

## International Financial Reporting Standards

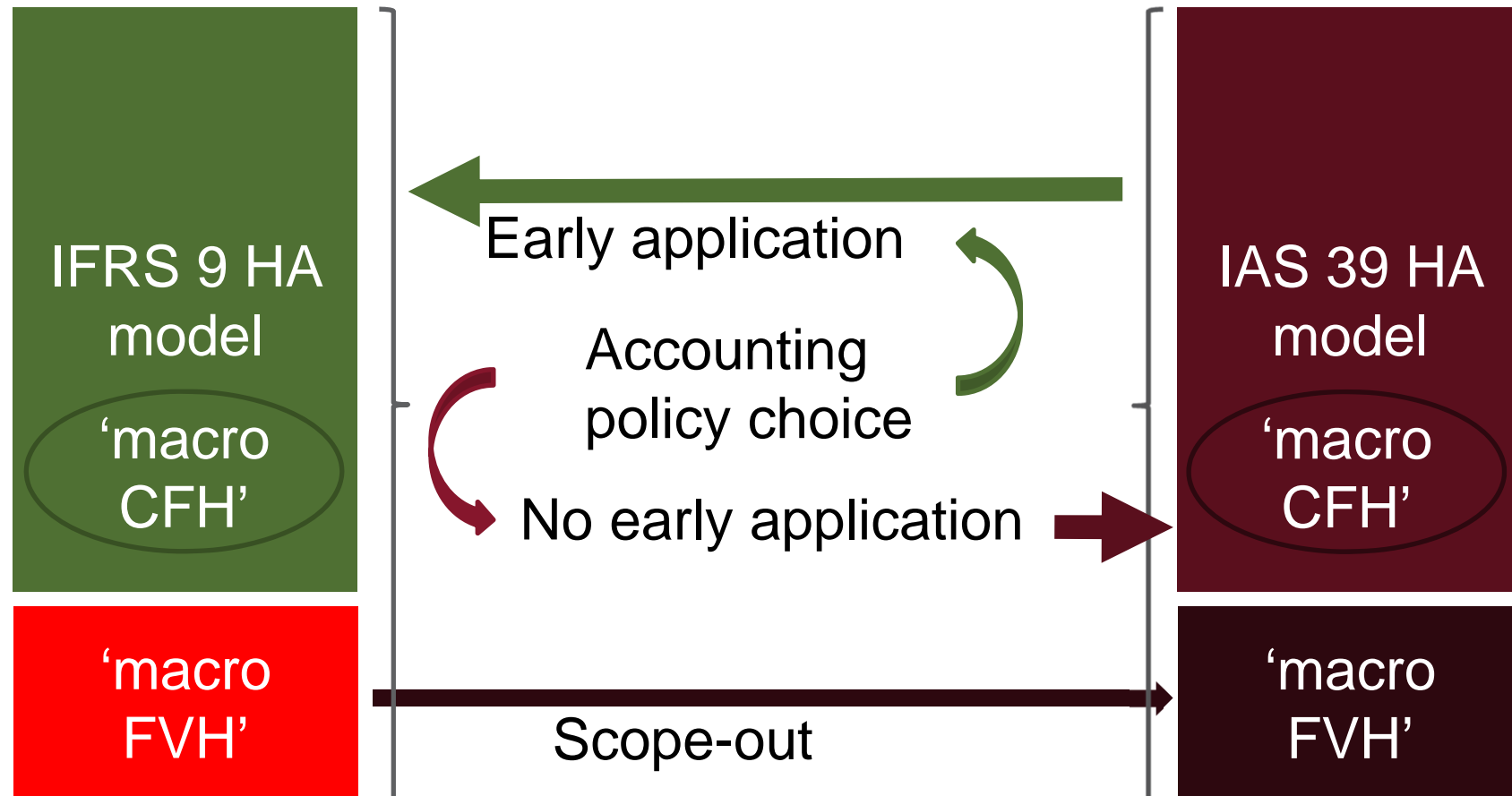


# Accounting for Macro Hedging Update June 2013

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# Interaction with hedge accounting

'Status quo' pending completion of the project on accounting for macro hedging:



# Accounting for macro hedging: Project update

# Project scope

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- Accounting for open portfolios or macro hedging
- Aim to develop an accounting solution so preparers can explain and users understand how businesses manage risk dynamically
- Considering an accounting solution for a variety of dynamic risk management activities. Not restricted to banks' interest rate risk management, eg commodity and FX risk

# Accounting for macro hedging: Portfolio revaluation approach overview

# What is macro hedging?

- Where risk management is undertaken on a dynamic basis for open portfolios:
  - New exposures may be continuously added and existing exposures expire
  - Exposures considered in contemplation of one another - the net risk position is managed
  - Management is of risk from external exposures only
  - Given this, risk management is dynamic
- Another common factor is that calculation of risk managed exposures may include an element of estimation in terms of volume and/or timing.

# Portfolio revaluation approach overview

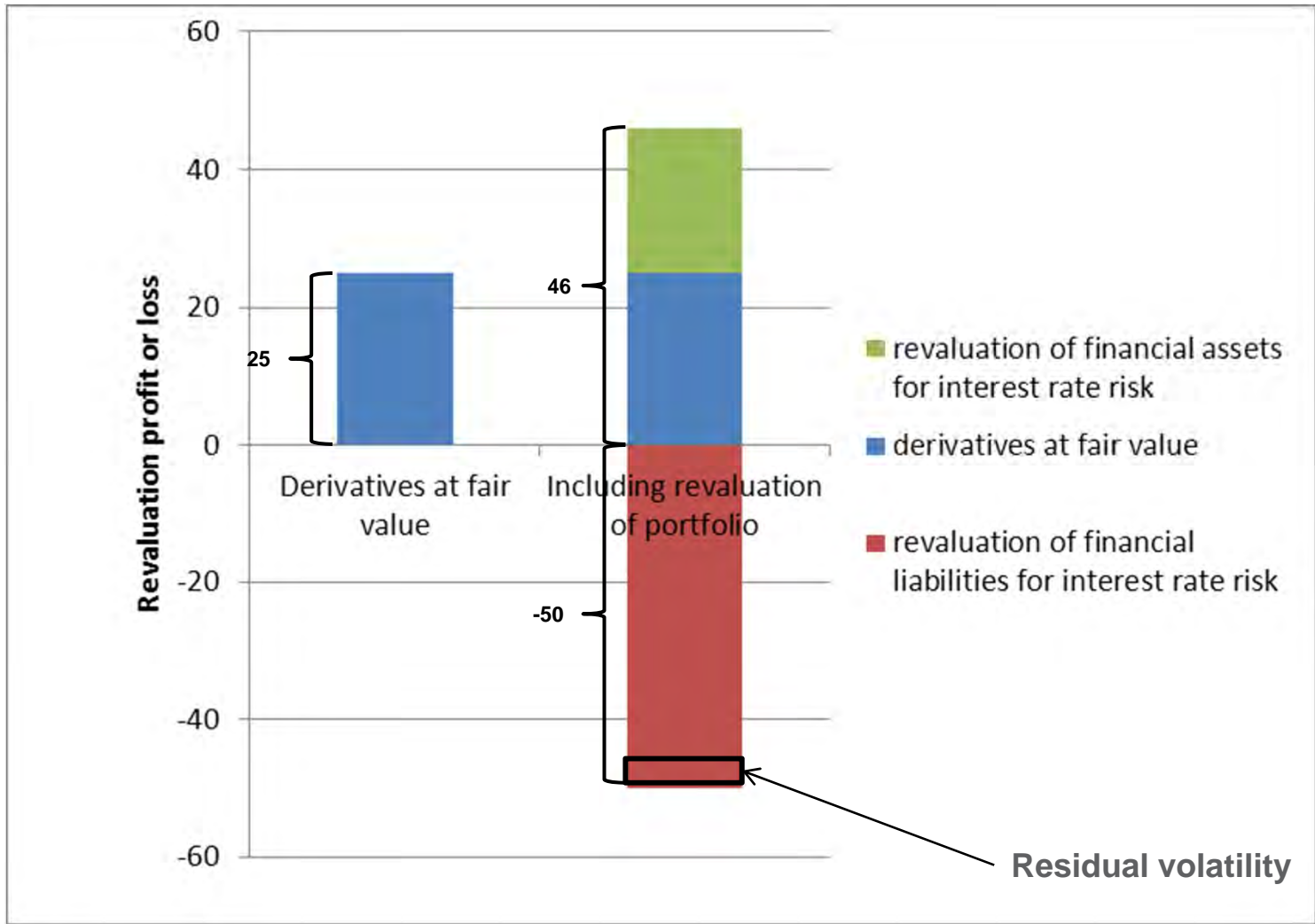
- The portfolio revaluation approach itself is simple
  - complexity only arises when considering how and what should be revalued
- Exposures within the dynamically managed portfolio are revalued with respect to the managed risk
- No change to accounting for hedging instruments
- Offset arises in profit or loss, to the extent of offsetting risk positions
- Performance reflects transformed risk base
- No requirement for specific linkage of exposures and hedging instruments, consistent with risk management

