Office for National Statistics

Insurance and pensions methods changes: 1997 to 2020

Improvements in calculating estimates for the insurance companies and pension funds subsector. Changes to the financial and non-financial accounts resulting from methods and data source changes.

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1 . Main changes

- Improvements for Blue Book 2022 include revisions to methods and the incorporation of new data sources relating to insurance and pensions.
- This work contributes to a better measurement of the non-financial and financial accounts, affecting all sectors of the UK and the rest of the world economy.
- Improvements to insurance and pensions, which are largely shown as combined series in the accounts, have led to changes across a range of transactions that affect gross domestic product (GDP), including output, intermediate consumption, household final consumption expenditure, imports, exports and the financial accounts.

2 . Overview of insurance and pensions and new data sources

In the National Accounts, insurance companies or corporations and pension funds form one of the three subsectors of the financial corporations sector, along with monetary financial institutions and other financial institutions.

Pension schemes provide workplace pensions which are classified as “social insurance” within the accounts.

Insurance companies provide non-life (such as car or home) and life insurance. Life insurers may also provide pensions. These could be either workplace, which are classified as social insurance, or individual, which are not classified as a pensions product in the accounts.

All sectors of the economy may consume insurance and/or pensions products which are the output of the insurance and/or pensions industries.

While this article refers to changes occurring between 1997 and 2020, changes have been implemented back historically where appropriate.

The Glossary provides a list of the main transactions and useful terminology.

New data sources

We have introduced two new data sources for our Blue Book 2022 estimates. They have both enhanced coverage, quality and granularity of the data, which improves our estimates of non-financial and financial transactions for insurance and pensions.

Solvency II regulatory data

Solvency II (SII) is a framework that the Prudential Regulatory Authority (PRA), part of the Bank of England, uses to regulate UK insurance companies. SIIreplaced its predecessor, Solvency I, in 2016 as the insurance regulatory framework. Part of this framework includes data submissions from insurance companies to the PRA. To improve estimates for insurance, the Office for National Statistics (ONS) is introducing this SII administrative data source.

Access to SII data enables the ONS to isolate the financial flows associated with the different types of insurance business, such as pension provision, other life (long-term) insurance and non-life (or general) insurance business. This means that the ONS can apply the appropriate methodologies, in line with international definitions, for each type of insurance business.

The Financial Survey of Pension Schemes (FSPS)

Our article, UK pension surveys: redevelopment and 2019 results explains the background to the new quarterly survey of pension schemes introduced in 2019. FSPS covers both the non-financial (income and expenditure) and financial accounts.

3 . Non-financial account changes for insurance

Currently, in the National Accounts, insurance data is derived from various sources, including annual and quarterly surveys. As of Blue Book 2022, for data from 2016 onwards, we will primarily use Solvency II (SII) data. We will also use SII to inform changes to the pre-2016 series.

As well as introducing the SII data source, the Office for National Statistics has also improved our methods as follows;

Changes to output (P.11)

P.11 is now estimated using the appropriate calculations for each type of insurance, in line with international definitions. The output of insurance represents the service provided to the policyholders. This is based, in general, on the premiums from, and the claims or benefits to, the policyholders. See the Glossary for a description of terms used.

For direct non-life insurance:

Premiums earned (gross of reinsurance) plus premium supplements minus adjusted claims incurred.

For direct life insurance:

Premiums earned (gross of reinsurance) plus premium supplements minus benefits due, minus increases (plus decreases) in actuarial reserves and reserves for with-profits insurance.

For life insurers in relation to pension provision:

Premiums (contributions for Defined Contribution schemes, premiums earned for Defined Benefit schemes) plus premium supplements minus benefit claims minus change in reserves.

For reinsurance accepted, which is comparable with direct non-life insurance and is calculated gross of reinsurance ceded:

Premiums earned less reinsurance commissions plus premium supplements minus adjusted claims incurred and profit sharing.

Reinsurance transactions are recorded gross of further reinsurance to other reinsurers, consistent with the gross treatment of reinsurance in direct life and non-life insurance.

Consumption

Direct non-life insurance is allocated to UK businesses as intermediate consumption (P.2), to households as final consumption (P.3), and to non-residents as exports (P.62).

