

# Interest Margin Hedge

London  
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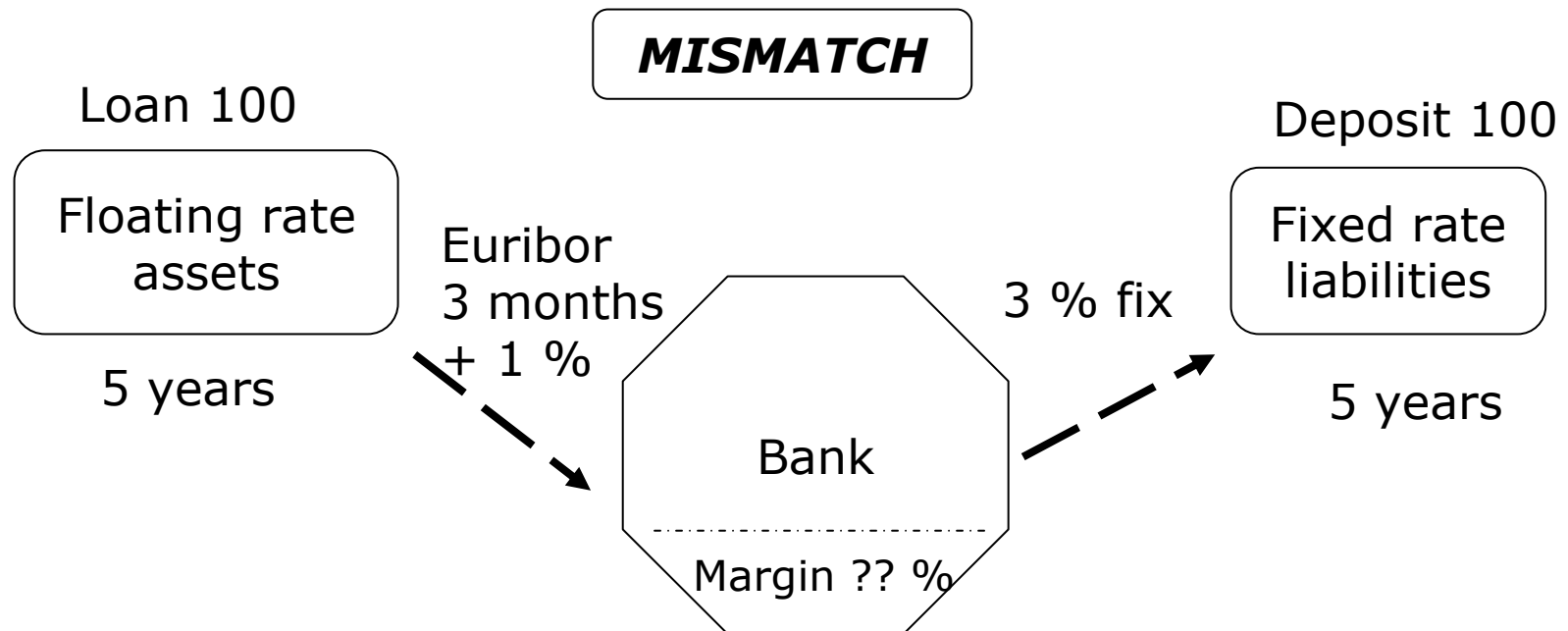
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# IMH in a Nutshell

- Alignment of hedge accounting with
  - state of the art interest risk management, and
  - consideration of Core Deposits as an integral part
- Hedging of the interest margin
  - ➔ Interaction of interest income and expense generates interest rate risk, not single assets or liabilities
- Based on net positions per maturity gaps
- The hedged risk: the benchmark component of the contractual interest rate, *securing today's interest rate levels*
- Fair Values of effective hedging derivatives remain in equity

# Importance of the Portfolio View

- Where does variability come from?
  - When does variability create risk?
  - Can risk derive from a fixed rate item?
- Only the Portfolio View provides the answer:

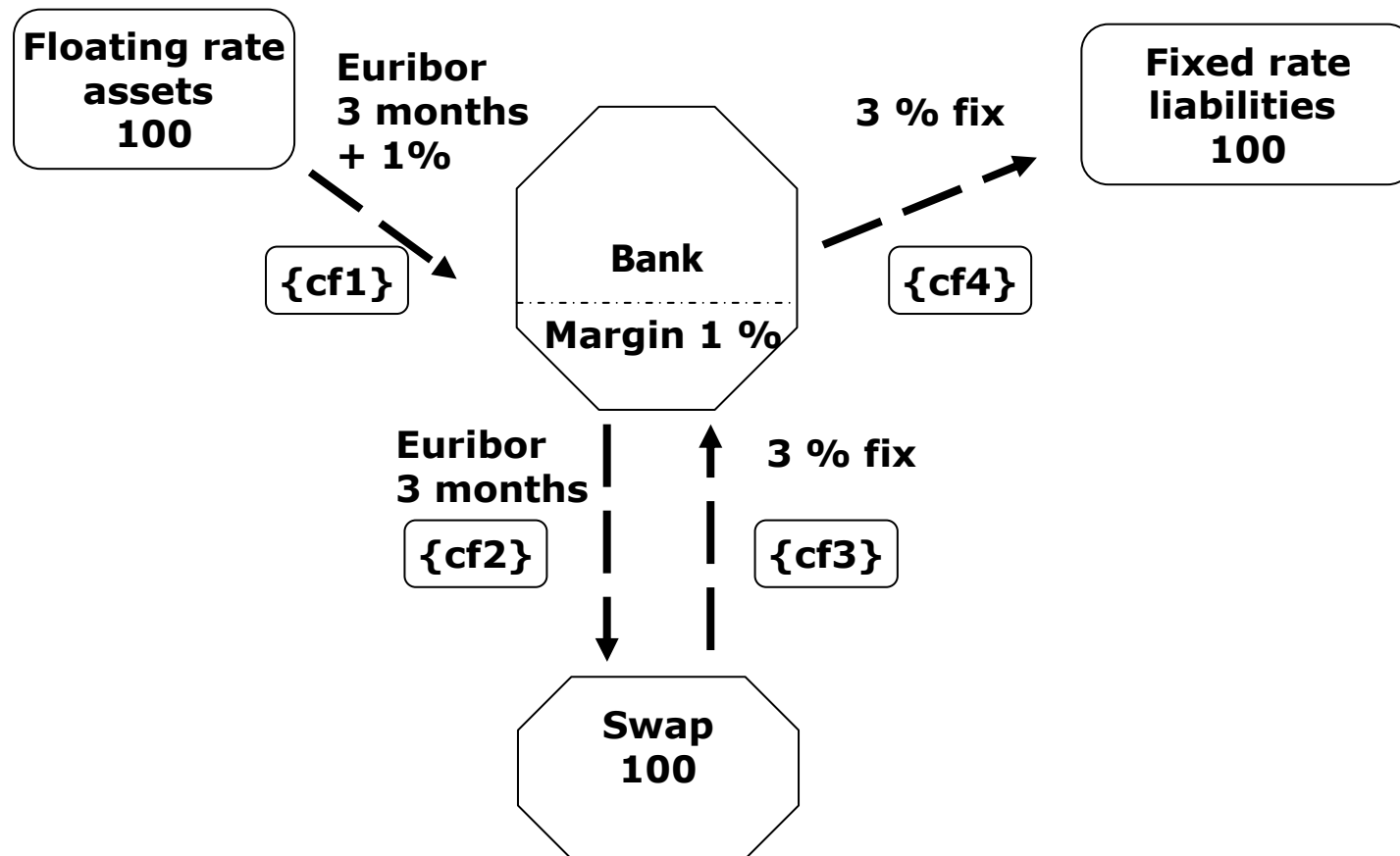


# Determination of a gap

- Mismatch of assets/liabilities in a specified time period: a gap
  - Aggregate fixed-rate assets and liabilities of the same (or similar) repricing dates
  - Leads to excess of one side within the same time periods
- A gap indicates the hedged items to be designated:
  - Currently existing funding or investment in floating rate items, or
  - the respective future transactions for funding or investment