# Benefits of portfolio revaluation approach

- Transparent representation of risk management activities
  - Alignment between accounting and risk management view
  - Provides information on impact of risk management activity on reported results
  - Information on residual risk positions
- Reduction in cumbersome patchwork hedge accounting solutions in financial statements
  - Economic volatility is more accurately portrayed
- Operational relief from reduction in tracking and amortisations from frequent dedesignations and redesignations
- Greater opportunity to use data already used for risk management



# Mechanics of the portfolio revaluation approach



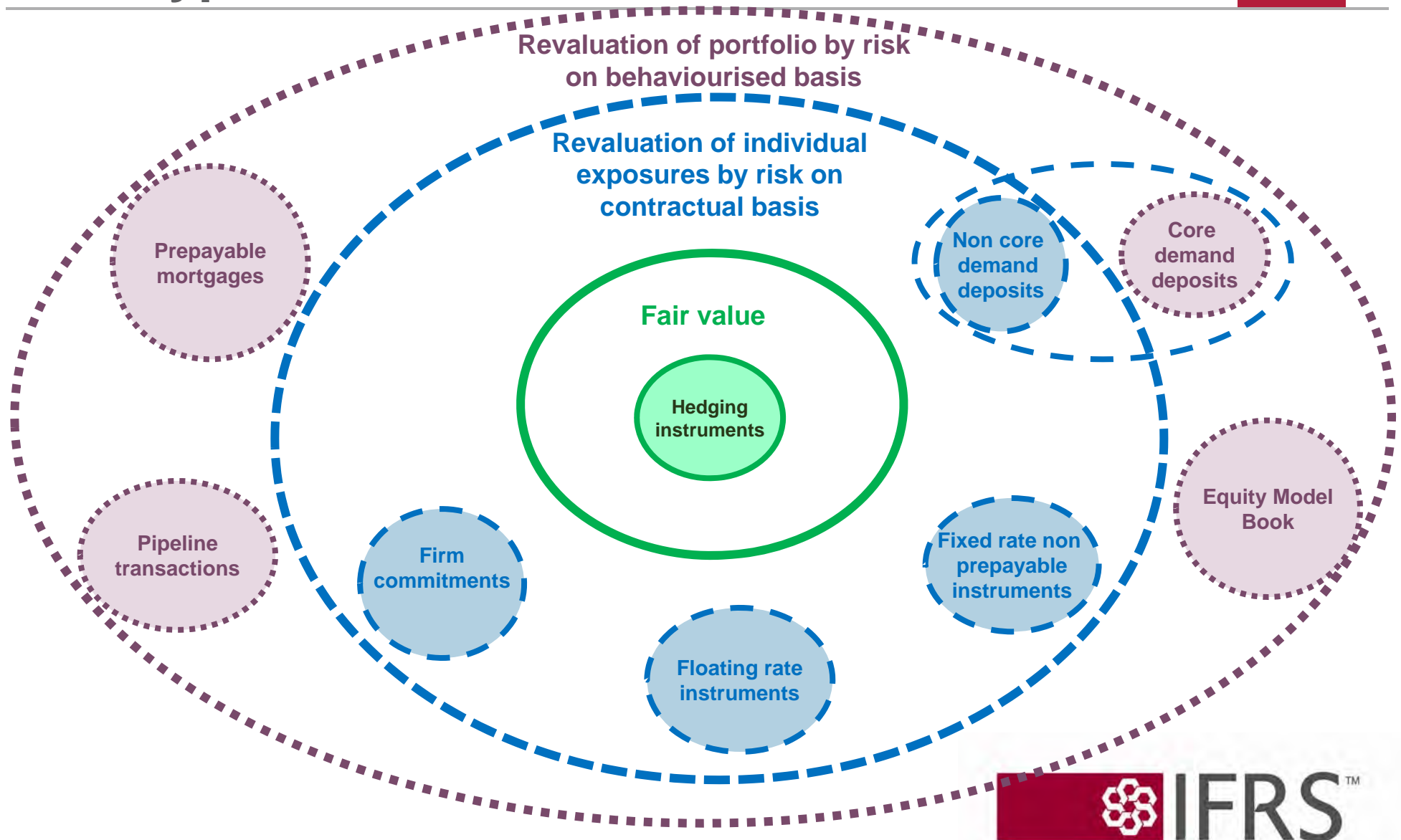
# Portfolio revaluation approach – balance sheet treatment

DR/(CR)				Balance sheet presentation alternatives		
	Amortised cost	Revaluation adjustment	Fair value	Line by line	Gross aggregate	Net adjust
<b>Assets</b>						
Retail Loans	1,000	11		1,011	1,000	1,000
Commercial Loans	750	30		780	750	750
Debt securities	500	(20)		480	500	500
Macro hedging revaluation					21	
<b>Derivatives</b>			25	25	25	25
<b>Liabilities</b>						
Deposits	(400)	5		(395)	(400)	(400)
Issued debt securities	(1,500)	(40)		(1,540)	(1,500)	(1,500)
Firm commitments		(15)		(15)		
Macro hedging revaluation					(50)	(29)
		(29)	25			
P&L from risk management activities			4			

## Key aspects of the revaluation approach

- Treat portfolio as unit of account, including behaviourisation
  - Prepayable fixed rate loan portfolios
- Inclusion of exposures with ‘deemed’ interest rate risk
  - Equity model book
  - Core demand deposit replication portfolio
- Role of transfer pricing deals representing the transfer of risk to ALM for inclusion in dynamic risk management
  - Benchmark rates only
  - Risks actually managed by ALM
- Gross treatment in P&L for internal derivatives
- Portfolio revaluation adjustment is sum of revaluation adjustment for individual exposures in portfolio

# Overview of portfolio revaluation approach for typical bank



- Scope
  - Holistic application wherever dynamic risk management is undertaken (by risk)
  - Discrete sub-portfolios within dynamically managed portfolio
  - Mandatory v optional application
- Income statement presentation
  - Actual net interest rate approach
  - Stable net interest rate approach
- Statement of financial position presentation
  - Line by line gross up
  - Aggregate assets and liabilities
  - Net balance

# More challenging risk management concepts also covered in DP

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- Risk limits
  - As long as within the risk limit set by management, a hedge is regarded as perfectly or automatically effective
- Bottom layer
  - For prepayable portfolios, assume all prepayment risk occurs in top layer, until bottom layer is breached
- Proportional approach
  - Apply revaluation approach to hedged proportion of managed portfolio, eg 80%
- Pipeline trades
  - Deemed fair value interest rate risk from publicly offered financial instruments

# Accounting for macro hedging: Application of portfolio revaluation approach by banks for interest rate risk

# What does dynamic risk management look like for banks?

- Risk management objective to transform net interest margin to have desired level of sensitivity to changes in market interest rates.
  - For some (not all) banks the objective will be to stabilise net interest margin
- Usually achieved by balancing interest bearing assets and liabilities so timing and basis of future interest rate fixings, combined with derivatives, mitigate residual interest rate mismatches to desired amount
- Central asset and liability management (ALM) function often performs dynamic risk management for all banking book exposures using sensitivity or similar calculations to calculate residual risk positions

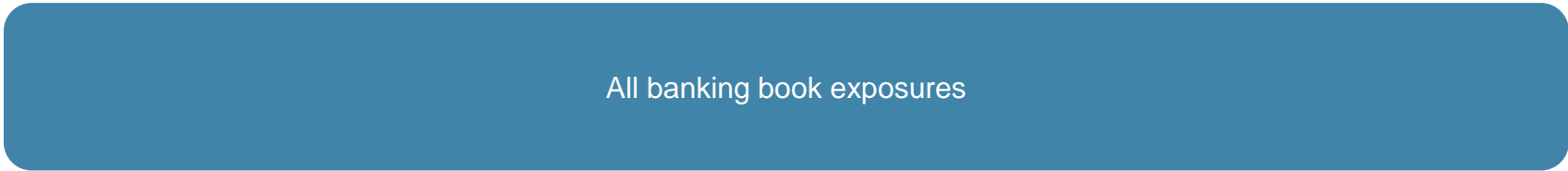


# What the model should apply to

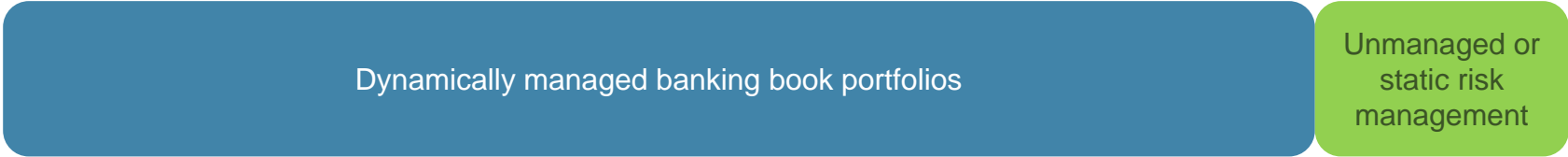
- Which portfolios should the revaluation approach be applied to?
  - Include all dynamically managed portfolios (likely to mean whole banking book) or
  - Focused selection of discrete portfolios
- Optional or mandatory application
- Key discussion is whether accounting for macro hedging should reflect risk management in its entirety (holistic view) or only to the extent risk is actually hedged (minimisation of profit or loss volatility view)
- Core issue is the usefulness of the information provided

