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Mini-presentation for SPPIs on:

ISIC 6419 Other Monetary Intermediation

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1 Industry Definition

1.1 Classification

The UK Standard Industrial Classification (SIC2007), which is based on the Statistical Classification of Economic Activities in the European Community (NACE Rev. 2), classifies all banking and credit activities together in a single division (64 Financial Service Activities, except insurance and pension funding). All monetary intermediation, except those activities carried out by the Central Bank is included in SIC2007 Class 64.19 “Other Monetary Intermediation”.

This class includes:

the receiving of deposits and/or close substitutes for deposits and extending of credit or lending funds. The granting of credit can take a variety of forms, such as loans, mortgages, credit cards etc. These activities are generally carried out by monetary institutions other than central banks such as:

- Banks
- Building societies
- Savings banks
- Credit unions

This class also includes:

- Postal giro and postal savings bank activities
- Credit granting for house purchase by specialised deposit taking institutions
- Money order activities

This class excludes:

- Credit granting for house purchase by specialised non-depository institutions (which are included in SIC2007 class 64.92)
- Credit card transaction processing and settlement activities (which are included in SIC2007 class 66.19

The UK Office for National Statistics (ONS) currently publishes an index for Financial Intermediation (Banks). The activities included in this index are classified in SIC2007 under the subclass 64.19/1 Banks.

This subclass is restricted to:

- Monetary intermediation by those institutions other than the Bank of England, authorised by the Financial Services Authority under the Banking Act of 1987 to accept deposits in the UK
- Monetary intermediation by those European authorised institutions which are entitled to accept deposits through a branch in the UK on the basis of their home state authorisation
- Monetary intermediation of the National Savings Bank
- Monetary intermediation of the Savings Certificate Office

By way of comparison, the International Industrial Classification (ISIC rev 4) classifies this activity in a similar way in class 6419 “Other Monetary Intermediation”. However, ISIC does not provide a further breakdown by institution as seen in SIC2007 and NACE Rev 2. A detailed comparison of the industrial classification can be found in ANNEX F

1.2 Industry output (SIC 2007 64.19/1)

The Financial Intermediation (Banks) subclass is limited to banks, but excludes both the Bank of England (UK central bank) and building societies. The activity of financial intermediation in this case

> "… is understood to refer to the process whereby a financial institution such as a bank accepts deposits from units wishing to receive interest on funds for which the unit has no immediate use and lends them to other units whose funds are insufficient to meet their needs. The bank thus provides a mechanism to allow the first unit to lend to the second. Each of the two parties pays a fee to the bank for the service provided, the unit lending funds by accepting a rate of interest lower than that paid by the borrower, the difference being the combined fees implicitly charged by the bank to the depositor and to the borrower. From this basic idea the concept emerges of a "reference" rate of interest. The difference between the rate paid to banks by borrowers and the reference rate plus the difference between the reference rate and the rate actually paid to depositors represent charges for financial intermediation services indirectly measured (FISIM)"[1].

In addition to indirect financial intermediation, banks may also provide a range of services for which a fee is directly levied (arranging a mortgage, managing portfolios, giving taxation advice, processing of cheques or electronic funds transfers, bookkeeping, etc.)

The ONS SPPI for Banking Services restricts attention to activities associated with loans and deposits, whether they are services which attract a direct fee, or services for which a charge is incurred via FISIM. For the purposes of the SPPI, output is further restricted to services offered to other domestic businesses, and then only private non-financial corporations. All other banking activity is considered out of scope of the current implementation of the Banking SPPI.

2 Index Construction

2.1 History

An SPPI for banking services was first considered in 1999. Working with the Bank of England and the British Bankers' Association (BBA), the ONS undertook a range of development work (including presentations to the Voorburg group in 2001 and 2002), culminating in the publication of a quarterly index in the UK in 2004. Following an internal quality review of the index in 2007, the index was subsequently withdrawn from the top level SPPI and work commenced on its redevelopment. The redevelopment work was completed jointly by ONS, the Bank of England and the British Bankers' Association (BBA) and the quarterly SPPI for Financial Intermediation (Banks) was first published in its current form in November 2008.

2.2 Index methodology

2.2.1 Underlying concept

The underlying methodology for the ONS Banking SPPI follows the ***user cost*** approach[2], whereby the total price for financial intermediation incorporates both fees and FISIM. As FISIM by its very nature cannot be measured directly, an indirect approach must be taken using the "reference" rate as indicated above.

