaps continue to impair the U.K.'s ability to monitor, identify, and analyse NBFI risks. While the FPC (Financial Policy Committee) has acknowledged these risks in its systemic risk work for many years, progress is still to be made on the material data gaps mentioned in the 2016 FSAP."

⁹ The SDDS Plus core set are: regulatory Tier 1 capital to risk-weighted assets, regulatory Tier 1 capital to assets, non-performing loans (NPL) net of provisions to capital, NPLs to total gross loans, return on assets, and liquid asset to short-term liabilities. See IMF "Guide to the Special Data Dissemination Standard (SDDS) Plus for Adherents and Users" (2015) for the full range of datasets in the SDDS Plus.

¹⁰ See <https://www.bankofengland.co.uk/statistics/banking-sector-regulatory-capital/2024/2024-q3>

¹¹ These data are published on the IMF FSI website.

¹² See "Are we underestimating changes in financial markets?" Andrew Bailey, February 2025: <https://www.bankofengland.co.uk/speech/2025/february/andrew-bailey-keynote-speech-university-of-chicago-booth-school-of-business>

¹³ See <https://committees.parliament.uk/publications/44220/documents/219977/default/>

15. Given this, not surprisingly, the question of improving NBFi data is a “live” issue of relevance to policy makers.¹⁴ The ONS, in cooperation with the Bank, is working to close gaps, particularly with regard to the SNA sub-sectors. But there is more that is needed.

Why enhance NBFi data?

16. From reviewing policy makers comments and official reports there are four financial stability risks of NBFi in particular that need monitoring: the *growth of credit provision* by so-called shadow banks; the elevation of *liquidity risk* such asset/liability mismatches of maturity and liquidity;¹⁵ *leveraged positions* opening up exposure to solvency and liquidity risks from sudden shifts in market sentiment; *interconnections* among NBFis and with deposit-takers, potentially magnifying financial system vulnerabilities.

17. Unlike the deposit-taking sector, which is well-defined by regulation, the NBFi sector covers a heterogeneous set of entities, invariably less closely regulated than deposit-takers. The way in which the risks combine differs by type of entity within the sector, as does their relative importance and growth: some entities borrow short-term, others lock in investors long-term; some entities are publicly-traded, others are private entities; some invest primarily in loans, others in equity or debt securities; some facilitate credit creation, and others provide securitisation-based credit intermediation. So, to address the complexity of institutions and risks, the North American and Japanese economies present data in their official statistics on a very disaggregated set of NBFi entities – see Annex 1.

International Initiatives and developments

18. So how has monitoring of NBFis developed since the turn of the century to address policy makers concerns? The turn of the century is a good starting point because following the late 1990s Asian financial crisis there was a step-change in the policy interest in financial stability analysis, as evidence by the establishment of the G-20 and Financial Stability Forum, later FSB, both in 1999.

Financial Soundness Indicators (FSIs) (early 2000s)

19. As noted above, the initial focus of FSIs was very much on the deposit-taking sector, but the list also included so-called “additional indicators” for NBFis, and other sectors – non-financial corporations (NFC) and households, customers of financial institutions. Initially there were only two NBFi indicators, measuring the size of financial assets owned by the

¹⁴ See for instance: “A data revolution: Built together, for everyone,” (2024) James Benford: <https://www.bankofengland.co.uk/speech/2024/july/speech-given-by-james-benford-at-the-fca-data-innovation-for-future-of-regulation>

¹⁵ The [2024 FSB Final Report on Liquidity Preparedness](#) supports the need for NBFi liquidity monitoring and encourages the publication of liquidity metrics for key NBFi sectors.

NBFI sector relative to total financial assets owned by the financial sector and to GDP. The U.K. reports these data for publication on the IMF's FSI website on a quarterly frequency.

20. In the 2010s the FSI list was expanded to include sub-sector detail covering money market funds, insurance companies and separately pension funds. In addition to indicators on their relative size, the expanded list includes indicators that help assess: the sectoral concentration of investments and *liquidity* risks for money market funds; *leverage and profitability* of insurance companies; and *liquidity and profitability* of pension funds. The U.K. does not report the expanded list. Nonetheless, publication of at least the relative shares of money market funds, insurance, and pension funds' financial assets within the financial sector and to GDP should be considered, not least given that data appears to be available, at least on an annual basis – see FSB Global Monitoring Report ahead.

System of National Accounts, 2008 (2008 SNA)

21. In 2008 a new SNA was published. With the growing interest in NBFIs the sub-sectoring of this sector was significantly expanded from that in the 1993 SNA. The latter “only” identified three NBFI sub-sectors: insurance and pension funds; other financial institutions other than insurance and pension funds; and financial auxiliaries. The 2008 SNA identifies seven NBFI sub-sectors: in addition to separating out insurance from pension funds, the additional sub-sectors include money market funds, non-money market investment funds; and captive financial institutions and money lenders. The ESA 2010 sets out the same sub-sectors as 2008 SNA, as does the 2025 SNA. National accounts data are compiled quarterly by the ONS with quarterly timeliness.

22. At the time of writing, U.K. enhancements are on the way so by 2026/27 the ONS is expecting to increase NBFI sub-sector granularity. These developments are most welcome and the work involved should not be under-estimated or under-appreciated. Nonetheless, the Barker report noted in 2014 (section 4.2.3.2) that users were “seeking expanded articulation of the sectors within the financial sector of the economy,” that are “beyond the existing standard National Accounts.” In short, as the Barker report indicates, and as Canada, Japan, and US have shown (see Annex 1), while a necessary input, the SNA sub-sector splits are not sufficient for monitoring the financial stability risks arising from the diverse set of NBFI entities; the level of disaggregation of NBFI sub-sectors can go well beyond that in the SNA.

23. Further research is needed to determine the detailed national accounts NBFI sub-sectoring beyond SNA necessary to meet U.K. financial stability analytical needs. This paper provides some suggested ideas in Annex 2, but it is advisable to get broad institutional buy-in from senior ONS and Bank management, and perhaps the Treasury and relevant supervisors, on this issue given the potential reporting burden on both the ONS and the entities in the identified sub-sectors.

