Structural hedge

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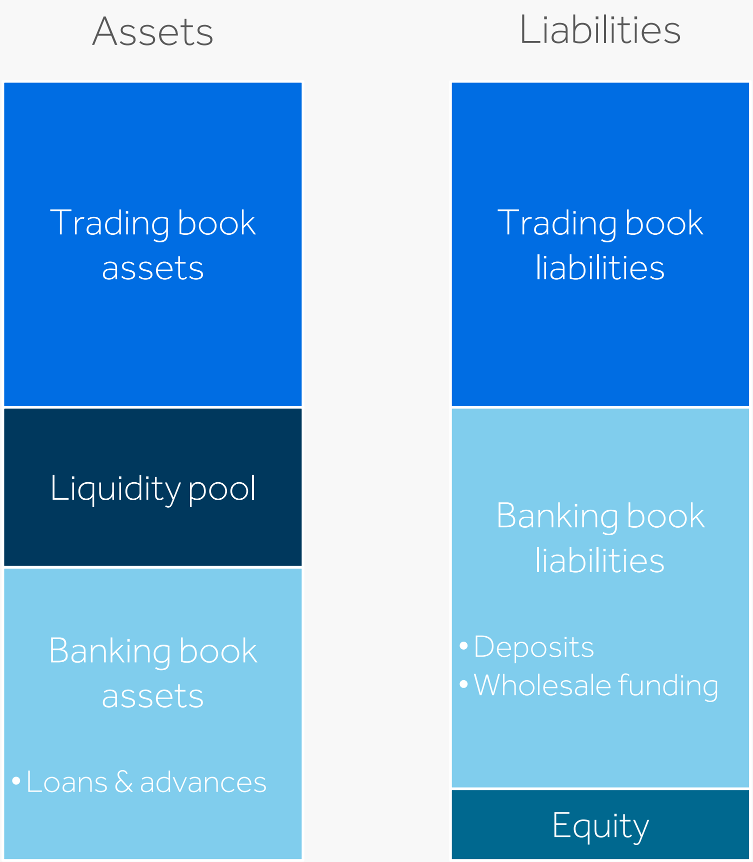
The structural hedge reduces interest rate risk and smooths net interest income over the interest rate cycle

The banking book has inherent interest rate risk

Balance sheet consists of a trading book and banking book



Trading book

- Assets and liabilities broadly matched
- Interest rate risk managed on a broadly matched book basis

