Finance

Where we are?

Firm Infrastructure
Human Resource Management
Technology
Procurement
SUPPORT ACTIVITIES
Inbound Logistics
Operations
Outbound Logistics
Marketing & Sales
Service
Margin
Margin
PRIMARY ACTIVITIES

A company

- Accounting point of view - generally sum of assets (investments) and liabilities (capital)

- Structure of each important

- Financial management (rules, tools)

Means and sources of a company

- Means – concrete composition of the buildings, tools, inventory, accounts receivable, goodwill, know-how, money the company owns (assets)
- Sources – the origin of wealth in a company (capital)

Financial structure

- In the balance sheet
  - shows structure of your assets
  - shows the nature of the capital (structure of financing)

Balance sheet

Example Company
Balance Sheet
December 31, 2017

ASSETS

Investment part

Current assets
Investments
Property, plant, and equipment
Intangible assets

Payment part

Other assets
Total assets

LIABILITIES & OWNER'S EQUITY

Capital part

Current Liabilities
Long-term liabilities
Total liabilities

Owner's equity
Total liabilities & owner's equity

TOTAL ASSETS
Receivables from subscriptions
Fixed assets
Intangible fixed assets
Incorporation expenses
Research and development
Software
Valuable rights
Goodwill (+/-)
Other intangible fixed assets
Intangible fixed assets under construction
Advance payments for intangible fixed assets
Tangible fixed assets
Land
Constructions
Equipment
Perennial corps
Breeding and draught animals
Other tangible fixed assets
Tangible fixed assets under construction
Advance payments for tangible fixed assets
Adjustment to acquired assets
Long-term financial assets
Shares - controlled organizations
Shares in accounting units with substantial influence
Other securities and shares
Loans to controlled and controlling organizations and to accounting unit with substantial influence
Other financial investments
Financial investments acquired
Advance payments for long-term financial assets

Current assets
Inventory
Materials
Work in progress and semi-products
Finished products
Animals
Merchandise
Advance payments for inventory
Long-term receivables
Trade receivables
Receivables from controlled and controlling organizations
Receivables from accounting units with substantial influence
Receivables from partners, cooperative members and association members
Long-term deposits given
Estimated receivable
Other receivables
Deffered tax receivable
Short-term receivables
Trade receivables
Receivables from controlled and controlling organizations
Receivables from accounting units with substantial influence
Receivables from partners, cooperative members and association members
Receivables from social security and health insurance
Due from state - tax receivable
Short-term deposits given
Estimated receivable
Other receivables
Short-term financial assets
Cash
Bank accounts
Short-term securities and ownership interests
Short-term financial assets acquired
Accruals
Deferred expenses
Complex deferred costs

TOTAL LIABILITIES
Equity
Registered capital
Registered capital
Company´s own shares and ownership interests (-)
Changes of registered capital (+/-)
Capital funds
Share premium
Other capital funds
Diferences from revaluation of assets and liabilities (+/-)
Diferences from revaluation in tranformation of companies (+/-)
Differences from transformation of companies (+/-)
Diferences from valuation in transformation of companies (+/-)
Reserve funds, statutory reserve account for cooperatives, and other retained earnings
Legal reserve fund / indivisible fund
Statutory and other funds
Profit / loss - previous years
Retained earnings from previous years
Accumulated losses from previous years
Other profit / loss - previous years
Profit / loss - current year (+/-)
Other sources
Reserves
Reserves under special statutory regulations
Reserves for pension and similar payables
Income tax reserves
Other reserves
Long-term payables
Trade payables
Payables to controlled and controlling organizations
Payables to accounting units with substantial influence
Payables from partners, cooperative members and association members
Long-term advances received
Issues bonds
Long-term notes payables
Estimated payables
Other payables
Deffered tax liability