Direct life insurance is allocated to UK households as final consumption (P.3), and to non-resident households as exports (P.62).

Reinsurance is allocated to other insurance companies (UK and non-UK).

The ONS has reviewed the allocation of direct non-life insurance to consuming sectors through detailed consultations with the Bank of England (BoE) on the different users of non-life insurance types.

Adjusting non-life catastrophic claims

Events, such as natural disasters, can result in exceptionally large (or catastrophic) claims. If claims are large, this will likely cause volatility in the level of output and maybe even negative output, which is conceptually impossible. The ONS has introduced an adjustment to handle such events, in line with the European System of Accounts (ESA-2010) paragraphs 16.92 and 16.93) and the System of National Accounts (SNA-2008) (paragraphs 17.40 to 17.42 and 17.60). The difference between adjusted and unadjusted claims is then recorded as a capital transfer.

Insurance Premium Tax (IPT)

We use IPT data, collected by Her Majesty's Revenue and Customs (HMRC), and apportion this value to individual sectors.

Reinsurance commission and profit share

These data are part of the calculation of output for reinsurance but are not available from SII. Based on a review of other sources, and consultation with BoE experts, a fixed percentage has been applied to represent reinsurance commissions and profit share as a percentage of reinsurance accepted premiums.

Exports and imports

Not all export and import data are available from SII. Life insurance exports have been estimated using ratios based on premiums, claims, and technical reserves data from SII. Reinsurance imports are also estimated using ratios derived from SII.

Other notable impacts

Net premiums, claims of non-life insurance and premium supplements.

4 . Non-financial account changes for pensions

Changes to output of pension funds or service charge

The output (P.11) of pension funds is defined under international national accounting standards to be equivalent to the service charge, the fees charged by the pension scheme administrators. The method used for calculating service charge for schemes where the government is the pension manager has not been changed. The current method for estimating service charge for private sector employee schemes, using 1% of assets, has been updated as follows:

Defined Benefit (DB) schemes

For private sector employee DB schemes, we use the Financial Survey of Pension Schemes (FSPS), where available, to calculate or service charge or output. For previous years the MQ5 Pension Funds Survey (PFS) is used.

Defined Contribution (DC) schemes

Alongside the government's automatic enrolment (AE) policy (where every UK employer must put certain staff into a workplace scheme and make contributions), a charge cap of 0.75% of assets was introduced for particular schemes. AE has increased the prevalence of master trusts and, with many smaller schemes transferring members to them, there has been rapid growth of DC and therefore more impact of the cap.

The new method for calculating service charge or output for DC schemes uses estimates based on this Financial Times pensions expert article for 2010 to 2019. From 2020 onwards, the assumption uses FSPS data.

Changes to employer social contributions: private sector DB schemes

Employer contributions (D.12) are the sum of "actual" and "imputed" contributions. While actual contributions are reported in FSPS, or Solvency II (SII), imputed contributions are now based on actuarial estimates from the annual Pensions in the national accounts: UK Table 29 methodology (2018) (Row 2.2 Column B, Part A).

Changes to investment income payable on pension entitlements or household social contribution supplements: DC schemes

Investment income payable on pension entitlements for DC schemes is equivalent to the value of household social contribution supplements in the National Accounts. The method for calculating investment income payable on pension entitlements is unchanged for DB schemes.

In general, DC schemes largely invest in "pooled investment vehicles" or "mutual funds" in the National Accounts financial balance sheet. Estimates of investment income for DC schemes can therefore be obtained by using a proportion of this. This proportion is based on data from FSPS but, as part of this relates to retained earnings, direct survey estimates of investment income are not fully captured and need to be uplifted, this is done using information from SII.

5 . Financial account changes

The financial account and balance sheet have taken on the new Financial Survey of Pension Schemes (FSPS) and Solvency II (SII) estimates, affecting most financial instruments across many sectors. The new data have improved instrument and sector classifications, for both assets and liabilities, throughout the time series. SII also provides improvements on counterparty relationships.

6 . Glossary

Claims incurred

The sum of claims paid and the change in the provision for claims during the financial year, related to insurance contracts arising from direct insurance and reinsurance business.

Claims

The amounts that insurers are obliged to pay policyholders on the occurrence of a specific event. Non-life claims are also recorded as D.72.

