

# Dynamic risk management

An introduction

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European Financial Reporting Advisory Group

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# OVERVIEW

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Why a change is needed

Other models (the carve out and the PRA)

The DRM core model





## Why a change is needed

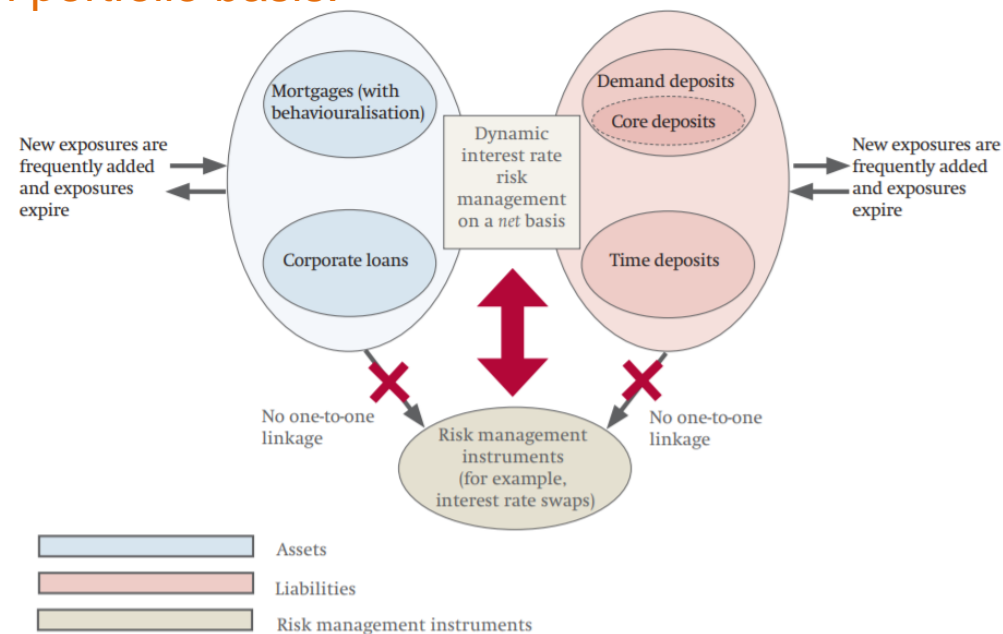
# Why a change is needed

## Introduction

- Risk management is a common activity that is applied by many entities - often managed dynamically

## DRM is generally based on an open portfolio basis.

- Exposures in these portfolios change frequently
- DRM is often performed on a net basis (entities assess the net risk position(s) arising from open portfolio)



IASB [Snapshot](#) on PRA

# Why a change is needed

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## Current challenges under IAS 39 and IFRS 9

- One-to-one linkage between what is being hedged and the hedging derivative does not accommodate the dynamic nature of risk management
- Can only accommodate open portfolios by treating them as a series of closed portfolios with short lives. Is operationally challenging
- Can only indirectly accommodate risk management on a net basis through gross designation
- Allow for a limited degree of behaviouralisation of exposures (for example, prepayable mortgages)
- Limitations make it difficult to align with a risk management focus or systems
- Eligible hedged items excludes core demand deposits (based on interaction with IFRS 13)



## Other models

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# Other models – EU carve out

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## Description and impact

- IAS 39 carve out has been applied since 2005 after the publication of the [\(EC\) No 2086/2004](#) (19 November 2004)
- According to the [EC](#) , the limitation of hedges to either cash flow hedges or fair value hedges and the strict requirements on the effectiveness of those hedges, prevent the continuation of risk management techniques, such as hedging a portfolio of core deposits, which are currently accepted by banking supervisors.
- European banks argue that IAS 39 would force them to carry out disproportionate and costly changes both to their asset/liability management and to their accounting systems and that it produces unwarranted volatility