# Scope alternatives

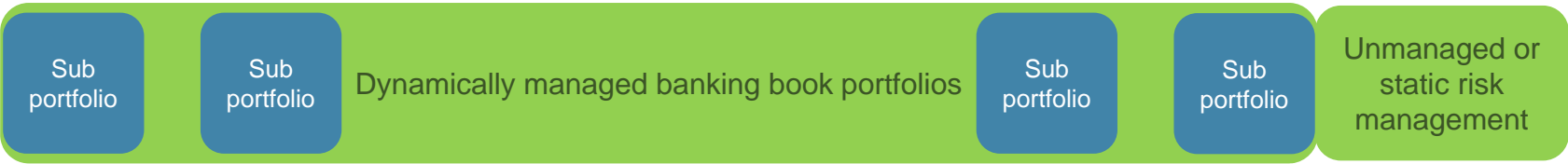
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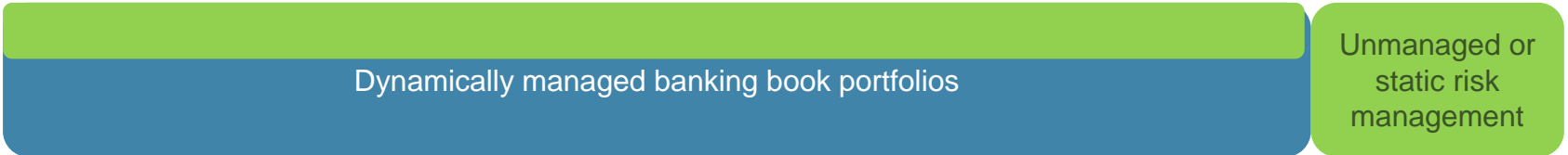
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Apply revaluation approach

Do not apply revaluation approach



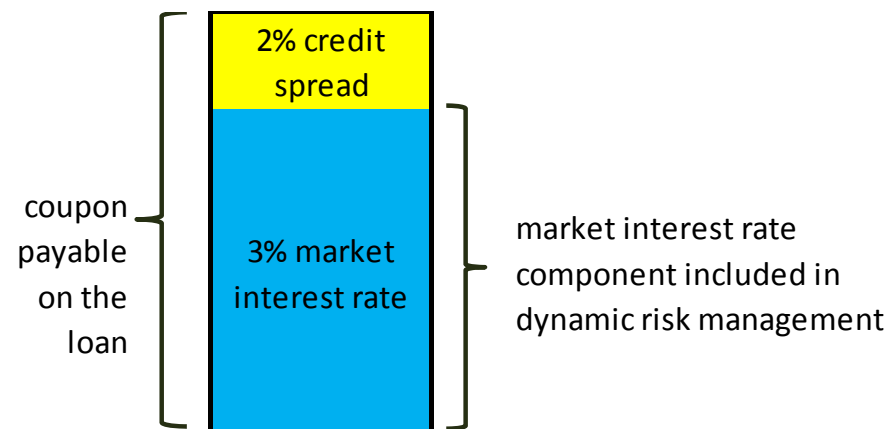
# Eligibility of managed exposures

Exposures included within dynamic risk management	Eligible for inclusion within revalued portfolio
Recognised external assets and liabilities at amortised cost	Yes
External firm commitments - unrecognised contractual assets and liabilities	Yes
External pipeline transactions	Maybe
Internal exposures	No
Deemed interest rate risk in non financial assets and liabilities	Maybe, depends on underlying exposure
Forecast external transactions	No
Recognised external assets and liabilities at FVTPL	No, possibly eligible hedging instruments

# Calculation of portfolio revaluation adjustment

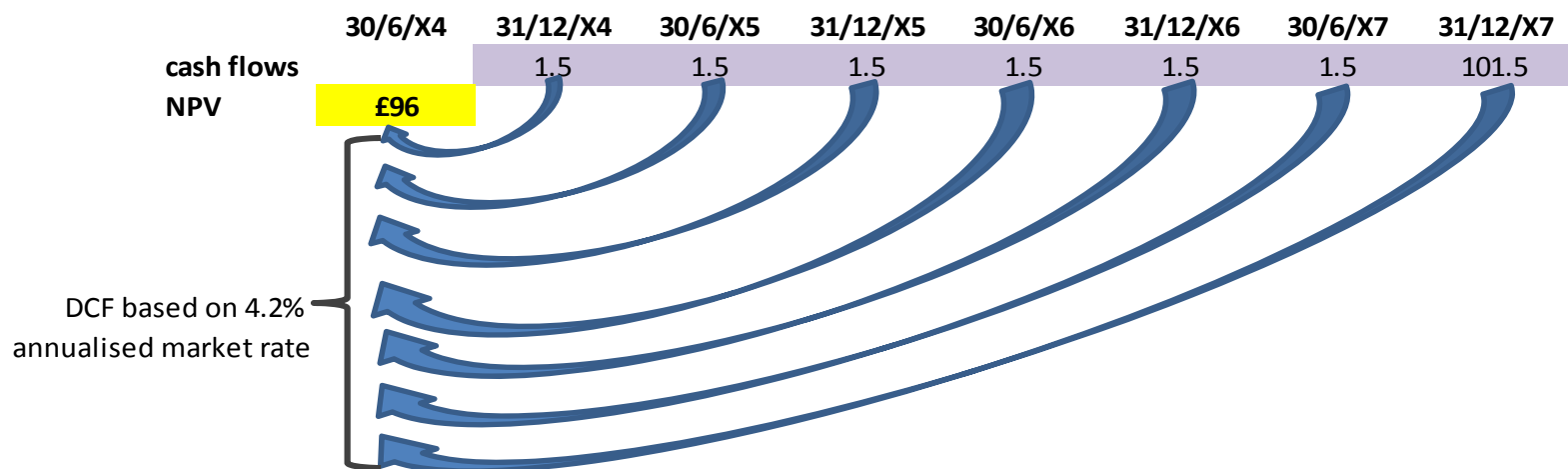
- Portfolio revalued by **aggregating** the revaluation of **all** exposures in the portfolio for the managed risk
- Individual exposures revalued by calculating **net present value (NPV)** of cashflows included within dynamic risk management with respect to prevailing market interest rates. For example:

On 1 Jan 20XX a 5 year £100m loan paying 5% interest semi annually is given to a corporate. The interest rate risk transferred to ALM for management is the 5 year semi annual market interest rate, equal to 3%.



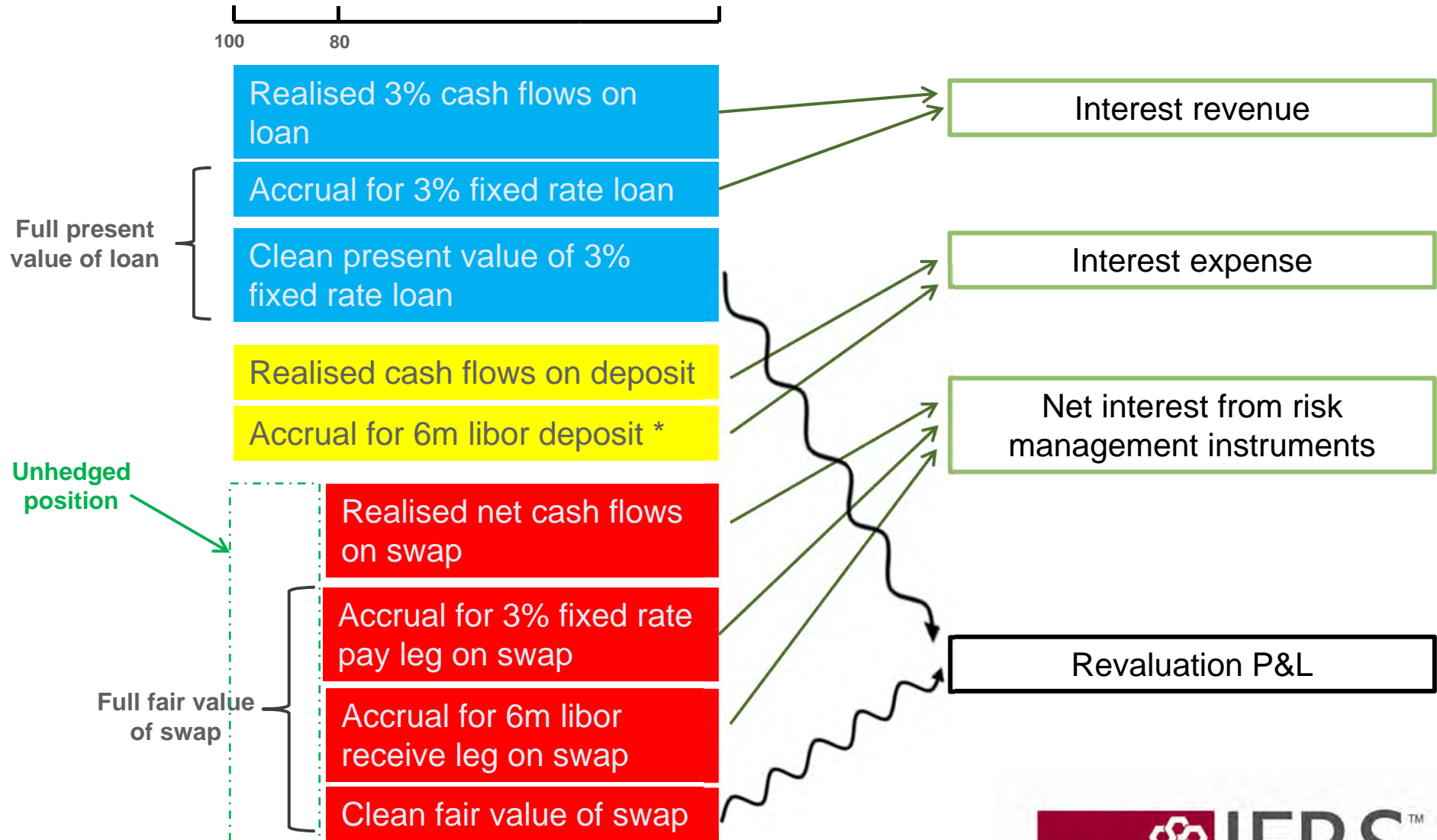
# Calculation of portfolio revaluation adjustment - Continued