FSB Global Monitoring Report (2011)

24. In 2011 the FSB started an annual survey of member countries to strengthen the monitoring of the NBFI sector. These survey results are published in an annual “Global Monitoring Report on Non-Bank Financial Intermediation.” It is a most comprehensive document. The report breaks down the NBFI sector data various ways, including by national accounts-based sub-sectors¹⁶ and by an economic classification developed by the FSB (EF1, EF2, EF3, EF4, EF5).¹⁷

25. In addition to measuring the size within the global financial system, and trends among the various sub-sectors of the NBFI sector, the FSB annual report considers the *interconnectedness* between NBFIs and the banking sector and provides measures of *leverage* by type of NBFI entity. Also, the role of private finance in NBFI financial intermediation was assessed in the 2023 report. To assess *liquidity* the economic classification uses concepts of liquid assets and short-term liabilities; the latter are defined in the *FSI Compilation Guide*.¹⁸

26. The U.K. reports to the FSB on both national accounts and economic bases, including separately identifying insurance and pension funds, and the central bank and banks. The latest report, released in December 2024, cover data up to 2023. The report shows (Graph 1-2) that banks have the largest share of financial assets within the U.K. financial system (around 50%), followed by other financial intermediaries (around 30%), with insurance and pension funds both under 10 %.

27. Among the economic functions, by far the largest U.K. categories are E1 and E2 functions – collective funds and finance companies that are susceptible to *liquidity risk*, from investors (EF1) and from the markets (EF2). The FSB reports that the U.K. was a significant contributor, behind the USA, to the almost 8 percent global growth of EF2 entities in 2023.¹⁹

¹⁶ More specifically: central bank and banks separately, data for pension and insurance companies separately, other financial intermediaries, and financial auxiliaries. Public financial institutions are also identified but not in the U.K. data.

¹⁷ Specifically: EF1: collective investment funds with features that make them susceptible to runs; EF2: Finance companies, leasing/factoring companies, consumer credit companies that are dependent on short-term funding; EF3: Market intermediation entities such as broker-dealers, custodial accounts, securities finance companies that are dependent on short-term funding; EF4 Credit insurance companies, financial guarantors, monoline insurers that facilitate of credit intermediation; EF5: Securitisation vehicles, structured finance vehicles, asset-backed securities that provide credit intermediation. Financial auxiliaries are unallocated.

¹⁸ In the FSI Guide, liquid assets comprise (1) currency; (2) deposits and other financial assets that are available either on demand or within three months or less; and (3) securities that are traded in liquid markets (including repo markets) that can be readily converted into cash, with insignificant risk of change in value under normal business conditions. The FSB broad definition of liquid assets is essentially the same. Short-term liabilities could be withdrawn either on demand or within three months or less. Preferably, “short-term” should be defined on a remaining maturity basis. See <https://www.imf.org/en/Data/Statistics/FSI-guide>

¹⁹ See [Global Monitoring Report on Non-Bank Financial Intermediation 2024](#) page 29.

28. In the 2023 FSB report, data from a commercial data provider covering private finance companies²⁰ shows that private equity and private credit are the most significant for the U.K. among this group. Indeed, it is worth noting that the significance of the U.K. is such that it was the only country separately identified in FSB's geographical distribution of private finance assets (page 66 of the 2023 report).

29. Also, the FSB reports more detailed information on NBFI national accounts-based sub-sector activity, albeit annually, than is available in the financial accounts the ONS publishes.²¹ The FSB report does not provide country specific data, but from the text of the 2023 report, assets held by central counterparties in the U.K. at end-2022 exceeded any other country, although they fell sharply in 2023, while assets held by U.K. broker-dealers were second only to the USA in size.

30. A major step forward in transparency would be to publish the data reported to the FSB, both on the national accounts and economic bases, even in summary form, subject to confidentiality requirements. The FSB report is "only" annual with an almost year's timeliness.²² The possibility of data collection and publication on a more frequent basis, say semi-annual, could be investigated, with the FSB.

International Association of Insurance Supervisors (IAIS), Global Monitoring Exercise (2019)

31. DGI-II included a recommendation to develop a reporting template for Global Systemically Important Insurance Companies (G-SII) (recommendation 4). A framework for identifying G-SIIs was adopted by the IAIS in 2013. The DGI recommendation was suspended when the IAIS decided to launch an annual Global Monitoring Exercise – first report being in 2019. The report monitors risks and trends in the global insurance market – particularly *solvency*, *liquidity* and *profitability*, and assesses the possible build-up of systemic risk – providing "systemic risk scores."

32. The template to be reported is notably detailed: assets by instrument owned and liabilities, including the five largest sovereign asset exposures; data on liquidity and off-balance sheet liabilities; and considerable other data such as on cash flows, types of borrowings, derivative positions, etc. The press release in 2024 stated that the report covers

²⁰ Specifically, asset under management in private equity companies, venture and growth capital companies, private credit companies and financial companies with real assets.

²¹ In Appendix 4 of the 2024 Report: hedge funds, real estate investment trusts, money market funds, other investment funds, finance companies, broker-dealers, structured finance vehicles, trust companies, captive financial institutions and money lenders, pension funds, insurance corporations, and central counterparties.

²² The FSB provides the detailed global data underlying its tables and charts, along with less granular national data on its website. Available at [Global Monitoring Report on Non-Bank Financial Intermediation 2024 - Financial Stability Board](https://www.fsb.org/2024/12/global-monitoring-report-on-non-bank-financial-intermediation-2024/). In addition, there's also an interactive tool to visualise the data. <https://www.fsb.org/2024/12/global-monitoring-report-on-non-bank-financial-intermediation-2024/>

60 of the largest international insurance groups, covering 90% of global written premiums. No separate national data are disseminated.

33. While the data may not be directly relevant for the national accounts, the ONS could approach the Prudential Regulatory Authority to learn more about the exercise and whether any of the data collected is of relevance as a broad cross-check on the data the ONS collects.

Recent developments that need monitoring

34. The Bank's June 2024 FSR (page 56) stated that the Bank's Financial Policy Committee "has previously identified non-bank leverage as a vulnerability in market-based finance,"²³ and in July 2025, the FSR analysed recent trends.²⁴ This message on NBFI leverage was echoed internationally in the G20 Finance Ministers and Central Bank Governors July 2024 Communique,²⁵ and followed up in an FSB report on the topic.²⁶ Information on, and trends in, leverage are available from the financial account balance sheet accounts for the NBFI, and by sub-sector, if the latter are sufficiently identified but may not tell the whole story due to off-balance sheet positions, e.g., through derivatives.

35. While financial markets and institutions are always innovating with new products – e.g., crypto, and new ways of delivering products e.g., fintech, one of the most important recent trends in financial markets and institutions is the increasing split between publicly-quoted and non-publicly (private) quoted NBFIs, and between publicly-traded and privately-traded financial instruments. Indeed, recent Bank FSRs (June 2024, November 2024 and July 2025) have included chapters on vulnerabilities in private equity, including in their relation to life insurance.