Short-term payables
Trade payables
Payables to controlled and controlling organizations
Payables to accounting units with substantial influence
Payables from partners, cooperative members and association members
Payroll
Payables to social securities and health insurance
Due from state - tax liabilities and subsidies
Short-term deposits received
Issued bonds
Estimated payables
Other payables
Bank loans and financial accomodations
Long-term bank loans
Short-term bank loans
Short-term accomodations
Accruals
Accrued expenses
Deffered revenues

Balance sheet

Example Company
Balance Sheet
December 31, 2017

ASSETS

Investment part

Current assets
Investments
Property, plant, and equipment
Intangible assets

Payment part

Other assets
Total assets

LIABILITIES & OWNER'S EQUITY

Capital part

Current Liabilities
Long-term liabilities
Total liabilities

Owner’s equity
Total liabilities & owner's equity

Assets 1 of 2

- Fixed assets (investment assets)
  - Usage longer than 1 year
  - Is subject do depreciation
- Current assets (operating)
  - Various forms (material, money, accounts payable)
  - Still changing from one form to another
  - Indicator - Absolute liquidity – ability to change to be used as a payment method

Assets 2 of 2

- Assets structure is derived from:
  - sector and branch of industry
    - (technology, standard values, …)
  - financial policy of the company
    - (aggressive, defensive, strength, …)

Equity

- represents what shareholders own, so it is often called shareholder's equity.
- Equity = Total Assets – Total Liabilities
- The two important equity items are **paid-in capital** and **retained earnings**.

Liabilities

- There are current liabilities and non-current liabilities.
- Current liabilities are obligations the firm must pay within a year, such as payments owing to suppliers.
- Non-current liabilities, meanwhile, represent what the company owes in a year or more time. Typically, non-current liabilities represent bank and bondholder debt.

Investment and financing

Definition

- Investing = bonding the capital in the assets (allows a production process in terms of revolution of current assets)

- Financing = raising money for a business, obtaining capital

Investing on start (assets part)

- Planning necessary think and calculate

Mo — **MUST HAVE**
The most vital things you can't live without

S — **SHOULD HAVE**
Things you consider as important, but not vital

Co — **COULD HAVE**
Things that are nice to have

W — **WON'T HAVE**
Things that provide little to no value you can give up on

Investing in between (assets part)

- Technical vs. Economical lifespan
- Technical
  - How long can machine produce flawless goods
- Economical
  - How long is effective to use the machine according to:
    - Operating costs
    - Revenues higher than interest rate
    - Taxes

Investment calculation

- Static
  1. Cost comparison
  2. Profit comparison
  3. Profitability comparison
  4. Payback comparison
- Dynamic
  1. Net present value (NPV)
  2. Internal rate fo return (IRR)

Static

1. Cost of purchase + cost of planned lifespan
   – (must be same capacity, profit not shown)
2. Profit – comparison of expected profit
3. Profitability – ROA, ROE, ROS
4. Payback of additional costs =

(Cost 2 – cost 1) / (operating cost 1 – operating cost)

Dynamic (NPV)

- NET PRESENT VALUE

$$\sum_{t=0}^{n} \frac{\left(E_t - A_t\right)}{\left(1+i\right)^t}$$

Dynamic (IRR)

- Internal rate of return – NPV = 0

$$\sum_{t=0}^{n} \frac{\left(E_t - A_t\right)}{\left(1+r\right)^t}$$

Financing (capital part)

- Own capital (equity)
- Foreign capital (liabilities – debt, credit…)
- Alternatives – leasing

- Strategic planning and calculating necessary (there are rules)

Financing

- **Debt financing vs. Equity financing**
- **Debt financing (capital)** – source of investment rely on borrowed funds
- Sources of debt capital: banks, credit unions, relatives and friends
- **Equity financing (capital**) – selling shares of the company to investors
- Sources of equity capital: relatives and friends, business angels and venture capitalists, partners

Key planning factors of capital

- Own sources (equity)
  - Will of owners to invest
  - Legal necessity
  - Profit generation ability
  - Dividend policies (profit parting)
- Foreign sources (debt)
  - Long term liabilities (mother company)
  - Short term liabilities (terms of payments of accounts payable and receivable)
  - Sum of liabilities of the company (for accepting further credit)