	1/1/20X3	30/6/20X3	31/12/20X3	30/6/20X4
Market interest rate *	3.0%	3.3%	3.6%	4.2%
NPV	£100m	£99m	£98m	£96m
Revaluation adjustment	-	£1m	£2m	£4m



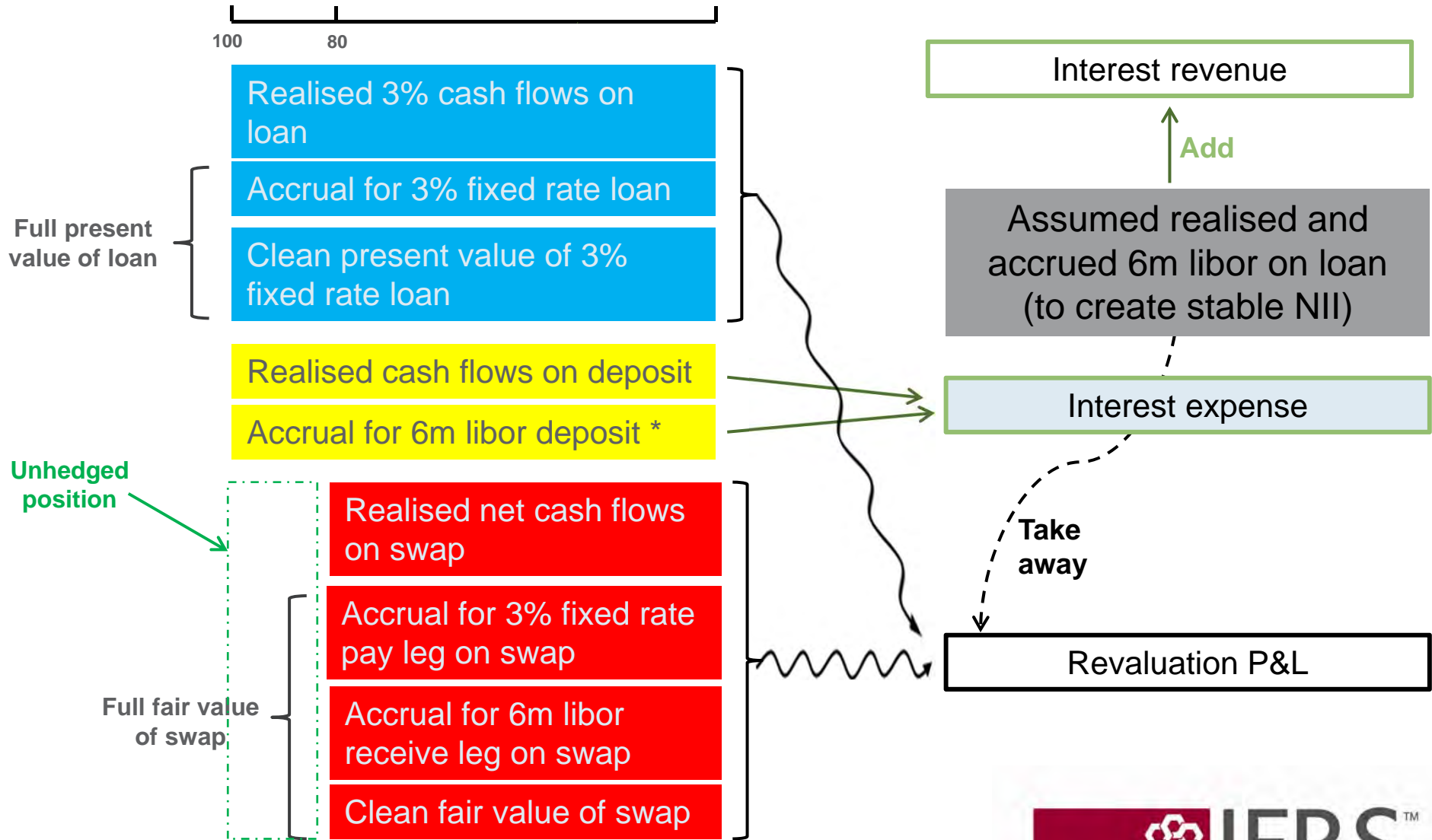
\* Assuming a flat yield curve

# Actual net interest rate approach



\* Present value of deposit is zero as it refixes to market on valuation day

# Stable net interest rate approach



\* Present value of deposit is zero as it refixes to market on valuation day

- Balance sheet presentation alternatives include:
  - **Line by line balance sheet gross up** – exposures included within managed portfolio recognised at default carrying amount *plus* associated revaluation adjustments
  - **Separate lines for aggregate adjustments to assets and liabilities** – Single balance sheet line item for revaluation adjustment for managed assets, similar presentation for managed liabilities
  - **Single net balance sheet line item** – net revaluation adjustments for all managed exposure recorded in single balance sheet line item
  - Additional considerations required for unrecognised managed exposures