# Filling a Current Gap

- Objective: fix the level of interest rate at inception of the hedge



# A Future Gap

- Example (liability sensitive): gap in years 3 - 5
  - Objective: fix the level of interest rate at inception of the hedge

		notional	Y1	Y2	Y3	Y4	Y5
<b>Assets</b>	5Y	100	100	100	0	0	0
<b>Liabilities</b>	5Y	-100	-100	-100	-100	-100	-100
	<b>Net-Position</b>	0	0	0	<b>-100</b>	<b>-100</b>	<b>-100</b>
<b>Forward Swap rec fix pay float</b>	<b>3Y/3m</b>				<b>100</b>	<b>100</b>	<b>100</b>

# Filling a Future Gap

- Conditions of future transactions are unknown
  - Fixed or Float?
  - Level of interest rate?
- Customer demands determine the future conditions
- The risk: future interest rates are uncertain
- Protection: fix interest rates today for either fixed or float future transaction
- Currently, IAS 39 doesn't permit this IMH



# Protecting a Future Gap

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- Same risk – same instrument
  - Designated risk: Libor component of forward rates
  - Non arbitrage characteristics of the forward rates embedded in the yield curve
- Scenario 1: future floating-rate transaction
  - Instrument: Forward Swap
- Scenario 2: future fixed-rate transaction
  - Instrument: Forward Swap

# Same Risk & Fair Value Change



- Appropriate accounting treatment of fair value change (starting year 3) of the derivatives achieves hedge objective

# Designation

- The bank identifies a portfolio of fixed rate financial instruments, i.e. assets and liabilities
- Aggregating them by their repricing dates into predefined time buckets
- Thus identifying a net open position of a specified gap
- Identifies by notional amounts existing variable rate items that currently fill the gap and/or future transactions that will fill the gap

# Designation

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- Designates them for their interest cash flows to be the hedged items
- Designates a part of the contractual interest rate that corresponds to a benchmark interest rate as the risk which it is hedging
- Designates one or more hedging instruments for each specified period of mismatch

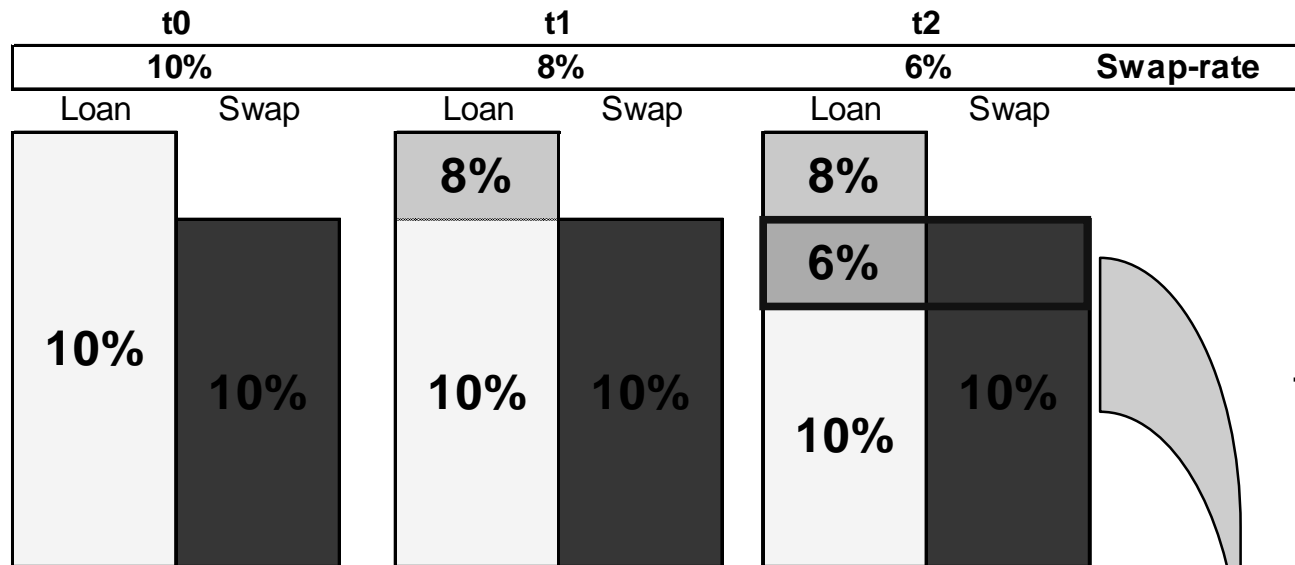
- Testing for
  - Close proximity of cash flow dates
  - “Overhedging” by
    - notional amount
    - maturity
- Testing twice
  - before including new production and new hedges in the hedge portfolio
  - after taking into account new production