Defined Benefit (DB) pension

A pension in which the rules of the scheme specify the rate of benefits to be paid.

Defined Contribution (DC) pension

A pension in which the benefits are determined by the contributions paid, the investment return on those contributions (less charges) and, if applicable, the type of annuity purchased upon retirement.

Employer "actual" social contributions D.6111

Contributions paid by employers to social insurance schemes or pension schemes to secure pensions benefits for their employees (and other eligible persons).

Employer "imputed" social contributions D.6121

Records the shortfall or surplus in the funding of the current service increase in pension entitlements. The current service increase is the (modelled) increase in entitlements because of employees working an extra year and building up extra benefits in the future. The purpose of the "actual" contributions is to cover that increase each year. The employer "imputed" contributions are then the difference between the current service increase less the net actual contributions (less the service charge). This can be a positive figure (indicating a shortfall that the employer is liable for), a negative figure (indicating a surplus that the employer is entitled to), or zero if actual contributions meet the increase.

Full fund managers

Life insurers whose only or main business is asset management.

Insurance Premium Tax (IPT)

A tax on general insurance premiums, including car insurance, home insurance, and pet insurance. There are two rates of IPT: a standard rate of 12% and a higher rate of 20%, which applies to travel insurance, electrical appliance insurance and some vehicle insurance.

Investment income payable on pension entitlements (D.442) or household social contribution supplements (D.6141)

Reflects the property income payable by the administrators of pension funds to households. It is either calculated as the income on investment of the fund for Defined Contribution schemes or, for Defined Benefit schemes, an actuarial calculation using the present value of pension entitlements (see European System of Accounts (ESA) 2010, pages 103 and 111).

Life insurance

A policyholder makes regular payments to an insurer in return for financial guarantees or an annuity to a beneficiary, at a given date or earlier in case of the death of policyholder.

Market output (P.11) of insurance

Insurers provide an insurance service for their clients, but do not charge explicitly for their service. Output is therefore calculated using the method described earlier in this article. The insurer collects premiums and pays claims or benefits on the occurrence of an insured event. The claims or benefits compensate the beneficiary for the financial consequences of the insured event. The insurance technical reserves are funds that insurers use to invest and to earn income. Such funds and the corresponding investment income (premium supplements) are a liability towards the beneficiaries.

Market output (P.11) of pensions or social insurance scheme service charges (D.61SC)

Net social contributions (D.61) are contributions made by households to social insurance schemes to make provision for social benefits to be paid. D.61SC represents the service fees charged by the units administering these schemes. D.61SC is recorded in the accounts as a negative, P.11 as a positive value.

Master trusts

Where a product provider, which can be an insurance company, manages a pension scheme for a number of employers under a single trust arrangement.

Non-life insurance

A policyholder makes regular payments to an insurer in return for a set financial guarantee in case of an accidental event (other than the death of a person).

Partial fund managers

Firms that are mainly life insurers with some asset management.

Pooled Investment Vehicles or Mutual Funds AF.52

Collective investment schemes operated by an investment company that enable investment in a diversified portfolio of shares, bonds and other securities.

Premium supplements (D.441)

The income earned from the investment of the insurance technical reserves of the insurers.

Premiums earned

The sum of gross premiums written, minus the change in the gross provision for unearned premiums.

Premiums

The amount of money an individual or business must pay for an insurance policy. Non-life premiums are also recorded as D.71.

Reinsurance

Insurers may protect themselves against an unexpectedly large claims by taking out a reinsurance policy. Reinsurance corporations are concentrated in a limited number of financial centres, often outside the UK.

Table 29

Accrued-to-date pension entitlements in social insurance, an annual return submitted according to the requirements of ESA 2010.

Technical reserves

Amounts of money set aside to pay for underwriting liabilities. Insurance companies must maintain sufficient assets as technical reserves to cover all underwriting liabilities.

7 . Future developments

The insurance and pensions changes will be published in Blue Book 2022 and are part of the ongoing programme of National Accounts improvements.

8 . Related links

Proposed changes to be implemented in Blue Book and Pink Book 2022
Article | Released 13 January 2022
Planned scope and content of the UK National Accounts, the Blue Book and UK Balance of Payments, the Pink Book 2022 editions.