

## WORKSHOP : FINANCIAL STATEMENT PRESENTATION

**2017 Insurance IFRS Seminar**

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**Session 17**



# Agenda

- 1.0 Product features & learning objectives
- 1.1 Define CFs & investment component
- 1.2 FCF & initial CSM calculation
- 1.3 Coverage unit definition & CSM roll forward calculation
- 1.4 IFRS 17 insurance contract liability projection
- 1.5 Insurance revenue definition
- 1.6 Directly attributable acquisition cost definition
- 1.7 SCI presentation – underwriting results
- 1.8 Insurance finance income & expense definition
- 1.9 SCI presentation – illustration
- 2.1 Non-economic experience variance
- 2.2 Non-economic assumption update
- 2.3 SCI presentation – non-economic experience variance & assumption update

# 1.0.1 Background: product features (given)

- ▶ Non par product
- ▶ 2-pay 5-year anticipated endowment

General description	2-pay 5-year anticipated endowment					
Level death benefit \$ (same for all years)		50,000				
Annual premium \$		22,000				
Year (per policy)	-	1	2	3	4	5
Surrender benefit \$ (EOY)		17,600	40,700	43,340	46,310	50,000
Survival benefit \$ (EOY)		-	-	-	-	50,000
Commission \$		660	220			
Expense \$ per policy bef sensitivity		5	5	2	2	2
Comm + Exp \$ per plc aft sensitivity	-	665	225	2	2	2

- ▶ Assume survival benefit in Yr5
- ▶ Initial 100 policies

# 1.0.2 Background: product cash flows (given)

- ▶ Best estimate (BE) cash flows (CFs) and statutory gross profit are shown as below:

Best estimate projection / Year	-	1	2	3	4	5
No. survival (BOY)		100.0000	94.9050	92.8674	90.8280	87.8829
No. deaths (EOY)		0.1000	0.1424	0.1857	0.2271	0.2636
No. surrender (EOY)		4.9950	1.8953	1.8536	2.7180	-
No. survival (EOY)	100.0000	94.9050	92.8674	90.8280	87.8829	87.6193
Premium Income (BOY)		2,200,000	2,087,910			
Commission (BOY)		66,000	20,879	-	-	-
Expense (BOY)		500	475	186	182	176
Death Outgo (EOY)		5,000	7,118	9,287	11,354	13,182
Surrender Outgo (EOY)		87,912	77,137	80,336	125,872	-
Survival Outgo (EOY)		-	-	-	-	4,380,964
Net CF		2,040,588	1,982,302	(89,809)	(137,407)	(4,394,322)
Investment income		96,008	181,518	185,094	188,568	190,041
Change in reserve		1,967,170	2,146,217	77,202	32,715	(4,223,304)
Gross profit		169,426	17,603	18,083	18,447	19,022

- ▶ BE investment return: 4.5%
- ▶ Reserving basis: GPV with 10% PAD (valuation interest rate 4.05%)

# 1.0.3 Background: learning objectives

## Learning objectives:

- ▶ CFs & investment component definition
- ▶ Initial measurement – profitable contract
- ▶ Coverage unit definition
- ▶ CSM roll forward calculation
- ▶ Insurance revenue definition
- ▶ Directly attributable acquisition cost definition
- ▶ SCI presentation – underwriting results
- ▶ Insurance finance income & expense definition
- ▶ SCI presentation illustration

# 1.1.1 Step 1 – define the CFs under IFRS 17

- ▶ Define the CFs for fulfillment cash flow calculation
  - ▶ Define the directly attributable expense: here assume 100% BE expenses
  - ▶ Define the investment component

## CF projection for FCF (include only the directly attributable expense)

	Yr0	Yr1	Yr2	Yr3	Yr4	Yr5
Premium						
Commission						
Expense						
Death outgo (ins component)						
Death outgo (inv component)						
Surrender outgo						
Survival outgo						
Net CF (NCF)						

# 1.2.1 Step 2 – calculate the FCF & initial CSM

- ▶ Risk adjustment (RA) – given, using simplified approach here

<b>RA approximation</b>						
	Yr0	Yr1	Yr2	Yr3	Yr4	Yr5
Amount at risk		2,500	2,373	2,322	2,271	2,197
RA	10,553	8,422	6,345	4,245	2,123	-

- ▶ Calculate the fulfilment cash flow (FCF)
- ▶ 3.5% is used as the discount rate

<b>FCF calculation</b>	
	Yr0
BEL	
RA	10,553
FCF	

- ▶ Quick exercise: what is the initial CSM?