[1] 2008 System of National Accounts (2008 SNA), Pre-edited version of Volume 1, para 6.163

[2] Alternate views might be a *Value Added or Cost of Funds* approach (differences between loan and deposit interest), or the *Earning Assets* approach (considering only interest on loans)

We define the loan price as

$$\text{Loan Price} = \left[\left(\frac{\text{Earned interest income} + \text{Loan fees}}{\text{Average loan balance over the period}} \right) - \text{Reference rate} \right] \times £1000$$

We define the deposit price as

$$\text{Deposit Price} = \left[\text{Reference rate} - \left(\frac{\text{Interest Payments} - \text{Deposit fees}}{\text{Average deposit balance over the period}} \right) \right] \times £1000$$

2.2.2 What our price indices would ideally measure

As an illustrative point, we would consider each of our price indices being formed from a fixed basket of services (being either loan services or deposit services). The aim of our price indices is to price the fixed basket in the base period, and to then re-price the exact same deposit and loan services in subsequent periods.

2.2.3 Choice of reference rate

The current instance of the Banking SPPI uses the three-month average LIBOR as its reference rate. The London Interbank Offered Rate (or LIBOR) is a daily reference rate based on the interest rates at which banks borrow unsecured funds from other banks in the London wholesale money market (or interbank market).

LIBOR is used as the reference rate for determining FISIM for both deposits and loans. The choice of LIBOR is generally in line with the recommendations of the 2008 SNA: "The rate prevailing for inter-bank borrowing and lending may be a suitable choice as a reference rate"[3].

2.2.4 Issues with constant quality

For each of loans and deposits, the underlying concept determines an effective interest rate and through the multiplication by £1000 converts the rate to a price. But what is this price? And what should we consider under the *user cost* approach?

If we consider deposits, we might consider this as the price of "depositing £1000" in some base period. In constructing a price index we will be interested in the price of "depositing £1000" in some later period. Yet to the user of the funds, this is not the same service; the purchasing power of the £1000 is different between the base and current period. Therefore there is an additional cost in that the purchasing power of the £1000 principle will erode over time due to the impact of inflation.

> Example: consider in the base period a deposit of £1000 for five years, with inflation running at effective rate of 10% per annum. If we come to re-price the service (a five year investment of £1000 from the base year) at the start of the second year, to purchase the same quantity of goods and services as in the base year it is necessary to invest £1100. Between the base year and the start of the second year, this is in effect an additional £100 cost to the user of the funds, in addition to the FISIM and fees components

[3] 2008 System of National Accounts (2008 SNA), Pre-edited version of Volume 1, para 6.166

If considering a user cost approach, we need to account for the deflation of the asset, in addition to the fees and FISIM aspects. There are several approaches to considering how the asset should be re-valued over time, but essentially they answer the same question: how do we ensure the utility of the asset in the current period is the same as that in the base period? Two different approaches to this problem are discussed in ANNEX A. The approached adopted by the ONS results in price indices with the form of

$$\text{Loan price} = \frac{\text{Interest Earned Income} - (\text{Reference rate} \times \text{Average daily loan balance})}{\text{Number of loans}} + \frac{\text{Loan Fees}}{\text{Number of loans}}$$

$$\text{Deposit price} = \frac{(\text{Reference rate} \times \text{Average daily deposit balance}) - \text{Interest payments}}{\text{Number of deposits}} + \frac{\text{Deposit Fees}}{\text{Number of deposits}}$$

In constructing the price indices for both Loans and Deposits, the price is split into a FISIM component and a Fees component. A price index for each component is then determined by taking the ratio of the average unit value for the price in the current period, and comparing this estimate with the average unit value from the base period.

2.3 Index coverage

The UK SPPI covers financial intermediation services provided by private UK banks where these services are provided to business customers only (specifically: private non-financial corporations); the UK SPPI is a net sector business-to-business price index only.

Price change is captured for services where an explicit fee is charged, for example the operation of a current account and for services where no explicit fee is charged, for example on a business deposit. The items included in this index are shown in the aggregation structure in figure 1. Since there are a wide range of banking and other financial intermediation services provided by banks to businesses, the UK index concentrates on the mainstream lending and deposit services offered. As a result, this index does not cover all of the financial services industry and is not intended as a proxy to these services.

2.4 Price collection and data sources

The data used in the UK Banking SPPI are an administrative by-product arising from regulatory activity undertaken by the Bank of England. In this role, the Bank of England collects a significant amount of data for financial policy monitoring and for the UK National Accounts. Two sources of these data are used in the Financial Intermediation (Banks) SPPI.

