Dynamic Risk Management

Outreach
Model Demonstration – Scenario Pack

Scenario illustration

This section illustrates the model through a series of scenarios, each scenario adds a level of complexity to the previous one. This illustrates the challenges arising from the dynamic nature of the portfolios and how the model address such challenges. Changes to the model arising from the dynamic nature can be split in two types:

- a change in "inputs": The "recognition" or "derecognition" of items that are in scope of the DRM accounting model (these events could either be expected or unexpected events); or

- a change in "strategy": Where the objective of transformation changes even though there has been no change in inputs.

The application of the DRM accounting model is illustrated using the following scenarios:

- Scenario 1: Initiation of the model with core demand deposits (page 59);
- Scenario 2: Unplanned additions to the model (page 69);
- Scenario 3: Maturities occurring as expected and roll of the risk management strategy (page 77);
- Scenario 4: Growth (page 88);
- Scenario 5: Prepayments (page 97); and
- Scenario 6: Change in risk management strategy (page 105)

Scenario illustration

The objective of this section is partly to **illustrate** the mechanics of the model, but **more importantly:**

- to demonstrate what information the model provides in the statement of profit or loss and on the statement of financial position;

- to illustrate how the various events impact the construction of the benchmark derivative and impact the measurement of alignment; and

- to illustrate how transformation is achieved and how the model provides a faithful representation of the risk management strategy, if that strategy is achieved.

IFRS

Scenario #1

An entity has CU 1,000 5-year fixed rate financial asset yielding 3.50% and CU 1,000 of deposit funding and those deposits do not pay interest. The entity's risk management strategy is to stabilise net interest income over time from changes in market interest rates.

More specifically, the entity has evaluated their deposits and determined that the tenor of the core demand deposits based is at least 5 years based on reasonable and supportable information. In addition, as the entity is a going concern, it has decided the best risk management strategy is to establish a 5-year **rolling** ladder for net interest income and the target profile is defined as such.

Graphically, the entity's risk reports would appear as follows (or something similar):

Item	Float	20X1	20X2	20X3	20X4	20X5	Total
Re – Pricing Bucket							
Loans Ⓐ						1,000	1,000
Liabilities Ⓑ		(200)	(200)	(200)	(200)	(200)	(1,000)
Difference	**(1,000)**	**200**	**200**	**200**	**200**	**200**	**0**

A – Because the loans are 5-year fixed rate, they are allocated to the 20X5 bucket based on their contractual terms;

B – The liabilities are evenly distributed over time reflecting the entity's approach to core deposits and their risk management strategy.

Scenario #1

Using the principles of the DRM accounting model the asset and target profiles are as follows:

Item	Float	Re – Pricing Bucket					Total
		20X1	20X2	20X3	20X4	20X5	
Asset Profile (A)						1,000	1,000
Target Profile (B)		200	200	200	200	200	1,000
Difference		(200)	(200)	(200)	(200)	800	0

A – The asset profile is entirely allocated to the 20X5 bucket based on the contractual terms of the designated financial assets;

B – The target profile is evenly distributed until 20X5 because of the laddering strategy

IFRS

Scenario #1

With the asset and target profiles now defined, the benchmark derivative can be defined. However, given the entity is transforming a single maturity asset profile to a laddered target profile, there are a number of derivatives required. The scenario will construct the benchmark derivative in steps.

To begin, as demonstrated in the table below, the asset profile has CU 1,000 in the 20X5 bucket compared with the target profile that has CU 200. To address this, the entity needs a CU 800 pay fix, receive float interest rate swap to eliminate the 20X5 bucket difference.

Item	Re – Pricing Bucket						
	Float	20X1	20X2	20X3	20X4	20X5	Total
Asset Profile						1,000	1,000
Target Profile		200	200	200	200	200	1,000
Difference		(200)	(200)	(200)	(200)	800	0
X5 Pay Leg	800					(800)	
Net Difference	800	(200)	(200)	(200)	(200)		0

IFRS

Scenario #1

However, a net difference remains and therefore additional derivatives are required in the definition of the benchmark derivative. Examining the net difference, there are CU 200 insufficient assets re-pricing in 20X1 and therefore, the benchmark derivative needs an additional CU 200, Receive Fix, Pay float interest rate swap maturity at the end of 20X1.

Item	Float	Re – Pricing Bucket					Total
		20X1	20X2	20X3	20X4	20X5	
Asset Profile						1,000	1,000
Target Profile		200	200	200	200	200	1,000
Difference		(200)	(200)	(200)	(200)	800	0
X5 Pay Leg	800					(800)	
Net Difference	800	(200)	(200)	(200)	(200)		0
X1 Rec Leg	(200)	200					
Net Difference	600	0	(200)	(200)	(200)		0

Scenario #1

This exercise can be repeated until the entire difference is eliminated and the benchmark derivative is fully defined. See the table below for the details of the benchmark derivative.