Financing (rules 1)

Gold rule of financing

- There should be match between the time of the bonding of the capital in assets and the time of the availability of the capital for their purchase

Gold balance rule

- narrow definition – fixed assets should be financed by equity, current assets by debts
- wide definition – fixed assets should be financed by long term debts, current assets by the short term ones

Financing (rules 2)

- Vertical capital structure
- Share among the equity and foreign capital should be 1:1 (leverage ratio – debt to equity)

Financing (rules 3)

- assets = liabilities
- long term assets = long term liabilities
- long term assets = own capital

- Foreign capital = own capital
- ROE!

Financial statements 1

- So far we have been talking about balance sheet (the structure of assets and liabilities)

Financial statements 2

- There are also
  - Profit and loss statement
  - Cash flow statement
  - Annual report
  - Auditor comment

Profit and loss statement

Example Corporation
Income Statement
For the year ended December 31, 2017

Sales (all on credit)	$500,000
Cost of goods sold	380,000
Gross profit	120,000
Operating expenses	
Selling expenses	35,000
Administrative expenses	45,000
Total operating expenses	80,000
Operating income	40,000
Interest expense	12,000
Income before taxes	28,000
Income tax expense	5,000
Net income after taxes	$ 23,000
Earnings per share (based on 100,000 shares outstanding)	$ 0.23

- Shows how the assets are working in you company – effectivity
- Revenue – expenses = Income
- Measure the performance over specific period of time

Cash flow statement

- Shows how stable you are in the short run.
- Shows inflow and outflow of money.

Annual report and auditor comment

- Annual report
  - Describes what really happened in the company, what were the plans, what is the accounting standard etc.
- Auditor comment
  - Verifies that statements are ok from point of accounting accuracy etc.

Financial statements 3

- All of them are very important source of information about what happened in your company.
- In the Czech Republic – companies in business register of specific size MUST publish statements!
- Used for tax purposes
- Used for financial planning
- Used for financial analysis…

Financial analysis

Sources of information

- Accounting of a company (reliable, auditors chamber revision)
- National statistics
- Statistics of ministries/departments
- Accounting of competition

„Meating“ a problem

- Verified accounting does NOT mean that you have no problem and it will be easy
- Accounting standards are different across Europe
- Czech Standards vs. ___________ standards vs. IFSR vs. US GAAP