Banking book

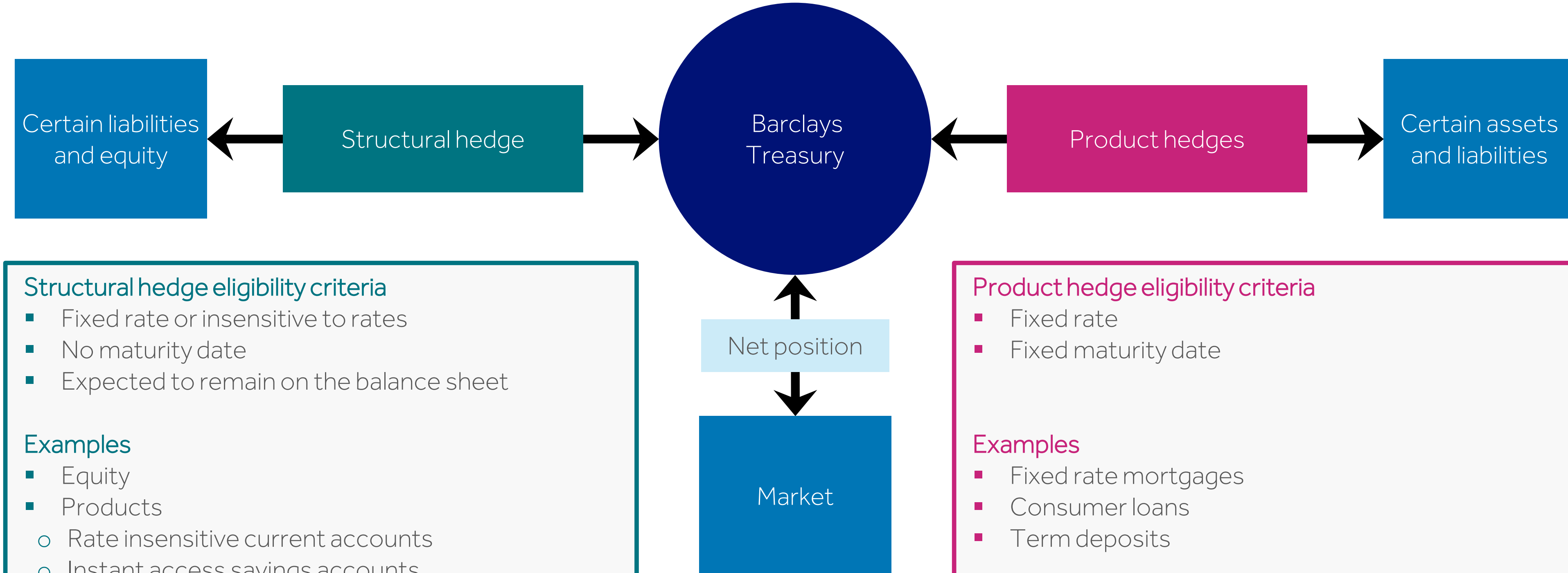
- Mix of fixed and floating rate products
- Fixed/floating and duration mismatches lead to interest rate risk

Fixed rate product examples	Floating rate product examples
Fixed rate mortgages	Variable rate mortgages
Rate insensitive current accounts	Credit cards
Term deposits	

Treasury proactively manages banking book interest rate risk

Sources and uses of funding are managed by Treasury on a floating rate basis

- **Product hedges:** Fixed rate products with a defined maturity are swapped to floating rate[1]
- **Structural hedge:** Undated rate insensitive products that are behaviourally stable are swapped to floating rate



Structural hedge eligibility criteria

- Fixed rate or insensitive to rates
- No maturity date
- Expected to remain on the balance sheet

Examples

- Equity
- Products
  - Rate insensitive current accounts
  - Instant access savings accounts

Product hedge eligibility criteria

- Fixed rate
- Fixed maturity date

Examples

- Fixed rate mortgages
- Consumer loans
- Term deposits

[1] Product hedges also require behaviouralisation. e.g. Mortgages have prepayment risk and are pre hedged |

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Without structural hedging, margins are subject to volatility

Illustrative example of a rate insensitive current account without structural hedging

Without hedging…

1. Customers deposit cash in a rate insensitive current account
2. The business pays the customer a 0% fixed rate
3. The business places the cash with Barclays Treasury
4. Barclays Treasury pays the business floating rate (typically central bank rate)