Benchmark Derivative	Re – Pricing Bucket						Fixed Rate	Float Rate
	Float	20X1	20X2	20X3	20X4	20X5		
20X1 Rec Leg	(200)	200					1.10%	(Float)
20X2 Rec Leg	(200)		200				1.25%	(Float)
20X3 Rec Leg	(200)			200			1.50%	(Float)
20X4 Rec Leg	(200)				200		1.75%	(Float)
20X5 Pay Leg	800					(800)	(2.00)%	Float
Total		**200**	**200**	**200**	**200**	**(800)**		
AP & TP Δ		**(200)**	**(200)**	**(200)**	**(200)**	**800**		
Net Δ	-	-	-	-	-	-		

A process is required for the entity to capture the necessary data to define the benchmark derivative based on the difference between the asset and target profile in addition to the market rates of interest on the date in question. **Since this data is required to manage risk in the first place, the staff do not think this is a significant addition from an operational perspective.**

IFRS

Scenario #1

With the target profile defined the entity could then estimate what P&L is implied in each period. For the sake of simplicity, this demonstration will focus on 20X1. The other periods would be calculated in a similar manner.

As the target profile is 5-year evenly distributed ladder, the P&L implied should reflect that laddered profile.

Item	Notional	Yield	CU Amounts	Six Month CU
20X1 Leg	200	2.60%	5.2	2.6
20X2 Leg	200	2.75%	5.5	2.8
20X3 Leg	200	3.00%	6.0	3.0
20X4 Leg	200	3.25%	6.5	3.2
20X5 Leg	200	3.50%	7.0	3.5
		Total	30.2	15.1
		Int Expense	0.0	0.0

The yield is calculated based on the yield curve in existence at the date the target profile is established.

IFRS

Scenario #1

At the inception of the model, the entity would have to demonstrate the existence of an economic relationship that the combination of the asset profile and designated derivatives would substantially achieve the target profile.

The entity would qualify if, at T^0, they have executed and designated derivatives that substantially achieved the risk management objective.

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After **six months** have passed, the entity has not originated any new financial assets or liabilities but is required to report financial results and therefore, completes the following comparison to prepare the necessary financial reports:

	Δ Clean FV	Period CFs*	Total ΔFV
Benchmark	(10.0)	(2.4)	(12.4)
Designated	(10.0)	(2.4)	(12.4)
Difference	0 (A)	0 (B)	0

A – The entity would compare the change in fair value to determine the amounts (if any) that need to be presented as the misaligned portion; and

B – The entity would compare the period cash flows (ie, the accruals) to determined what amount (if any) that need to be presented as the misaligned portion.

* See next slide for calculation of Period CFs

Scenario #1

The table below shows the calculation of the period CFs assuming the float rate is 1.00% for the six month period in question.

Benchmark & Designated	Notional	Fixed Rate	Float Rate	Net %	CU	Six Month CU
20X1 Rec Leg	200	1.10%	(1.00)%	0.10%	0.2	0.10
20X2 Rec Leg	200	1.25%	(1.00)%	0.25%	0.5	0.25
20X3 Rec Leg	200	1.50%	(1.00)%	0.50%	1.0	0.50
20X4 Rec Leg	200	1.75%	(1.00)%	0.75%	1.5	0.75
20X5 Pay Leg	800	(2.00)%	1.00%	(1.00)%	(8.0)	(4.0)
Total					(4.8)	(2.4)

IFRS

After the comparisons, the entity has the necessary data to complete the required journal entries as follows:

1. Record the change in fair value of the designated derivatives in Other Comprehensive Income:

Dr	Other Comprehensive Income	12.4	
	Cr Derivative Fair Value		12.4

2. Reclassify a portion from Other Comprehensive Income to the Statement of Profit or Loss such that it reflects the target profile:

Dr	DRM Derivative Contribution	2.4	
	Cr Other Comprehensive Income		2.4

The income statement for the period is as follows:

Period end	Financial assets (3.50%)	DRM Derivative Contribution	Financial liabilities (0.00%)	Imperfect Alignment	Total reported results	Target Profile Implied
6/30/X1	17.5	(2.4)	(0)	0.0	15.1	15.1

A process is required for the entity to capture the necessary data to determine the amounts that would be implied by the target profile.

IFRS

Scenario #1: How are the challenges addressed?

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.	This basic form of transformation address the designation challenges of IAS 39 and IFRS 9 as the core demand deposits are not eligible hedged items.	Not demonstrated	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 or NII.

IFRS

Scenario # 2 – Input Change: Designation of new items that were not a future transaction

IFRS

Scenario #2

Moving forward one period in time, the entity issues a CU 300 3-year fixed rate financial liability bearing 2.00% interest and uses those funds to purchase a 3-year floating rate financial asset yield LIBOR + 0.40%. The financial asset is measured at amortised cost and is therefore eligible for designation within the DRM accounting model.

As the newly issued financial liability and purchased financial asset are not part of an already defined and designated portfolio in the DRM accounting model, the entity must specifically designate these items in the model (ie they were not designated as a highly probable forecast transaction).