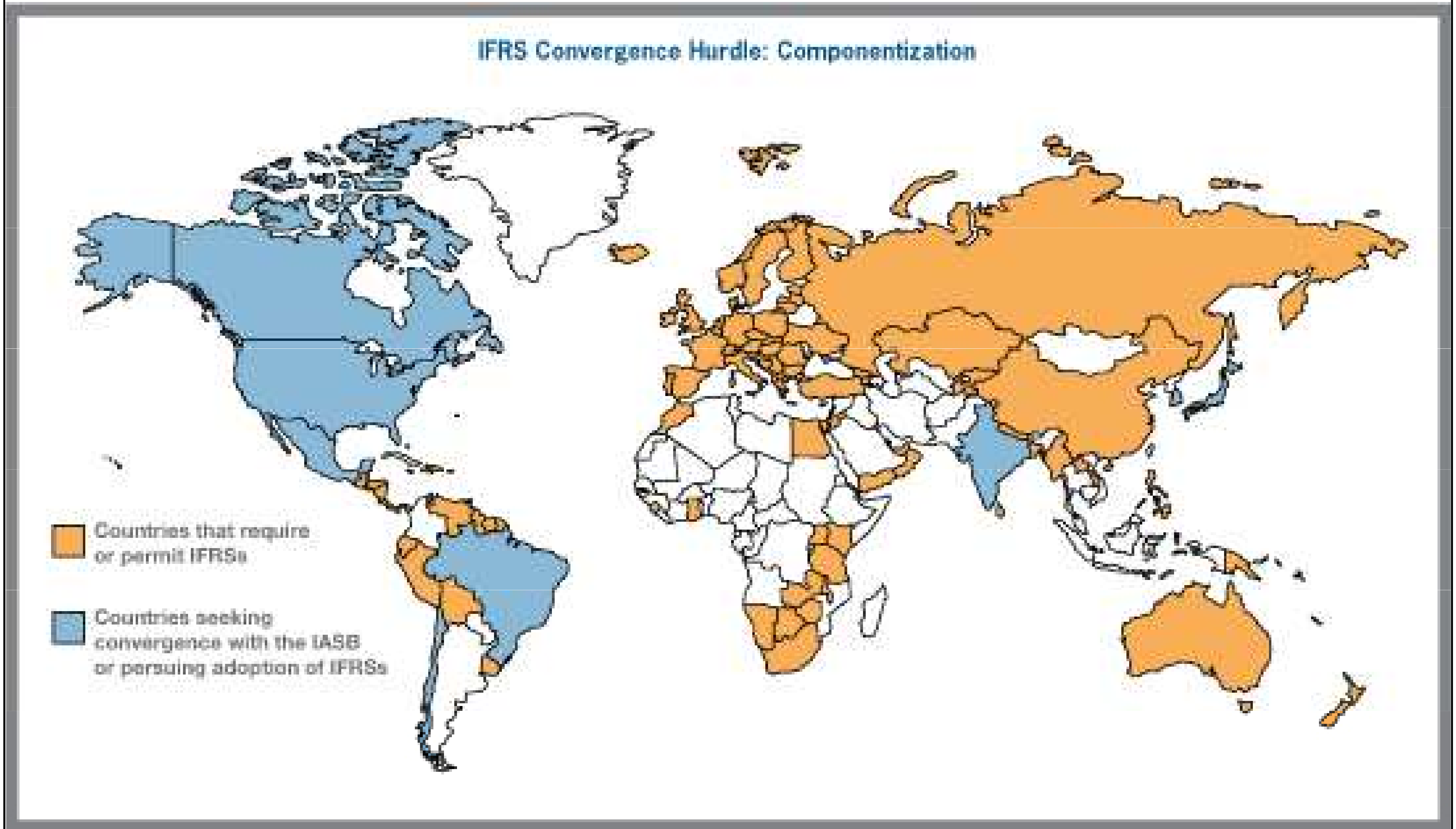
Ing. Dagmar POLEŠÁKOVÁ
AUDITOR
číslo oprávnění: 0564

Afghanistan	Denmark	Latvia	Rwanda
Albania	Dominica	Lesotho	Saint Lucia
Angola	Dominican Republic	Liechtenstein	Saudi Arabia
Anguilla	Ecuador	Lithuania	Serbia
Antigua and Barbuda	Egypt	Luxembourg	Sierra Leone
Argentina	El Salvador	Macao	Singapore
Armenia	Estonia	Macedonia	Slovakia
Australia	European Union	Madagascar	Slovenia
Austria	Fiji	Malaysia	South Africa
Azerbaijan	Finland	Maldives	Spain
Bahamas	France	Malta	Sri Lanka
Bahrain	Georgia	Mauritius	St Kitts and Nevi
Bangladesh	Germany	Mexico	St Vincent and th Grenadines
Barbados	Ghana	Moldova	Suriname
Belgium	Greece	Mongolia	Swaziland
Belarus	Grenada	Montserrat	Sweden
Belize	Guatemala	Myanmar	Switzerland
Bermuda	Guinea-Bissau	Nepal	Syria
Bhutan	Guyana	Netherlands	Taiwan
Bolivia	Honduras	New Zealand	Tanzania
Bosnia and Herzegovina	Hong Kong	Nicaragua	Thailand
Botswana	Hungary	Niger	Trinidad & Tobago
Brazil	Iceland	Nigeria	Turkey
Brunei Darussalam	India	Norway	Uganda
Bulgaria	Indonesia	Oman	Ukraine
Cambodia	Iraq	Pakistan	United Arab Emirates
Canada	Ireland	Palestine	United Kingdom
Cayman Islands	Israel	Panama	United States
Chile	Italy	Paraguay	Uruguay
China	Jamaica	Peru	Uzbekistan
Colombia	Japan	Philippines	Venezuela
Costa Rica	Jordan	Poland	Vietnam
Croatia	Kenya	Portugal	Yemen
Cyprus	Korea (South)	Romania	Zambia
Czech Republic	Kosovo	Russia	Zimbabwe