# Other models – EU carve out

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## Description and impact

- The carve-out therefore adjusts the IAS 39 fair value portfolio hedging to:
  - Relax effectiveness testing so that under-hedging does not lead to ineffectiveness (in practice banks usually apply the bottom layer approach to reflect the net risk position - i.e., a nominal value proportion (or synthetic risk position) of the portfolio instead of the entire portfolio)
  - Allow hedging of interest rate component of a portfolio core deposits remunerated at zero interest rate or below market interest rate

## Other models – EU carve out

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### Description and impact

- **Core demand deposits** are customer deposits that remain on deposit for a relatively long period and for which banks typically pay negligible interest. The stability arise as **withdrawals are mostly offset by additional deposits**.
- Some banks consider core deposits to have **economic characteristics** of a zero-coupon bond and new deposit are regarded at its discounted value based on its expected future repayment date. The discounted value of these liabilities can be **sensitive to interest rate movements**, so banks mitigate this risk.
- However, IFRS 13 states that fair value of a demand deposit **equals its face value** which means that these cannot be hedged under IAS 39.

Overall intention of the carve-out is to **enable hedge accounting** for risk management activities related **to core deposits** and **to alleviate the impact** of hedge ineffectiveness when actual scheduled cash flows in a specific **time bucket differs from expectations**

# Other models - PRA

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## Why did the Portfolio Revaluation Approach not work?

- [2014 DP](#) as explained in [Stephen Cooper article for investors](#):

The **PRA** involved identifying a portfolio of exposures that is subject to dynamic risk management, and remeasuring these for the risk being managed, e.g., a portfolio of loans and deposits.

Similar to the fair value hedging approach under IAS 39 and IFRS 9, this was not a full fair value approach, as only one component of changes in value would be recognised in the revaluation adjustment. For banks this would mean changes in value for interest rate risk due to changes in the hedged interest rate risk component would be included in the carrying amount. Other components of the change in fair value including credit risk, expected credit losses and other components of the credit spread such as liquidity were not included in the adjustment. This revaluation adjustment is then reported in profit or loss together with the full fair value changes of the derivatives that the bank is using to manage that risk.

**PRA alternative:** recognition of the risk management impacts in OCI (both hedged item and hedging instrument)

# Other models - PRA

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## Why did the Portfolio Revaluation Approach not work?

- Constituents thought that the approach would **increase P&L volatility** as the full portfolio was revalued not just that part being hedged by derivatives.
- In its [comment letter](#) on the PRA DP, EFRAG said: “.., we note that many banks do not manage their interest rate risk on a fair value basis but rather on a cash flow basis, and many of the concepts proposed in the DP would fit more comfortably with a cash flow hedge model than with a fair value model. In this regard, we believe that such a **cash flow hedge model** should be considered as part of further work on the project. However, since preparers have had concerns with the present model, the IASB should reconsider the possibilities of removing the accounting volatility in equity that the present model causes.”
- In February 2015, the IASB staff prepared a [paper](#), summarising the feedback received and noted the following in paragraph 10(a) “First, the idea of ‘revaluing’ exposures as proposed in the PRA does not necessarily reflect DRM in all circumstances and consequently has its limitations. For instance, a **cash flow hedge accounting model reflects DRM activities better when interest rate risk is managed in terms of cash flow variability**. However, suggestions on how this could be implemented or how existing cash flow hedge accounting models could be improved were not elaborated upon.”



## The DRM core model

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# The DRM core model

## Objective

- To conclude the replacement of IAS 39 with the development of a macro hedge accounting model
- To improve information provided regarding risk management and how risk management activities affect a bank's current and future economic resources

Transparency	Eligible Items	Dynamic Nature	Performance measurement
By presenting the DRM derivative contribution on a separate line item on the face of the statement of profit or loss, this will add transparency to the impact risk management actions have on the entities economic resources and allow users to evaluate the strategy.	The scenario demonstrates how a future transaction would be identified and also designated within the DRM accounting model.	The change in inputs to the model does not require any action regarding designation and de-designation and the changes are automatically accommodated in the model.	As the entity has perfectly achieved the strategy, the P&L reflects the economics faithfully.  There is no misalignment presented as none exists.  Since management has achieved the strategy, the results of that strategy are reflected in the statement of profit or loss and NII.