Once designated, the updated asset and target profiles are as follows:

Item	Re – Pricing Bucket							Total
	Float	12/31/X1	12/31/X2	12/31/X3	6/30/X4	12/31/X4	12/31/X5	
Asset Profile	300 A						1,000	1,300
Target Profile		200	200	200	300 B	200	200	1,300
Difference	(300)	200	200	200	300	200	(800)	0

A – The new financial asset is allocated to the float bucket based on its contractual terms;

B – The target profile adds CU 300 to the 6/30/20X4 bucket based on the contractual terms of the designated financial liability and the strategy to match assets and liabilities.

IFRS

Scenario #2

Prior to updating items designated in the DRM model the entity should measure alignment; however, given the entity was perfectly aligned one day prior and it measured alignment at that time, this demonstration will not repeat that aspect of the model.

Once the new items are designated, the entity must update the benchmark derivatives accordingly;

	Re – Pricing Bucket							Fixed Rate	Float Rate
	Float	12/31/X1	12/31/X2	12/31/X3	6/30/X4	12/31/X4	12/31/X5		
T^0 Benchmark		200	200	200		200	(800)		
+$T^{0.5}$ Input Changes (A)	(300)				300			1.65%	(Float)
$T^{0.5}$ Benchmark	(300)	200	200	200	300	200	(800)		

A – A 3-year receive fix, pay float IRS is added to the definition of the benchmark derivative as that is the derivative required to maintain perfect alignment given the new designations in the model.

Said differently, because the AP added CU 300 to the float bucket and the TP added CU 300 to 6/30/X4 bucket, the benchmark derivative recognises the need for transformation of CU 300 of float to CU 300 of fixed ending on 6/30/X4.

Scenario #2

With the target profile defined the entity could then estimate what P&L is implied in each period. For the sake of simplicity, this demonstration will focus on 20X1. The other periods would be calculated in a similar manner.

The previous P&L implication is updated to reflect the additions to the model

Item	Notional	Yield	CU Amounts	Six Month CU
20X1 Leg	200	2.60%	5.2	2.6
20X2 Leg	200	2.75%	5.5	2.8
20X3 Leg	200	3.00%	6.0	3.0
20X4 Leg	200	3.25%	6.5	3.2
20X5 Leg	200	3.50%	7.0	3.5
June 30, X4 Leg	300	2.05%	6.15	3.1
Total			36.4	18.2
Int Expense			(6.0)	(3.0)

Assuming the entity designated the derivative required to maintain perfect alignment, the entity would have to demonstrate the continued existence of an economic relationship after designating the new items, including any new derivatives.

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After six months have passed, the entity has not originated any new financial assets or liabilities but is required to report financial results and therefore, completes the following comparison to prepare the necessary financial reports:

	Δ Clean FV	Period CFs*	Total ΔFV
Benchmark	(2.6)	(1.4)	(4.0)
Designated	(2.6)	(1.4)	(4.0)
Difference	0 Ⓐ	0 Ⓑ	0

A – The entity would compare the change in fair value to determine the amounts (if any) that need to be presented as the misaligned portion; and

B – The entity would compare the period cash flows (ie, the accruals) to determined what amount (if any) that need to be presented as the misaligned portion.

* See next slide for calculation of Period CFs

IFRS

Scenario #2

The table below shows the calculation of the period CFs assuming the float rate is 1.00% for the six month period in question.

Benchmark & Designated	Notional	Fixed Rate	Float Rate	Net %	CU	Six Month CU
20X1 Rec Leg	200	1.10%	(1.00)%	0.10%	0.2	0.10
20X2 Rec Leg	200	1.25%	(1.00)%	0.25%	0.5	0.25
20X3 Rec Leg	200	1.50%	(1.00)%	0.50%	1.0	0.50
20X4 Rec Leg	200	1.75%	(1.00)%	0.75%	1.5	0.75
20X5 Pay Leg	800	(2.00)%	1.00%	(1.00)%	(8.0)	(4.0)
June 30 20X4 Rec Leg	**300**	**1.65%**	**(1.00)%**	**0.65%**	**1.95**	**0.98**
Total					(2.85)	(1.42)

After the comparisons, the entity has the necessary data to complete the required journal entries as follows:

1. Record the change in fair value of the designated derivatives in Other Comprehensive Income:

Dr	Other Comprehensive Income	4.00	
	Cr Derivative Fair Value		4.00

2. Reclassify a portion from Other Comprehensive Income to the Statement of Profit or Loss such that it reflects the target profile:

Dr	DRM Derivative Contribution	1.43	
	Cr Other Comprehensive Income		1.43

The income statement for the period is as follows:

Period End	Financial assets	DRM Derivative Contribution	Financial liabilities	Misalignment	Total reported results	Target Profile Implied
12/31/X1	19.6	(1.4)	(3.0)	0.0	15.2	15.2

▓ IFRS

Scenario #2: How are the challenges addressed?

Transparency	Eligible Items	Dynamic Nature	Performance measurement
Presenting the DRM derivative contribution on a separate line item on the face of the statement of profit or loss will add transparency to the impact risk management actions have on the entities economic resources and allow users to evaluate the strategy.	The example illustrates that not only core demand deposits are eligible for designation within the target profile.	The addition of new inputs to the model does require designation given they are different portfolios and the benchmark derivative must be updated accordingly (ie a layer must be added and also tracked).	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 or NII.