IFRS

- The 116 jurisdictions in blue require IFRS for all or most domestic publicly accountable entities (listed companies and financial institutions).
- Jurisdictions that permit or require IFRS for at least some domestic publicly accountable entities are in grey.
- Jurisdictions that do not require or permit IFRS for any domestic publicly accountable entities are in white.

IFRS MAP


IFRS Convergence Hurdle: Componentization
Countries that require or permit IFRSs
Countries seeking convergence with the IASB or persuing adoption of IFRSs

Sources
case study in the Czech Republic

- www.justice.cz – business register with financial data of competition and.... you!
- Mpo.cz – Ministry of industry and trade (sector statistics for industry)
- www.czso.cz Czech statistical office
- www.magnusweb.cz – source of financial data of competition
- Bloomberg terminal FEA MU – source of financial data

Full financial analysis steps

1. Absolute indicators analysis (percentage, vertical analysis)
2. Calculation of relative indicators (ratios)
3. Comparison of these indicators (rations) to business sectors and branches (how?)
4. Evaluation of indicators and values in time (trends, horizontal analysis)
5. Evaluation of relations of these indicators (USA Du-Pont, CZE – pyramid settings of indicators)
6. Analysis of strengths and weaknesses and proposal of measures

Financial analysis

- For evaluation of financial health
- Indicators of rentability and profitability
- Indicators of debtness
- Indicators of solvency
- Indicators of external market evaluation

1. Absolute indicators

- Percentage of fixed assets and current assets
  - Is your company capitally strong of weak?
  - What is structure of your assets?
  - Is there any risk of bancrupcy?
  - What should we prioritize in planning?
  - Do I make profit? (just yes/no answer, but does not show how good I am)

2. Calculation of relative indicators (ratios)

THIS IS THE CORE OF FINANCIAL ANALYSIS

- For evaluation of financial health
  – Indicators of profitability and profitability
  – Indicators of activity
  – Indicators of debtness (financial leverage)
  – Indicators of solvency (liquidity)
  – Indicators of external market evaluation

Profitability

- Relation between investment and return
- Simple fraction but…
- What is return?
- Return is earning?
- Which one?

Earning
Earing before interests, taxes, depreciation and amortization (EBITDA)
- Depreciation and amortization

Earning before interest and taxes (EBIT)
- Interests

Earning before taxes (EBT)
- Taxes

Earning after taxes (EAT)

Profitability ratios

- ROA = EBIT/assets
  - (how profitable my assets are)
- ROS = EAT/sales
  - (how good I am in the comparable industry)
- ROE = EAT/equity
  - (how much I earn of my money)
- ROCE, ROI, RO…..whatever
- Optimal? Higher the better…

Activity 1 of 2

General activity indicator

- Turnover of total assests = sales(revenues) / total assest
  - (productivity of assets, **Optimal: good if ≥1**)

Financial and production indicators (important in shops)

- Turnover of current assets = sales/ current assets (mostly inventory = inventory turnover – „number of purchasing to warehouse“)
- Time of turnover = 365/turnover of current assets
- **Optimal depends on industry and technology.**

Activity 2 of 2

- Financial stability (cash flow)!
  - Turnover ratio of accounts payable (TAP) and turnover ratio of accounts receivable (TAR)
- TAP (TAR) = sales / average AP(AR)
- Time of turnover = 365/TAP
- **Optimal? TAP ≥ TAR**

