### Illustration of the alternative approaches to accounting for purchased financial assets

#### Introduction

1. The purpose of this illustration is to facilitate understanding of the four alternative approaches to accounting for purchased loans as discussed in the AP 3B/FASB Memo 114 and to provide a high level comparison of these alternatives. This illustration does not purport to provide a detailed account of each alternative. Indeed, if the boards were to pursue the Componentised Approach or Gross Up Presentation Approach, either of these approaches would need to be developed further.

2. For the illustration of the four alternatives, consider the following fact pattern: An entity purchases a portfolio of amortising loans with a remaining life of four years for CU800\(^1\). The remaining contractual cash flows at the time of purchase are CU1,000. At the time of purchase the entity expects not to collect CU120. The entity expects that losses will occur evenly during the life of the portfolio. The

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\(^1\) The purchase price of CU800 represents the fair value of the acquired portfolio.

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entire portfolio is classified in Bucket 2. There are no changes in expectations in subsequent periods\(^2\) and losses occur as expected.

3. The table below outlines the contractual cash flows (CCF), expected cash flows (ECF) and effective interest rate (EIR). The contractual EIR and credit-adjusted EIR are derived from the purchase price and the contractual cash flows or expected cash flows respectively.

<table>
<thead>
<tr>
<th></th>
<th>t0</th>
<th>t1</th>
<th>t2</th>
<th>t3</th>
<th>t4</th>
<th>EIR</th>
<th>Total CF</th>
</tr>
</thead>
<tbody>
<tr>
<td>Remaining contractual</td>
<td>-800</td>
<td>250</td>
<td>250</td>
<td>250</td>
<td>250</td>
<td>9.56%</td>
<td>1,000</td>
</tr>
<tr>
<td>cash flows</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cash flows expected at</td>
<td>-800</td>
<td>220</td>
<td>220</td>
<td>220</td>
<td>220</td>
<td>3.92%</td>
<td>880</td>
</tr>
<tr>
<td>the time of purchase</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

\textbf{Alternative 1—Originated loans approach}

4. This alternative aligns the impairment accounting and interest income recognition model for purchased and originated loans. Accordingly, an entity would initially recognise purchased loans at fair value and establish an allowance account for expected credit losses. The initial expected loss would be recognised immediately in the income statement. The following journal entry would be made on day 1:

\begin{align*}
\text{Dr Loan} & \quad 800 \quad [\text{purchase price}] \\
\text{Dr Impairment loss} & \quad 120 \\
\text{Cr Cash} & \quad 800 \\
\text{Cr Allowance} & \quad 120 \quad [\text{lifetime expected credit losses}^3] \\
\end{align*}

5. At the time of the purchase, the balance sheet would reflect the net loan balance of CU 680. The income statement would reflect an impairment loss of CU 120.

6. Interest income will be accrued at the gross balance of the loan (that is, not decreased by the allowance balance) at the contractual EIR (9.56%). The journal entry at the end of Y1 will be as follows:

\begin{align*}
\text{Dr Cash} & \quad 220 \quad [\text{cash flows received as expected}] \\
\text{Dr Allowance} & \quad 30 \quad [\text{use allowance for losses that crystallised as expected}] \\
\text{Cr Interest income} & \quad 77 \quad [\text{gross balance of CU}800 \times 9.56\%] \\
\text{Cr Loan} & \quad 173 \quad [\text{reduction in loan balance using EIR method}] \\
\end{align*}

\(^2\) Changes in expectations are treated the same way under all the alternatives.

\(^3\) For the purposes of this illustration expected losses are not discounted.
7. At the end of Y1, the balance sheet would reflect a net loan balance of CU 537 (which comprises amortised loan balance of CU627 and allowance balance of CU90). The income statement would reflect interest income of CU77.

**Alternative 2—Componentised approach**

8. This alternative would recognise purchased loans at fair value and establish an allowance account for initial expected credit losses. However, the initial expected loss would not be recognised in the income statement immediately. Instead, an initial expected loss adjustment account would be created on initial recognition and would be amortised through the income statement over the life of the loan.