# 1.3.1 Step 3 – define the coverage unit & CSM roll forward calculation

- ▶ Assume BE scenario – everything goes as expected

Coverage unit projection						
	Yr0	Yr1	Yr2	Yr3	Yr4	Yr5
NOP (BOY)						
SA (BOY)						
Coverage unit (BOY)						



# 1.3.3 Step 3 – define the coverage unit & CSM roll forward calculation

- Assume BE scenario – everything goes as expected

Coverage unit projection						
	Yr0	Yr1	Yr2	Yr3	Yr4	Yr5
NOP (BOY)						
SA (BOY)						
Coverage unit (BOY)						

- CSM roll forward

CSM roll forward						
	Yr0	Yr1	Yr2	Yr3	Yr4	Yr5
CSM (BOY)						
Interest accretion						
Amortization						
CSM (EOY)						

## Learning objectives

- Coverage unit definition
- CSM roll forward calculation

# 1.4.1 IFRS 17 insurance contract liability projection - breakdown

## ► IFRS 17 insurance contract liability projection

IFRS 17 insurance liability						
	Initial	Yr1	Yr2	Yr3	Yr4	Yr5
<b>BEL (EOY)</b>						
BEL NCF						
BEL interest accretion						
BEL change in assumption						
<b>RA (EOY)</b>						
RA interest accretion						
RA release						
RA change in assumption						
<b>CSM (EOY)</b>						
CSM interest accretion						
CSM release						
CSM change in assumption						
<b>IFRS 17 insurance liability</b>						

# 1.5.1 Step 4 – define insurance revenue IR

## ► Define the IR

<b>Insurance revenue (IR)</b>						
	Yr0	Yr1	Yr2	Yr3	Yr4	Yr5
IR death outgo						
IR surrender outgo						
IR survival outgo						
IR attributable expense (non-AC)						
IR attributable expense (AC)						
IR RA release						
IR CSM amortization						

# 1.6.1 Step 5 – define the directly attributable acquisition cost (DAAC)

- ▶ Assume FY commission is the directly attributable acquisition cost & no interest

DAAC						
	Yr0	Yr1	Yr2	Yr3	Yr4	Yr5
<b>Commission + Expense (BOY)</b>						
Non-attributable						
Attributable AC						
Attributable AC amortization						
Attributable AC remaining balance						
Attributable non-AC						

## Learning objectives

- ▶ Directly attributable acquisition cost definition
- ▶ Insurance revenue definition

# 1.7.1 Step 6 – SCI underwriting results

- Define the SCI underwriting results

<b>Statement of comprehensive income</b>						
	Yr0	Yr1	Yr2	Yr3	Yr4	Yr5
<b>Underwriting result</b>						
<b>Insurance revenue (IR)</b>						
IR death outgo						
IR surrender outgo						
IR survival outgo						
IR attributable expense (non-AC)						
IR attributable expense (AC)						
IR RA release						
IR CSM amortization						
<b>Insurance service expense (ISE)</b>						
ISE death outgo						
ISE surrender outgo						
ISE survival outgo						
ISE expense						
Losses at initial recognition						
Reserve of previously recognized losses						

# 1.8.1 Step 7 – IFIE definition (given)

## ► Define the insurance finance expense

<b>IFRS 17 insurance liability</b>						
	Initial	Yr1	Yr2	Yr3	Yr4	Yr5
<b>BEL (EOY)</b>	<b>(61,088)</b>	<b>2,052,035</b>	<b>4,178,487</b>	<b>4,234,919</b>	<b>4,245,728</b>	<b>-</b>
BEL NCF		2,040,588	1,982,302	(89,809)	(137,407)	(4,394,322)
BEL interest accretion		72,534	144,151	146,241	148,216	148,594
BEL change in assumption						
<b>RA (EOY)</b>	<b>10,553</b>	<b>8,422</b>	<b>6,345</b>	<b>4,245</b>	<b>2,123</b>	<b>-</b>
RA interest accretion		369	295	222	149	74
RA release		(2,500)	(2,373)	(2,322)	(2,271)	(2,197)
RA change in assumption						
<b>CSM (EOY)</b>	<b>50,535</b>	<b>40,332</b>	<b>30,382</b>	<b>20,327</b>	<b>10,165</b>	<b>-</b>
CSM interest accretion		1,769	1,412	1,063	711	356
CSM release		(11,972)	(11,362)	(11,118)	(10,874)	(10,521)
CSM change in assumption						
<b>IFRS 17 insurance liability</b>	<b>-</b>	<b>2,100,789</b>	<b>4,215,213</b>	<b>4,259,491</b>	<b>4,258,016</b>	<b>-</b>

