Introduction

1. At the April 2021 Board meeting, the Board discussed feedback from the outreach on the core model for Dynamic Risk Management (DRM model). Three main challenges were identified by participants that are key to the viability and operability of the DRM model.

2. The designation of a portion of prepayable assets in the DRM model was one of these challenges. The issue was specifically about what approach an entity should use to determine the portion of a portfolio of prepayable assets to be designated in the DRM model. When developing the DRM model, the Board tentatively decided that a proportion (ie percentage) of nominal amounts of assets in a portfolio could be designated in the DRM model. However, outreach participants suggested using a bottom layer of nominal amounts.

3. This paper sets out staff analysis on the issue and its interaction with the refinements to the DRM model discussed in the Agenda Paper 4A of this meeting.

Summary of staff recommendations

4. In the staff view, the refinements recommended by staff in Agenda Paper 4A of this meeting, particularly the addition of the risk mitigation intention to the DRM...
model, also addresses the issue related to the designation of a portion of prepayable assets in the DRM model. Subject to the Board agreeing with our recommendations in that paper, we are not recommending making any further refinements to the DRM model with regards to this issue.

**Structure of this paper**

5. This paper is structured as follows:
   (a) A reminder of the issue;
   (b) Staff analysis and view; and
   (c) Question for Board members.

6. For ease of reference, we have included an extract from Agenda Paper 4D of the April 2021 meeting in Appendix A—Outreach feedback on bottom layer approach.

**A reminder of the issue**

7. At its February 2018 meeting, the Board discussed the role of the asset profile within the DRM model, noting that:
   (a) the profile of some financial assets (such as prepayable financial assets) could be on an expected maturity rather than contractual maturity basis, considering the potential impact of prepayments.
   (b) while the scope of dynamic risk management is often the entire banking book, and thus designation of the dynamically managed portfolios in their entirety as part of the asset profile in the DRM model would be ideal, there could be valid risk management reasons for designating only a portion of a portfolio.

8. At that meeting, the Board tentatively decided to allow designation of a percentage of a portfolio of financial assets provided it is consistent with an entity’s risk management strategy and is consistently applied to all expected cash flows within the portfolio. This approach is referred to as the percentage approach.

9. Applying the percentage approach an entity would determine the portion of a portfolio of financial assets to designate in the DRM model as a percentage of all the assets in the portfolio. For example, if an entity has a portfolio of CU100 of fixed rate prepayable assets and decides to designate 20 percent of the portfolio, the
entity is designating 20 percent of every asset in the portfolio (ie a vertical portion). If some assets prepay earlier than expected, it is assumed to affect each asset in the portfolio equally.\(^1\)

10. However, as discussed at the April 2021 Board meeting, most outreach participants recommended that instead of the percentage approach, the Board allows a *bottom layer* approach—that is, allowing entities to designate the bottom layer of a portfolio of prepayable assets in the DRM model.

11. These participants said that in applying the bottom layer approach an entity separates the portfolio of prepayable assets into layers representing the extent to which the entity expects prepayable assets to be susceptible to prepayment risk. The bottom layer therefore is the portion of prepayable assets that is less susceptible to prepayment risk, ie a ‘stable’ portion of prepayable assets, hence the entity decides to hedge that portion. The upper layer(s) is left unhedged.

12. Applying the bottom layer approach, the portfolio of CU100 described in paragraph 99 could for example, be considered to comprise a hedged bottom layer of CU20 and an unhedged upper layer of CU80. If some assets prepay earlier than expected, these prepayments are assumed to come first from the unhedged upper layer. Unexpected changes to the portfolio would arise only if, and to the extent, that the prepayments reach the hedged bottom layer of CU20 (ie prepayments amount to more than CU80). As long as a nominal amount of assets equal to the hedged bottom layer of CU20 remain, there is no impact from unexpected changes.

13. Some of the outreach participants therefore said that allowing entities to designate a bottom layer in the DRM model would better represent their risk management strategy because they hedge the repricing risk arising from changes in interest rates of *only* the bottom layer of prepayable assets. See paragraph A3 of Appendix A of this paper for an example illustrating application of a bottom layer approach that reflects risk management strategy and activities.

14. In contrast, a few other outreach participants recommended the Board to permit a bottom layer approach solely for the purpose of minimising the effect reported in

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\(^1\) This description is consistent with paragraph BC199 of the Basis for Conclusions on IAS 39 which describes the percentage approach in context of Fair value hedge accounting for a portfolio hedge of interest rate risk.
statement of profit or loss without explicitly asserting that such an approach would faithfully reflect their risk management strategy and activities.