The following journal entry would be made on day 1:

Dr Loan 800 [purchase price]
Dr Initial expected loss adjustment 120
Cr Cash 800
Cr Allowance 120 [lifetime expected credit losses]

9. At the time of the purchase, the balance sheet would reflect the overall carrying value of the loan of CU 800 [purchase price of CU800 plus initial expected credit loss adjustment of CU120 less allowance balance of CU120]. If the boards were to pursue this approach, presentation and disclosure of these elements would need to be considered. There is no impact on the income statement at initial recognition under this alternative.

10. In subsequent periods, the initial expected loss adjustment would be amortised through the income statement. The interest income would be recognised at contractual EIR (9.56%) multiplied by the gross balance of the loan (that is, not decreased by the allowance balance and not adjusted by the initial expected loss adjustment). The following journal entry would be made at the end of year 1:

Dr Cash 220 [cash flows received as expected]
Dr Allowance 30 [use allowance for losses that crystallised as expected]
Cr Interest income 77 [gross balance of CU800 times 9.56%]

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4 The examples in this appendix do not recognise a separate account for the purchase discount. Instead, the loan balance is presented net of the discount.

5 For the purposes of this illustration expected losses are not discounted.
Cr Loan  173 [reduction in loan balance using EIR method]
Dr Amortisation of initial expected loss adjustment  45
Cr Initial expected loss adjustment  45

11. Note that the journal entries in Y1 under this alternative are exactly the same as under alternative 1 except for the amortisation of the initial expected loss adjustment. Under Alternative 1 the initial expected loss flows through the income statement at the time of purchase.

12. At the end of Y1, the net carrying value on the balance sheet would equal CU611 (which comprises amortised loan balance of CU627, allowance balance of CU90 and unamortised initial expected loss adjustment of CU75). The income statement would reflect interest income of CU77 and amortisation of initial expected loss adjustment of CU45 for a net income of CU317.

**Alternative 3 – Gross presentation approach**

13. Under this alternative, loans would initially be recognised at fair value however the carrying value would be grossed-up to separately present an allowance for credit losses. The following journal entry would be made on day 1:

Dr Loan  920
Cr Allowance  120 [lifetime expected credit losses\(^8\)]
Cr Cash  800 [purchase price]

14. At the time of the purchase, the balance sheet would reflect the gross loan balance of CU920 and the allowance balance of CU120. There would be no income statement effect on day 1.

15. Interest income will be accrued on the net loan balance at the credit-adjusted EIR (3.92%). The journal entry at the end of Y1 will be as follows:

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\(^6\) The EL adjustment could be amortised using various mechanisms. This example shows amortisation using an effective interest rate that results in the same net income as if the expected EIR were used. Specifically, the annual amortisation of the initial expected loss adjustment represents the difference between interest income calculated on the gross loan balance at the contractual EIR and interest income that would have been recognised if credit-adjusted EIR were applied to the gross loan balance. If the boards decide to pursue the Componentised Approach, other amortisation methods may be brought to the boards for consideration (for example to address the concerns with respect to instruments with early loss patterns).

\(^7\) CU77-CU45=CU31 instead of CU32 as a result of the effects of rounding.

\(^8\) For the purposes of this illustration expected losses are not discounted.
Dr Cash 220 [cash flows received as expected]
   Cr Interest income  31 [net balance of 800 times 3.92%]
   Cr Loan  189 [reduction in loan balance using EIR method]
Dr Allowance 30 [adjust (reverse) allowance\(^9\)]
   Cr Loan  30

16. At the end of Y1, the balance sheet would reflect the gross loan balance of CU701 and the allowance of CU90. The income statement would reflect interest income of CU31.