# Testing against Hedge Objective

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- Primary objective: Identification of ineffective Derivatives (or portions thereof)
- Prevention of any management discretion (in case of multiple hedging derivatives per gap)
- Hidden ineffectiveness requires tracking of
  - Gaps as initially analysed
  - Derivatives designated
- Potential Solution → Hedge Matrix

# Tracking Ineffectiveness



Loanportfolio is hedged to 80% using a payer swap

20% of the loans documented in t0 were prepaid. In t1 a "new production" of loans at a 8% yield level occurs.

20% of the loans documented in t0 were prepaid. In t1 a "new production" of loans at a 6% yield level occurs.

**Ineffectiveness**

= Fair Value of "overhedging" swap portion

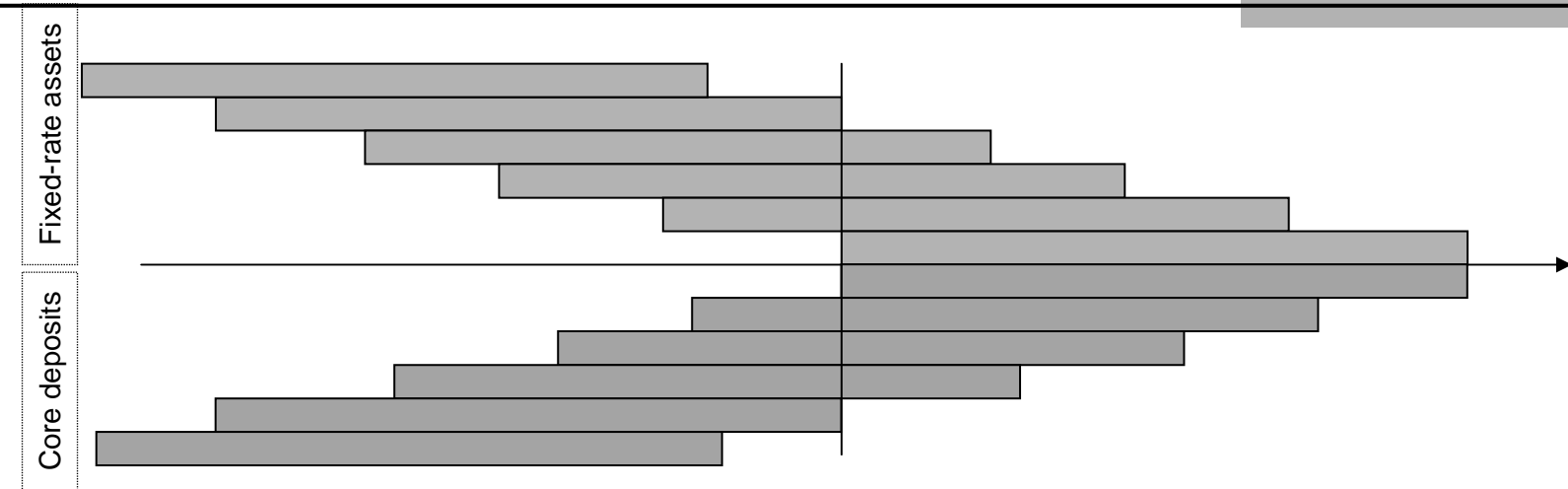
Tracking of Ineffectiveness

# Core Deposits

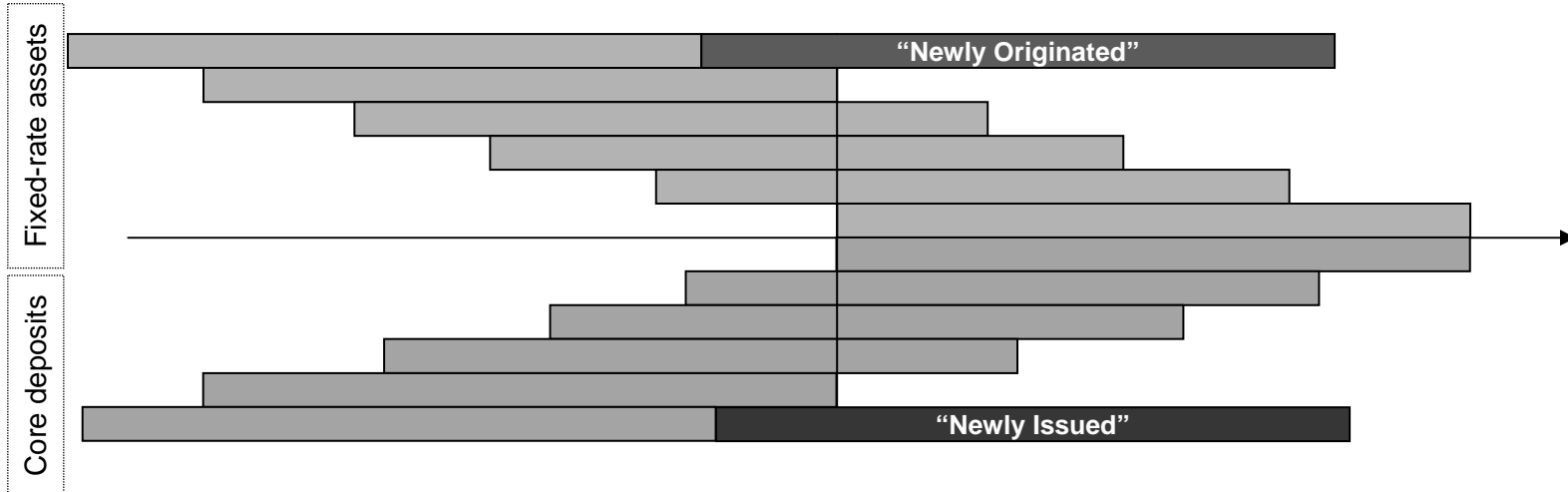
- Core Deposits represent “fixed-rate” liabilities
  - offsetting naturally fixed-rate assets or
  - generating the need for fixing the interest rate level for their corresponding investment
- Core deposits are incorporated in the IMH portfolio based on behavioural assumptions, using state of the art risk management practice:
  - core volume approach, replicating portfolio, diffusion process etc



# Core Deposits & New Production



Core deposits, assumed to have matured in the last period, are assumed to offset the origination of new assets of the next period.



# Summary

- IMH aligns state of the art interest risk management and accounting
- IMH integrates core deposits in the hedging portfolio
- Despite strong similarities, IMH can currently not be designated as a CFH
- Most ALM systems used by the industry could be utilized as a basis for implementing the IMH approach