

## Matching adjustment asset and liability information return (MALIR) – Content of the submission, basic information and analytical data

This log file provides the overall content of the submission and the instructions to complete the set of MALIR templates. The set of templates cover four types of data: basic information, cash flow data, output data and further information.

### Content of the submission

The MALIR includes the following submission templates:

- MALIR 1 – Firm Information
- MALIR 2 – Asset cash flows
- MALIR 3 – Liability cash flows
- MALIR 4 – Portfolio Output
- MALIR 5 – Matching Tests
- MALIR 6 – Assets – Further Info
- MALIR 7 – Reconciliation

All of the MALIR submission templates are applicable to all firms with permission to apply the Matching Adjustment (MA).

All firms with permission to use the MA must submit a completed MALIR to the PRA annually.

A separate MALIR should be completed for each MA portfolio (MAP).

The MALIR should be submitted to the PRA through the Bank of England Electronic Data Submission (BEEDS) portal within the requisite reporting window of 130 business days after a firm's financial year end (or twelve weeks after the end of the financial reporting period).

All information in the MALIR should be provided at the effective date of 31 December.

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All assets, for all components within the MAP, should be captured. This includes each investment in QRT IR.06.02 (list of assets), each derivative (which may be an asset or a liability in the balance sheet) in QRT IR.08.01 (open derivatives) and each reinsurance treaty.

Where applicable amounts should be in GBP and millions.

If in completing this return discrepancies are identified between the assets included in the MAP and those for which the firm has permission to hold, the firm should notify their supervisory team as soon as possible.

## Basic Information

The Basic Information consists of the following templates: MALIR 1 – firm information.

MALIR 1 is applicable for each MAP held by all firms with permission to apply the Matching Adjustment.

MALIR 1 – Firm Information		
CELL(S)	ITEM	INSTRUCTIONS
MALIR 1 1.1	Undertaking name	Legal name of the undertaking.
MALIR 1 1.2	Legal entity identifier (LEI)	Identification code of the undertaking.
MALIR 1 1.3	FRN	Firm Reference Number of the undertaking.
MALIR 1 1.4	MAP reference	Matching portfolio number which is attributed by the undertaking as defined in QRT IR.06.02, item C0080.
MALIR 1 1.5	Reporting reference date	Identify the ISO 8601 (yyyy-mm-dd) code of the date identifying the last day of the reporting period.

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MALIR 1 – Firm Information		
MALIR 1 1.6	Reporting submission date	Identify the ISO 8601 (yyyy-mm-dd) code of the date when the report to the supervisory authority is made.
MALIR 1 1.7	Initial submission or re-submission	Identify if it is an initial submission of information or a re-submission of information in relation to a reporting reference date already reported. An integer number should be entered which reflects the number of times the MALIR has been submitted for the relevant year end where 1 would be the initial submission.

## Cash flow data

The cash flow data consists of the following templates: MALIR 2 – asset cash flows and MALIR 3 – liability cash flows.

MALIR 2 and 3 are applicable for each MAP held by all firms with permission to apply the Matching Adjustment.

MALIR 2 – Asset cash flows		
CELL(S)	ITEM	INSTRUCTIONS
MALIR 2 2.1	Component A/B/C of the MAP	Which component of the MAP the asset is held within as set out in chapter 4 of Supervisory Statement (SS)7/18.  Where an asset is allocated to more than one component this should be split accordingly into different lines in the submission. The relevant values and cash flows of each line should be adjusted in proportion to the ratio in which they are held.

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MALIR 2 – Asset cash flows		
MALIR 2 2.2	Asset Type	Asset type, please select only from the table in the Appendix at the end of this log file.  There are separate fields (MALIR 2 – 2.3 and MALIR 2 – 2.4) where firms' own definition of asset type may be included.
MALIR 2 2.3	Internal high level asset classification	Firm specific high level asset type (or asset category) used for internal reporting and analysis. This could be the category typically used for strategic asset allocation purposes or high-level investment limits.
MALIR 2 2.4	Internal detailed asset classification	Firm specific detailed asset type (or asset category) used for internal reporting and analysis. This could be the most granular level of asset reporting.
MALIR 2 2.5	Description of assets or where further detail may be helpful	Further details on the nature of assets categorised as 'Other assets' or 'Derivatives' or any additional information useful for understanding a given asset.
MALIR 2 2.6	Item title	Asset name, as defined in QRT IR.06.02, item C0190, or Counterparty name, as defined in QRT IR.08.01 item C0260, or Legal name of reinsurer or collateral provider, as defined in QRT IR.30.05, item C0030.
MALIR 2 2.7	CIC	Complementary Identification Code for asset classification purposes as defined in QRT IR.06.02, item C0290 or QRT IR.08.01 C0380.

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MALIR 2 – Asset cash flows		
MALIR 2 2.8	ID Code and Type of Code	Asset ID Code and type of code as defined for use in QRT IR.06.02, item C0040, Derivative ID Code and type of code as defined for use in QRT IR.08.01, item C0040 or Identification code of reinsurer or collateral provider and type of code as defined for use in QRT IR.30.05 item C0010.
MALIR 2 2.9	Issuer Sector	Classification of the principal economic activity of the issuer of the asset using codes as per QRT IR.06.02, item C0230.
MALIR 2 2.10	FS Sector	Select the most appropriate sector classification of the issuer of the asset as used in the calculation of fundamental spread (FS) from: 'sovereigns', 'financial' or 'non-financial'.
MALIR 2 2.11	Issuer Country	Country in which the issuer of the asset is domiciled.  ISO 3166-1 Alpha-2 codes should be used to identify the issuer country as defined here: <a href="https://www.iso.org/iso-3166-country-codes.html">https://www.iso.org/iso-3166-country-codes.html</a> .  Where the asset is a consolidation of multiple underlying assets from different countries, please enter 'MIX'.
MALIR 2 2.12	Currency	Currency in which cash flows are received using ISO 4217 currency codes: <a href="https://www.iso.org/iso-4217-currency-codes.html">https://www.iso.org/iso-4217-currency-codes.html</a> .  Where the currency reported is as a result of pairing the asset with a currency swap please indicate this in MALIR 2 – 2.5 by stating “paired with swap” followed by the ISO

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## MALIR 2 – Asset cash flows

4217 code for the initial currency in which the asset was issued.

