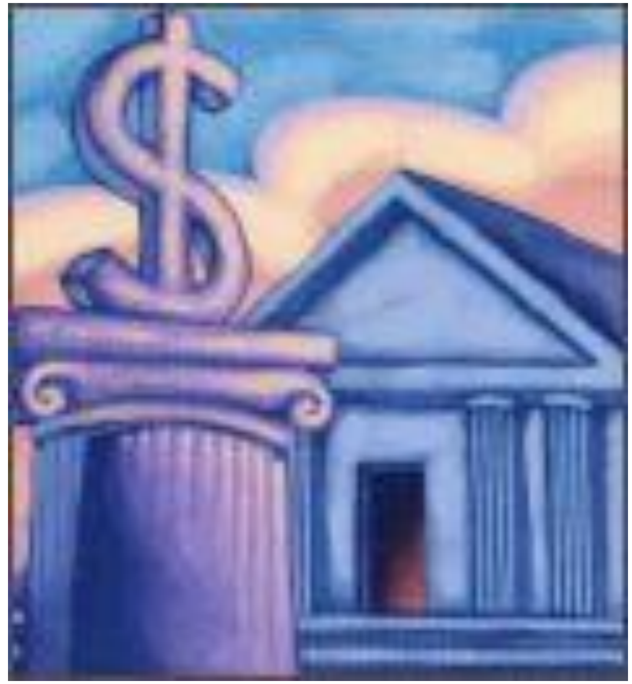
BANKING



Tutorial 2 – Financial statement analysis

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Example II – Bank balance sheet

The financial institution just succeeded in the licensing process and became a BANK (as of 1.1.) with the basic capital of 500 mil CZK. The BANK also managed to issue bonds immediately with the license in the amount of 300 mil CZK, paying 4 % p.a. (paid semi-annualy).
The opening balance of the BANK includes cash balances with the central bank of 600 mil CZK (for simplicity assume zero interest) and a portfolio of long-term loans paying on average 5 % p.a. in the amount of ……..It also invested in 1 000 corporate bonds of ČEZ company for 97 CZK each (1 000 nominal value) in its trading portfolio.

1. Show the opening balance of the BANK, determine the portfolio amount.

Ommit taxes in all cases

Example II – Bank balance sheet, cont.

During the year the BANK made these operations:

- collected deposits in the amount of 200 mil CZK paying on average 1,5 % p.a. (when calculating P/L assume the average amount of deposits during the year 100 mil CZK).
- in March the BANK purchased highly liquid equities of Erste Bank in the amount of 265 mil CZK and sold them in November for 278 mil CZK. In August it also received dividends of 8 mil CZK for these shares.
- As the yields during the year increased, the market price of the ČEZ bonds dropped to 95 at the year end. The BANK received coupon payments in the amount of 6 mil CZK in September.
- The loan exposure did not change during the year.
- The rest of assets were deposited with the central bank.

The bonds issued by the bank were freely traded in the market; the market value dropped to 280 mil CZK at the end of the period (31.12.).

2. Show the P/L calculation of the BANK for the year
3. Show the closing balance of the BANK (as of 31.12.)

Solution to be provided in Excel

Basic corporate financial statements - recap

Basic operations of banks are reflected in the

BALANCE SHEET

The balance sheet is a statement of the assets, what the company **owns**, and liabilities, what the company **owes**. The balance sheet shows (at a certain point in time):

how the cash is invested in the business

- how the assets are balanced with the liabilities
- how the company is financed.

INCOME STATEMENT (P/L)

Profit and loss accounts (income statements) record the trading activities of a company for a given period of time. The profit and loss account:

- compares revenues for the year against the cost of goods sold, and other expenses – disclosing the profit or loss made
- measures the current performance of the business, and shows the turnover and expenses
- shows how the profit was earned and how much was taken in taxation.