Source: IASB

# The DRM core model

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## Objective

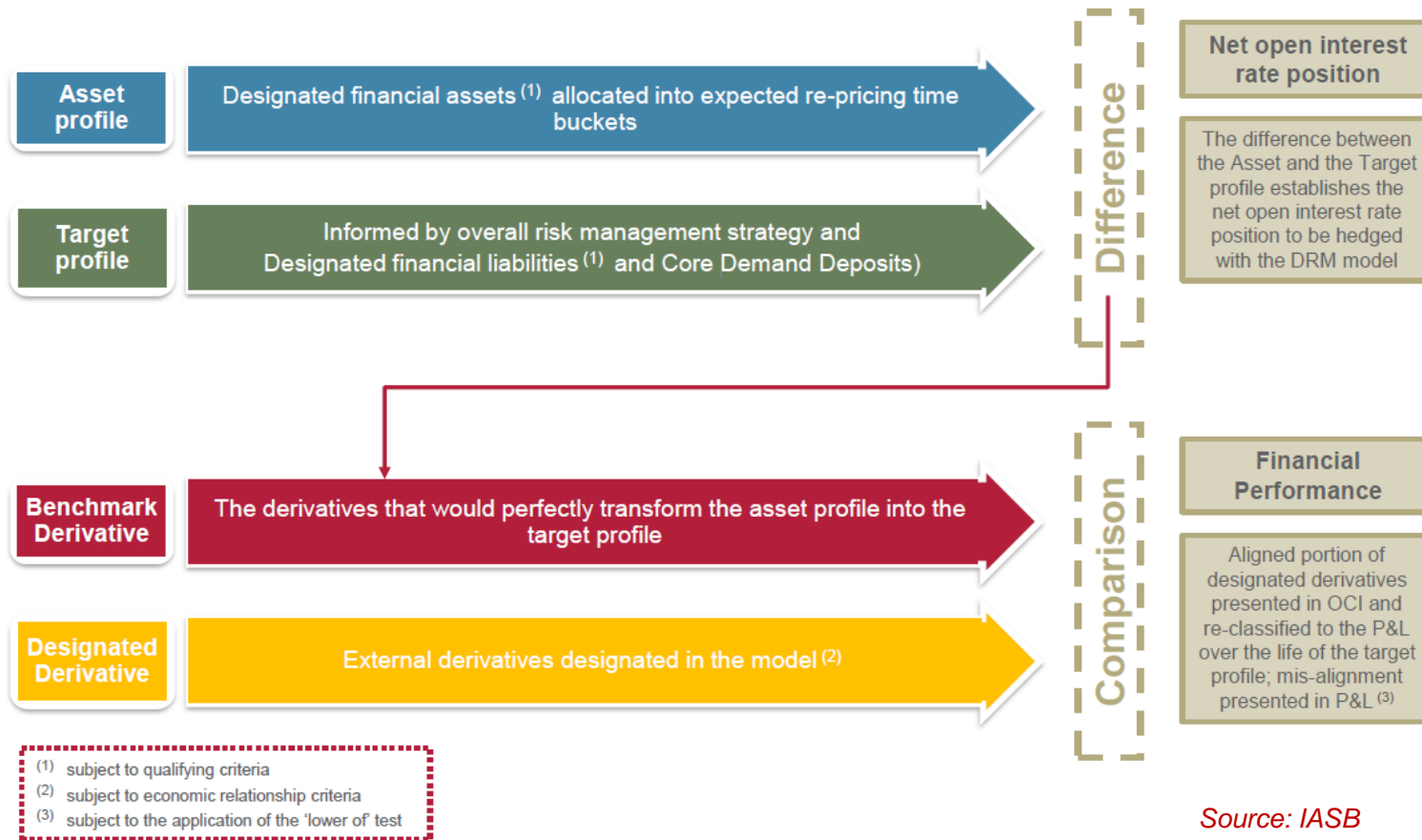
- The project will first focus on developing a 'core' model focused on the most important aspects of DRM and then seek feedback from interested constituents before determining next steps
- **DRM model phases:**