36. Why the interest? First, compared with publicly-quoted financial institutions, private NBFIs e.g., hedge funds, private equity, venture capital funds etc., tend to have different behavioural patterns than other financial institutions: investing in more illiquid assets, with investors willing to take a longer time-horizon, and, from press reports, valuation methods that do not always reflect current market prices. If markets turn quickly, and investors want

²³ See <https://www.bankofengland.co.uk/-/media/boe/files/financial-stability-report/2024/financial-stability-report-june-2024.pdf>

²⁴ See [Financial Stability Report - July 2025 | Bank of England](#), Box C, page 75.

²⁵ See paragraph 23: <https://www.g20.utoronto.ca/2024/241024-finance-communique.html#:~:text=In%20line%20with%20our%20landmark,tax%20transparency%20and%20fostering%20global>. The FSB published a consultation document in December 2024.

²⁶ The [2025 FSB Final Report on NBFI Leverage](#), outlines a new integrated framework for identifying and mitigating leverage-related risks in NBFIs (e.g., risk identification and monitoring, addressing leverage in core markets, and cross-border cooperation).

their money, exposure of other financial institutions to these entities could be a source of financial vulnerability.²⁷

37. Second, the performance of financial instruments traded off-market are invariably not subject to the same degree of transparency as publicly-traded financial instruments and not as liquid. The type of potential questions that can arise include: How exposed are publicly-quoted financial institutions to such assets? Is the trading of financial instruments off-market growing? Are private NBFIs the main participants in private markets?

Comparator economies

38. Annex 1 sets out the NBFI sub-sector breakdown in U.K., US, Canada, Japan, and Euro area. While the timeliness of the U.K. releasing data is broadly the same as for these other economies, the sub-sector splits and available information, particularly in the North America economies and Japan, is beyond that of the U.K. The Euro area appears closer to, but ahead of, the U.K., in that the full SNA/ESA NBFI sub-sector split is published (except money market funds are merged with deposit-takers).

Section 2. Vulnerabilities, Interconnections and Spillovers

39. Financial stability risks can emerge from a number of sources other than the financial sector. The data needed to monitor potential sources of risk range from cross-border surveys, to data derived from financial accounts, such as types of credit and debt levels, including the government; asset prices such as real estate;²⁸ and distributional data, such as for households.

Cross-border financial interconnections

40. The 2014 Barker review of national accounts and balance of payments recommended that “particular attention be given to international financial transactions as the flow-of-funds (from-whom to-whom) datasets are further developed and that consideration be given to using the CPIS (Coordinated Portfolio Investment Survey) and the CDIS (Coordinated Direct Investment Survey) organised by the IMF to form part of the base methodology” (development recommendation 7).

41. The U.K. is a leading contributor to cross-border data surveys – the U.K. was a founder member of the BIS’s International Banking Statistics (IBS) – both on residence and

²⁷ The Bank of England’s November 2024 FSR (page 94) reported that the Bank is co-leading the FSB’s open-ended funds (OEF) Data Pilot Project, which is considering the availability of data to monitor vulnerabilities arising from liquidity mismatches in OEFs.

²⁸ The ONS publishes residential real estate prices monthly. The ONS does not appear to publish commercial real estate prices: the Bank June 2024 FSR included a chart of these prices for USA, Euro area and U.K., with U.K. data from Bank calculations. Also, the BIS has a commercial real estate price website to which around 20 countries report, but there is no U.K. data.

nationality bases; was one of the main driving forces behind the establishment of the CPIS; and has worked with other countries to strengthen the IBS, CPIS and CDIS data post the GFC. And the U.K. has for many years been publishing a comprehensive International Investment Position (IIP) statement – one of the first in the world to do so, although the NBFIs sector is not separately identified.

Financial Accounts

42. The 2008 SNA framework includes both above- and below-the-line sectoral information. This paper is focusing on the financial accounts sectoral information – the below-the-line sector data. This involves sectors and sub-sectors by instrument, transactions, other flows, and particularly position data, as defined in the 2008 SNA. The transactions data are sometimes known as flow-of-funds data, a term that can also refer to from-whom to-whom data - the same sectors and instruments but providing counterpart information.

43. In 2016, Professor Bean wrote: “The access to a detailed breakdown of the institutional sectors with fine detail on assets and liabilities by specific financial instruments, including counterparty information, is essential for the effective evaluation of the risks to financial stability. This information allows a better understanding of the interconnectedness between key players in the financial system, as well as the shadow banking system, when conducting stress tests. the ideal Flow-of-Funds statistics should be constructed bottom-up, with data collected at firm level.”

44. Further, the ONS’s December 2024 paper notes that financial accounts data “assist policymakers in monitoring spillovers from the financial sector to other sectors of the economy and internationally,” and “international spillovers are of particular importance to the U.K., given the U.K.’s role as a global financial centre.” This reinforced the message in a joint 2015 Bank and ONS paper, “in order to assess risks and calibrate the effects of its tools, it (the Bank’s FPC) needs reliable data on both the UK financial system and the links between the financial sector and the wider economy.”²⁹ Similarly, the OECD stated in 2017: “The framework of financial accounts and balance sheets, delivers essential macro-economic information to monitor financial risks and vulnerabilities, and analyse links between the world of finance and the “real” economy.”³⁰

45. Balance sheet data are particularly relevant for monitoring financial risks. The Executive Summary in an IMF 2015 paper on “Balance Sheet Analysis in Fund Surveillance,” summed up the importance, as such: “Balance sheet analysis captures the role

²⁹ See “The U.K. Flow of Funds Project: introduction, progress and future work.” <https://www.bankofengland.co.uk/statistics/articles/2015/the-uk-flow-of-funds-project-introduction-progress-and-future-work>

³⁰ Understanding Financial Accounts: https://www.oecd.org/content/dam/oecd/en/publications/reports/2017/11/understanding-financial-accounts_g1g8072a/9789264281288-en.pdf. U.K. financial accounts data are published by the OECD: <https://www.oecd.org/en/data/datasets/financial-accounts-and-balance-sheets.html>

that financial frictions and mismatches play in creating fragility and amplifying shocks. This is key to understanding the macroeconomic outlook, identifying vulnerabilities, and tracing the transmission of potential shocks and policies.”³¹ Balance sheet data can allow an analysis of the transfers of value between sectors.

46. At the outset it must be made clear that collecting and compiling financial accounts data is a challenging task and that a wide range of data are needed to monitor financial stability risks, not all of them based on national accounting principles. However, a comprehensive set of financial accounts, flows and positions, is the bedrock of any analysis of the system as a whole, underpinning other financial data, placing them in context.