15. The staff understood this feedback to mean that such a bottom layer approach would not be based on a bottom layer that represents the risk management strategy and activities. In other words, using this approach, the bottom layer would not necessarily correspond to the stable portion of the portfolio the risk managers would be hedging. For example, risk managers could hedge the entire portfolio of assets or a different portion of their nominal amounts. However, for accounting purposes, a bottom layer that includes an ‘accounting buffer’ is identified to ensure that the ceiling of bottom layer is not breached. The entity then selectively uses only some, but not all, of the derivatives transacted for risk management purposes. See paragraph A5 of Appendix A of this paper for an example illustrating application of a bottom layer approach used for accounting purposes only.

**Staff analysis and view**

16. In analysing the feedback described in paragraphs 10–13 of this paper, we note the following:

(a) in line with their risk management strategy and activities, entities may choose to designate *only a portion* of prepayable assets—instead of the entire portfolio—as long as that allows them to achieve their risk management strategy. This is consistent with the Board’s observation when developing the DRM model (see paragraph 7(b) of this paper);

(b) the portion of prepayable assets that are designated is determined after considering the expected prepayment levels (also see paragraph A4), which could be any extent of the portfolio of prepayable assets, expressed as an amount of assets, not necessarily a specified percentage of the assets in the portfolio; and

(c) from a risk management perspective, this portion of prepayable assets (ie the bottom layer) would represent the *stable* portion of prepayable assets, which is similar to the approach used to determine the ‘core’ portion of demand deposits. It is the stable portion that is then designated, consistent with the risk management strategy.
17. In our view, the issue of determining a portion of prepayable assets to be designated in the DRM model, is directly linked to the extent to which an entity decides to mitigate an open risk position. As a result, the issue is also directly linked to the refinements to the DRM model discussed in Agenda Paper 4A of this meeting, which contemplate:

(a) the combination of (expected) cash flows from assets and liabilities to determine the current net open risk position. It is the current net open risk position that is then subject to the entity’s risk management activities. This means entities no longer focus on identifying and monitoring the gross exposure of the individual items in the portfolio but instead focus on the net risk exposure generated by the whole portfolio. Sometimes this is referred as a ‘portfolio view’.

(b) the inclusion of the risk mitigation intention representing the extent/portion of the current net open risk position the entity intends to mitigate using designated derivatives. It is a specified extent of risk,² and not necessarily a percentage of the current net open risk position, to be mitigated using derivatives.

(c) the risk mitigation intention being set for a period of time. How long that period is, depends on the frequency of the changes to the underlying portfolio with which the entity is making decisions about the extent to which the entity decides to mitigate its open risk positions (ie designating a larger or smaller portion of the current net open risk position or trading new derivatives).

18. The staff are therefore of the view that the proposed refinements to the DRM model, in essence, also resolve the need to designate a bottom layer for risk management purposes. This is because the risk mitigation intention would enable an entity to decide the extent of the current net open risk position to mitigate by using derivatives. Such a decision—ie how much of the risk exposure to mitigate—could be driven by many factors, including an entity’s current expectations of

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² The extent of risk can be expressed in different risk metrics, for example, PV01.
prepayment levels or other risk management factors, but it must be consistent with
the entity’s risk management strategy and activities.

19. In other words, the fact that the DRM model focuses on alignment with the risk
management strategy, instead of prescribing an approach that entities must use to
determine the risk mitigation intention, requires the expectations about prepayment
levels and the portion of the risk to mitigated, to be consistent with an entity’s risk
management strategy. Therefore, an entity applying the DRM model would not
need to use a bottom layer approach to do so.

20. However, the proposed refinements would not respond to the feedback about
applying a bottom layer approach purely to minimise accounting volatility without
reflecting risk management activities (as described in paragraphs 14–15 of this
paper), nor do we think that feedback should be addressed.

21. Preliminary informal feedback obtained on the proposed refinements to the DRM
model, tentatively confirmed the staff view in paragraphs 18–20 of this paper that
the refinements address the root cause for potential use of a bottom layer approach
in the DRM model and achieve better alignment with entities’ risk management
strategies and activities.

