Financial Accounting

1: IFRS Basics

1.1 Differences US & Germany

	US GAAP	German GAAP
Level of disclosures	high	low
Number of Explicit Choices	low	high
Major principle	True and fair view	Prudence, conservatism
Level of recognised items	Rather hgh	low
Fair Value orientation	medium	low
Type of standards	Rules based	Principles based

Strong differences resulting in difficulties for common standard.

Reasons for Convergence
- Internationalization of capital markets
- Globalisation of economies and companies

1.2 IFRS & IASB

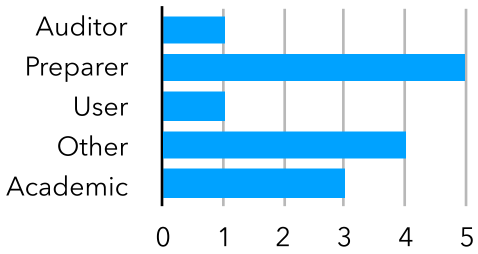
IASB (International Accounting Standards Board) History
1973 Foundation of IASC as a private Organisation in London, issuing IAS
1987 Cooperation woth IOSCO (Organization uniting BaFin, SEC, ESMA, etc.)
2001 Rebranding International Accounting Standards Board (IASB) & International Financial Reporting Standards (IFRS)
2002 European Union chooses for IAS Regulation for all EU listed firms by 2005
2005 IAS Regulation in effect (EU)
2006 MoU for convergence of IFRS & US GAAP
2007 SEC allows foreign firms listed in US to use IFRS
2017 IFRS required in 126 countries arround the world

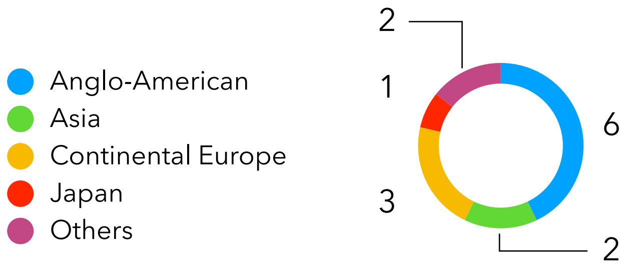
Mission of IASB
- transparency by international comparability
- accountability by reducing information gap between investors and companies
- economic efficiency by higher tranparency resulting in improved asset allocation
- reduce cost due to lower amount of different accounting standards

Funding of IASB

Overall Budget: 25,4£ (2017)
How independent is IASB?