**Alternative 4—Credit-adjusted EIR approach**

17. Under this alternative, purchased loans would be initially recognised at fair value with no allowance and no day-1 loss in the income statement on initial recognition. The journal entry at the time of purchase would be as follows:
   Dr Loan 800 [purchase price]
   Cr Cash 800

18. Interest income on the loan balance would be recognised using the credit-adjusted EIR (3.92%). The journal entry at the end of year 1 would be as follows:
   Dr Cash 220 [cash flows received as expected]
      Cr Interest income  31 [CU800 times 3.92%]
      Cr Loan  189 [reduction in loan balance using EIR method]

19. The balance sheet at the end of year 1 would reflect the loan balance of CU611 and the income statement would reflect interest income of CU31.

**Comparison of the alternatives**

20. The tables below provide a comparison of journal entries, balance sheets and income statements under each of the four approaches on initial recognition and at the end of year 1.

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\(^9\) Staff have discussed whether, under the Gross up Presentation approach, the allowance balance should be reduced (a) over the life as contractual cash flows are not met, or (b) when the loan is retired confirming that all contractual payments will not be received. The examples have been prepared according to the first option; however, if the boards decide to pursue the Gross up Presentation Approach, the staff will conduct further analysis on the issue.
Journal entries at the time of initial recognition (Dr/(Cr))

<table>
<thead>
<tr>
<th></th>
<th>Originated Loan Approach</th>
<th>Componentised Approach</th>
<th>Gross Up Presentation Approach</th>
<th>Credit-adjusted EIR Approach</th>
</tr>
</thead>
<tbody>
<tr>
<td>Loan</td>
<td>800</td>
<td>800</td>
<td>920</td>
<td>800</td>
</tr>
<tr>
<td>Cash</td>
<td>(800)</td>
<td>(800)</td>
<td>(800)</td>
<td>(800)</td>
</tr>
<tr>
<td>Allowance</td>
<td>(120)</td>
<td>(120)</td>
<td>(120)</td>
<td></td>
</tr>
<tr>
<td>Impairment loss (IS)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>EL adjustment (BS)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Balance sheet at initial recognition (Dr/(Cr))

<table>
<thead>
<tr>
<th></th>
<th>Originated Loan Approach</th>
<th>Componentised Approach</th>
<th>Gross Up Presentation Approach</th>
<th>Credit-adjusted EIR Approach</th>
</tr>
</thead>
<tbody>
<tr>
<td>Loan</td>
<td>680</td>
<td>680</td>
<td>920</td>
<td>800</td>
</tr>
<tr>
<td>Allowance</td>
<td></td>
<td></td>
<td>(120)</td>
<td></td>
</tr>
<tr>
<td>EL adjustment</td>
<td></td>
<td></td>
<td>120</td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>680</td>
<td>800</td>
<td>800</td>
<td>800</td>
</tr>
</tbody>
</table>

Income statement at initial recognition (Dr/(Cr))

<table>
<thead>
<tr>
<th></th>
<th>Originated Loan Approach</th>
<th>Componentised Approach</th>
<th>Gross Up Presentation Approach</th>
<th>Credit-adjusted EIR Approach</th>
</tr>
</thead>
<tbody>
<tr>
<td>Impairment loss (IS)</td>
<td>120</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>120</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
</tbody>
</table>

21. All alternatives except Alternative 1 initially recognise loans at the fair value of CU800 although the presentation of the balance sheet is different. Alternative 3 requires gross presentation of the loan balance and the allowance account. Alternative 4 entails presentation on a net basis. Presentation under Alternative 2 will need to be considered if the boards pursue this approach.

22. There is a day-1 loss in the income statement under Alternative 1 but not under the other alternatives. The other alternatives recognise the initially expected loss over time through varying mechanisms.