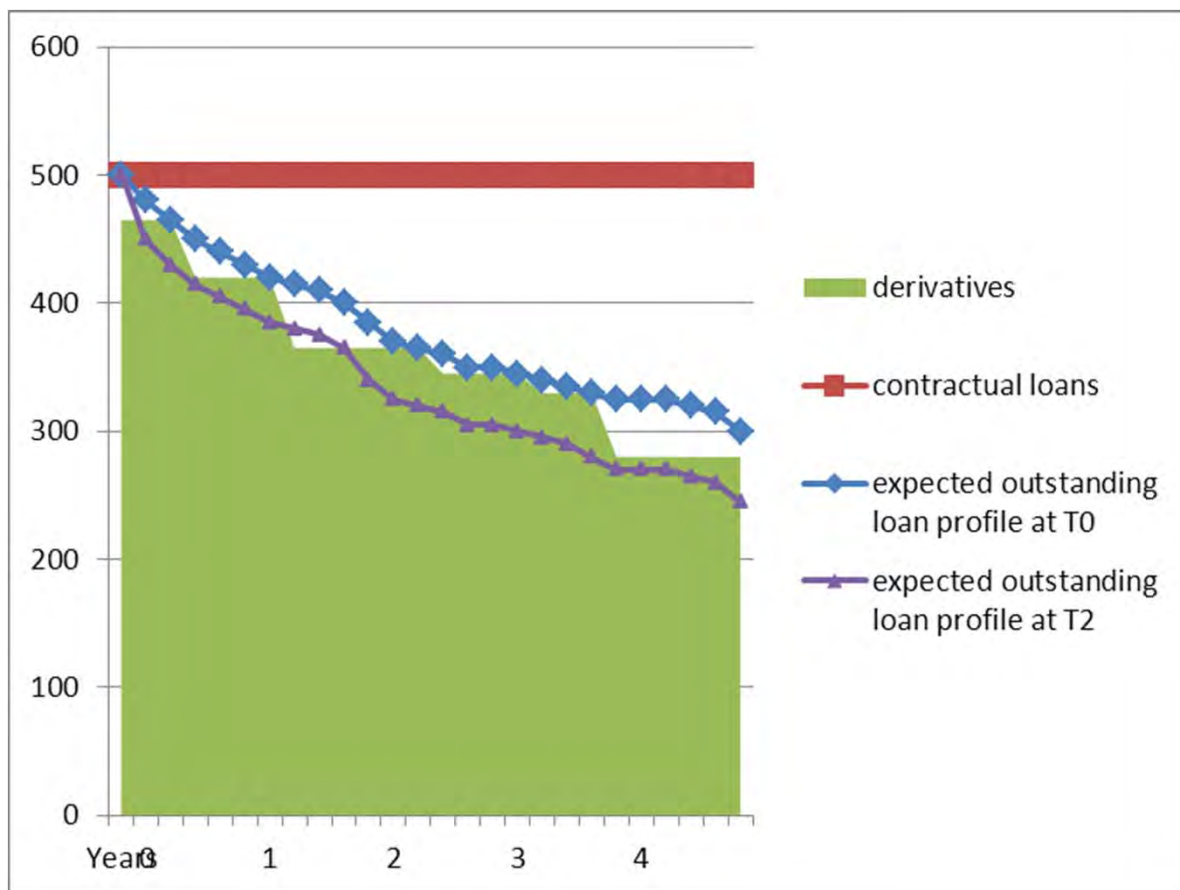


## Portfolio as unit of account

- Where portfolios are managed on basis of behaviourised expected cash flows, treating the portfolio as unit of account best represents risk management in the financial statements
- Considering a prepayable mortgage portfolio:
  - Each borrower has an option to prepay their **individual mortgage** any time, but a lender knows neither whether or when prepayment might occur for an individual mortgage.
  - However, at a **portfolio level**, the lender can **estimate** the expected amount and timing of prepayments, based on past experience.
- Calculation of revaluation adjustment based on up to date estimates for outstanding mortgages in portfolio
  - Reflects dynamic approach without need for tracking and amortisations
  - Where actual behaviour matches estimated behaviour no volatility **if perfectly hedged**

# Behaviourised portfolios

- Prepayable mortgage portfolio

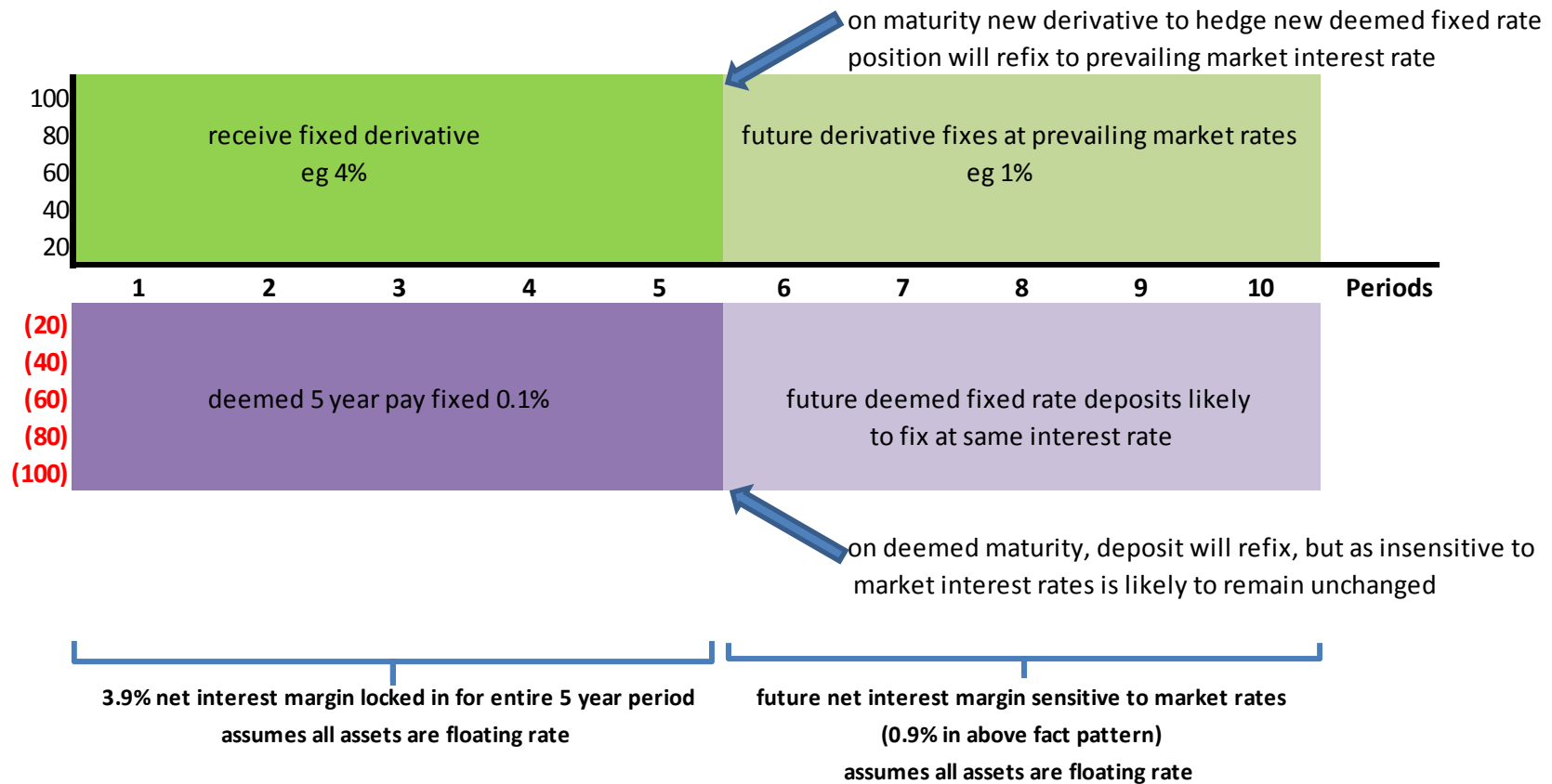


# Prepayment Risk in Demand Deposits

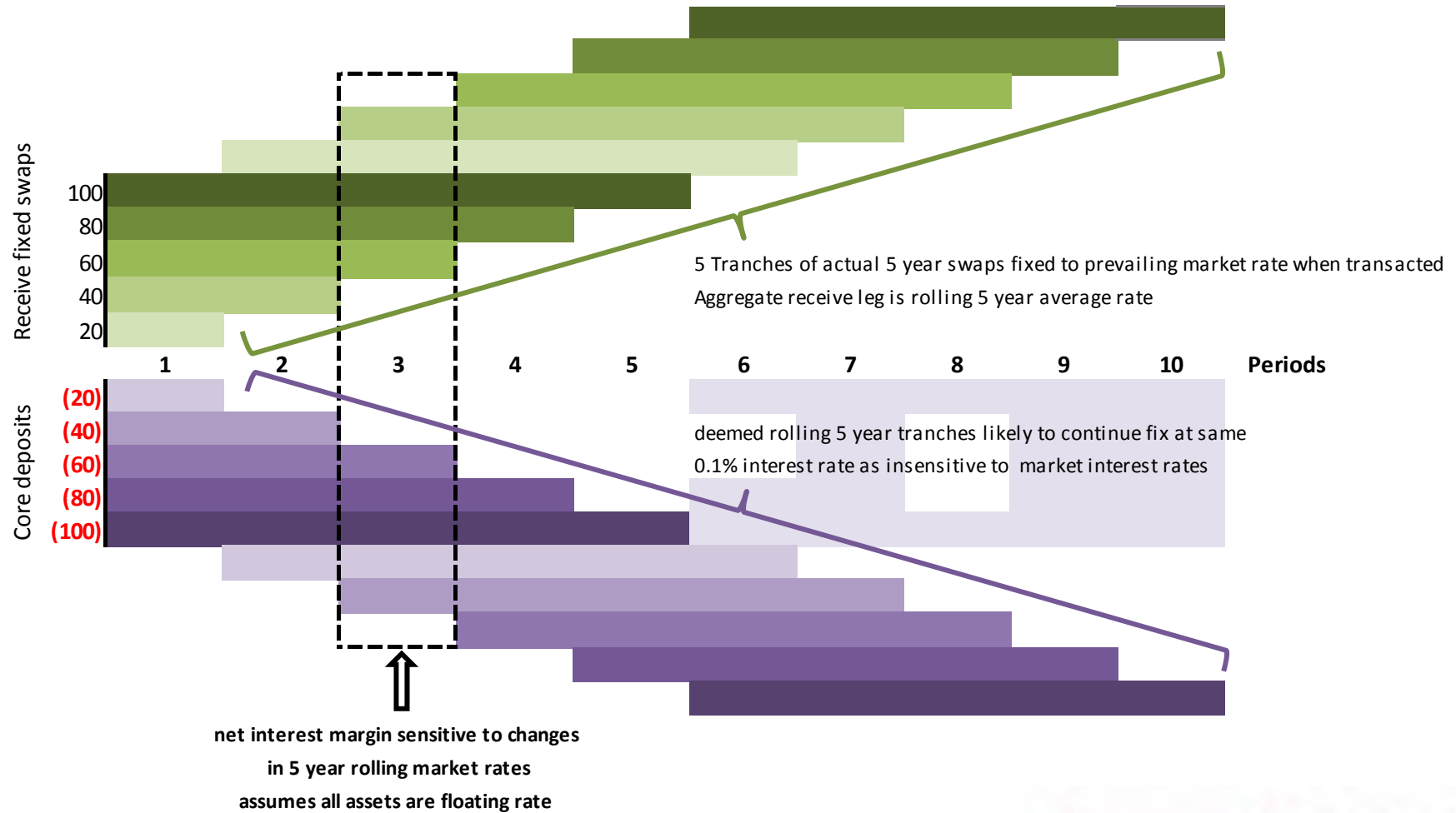


- At a portfolio level, the ‘sticky’ nature of demand deposits leads to existence of a stable portion in the amount outstanding.
- These **core demand deposits** are regarded as fixed rate deposits with longer maturities for risk management purposes.
- Strong **homogeneous** character as a portfolio, replacements in portfolio have same terms as other portfolio items in respect of maturity (on demand) and interest rates (zero or very low) and typically are insensitive to changes in market interest rates.