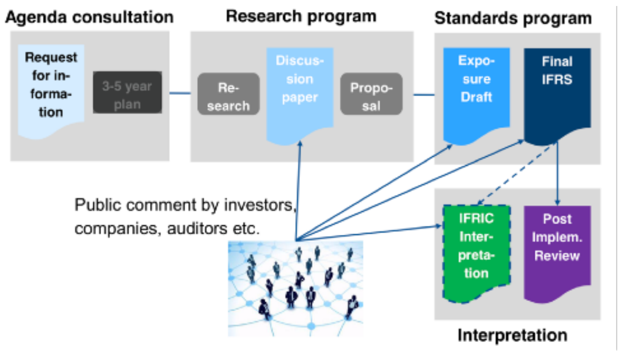
Members of IASB

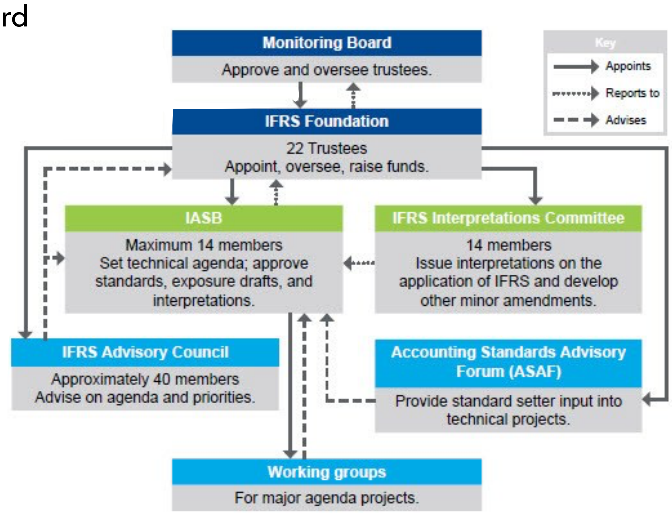




Organizational Structure & Process for a Standard

- More than just IASB





International Accounting in Germany

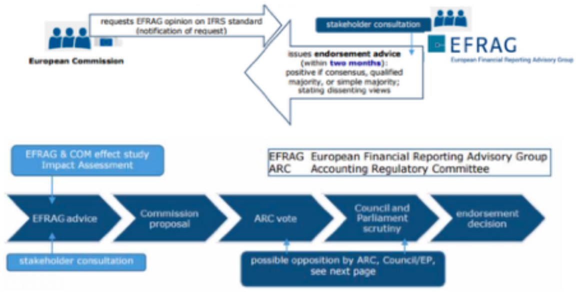
90s	multinational companies referred to IAS or US GAAP
1998	Capital Raising Act: Option to apply IAS or US GAAP
2005	mandatory application of IFRS in consolidated accounts for listed companies

IAS Regulation - Implementation in Germany

	Consolidated financial statements (legal entity and all subsidaries)	Individual financial statements (only legal entity)
Publicly traded companies (= shares or bonds on regulated market)	Obligatory to apply EU endorsed IFRS rules	Option for IFRS financial statement (in addition to GER GAP for determining dividends)
Non-publicly traded companies	Option for firms	Option for IFRS financial statement (in addition to GER GAP for determining dividends)

IAS Regulation – Endorsement Process

- European Unions wants to check Regulations before validation in Europe
- Requirements:
  1. not contrary to ‚true and fair view' principle
  2. conductive to EU public good
  3. understandible, relevant, reliable & comparable principles



IAS Regulation Enforcement in Germany

Two-tier enforcement mechanism

1. Fincial Reporting Enforcement Panel (Dt. Prüfstelle für Rechnungslegung (DPR)); private
2. Federal Financial Supervisory Authority (Bundesanstalt für Finanzdienstleistungsaufsicht (BaFin); federal authority

Sanction: error announcement required by BaFin

IFRS for SMEs

Standards for emerging countries with lower complecity (not applicable in Germany)

Hierarchy of IFRS

1. Standards (IAS or IFRS) and interpretations (SIC, IFRIC)
2. Standards and interpretations dealing with similar or related issues
3. Conceptual Framework for definition, recognition criteria and measurement
4. Accepted industry practices, accounting literature and other standard-setters using similar Conceptual Framework

Conceptual Framework

- Purpose: assistance for IASB, preparers and others for consistence & interpretation
- Revised in 2018

1.3 Financial Statements

Financial Statements

- Statement of Financial Postion (= balance sheet)
- Statement of Performance (= income statement)
- Statement of Changes in Equity
- Statement of Cash Flows
- Notes (summary of significant accounting policies & other explanatory information)

Assets

- resource controlled by the enterprise
- result of a past event
- future economic benefits are expected

Current Assets:

- expected to be realised in the entity's normal operating cycle or within 12 month after reporting period
- held primarily for the purpose of trading
- cash and cash-equivalents

Non-current Assets

- all other assets

Equity

- residual interest in the assets after deducting all its liabilities (= assets - liabilities)
- recognition: probable future economic benefit associated with the item, cost can be measured with reliability

Liabilities

- present obligation of the enterprise (against outsiders)
- arising from past event
- outflow of ressources embodying economic benefits

Current Liabilities

- expected to be settled within the entity's normal operating cycle or within 12 month
- held for the purpose of trading
- entity has not right to deffer settlement beyond 12 month

Non-current Liabilities

- all other liabilities

Further definitions

- Operating Cycle
  > for supermarkets selling fruit & vegetables: 1-3 days
  > for shipyards: 2-5 years
- Trading purpose
  > buying other companies shares for sepculative purposes (= trading)
  > buying other companies shares for long-term relationship (= non-trading)
- Cash & Cash-Equivalent: coins, cash in saving accounts etc.