The first of these, the Effective Rates (ER) form is a survey of average interest rates. These data are collected on a monthly basis and achieves coverage of around 70% of all private UK banks. The ER form collects balances, interest flow and rates, by broad type of bank customer, by type of financial product. Types of customer collected on this form, and types of product for private non-financial corporation customers are listed in the ANNEX B and ANNEX C respectively. Different degrees of detail are available for new and outstanding loans, with new loans provided in a size banding.

The second source, the Profit and Loss (PL) form is a quarterly census which collects interest payable, interest receivable and fees data. Interest receivable is classified by broad type of product, with information on type of bank customer. The PL bank customer types are listed in ANNEX D. Interest payable is classified by broad type of product, also with information on type of bank customer. Fee information is collected by type of instrument (including a split for deposits, overdrafts and loans), but is limited to private non-financial corporations, households and a total for all customer types.

For the purposes of an SPPI, the ONS would ideally like to construct portfolios of loans and deposits, and sample them from period to period. In application, the regulatory activity of the Bank of England collects data from each responding bank at an aggregate level. Consequently, measures produced by the ONS are *average unit values*. Further, different levels of aggregation exist for fees and interest data. Adopting the different sources of administrative data for the UK Banking SPPI, the ONS was faced with a choice: to use the additional details on bank customer type from the complete coverage PL form, but have no data on size or type of loan and deposit products, or to use the estimates from the partial coverage ER form that provide different information on type of loan and deposit products, but lose detailed information on bank customer type. The ONS believes that type of deposit and loan product (that is, different durations of loan, and different types of timed deposits) provide more homogenous products over which to construct average unit values, compared with the alternative of using aggregates constructed simply by customer type. The FISIM component of the UK Banking SPPI uses data from the ER form. Separate FISIM price indices are produced for floating rate loans, loans of less than one year fixed term, between one and five year fixed term, and greater than five years. For deposits, FISIM price indices are constructed for interest bearing sight deposits, for time deposits redeemable at notice, and for fixed term timed deposits.

Such a solution is not possible for fee data (fee data are not collected on the ER form). Instead, the PL form is adopted, and fee indices constructed separately for both overdrafts and loans on the one hand, and separately for both interest bearing and non-interest bearing deposits on the other.

2.5 Weights

Component level weighting data for the UK Banking SPPI are determined from the same data sources used for quarterly pricing (that is, the ER and PL forms from the Bank of England). Base period weights are determined from revenue data from the 2005 calendar year.

The weights for the Banking SPPI will be updated (together with all the other ONS SPPI's) once every five years, with the next update being on a reference year of 2010.

3 Results

The aggregation structure of the UK Banking SPPI is shown in Figure 1. The time series for the current form of the index since its inception (2005) is shown in ANNEX E.

4 Future challenges for the Banking SPPI

4.1 Inclusion in the "top level" SPPI

The Banking SPPI is in essence limited in scope to financial intermediation on deposits and loans offered by banks (and banks alone) to UK private non-financial corporations. This index is not intended to be a proxy for all financial services. As of 2009, the ONS has not included this price index in the aggregate "top level" SPPI, as to date it has not been possible to obtain robust weighting information that is consistent with the majority of the ONS SPPI data. Data are available for the total financial services but not for banking alone. Resolution of this issue is seen of high importance for both the Banking SPPI and for the "top level" SPPI.

4.2 Proxy for number of loans and number of deposits

The UK Banking SPPI is a suite of average unit value indices. However, construction of each average unit value index requires a robust and reliable measure of quantity. For the Banking SPPI the quantities required are numbers of loans and numbers of deposits. Unfortunately, these data are not readily available from existing data sources. Instead, a single proxy measure is used for both the number of loans and the number of deposits. The proxy used in the Banking SPPI is the "number of live businesses (private non-financial corporations) on the UK business register with a turnover of at least £1 million".

The resulting average prices included in the Banking SPPI are described in ANNEX G

4.3 Expanded coverage

The Banking SPPI is currently restricted in scope to the output of banks, and then only for services provided to private non-financial corporations. The coverage of the index could ideally be expanded to cover other sectors of the economy (with an ultimate aim of business-to-all), and to include services provided by building societies. Progress in this regard is constrained by the level of detail available through Bank of England regulatory activity.

4.4 Average unit value and products

The UK Banking SPPI is a suite of average unit value indices. The 2008 restart of the index saw introduction of data on fees, and use of more detailed product level data arising from new forms in use by the Bank of England. This index is a marked improvement over the series that was discontinued in 2007.

The average unit value approach results in FISIM components that are positive (this is a feature of the data and not of the individual transactions themselves). The series also tends to be relatively smooth, at least over its current lifecycle.