47. Detailed financial accounts data supports financial stability analysis, such as through measures of credit growth and leverage ratios - debt-to-equity, debt to GDP ratios, by sector and sub-sector, such as set out in the IMF’s “encouraged” macro-financial indicators list.³² The instrument breakdown indicates the type of risks taken as different instruments have different risk profiles both for borrowers and lenders e.g., loans (including repos), compared with debt securities, compared with equity securities. Very encouragingly, the ONS’s December 2024 paper says Financial Services Survey (FSS) improvements will provide information on unlisted equity holdings of private equity and holding companies: the growing need to separate out privately-traded from publicly-traded securities was noted above.

48. The U.K. publishes quarterly financial accounts data and as noted above is making progress in filling gaps. However, the U.K. has not fully implemented recommendations made in the Bean report. There are two significant issues to address for the U.K. to compile of comprehensive financial accounts for use in financial stability analysis. The first is better sub-sector identification in the non-bank financial corporations sector – this was discussed above. The second issue is that of the central bank sub-sector.

49. The 2008 SNA sector framework separately identifies the central bank. However, while it provides a weekly report on its activities, the Bank has confidentiality concerns over the inclusion of the central bank balance sheet in financial accounts except with a very long-time lag of over a year. So presently, data for the central bank is merged together with that of other deposit-takers for recent quarters. Obviously, there is justification for restricting the release of information if it could cause negative ramifications in financial markets. But other countries compile financial accounts separately identifying the central bank or in some instances monetary authorities – see Annex 3.

50. Beyond addressing the NBFIs and central bank issues, a short-term strategy, if not already in train, would be to undertake a detailed benchmark assessment of U.K. financial

³¹ Available at <https://www.imf.org/external/np/pp/eng/2015/061215.pdf>

³² See Section V Table 4 (c) in the Background paper to the IMF’s Data Provision to the Fund for Surveillance Purposes: <https://www.imf.org/-/media/Files/Publications/PP/2024/English/PPEA2024016.ashx>”

accounts against the international statistical standards e.g., gaps in balance sheets, missing sub-sectors, instrument identification, etc with the objective of closing gaps. A longer-term strategy would include reconciliation of stocks and flows, and the development of from-whom to-whom data – see next sub-sector.

51. Better, clearer, and more easily searchable presentation of financial accounts on the ONS website should also be considered. For most of other comparator economies, searching for financial or sector accounts on the relevant website leads the user links to these data, the US being the most direct, others needing a little more investigation. The ONS website needs to have a direct link to financial accounts data, providing detailed data by sector and sub-sector. Statistics Canada’s website might be the best for the ONS to emulate.

From-whom to-whom

52. The importance of compiling from-whom to-whom data was recognised by the 2014 Barker Report.³³ It noted (page 53) that users were particularly asking for information on which sectors hold the assets/liabilities of which other sectors of the economy. To develop the from-whom to-whom data the Report recommended that a joint ONS/Bank group be formed - the ONS/Bank Senior Financial Sector Accounts Steering Group was established and meets quarterly.

53. From-whom to-whom data supports analysis of interconnections within the economy and with counterparties in the rest of the world. Such data can be used in stress tests to better understand how shocks might transmit through the economy and highlight vulnerable concentrations and linkages. Understanding interconnections has become a feature of financial stability analysis as Bank’s Governor set out in his October 2024 comments, and as was also referenced by Bean in his report.³⁴

54. The joint 2015 Bank and ONS paper referenced in paragraph 44 commented on the importance of developing from-whom to-whom data. The article noted the benefit in “identifying the build-up of risks in the financial sector and in understanding financial connections amongst the institutional sectors and sub-sectors within the economy.” Further, “the enhancement of financial accounts to include from-whom to-whom data and improved sector and instrument breakdown would also have wider-reaching benefits for the National Accounts.” The 2015 article concluded that “ideally a full set of matrices would be published in Blue Book 2019.”

³³ The Review used the term “flow-of-funds.” But made clear this meant from-whom to-whom data.

³⁴ Bean noted that the U.K. compared unfavourably with most European countries in producing flow-of-funds data from granular level data. He identified Portugal as a role model in this regard.

55. In 2019 and in 2020 the ONS did publish experimental from-whom to-whom balance sheet data, with detailed breakdowns of the NBFi sector and by instrument.³⁵ The ONS stated that these data were not directly comparable with the ONS's financial and national accounts data. The 2020 release covered end-2016, -2017, and -2018. But there does not appear to have been any subsequent releases of these data. The experimental data should be updated and published for the years since, if the source data are available.

56. The best set of from-whom to-whom data is that based on the financial accounts, such as produced by Canada. However, as the Barker report noted, this requires a significant amount of data. In the U.K. it would appear that publication of from-whom to-whom data on such a basis is many years off, but to go some way to meeting user needs, the ONS could consider publishing on its website the from-whom to-whom data for insurance companies and debt securities that were referenced in the ONS's December 2024 paper, when such data become available.³⁶ A good comparator example is the Bank of Japan: it publishes to-whom from-whom data for loans and domestic debt securities in its quarterly flow-of-funds publication.

57. An alternative approach to the national accounts was developed in the IMF in the 2000s drawing on existing data sets to develop a balance sheet matrix of to-whom from-whom relationships. This is known as the "Balance Sheet Approach (BSA)."³⁷ The IMF runs training courses on the BSA. To produce a BSA it is necessary to compile IIP, CPIS, and government finance data. But the centrepieces are separate Standardised Report Forms (SRFs) for the central bank, other depository corporations and the NBFi sector. SRFs were developed by the IMF in the mid-2000s to provide detailed counterparty data for these financial corporation sectors vis-a-vis other sectors on a resident basis, in a globally standardised form.

58. The possibility of developing a BSA could be considered by the U.K. Given the Bank's confidentiality concerns that limit the possibility of a separate central bank SRF, an alternative might be to compile an SRF for the deposit-taking sector, including the central bank. With this SRF, the NBFi SRF that the ONS has recently started compiling – albeit the level of detail not known to the author, and the other necessary cross-border and government data already compiled, a BSA matrix might be possible. The latter would be a bridge to

³⁵ See U.K. financial accounts experimental statistics flow-of-funds matrices data tables <https://www.ons.gov.uk/economy/nationalaccounts/uksectoraccounts/datasets/ukfinancialaccountsexperimentaltatisticsflowoffundsmatricesdatatables>

³⁶ From-whom to-whom debt securities information is available on the UK's National Data Summary Data Page in the IMF's SDDS Plus website: <https://www.ons.gov.uk/aboutus/IMFpage>

³⁷ The basic text setting out the approach is Mathisen, Johan and Anthony Pellechio (IMF WP 06/100) Using the Balance Sheet Approach in Surveillance: Framework, Data Sources, and Data Availability: at https://www.imf.org/-/media/Websites/IMF/imported-full-text-pdf/external/pubs/ft/wp/2006/_wp06100.ashx

understanding financial interconnections within the economy before any comprehensive national accounts based from-whom to-whom data were compiled. The ONS might consider sending a member of staff to the IMF BSA training course.