Income

- increases in economic benefits
  > inflows
  > enhancement of assets
  > decrease of liabilities that result in increases in equity

Expense

- decrease in economic benefits
  > outflows
  > depletion of assets
  > incurrences of liabilities that result in decreases in equity

Financial Statement

<table>
<tr><td colspan="3">Changes in equity: (1) + (2) + (3)</td></tr>
<tr><td colspan="2">Total comprehensive income: (1) + (2)</td><td rowspan="2">(3) Transactions with shareholders or restatements</td></tr>
<tr><td>(1) Profit or Loss for the period</td><td>(2) Other Comprehensive Income</td></tr>
</table>

Missing: consistend concept for differentiating changes in equity to be recognized in (1) or (2).

- Recycling P&L – OCI Shifting OCI to P&L (further details regulated in special standards)
- Options for presentation:
  > One statement approach: a single statement including P&L and OCI in two sections
  > Two statement approach: a seperate P&L and a statement of OCI beginning with P&L
- Statement of Changes in Equity incl. total comprehensive income, transactions with shareholders, restatement
- Statement of Cash Flows: changes in cash and cash-equivalents
  > Classification: operating, investing, financing
- Notes
  > basis of preparation (which standards)
  > specific accounting policies (options used)
  > other information required by IFRS
  > relevant information for an understanding

1.4 Asset Overview

Inventories

- Raw materials, work-in-process products and finished products used for sale/production
  > e.g. steel, computer chips

Investment Property

- Land and buildings held for capital appreciation and/or to earn rentals
  > e.g. appartment building

Property, plant and equipment (PPE)

- Tangible assets which are used for production or administrative purposes
  > e.g. factory buildings, machines

Financial Assets

- Non-physical assets that derive value because of a contractual claim
  > e.g. stock, options, bonds, cash

Intangible Assets

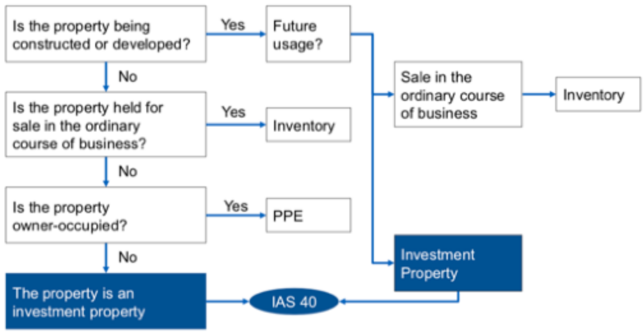
- Non-monetary assets without physical substance which are used for production or administrative purposes
  > e.g. software, licenses, patents

2: Investment Property

2.1 Overview

Relevant Standard
IAS 40: Investment Property

Definition:
Property (land/building) held to earn rentals or for capital appreciation, rather than for
- use in the production or supply of goods or services or for administrative purposes
- sale in the ordinary course of business



Examples
- Land held for long-term capital appreciation
- Land held for undetermined future use
- Buildings held for rental income

2.2 Recognition

Recognition Criteria
- Future economic benefits are probable
- Cost can be measuren reliably

2.3 Measurement

Intitial Measurement: Measurement of cost

Cost of Purchase	Cost of Construction
+ Purchase price	+ Cost of materials
+ Duties & non-refundable taxes	+ Cost of conversion
- Discounts	

\+ Costs attributable to bring asset to locaction & condition for it to be capable of operating
+/- Borrowing costs (for qualifying assets [IAS 23] only)
\- Government grants