CASH FLOW STATEMENT

The cash flow statement reports the net changes in the cash balance and helps to explain **how the surplus or deficit in cash arose**. The cash flow statement has the advantage of being based on hard facts, since its preparation requires no valuation decisions, unlike the income statement. The cash flow statement is:

- a report on the financial effects of all transactions during the accounting period
- a mixture of capital and revenue transactions and is retrospective

Basic classification – cash flow from operating, investing and financing activities

Basic corporate financial statements - recap

Financial statements relationship

Balance sheet

ASSETS	**LIABILITIES**
Net fixed assets	Owner's equity
Operating assets	Long-and short-term debt
Cash	Operating liabilities

Income statement

Revenues
- Cost of goods sold
- Selling, general and administrative expenses
- Depreciation

Operating profit
-/+ Interest income/expense

Income before tax
Income taxes

Net profit (Net income)

Financial ratios analysis

- <u>**Profitability (ROAA, ROEA, NIM…)**</u>
- <u>**Liquidity (quick assets, CA/CL)**</u>
- **Activity (Efficiency) (Asset turnover)**
- **Marketability (Market ratios, P/E ratio)**
- **<u>Leverage</u> (indebtness), (for banks rather <u>capital adequacy</u> ratios)**

Example III – interaction of corporate and bank financial statements

Brothers Smith decided to start their own business by cooking marmelades. They had savings in the amount of 200 which served as their basic capital. Unfortunately it was not enough to start the business so after a detail analysis they were provided a 10Y annuity investment loan by the BANK in the amount of 300, the BANK charges 5% p.a. for the loan, annuity paid yearly. They also asked the bank for a short term operational financing (revolving credit) in the amount of 100. The BANK charges PRIBOR + 0, 5% p.a. for this type of loan.
After Brothers Smith solved the financing, they purchased technology for 300. They also needed a car for distributing marmelades into the shops, so they decided for a short term car rental, paying 20 per year. They also needed the facility where the marmelades will be cooked, so they agreed on the rental payments of the facility in the amount of 200 per year. Finally, they purchased inventories (fruits for180 and sugar for 100).
Assume 1Y PRIBOR rate is 1 %.

Example III – interaction of corporate and bank financial statements

1. Construct the initial balance sheet of Brothers Smiths situation after they have paid for the technology and inventories.
2. Construct the initial sub-balance sheet of the BANK at the same point in time only for balances related Brothers Smith.
3. The business ran well, and after one year after using all the ingredients and paying 100 for electricity and water, they sold CZK 800 worth of marmelade, out of which 700 for cash to many small shops and 100 to a bigger contractor on invoice (was not paid until end of the period). Construct the income statement of the situation. Assume that the depreciation rate of technology was 25% and the applicable income tax rate was 15% and was paid on the 31.12. (simplifying assumption). Ignore any potential interest earned on current account.
4. Construct the end of period balance sheet of the Brothers Smith situation.
5. Construct the cash flow statement of Brothers Smith.
6. Construct the end of period sub-balance sheet of the BANK.

Solution to be provided in excel

Example III – interaction of corporate and bank financial statements

Brothers Smith Annuity calculation

Calculate an instalment for a CZK 300 loan with 10-year maturity, interest rate at 5% and yearly instalments.

Solution

Principal	300
Interest rate	0,05
Maturity	10
Instalments per year	1
Annuity	38,85137

Rok	Splátka/ Instalment	Splátka úroku/ Interest paid	Splátka jistiny/ Principal paid	Zbytek jistiny/ Principal left	Diskontní faktor/ Discount factor	PV splátek / PV of instalments
1	38,85	15,00	23,85	276,15	0,95	37,00
2	38,85	13,81	25,04	251,10	0,91	35,24
3	38,85	12,56	26,30	224,81	0,86	33,56
4	38,85	11,24	27,61	197,20	0,82	31,96
5	38,85	9,86	28,99	168,21	0,78	30,44
6	38,85	8,41	30,44	137,77	0,75	28,99
7	38,85	6,89	31,96	105,80	0,71	27,61
8	38,85	5,29	33,56	72,24	0,68	26,30
9	38,85	3,61	35,24	37,00	0,64	25,04
10	38,85	1,85	37,00	0,00	0,61	23,85
	388,51	88,51	300,00			300,00

Thank you for your attention.