However, the resulting index is still a broad level average unit value. Use of data from the Bank of England constrains the index to a sparse level of available detail, and the resulting aggregation structure means that the price indices are averaged over fairly heterogeneous activities. For example, the loan indices do not include purpose of loan, ~~or~~ nor characteristics of the borrower. Any future improvements to the banking SPPI need to develop more homogeneous components in the aggregation structure.

4.5 Negative prices

It is important that a move to more homogeneous products introduces the possibility of observing a negative price, especially since the ONS price indices are produced separately for FISIM and fees. Treating FISIM as a margin means that negative prices for *individual* transactions can certainly exist, in which case the FISIM component might be seen as a loss leader. The likelihood of *aggregate* prices being negative is extremely unlikely, yet may result as an artefact of sampling. Given the positive nature of the current average unit value approach, the question as how to treat negative prices has not yet been considered in any great detail, and remains an issue for resolution for future index development.

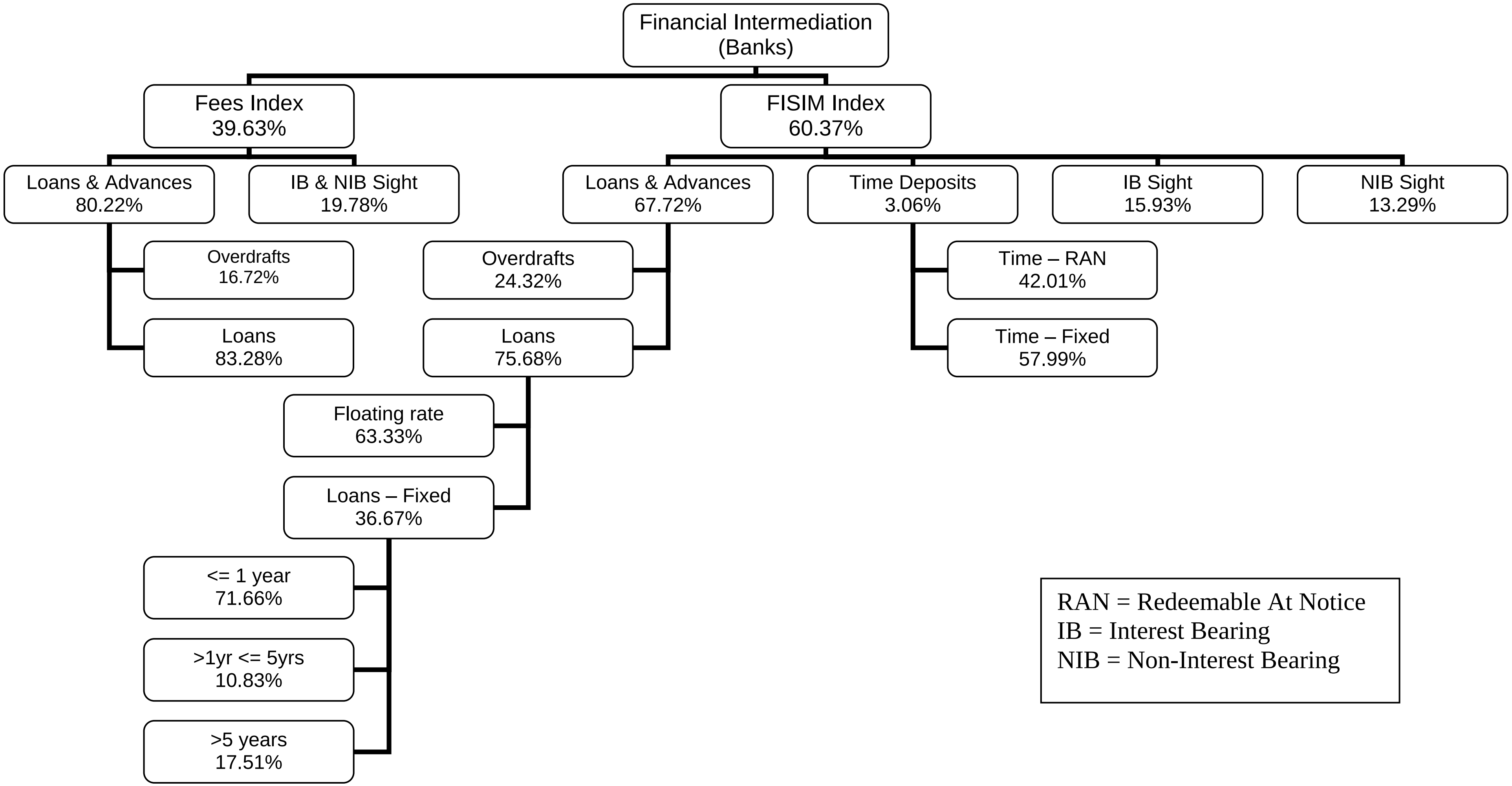
4.6 Alternative views on FISIM

The ONS is aware of alternate views on FISIM, with one viewpoint most notably proposed by the European Central Bank (ECB)[4]. The ECB have questioned the method used to compile FISIM in the context of the 2008 SNA, partly because concerns have arisen from the financial market turmoil, but cite shortcomings of the current framework more generally. The paper suggests that the term premium and default risk are components of interest faced by lenders and borrowers other than those who lend to and borrow from financial intermediaries and are therefore part of the interest component rather than part of the services provided by financial intermediaries.

This matter is being further progressed by a Eurostat taskforce, and has the potential to redefine the concept and measurement of FISIM (and consequently the aims of the Banking SPPI).

[4] Mink, Reimund and Colangelo, Antonio (2008) *An Enhanced Methodology of Compiling Financial Intermediation Services Indirectly Measured (FISIM)*, paper presented at OECD Working party on National Accounts, Paris, 14-16 October 2008

Figure 1 - AGGREGATION STRUCTURE SHOWING THE PRODUCTS INCLUDED IN THE SPPI FINANCIAL INTERMEDIATION (BANKS).



ANNEX A Methods for revaluing assets over time

A.1 Change in utility for asset balances is best measured by an independent price index

This approach considers utility preserved across different periods when the asset is inflated according to a change in some indicator of general purchasing power. For some utility function φ^t, the utility of holding £1000 in period 0 is the same as holding $£1000 \times \frac{I^t}{I^0}$ in period *t*.

$$\varphi^0(£1000) = \varphi^t\left(£1000 \times \frac{I^t}{I^0}\right)$$

To ensure that the purchasing power of the asset is the same as the base period, this approach requires the "Average balance" in the denominator of the price equation to be *deflated* by the change in the price index since the base period.