= Cost of an item of investment property

Intitial Measurement: Government grants (IAS 20)
- recognized when reasonable assurance to receive grant and to fulfill any conditions
- recognized as one deduction OR recognized as deffered income

Initial Measurement: Borrowing costs (IAS 23)

- Qualifying asset: needs to take a substantial period of time to get ready for its intended use or sale (therefore Investment Property
- Can be added into costs during construction period
  > as actual interest costs
  > as calculated costs

Subsequent Measurement

Cost model (IAS 40.56)	Fair value model (IAS 40.33 ff.)
- Cost less any accumulated depreciation and any impairment losses - Fair value shall be disclosed in the notes	- Annual measurement at fair value - Gain or loss shall be recognized in profit or loss

- Choice must be applied to all investment property
- Change from fair value model to cost model not allowed

Subsequent Measurement: Cost model

Depreciation
- Depreciation begins, when it is available for use
- Depreciation runs over an asset's useful life
- Depreciable amount: cost of an asset less its residual value
- Depreciation method shall reflect the way economic benefits are expected to be consumed

Depreciation methods
- Straight-line: each year the same amount
- Diminishing balance
- Sum of units/machine-hours

Impairment
- Impairment loss occur, when assets carrying amount exceeds its recoverable amount
- Recoverable amount: Higher of
  > Net selling price: amount, the asset could be sold less any direct selling costs
  > Value on use: present value of future cash flows from assets use
- External indicators: falling market value, regulatory, change in market
- Internal indicators: physical damage, obsolence, loss of key personnel

Subsequent Measurement: Fair value model

Definition: price that would be received to sell an asset in orderly transaction
Levels:
1. Quoted prices in active markets for identical assets
2. Other observable (market) data (e.g. prices for similar assets, prices on non-active markets)
3. Non-observable data (estimated/calculated)
   > include: current market conditions, expected cash in- and outflows
   > exclude: transaction cost of sale, expected cash in- and outflows for/after improvement

Retirement and disposal

- Derecognize on disposal or when permanently withdrawn from use & no future economic benefits expected
- Difference between carrying amount is income or expense

2.4 Disclosure

Fair value model
- Reconciliation (all value changes made)
- Information on property, for which fair value cannot be determined
- Whether properties held under operating leases are classified as investment property

Cost model
- Reconciliation (all value changes made)
- Fair value, respectively information on property for which fair value cannot be determined

- criterias two distinguished between investment property & owner occupied property or inventory
- methods, significant assumtions to determine fair value
- Rental income, operating expense

3: Property, plant & equipment

3.1 Overview

Relevant Standard
IAS 16: PPE

Definition:
Tangible items that
- Are held for use in the production of goods/services or for administrative purposes
- Expected to be used during more than one period

Examples
- Entity owned factory building used for manufacturing its products
- Entity owned vehicle fleet used by the sales staff for their duties/private use

3.2 Recognition

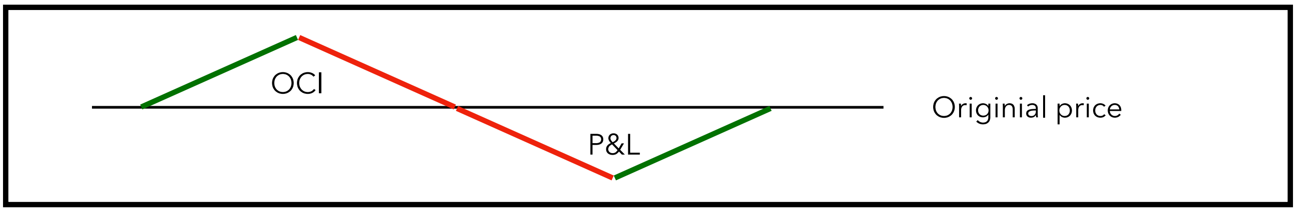
Recognition Criteria
- Future economic benefits are probable
- Cost can be measuren reliably
- Component approach
  > each part of PPE with significant cost in relation to total cost is reconized and depreciated separately
  > party with same useful lifes an depreciation may be grouped (e.g. airplane: engine, interior)