For the purpose of the asset cash flows, all values should be in GBP and millions.

MALIR 2 2.13	FS table used	The FS table used (from the Technical Information for Solvency UK Firms: <a href="https://www.bankofengland.co.uk/prudential-regulation/key-initiatives/solvency-ii/technical-information">https://www.bankofengland.co.uk/prudential-regulation/key-initiatives/solvency-ii/technical-information</a> to calculate the probability of default (PD) and cost of downgrade (CoD) for the asset.
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The following options are available:

- government and central bank;
- corporate – financial (EUR);
- corporate – non financial (EUR);
- corporate – financial (USD);
- corporate – non financial (USD);
- corporate – financial (GBP);
- corporate – non financial (GBP);
- corporate – financial (other currency); and
- corporate – non financial (other currency).

MALIR 2 2.14	Valuation method Solvency II	Identify the valuation method used when valuing assets or derivatives, as defined in QRT IR.06.02, item C0150 or QRT IR.08.01, item C0250 respectively.
MALIR 2 2.15	Credit Quality Step (CQS)	For assets rated externally by a credit rating agency (CRA) select the CQS as defined and mapped in accordance with <a href="https://www.legislation.gov.uk/eur/2016/1800">https://www.legislation.gov.uk/eur/2016/1800</a> .

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## MALIR 2 – Asset cash flows

For internally rated assets select the CQS to which the internal credit assessment outcome is allocated.

For assets which are not rated select 'no rating available'.

MALIR 2 2.16	Rating method	Select the rating method used for the asset indicating whether the asset is: <ul style="list-style-type: none"><li>• rated externally (externally rated - CRA) as referred to in regulation 4(4) of The Insurance and Reinsurance Undertakings (Prudential Requirements) Regulations 2023 (referred to here as the 'MA regulations'); or</li><li>• internally rated (internally rated); or</li><li>• has an external CRA rating but an internal rating is used instead (internal rating applied as overlay).</li></ul> The latter category should only be used where a firm has made an explicit decision to apply an internal rating instead of the available external rating.
MALIR 2 2.17	Name of Internal Methodology	The name of the internal rating methodology used for assets which are identified as internally rated in MALIR 2 – 2.16.  Alternatively enter 'N/A'.
MALIR 2 2.18	Internal Rating	The notched internal rating for the asset if produced.  Alternatively enter 'N/A'.

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MALIR 2 – Asset cash flows		
MALIR 2 2.19	Fitch Rating	Select the notched rating obtained for this asset from Fitch (including public external ratings and private ratings).  Alternatively enter 'N/A' if no rating from Fitch was obtained.  Private ratings for this purpose do not include credit opinions.
MALIR 2 2.20	Moody's Rating	Select the notched rating obtained for this asset from Moody's (including public external ratings and private ratings).  Alternatively enter 'N/A' if no rating from Moody's was obtained.  Private ratings for this purpose do not include credit opinions.
MALIR 2 2.21	S&P Rating	Select the notched rating obtained for this asset from S&P (including public external ratings and private ratings).  Alternatively enter 'N/A' if no rating from S&P was obtained.  Private ratings for this purpose do not include credit opinions.
MALIR 2 2.22	Other CRA Rating	Enter the notched rating obtained for this asset from any CRA other than Fitch, Moody's and S&P (including public external ratings and private ratings).

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## MALIR 2 – Asset cash flows

Alternatively enter 'N/A' if no rating from another agency was obtained.

Private ratings for this purpose do not include credit opinions.

MALIR 2 2.23	Notched rating used	The selection should reflect the notched rating used for the asset in the FS calculation.
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Select between options 'Fitch rating', 'Moody's rating', 'S&P rating', 'other CRA rating', 'internal rating', or 'N/A - notched rating unavailable'.

This field should be marked as 'N/A - notched rating unavailable' if the asset is not currently rated on a notched rating scale.

MALIR 2 2.24	Underlying property exposure	For all assets with an underlying exposure to property, regardless of asset type classification, the type of exposure should be indicated by choosing either 'residential' or 'commercial' as most appropriately reflects the nature of the holding (eg a housing building would be considered 'Residential' whether for single or multi-family use).
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Where there is no underlying property exposure select 'N/A'.

If a property is mixed-use select the option which is most reflective of the underlying risk.

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MALIR 2 – Asset cash flows		
MALIR 2 2.25	Internally restructured (Y/N)?	Y indicates that the asset has been internally restructured.  An asset is internally restructured if the firm or group holds all the tranches, and some tranches are outside the MA portfolio.
MALIR 2 2.26	SME (Y/N)?	Y indicates this is lending to a small or medium sized enterprise (SME).  The UK government definition of SMEs encompasses micro (less than 10 employees and an annual turnover under €2 million), small (less than 50 employees and an annual turnover under €10 million) and medium-sized (less than 250 employees and an annual turnover under €50 million) businesses.
		Investments in a securitisation/special purpose vehicle (SPV) where the underlying exposures include investment in SMEs should be shown as an SME exposure. SPVs in their own right are unlikely to be SMEs.
MALIR 2 2.27	Partial recognition of cashflows (Y/N)?	Y indicates that only part of the asset's cash flows have been recognised in order to be MA-eligible.
MALIR 2 2.28	Asset in construction phase (Y/N)?	Y indicates that this is an investment directly or indirectly in an asset that is currently in its construction phase.  This should include all assets where the cash flows to be received on the underlying asset exposure are dependent on successful and timely completion of a construction

## MALIR 2 – Asset cash flows

phase.