IFRS

Scenario # 3 – Input Change: Roll of the Risk Management Strategy

IFRS

Moving forward to the beginning of 20X2, there are two events that occur due to the passage of time. More specifically:

- The CU 200 20X1 receive fix, pay float interest rate swap will mature; and

- The 20X1 time bucket within the target profile will mature.

The updated asset and target profiles are as follows after the maturity of the 12/31/X1 time bucket:

Item	Float	Re – Pricing Bucket						Total
		12/31/X1	12/31/X2	12/31/X3	6/30/X4	12/31/X4	12/31/X5	
Asset Profile	300						1,000	1,300
Target Profile			200	200	300	200	200	1,100
Difference	(300)		200	200	300	200	(800)	200

IFRS

However, the previous table is incomplete because the entity, being a going concern, designated the core demand deposits in a rolling laddering strategy and therefore the CU 200 allocation that matured will be re-allocated to the 12/31/X6 represents the maturity and re-investment of the transformed 12/31/X1 time bucket.

The updated asset and target profiles are as follows incorporating the newly designated items:

Item	Float	12/31/X1	12/31/X2	12/31/X3	6/30/X4	12/31/X4	12/31/X5	12/31/X6	Total
					Re – Pricing Bucket				
Asset Profile	300						1,000		1,300
Target Profile			200	200	300	200	200	200 A	1,300
Difference	(300)		200	200	300	200	(800)	200	0

A – The portion of the target profile that matured in 20X1 is rolled into 20X6 to maintain the evenly distributed five year ladder

Examining the asset and target profiles should highlight that the entity must also designate the re-investment of the CU 1000 financial asset that matures in 20X5 (or at least a CU 200 portion) because the target profile stipulates re-pricing in 20X6 which is after the contractual maturity of any financial asset currently designated in the DRM accounting model.

Item	Float	12/31/X1	12/31/X2	12/31/X3	6/30/X4	12/31/X4	12/31/X5	12/31/X6	Total
					Re – Pricing Bucket				
Asset Profile	300						1,000		1,300
Target Profile			200	200	300	200	200	200	1,300
Difference	**(300)**		**200**	**200**	**300**	**200**	**(800)**	**200**	**0**

The entity would designate the expected re-investment as a forecast transaction and would need to demonstrate that such an issuance is highly probable. It would not be necessary for the entity to know the exact contractual terms (most importantly whether it would be fixed or floating in nature), simply that the re-investment will occur.

IFRS

Scenario #3

The asset profile and target profiles would appear as follows after the designation of the future re-investment:

Item	Float	Re – Pricing Bucket						Total
		12/31/X2	12/31/X3	6/30/X4	12/31/X4	12/31/X5	12/31/X6	
Asset Profile	300					**1,000**		1,300
Asset Profile – FT	*200							
Target Profile		200	200	300	200	200	**200**	1,300
Difference	**(300)**	**200**	**200**	**300**	**200**	**(800)**	**200**	**0**

Because it is known that the reinvestment will reflect market rates at 12/31/X5 because the future financial assets have not yet been priced, the reinvestment is allocated to the float bucket. Furthermore, because the future financial assets is a re-investment of an existing financial asset, the designation would not increase the notional of the asset profile beyond 1,300. The designation means that the entity has, as at 1/1/20X2, a CU 200 five-year financial asset that is fixed until 12/31/X5 and then floating rate from 1/1/20X6 until 12/31/X6.

IFRS

Scenario #3

Prior to updating items designated in the DRM model the entity should measure alignment; however, given the entity was perfectly aligned one day prior and it measured alignment at that time, this demonstration will not repeat that aspect of the model.

	Re – Pricing Bucket									
	Float	X1	X2	X3	6/30/ X4	12/31 /X4	20X5	20X6	Fixed Rate	Float Rate
$T^{0.5}$ Benchmark	(300)	200	200	200	300	200	(800)			
-T^1 Maturities	200	(200)							1.10%	(Float)
+T^1 Roll Ⓐ	(200)							200	2.15%	(Float)
T^1 Benchmark	(300)		200	200	300	200	(800)	200		

A – A 5-year receive fix, pay float IRS is added to the definition of the benchmark derivative as that is the derivative required to maintain perfect alignment given the roll of the risk management strategy. 2.15% is the 5-year fixed rate at that time (ie, T=1)

Said differently, because the TP added CU 200 to the 20X6 bucket, the benchmark derivative also reflects those input changes.

❀ IFRS

Scenario #3

With the target profile defined the entity could then estimate what P&L is implied in each period. For the sake of simplicity, this demonstration will focus on 20X2. The other periods would be calculated in a similar manner.