Debtness (financial leverage) 1 of 2

- Related to the extend to which a firm relies on debt financing rather than equity, Important! – Who is the creditor!
- Debt ratio (creditor risk) = total debts / total assets
  - (risk ratio for anybody to lend you money)
- Leverage(debt to equity) = equity / foreign capital
  - (Is your company stable and still “yours”?)
- Interest coverage = Earning (EBIT) / interest expense
  - (Are you able to cover necessary expenses or have to sell building? ☹)

Debtness (financial leverage) 2 of 2

- Optimal? According to rules of capital structure!
- **Debt ratio (creditor risk) ≤ 1**

- **Leverage(debt to equity) = 1 : 1**
- **(standard world-wide - 60:40)**

TERM - Liquidity

- **Liquidity (absolute)**- describes the degree to which an asset or security can be quickly bought or sold in the market without affecting the asset's (investopedia.com)

- **Liquidity (relative)** – ability of the company to pay all accouts payable in the proper terms

Indicators of solvency (liquidity) 1 of 3

- Ability of a company to fulfil the requested payment on time (pay off accounts payable)
- Based on relation of current assets and short term liabilities
- Short term liabilities (accounts payable)
- usually from core business activity
- Liabilities to external subjects

Indicators of solvency (liquidity) 2 of 3

- Current ratio = current assets/ short term liabilities

- Quick ratio (acid test) = (current assets- inventory)/ short term liabilities

- Cash ratio = financial assets (cash, bank account)/ short term liabilities

Indicators of solvency (liquidity) 3 of 3

- **Optimal? Depends on strategy…**

	aggresive	normal	defensive
cash	0,2	0,2	0,2
quick	0,4-0,7	0,7-1	1-1,5
current	under 1,6	1,6-2,5	over 2,5

Indicators of external market evaluation

- Only for marketed companies (in CZE 19 companies)
- P/E ratio – price/earning ratio = market price of share/ EAT per share

- Share rate (market/book ratio) = market price/nominal price (book value)

- EAT per share (EPS) = EAT/number of shares

- Dividend yield = dividend/share price

3. Comparison of these indicators (rations) to business sectors and branches (How?)

- Find appropriate competition, fnd average industry values…then compare
  - www.justice.cz – business register with financial data of competition and…. you!
  - Mpo.cz – Ministry of industry and trade (sector statistics for industry)
  - www.czso.cz Czech statistical office
  - www.magnusweb.cz – source of financial data of competition
  - Bloomberg terminal FEA MU – source of financial data