Fiscal Statistics

59. One major trend in recent years that potentially impacts financial stability analysis has been the huge growth in the size of general government debt relative to GDP: in 2007 the U.K. figure was just under 40%; it is now close to 100%. Like the private sector before it, public sectors in advanced countries seemingly discovered that the liberalisation of capital allowed greater borrowing and build up of debt than previously thought, without apparent consequences. Until, in the U.K. case, the turbulence following the 2022 September budget highlighted the potential financial stability vulnerability arising from fiscal policy.

60. The ONS publishes a great deal of data on government and public sector finances, but developments in the past year both domestically and internationally might lead the ONS to look anew at the range of government and public sector financial data published. Some suggestions are highlighted in the text ahead.

61. Internationally, rising government debt was a factor behind the IMF introducing an expanded mandatory reporting of general government debt for surveillance purposes. The data required include various breakdowns by maturity, currency, residency, creditor-type and instrument, and liquid assets for central and general government. Given some of these data series are already included within SDDS Plus specifications, to which the U.K. is adhering, and data such by residency and sector breakdown, as well as liquid assets, should already be available, the U.K. seems to be in a good position to meet the new IMF data needs. The ONS should consider publishing all these new IMF mandatory data together with a long back series, on its website. In other words, restarting and expanding the international standards general government debt data that it stopped publishing with end-2019 data.³⁸

62. Domestically, in the October 2024 budget the Chancellor of the Exchequer made significant changes to the government's fiscal targets. Most notably the current fiscal target would cover day-to-day spending and exclude capital investment, and instead of public sector net debt, a broader measure, public sector net financial liabilities is to be targeted.

63. From an international statistical methodological viewpoint, such an approach as outlined by the Chancellor is closer to the concepts in the Government Finance Statistics Manual (GFSM) 2014 than Eurostat's Debt and Deficit Manual (DDM). Further as the ONS has decided that it will implement the new SNA – to which GFSM is aligned, instead of the

³⁸ See <https://www.ons.gov.uk/economy/nationalaccounts/uksectoraccounts/datasets/internationalstandardsgeneralgovernmentdebtdata>

new ESA, to which the DDM is aligned, the tide of events implies that GFSM will replace DDM as the core methodology for ONS's fiscal statistics.

64. While the two fiscal manuals are close in concept, as they are aligned with SNA and ESA respectively, who in turn are close in concepts, there are differences. In particular, in the GFSM's framework net worth is central. So, the current balance encompasses only transactions that impact net worth and any transaction that does impact net worth is in the current balance. Similarly, the concept of debt is broader in GFSM than DDM, for instance, covering unfunded contractual public sector pension liabilities and accounts payable, neither of which are in the Eurostat measure. The ONS does publish detailed quarterly GFSM data on its website,³⁹ which could become the primary public sector statistical framework.

65. In the OBR's document for the October 2024 budget – "Economic and fiscal outlook," a nice chart sets out schematically how to reconcile between the various measures of public sector balance sheet aggregates, from general government gross debt to whole of government net liabilities (page 182).⁴⁰ Notably in the OBR chart, in addition to non-financial assets, unfunded pension sector liabilities and PFI contracts are included in the bridge between public sector net financial liabilities and public sector net worth. The OBR document explains its approach is consistent with GFSM 2014.

66. The ONS does provide a reconciliation between public sector net debt and public net worth, both excluding public sector banks. In the June 2025 publication of this reconciliation, with data up to Q2 2025 data, there are two measures of public sector net worth presented; the first measure only includes "non-financial assets" in the bridge between public sector net financial worth and net worth; the second is consistent with the OBR method and so with GFSM 2014.⁴¹ Further, while the methodological basis of the second measure is clear, the methodological basis of the first measure is not explained in the table nor notes. Given that the role of the OBR is to assess U.K. public finances, should the ONS present only the GFSM measure of net worth and drop the other measure?

67. One particular difficulty in measuring net worth is valuing non-financial assets. In this context, it is worth noting that in May 2023 the International Public Sector Accounting Board published a new standard on how such assets should be valued.⁴² If not already done so, the ONS might consider the relevance of this standard for the valuation of public sector non-financial assets included in its public sector net worth data.

³⁹ IMF's GFS framework in the public sector finances: Appendix E: <https://www.ons.gov.uk/economy/governmentpublicsectorandtaxes/publicsectorfinance/datasets/internationalmonetaryfundsgovernmentfinancesstatisticsframeworkinthepublicsectorfinancesappendix>

⁴⁰ Office for Budget Responsibility: Economic and fiscal outlook (October 2024) https://obr.uk/docs/dlm_uploads/OBR_Economic_and_fiscal_outlook_Oct_2024.pdf

⁴¹ Public Sector Net Worth: Appendix O: [Public sector net worth: Appendix O - Office for National Statistics](#)

⁴² https://ifacweb.blob.core.windows.net/publicfiles/2023-05/IPSAS-45-Property-Plant-Equipment_1.pdf

Household Distributional data

68. This paper has referenced the IMF’s template on distributional data for banks (see paragraph 10). At the international level, there is also growing interest in household distributional data.

69. Household distributional data consistent with the national accounts was a recommendation in DGI-II and has been carried through to DGI-III – recommendations 8 and 9. Clearly households are central to financial developments in an economy, as investors, borrowers, and ultimate recipients of income from other sectors. But the distribution of income, consumption, saving and wealth, including liabilities, can, as seen in the GFC, have financial stability implications not evident from total household data, important though the latter are. Beyond this, these data are central to the study of wealth accumulation and of inequality.

70. The U.K. does publish distributional data,⁴³ but not consistent with the national accounts. In the latest G-20 DGI progress report (October 2025)⁴⁴ the U.K. is recorded as reporting that meeting recommendations 8 and 9 in DGI-III is not an immediate priority given available resources. While this position is understandable given pressures on the ONS, the US and Canada meet both recommendations; all European G7 countries meet the wealth recommendation, and are addressing the income, consumption and saving; and Japan is addressing both. The U.K. could reassess its priority level.

71. Thirty-three economies have joined a new OECD expert group on the distribution of household wealth⁴⁵ to develop a harmonised template and methodology for the regular compilation of distributional wealth data by the end-2026. Distributional issues are relevant to the U.K. so the ONS’s continued participation is important. It is worth noting that in 2024 the ECB released Distributional Wealth Accounts (DWA) data that show that the share of wealth held by the top 10% stood at 56% in Q4 2023, while the bottom half held just 5%.