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10 Income statement
11 Balance sheet
12 Presentation under the Componentised Approach will need to be considered if the boards decide to pursue this alternative.
## Journal entries at the end of year 1 (Dr/(Cr))

<table>
<thead>
<tr>
<th></th>
<th>Originated Loan Approach</th>
<th>Componentised Approach</th>
<th>Gross Up Presentation Approach</th>
<th>Credit-adjusted EIR Approach</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cash</td>
<td>220</td>
<td>220</td>
<td>220</td>
<td>220</td>
</tr>
<tr>
<td>Allowance</td>
<td>30</td>
<td>30</td>
<td>30</td>
<td></td>
</tr>
<tr>
<td>Interest income</td>
<td>(77)</td>
<td>(77)</td>
<td>(31)</td>
<td>(31)</td>
</tr>
<tr>
<td>Loan</td>
<td>(173)</td>
<td>(173)</td>
<td>(219)</td>
<td>(189)</td>
</tr>
<tr>
<td>Amortise initial EL</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>EL adjustment</td>
<td>(45)</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

## Balance sheet at the end of year 1 (Dr/(Cr))

<table>
<thead>
<tr>
<th></th>
<th>Originated Loan Approach</th>
<th>Componentised Approach</th>
<th>Gross Up Presentation Approach</th>
<th>Credit-adjusted EIR Approach</th>
</tr>
</thead>
<tbody>
<tr>
<td>Loan</td>
<td>537</td>
<td>537</td>
<td>701</td>
<td>611</td>
</tr>
<tr>
<td>Allowance</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>EL adjustment</td>
<td></td>
<td></td>
<td>75</td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td><strong>537</strong></td>
<td><strong>611</strong></td>
<td><strong>611</strong></td>
<td><strong>611</strong></td>
</tr>
</tbody>
</table>

## Income statement at the end of year 1 (Dr/(Cr))

<table>
<thead>
<tr>
<th></th>
<th>Originated Loan Approach</th>
<th>Componentised Approach</th>
<th>Gross Up Presentation Approach</th>
<th>Credit-adjusted EIR Approach</th>
</tr>
</thead>
<tbody>
<tr>
<td>Interest income</td>
<td>(77)</td>
<td>(77)</td>
<td>(31)</td>
<td>(31)</td>
</tr>
<tr>
<td>Amortise EL</td>
<td></td>
<td></td>
<td>45</td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td><strong>(77)</strong></td>
<td><strong>(31)</strong></td>
<td><strong>(31)</strong></td>
<td><strong>(31)</strong></td>
</tr>
</tbody>
</table>

23. The net carrying value of the loan on the balance sheet (ie net of allowance and initial expected loss adjustment, as applicable) is the same under alternatives 2, 3 and 4 throughout the life of the portfolio.

24. Under Alternatives 3 and 4, interest income is recognised at the credit-adjusted EIR applied to the net balance of the loan (ie net of the allowance for credit losses that is required to be separately presented under Alternative 3). Hence interest income is the same under these two alternatives. This effect continues throughout the life of the portfolio.

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13 Presentation under the Componentised Approach will need to be considered if the boards decide to pursue this alternative.
25. Under Alternatives 1 and 2, interest income is recognised at the contractual EIR applied to the gross loan balance (that is, before the allowance for credit losses and initial expected loss adjustment). Hence interest income is the same under these two alternatives. This effect continues throughout the life of the portfolio. It is important to note however that the net income statement impact under Alternative 2 is the same as under Alternatives 3 and 4. This is because the initial expected loss adjustment is being amortised over the life of the portfolio using EIR methodology. This effect continues throughout the life of the portfolio.\(^\text{14}\)

26. All alternatives amortise down to zero on the balance sheet at maturity. The net impact on the income statement over the life of the portfolio is the same under all alternatives, but the timing of recognition is different under Alternative 1 as opposed to Alternatives 2, 3 and 4.\(^\text{15}\)

\(^\text{14}\) If the boards were to pursue Alternative 2, they could consider whether a simpler amortisation method (eg straight-line) could be permitted since the method used in this example requires the computation of two EIRs. If the simpler method of amortisation of the initial expected loss were to be permitted, that could result in a different income statement recognition pattern under this alternative as compared to Alternatives 3 and 4.

\(^\text{15}\) The geography of recognition may also be different under Alternative 2 as compared to Alternatives 3 and 4 depending on how the amortisation of initial expected losses is presented.