If there are safeguards/guarantees in place such that cash flows will be paid even if (for example) construction overruns causing the exposure to construction risk to be limited then this should be indicated (in MALIR 2 – 2.5); however, such assets would still be deemed to be in construction phase.

MALIR 2 2.29	Climate target / Green (Y/N/U)?	<p>Y indicates that the asset is considered to be a green asset or one which contributes to a climate target.</p> <p>In order for an asset to be considered ‘green’ it must substantially support at least one of the following six environmental objectives (in accordance with Greening Finance: a roadmap to sustainable investing (<a href="https://www.gov.uk/government/publications/greening-finance-a-roadmap-to-sustainable-investing">https://www.gov.uk/government/publications/greening-finance-a-roadmap-to-sustainable-investing</a>)) while not causing significant harm to any of the others:</p> <ol style="list-style-type: none"><li>1) climate change mitigation;</li><li>2) climate change adaptation;</li><li>3) sustainable use and protection of water and marine resources;</li><li>4) transition to a circular economy;</li><li>5) pollution prevention and control; and / or</li><li>6) protection and restoration of biodiversity and ecosystems.</li></ol> <p>N indicates that the asset is not considered to be a green asset or one which contributes to a climate target.</p>
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## MALIR 2 – Asset cash flows

Please enter U (unclassified) for all assets for which there is no climate related classification.

MALIR 2 2.30	Hedging Asset (Y/N)?	Y indicates that this asset is used as a hedging asset within the MA portfolio.
MALIR 2 2.31	Capacity Enhancing Assets	Select the most relevant sub-category from the drop-down list for all new assets, or additional exposures to existing assets, invested in after 31 December 2023, which directly contribute to UK economic growth via the financing of increased capacity in both capital and labour stock and tangible and intangible assets in the economy. The category chosen should reflect the majority (>50%) of the investment.
For an asset which meets these criteria the option choice should most accurately reflect the nature of the investment: 'Plant and Equipment'; 'Infrastructure'; 'Properties (including Housing); 'Agricultural Land, Forestry and Natural Resources / Mining'; 'Clean Energy Projects/Transition to Net Zero'; 'Human Capital Development'; 'Software and Technology'; 'Innovation and Research and Development'; 'Other'; or 'Unknown'.		
If the investment is creating capacity in the UK, but the category of investment is different or is a combination of one or more of the above, please choose the 'Other' option and clarify further in MALIR 2 - 2.5. If the category of the investment is not known, please choose the 'Unknown' option and clarify further in MALIR 2 - 2.5.		

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## MALIR 2 – Asset cash flows

This field should be marked 'N/A' for all assets which do not meet the above criteria and are not aiding additional capacity creation.

MALIR 2 2.32	Primary / Secondary Investment	This field should only be completed for assets which are new assets or additional exposures to existing assets in the MA portfolio after 31 December 2023
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Indicate whether the asset is a primary or secondary investment where:

- a primary investment would be the purchase of a new bond issue or the origination of a new loan; and
- a secondary investment would be the purchase of a bond or loan from another investor.

Select 'Unknown' if the origination status of the asset is not known.

MALIR 2 2.33	Highly Predictable Asset (Y/N)?	Y indicates that this is an asset with a highly predictable cash flow as defined in 5.3 of the Matching Adjustment Part of the PRA Rulebook
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MALIR 2 2.34	Uncertainty Provision (%)	MA Benefit (%) assuming the worst contractual outcome occurs.
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This should be calculated as: 'FS Addition - Highly Predictable' divided by ('MA Benefit (%)' less 'MA Benefit (%) under worst contractual outcomes' *plus* 'FS Addition - Highly Predictable').

Where 'MA Benefit (%) under worst contractual outcomes'

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## MALIR 2 – Asset cash flows

is defined as the lowest possible MA Benefit, consistent with Matching Test 4 in the Appendix to SS7/18.

MALIR 2 2.35	Duration (in years)	Duration of cash flows, in years.  Asset duration, defined as the ‘residual modified duration’ (modified duration calculated based on the remaining time for maturity of the security, counted from the reporting reference date). For assets without fixed maturity the first call date shall be used. The duration shall be calculated based on economic value.
MALIR 2 2.36	Term (in years)	Remaining term to expected maturity date of the asset, in years.
MALIR 2 2.37	Yield (%)	Asset yield to maturity (YTM).  For assets where cash flows are only partially recognised (eg callable assets), this should be calculated based on the best estimate cash flows within the matching adjustment portfolio.
MALIR 2 2.38	RFR (%)	The annual effective rate calculated as the single discount rate as set out in regulation 5(1)(b) of the MA regulations but applied to the asset in isolation assuming exactly matching liability cashflows.  For assets where cash flows are only partially recognised (eg callable assets), this should be calculated based on the best estimate cash flows within the matching adjustment portfolio.