…business margins are subject to volatility

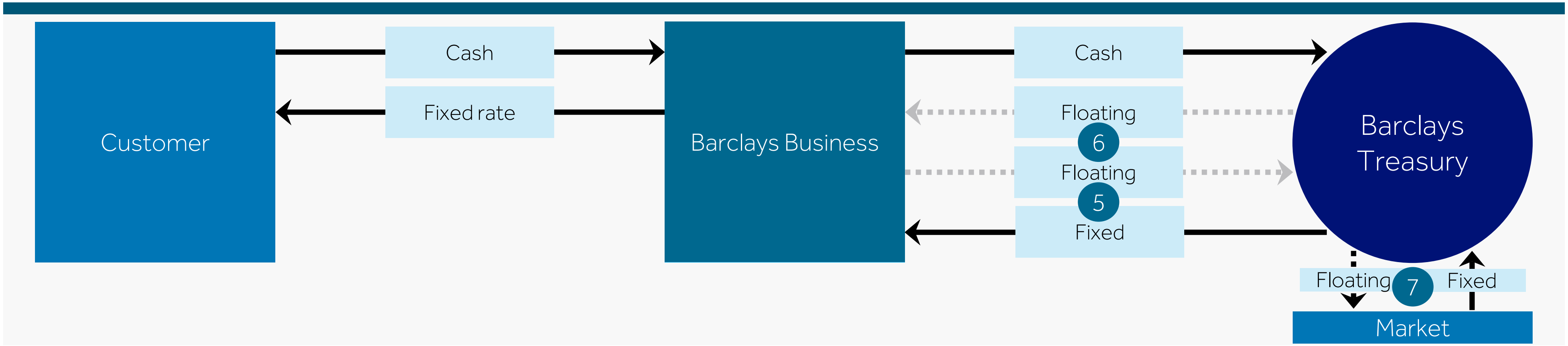
Rate	Interest cost	Interest income	Margin
5.25%	0%	5.25%	5.25%
7.25%	0%	7.25%	7.25%
3.25%	0%	3.25%	3.25%

Interest rate risk arises

- The result is floating rate interest income, but fixed rate interest cost for the business. As a result, the margin earned will fluctuate

With structural hedging, margins are more stable

Illustrative example of a rate insensitive current account with structural hedging



With hedging...

5 The business executes an interest rate swap with Barclays Treasury

6 The floating rates net off, resulting in a fixed margin for the business

7 Barclays Treasury hedges the Group's net position with the market

...business margins are more stable

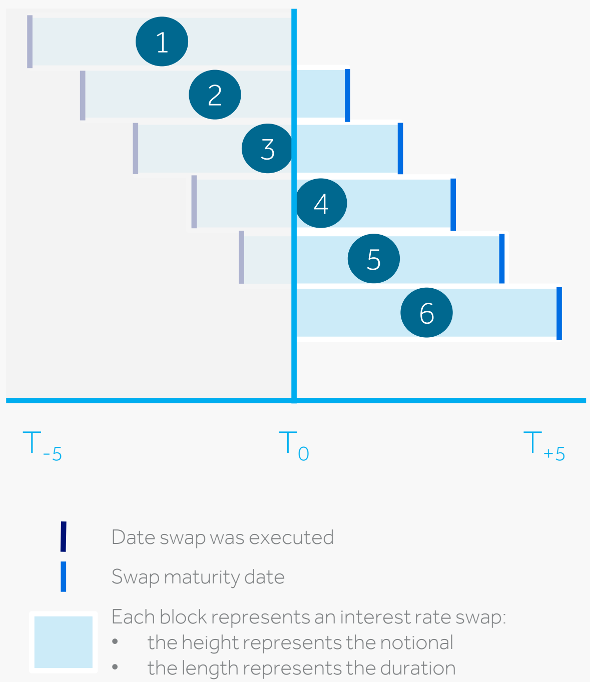
Rate	Interest cost	Interest income	Interest rate swap		Day 1 margin
			Pay floating	Receive fixed	
5.25%	0%	5.25%	-5.25%	4%	**4%**
7.25%	0%	7.25%	-7.25%	4%	**4%**
3.25%	0%	3.25%	-3.25%	4%	**4%**

Interest rate risk hedged

- The result is fixed rate interest income and cost for the business. The interest rate risk has been transferred out of the bank

The structural hedge comprises numerous swaps, executed over time

Illustrative simplified example of a structural hedge



- This example includes six 5-year swaps with the same notional value
- One swap has been executed each year, at the prevailing swap rate

Ref	Date swap executed	Swap duration	Years to maturity	Swap notional	Illustrative swap rate	Year one income
1	5 years ago	5 years	Matured	£100	1%	Matured
2	4 years ago	5 years	1 year	£100	1%	£1
3	3 years ago	5 years	2 years	£100	2%	£2
4	2 years ago	5 years	3 years	£100	1%	£1
5	1 years ago	5 years	4 years	£100	3%	£3
6	Today	5 years	5 years	£100	5%	£5
			Total	£500		£12