$$\text{Loan Price} = \left[\text{Reference rate} - \left(\frac{\text{Interest Payments} - \text{Deposit fees}}{\left\{\text{Average loan balance over the period} \times \frac{I^0}{I^t}\right\}}\right)\right] \times £1000$$

$$\text{Deposit Price} = \left[\text{Reference rate} - \left(\frac{\text{Interest Payments} - \text{Deposit fees}}{\text{Average deposit balance over the period} \times \frac{I^0}{I^t}}\right)\right] \times £1000$$

A concern with this approach is the choice of the actual index, given the investments are being made by businesses. It is questionable whether choices such as the CPI, the manufacturing PPI or the GDP deflator reflect purchasing power for all businesses.

A.2 Change in utility for asset balances is best measured by relative change in balances

This approach assumes that businesses themselves seek to preserve the purchasing power of their assets, and so the change in utility of assets is best measured by the change in the average size of each type of asset. Again, for some utility function φ^t, the utility of holding the base period average balance in period 0 is assumed equal to the current period average balance in period *t*.

$$\varphi^0(\text{Base period average balances}) = \varphi^t(\text{Current period average balances})$$

Under this approach, rather than deflate the average balance by the change in the balances, the nominal investment (£1000) is replaced with the average balance *each period*.

$$\text{Loan price} = \left[\left(\frac{\text{Interest Earned Income} + \text{Loan Fees}}{\text{Average daily loan balance}}\right) - \text{Reference rate}\right] \times \text{Average amount outstanding}$$

$$= \left[\left(\frac{\text{Interest Earned Income} + \text{Loan Fees}}{\text{Average daily loan balance}}\right) - \text{Reference rate}\right] \times \frac{\text{Average daily loan balance}}{\text{Number of loans}}$$

$$= \frac{\text{Interest Earned Income} + \text{Loan Fees}}{\text{Number of loans}} - \frac{(\text{Reference rate} \times \text{Average daily loan balance})}{\text{Number of loans}}$$

$$= \frac{\text{Interest Earned Income} - (\text{Reference rate} \times \text{Average daily loan balance})}{\text{Number of loans}} + \frac{\text{Loan Fees}}{\text{Number of loans}}$$

$$\text{Deposit price} = \left[\text{Reference rate} - \left(\frac{\text{Interest payments} - \text{Deposit Fees}}{\text{Average daily deposit balance}}\right)\right] \times \text{Average amount deposited}$$

$$= \left[\text{Reference rate} - \left(\frac{\text{Interest payments} - \text{Deposit Fees}}{\text{Average daily deposit balance}}\right)\right] \times \frac{\text{Average daily deposit balance}}{\text{Number of deposits}}$$

$$= \frac{(\text{Reference rate} \times \text{Average daily deposit balance})}{\text{Number of deposits}} - \frac{(\text{Interest payments} - \text{Deposit Fees})}{\text{Number of deposits}}$$

$$= \frac{(\text{Reference rate} \times \text{Average daily deposit balance}) - \text{Interest payments}}{\text{Number of deposits}} + \frac{\text{Deposit Fees}}{\text{Number of deposits}}$$

This latter approach is currently employed by the ONS in the banking SPPI.