Phase I	Phase II
Core Demand Deposits	Equity
Amortised Cost	Fair Value (FV) OCI
Linear Hedging Instruments (swaps)	Non-Linear Hedging Instruments (options)

# The DRM core model

## DRM model overview





# The DRM core model

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## Asset profile

- The asset profile allocates designated financial assets (FA) into time buckets based on their re-pricing dates
- At a minimum, portfolios should comprise of FA of the same currency and with similar prepayment features.
- Qualifying criteria:
  - FA are measured at amortised cost under IFRS 9
  - Future transactions (FT) are highly probable and will result in FA measured at amortised cost
  - Items within the asset profile are managed on a portfolio basis for interest rate risk
  - Items already designated in a hedge accounting relationship for interest rate risk are not eligible under the DRM model (cannot double hedge)\*
  - The effect of credit risk does not dominate the value changes.

\* It is not clear how de-designation under IAS 39/IFRS 9 and designation under the DRM model would work as this forms part of transition which will be considered later.

# The DRM core model

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## Target profile

- The target profile could be described as the funding profile adjusted for the entity's risk management strategy and approach regarding core deposits.
- At a minimum, portfolios should comprise of liabilities of the same currency and core deposits are separated from other liabilities.
- Qualifying criteria:
  - Financial Liabilities (FL) are measured at amortised cost
  - Financial Transactions (FT) are highly probable and result in FL measured at amortised cost
  - FL and FT are managed on a portfolio basis for interest rate risk; and
  - FL and FT are not designated in a hedge accounting relationship for interest rate risk.

*The DRM model allows the target profile to be flexible to reflect the risk management strategy of the entity*

# The IASB model

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## Core Demand Deposits

- Stabilising the Net Interest Income (NII) when the asset profile is entirely funded by core demand deposits raises complications as core demand deposits represent perpetual funding

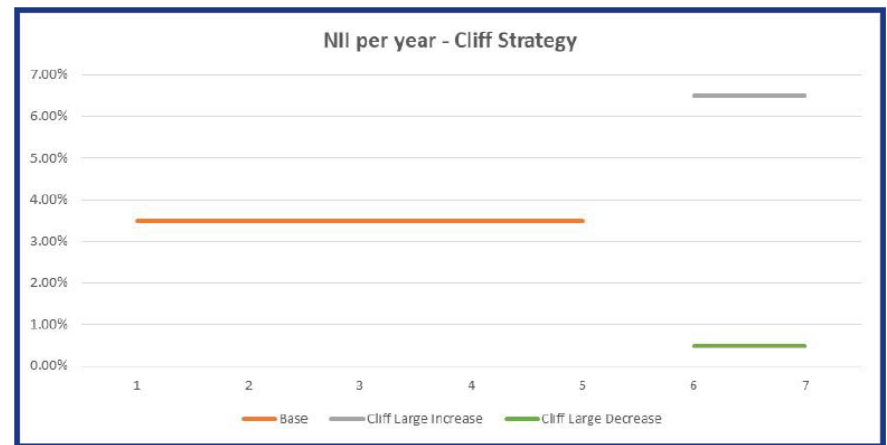
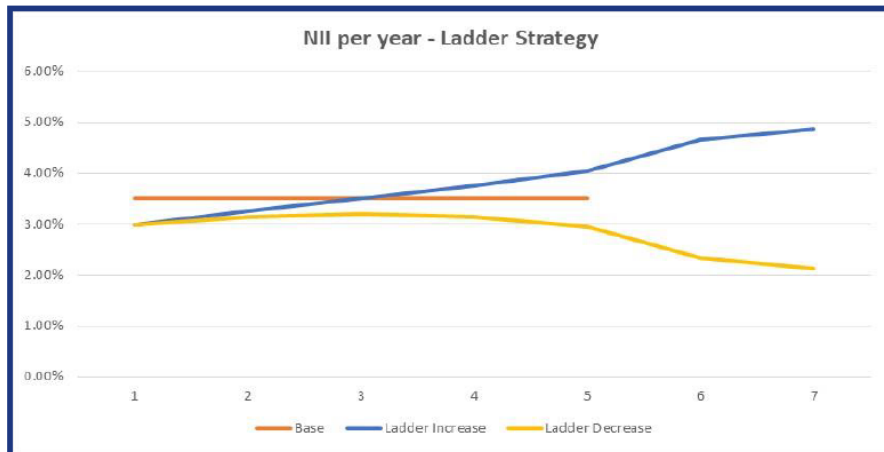
### Key features of core demand deposits