<u>Illustrative outcomes</u>

- Year one income: £12
- Year one average yield: 2.4%
- Average duration: 2.5 years[1]

[1] Weighted average duration, assuming each swap matures evenly over the year |

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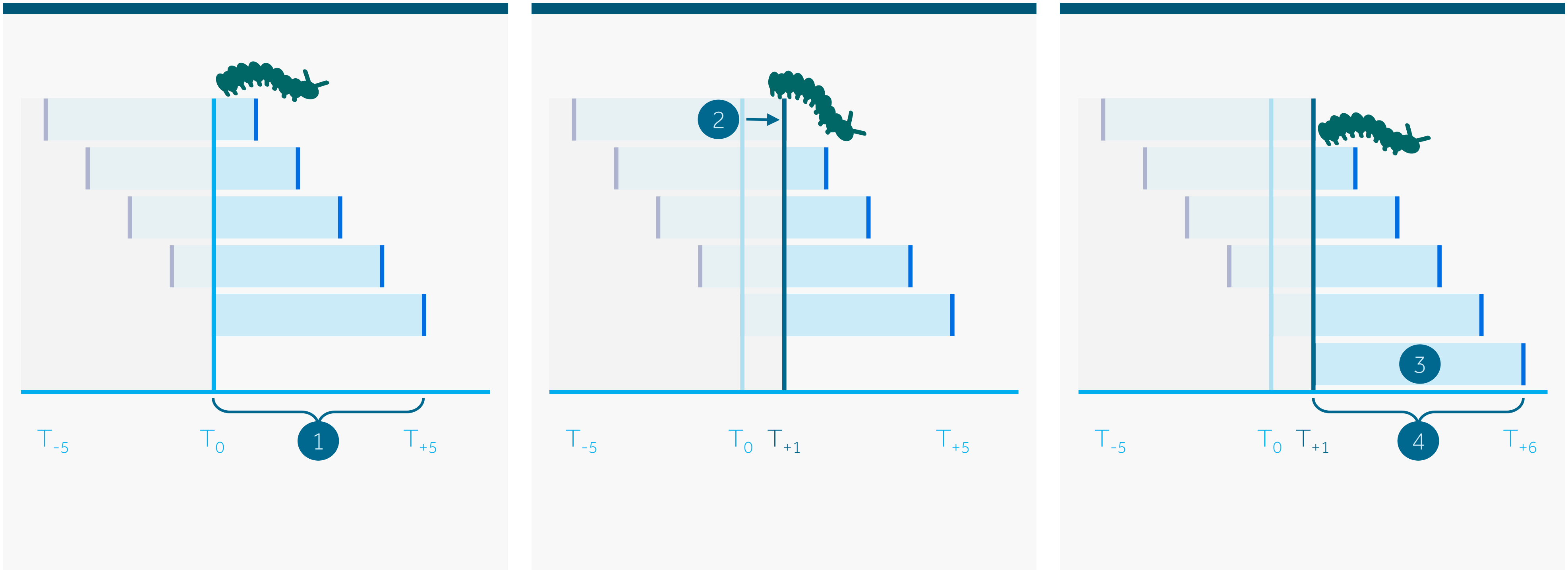
The hedges are executed so only a portion matures at any one time

Illustrative "caterpillar hedge" example



1. Average hedge yield is the average fixed yield received on all the interest rate swaps in the structural hedge
2. Each period, part of the structural hedge matures
3. A new swap is executed onto the prevailing swap rate
4. The swaps in the hedge lock in net interest income in future periods

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Higher swap rates can offset a lower structural hedge notional

As rates increase, rate sensitive deposits may migrate but the yield on swaps will increase

Illustrative example

- Maturing yields are currently 1%, whilst the current swap rate is 5%
- £100 of the £500 structural hedge is maturing each year