Section 3 A Website for Financial Stability data

72. To bring the approach to publication of data for financial stability analysis into line with that for economic and fiscal data, this report recommends a website be established. This

⁴³ See for instance: <https://www.gov.uk/government/statistics/households-below-average-income-for-financial-years-ending-1995-to-2023/households-below-average-income-an-analysis-of-the-uk-income-distribution-fye-1995-to-fye-2023#the-overall-income-distribution>

⁴⁴ Available at <https://www.imf.org/-/media/Files/News/Seminars/DGI/Documents/third-phase-of-the-g20-data-gaps-initiative-third-progress-report-2025.ashx>.

⁴⁵ The official title is the “Expert Group on Disparities in a National Accounts Framework.” See <https://www.oecd.org/en/data/datasets/household-distributional-results-in-line-with-national-accounts-experimental-statistics.html>

website would include a publicly available core set of macro-financial indicators on a quarterly frequency for policy makers and analysts, as well as the general public, as well as links to other relevant datasets such as the financial accounts. The timing of publication of the macro-financial indicators could be aligned with quarterly national accounts data; that is, macro-economic and macro-financial data are published at the same time. In doing so, the U.K. could be an international leader in this field.

Macro-financial indicators

73. The increasing interest and need to monitor risks in the financial sector resulted in the IMF Executive Board in 2024 introducing a mandatory list of macro-financial indicators for data provision to the Fund (DPF). This list covers banks and the NBFI sector, as well as a list of so-called “encouraged” macro-financial indicators covering other sectors.

74. The mandatory data include a selection of core FSIs for banks, credit and assets data for both banks and NBFIs, as well as quarterly residential real estate prices. The encouraged list includes additional indicators, drawn from the FSI list, for banks, NBFIs, households, and NFCs - such data include NFC debt to equity and to GDP, and return on equity, and debt to GDP and debt to gross disposable income for households.⁴⁶ While not included in the encouraged list, a breakdown of some or all of the indicators for NFC into publicly quoted and privately-owned companies could be considered domestically.

75. DPF data are to be provided to the IMF Article IV missions. If a country does not provide the necessary data and has the resources to do so, there is a sanctions process. Given the systematic importance of the U.K. financial system, there may be pressure for the U.K. to provide the “encouraged” indicators. At present, based on data published on the IMF’s FSI website, the U.K. provides virtually all the banking, and many of the NFC and households indicators, but none of the NBFI – money market funds, insurance and pension, indicators.

76. The ONS could publish these DPF data on its website on a quarterly frequency in the format of the Fund’s table of macro-financial indicators (Tables 4a – 4c).⁴⁷ Other data might be added, such as the data reported to the FSB and standard indicators analysed in the Bank’s FSRs, such as U.K. banks’ average loan margins, NFC debt split between bank and market-based, and debt service ratio for mortgage holders. In addition, distributional FSI data sets for deposit-takers could be included.

77. The Bank’s semi-annual FSRs do not contain a regular statistical annex but the Bank does publish several data series in relation to the core indicators that it uses when considering

⁴⁶ See Section V Table 4 (c) in the Background paper to the IMF’s Data Provision to the Fund for Surveillance Purposes: <https://www.imf.org/-/media/Files/Publications/PP/2024/English/PPEA2024016.ashx>”

⁴⁷ See Section V in the Background paper to the IMF’s Data Provision to the Fund for Surveillance Purposes paper: <https://www.imf.org/-/media/Files/Publications/PP/2024/English/PPEA2024016.ashx>

the use of macro-prudential tools, specifically related to the counter-cyclical capital buffer and housing market tools.⁴⁸ These tables could be included along with other Bank statistics in the Statistics section of the Bank’s website, and be the basis for a regular statistical annex in the FSR.

78. An ONS website and an FSR statistical annex could not only provide the public with regular macro-financial data in a time series format but also meet IMF requirements without additional work being needed for when the annual Article IV mission arrives.

Other financial stability datasets

79. In addition to the macro-financial indicators, a financial stability website should include links to other relevant datasets. These could include financial market data such as interest rates and derivative spreads, and asset prices, such as for equities and debt securities; indicators of the resilience of financial market infrastructure, such as covering payment and clearing systems - margin calls, and/or number of failed transactions; the financial accounts, including a more detailed NBFI sub-sector split than set out in the SNA; published from-whom to -whom/BSA data; cross-border data such as the CPIS and CDIS; a re-established international standards general government debt dataset; commercial real estate prices;⁴⁹ and household distributional data.

Conclusion and Recommendations

80. The ONS December 2024 paper sets out a work programme for the U.K. financial accounts, through to 2026/27. A high priority for the ONS and Bank is meeting the U.K.’s international commitments, including the SDDS Plus requirements, the DGI II recommendations, and the reporting to the FSB on NBFIs. This work involves a significant resource effort.

81. Nonetheless, this paper considers there remains more work to be done to close gaps and improve the presentation of data for financial stability analysis. To this end, the paper makes the following recommendations.

Strategic recommendations

Recommendation 1: Establish a public domestic financial stability data website, starting with publishing data in the format of the IMF’s mandatory and encouraged set of macro-financial indicators, on a quarterly frequency and timelessness, and include these indicators in a Statistical Annex to the FSR reports. These indicators can support financial stability analysis and public understanding.

⁴⁸ These data are available at <https://www.bankofengland.co.uk/about/people/financial-policy-committee>

⁴⁹ As noted above, the U.K. does not appear to publish commercial real estate prices even though financial stability risks can emerge from bank lending for commercial real estate. It might be possible to explore the potential of transactions and administrative data from the Land Registry.

As has been demonstrated in this paper, a considerable amount of macro-financial data relevant for financial stability analysis exists, mostly reported to international agencies. The recommendation is to bring it together in a public domestic website along with links to other relevant data that once created could prove a catalyst for further development. The timing of publication of the macro-financial indicators could be aligned with quarterly national accounts data; that is, macro-economic and macro-financial data published at the same time.

Recommendation 2: A strategy for financial stability analysis data be established. To this end, ESCoE consider holding a conference along the lines “Data needs for financial stability analysis: what is required?” A report with recommendations could be prepared from the conference proceedings to help establish the strategy.

The conference should include domestic financial stability policy makers and analysts and include representation from the Financial Stability Board (FSB) and IMF. The provisional agenda could be structured around monitoring (1) risks in the financial sector, and (2) vulnerabilities, interconnections, and spillovers within and across economies, including the development of financial accounts, such as reconciling flows and stocks, and from-whom to-whom data. Ideas for the agenda could be encouraged from the ONS, Bank, Treasury, Financial Conduct Authority, and Prudential Regulation Authority.