ANNEX B Bank client types collected on Bank of England ER Form

Central and Local Government
Public corporations
Banks (including the central bank, the Bank of England)
Building societies
Financial corporations (excluding banks and building societies)
Private non-financial corporations
Households & Individual trusts
Non-profit institutions serving households

ANNEX C Product types collected on Bank of England ER Form

C.1 Deposits from private non-financial corporations

Non-interest bearing sight
Interest bearing sight
Time, fixed maturity <= 1 year
Time, fixed maturity > 1 <= 2 years
Time, fixed maturity > 2 years
Time, redeemable at notice

C.2 Loans for private non-financial corporations

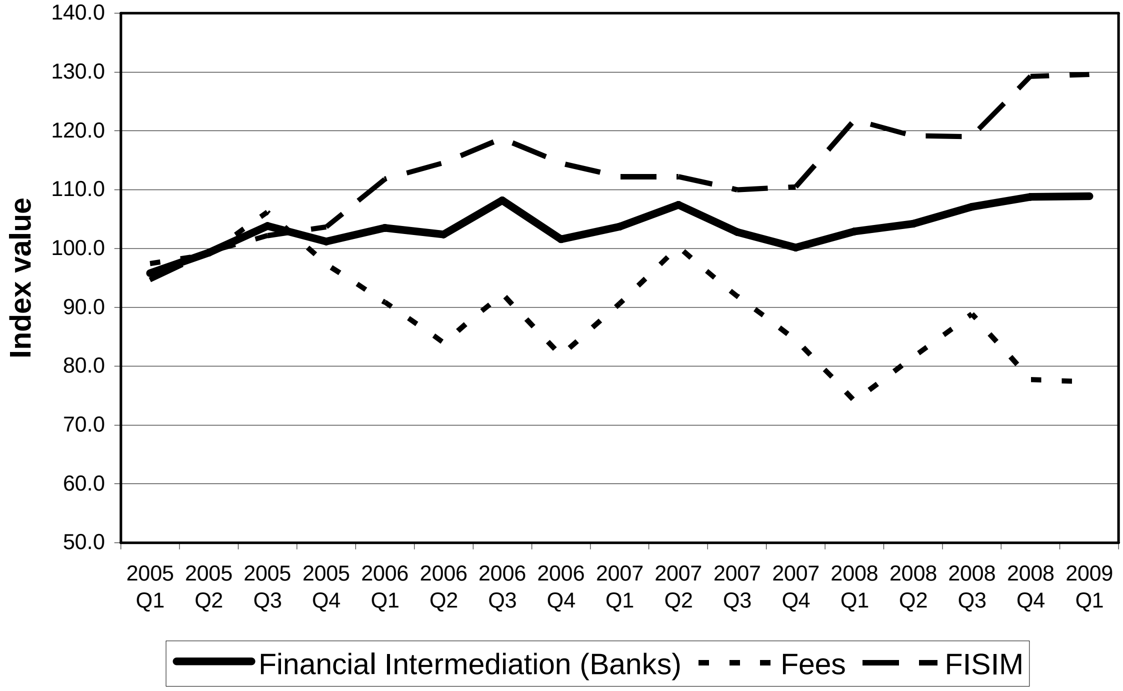
New loans
Loans <= £1 million, floating rate
Loans <= £1 million, initial fixation <=1 year
Loans <= £1 million, initial fixation > 1 <=5 years
Loans <= £1 million, initial fixation > 5 years
Loans > £1 million, <= 20 million, floating rate
Loans > £1 million, <= 20 million, initial fixation <=1 year
Loans > £1 million, <= 20 million, initial fixation > 1 <=5 years
Loans > £1 million, <= 20 million, initial fixation > 5 years
Loans > £1 million, <= 20 million, floating rate
Loans > 20 million, initial fixation <=1 year
Loans > 20 million, initial fixation > 1 <=5 years
Loans > 20 million, initial fixation > 5 years