The previous P&L implication is updated to reflect the additions to the model

Item	Notional	Yield	CU Amounts	Six Month CU
20X2 Leg	200	2.75%	5.5	2.8
20X3 Leg	200	3.00%	6.0	3.0
20X4 Leg	200	3.25%	6.5	3.2
20X5 Leg	200	3.50%	7.0	3.5
June 30, X4 Leg	300	2.05%	6.15	3.1
20X6 Leg	200	3.65%	7.3	3.7
Total			38.5	19.23
Int Expense			(6.0)	(3.0)

The entity would have to demonstrate the continued existence of an economic relationship after designating the new items, including any new derivatives.

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After six months have passed, the entity has not originated any new financial assets or liabilities but is required to report financial results and therefore, completes the following comparison to prepare the necessary financial reports:

	Δ Clean FV	Period CFs*	Total ΔFV
Benchmark	(2.63)	(0.38)	(3.00)
Designated	(2.63)	(0.38)	(3.00)
Difference	0 Ⓐ	0 Ⓑ	0

A – The entity would compare the change in fair value to determine the amounts (if any) that need to be presented as the misaligned portion; and

B – The entity would compare the period cash flows (ie, the accruals) to determined what amount (if any) that need to be presented as the misaligned portion.

* See next slide for calculation of Period CFs

IFRS

Scenario #3

The table below shows the calculation of the period CFs assuming the float rate is 1.00% for the six month period in question.

Benchmark & Designated	Notional	Fixed Rate	Float Rate	Net %	CU	Six Month CU
20X2 Rec Leg	200	1.25%	(1.00)%	0.25%	0.5	0.25
20X3 Rec Leg	200	1.50%	(1.00)%	0.50%	1.0	0.50
20X4 Rec Leg	200	1.75%	(1.00)%	0.75%	1.5	0.75
20X5 Pay Leg	800	(2.00)%	1.00%	(1.00)%	(8.0)	(4.0)
June 30 20X4 Rec Leg	300	1.65%	(1.00)%	0.65%	1.95	0.98
20X6 Rec Leg	200	2.15%	(1.00)%	1.15%	2.30	1.15
Total					(0.75)	(0.37)

IFRS

After the comparisons, the entity has the necessary data to complete the required journal entries as follows:

1. Record the change in fair value of the designated derivatives in Other Comprehensive Income:

Dr	Other Comprehensive Income	3.00
Cr	Derivative Fair Value	3.00

2. Reclassify a portion from Other Comprehensive Income to the Statement of Profit or Loss such that it reflects the target profile:

Dr	DRM Derivative Contribution	0.38
Cr	Other Comprehensive Income	0.38

The income statement for the period is as follows:

Period Ending	Financial assets	DRM Derivative Contribution	Financial liabilities	Misalignment	Total reported results	Target Profile Implied
6/30/X2	19.6	(0.4)	(3.0)	0.0	16.2	16.2

IFRS

Scenario #3: How are the challenges addressed?

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.

⊛ IFRS

Scenario # 4 – Input Change: Designation of growth as a future transaction

IFRS

Scenario #4

Moving forward a day, the entity commits to issue a new CU 500 5.00% 4-year fixed rate loan in six months time. As this transaction is not an existing financial asset nor has it been previously designated in the model, the entity designates the growth as a forecast transaction. Given the existence of the contractual agreement, the entity would be able to demonstrate the forecast transaction is highly probable.

However, the entity does not have the necessary funding and therefore, it must be highly probable that the entity will issue new financial liabilities in six months time to fund the loan. Similarly, the entity would designate the expected issuance as a forecast transaction and would need to demonstrate that such an issuance is highly probable. This would satisfy the requirement that the notional of the asset and target profile always be equal.

It would not be necessary for the entity to know the exact contractual terms of the issuance (most importantly whether it would be fixed or floating in nature) because the issuance will be exposed to interest rate risk regardless.

Unless the exact terms of the new financial liabilities are known, it will be allocated to the float bucket.

IFRS

Scenario #4

Graphically, the asset and target profile would appear as follows :

Item		Re – Pricing Bucket						
		Float	12/31/20X2	12/31/20X3	12/31/20X4	12/31/20X5	6/30/20X6	Total
A	Asset Profile						500	500
B	Target Profile	500						500
	Difference	**500**					**(500)**	**0**

A – The loans are allocated to June 30th, 20X6 bucket based on the contractual terms;

B – Because the liabilities have not yet been priced, they are allocated to the float bucket.

Note: The staff have not carried forward the others part of the asset and target profile for sake of simplicity of demonstration even though the scenario is a continuation of the previous fact pattern.

IFRS

Prior to updating items designated in the DRM model the entity should measure alignment; however, given the entity was perfectly aligned one day prior and it measured alignment at that time, this demonstration will not repeat that aspect of the model.

	Re – Pricing Bucket									
	Float	X2	X3	06/30/X4	12/31/X4	12/31/X5	6/30/X6	12/31/X6	Fixed Leg	Float Leg
$T^{1.5}$ Benchmark	(300)	200	200	300	200	(800)		200		
+ $T^{1.5}$ Growth	500*						(500)*		(2.50%)	Float
$T^{1.5*}$ Benchmark	200	200	200	300	200	(800)	(500)	200		

A – The benchmark derivative related to the growth is a 6 month forward starting CU 500 Pay Fix, receive float interest rate swap. This is the case because:

- The strategy remains to stabilise NII by matching assets and liabilities; and
- Since both the funding and the loan will not exist until 6 months have passed, the swap must be forward starting.