# Core Demand Deposits - Simple Approach

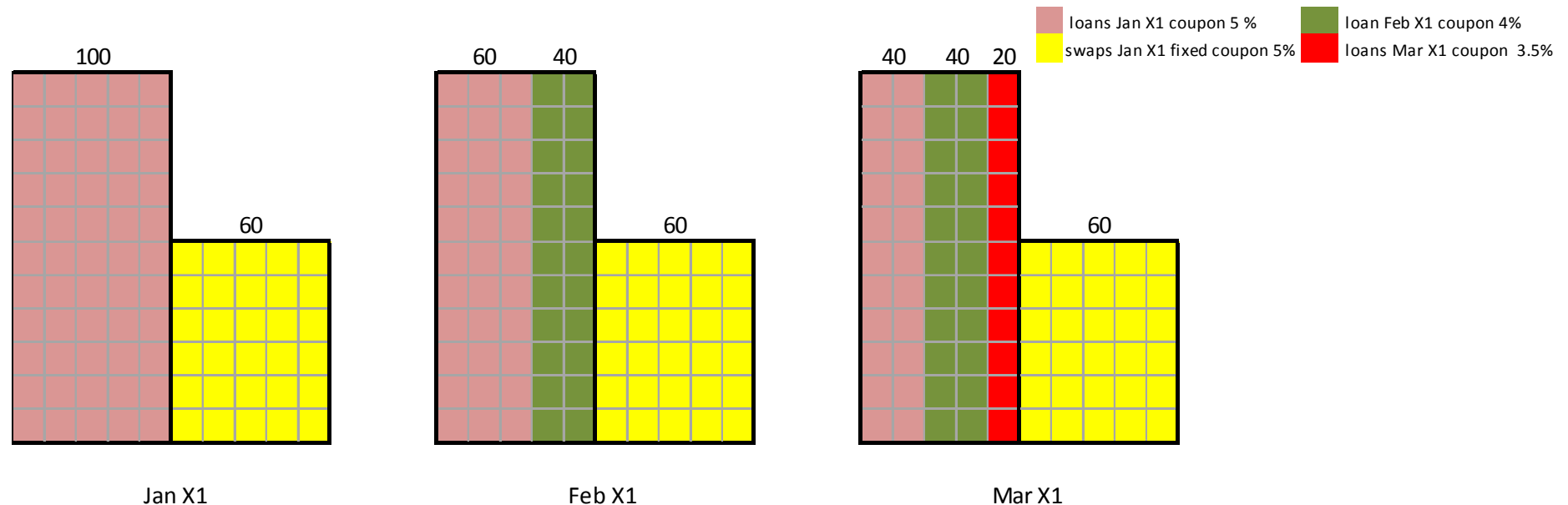


# Core Demand Deposits: Roll-over strategy / Replication Portfolio



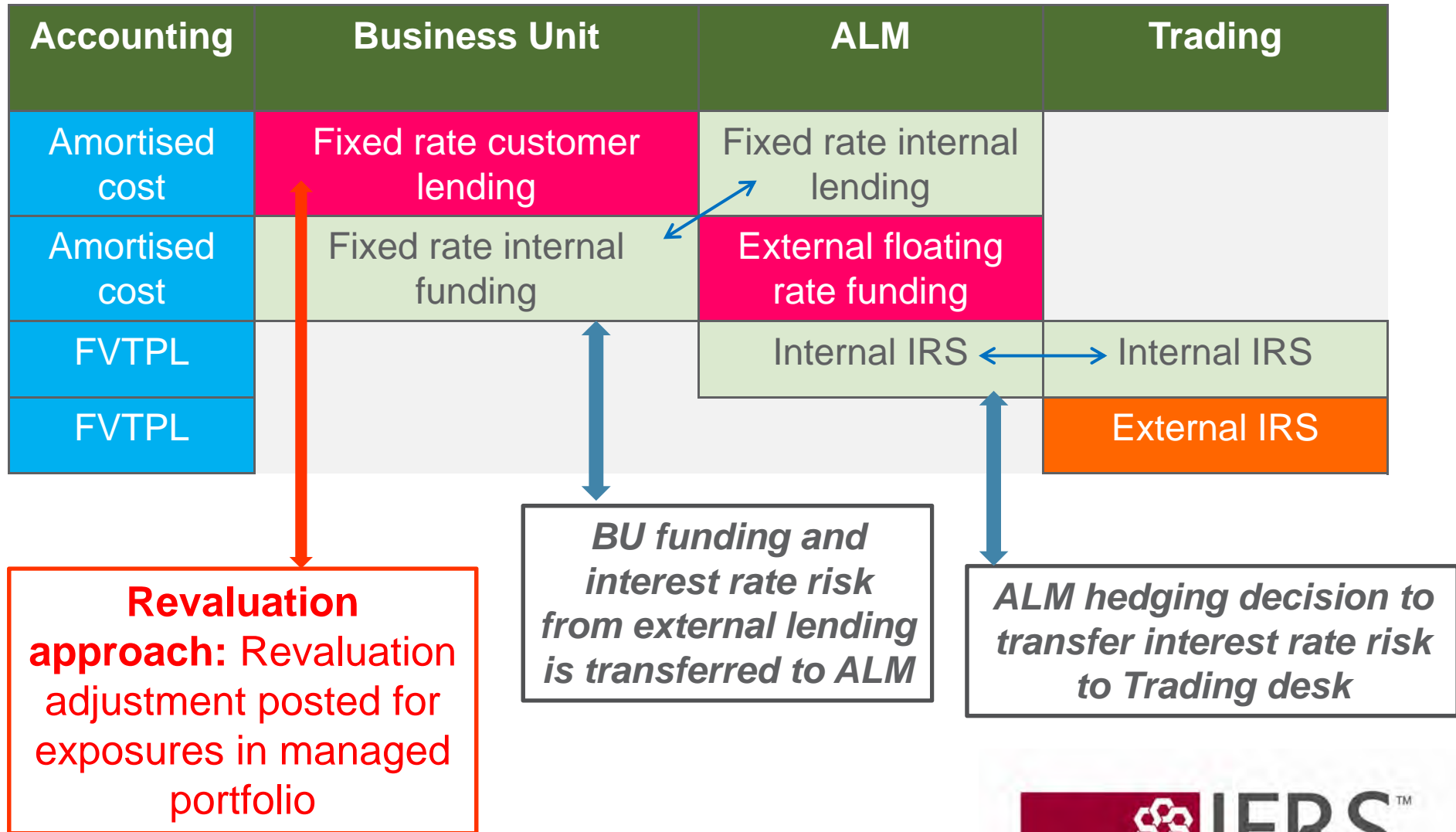
# Bottom layer and proportions

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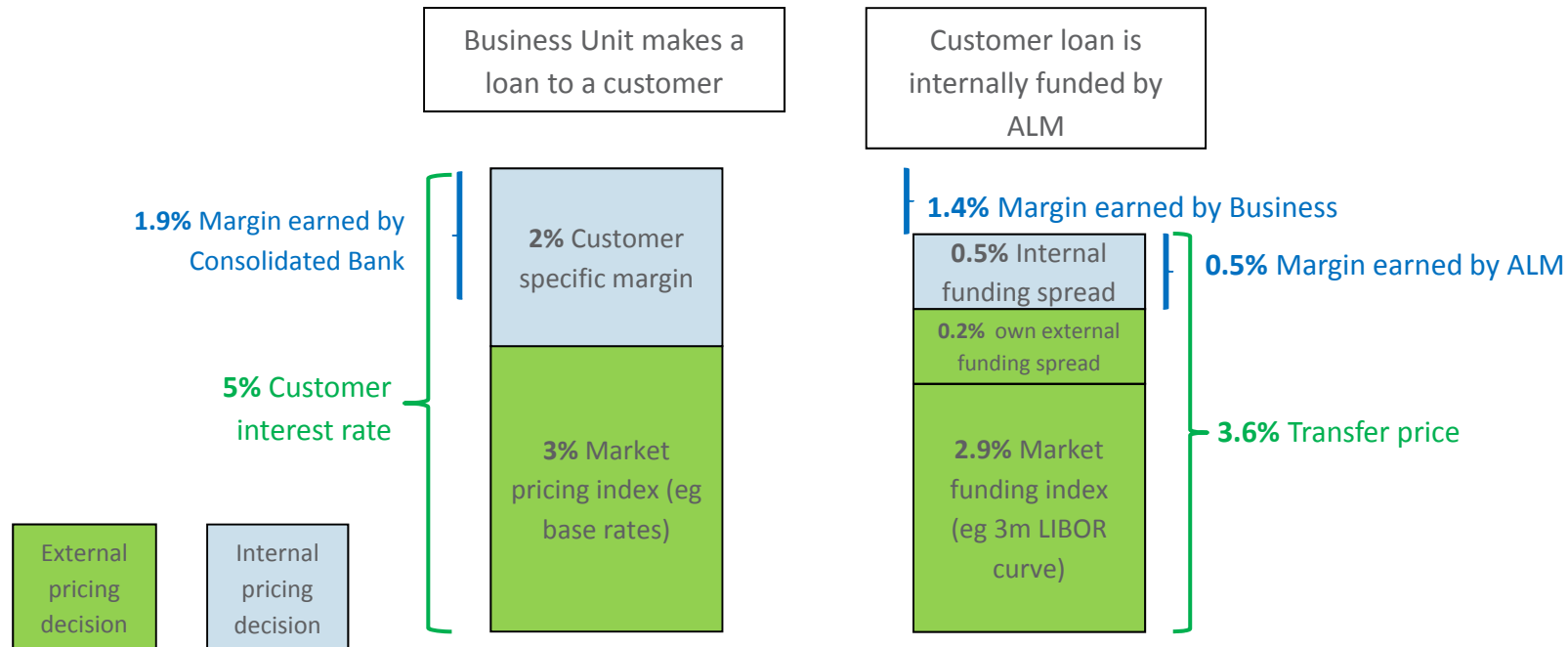


