

FA Module 24 IFRS 17 basic practice exam questions

covering initial recognition, fulfilment cash flows, acquisition cash flows, coverage period, present value of future cash outflows, investment component, risk adjustment for non-financial risk, contractual service margin, insurance finance expense, allocation of the contractual service margin to profit or loss, accretion of interest, insurance revenue, insurance contract liability,

An insurer issues insurance contracts on January 1, 20XX, with coverage periods of three years.

- ! Premiums of 934 are paid right after initial recognition.
- ! The discount rate for the fulfilment cash flows is 4% *per annum* for all years and does not change.
- ! Acquisition cash flows directly attributable to the portfolio of insurance contracts are zero.
- ! No contracts lapse before the end of the coverage period.
- ! The investment component is zero in all years.

At initial recognition, the insurer estimates

- ! The cash outflows for claims as 268 each on December 31, 20XX, 20XX+1, and 20XX+2.
- ! The risk adjustment for non-financial risk = 20 for each claim and does not accrete interest.

Actual claims paid equal the initial estimates in all years, and no changes are made to future estimated claims.

Question 24.1: Present value of future cash outflows

What is the present value of future cash outflows at initial recognition?

$$\text{Answer 24.1: } 268 \times (1.04^{-1} + 1.04^{-2} + 1.04^{-3}) = 743.72$$

Question 24.2: Fulfilment cash flows

What are the fulfilment cash flows at initial recognition (before the premium is received)?

$$\text{Answer 24.2: } 743.72 + 3 \times 20 - 934 = (130.28)$$

(fulfilment cash flows at initial recognition = future cash outflows + risk adjustment for non-financial risk – premium)

Question 24.3: Contractual service margin

What is the contractual service margin at initial recognition?

$$\text{Answer 24.3: } 0 - (-130.28) = 130.28$$

(contractual service margin at initial recognition = negative of fulfilment cash flows, but not less than zero)

Question 24.4: Fulfilment cash flows

What are the fulfilment cash flows right after the premium is received?

$$\text{Answer 24.4: } 743.72 + 3 \times 20 = 803.72$$

(fulfilment cash flows = present value of future cash flows + risk adjustment for non-financial risk)

Question 24.5: Insurance finance expense

What is the insurance finance expense on the present value of future cash outflows in 20XX?

Answer 24.5: $743.72 \times 4\% = 29.75$

(insurance finance expense on the present value of future cash outflows (if discount rate does not change)
= discount rate \times present value of future cash flows at beginning of the year)

Question 24.6: Insurance finance expense

What is the insurance finance expense on the contractual service margin in 20XX?

Answer 24.6: $130.28 \times 4\% = 5.21$

(insurance finance expense on the contractual service margin = discount rate \times contractual service margin
at the beginning of the year)

Question 24.7: Insurance finance expense

What is the total insurance finance expense in 20XX?

Answer 24.7: $29.75 + 5.21 = 34.96$

Question 24.8: Allocation to profit or loss

What is the allocation of the contractual service margin to profit or loss in 20XX?

Answer 24.8: $(130.28 + 5.21) / 3 = 45.16$

(allocation of the contractual service margin to profit or loss = (contractual service margin + accretion of
interest) \times portion of current and future contract period in current year)

Question 24.9: Insurance revenue

What is the insurance revenue in 20XX?

Answer 24.9: $268 + 20 + 45.16 = 333.16$

(insurance revenue = claim payment expected to be indemnified by premium + release of risk adjustment +
allocation of contractual service margin to profit or loss)

Question 24.10: Contractual service margin

What is the contractual service margin after the allocation to profit or loss at December 31, 20XX?

Answer 24.10: $130.28 + 5.21 - 45.16 = 90.33$

(contractual service margin after the allocation to profit or loss = contractual service margin at the beginning of the year + insurance finance expense on the contractual service margin – allocation of contractual service margin to profit or loss)

Question 24.11: Fulfilment cash flows

What are the fulfilment cash flows at December 31, 20XX?

Answer 24.11: $268 \times (1.04^{-1} + 1.04^{-2}) + 2 \times 20 = 545.47$

(fulfilment cash flows = present value of future cash flows + risk adjustment for non-financial risk)

Question 24.12: Insurance contract liability

What is the insurance contract liability at December 31, 20XX?

Answer 24.12: $545.47 + 90.33 = 635.80$

(insurance contract liability = fulfilment cash flows + contractual service margin)

Question 24.13: Insurance finance expense

What is the insurance finance expense on the present value of future cash outflows in 20XX+1?

Answer 24.13: $4\% \times 268 \times (1.04^{-1} + 1.04^{-2}) = 20.22$

(insurance finance expense on the present value of future cash outflows (if discount rate does not change) = discount rate \times present value of future cash flows at beginning of the year)

Question 24.14: Insurance finance expense

What is the insurance finance expense on the contractual service margin in 20XX+1?

Answer 24.14: $90.33 \times 4\% = 3.61$

(insurance finance expense on the contractual service margin = discount rate \times contractual service margin at the beginning of the year)

Question 24.15: Insurance finance expense

What is the total insurance finance expense in 20XX+1?

Answer 24.15: $20.22 + 3.61 = 23.83$

Question 24.16: Allocation to profit or loss

What is the allocation of the contractual service margin to profit or loss in 20XX+1?

Answer 24.16: $(90.33 + 3.61) / 2 = 46.97$

(allocation of the contractual service margin to profit or loss = (contractual service margin + accretion of interest) × portion of current and future contract period in current year)

Question 24.17: Insurance revenue

What is the insurance revenue in 20XX+1?

Answer 24.17: $268 + 20 + 46.97 = 334.97$

(insurance revenue = claim payment expected to be indemnified by premium + release of risk adjustment + allocation of contractual service margin to profit or loss)

Question 24.18: Contractual service margin

What is the contractual service margin after the allocation to profit or loss at December 31, 20XX+1?

Answer 24.18: $90.33 + 3.61 - 46.97 = 46.97$

(contractual service margin after the allocation to profit or loss = contractual service margin at the beginning of the year + insurance finance expense on the contractual service margin – allocation of contractual service margin to profit or loss)

Question 24.19: Fulfilment cash flows

What are the fulfilment cash flows at December 31, 20XX+1?

Answer 24.19: $268 \times 1.04^{-1} + 20 = 277.69$

(fulfilment cash flows = present value of future cash flows + risk adjustment for non-financial risk)

Question 24.20: Insurance contract liability

What is the insurance contract liability at December 31, 20XX+1?

Answer 24.20: $277.69 + 46.97 = 324.66$

(insurance contract liability = fulfilment cash flows + contractual service margin)