All scenarios to date have assumed perfect alignment, however, this example will assume the entity only executes a CU 450 Pay Fix Interest Rate Swap rather than the benchmark CU 500.

In this example, even though the entity is not perfectly aligned, it is able to demonstrate the existence of an economic relationship and continues to apply the DRM accounting model.

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After six months have passed, the entity has not originated any new financial assets or liabilities but is required to report financial results and therefore, completes the following comparison to prepare the necessary financial reports:

	Δ Clean FV	Period CFs*	Total ΔFV
Benchmark	(2.62)	(0.38)	(3.00)
Designated	(2.42)	(0.38)	(2.80)
Difference	**0.20** Ⓐ	**0.00** Ⓑ	**0.20**

A – The entity would compare the change in fair value and observe the designated is less than the benchmark due to under hedging.

B – The entity would also compare the period cash flows (ie, the accruals). Given there has been no change in the floating rates during the six month period and the forward start does not have period cash flows, the figures remain identical.

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Scenario #4

The table below shows the calculation of the period CFs assuming the float rate is 1.00% for the six month period in question.

Designated	Notional	Fixed Rate	Float Rate	Net %	CU	Six Month CU
20X2 Rec Leg	200	1.25%	(1.00)%	0.25%	0.5	0.25
20X3 Rec Leg	200	1.50%	(1.00)%	0.50%	1.0	0.50
20X4 Rec Leg	200	1.75%	(1.00)%	0.75%	1.5	0.75
20X5 Pay Leg	800	(2.00)%	1.00%	(1.00)%	(8.0)	(4.0)
June 30 20X4 Rec Leg	300	1.65%	(1.00)%	0.65%	1.95	0.98
20X6 Rec Leg	200	2.15%	(1.00)%	1.15%	2.30	1.15
June 30 20X6 Fwd Rec Leg	450	(2.50)%	1.00%	1.50%	--	--
Total					(0.75)	(0.37)

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Scenario #4: Journal Entries

After the comparisons, the entity has the necessary data to complete the required journal entries as follows:

1. Record the change in fair value of the designated derivatives in Other Comprehensive Income:

    Dr   Other Comprehensive Income   2.80

    Cr Derivative Fair Value   2.80

2. Reclassify a portion from Other Comprehensive Income to the Statement of Profit or Loss such that it reflects the target profile:

    Dr   DRM Derivative Contribution   0.38

    Cr Other Comprehensive Income   0.38

The income statement for the period is as follows:

Year	Financial assets	DRM Derivative Contribution	Financial liabilities	Misalignment	Total reported results	Target Profile Implied
12/31/X2	19.6	(0.4)	(3.0)	0.0	16.2	16.2

Important to note that even though the entity is under hedged, there are no figures report as misalignment due to the lower of test. This highlights the importance of disclosure to fully communicate the performance of the risk management function because, in this example, the entity is under hedged and has not achieved their risk management strategy.

Scenario #4: How are the challenges addressed?

Transparency	Eligible Items	Dynamic Nature	Performance measurement
Disclosures will communicate that the entity is under hedged. Currently, this fact would not be communicated in the financial statements.	This example highlights how forecast transactions are eligible within the DRM accounting model.	This scenario again demonstrates how the model would recognise a future transaction and incorporate that information into the definition of the benchmark derivative.	While the entity has not achieved perfect alignment, since there is no impact on the current period, the entity's is able to show that they achieved the strategy in NII. There is no impact on current period NII because the misalignment is entirely attributable to forecast transactions not yet recognised on the balance sheet.

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Scenario #4

Moving forward another day, the entity both issues the 4-year floating rate liability and also originates the 4-year fixed rate loan as planned. Therefore, both transactions are no longer forecast in nature but are existing. However, there is no need to re-designate the transaction or designate new transactions as they were already designated in the model. The asset and target profiles would be unchanged.

If the entity had issued a fixed rate liability rather than the floating rate liability, the forecast transaction would be allocated to the appropriate fixed time bucket accordingly. There would be a consequential requirement to alter the benchmark derivative, however, this would not be a de-designation / re-designation event.

Scenario # 5 – Input Change: Prepayments: Unexpected maturity within the designated portfolios

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Scenario #5

Moving forward another day and continuing with the same fact pattern, the loan scheduled to mature on 6/30/X6, prepays in its entirety. Therefore, the borrower returns the CU 500 to the entity and the entity places the funds in deposit with another financial institution (i.e., cash). Graphically, the asset and target profile would appear as follows:

	Item	Float	12/31/X2	12/31/X3	12/31/X4	12/31/X5	6/30/X6	Total
A	AP	500					~~500~~	500
	TP	500						500
B	**Difference**	**0**					**0**	**0**

With header spanning: **Re – Pricing Bucket**

A – The funds on deposit with another institution would be allocated to the float bucket based on contractual terms (likely an overnight rather than a 1-month rate);

B – The TP remains unchanged because the change in the asset profile does not impact the objective the entity's wants to achieve through transformation.