- *Demand feature*
- *The notional of demand deposits treated as core and the associated tenor must be based on reasonable and supportable information*
- *The interest rate paid can only change at the discretion of the deposit issuer. The entity cannot be contractually obligated to change the interest rate paid when market interest rates change*

# The IASB model

## Core Demand Deposits continued

Transformation of the asset profile can have a material impact on the speed at which changes in interest rates can impact NII as demonstrated in the charts below that illustrate NII changes over time with a 'cliff' and a laddering strategy.



Laddering is an approach to mitigate a cliff impact of changes in interest rates as a form of diversification. A bond ladder is an investment strategy whereby an investor staggers the maturity of the bonds in their portfolio so that the bond proceeds mature and can be reinvested at regular intervals. For example, a 5-year ladder means that 20% would re-price each year. More specifically, a 5-year ladder would have 20% re-price in 1-years time, another 20% re-price in 2-years time, 20% re-price in 3-years time, and so on.

*Source: IASB*

# The DRM core model

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## Benchmark vs. Designated derivatives

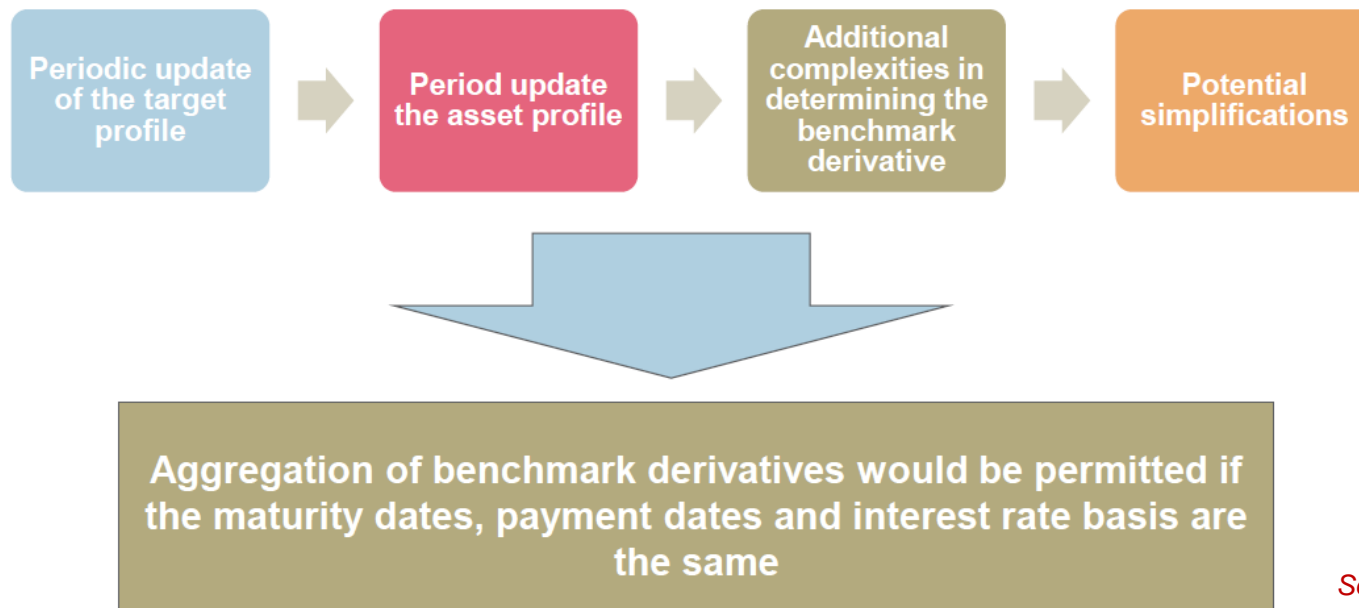
- **Benchmark derivative** is the theoretical derivative that would perfectly transform the asset profile into the target profile
- **Designated derivatives** within the DRM model are expected to be successful in meeting the same alignment target
- Qualifying criteria:
  - There is an **economic relationship** between the target profile, the asset profile and the derivatives designated within the DRM model
  - Any designation **does not reflect an imbalance** that would create misalignment that could result in an accounting outcome inconsistent with the purpose of the DRM accounting model.