- Risk management objective for the above portfolio could be to hedge the bottom layer of 60 or 60% of whole portfolio
- Difficulties of identifying and quantifying the revaluation adjustment if hedging a proportion or a bottom layer of non homogeneous portfolio
  - What if the proportion hedged changes. Eg to 70%
  - Which exposures make up bottom layer?

# Role of internal transactions



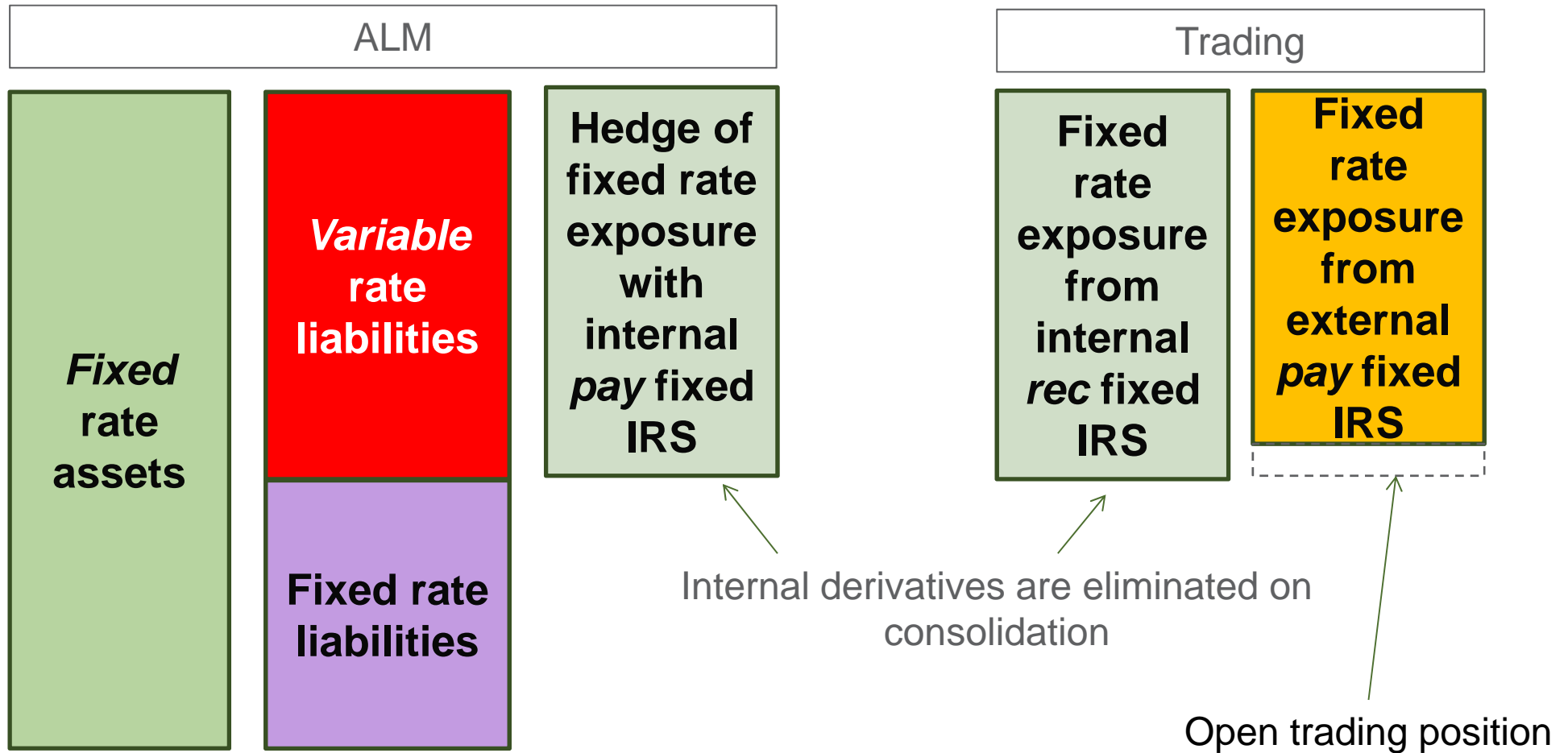
# Representation of managed risk



- Internal lending (transfer pricing) transactions to quantify the cashflows that represent the managed risk in the external customer exposures
  - Internal transfer pricing deals are **not** the managed exposures
- If managing net interest margin the managed risk would be the market funding index
- Is the transfer pricing deal a good enough representation of the managed risk in the external exposure?



# Trading position – with substantial externalisation



Stable consolidated P&L to the extent that external derivatives offset the revaluation of the hedged portfolio

# Thank you



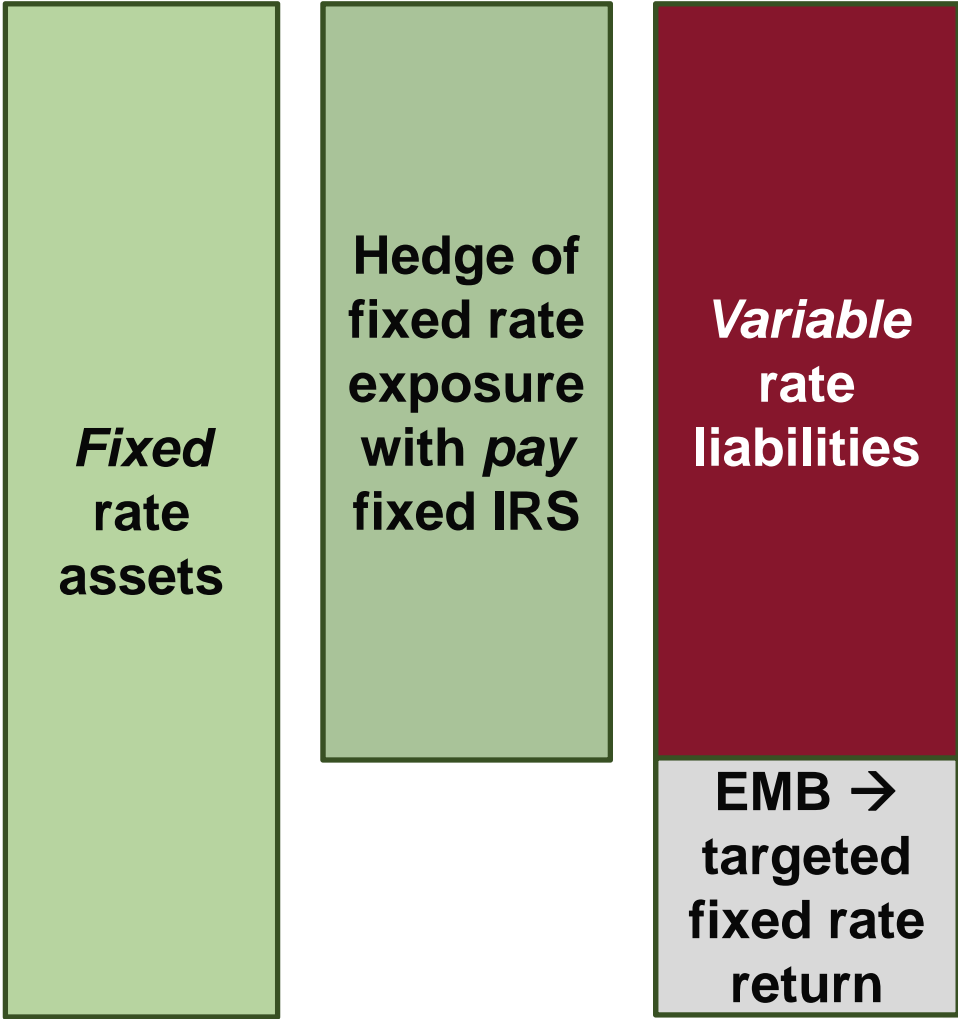
# Accounting for macro hedging: Appendices