One question that can arise is how can an entity detect a prepayment given the dynamic nature of portfolios. While some tracking will be required, any time there is a maturity in a time bucket sometime in the future, this means there was a prepayment or a change in the prepayment assumptions.

Graphically:

	12/31/X2		
Item	**Float**	**6/30/X6**	**Total**
Asset Profile		500	500
Target Profile	500		500
Difference	**(500)**	**500**	**0**

	1/1/X3		
Item	**Float**	**6/30/X6**	**Total**
Asset Profile	500	0	500
Target Profile	500		500
Difference	**0**	**0**	**0**

Comparing the two time buckets highlights that something matured that was not scheduled which means there has been a prepayment.

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Scenario #5

As discussed during the September 2018 Board meeting, because there has been a prepayment, the entity must measure imperfect alignment after updating the benchmark derivative but prior to updating any of the designated derivatives in order to faithfully reflect the impact the prepayment has had on the entity's economic resources.

Therefore, the benchmark derivative must be updated to remove the June 30th, 20X6 leg.

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Benchmark Derivative	Re – Pricing Bucket								Fixed Rate	Float Rate
	Float	12/31/X2	12/31/X3	6/30/X4	12/31/X4	12/31/X5	6/30/X5	12/31/X6		
20X2 Leg	(200)	200							1.25%	(Float)
20X3 Leg	(200)		200						1.50%	(Float)
20X4 Leg	(200)				200				1.75%	(Float)
20X5 Leg	800					(800)			(2.00)%	(Float)
June 30 20X4 Leg	(300)			300					1.65%	(Float)
20X6 Leg	(200)							200	2.15%	(Float)
~~June 30 20X5 Leg~~	~~500~~						~~(500)~~		~~(2.50)%~~	~~Float~~
Total	(300)	200	200	300	200	(800)		200		

Scenario #5

The entity would then compare the change in fair value of the benchmark with the designated to determine what amounts, if any, should be presented as misalignment.

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	Δ Clean FV	Period CFs*	Total ΔFV
Benchmark	380	0.00	380
Designated	400	0.00	400
Difference	**20** Ⓐ	**0** Ⓑ	**20**

A – After the update, the change in fair value of the benchmark is 380 vs the designated value of 400 and therefore, the entity is over-hedged by a value of 20. This value of 20 represents the change in fair value of the excess derivatives designated in the model that, due to the prepayment, are no longer aligning the asset and target profiles.

B – Given only a day has passed the entity last measured alignment, the period CFs will be immaterial and have been ignored for purposes of simplicity.

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After the comparisons, the entity has the necessary data to complete the required journal entries as follows:

1. Record the change in fair value of the designated derivatives in Other Comprehensive Income:

Cr Other Comprehensive Income		380
Dr Derivative Fair Value	400	
Cr Misalignment P&L		20

The income statement for the period (i.e., day) is as follows:

Year	Financial assets	DRM Derivative Contribution	Financial liabilities	Misalignment	Total reported results	Target Profile Implied
1/1/X3	0.0	0.00	0.0	20.0	20.00	0.00

This CU 20 of misalignment represents the change in economic resources because the entity executed, in retrospect, the wrong derivative. If the entity had accurately predicted the prepayment when the contract was agreed, it would have taken different risk management actions.

In that way, it quantifies the impact on resources from an error in estimation.

Scenario #5: How are the challenges addressed?

Transparency	Eligible Items	Dynamic Nature	Performance measurement
The fact that misalignment is presented in the statement of profit or loss will communicate the fact that the entity did not achieve the strategy in the period to users of financial statements. This should improve the conversation regarding risk management.	Not demonstrated	The example highlights how an unexpected change in inputs would be accommodated in the model.	The effect on economic resources is presented clearly in the statement of profit or loss and labelled as misalignment. Disclosure of the reasons would also allow users to understand the reason what that occurred.

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Scenario Demonstration

Thus far, we have demonstrated how the following events causing an input change are accommodated in the DRM Accounting Model:

- Unplanned additions to the model (Scenario #2);
- Planned additions to the model (designation of future transactions and growth) (Scenario #4);
- Maturities occurring as expected (Scenario #3);
- Maturities occurring unexpectedly (prepayments) (Scenario # 5); and
- A roll of the risk management strategy (Scenario #3).

All other events can be allocated into one of the above except for a change in the risk management strategy itself.

We will demonstrate this scenario in the following slides:

Scenario # 6 – Change in the Risk Management Strategy

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Scenario #6

Continuing with the previous example but moving forward another day and assuming the entity re-establishes perfect alignment, the entity decides that it must change their approach to core demand deposits given the significant decrease in term interest rates. Rather than treating core demand deposits as a 5-year fixed financial liability, the entity decides to treat all core demand deposits as floating rate liabilities.