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MALIR 2 – Asset cash flows		
MALIR 2 2.39	Credit Spread (%)	This should be the difference between the yield and the risk-free rate (as calculated in MALIR 2 – 2.38).
MALIR 2 2.40	Base recovery rate (%)	Assumptions used for the recovery rate assumption in the base balance sheet consistent with regulation 6(6)(a) of the MA regulations.
MALIR 2 2.41	Probability of Default (%)	The Probability of Default (PD) attributed to each asset as calculated using the Technical Information for Solvency UK Firms: <a href="https://www.bankofengland.co.uk/prudential-regulation/key-initiatives/solvency-ii/technical-information">https://www.bankofengland.co.uk/prudential-regulation/key-initiatives/solvency-ii/technical-information</a> and used in the calculation of 'FS (%)' as per MALIR 2 – 2.45 and consistent with regulation 6(3)(a) of the MA regulations.
MALIR 2 2.42	Residual FS Allowance (%)	This is the residual balance used to calculate basic FS (%) as per chapter 5 of SS7/18, after any adjustment for notching and before any FS Additions.
		This should be calculated as [MAX(PD + CoD, LTAS floor) less PD] using relevant published FS tables adjusted, where necessary, to reflect differences in credit quality by rating notch. This figure should be provided for each asset expressed as a %.
		PD, LTAS floor and CoD as calculated using the Technical Information for Solvency UK Firms: <a href="https://www.bankofengland.co.uk/prudential-regulation/key-initiatives/solvency-ii/technical-information">https://www.bankofengland.co.uk/prudential-regulation/key-initiatives/solvency-ii/technical-information</a> and used in the calculation of 'FS (%)' as per MALIR 2 – 2.45.

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MALIR 2 – Asset cash flows		
MALIR 2 2.43	FS Addition - Highly Predictable (%)	The addition to basic FS (as defined in chapter 5 of SS7/18) applied to account for highly predictable assets as set out in SS7/18.
MALIR 2 2.44	FS Addition - Other (%)	The addition to basic FS (as defined in chapter 5 of SS7/18) applied other than for highly predictable assets as set out in SS7/18.
MALIR 2 2.45	FS (%)	The FS attributed to each asset, after any adjustment for notching and post FS Additions.
		FS (%) should be calculated as the sum of 'PD (%)' (as per MALIR 2 – 2.41) plus 'Residual FS Allowance (%)' (as per MALIR 2 - 2.42) plus 'FS Addition - Highly Predictable (%)' (as per MALIR 2 - 2.43) plus 'FS Addition - Other (%)' (as per MALIR 2 - 2.44).
MALIR 2 2.46	MA (%)	For the purposes of the MALIR MA (%) is calculated as a spread (ie credit spread - fundamental spread), <b>not</b> as a percentage of market value (or similar) and consistent with regulation 6 of the MA regulations.
		If the MA cannot be calculated in this way for a given asset please provide the MA and describe the calculation as a free form entry in the MALIR 6.
		This should be reconcilable (at portfolio level) with that reported in QRT IRR.22.03.01.
MALIR 2 2.47	MA Benefit (£m)	MA Benefit in pound sterling. For the purposes of the MALIR this should be calculated using one of the following

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## MALIR 2 – Asset cash flows

techniques:

- a) assume the MA portfolio consists solely of the single asset and calculate the level of MA on hypothecated liabilities; or
- b) replace the single asset with a risk-free asset of equivalent cash flow size/timing, and calculate the marginal loss of MA on the portfolio.

For consistency, the level of MA benefit in monetary terms should be proportionally scaled for each asset such that the total amount of MA Benefit across the portfolio is consistent with the level of MA Benefit achieved in the calculation of the Technical Provisions. The MA Benefit (£m), at portfolio level, should reconcile with that reported in QRT IR.22.01.

The MA Benefit (£m) should be shown in respect of assets that generate that benefit ie component A assets. If it is possible to provide a corresponding figure for other assets (ie the MA Benefit they would generate if they were in Component A), this should be provided.

MALIR 2	Market Value	Market value in £m sterling.
2.48	as at effective date (£m)	Where an asset is not paired with a derivative the value is as defined in QRT IR.06.02, item C0170.

Where an asset is paired with a derivative the amount is the sum of the value of the asset in QRT IR.06.02, item

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## MALIR 2 – Asset cash flows

C0170 and the value of the derivative in QRT IR.08.01, item C0240.

Where a derivative is not paired with an asset the value is as defined in QRT IR.08.01, item C0240. The value of a reinsurance asset should be shown in a consistent manner with how it would be reported in QRT IR.02.01 C0010/R0270, ie net of any Counterparty Default Adjustment (CDA).

MALIR 2 2.49	Notional value (£m)	As defined for use in QRT IR.06.02, item C0140 or QRT IR.08.01, item C0130. If the asset is amortising provide the current value.
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All values should be calculated using £m.

MALIR 2 2.50	Cash flow type	The level of fixity of the asset cash flows after any adjustments to those cashflows (eg haircuts for assets with inadequate modified spens clauses).
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Select between options ‘Fixed – with adequate compensation on early repayment’, ‘Fixed – no early repayment option’, ‘Fixed – with inadequate compensation’ or ‘Other’.

MALIR 2 2.51	Gross monthly cash flows (£m)	Promised asset cash flows (ie before any adjustment for de-risking, but after any adjustments for MA eligibility (as per chapter 2 of SS7/18), on a monthly basis, for all assets held within the MAP.
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## MALIR 2 – Asset cash flows

Where a firm ordinarily presents cash flows annually they will need to be restated as monthly.

Figures should be in £m.

Cash flows should be consistent with overall metrics (eg yield and spread) for each asset.

Nominal cash flows should be shown for inflation-linked assets based on the best estimate assumptions regarding future inflation.