Outstanding loans
Loans, floating rate
Loans, initial fixation <=1 year
Loans, initial fixation > 1 <=5 years
Loans, initial fixation > 5 years

ANNEX D Bank client types collected on Bank of England PL Form

Bank of England
Other UK Banks
Building Societies
Monetary financial institutions other than banks and building societies
Other financial corporations
UK central government
UK local authorities
UK public corporations
Private non-financial corporations
    Of which Manufacturing
    Wholesale and retail trade
    Transport, storage and communication
    Development, buying and selling of real estate
Households

ANNEX E Results



	Financial Intermediation (Banks) (2005=100.0)		
	Main index	Sub Index Fees	Sub Index FISIM
2005	100.0	100.0	100.0
2006	103.9	87.2	114.9
2007	103.5	91.8	111.2
2008	105.8	80.5	122.3
2005 Q1	95.8	97.5	94.7
2005 Q2	99.3	99.0	99.4
2005 Q3	103.8	106.2	102.2
2005 Q4	101.2	97.3	103.7
2006 Q1	103.5	90.8	111.8
2006 Q2	102.4	84.0	114.5
2006 Q3	108.2	92.3	118.7
2006 Q4	101.6	81.8	114.5
2007 Q1	103.7	90.6	112.2
2007 Q2	107.4	100.2	112.2
2007 Q3	102.8	91.9	110.0
2007 Q4	100.2	84.5	110.5
2008 Q1	102.9	74.1	121.8
2008 Q2	104.2	81.5	119.1
2008 Q3	107.1	88.8	119.0
2008 Q4	108.8	77.7	129.3
2009 Q1	108.9	77.3	129.6

ANNEX F Classification comparison – UK SIC 2007 versus ICI 4 / NACE Rev. 2

SIC 2007	ISIC Rev 4/ NACE Rev 2
Division 64 – Financial service activities, except insurance and pension funding This division includes the activities of obtaining and redistributing funds other than for the purpose of insurance or pension funding or compulsory social security. Note: National institutional arrangements are likely to play a significant role in determining the classification within this division. **Group 64.1 Monetary intermediation** This group includes the obtaining of funds in the form of transferable deposits, i.e. funds that are fixed in money terms, obtained on a day-to-day basis and, apart from central banking, obtained from non-financial sources. Class 64.11 Central Banking This class includes: – issuing and managing the country's currency - monitoring and control of the money supply - taking deposits that are used for clearance between financial institutions - supervising banking operations - holding the country's international reserves - acting as banker to the government The activities of central banks will vary for institutional reasons. Class 64.19 Other monetary intermediation This class includes the receiving of deposits and/or close substitutes for deposits and extending of credit or lending funds. The granting of credit can take a variety of forms, such as loans, mortgages, credit cards etc. These activities are generally carried out by monetary institutions other than central banks, such as: - banks - savings banks - credit unions This class also includes: - postal giro and postal savings bank activities - credit granting for house purchase by specialized deposit-taking institutions - money order activities	**Division 64 – Financial service activities, except insurance and pension funding** This division includes the activities of obtaining and redistributing funds other than for the purpose of insurance or pension funding or compulsory social security. Note: National institutional arrangements are likely to play a significant role in determining the classification within this division. **Group 641 – Monetary intermediation** This group includes the obtaining of funds in the form of transferable deposits, i.e. funds that are fixed in money terms, obtained on a day-to-day basis and, apart from central banking, obtained from non-financial sources. Class 6411 – Central Banking This class includes: - issuing and managing the country's currency - monitoring and control of the money supply - taking deposits that are used for clearance between financial institutions - supervising banking operations - holding the country's international reserves - acting as banker to the government The activities of central banks will vary for institutional reasons. Class 6419 – Other monetary intermediation This class includes the receiving of deposits and/or close substitutes for deposits and extending of credit or lending funds. The granting of credit can take a variety of forms, such as loans, mortgages, credit cards etc. These activities are generally carried out by monetary institutions other than central banks, such as: - banks - savings banks - credit unions This class also includes: - postal giro and postal savings bank activities - credit granting for house purchase by specialized deposit-taking institutions - money order activities This class excludes:

This class excludes: - credit granting for house purchase by specialized non-depository institutions, see 6492 - credit card transaction processing and settlement activities, see 66.19 *Subclass 64.19/1 Banks* This subclass includes only: – Monetary intermediation by those institutions other than the Bank of England, authorised by the Financial Services Authority under the Banking Act of 1987 to accept deposits in the UK – Monetary intermediation by those European authorised institutions which are entitled to accept deposits through a branch in the UK on the basis of their home state authorisation – Monetary intermediation of the National Savings Bank – Monetary intermediation of the Savings Certificate Office *Subclass 64.19/2 Building Societies* This subclass includes: - Monetary intermediation by those institutions authorised by the Financial Services Authority under the Building Societies Acts of 1986 and 1997 This subclass excludes: - Activities of specialist mortgage finance companies see 64.92/2 - Activities of housing associations see 41.10, 68.20/1 **Group 64.2 Activities of holding companies** <u>Class 64.20 Activities of holding companies</u> *Subclass 64.20/1 Activities of agricultural holding companies* *Subclass 64.20/2 Activities of production holding companies* *Subclass 64.20/3 Activities of construction holding companies* *Subclass 64.20/4 Activities of distribution holding companies* *Subclass 64.20/5 Activities of financial services holding companies* *Subclass 64.20/9 Activities of other holding companies n.e.c.* **Group 64.3 Trusts, funds and similar financial entities** <u>Class 64.30 Trusts, funds and similar financial entities</u> *Subclass 64.30/1 Activities of investment trusts* *Subclass 64.30/2 Activities of unit trusts* *Subclass 64.30/3 Activities of venture and development capital companies* *Subclass 64.30/4 Activities of open-ended investment companies*	- credit granting for house purchase by specialized non-depository institutions, see 6492 - credit card transaction processing and settlement activities, see 6619 **Group 642 – Activities of holding companies** <u>Class 6420 – Activities of holding companies</u> **Group 643 – Trusts, funds and similar financial entities** <u>Class 6430 – Trusts, funds and similar financial entities</u> **Group 649 – Other financial service activities, except insurance and pension funding activities** <u>Class 6491 – Financial leasing</u> <u>Class 6492 – Other credit granting</u> <u>Class 6499 – Other financial service activities, except insurance and pension funding activities, n.e.c.</u>

Subclass 64.30/5 Activities of property unit trusts *Subclass 64.30/6 Activities of real estate investment trusts* **Group 64.9 Other financial service activities, except insurance and pension funding** Class 64.91 Financial leasing Class 64.92 Other credit granting *Subclass 64.92/1 Credit granting by non-deposit taking finance houses and other specialist consumer credit grantors* *Subclass 64.92/2 Activities of mortgage finance companies* *Subclass 64.92/9 Other credit granting n.e.c.* Class 64.99 Other financial service activities, except insurance and pension funding, n.e.c. *Subclass 64.99/1 Security dealing on own account* *Subclass 64.99/2 Factoring* *Subclass 64.99/9 Other financial service activities, except insurance and pension funding, n.e.c.*	

ANNEX G Form of price measures for Banking SPPI price indices, accounting for proxy measures for number of deposits and number of loans

$$\text{Loan price} = \left[\left(\frac{\text{Interest Earned Income} + \text{Loan Fees}}{\text{Average daily loan balance}}\right) - \text{Reference rate}\right] \times \text{Average amount outstanding}$$

$$= \left[\left(\frac{\text{Interest Earned Income} + \text{Loan Fees}}{\text{Average daily loan balance}}\right) - \text{Reference rate}\right] \times \frac{\text{Average daily loan balance}}{\text{Number of businesses}}$$

$$= \frac{\text{Interest Earned Income} + \text{Loan Fees}}{\text{Number of businesses}} - \frac{(\text{Reference rate} \times \text{Average daily loan balance})}{\text{Number of businessess}}$$

$$= \frac{\text{Interest Earned Income} - (\text{Reference rate} \times \text{Average daily loan balance})}{\text{Number of businesses}} + \frac{\text{Loan Fees}}{\text{Number of businesses}}$$

$$\text{Deposit price} = \left[\text{Reference rate} - \left(\frac{\text{Interest payments} - \text{Deposit Fees}}{\text{Average daily deposit balance}}\right)\right] \times \text{Average amount deposited}$$

$$= \left[\text{Reference rate} - \left(\frac{\text{Interest payments} - \text{Deposit Fees}}{\text{Average daily deposit balance}}\right)\right] \times \frac{\text{Average daily deposit balance}}{\text{Number of businesses}}$$

$$= \frac{(\text{Reference rate} \times \text{Average daily deposit balance})}{\text{Number of businesses}} - \frac{(\text{Interest payments} - \text{Deposit Fees})}{\text{Number of businesses}}$$

$$= \frac{(\text{Reference rate} \times \text{Average daily deposit balance}) - \text{Interest payments}}{\text{Number of businesses}} + \frac{\text{Deposit Fees}}{\text{Number of businesses}}$$