2.3 Measurement

Intitial Measurement
- Purchase price

Subsequent Measurement
- Choice between Cost Model (s.a.) and Revaluation Model

Subsequent Measurement
- Revalued amount: fair value less any subsequent accumulated depreciation & subsequent impairment losses
- Accounting changes in value:



- Frequency: when fair value differs materially from carrying amount

2.4 Disclosure

Generally

For each class of property/plant/equipmant):

- Depreciation methods
- Gross carrying amount and accumulated depreciation
- Reconciliation of carrying amount (table of changes in PPE (dt. Anlagespiegel))

Addition disclosures for items stated at revalued amounts

- Fair value: effective date, methods and significant assumtions for calculation/estimate
- Whether independent value was involved
- Carrying amount under cost model

4: Intangibles

4.1 Overview

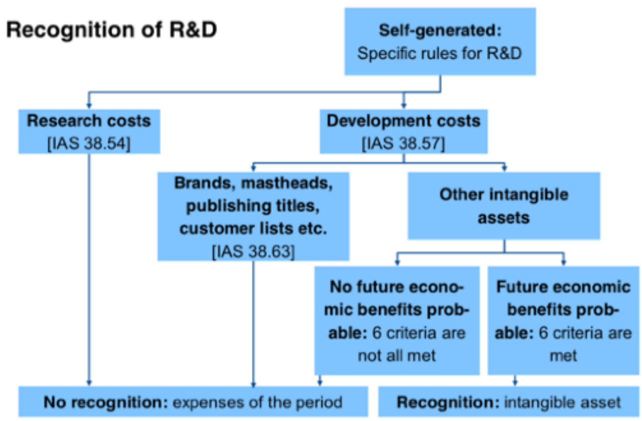
Relevant Standard
IAS 38: Intangible Assets

Definition:
Intangible Asset: identifiable non-monetary asset without physical substance
Three ciritical attributes
1. Identifiability (separable or arises from legal/contracautal rights)
2. Control (power to obtain benefits)
3. Future economic benefits

Examples
- Exlusive license to operate particular food-store in specified jurisdiction under as franchise
- Patented technology, trademarks
- Computer software, databases

4.2 Recognition

Recognition Criteria
- Future economic benefits are probable
- Cost can be measuren reliably
- Differentiation
  > aquired assets: probability is assumed to be fullfilled
  > self-generated assets: specific requirement for R&D costs



Recognition: Research and Developent
- Research: activities aimed at obtaining new knowlade, search for application of research findings/knowledge
- Development: application of research findings/knowlede
- If research phase and development phase cannot be distinguished > research

Recognition: Prohibition of recognizing self-generated Intangible Assets
Following items are probhibited from recognition
- Brands, Pubishing titles, Customer lists, Items similar in substance
- cost, which have to be expensed: start-up (pre-opening) costs, training cost, advertising

4.3 Measurement

Initial Measurement
- Cost

Subsequent Measurement
- Cost Model: cost less any accumulated amortization/accumulated impairment losses
- Active Market > Revaluation Model: fair value less any subsequent accumulated amortization/ accumulated impairment losses

Subsequent Measurement: Cost Model
- Straight-line method

Definite useful life
- Intangible from contractual/legal rights: Amortization over period of contractual/legal rights and impairment tests upon indications
- Other Intangible: Amortization over useful life and impairment test upon indications

Indefinite useful life (no foreseeable limit to the time, the asset generated net cash inflows)
- Impairment only approach: no amortization, impairment test annualy and upon indication

Subsequent Measurement: Revaluation Model
- Active market needed (uncommon)