# The DRM core model

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## Benchmark vs. Designated derivatives

- As the DRM model allows for designation of open portfolios, the portfolio of derivatives required for alignment will also change.
- The benchmark derivative will become a portfolio of derivatives over time due to the dynamic nature of open portfolios.



Source: IASB

# The DRM core model

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## Performance reporting

- The aim of the DRM model is to faithfully represent the impact of a financial institution's risk management activities
- An entity perfectly achieves its risk management strategy. The model should reflect its risk, in the statement of profit or loss

### Perfect Alignment

- *Achieved when the asset profile, in conjunction with the designated derivatives, equal the target profile*
- *These derivatives are called the benchmark derivative in the model*

### Imperfect Alignment

- *Achieved when the designated derivatives are different from the benchmark derivative*
- *The effects of imperfect alignment on the entity's current and future economic resources*

# The DRM core model

## Performance reporting: perfect alignment example

An entity has CU 1,000 3-year floating rate FA yielding LIBOR + 1.00% and CU 1,000 of 3-year fixed rate FL bearing 3.00% interest. The entity's risk management strategy is to stabilise NII over a 3-year period.

The table below shows the calculation of the period cash flows assuming the float rate is as stated for the periods in question.

Benchmark & Designated	Notional	Fixed Rate	Float Rate	Net %	CU
20X1	1,000	4.00%	(3.50)%	0.50%	5
20X2	1,000	4.00%	(3.00)%	1.00%	10
20X3	1,000	4.00%	(2.50)%	1.50%	15
<b>Total</b>					<b>30</b>

Source: IASB



# The DRM core model

## Performance reporting: perfect alignment example continued

The designated derivative is a CU 1,000 3-year receive fix 4.00%, pay float IRS. This would be the benchmark derivative as it will remove any variability attributable to changes to the floating rate and also fixes interest income for a 3-year period. Given that the target profile is to create a 3-year fixed rate financial asset, perfect alignment has been achieved, and therefore the derivative is the benchmark derivative.

Designated derivative = Benchmark Derivative			
Year	Change in fair value	Period Cash Flows	Change in fair value excluding accrual (clean fair value)
20X1	31.3	5	26.3
20X2	0	10	(10)
20X3	(1.3)	15	(16.3)
Accumulated changes	30	30	0

The proposed mechanics—the pull to par effect on the derivative combined with the reclassification of interest accruals to the statement of profit or loss—would ensure that no balance was deferred beyond the contractual maturity of the derivative.

Year	Libor	Financial assets (LIBOR+ 1.00%)	Reclassification	Combined	Financial liabilities (3.00%)	Net of interest income and expense
20X1	3.50%	45	5	50	(30)	20
20X2	3.00%	40	10	50	(30)	20
20X3	2.50%	35	15	50	(30)	20

The accruals from the designated derivative are reclassified each period from OCI such that the statement of profit or loss reflects the TP.

# The DRM core model

## Performance reporting: imperfect alignment example – over-hedging

In the case of over-hedging, consider the same fact pattern as in slides 45 and 46. We assume the entity designates a derivative whose contractual terms are identical to the benchmark derivative, except for notional amount which is CU 1,500 rather than CU 1,000.