Cash flows for any inflation-linked derivative exposures should be shown net based on projected future inflation. Where an asset is paired with a derivative (eg currency swap), the eventual £m cash flow from the pairing should be reflected.

Where cash flows extend beyond 50 years the portion beyond year 50 should be included in the month 600 column, discounted (back to month 600) at the basic risk-free rate.

The cash flows attributed to reinsurance, net of any Counterparty Default Adjustment (CDA), should be provided as per the expectation set out in chapter 2 of SS7/18.

If only a part of the asset cash flows are MA eligible, only include the eligible portion of the cash flows.

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MALIR 3 – Liability Cash flows		
CELL(S)	ITEM	INSTRUCTIONS
MALIR 3 3.1_C01	Present value at basic RFR £m	The present value of the monthly liability cash flows (gross of reinsurance) used in the calculation of the base MA for all liabilities that are level or have fixed-escalation claim cash flows.
	Level or fixed-escalation claim Cashflows	Cash flows should be discounted at the basic RFR.  Response should be positive in £m.
		For liabilities with a combination of fixed and inflation-linked characteristics the full set of liability cash flows should be reflected as inflation-linked under MALIR 3 – 3.1_C02.
MALIR 3 3.1_C02	Present value at basic RFR £m	The present value of the monthly liability cash flows (gross of reinsurance) used in the calculation of the base MA for all liabilities that have inflation-linked claim cash flows.
	Inflation-linked claim Cashflows	Cash flow calculation should use the best estimate assumptions regarding

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## MALIR 3 – Liability Cash flows

future inflation and be discounted at the basic RFR.

Response should be positive in £m.

For liabilities with a combination of fixed and inflation-linked characteristics the full set of liability cash flows should be reflected as inflation-linked.

MALIR 3 3.1_C03	Present value at basic RFR £m	The present value of the monthly expense cash flows used in the calculation of the base MA for all liabilities.
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### Expense Cashflows

Cash flows should be discounted at the basic RFR.

Response should be positive in £m.

A description of the items included under this heading should be provided in MALIR 3 – 3.5.

MALIR 3 3.1_C04	Present value at basic RFR £m	The present value of any other liability related cash flows used in the calculation of the base MA for all liabilities not covered in any of the other options above.
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### Other

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## MALIR 3 – Liability Cash flows

Cash flows should be discounted at the basic RFR.

Response should be positive in £m.

A description of the items included under this heading should be provided in MALIR 3 – 3.4.

MALIR 3 3.2_C01	Present value at basic RFR + MA £m	The present value of the monthly liability cash flows (gross of reinsurance) used in the calculation of the base MA for all liabilities that are level or have fixed-escalation claim cash flows.
	Level or fixed-escalation claim Cashflows	Cash flows should be discounted at the basic RFR + MA.  Response should be positive in £m.  For liabilities with a combination of fixed and inflation-linked characteristics the full set of liability cash flows should be reflected as inflation-linked under MALIR 3 – 3.2_C02.

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## MALIR 3 – Liability Cash flows

MALIR 3 3.2_C02	Present value at basic RFR + MA £m	The present value of the monthly liability cash flows (gross of reinsurance) used in the calculation of the base MA for all liabilities that have inflation-linked claim cash flows.
	Inflation-linked claim Cashflows	Cash flow calculation should use the best estimate assumptions regarding future inflation and be discounted at the basic RFR + MA.
		Response should be positive in £m.
		For liabilities with a combination of fixed and inflation-linked characteristics the full set of liability cash flows should be reflected as inflation-linked.
MALIR 3 3.2_C03	Present value at basic RFR + MA £m	The present value of the monthly expense cash flows used in the calculation of the base MA for all liabilities.
	Expense Cashflows	Cash flows should be discounted at the basic RFR + MA.
		Response should be positive in £m.

## MALIR 3 – Liability Cash flows

A description of the items included under this heading should be provided in MALIR 3 – 3.5.

MALIR 3 3.2_C04	Present value at basic RFR + MA £m	The present value of any other liability related cash flows used in the calculation of the base MA for all liabilities not covered in any of the other options above.
	Other	Cash flows should be discounted at the basic RFR + MA.  Response should be positive in £m.
		A description of the items included under this heading should be provided in MALIR 3 – 3.4.
MALIR 3 3.3_C01	Gross liability cashflows by month	The monthly liability cash flows (gross of reinsurance) in £m used in the calculation of the base MA for all liabilities that are level or have fixed-escalation claim cash flows.
	Level or fixed-escalation claim Cashflows	For cash flows which extend beyond 50 years the portion beyond year 50 should be discounted back to month 600 at the basic risk-free rate and reflected in the month 600 row.

## MALIR 3 – Liability Cash flows

Responses should be positive in £m.

For liabilities with a combination of fixed and inflation-linked characteristics the full set of liability cash flows should be reflected as inflation-linked under MALIR 3 – 3.3\_C02.

MALIR 3 3.3_C02	Gross liability cashflows by month	The monthly liability cash flows (gross of reinsurance) in £m used in the calculation of the base MA for all liabilities that have inflation-linked claim cash flows. Cash flow calculation should use the best estimate assumptions regarding future inflation.
	Inflation-linked claim Cashflows	For cash flows which extend beyond 50 years the portion beyond year 50 should be discounted back to month 600 at the basic risk-free rate and reflected in the month 600 row.
		Responses should be positive in £m.