4.4 Disclosure

Generally
- Useful life or amortization rate
- Amortization method
- Gross carrying amount
- Accumulated amorization and impairment losses
- Items in income statement, in which amortization is included
- Reconcilation of carrying amount
  > additions, retirements and other disposals, revaluations, impairments, reversal of impairm.
- Basis for determining indefinite life
- Description and carrying amount of individually material intangible assets
- Information about intangibles whose access is restriceted
- Contractual commitment to acquire intangible assets
- Intangible assets carried at revalued amounts
- Amount of research and development expenditure recognized as an expense

5: Inventories

5.1 Overview

Relevant Standard
IAS 2: Inventories

Definition:
Assets that are
- Held for sale in the ordinary course of business
- In the process of production for such sales
- In the form of materials or supplies to be consumed in the rendering of services

Examples
- Merchandise
- Finished goods
- Production supplies

5.2 Recognition

Recognition
Mandatory recognition when
- Criteria for assets are fulfilled
- Criteria for recognition are fulfilled
  > can be measured reliably
  > future economic benefits are probable

5.3 Measurement

Initial Measurement
- Cost of purchase
- Cost of conversion
- Other costs directly attributable to bringing the inventories to their present location and condition
- Borrowing costs: option, when qualifying asset
- Government grants

Initial Measurement: Technique for Cost
- Weighted average cost
- First-in-first-out (FIFO)
- <u>Not</u> allowed: LIFO

Subsequent Measurement

Lower of Cost and Net realisable value (NRV)

NRV:

- Estimated selling price (Fair Value) less the estimated costs of completion and estimated costs necessary to make the sale
- Determining:
  > Basically: market-based view
  > Exception: for supplies replacement costs may be the best available measure of their NRV
- Write downs
  > recognized in profit or loss
  > determined on an item by item basis (sometimes on a group basis)
- Reversal of write-downs if circumstances no longer exist

5.4 Disclosure

Generally

- Accounting policies adopted in measuring inventories (incl. cost formula used)
- Total carrying amount of inventories and the carrying amount in classifications appropriate to the entity
- Carrying amount of inventories at fair value less costs to sell
- Amount of any write-down of inventories
- Amount of any reversal of any write-down

6: Provisions

6.1 Overview

Relevant Standard
IAS 37: Provisions, Contigent Liabilities and Contigent Assets

Definition:
- Liability of uncertain timing and/or amount

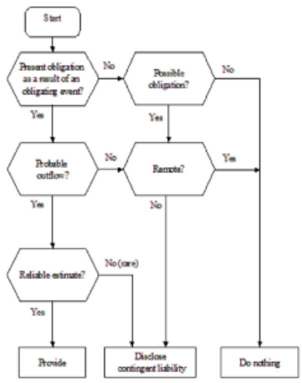
Examples
- Guaranties/warranties
- Land contamination
- Pending lawsuits
- excl. leases & pensions

6.2 Recognition

Recognition
- Present obligation (legal (e.g. contracts, legislation), constructive (e.g. warranties)
- Arisen as a result of a past event
- Outflow of economic benefits is probable (‚more likely than not')
- Amount can be estimated reliably

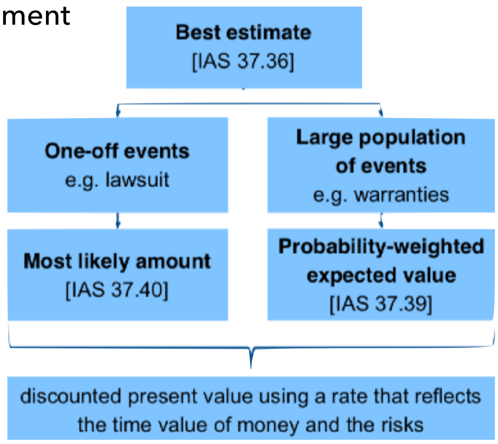
Recognition Contigent Liability
- Possible obligation depending on uncertain future event to occur

or
- Present obligation but outflow of economic benetifts is <u>not probable</u> or amount <u>cannot</u> be measures reliably
- Probability of outflow is not only remote



