



## Sophia Bank IFRS9 ECL Case II.

Sophia Bank was founded -surprisingly- by Sophia as of 01.01.2018 and started to provide loans for small and medium size enterprises. Sophia Bank is using external ratings and converts the rating agency's categories to its own PDs, it is called master scaling.

These PD estimations are always 12 month PIT (Point in time) estimations; Sophia Bank determines the lifetime PD based on regression.

The credit losses, interests and carrying amounts are determined according to IFRS9:

**Loan1:** This company is called Michael Desings Ltd.

**Rating 2018.01.01** BB

**Expected cash flows:**

Balance sheet date	Amount in CU
2018.12.31	-100 000
2019.12.31	26 000
2020.12.31	26 000
2021.12.31	26 000
2022.12.31	26 000

Contractual interest rate: 1,40%

There is no information regarding downgrading in the foreseeable future. Even in case of an economic downturn the company remains strong financially.

**Loan2:** Ratatouille Records Ltd.

**Rating 2018.01.01** BB

**Expected cash flows:**

Balance sheet date	Amount in CU
2018.12.31	-200 000
2019.12.31	23 000
2020.12.31	23 000
2021.12.31	23 000
2022.12.31	23 000
2023.12.31	23 000
2024.12.31	23 000
2025.12.31	23 000
2026.12.31	23 000
2027.12.31	23 000

Contractual interest rate: 0,50%

Ratatouille's songs are always demanded. No downgrades expected in case of an economic downturn



**Loan3:** Ivanka Law Office

**Rating 2018.01.01** BB

**Expected cash flows:**

Balance sheet date	Amount in CU
2018.12.31	-200 000
2019.12.31	23 000
2020.12.31	23 000
2021.12.31	23 000
2022.12.31	23 000
2023.12.31	23 000
2024.12.31	23 000
2025.12.31	23 000
2026.12.31	23 000
2027.12.31	23 000

Contractual interest rate: 0,50%

Ivanka Law Office performs well, however from 2019\* the external rating agency downgraded the company to grading category "B", because it is expected that a possible economic downturn scenario would significantly deteriorate the company's credit quality. (\*before 2018 FS's were authorized for issue)

The external rating agency provided revised 12 month PIT PD estimations for the upcoming years for rating category "B" (lifetime PD-s are marginal):

Year ended as of	<i>Economic downturn PD (12 month PIT)</i>	<i>Economic downturn PD (Lifetime PIT)</i>	<i>PD (TTC)</i>	<i>Note</i>
2018.12.31	3%*	3%	5%	*That means as of 31.12.2018 the 12 month PIT PD is 3% for the next (!) 12 month. **That means as of 31.12.2019 the marginal Lifetime PD is 15%
2019.12.31	14%	15%**	5%	
2020.12.31	11%	12%	6%	
2021.12.31	9%	10%	6%	
2022.12.31	7%	8%	6%	
2023.12.31	6,60%	6%	6%	
2024.12.31	3,80%	4%	6%	
2025.12.31	3,49%	3,5%	4,7%	
2026.12.31	2,99%	3%	3%	

**Loan4:** Stan's Bakery Ltd

**Rating 2018.01.01** AAA

Contractual cash flows of the loan:

date	Amount in CU
2018.01.01	(100 000) initial recognition
2021.12.31	150 000 repayment

Contractual interest rate: 9%

In 2019 turns out that Stan's

Bakery Ltd's biggest client is Ivanka Law Office, and in case of an economic downturn Stan wont be able to repay the loan in full, only 50 000 CU is expected to be repayed at the end of maturity.



Historical data shows that similar cases resulted in downgrading to category "D" (impaired). This information is available after the authorization (for issue) of the financial statements of 2018 only.

**Loan5:** This loan was purchased from Lara Bank. Lara's own bank provided loan for a small entrepreneur, however the entrepreneur was late (Days past due over 90 days) with the first installment, so Lara offered a deal to Sophia, to purchase the loan for 4000 CU and to receive 4500 CU at the end of maturity. No installments will be paid until maturity.

**Rating 2018.01.01** D  
 2018.04.30 Acquisition date  
 4000 Price paid  
 8000 Original contractual amount  
 200 Installment  
 4500 Amount received at maturity date  
 2021.12.31 Contractual redemption date

Contractual interest rate: 3,18%

Contractual cash flows		Expected cash flows	
Date	Amount in CU	Date	Amount in CU
2017.01.01	-8000		
2017.12.31	200 <-Past due	2018.04.30	-4000
2018.12.31	200	2018.12.31	0
2019.12.31	200	2019.12.31	0
2020.12.31	200	2020.12.31	0
2021.12.31	8200	2021.12.31	4500

**Other informations available:**

Regarding the macroeconomical conditions all indicators are showing that the economy is expanding, interest rates are low, unemployment is record low.

However the following events and scenarios have occurred or are likely to occur:

- Trade wars between the country where Sophia Bank operates and another large country, the trade wars could potentially brake expansions overseas
- Purchasing management indexes started to drop significantly from last quarter of 2017
- The other large country's economic growth is expected (experts estimated the probability between around 55%-75%) to take a downturn from 2019 to 2022 periods
- Major listed companies declared financial difficulties, and are forced to layoffs, and facing shrinking demands

PD is determined based on the external rating agency categories and mapped to PD's as follows:

\*12 month PIT PD's

Category	PD*
AAA	0,05%
AA	0,09%
A	0,20%
BBB	1,00%
BB	3,00%



B	15%
CCC	46%
D	100%

LGD's are determined in accordance with CRR regulation:

- senior exposures without eligible collateral: 45 %;
- subordinated exposures without eligible collateral: 75 %;

Sophia Bank estimated its Weighted average cost of capital (WACC) for the upcoming years as follows:

2018.12.31	0,70%
2019.12.31	0,75%
2020.12.31	1,20%
2021.12.31	1,00%
2022.12.31	8,00%
2023.12.31	0,70%
2024.12.31	0,65%
2025.12.31	0,60%
2026.12.31	0,60%

**Required:**

You are Sophia Bank's new CFO, and your accounting and credit risk department must prepare the relevant financial statements extracts:

- Statement of financial position
- Statement of comprehensive income)

/Statement of changes in equity, Cash-flow statement and Notes are not required now/

related to the financial assets described above according to IFRS9 for the fiscal years ended as of 31.12.2018 and 31.12.2019.

During your solution consider the probable macroeconomic outcomes and their impacts in your workings. Explain your choices (e.g. classification of loans into ECL stages)

For simplification purposes half year discounting is not required now (you may use full year discount factors during your calculations).

Prepare a short presentation (2-3 slides) about the results (you may use the provided template)

Hint: Loan 1 calculations were already completed during the handover with the previous CFO.