Example 1

- Despite a 100bps reduction in rates, NII increases

Example 2

- Despite a 10% reduction in total swap notional, NII increases

Day 1

Ref	Swap duration	Years to maturity	Swap notional	Illustrative swap rate	Annual income
1	5 years	Matured	£100	1%	Matured
2	5 years	1 year	£100	1%	£1
3	5 years	2 years	£100	2%	£2
4	5 years	3 years	£100	1%	£1
5	5 years	4 years	£100	3%	£3
6	5 years	5 years	£100	5%	£5
		Total	£500		£12

Example 1: 100bps reduction in rates

Ref	Swap duration	Years to maturity	Swap notional	Illustrative swap rate	Annual income
1	5 years	Matured	£100	1%	Matured
2	5 years	Matured	£100	1%	£1
3	5 years	1 year	£100	2%	£2
4	5 years	2 years	£100	1%	£1
5	5 years	3 years	£100	3%	£3
6	5 years	4 years	£100	5%	£5
7	5 years	5 years	£100	4%	£4
		Total	£500		£15

Example 2: 10% reduction in notional

Ref	Swap duration	Years to maturity	Swap notional	Illustrative swap rate	Annual income
1	5 years	Matured	£100	1%	Matured
2	5 years	Matured	£100	1%	£1
3	5 years	1 year	£100	2%	£2
4	5 years	2 years	£100	1%	£1
5	5 years	3 years	£100	3%	£3
6	5 years	4 years	£100	5%	£5
7	5 years	5 years	£50	5%	£2.5
		Total	£450		£13.5

Barclays' average maturing yields are c.1-1.5% in FY24/25. At current rates, rolling the equity hedge alone (c.20% of the total structural hedge) would result in FY24 income > FY23

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Structural hedge notional considerations

Banks structurally hedge the stable portions of exposures

General principles

1. Exclude floating rate balances and items with a contractual maturity
2. Behavioural analysis removes volatile and concentrated balances
3. Additional outflow buffers provide protection from short term/seasonal or unexpected attrition

Current accounts

- Behaviouralised for stickiness and concentration risk
- Model a buffer for outflows and rate sensitivity

Managed rate deposits (MRDs)

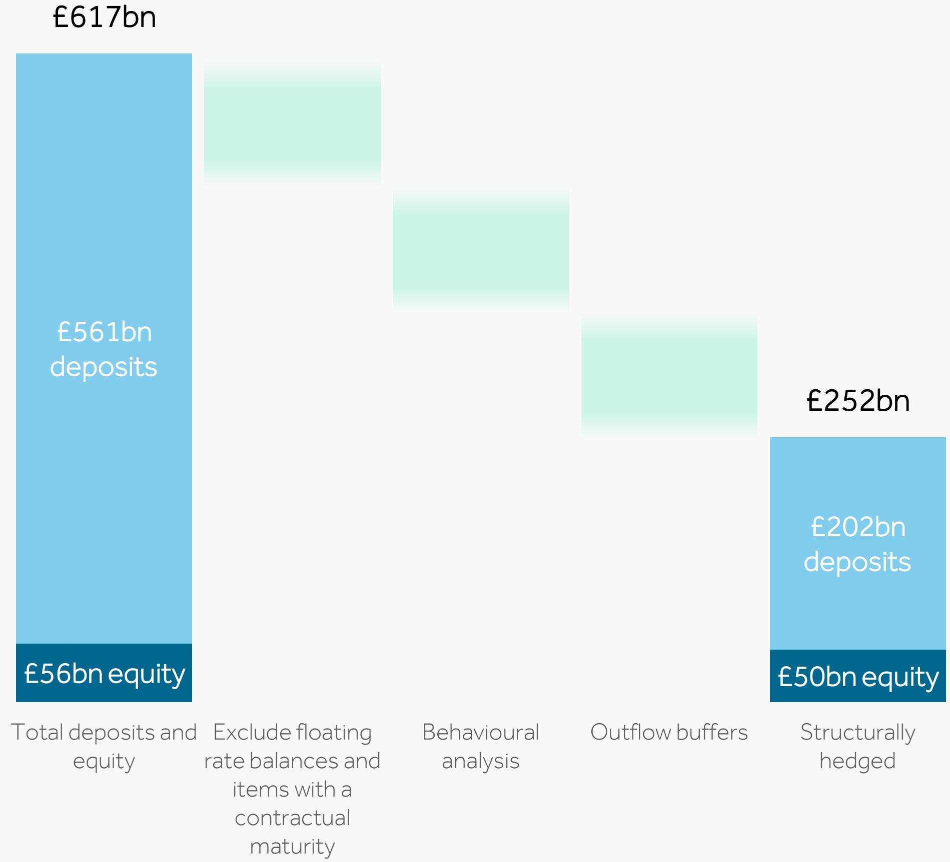
- Instant access savings accounts
- Hedged based on the expected pricing pass-through (beta)
- Behaviouralised for stickiness and concentration risk
- Model a buffer for outflows and rate sensitivity