For liabilities with a combination of fixed and inflation-linked characteristics the full set of liability

## MALIR 3 – Liability Cash flows

		cash flows should be reflected as inflation-linked.
MALIR 3 3.3_C03	Gross liability cashflows by month	The monthly expense cash flows in £m used in the calculation of the base MA for all liabilities.
	Expense Cashflows	For cash flows which extend beyond 50 years the portion beyond year 50 should be discounted back to month 600 at the basic risk-free rate and reflected in the month 600 row.
		Responses should be positive in £m.
		A description of the items included under this heading should be provided in MALIR 3 – 3.5.
MALIR 3 3.3_C04	Gross liability cashflows by month	Any other liability related cash flows used in the calculation of the base MA for all liabilities not covered in any of the other options above.
	Other	For cash flows which extend beyond 50 years the portion beyond year 50 should be discounted back to month 600 at the basic risk-free rate and reflected in the month 600 row.
		Response should be positive in £m.

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## MALIR 3 – Liability Cash flows

A description of the items included under this heading should be provided in MALIR 3 – 3.4.

MALIR 3 3.4	Description of items included under 'Other' liability cashflows	Details on and description of items included in: <ul style="list-style-type: none"><li>• MALIR 3.1_C04</li><li>• MALIR 3.2_C04</li><li>• MALIR 3.3_C04</li></ul>
MALIR 3 3.5	Description of items included under 'Expense cashflows'	Details on and description of items included in: <ul style="list-style-type: none"><li>• MALIR 3.1_C03</li><li>• MALIR 3.2_C03</li><li>• MALIR 3.3_C03</li></ul>

## Output data

The Output data consists of the following templates: MALIR 4 – Portfolio Output and MALIR 5 – Matching Tests

MALIR 4 and 5 are applicable for each MAP held by all firms with permission to apply the Matching Adjustment.

## MALIR 4 – Portfolio Output

CELL(S)	ITEM	INSTRUCTIONS
MALIR 4 4.1	Total spread (bps)	Total spread for the MAP as per the base balance sheet (in bps). This should be calculated as the internal rate of return (IRR) on the portfolio

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## MALIR 4 – Portfolio Output

		(in the same manner as QRT IRR.22.03.01 R0010) minus the RFR (in the same manner as QRT IRR.22.03.01 R0020).
MALIR 4 4.2	PD allowance (bps) [A]	The probability of default allowance for the MAP as per the base balance sheet (in bps) after any adjustment for notching calculated in the same manner as QRT IRR.22.03.01, R0030, C0010.
MALIR 4 4.3	Residual Fundamental Spread Allowance (bps) [B]	The residual balance used to calculate basic FS (%) on a MAP level after any adjustment for notching and before FS Additions calculated in the same manner as QRT IRR.22.03.01, R0040, C0010.
MALIR 4 4.4	FS Addition - Highly Predictable (bps) [C]	The addition to the basic FS (as defined in chapter 5 of SS7/18) applied to the MAP to account for highly predictable assets as set out in 8.2 of the Matching Adjustment Part of the PRA Rulebook and chapter 5 of SS7/18.
MALIR 4 4.5	FS Addition - Other (bps) [D]	The additions to FS applied to the MAP other than for highly predictable assets as set out in 8.2 of the Matching Adjustment Part

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## MALIR 4 – Portfolio Output

		of the PRA Rulebook and chapter 5 of SS7/18.
MALIR 4 4.6	Fundamental Spread allowance (bps) [A] + [B] + [C] + [D]	The total Fundamental Spread allowance in bps.  Calculated as the sum of MALIR 4 – 4.2; 4.3; 4.4 and 4.5.
MALIR 4 4.7	Matching Adjustment (bps)	Total MA for the MAP (in bps) calculated as the total spread (MALIR 4 – 4.1) minus the total FS (MALIR 4 – 4.6) for all assets.
MALIR 4 4.8	Matching Adjustment benefit (£m)	Total MA Benefit for the MAP (£m) calculated as the amount equal to the impact on the Best Estimate Liabilities of the scenario in 3.2(2)(c) of the Conditions Governing Business Part of the PRA Rulebook
MALIR 4 4.9	Matching Adjustment (bps) as per QRT IRR.22.03.01, R0060 in C0010	Total MA for the MAP, in bps, as reported in QRT IRR.22.03.01, R0060 in C0010
MALIR 4 4.10	Matching Adjustment Benefit (£m) as implied by QRT IR.22.01.01, R0010, C0090	Total MA Benefit for the MAP, in £m, as reported in QRT IR.22.01.01, R0010 in C0090.
MALIR 4 4.11	Matching Adjustment Benefit (£m) as implied by the sum of MALIR 2 – 2.47	The total MA Benefit, in £m, as calculated by taking the sum total of MALIR 2 – 2.47

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MALIR 4 – Portfolio Output		
MALIR 4 4.12	Explanation of any differences between the MA in bps in MALIR 4 - 4.7 and 4.9	Any differences between the MA (in bps) shown in MALIR 4 – 4.7 and 4.9 should be explained here.  Where the MA (in bps) is consistent between MALIR 4 – 4.7 and 4.9 this field should be marked ‘N/A’.
MALIR 4 4.13	Explanation of any differences between the MA Benefit in £m in MALIR 4 - 4.8, 4.10 and 4.11	Any differences in the MA Benefit (in £m) shown in MALIR 4 – 4.8, 4.10 or 4.11 should be explained here.  Where the MA Benefit (in £m) is consistent between MALIR 4 – 4.8, 4.10 and 4.11 this field should be marked ‘N/A’.
MALIR 4 4.14	Qualitative explanation of any difference between market value of assets in the MAP (£m) and Total Solvency II Amount of assets in QRTs IR.06.02	If the value of the assets in the MAP (£m) as per QRT IR.06.02 is inconsistent with the value of the assets (£m) in this MALIR, a quantitative reconciliation should be provided using MALIR 7.  Any qualitative comments in respect of this reconciliation can be made here.