While the main objective of the conference and the follow-up report would be to reach consensus on a long-term strategy to guide ONS, and where relevant Bank staff, in their work in this field, the conference could also influence international thinking about the development and publication of financial stability data.

Recommendation 3: Undertake research into detailed U.K. national accounts sub-sectoring of the NBFIs beyond the SNA breakdowns. Some ideas are provided in Annex 2.

The proposed conference can help identify user needs, while the Bank’s Financial Stability Reports, the FSB’s annual non-bank financial institutions monitoring exercise, and the comparator country experiences of USA, Canada and Japan, including on data sources, could be drawn upon. It would be best to involve senior ONS and Bank management, and perhaps the Treasury and relevant supervisors, to get broad institutional buy-in.

With these three strategic recommendations, there is no reason why the U.K. could not become an intellectual leader in the development and compilation of statistics for financial stability analysis.

Other recommendations

Monitoring Risks in the Financial Sector

Deposit-takers

Recommendation 4: Review the feasibility of compiling and publishing data on U.K. deposit-takers' concentration and distribution measures for the selected core FSIs in the IMF template (paragraph 10).

Non-bank financial institutions

Recommendation 5: Publish in a financial stability data website the relative financial asset share of NBFIs, and of money market funds, insurance, and pension funds, within the financial sector and vis-à-vis GDP (paragraph 20).

Recommendation 6: Publish in a financial stability data website the NBFI data reported to the FSB, even in summary form, subject to confidentiality requirements. The possibility of semi-annual data collection and publication be investigated (paragraph 30).

Recommendation 7: Approach the Prudential Regulatory Authority to learn more about the IAIS Global Monitoring Exercise (paragraph 33).

Vulnerabilities, Interconnections, and spillovers

Financial accounts

Recommendation 8: Separately identify unlisted equities in the published U.K. financial account, as far as available (paragraph 47).

Recommendation 9: Undertake a detailed benchmark assessment of U.K. financial accounts against the international statistical standards e.g., gaps in balance sheets, missing sub-sectors, instrument identification, etc with the objective of closing gaps (paragraph 50).

Recommendation 10: Develop a better, clearer, and more easily searchable presentation of financial accounts on the ONS website, drawing on comparator economies for ideas (paragraph 51).

From-whom to-whom

Recommendation 11: Investigate whether the experimental from-whom to-whom data last published in 2020 could be updated and published for the years since (paragraph 55)

Recommendation 12: Actively look to publish on the ONS's website partial from-whom to-whom that become available, such as for insurance companies and debt securities (paragraph 56).

Recommendation 13: Research the possibility of developing a Balance Sheet Approach (BSA) and, if so, sending a member of staff to the IMF BSA training course (paragraph 58).

Fiscal Statistics

Recommendation 14: Publish all the new IMF mandatory general government data together with a long back series. In other words, restarting and expanding the international standards general government debt data publication that stopped with end-2019 data:

<https://www.ons.gov.uk/economy/nationalaccounts/uksectoraccounts/datasets/internationalstandardsgeneralgovernmentdebtdata> (paragraph 61).

Recommendation 15: Consider which measure of public sector net worth to give prominence to (paragraph 66)

Recommendation 16: Consider the relevance of the International Public Sector Accounting Board standard for the valuation of public sector non-financial assets included in the ONS's public sector net worth data (paragraph 67).

Household distributional data

Recommendation 17: Reassess the priority level of the DGI-III recommendations for these data in light of the position of comparator economies (paragraph 70).

Annex 1: NBFI sub-sectors identified by comparator economies

Transactions and balance sheet published quarterly unless otherwise noted.

U.K.: 3 sub-sectors: Insurance and pension funds; non-money market investment funds; and other financial intermediaries and financial auxiliaries.

Canada: 16 sub-sectors: Trust companies and mortgage loan companies; life insurance business; segregated funds of life insurance companies; trustee pension funds; property and casualty insurance funds; other private financial institutions; mutual funds; money market funds; other mutual funds; other financial intermediaries except ICPF; financial vehicle corporations engaged in securitisation transactions; financial corporations engaged in lending; security and derivative dealers; specialised financial corporations and other financial corporations not elsewhere included; financial auxiliaries; and captive financial institutions and money lenders.

Euro area: 6 sub-sectors: Investment funds; insurance companies; pension funds; other financial intermediaries; captive financial institutions and money lenders; and financial auxiliaries. It is possible that there may be a more detailed breakdowns than publicly available.

Japan: 16 sub-sectors: Bond investment trusts; stock investment trusts; life insurance; non-life insurance, of which private non-life insurance and separately standardised guarantee institutions; mutual aid insurance; defined benefit corporate pension schemes; defined corporate contribution schemes; other pensions; finance companies; structured financing special purpose companies and trusts; fiscal loan fund; government financial institutions (not depository corporations); public financial dealers and brokers of which security companies; financial auxiliaries of which financial holding companies; and public captive holding companies. It appears that the full breakdown is probably only available annually; the quarterly release has a less sub-sector breakdown.

USA: 20 sub-sectors: Property casualty insurance companies; life insurance companies general accounts; life insurance companies separate accounts; private pension funds: defined benefit plans; private pension funds: defined contribution plans; federal government employee retirement funds: defined benefit plans; federal government employee retirement funds: defined contribution benefit plans; state and local government retirement funds: defined benefit plans; state and local government retirement fund: defined contribution; money market funds; mutual funds; closed-end funds; exchange traded funds; agency and GSE backed mortgage pools; issuers of asset backed securities; finance companies; mortgage real estate investment trusts; security brokers and dealers; holding companies; and other financial business.

Annex 2: Suggested ideas for further breakdowns of the NBFi sector

To determine whether a type of entity should be separately identified, the following factors could be taken into account: (1) their *relevance* within the financial system - the larger and/or faster growing the more relevant the sub-category; (2) their *combination of associated financial stability risks*, as these differ by type of sub-category, and (3) their *relationship with other sectors*, particularly deposit-takers and also cross-border.

To give examples, investment funds are an important sub-sector but because of different combinations of the financial risks, further disaggregation of this sub-sector might be appropriate. For instance, the liquidity risks associated with open-ended investment funds differs from those of close-ended funds; within the latter, the leverage risks associated with private closed-ended funds differs from that of publicly-traded funds; and, interconnection risks associated with NBFIs dependant on bank financing differs from those dependant on foreign financing, all set in the context of their relative importance within the financial system.