Equity

- Tangible cash equity is hedged

Barclays prioritises income stability. As such, the majority of the assessed capacity is hedged. This is in line with our approach of not taking a view on rates

Q323 total deposits and equity to structural hedge notional[1]



[1] Existing disclosure |

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Structural hedge duration considerations

Behavioural life

- Duration is dependent on the underlying product behaviour
  - Equity typically has a longer duration than current accounts
  - Current accounts typically have a longer duration than savings accounts
- This behaviour is modelled at a portfolio level and we manage the duration profile accordingly
- We achieve this through a basket of varying tenors of swaps

Barclays' structural hedge average duration is c.2.5 years

Duration sensitivities

	Weighted average life	
	Longer	Shorter
Earnings volatility	Lower, as the hedge takes longer to reprice	Higher, as the hedge reprices faster
Benefit from rising bank rates	Slower	Faster
Protection from falling bank rates	Greater	Less

- There are also regulatory expectations that hedging the balance sheet in this way requires a relatively stable duration
- This leads to infrequent changes in the portfolio duration

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Performance of the structural hedge over time

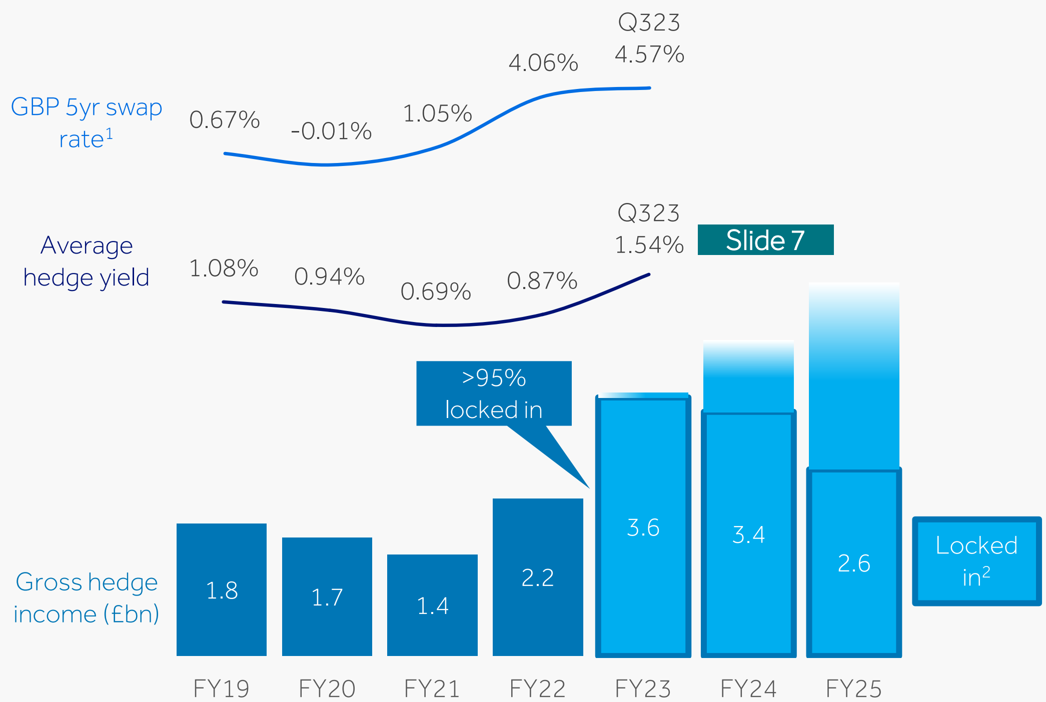
The structural hedge smooths income and protects against sharp downwards movement in interest rates