Staff view

22. Although the refinements to the DRM model discussed in Agenda Paper 4A of this
meeting, including the addition of the risk mitigation intention, were primarily
designed to facilitate incorporation of risk limits in the DRM model, they in effect
also resolve the need for designation of a bottom layer of prepayable assets for risk
management purposes as requested by some outreach participants.

23. Based on the staff analysis set out in paragraphs 16–21, we think the recommended
refinements in Agenda Paper 4A for this meeting also respond to the feedback
related to the designation of a portion of prepayable assets in the DRM model in a
principles-based approach. The staff is therefore not recommending making any
further refinements with regards to this issue.
24. The staff would like to ask the Board the following question.

Question for the Board

Does the Board agree with the staff view set out in paragraphs 22–23 of this paper?
Appendix A—Outreach feedback on bottom layer approach

A1. The following paragraphs are an extract from Agenda Paper 4D of the April 2021 Board meeting illustrating through examples feedback from outreach participants in response to the staff question about what the ‘bottom layer’ represents.

A2. These examples illustrate two contrasting views ie when bottom layer approach reflects entity’s risk management strategy and activities (risk management view) versus when the bottom layer approach is used only for accounting purposes.

**Bottom layer approach reflecting bank’s risk management view**

A3. The following example could illustrate application of a bottom layer approach that reflects risk management view.

Bank X has a CU100 million portfolio of prepayable fixed interest rate loans with a 5-year contractual maturity. The bank expects loans that have a total principal amount of CU35 million to have been prepaid before the end of the contractual term. Therefore, CU65 million is expected to remain outstanding for the full five years. On this basis, the risk managers of the bank decide that the bottom layer to be managed for interest rate risk is CU60 million, recognising that there is a margin of error in the estimate of CU65 million. The risk managers of the bank then decide to transact a 5-year swap to pay fixed interest and receive variable interest on a notional amount CU60 million. For risk management and hedge accounting purposes the bottom layer is CU60 million, and therefore as long as at least CU60 million of loans remain outstanding for the full contractual term, the dynamic risk management activity is considered a success by the bank. In other words, no loss would be recognised unless and until the level of prepayments exceeds CU40 million. Table 1 summarises this example.

<table>
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<th>Description</th>
<th>CU millions</th>
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<tbody>
<tr>
<td>Contractual cash flows</td>
<td>100</td>
</tr>
<tr>
<td>Expected cash flows</td>
<td>65</td>
</tr>
<tr>
<td>Notional amount of traded derivatives</td>
<td>60</td>
</tr>
<tr>
<td>Bottom layer for risk management view</td>
<td>60</td>
</tr>
<tr>
<td>Bottom layer for accounting purposes</td>
<td>60</td>
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</tbody>
</table>

A4. In the participants’ views, the reason why the bank separated the mortgage portfolio into the upper and bottom layers is that it estimated that the maximum amount of
prepayments would be CU40 million. The inverse assumption is that the bank expects no prepayment in the bottom layer (CU60 million). This is the basis why banks deem all subsequent prepayments to be attributable to the upper layers.

**Bottom layer approach only for accounting purposes**

A5. Using a similar fact pattern to paragraph A3, the following example illustrates bottom layer approach used for accounting purposes only.

Unlike the scenario in paragraph A3, Bank Y decides _not_ to adopt a bottom layer approach for risk management. As a result, risk managers transact a 5-year swap to pay fixed interest and receive variable interest on a notional amount CU65 million (ie based in expected cash flows). The bank, however, adopts a bottom layer approach solely for accounting purposes by designating in hedge accounting only CU45 million. In this context, the bottom layer of CU45 million includes ‘accounting buffer’ to ensure that the ceiling of bottom layer determined for accounting purposes is not breached. Applying this approach, for hedge accounting purposes, as long as CU45 million of loans remain outstanding for the full contractual term (ie level of prepayments does not exceed CU55 million), no accounting loss would be recognised. Nonetheless, it is acknowledged that this would be inconsistent with the risk management view under which CU65 million are risk managed; not CU45 million. Table 2 summarises this example.

<table>
<thead>
<tr>
<th>Description</th>
<th>CU millions</th>
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</thead>
<tbody>
<tr>
<td>Contractual cash flows</td>
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<td>Expected cash flows</td>
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<tr>
<td>Notional amount of traded derivatives</td>
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</tr>
<tr>
<td>Bottom layer for risk management view</td>
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<tr>
<td>Bottom layer for accounting purposes</td>
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