So, what are the type of entities relevant for U.K. financial stability analysis? The ONS's December 2024 paper highlights within *non-money market investment funds* the possibility of identification of open-ended investment funds, open-ended property funds and closed-end investment funds, along with private equity funds, which the paper rightly notes are of interest to the Bank. Among *Other financial corporations*, the paper identifies special purpose vehicles.

Further ideas come from recent Bank of England FSRs. In addition to highlighting the liquidity vulnerabilities in *money market funds*, and with *non-money market investment funds*, the FSRs have identified open-ended funds, and specifically bond open-ended funds and hedge funds. The high leverage of private equity – within *other financial institutions* has been highlighted, along with defined benefit pension funds - within *pension funds*. All these entities would be candidates for separate identification.

In 2024, the Bank of England conducted a “system-wide exploratory scenario exercise” (SWES) to explore how the UK financial system would respond to a market shock. As the final report described,⁵⁰ the aims of the SWES were to: (1) enhance understanding of the risks to and from non-bank financial institutions (NBFIs), and the behaviour of NBFIs and banks in stress, including what drives those behaviours; and (2) investigate how these behaviours and market dynamics can amplify shocks in markets and potentially pose risks to UK financial stability. The exercise took a system-wide perspective, and incorporated complex firm behaviours and interactions through the active engagement of around 50 different financial firms. The experience of this exercise could help inform NBFi data needs, particularly in relation to connected financial stability risks,

⁵⁰ [The Bank of England's system-wide exploratory scenario exercise final report | Bank of England](#)

Among the possibilities identified in the FSB's 2023 Global Monitoring Report, Annex III are: finance companies, broker dealers,⁵¹ and central counterparties, within the *Other financial corporation's* sub-sector. In addition, from the FSB analysis of private finance (section 3 Graph 3-1 of the 2023 FSB report), private equity and private credit funds within *non-money market investment funds* are significant in the U.K.⁵²

Other ideas come from a paper published by the IMF in 2022 – Financial Innovation and Statistical Methodology (Box 2 and Appendix IV).⁵³ Within *insurance* and *pension funds* sub-sectors, the paper suggested splitting life and non-life insurance, and defined benefit and defined contribution pension funds (Box 2 of the paper) - both the USA and Canada have gone in these directions as seen in Annex 1. Within *money market funds*, the IMF paper suggest splitting between constant and variable net asset value funds. Some ideas on further sub-sector break-downs and sources of information could be gleaned from the work of USA, Canada and Japan in particular.

⁵¹ Broker dealers could be considered financial auxiliaries but the 2023 FSB Report reports that in the U.K. broker dealers hold significant assets – see page 77 of the Report.

⁵² Private credit funds would need defining, but essentially covers funds investing in long-term loans. The FSB 2023 report discusses private credit in a number of jurisdictions so there must be some definitions already available otherwise the data included report could not be provided.

⁵³ Available at <https://www.imf.org/-/media/Files/Publications/WP/2022/English/wpica2022212-print-pdf.ashx>

Annex 3: Comparator economies publication of financial accounts data

68. The Federal Reserve in the USA release their very detailed Financial Accounts of the US covering flow-of-funds, balance sheets and integrated macroeconomic accounts quarterly around three months after the end of the reference period. It provides an extraordinary number of detailed tables⁵⁴ including from-whom to-whom data, which they acknowledge is a work in progress.⁵⁵ Within the publication, monetary authorities are separately identified and defined as assets and liabilities of Federal Reserve Banks. The Federal Reserve publishes an interactive financial accounts guide on its website that sets out the link between each data series and the underlying source data.

69. The Bank of Japan (BoJ) also publishes financial accounts on a quarterly basis around a quarter after the reference period both transactions and positions, with a very detailed sector and sub-sector breakdown, and instrument breakdown. The data also include a reconciliation between flows and stocks. The central bank is separately identified. The BoJ publishes the data in a quarterly flow-of-funds publication, which like the Federal Reserve publication has an extraordinary number of detailed tables. On the BoJ website is also a document that comprehensively outlines the compilation method of Japan's flow-of-funds, including sources of information.⁵⁶

70. While obviously the United States and Japanese economies differ from the U.K., there may be benefit in the ONS reviewing these two countries compilation methods given the level of detail provided, to gain ideas that might help in their own financial accounts' compilation work. Sharing knowledge cross-country can often be beneficial.

71. Statistics Canada releases very detailed data on its website, both transactions and balance sheet data by sector and sub-sector on a quarterly frequency less than one quarter after the end of the reference period.⁵⁷ It also provides a facility to identify from-whom to-whom transactions, other changes, and position data for selected instruments. Like the US, a very impressive amount of data. Monetary authorities are separately identified and defined as central bank functions. Statistics Canada provides an overview of its collection method.

⁵⁴ Available at <https://www.federalreserve.gov/releases/z1/20240912/z1.pdf>

⁵⁵ See <https://www.federalreserve.gov/econres/notes/feds-notes/from-whom-to-whom-relationships-in-the-financial-accounts-of-the-united-states-20230324.html>

⁵⁶ See <https://www.boj.or.jp/en/statistics/sj/sjall.pdf> and <https://www.boj.or.jp/en/statistics/outline/exp/data/exsj01.pdf>

⁵⁷ See <https://www150.statcan.gc.ca/t1/tbl1/en/tv.action?pid=3610058001&pickMembers%5B0%5D=2.1&pickMembers%5B1%5D=3.1&cubeTimeFrame.startMonth=04&cubeTimeFrame.startYear=2023&cubeTimeFrame.endMonth=04&cubeTimeFrame.endYear=2024&referencePeriods=20230401%2C20240401> and <https://www150.statcan.gc.ca/n1/pub/71-607-x/71-607-x2018015-eng.htm.2>

72. The ECB publishes a quarterly release on euro sector accounts both transactions and balance sheet by instrument and a limited sector breakdown with financial corporations as one sector, published quarterly around four months after the reference period. The central bank is separately identified. More detailed NBFIs sub-sector data were published in October 2024 for the first time.⁵⁸ Among individual EU countries, Germany, Italy, and Spain all identify the central bank in their SDDS Plus balance sheet data. Statistics Netherlands presents quarterly from-whom to-whom data on the creditor/debtor relationship between sectors for several important financial instruments.

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⁵⁸ See https://www.ecb.europa.eu/press/pdf/ffi/ecb.eaefd_full2024q2_annex~835eb9ced7.en.pdf and https://www.ecb.europa.eu/stats/macroeconomic_and_sectoral/sector_accounts/shared/pdf/Other_financial_institutions_explained.en.pdf

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