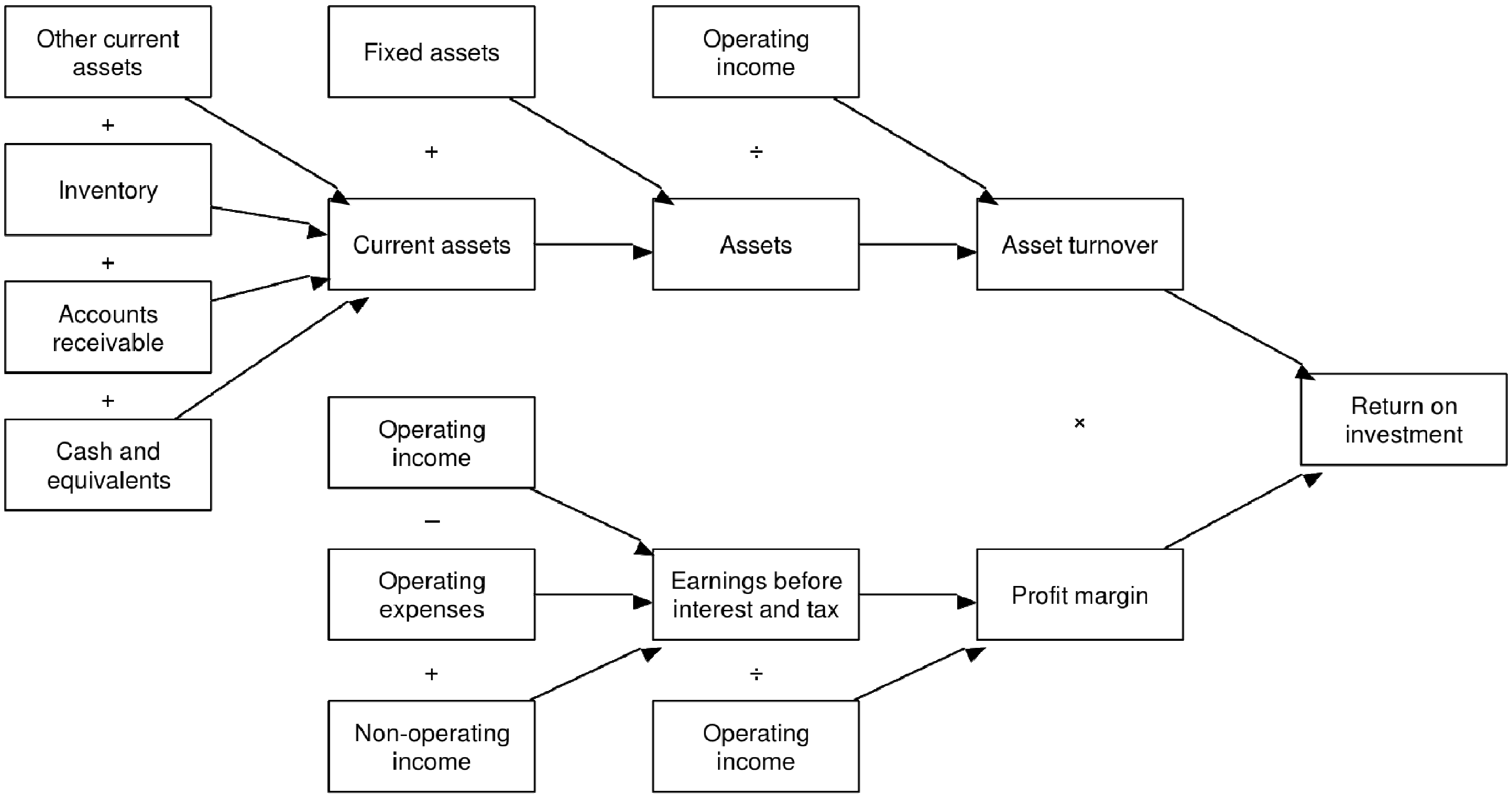
4. Evaluation of indicators and values in time (trends, horizontal analysis)