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## MALIR 5 – Matching Tests

CELL(S)	ITEM	INSTRUCTIONS
MALIR 5 5.1	PRA Matching Test 1	<p>C01: The Result of Test 1: Accumulated Cash Flow Shortfall Test as set out in the appendix to SS7/18.</p> <p>The result should be in % terms, as at the effective date of 31 December each year.</p>
		<p>C02: In the event that the result shown in MALIR 5 – 5.1 C01 exceeds the threshold rate specified in SS7/18 Appendix: Test 1, an explanation should be provided in this field.</p>
MALIR 5 5.2	PRA Matching Test 2: Interest Rate	<p>C01: The Result of Test 2: 99.5<sup>th</sup> Percentile Value at Risk (VaR) Test for interest rate risk as set out in the appendix to SS7/18.</p> <p>The result should be in % terms, as at the effective date of 31 December each year.</p>
		<p>C02: In the event that the result shown in MALIR 5 – 5.2 C01 exceeds the threshold rate specified in SS7/18 Appendix: Test 2, an explanation should be provided in this field.</p>

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## MALIR 5 – Matching Tests

MALIR 5 – 5.3	PRA Matching Test 2: Inflation	C01: The Result of Test 2: 99.5 <sup>th</sup> Percentile Value at Risk (VaR) Test for inflation rate risk as set out in the appendix to SS7/18.  The result should be in % terms, as at the effective date of 31 December each year.
		C02: In the event that the result shown in MALIR 5 – 5.3 C01 exceeds the threshold rate specified in SS7/18 Appendix: Test 2, an explanation should be provided in this field.
MALIR 5 5.4	PRA Matching Test 2: FX	C01: The Result of Test 2: 99.5 <sup>th</sup> Percentile Value at Risk (VaR) Test for currency risk as set out in the appendix to SS7/18.  The result should be in % terms, as at the effective date of 31 December each year.
		C02: In the event that the result shown in MALIR 5 – 5.4 C01 exceeds the threshold rate specified in SS7/18 Appendix: Test 2, an explanation should be provided in this field.

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## MALIR 5 – Matching Tests

MALIR 5 5.5	PRA Matching Test 3	C01: The Result of Test 3: Notional Swap Test as set out in the appendix to SS7/18.  The result should be in % terms, as at the effective date of 31 December each year.
		C02: In the event that the result shown in MALIR 5 – 5.5 C01 lies outside of the threshold rate window specified in SS7/18 Appendix: Test 3, an explanation should be provided in this field.
MALIR 5 5.6	PRA Matching Test 4	Only firms holding assets with HP cash flows are expected to apply matching test four.  C01: The Result of Test 4: MA Loss Test for assets with HP cash flows as set out in the appendix to SS7/18.  The result should be in % terms, as at the effective date of 31 December each year.
		C02: In the event that the result shown in MALIR 5 – 5.6 C01 exceeds the threshold rate specified in SS7/18

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MALIR 5 – Matching Tests		
Appendix: Test 4, an explanation should be provided in this field.		
MALIR 5.7	PRA Matching Test 5	Only firms holding assets with HP cash flows are expected to apply matching test five.
C01: The Result of Test 5: Modified Accumulated Cash Flow Shortfall Test as set out in the appendix to SS7/18.		
The result should be in % terms, as at the effective date of 31 December each year.		
C02: In the event that the result shown in MALIR 5 – 5.7 C01 exceeds the threshold rate specified in SS7/18 Appendix: Test 5, an explanation should be provided in this field.		

## Further Information

The Further Information consists of the following templates: MALIR 6 – Assets – Further Info and MALIR 7 – Reconciliation

Both MALIR 6 and 7 need only be completed where further information is required to support the wider MALIR submission.

MALIR 6 – Assets – Further Info		
CELL(S)	ITEM	INSTRUCTIONS

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## MALIR 6 – Assets – Further Info

MALIR 6	Assets - Further detail	If there have been any significant changes in approach from previous years (if applicable) or anything that may require additional explanation it should be detailed here.
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## MALIR 7 – Reconciliation

CELL(S)	ITEM	INSTRUCTIONS
MALIR 7	IR.06.02 Quantitative Reconciliation	This should only be completed if the Total Solvency II Amount of the assets in the MAP (£m) as per QRT IR.06.02 is inconsistent with the market value of the assets (£m) in this MA Information Return.  A quantitative reconciliation starting from the amount of assets in the MAP (£m) as per QRT IR.06.02 and then adding in further items not included in this QRT (such as derivatives and reinsurance) to get to the asset value (£m) as per this MA data request submission should be detailed here if applicable.
		Further qualitative commentary on any inconsistencies can be provided in MALIR 4 – 4.14.