An entity might choose to change their strategy as described for a number of reasons, including:

- Given the significant decrease in term interest rates, the entity may not want to lock in term interest rates at very low levels. The entity could be of the opinion interest rates will rise again in the near term and therefore, are willing to wait;

- The entity could have decided that a rolling 5-year ladder introduces too much present value risk to NII and therefore changes to a floating rate strategy; or

- The entity's regulator has stipulated that all core demand deposits be treated as floating rate for interest rate risk purposes.

The scenario described may be an exceptional case given the magnitude of the change – however, changes can and will occur though they must be infrequent.

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As this is a decision that results in a change in the target profile with no change in inputs, this is a change in the risk management strategy and therefore, the amounts presented in Other Comprehensive Income should be reclassified such that the results reported reflect the target profile prior to the change in the RM strategy.

The entity will need to know the amounts associated with any time bucket that will be impacted by the change. Therefore, it is important to first understand which time buckets have been impacted, by examining the old and target profiles:

Re – Pricing Bucket								
Item	**Float**	**12/31/X2**	**12/31/X3**	**6/30/X4**	**12/31/X4**	**12/31/X5**	**12/31/X6**	**Total**
Old TP		200	200	300	200	200	200	1,300
New TP	1,000			300				1,300
Difference	**(1,000)**	**200**	**200**	Ⓐ	**200**	**200**	**200**	**0**

A – The June 30, 20X3 bucket is unchanged because that part of the TP is supported by contractual financial liabilities.

Scenario #6

Based on the comparison of the asset and target profiles after the change in the risk management strategy, the following adjustments are required to the benchmark derivative. Prior to updating items designated in the DRM model the entity should measure alignment; however, given the entity was perfectly aligned one day prior and it measured alignment at that time, this demonstration will not repeat that aspect of the model.

Benchmark Derivative	Re – Pricing Bucket							Fixed Rate	Float Rate	FV
	Flt	12/31/ X2	12/31/ X3	6/30/X 4	12/31/ X4	12/31/ X5	12/31/ X6			
20X2 Leg	(200)	200						1.50%	(Float)	1
20X3 Leg	(200)		200					2.00%	(Float)	25
20X4 Leg	(200)				200			2.50%	(Float)	69
20X5 Leg	(200)					200		3.00%	(Float)	100
June 30 20X4 Leg	(300)			300				1.65%	(Float)	50
20X6 Leg	(200)						200	4.00%	(Float)	130.36
Total	(300)			300						

Assuming the entity terminated the corresponding designated derivatives (those highlighted in **red** above), the entity would maintain perfect alignment after the change in strategy. No misalignment would arise going forward as long as the entity terminated the corresponding derivatives as a part of their change in strategy.

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After 6 months have passed, the entity has not originated any new financial assets or liabilities but is required to report financial results and therefore, completes the following comparison to prepare the necessary financial reports:

	Δ Clean FV	Period CFs	Total ΔFV
Benchmark	19.02	0.98	20.0
Designated	19.02	0.98	20.0
Difference	0 **A**	0 **B**	

A – The entity would compare the change in fair value to determine the amounts (if any) that need to be presented as the misaligned portion; and

B – The entity would compare the period cash flows (ie, the accruals) to determined what amount (if any) that need to be presented as the misaligned portion.

Designated	Notional	Fixed Rate	Float Rate	Net %	CU	CU / 2
June 30 X4 Rec Leg	300	1.65%	(1.00)%	0.65%	1.95	0.98
Total					**1.95**	**0.98**

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After the comparisons, the entity has the necessary data to complete the required journal entries as follows:

1. Record the change in fair value of the designated derivatives in Other Comprehensive Income:

    Dr   Derivative Fair Value   20.0

    Cr Other Comprehensive Income   20.0

2. Reclassify a portion from Other Comprehensive Income to the Statement of Profit or Loss such that it reflects the target profile:

    Dr   Other Comprehensive Income   0.98

    Cr DRM Derivative Contribution   0.98

The income statement for the period is as follows:

Year	Financial assets	DRM Derivative Contribution	Financial liabilities	Imperfect Alignment	Total reported results
6/30/X3	19.6	0.98	(3.0)	0.0	17.6

However, the above is not complete as the entity must also reclassify the amounts in OCI associated with the previous strategy.

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The amounts to be re-classified based on the previous strategy are listed in the table below.

| Benchmark Derivative | Float | Re – Pricing Bucket | | | | | Fixed Rate | FV at end 20X2 |
		12/31/X2	12/31/X3	12/31/X4	12/31/X5	12/31/X6		
20X2 Leg	(200)	200					1.50%	1
20X3 Leg	(200)		200				2.00%	25
20X4 Leg	(200)			200			2.50%	69
20X5 Leg	(200)				200		3.00%	100
20X6 Leg	(200)					200	4.00%	130.36
Total	(1000)	200	200	200	200	200		

The amounts in the red box above must be re-classified over the original time horizon that they were transforming. For example, the 20X6 leg must be re-classified from the current period until 20X6. To do otherwise would imply a change in the reclassification pattern which is not permitted within the DRM accounting model.

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Thank you

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