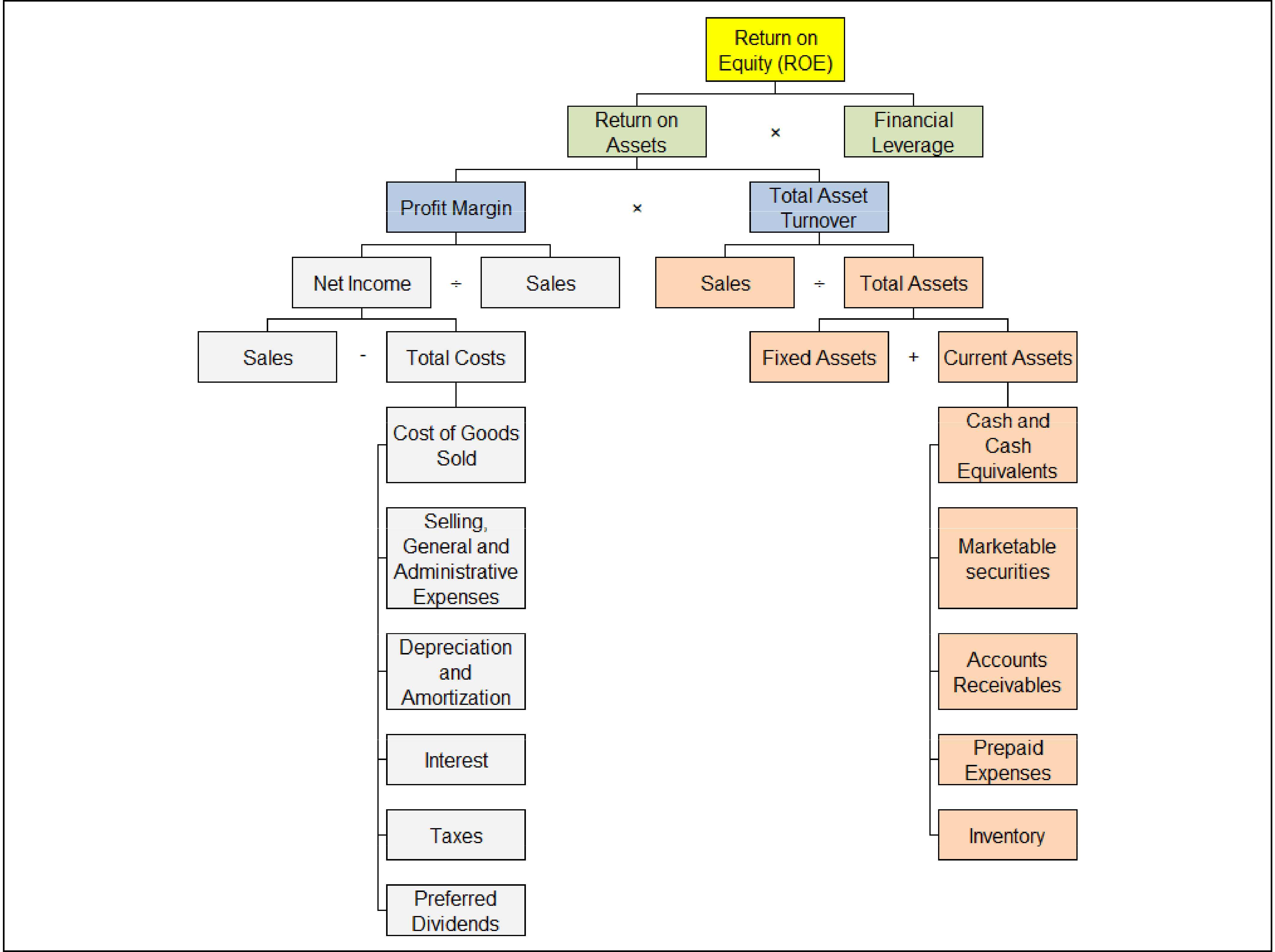
- What it means?
- What is the reality?
- What happened?
- What can be done?

5. Evaluation of relations of these indicators (USA Du-Pont, CZE – pyramid settings of indicators)

- Basically disassembling the top level indicator to individual indicators, used for analysis of sensitivity of top level indicator

DuPont Model




Return on Equity (ROE)
Return on Assets
×
Financial Leverage
Profit Margin
×
Total Asset Turnover
Net Income
÷
Sales
Sales
÷
Total Assets
Sales
-
Total Costs
Fixed Assets
+
Current Assets
Cost of Goods Sold
Selling, General and Administrative Expenses
Depreciation and Amortization
Interest
Taxes
Preferred Dividends
Cash and Cash Equivalents
Marketable securities
Accounts Receivables
Prepaid Expenses
Inventory

6. Analysis of strengths and weaknesses and proposal of measures

- Problems?
- How to solve them?
- Do we have adequate means to solve it?

Common problems

- Low profitability – too much assets
- Bank will not finance us – too much debt
- We can not pay employees – liquidity
- Are we having a lot of assets?
- Sell off, factoring, reversal leasing…

Time to

Earning After Taxes

EAT

Enjoy your quick lunch