6.3 Measurement

Initial Measurement



Initial Measurement: Reimbursement

dt. Erstattungen

- Some (or all) of the expenditure required to settle a provision is expected to be reimbursed by another party (e.g. insurance company)
- Reimbursement is recognised as separate asset, when it is sure, that it is received
  > that amount should not exceed the amount of the provision

Subsequent Measurement

- Review and adjust provisions at each subsequent balance sheet date
- Outflow no longer probable > provision is reversed

6.3 Disclosure

Generally

For each class of provision:

- Nature
- Timing
- Uncertainties
- Assumptions
- Reimbursement (if any)

7: Financial Instruments

7.1 Overview

Relevant Standard

IAS 32: Financial Instrument - Presentation
IFRS 9: Financial Instruments
IFRS 13: Fair Value Measurement
IFRS 7: Financial Instruments - Disclosures

Definition:

Any contract, that gives rise to a financial asset of one entity and a financial liability or equity instrument of antoher entity.

Examples

Assets

- Cash: EUR, USD, Yen, etc.
- Equity Instruments of another entity: Shares of a Company
- A contractual right to receive cash or another financial asset: deposits, treasury, company bonds, account reveivables
- A constracual right to exchange financial asset/liabilities under conditions that potentially favourable: Forwards & Options (Derivatives)

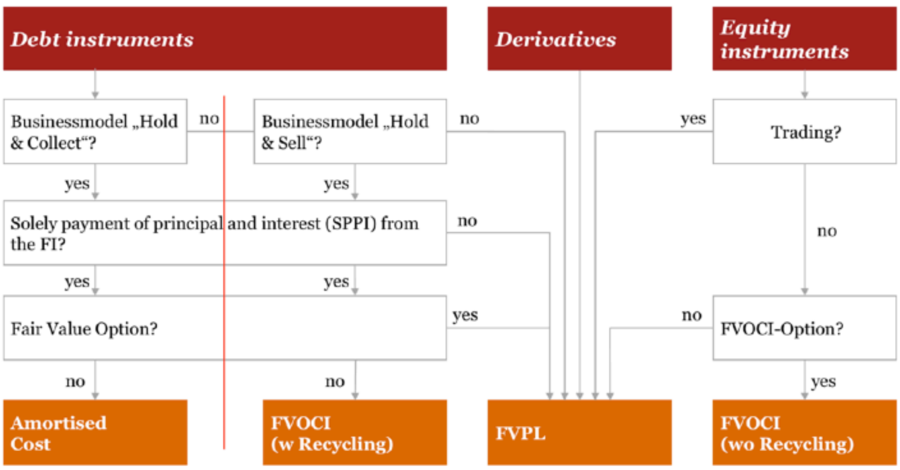
Liabilities

- Contracutal right to deliver cash or another financial asset to another entitiy: account payable, bankloans, issuing a bond
- Contractual obligation to exchange financial assets or financial liabilities with another entity under conditions that are potentially unfavorable to the entity: FX, Commodity Forwards, Options with negative Fari Value

7.2 Recognition

Recognition

All financial instruments are recognized when the entity becomes a party to the contractual provisions of the instrument.



7.3 Measurement

Initial Measurement

Fair Value plus/minus transaction cost
> correspondent with payment amount (most cases)

Subsequent Measurement: Financial Assets

Categorie	FVPL	FVOCI w. recy.	FVOCI wo. recy.	Amortised Cost
Initial recognition	Fair Value	Fair Value & transaction cost	Fair Value & transaction cost	Fair Value & transaction cost
Subsequent measurement	Fair Value	Fair Value	Fair Value	Amortised Cost
Fair Value Change	Through P&L	Not affecting P&L (> OCI with recylcling)	Not affecting P&L (> OCI without recylcling)	Na
Impairment	Implied	Through P&L	Implied	Through P&L