Year	Difference in period cash flows	Difference in clean fair value change	Imperfect Alignment
20X1	2.5	13.2	15.7
20X2	5.0	(5.0)	0.0
20X3	7.5	(8.2)	(0.7)
Total	15	0	15

The entity presents the difference between the change in clean fair value of the benchmark and designated derivatives in the statement of profit or loss as imperfect alignment, which is consistent with existing IFRS Standards. Changes in fair value of the cash flows arising from the excess CU 500 derivative would be treated as any other derivative held for trading purposes.

Year	Libor	Financial assets (LIBOR+ 1.00%)	Reclassification	Combined	Financial liabilities (3.00%)	Misalignment	Total reported results	Target profile implied	Difference
20X1	3.50%	45	5	65.7	(30)	15.7	35.7	20	15.7
20X2	3.00%	40	10	50	(30)	0.0	20	20	0
20X3	2.50%	35	15	49.3	(30)	(0.7)	19.3	20	(0.7)

## The DRM core model

### Performance reporting: imperfect alignment example – over-hedging

The table below shows the calculation of the period cash flows assuming the float rate is as stated for the periods in question.

Designated	Notional	Fixed Rate	Float Rate	Net %	CU
20X1	1,500	4.00%	(3.50)%	0.50%	7.5
20X2	1,500	4.00%	(3.00)%	1.00%	15
20X3	1,500	4.00%	(2.50)%	1.50%	22.5
<b>Total</b>					<b>45</b>

CU Designated	CU Benchmark	$\Delta$
7.5	5.0	2.5
15	10.0	5.0
22.5	15.0	7.5

Source: IASB

# The DRM core model

## Performance reporting: imperfect alignment example – under-hedging

To illustrate, consider the same fact pattern as in slides 23 and 24. The entity designates a derivative whose contractual terms are identical to the benchmark derivative, except for notional amount which is CU 750 rather than CU 1,000.

Year	Difference in period cash flows	Difference in clean fair value change	Imperfect Alignment
20X1	(1.2)	(6.5)	<del>(7.7)</del> 0
20X2	(2.5)	2.5	0
20X3	(3.7)	4	<del>(0.3)</del> 0
Total	(7.4)	0	<del>(7.4)</del> 0

- The missing cash flows cannot be reclassified to the statement of profit or loss as they do not exist nor did they occur.
- The 'lower of' test is retained as it maintains consistency with IFRS 9 and equally important, because recognising gains or losses in the statement of profit or loss related to an asset or liability that does not exist (ie the benchmark derivative) is inconsistent with the Conceptual Framework.

Measuring the change in fair value of these cash flows communicates the impact on the entity's future economic resources as if the CU 250 benchmark derivative had been executed. This quantifies the **opportunity cost** for an action not taken.

Year	Financial assets (LIBOR+ 1.00%)	Reclassification	Combined	Financial liabilities (3.00%)	Misalignment	Total reported results	Target Profile Implied
20X1	45	3.8	48.8	(30)	0	18.8	20
20X2	40	7.5	47.5	(30)	0	17.5	20
20X3	35	11.3	46.3	(30)	0	16.3	20

## The DRM core model

### Performance reporting: imperfect alignment example – under-hedging

The table below shows the calculation of the period cash flows assuming the float rate is as stated for the periods in question.

Designated	Notional	Fixed Rate	Float Rate	Net %	CU
20X1	750	4.00%	(3.50)%	0.50%	3.75
20X2	750	4.00%	(3.00)%	1.00%	7.5
20X3	750	4.00%	(2.50)%	1.50%	11.25
<b>Total</b>					<b>22.5</b>

CU Designated	CU Benchmark	$\Delta$
3.75	5.0	(2.5)
7.5	10.0	(5.0)
11.25	15.0	(7.5)

# The DRM core model

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## Performance reporting: other scenarios

- The IASB's scenario pack (paper 06-04A) is included for further information. The application of the DRM model is illustrated for the following scenarios:
  - **Scenario 1:** Initiation of the model with core demand deposits
  - **Scenario 2:** Unplanned additions to the model
  - **Scenario 3:** Maturities occurring as expected and rolling the risk management strategy
  - **Scenario 4:** Growth
  - **Scenario 5:** Prepayments
  - **Scenario 6:** Change in risk management strategy



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