# Deemed interest rate risk in non financial instruments

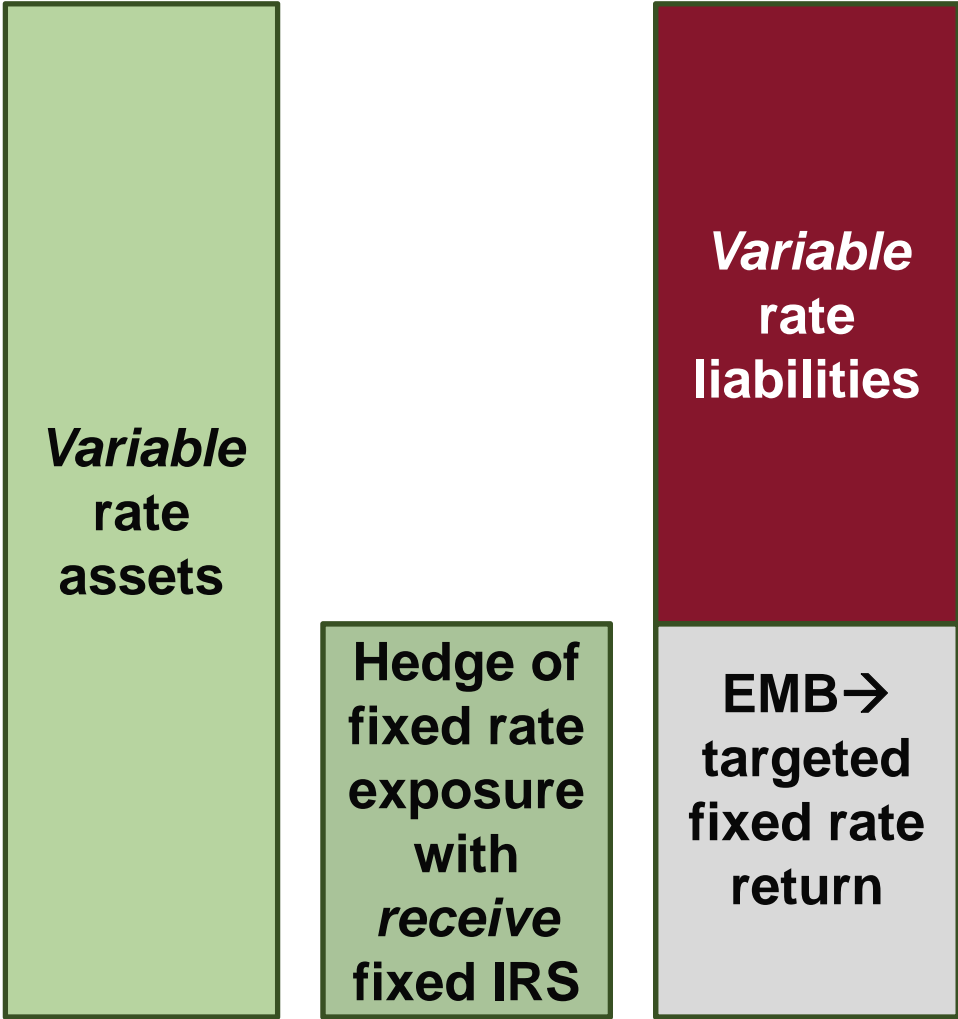
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- Some banks disaggregate their return on equity into a **base return** and a **residual return**
  - The base return is the return equity holders expect as compensation for providing investment
  - The residual return is anything above that
- In order to ensure that banks can deliver that base return to equity holders, they may model that return and include it in their risk management activities - often called an **Equity Model Book**
- How might this risk management strategy be accommodated within an accounting solution for macro hedging?
  - What are the implications if it is not?

# Equity model book example – reduction in hedging activity



# Equity model book example – increase in hedging activity



## Pipeline trades: conceptual basis?

- **Pipeline trades:** financial instruments that are publicly offered for a period of time at fixed rates. For example fixed rate mortgage or deposit rates advertised in branches
  - Transactions are only *anticipated*, similar to a forecast transaction
  - Deemed to have fair value interest rate risk as bank would feel obliged to honour the offer due to commercial pressures
- However, is there any conceptual basis for recognising revaluation of a pipeline trade as an asset or liability?

- The basic concept of incorporating risk limits into the revaluation approach is:

*As long as the amount of risk is within the risk limit set by management, a hedge is regarded as **perfectly** or **automatically** effective.*

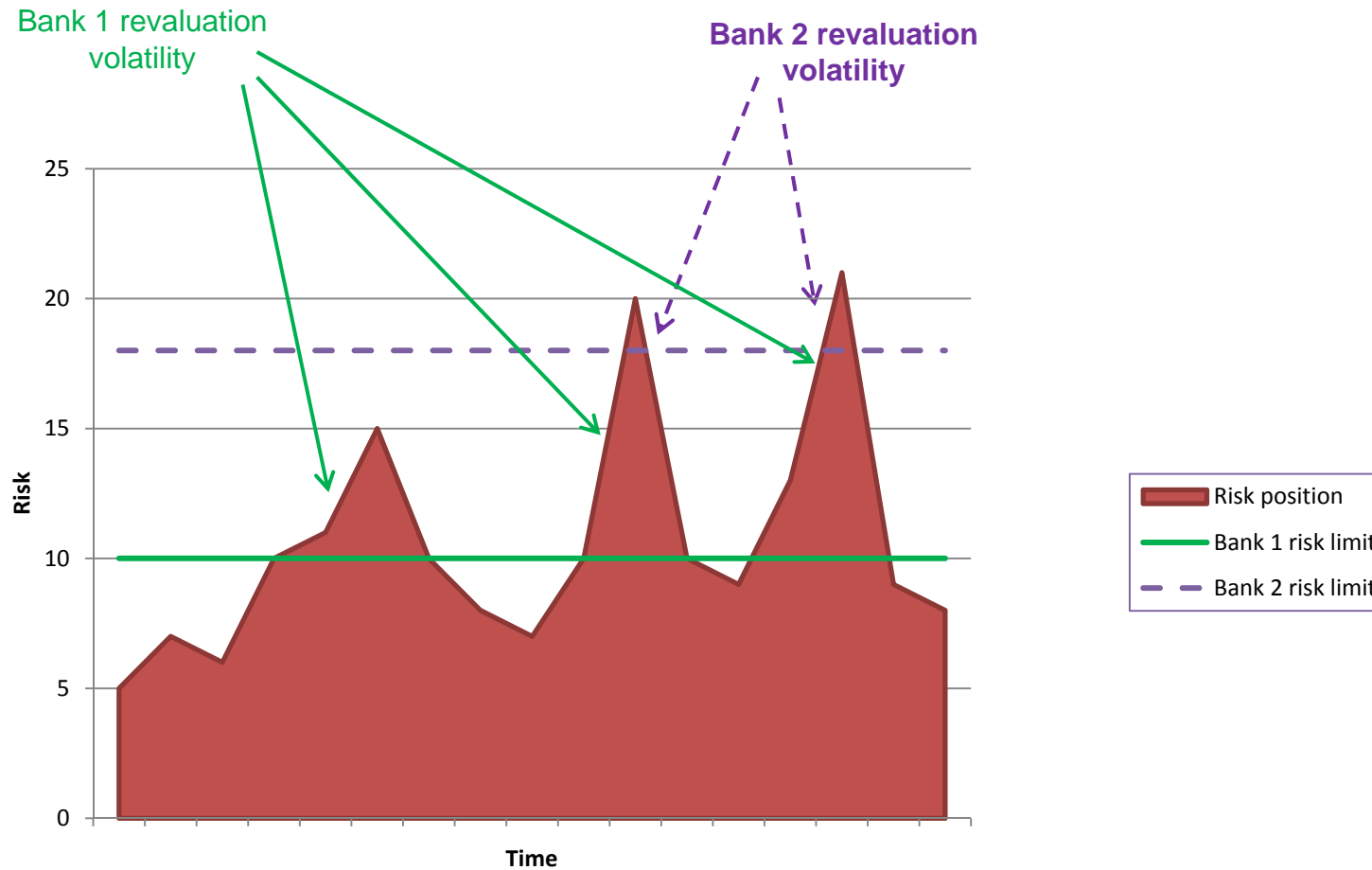
- Such an approach presents a moral hazard:

*The wider the risk limits are, the less revaluation volatility is recorded in profit or loss*

- Operational difficulties if risk limits are breached
- Usefulness of information



# Impact of risk limits approach



- Intentionally unhedged positions
- Imperfections in hedging strategies
  - Hedging instrument selection
  - Actual behaviour  $\neq$  expected behaviour
- Fair valuation inputs for hedging instruments