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## Appendix

MALIR 2 – 2.2 requires a selection of asset type for each asset in the MAP. The definitions used for asset types in the MALIR differ from those used elsewhere. The definitions to be applied in the selection of asset type are as follows:

Asset Types	Definition
Agricultural Mortgages	Bonds or loans where the exposure or underlying exposure is to Agricultural Mortgage proceeds.
Cash / Liquidity Funds	Cash or cash-equivalents.
	There is no need to provide cash flows for these assets unless it is assumed for matching purposes that the assets generate cash flows beyond month 1. If such an assumption is made it should be explained in MALIR 2 – 2.5 or MALIR 6.
Corporate Bonds	Bonds where a standard formula firm would set the Spread SCR in accordance with Solvency Capital Requirement - Standard Formula 3D17 of the PRA Rulebook and are not captured elsewhere in this categorisation table.
Covered Bonds	Bonds that satisfy the definition in Article 3(1) of Directive (EU) 2019/2162.
Derivatives / Swaps	A derivative or swap held in the MAP.
	Where a derivative is paired with another asset to create an MA eligible asset, the derivative and underlying asset should be shown together in a single line of the template and categorised as the asset type associated with the underlying asset and not as

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Asset Types	Definition
	'Derivatives'. The presence of the derivative should be taken account of in the cash flows and other associated information related to the combined asset and indicated in MALIR 2 - 2.5 by stating 'paired with derivative'. Where there are unrelated additional comments in MALIR 2 - 2.5, the additional comments can be included alongside the note on derivative pairing.
	Where it is not possible to show paired assets in a single row of the template, then the underlying asset and derivative may be shown separately. The derivative assets should be categorised as 'Derivatives' and a reference made in MALIR 2 - 2.5 to the relevant paired asset. If possible, a consistent identifier should be inserted in to MALIR 2 – 2.5 to identify the asset with which the derivative is paired.
	Grouped derivative exposures can either be shown combined in a single line of the template at an appropriate level of granularity (eg FX swaps by currency) or listed individually. In either case they should be categorised as 'Derivatives'. More detail on how the grouping works can be provided if it would be helpful to do so, in MALIR 2 - 2.5 or MALIR 6.
	Where derivatives are used for any other purpose in the MAP eg to modify the duration of the portfolio, these derivative exposures should be shown in separate lines of the template. They too should be

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Asset Types	Definition
	categorised as 'Derivatives' with any additional information around the nature and purpose of the exposure to be given in MALIR 2 – 2.5 or MALIR 6.
Education Lending	Bonds or loans where the exposure or underlying exposure is to loans to a higher or further education institution.
Equity Release Mortgages (ERM)	Bonds or loans where the exposure or underlying exposure is to ERM proceeds. Retirement interest-only mortgages should be included as 'Other Assets'.
Financing Lease on Commercial Properties	Financing involving the leasing of a real estate asset, repaid by a lease upon that asset. This includes sale and leaseback loans, income strips and other lease financing on real estate.
Ground Rent	Bonds or loans where the exposure or underlying exposure is to Ground Rent proceeds.
Income Producing Real Estate (IPRE)	A method of providing funding to real estate where the prospects for repayment and recovery on the exposure depend primarily on the cash flows generated by the asset.
	Such assets are structured into an SPV with loans made directly to the SPV. The SPV structure is used to isolate the collateral from bankruptcy and insolvency risks of the other entities that participate in the transaction.

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Asset Types	Definition
Infrastructure Loans	Loans where the exposure is to infrastructure assets or infrastructure entities (both terms are defined in the Glossary Part of the PRA Rulebook).
Object Finance	A method of funding the acquisition of physical assets (eg ships, aircraft, satellites, railcars, and fleets) where the repayment of the exposure is dependent on the cash flows generated by the specific assets that have been financed and pledged or assigned to the lender.
Other Assets	'Other assets' should only be used for assets that do not satisfy any of the other definitions of asset types in this categorisation table.
	Where this classification has been selected a description of the asset should be provided in MALIR 2 - 2.5.
Other Commercial Real Estate Lending (CREL)	A loan secured on a CRE asset, other than IPRE.
Other Loans	Loans that do not satisfy any of the other definitions of asset types in this categorisation table. Where relevant, this category should be used instead of 'other assets'.
Other Securitisations (eg RMBS / CMBS / ABS)	Bonds or loans that meet the definition of a 'securitisation' under-Securitisation 1.3 of the PRA Rulebook.
Other Sovereign, Sub-sovereign, Quasi Government / Supernational	Other Sovereign, sub-sovereign, Quasi Government / Supernational bonds that do not satisfy the definitions

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Asset Types	Definition
	of Sovereigns - UK, Sovereigns - Other than UK, and Quasi Government Exposures / Supranationals.
Quasi Government Exposures / Supranationals	Bonds or loans issued or fully, unconditionally and irrevocably guaranteed by multilateral development banks and international organisations where a standard formula firm would set the Spread SCR in accordance with Solvency Capital Requirement - Standard Formula 3D24.2 to 3D24.4 of the PRA Rulebook.
Reinsurance Assets	Reinsurance (eg quota share reinsurance or longevity swaps written as reinsurance) held in the MA portfolio. Please show the value of the reinsurance consistent with how it would be reported on the Solvency II balance sheet.
Secured Financing Transactions	Financing transactions/arrangements secured by collateral that are not captured elsewhere in this categorisation table.
Social Housing	Bonds or loans where the exposure or underlying exposure is to loans to a provider of social housing.
Sovereigns - Other than UK	Bonds or loans where a standard formula firm would set the Spread SCR in accordance with Solvency Capital Requirement - Standard Formula 3D24.5 of the PRA Rulebook.
Sovereigns - UK	Bonds or loans issued or fully, unconditionally and irrevocably guaranteed by the UK Government or Bank of England where a standard formula firm would set the Spread SCR in accordance with Solvency Capital Requirement - Standard Formula 3D24.2(1) of

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Asset Types	Definition
	the PRA Rulebook.  (Note that Solvency Capital Requirement - Standard Formula 3D24.6 and 3D24.7 of the PRA Rulebook are not included in this definition).
Student Accommodation	Bonds or loans where the exposure, or underlying exposure, is to loans to a provider of student accommodation.
Trade Receivable / Supply Chain Financing	Bonds or loans where the exposure or underlying exposure is to trade receivables and factoring receivables, where an invoice has been issued for goods delivered or services provided by the seller to end customers.