### Learning objectives

- Insurance finance income & expense definition

# 1.9.1 Step 8 – SCI illustration

- SCI illustration (assume investment income is at 4.5%)

<b>Statement of comprehensive income</b>						
	Yr0	Yr1	Yr2	Yr3	Yr4	Yr5
<b>Underwriting result</b>						
<b>Insurance revenue (IR)</b>						
IR death outgo						
IR surrender outgo						
IR survival outgo						
IR attributable expense (non-AC)						
IR attributable expense (AC)						
IR RA release						
IR CSM amortization						
<b>Insurance service expense (ISE)</b>						
ISE death outgo						
ISE surrender outgo						
ISE survival outgo						
ISE expense						
<b>Investment result</b>						
Investment income						
Insurance finance expense						
<b>Profit before tax</b>						
Other comprehensive income						
<b>Total comprehensive income</b>						
<b>Statutory profit</b>						

## 2.1.0 Background: learning objectives

- ▶ 2-pay 5-year anticipated endowment (same product)
- ▶ What if there are non economic experience variance?
- ▶ At the end of Yr2, an experience variance on mortality (+1 death) is noted

### Learning objectives:

- ▶ Impact on CSM due to non economic experience variance



## 2.1.1 CF projection for FCF calculation

- ▶ Define the CFs for FCF calculation
- ▶ Experience variance only

### CF projection for FCF (include only the directly attributable expense)

	Yr0	Yr1	Yr2	Yr3	Yr4	Yr5
Premium						
Commission						
Expense						
Death outgo (ins component)						
Death outgo (inv component)						
Surrender outgo						
Survival outgo						
Net CF (NCF)						

## 2.1.3 Impact on CSM due to non economic experience variance

- ▶ FCF after experience variance only

FCF calculation						
	Yr0	Yr1	Yr2	Yr3	Yr4	Yr5
BEL						
RA						
FCF						

CSM roll forward						
	Yr0	Yr1	Yr2	Yr3	Yr4	Yr5
CSM (BOY)						
Interest accretion						
Experience adjustment						
Assumption change (non econ)						
Assumption change (econ)						
Amortization						
CSM (EOY)						

## 2.2.0 Background: learning objectives

- ▶ 2-pay 5-year anticipated endowment (same product)
- ▶ After non economic experience variance (as discussed in 2.1), mortality assumption for Yr3-Yr5 is also assumed to be +200% accordingly

### Learning objectives:

- ▶ Impact on SCI/ CSM due to non economic assumption change
- ▶ SCI presentation illustration

## 2.2.1 CF projection for FCF calculation

- ▶ Define the CFs for FCF calculation
- ▶ Experience variance & assumption update

### CF projection for FCF (include only the directly attributable expense)

	Yr0	Yr1	Yr2	Yr3	Yr4	Yr5
Premium						
Commission						
Expense						
Death outgo (ins component)						
Death outgo (inv component)						
Surrender outgo						
Survival outgo						
Net CF (NCF)						

## 2.2.3 Impact on CSM due to non economic assumption change

- ▶ FCF after experience variance & assumption update

FCF calculation						
	Yr0	Yr1	Yr2	Yr3	Yr4	Yr5
BEL						
RA						
FCF						

  

CSM roll forward						
	Yr0	Yr1	Yr2	Yr3	Yr4	Yr5
CSM (BOY)						
Interest accretion						
Experience adjustment						
Assumption change (non econ)						
Assumption change (econ)						
Amortization						
CSM (EOY)						

### Learning objectives

- ▶ Impact on SCI/ CSM due to non economic assumption change

# 2.3.1 SCI illustration

## ► Experience variance & assumption update

Statement of comprehensive income						
	Yr0	Yr1	Yr2	Yr3	Yr4	Yr5
<b>Underwriting result</b>						
<b>Insurance revenue (IR)</b>						
IR death outgo						
IR surrender outgo						
IR survival outgo						
IR attributable expense (non-AC)						
IR attributable expense (AC)						
IR RA release						
IR CSM amortization						
<b>Insurance service expense (ISE)</b>						
ISE death outgo						
ISE surrender outgo						
ISE survival outgo						
ISE expense						
<b>Investment result</b>						
Investment income						
Insurance finance expense						
<b>Profit before tax</b>						
Other comprehensive income						
<b>Total comprehensive income</b>						
<b>Statutory profit</b>						

# International Financial Reporting Standards for Insurers - IFRS 17

## Presentation (Workshop)

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