During 2008-2009, the fall in interest rates from 5% to 0.5% could have reduced the income on our rate insensitive current accounts by 90%. In fact, our income decreased less than 5% over this period, which was supported by having hedges in place

[1] UK Pound Sterling SONIA OIS Zero 5 Year Point (Refinitiv: GBPOIS5YZ=R). Series starts 30/07/2008 | [2] Trailing average of the last 6 month end yields |

Q323 Barclays structural hedge disclosure

Another quarter of locking in future gross hedge income



					Q323
Total	£171bn	£188bn	£228bn	£263bn	£252bn
Product	£131bn	£145bn	£183bn	£215bn	£202bn
Equity	£40bn	£43bn	£45bn	£48bn	£50bn

Hedge notional (period end) Slide 10

- >95% of expected income (c.£3.6bn) locked in for FY23
  - £3.3bn at H123
- c.£3.4bn of income locked in for FY24
  - £3.0bn at H123
- At current rates, rolling the equity hedge alone would result in a FY24 income of >£3.6bn Slide 9
- Hedges maturing at c.£50-60bn annually in FY24/25, with average maturing yields of c.1-1.5% Slide 7
- Average duration across the programme of c.2.5 years Slide 11
- Two-thirds of gross hedge income within Barclays UK

[1] UK Pound Sterling SONIA OIS Zero 5 Year Point (Refinitiv: GBPOIS5YZ=R) | [2] Refers to the impact to NII of hedges that have already been executed |

Summary

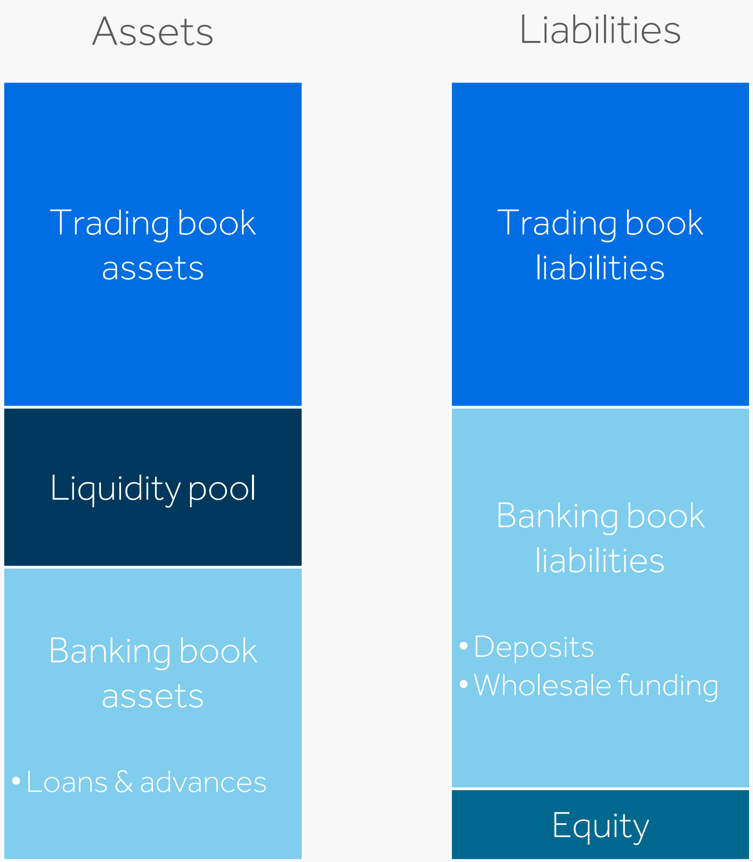
The structural hedge reduces interest rate risk and smooths net interest income over the interest rate cycle