Subsequent Measurement: Financial Liabilities

Categorie	FVPL	Amortised Cost
Initial recognition	Fair Value	Fair Value & transaction cost
Subsequent measurement	Fair Value	Amortised cost
Fair Value Change	Through P&L	Na
Own credit risk	Recognised	Not recognised

7.4 Disclosures

Generally

- Significance for the financial situation and profitability of the company
- Type and extend of the risks
- Controlling of financial risks

8: Earnings Management

8.1 Overview

Definiton
Earning management is a reasonable and legal management decision making and reporting intended to achieve stable and predictable financial results.
It shall not be confused with illegal activities.

Accounting Earnings Management (AEM)
- Explanation: Earnings management via choice in accounting methods
- Timing: After the end of the accounting period (comp. Photoshop=
- Exmaples: selecting the write-off method/period, estimating residual value

Real Earnings Management (REM)
- Explanation: Deviating from normal business activities
- Timing: During the fiscal year (comp. Cosmetics)
- Examples: Sell fixed assets, sale and lease back

8.2 Examples

Income Maximation
- Maximazing income to realize higher bonuses

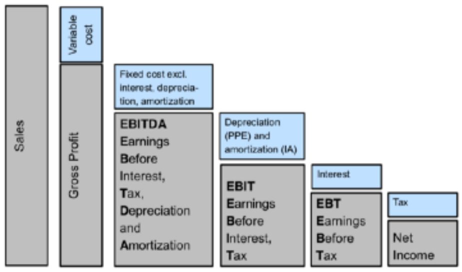
Income Minimization
- Reduction in current income to have better position in negotiations with stakeholders/public

Big Bath Accounting
- Report lage loss because managers have little to lose (in current period)
- Large write-offs and therefore higer future earning

Income Smooting
- Reduction of earning in goods years and inflation of earning during bad years to report stable earnings

8: Financial Statement Analysis

8.1 Important Measures



Earning figures

- Net income/profit/earning: result of the income statement
- EBT: earnings before tax
- EBIT: earnings before interest and tax
- EBITDA: earnings before interest, tax, depreciation and amoritzation

Cash Flow figures

- Cash flow from operating activities
- Free cash flow: cash flow available for shareholders
  > cash flow from operating activities + cash flow from investing acitvities

8.1 Important Ratios

Profitability ratios

$$\frac{\text{gross/operating/net profit}}{\text{sales}}$$ gross/operating/net income margin

$$\frac{\text{net income}}{\text{average total assets}}$$ return on assets

$$\frac{\text{net income}}{\text{average shareholders equity}}$$ return on equity

$$\frac{\text{EBIT}}{\text{capital employed}}$$ return on capital employed (total assets–current liab.)

Liquidity ratios

$$\frac{\text{cash + short term investments}}{\text{current liabilities}}$$ cash ratio (1st grade)

$$\frac{\text{cash + short term investments + recievables}}{\text{current liabilities}}$$ quick ratio (2nd grade)

$$\frac{\text{current assets}}{\text{current liabilities}}$$ current ratio (3rd grade)

Leverage ratios

$\frac{\text{dividends} + \text{share price}_{end} - \text{share price}_{begin}}{\text{share price}_{begin}}$	TSR
$\frac{\text{total equity/debt}}{\text{total assets}}$	debt/equity to asset ratio
$\frac{\text{total debt}}{\text{total equity}}$	debt to equity ratio
$\frac{\text{dividends}}{\text{shares}}$	dividends per share
$\frac{\text{income}}{\text{shares}}$	earnings per share
$\frac{\text{market price per share}}{\text{earnings per share}}$	price/earnings ratio (dt. KGV)

Non-financial Measures/Ratios

- Employees: satisfication, participation of women, retention/turnover, accidents
- Customer: satisfaction
- Environment: waste, greenhouse gas, water usage, energy usage
- Social: sweatshops, child labor