1. Banks generally seek to hedge balances back to floating rate
2. Structural hedging is undertaken on fixed rate or rate insensitive liabilities that are challenging to product hedge
3. Hedging reduces the income volatility that businesses would otherwise experience
4. The operating of the hedge is a granular set of receive fixed swaps that offset the pay fixed of structural hedge balances and is rolled on an ongoing basis providing a smoothed interest rate profile
5. The hedge effectively defers some of the margin benefit from the recent sharp rise in interest rates to future periods when it will be more valuable

We are currently in the upturn portion of the interest rate cycle, and gross structural hedge income has been growing
Q323 YTD gross structural hedge income of £2.6bn represented 13% of Group income

Appendix

Balance sheet considerations



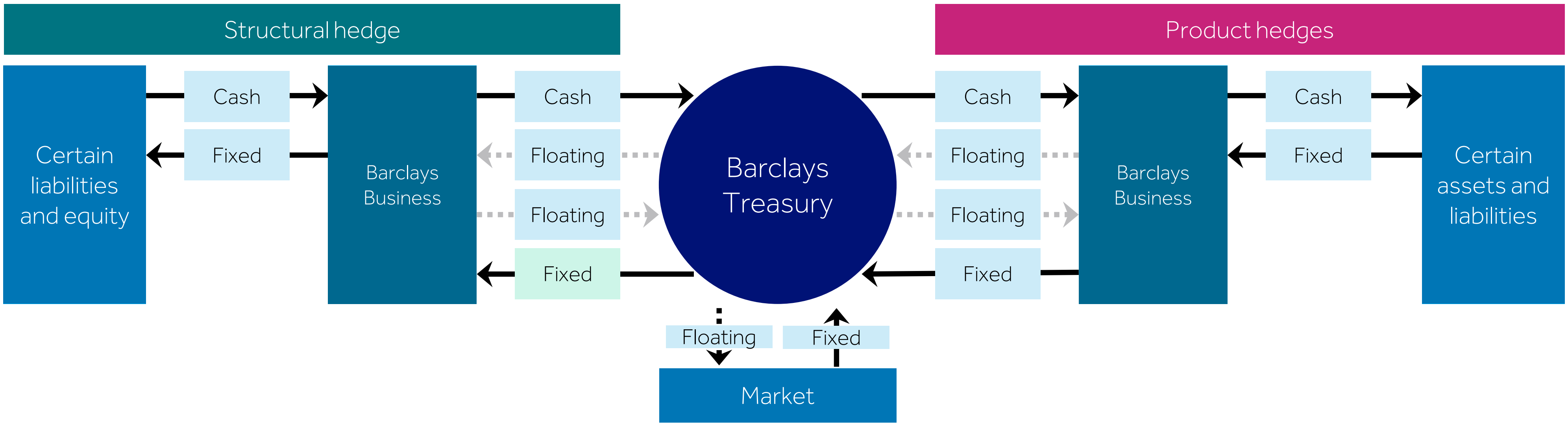
Trading book

- Fair value accounted
- Capitalised through Value at Risk
- Income classified as trading income

Banking book

- Accrual accounted
- Capitalised through Pillar 2A
- Income classified as net interest income

Treasury hedges and funds multiple Barclays businesses



- The fixed leg highlighted in light green represents the structural hedge yield

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