IFRS 10 Consolidated Financial Statements
IFRS 3 Business Combinations
IFRS 8 Operating Segments

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Consolidated Financial Statements (IFRS 10)

IFRS 10
Learning objectives

- What is the objective of IFRS 10?
- Control as the basis for consolidation
- Accounting requirements of IFRS 10

What is the objective of IFRS 10?

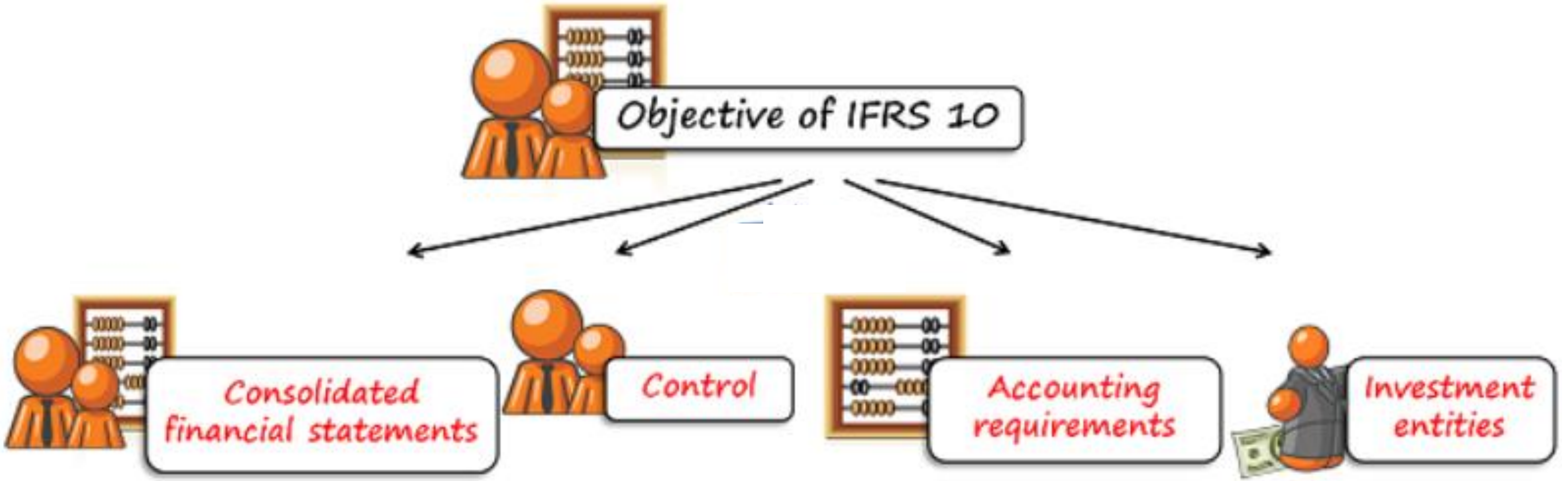
Requires an entity (a parent) that controls one or more other entities (subsidiaries) to present consolidated financial statements;

Defines the principle of control as the basis for consolidation and sets out how to identify whether the investor controls the investee;

Sets out the accounting requirements for the preparation of consolidated financial statements, and

Defines an investment entity and sets out an exception to consolidating particular subsidiaries of an investment entity.

What is the objective of IFRS 10?



Control as the basis for consolidation

- Simply speaking, the basic rule is:
  - If an investor controls its investee => investor must consolidate;
  - If an investor does NOT control its investee =>; investor does NOT consolidate.

So what is control?

Control

- An investor controls an investee when the investor:

Is exposed to, or has right to variable returns from its involvement with the investee;

Has the ability to affect those returns

Through its power over the investee.

How to assess control

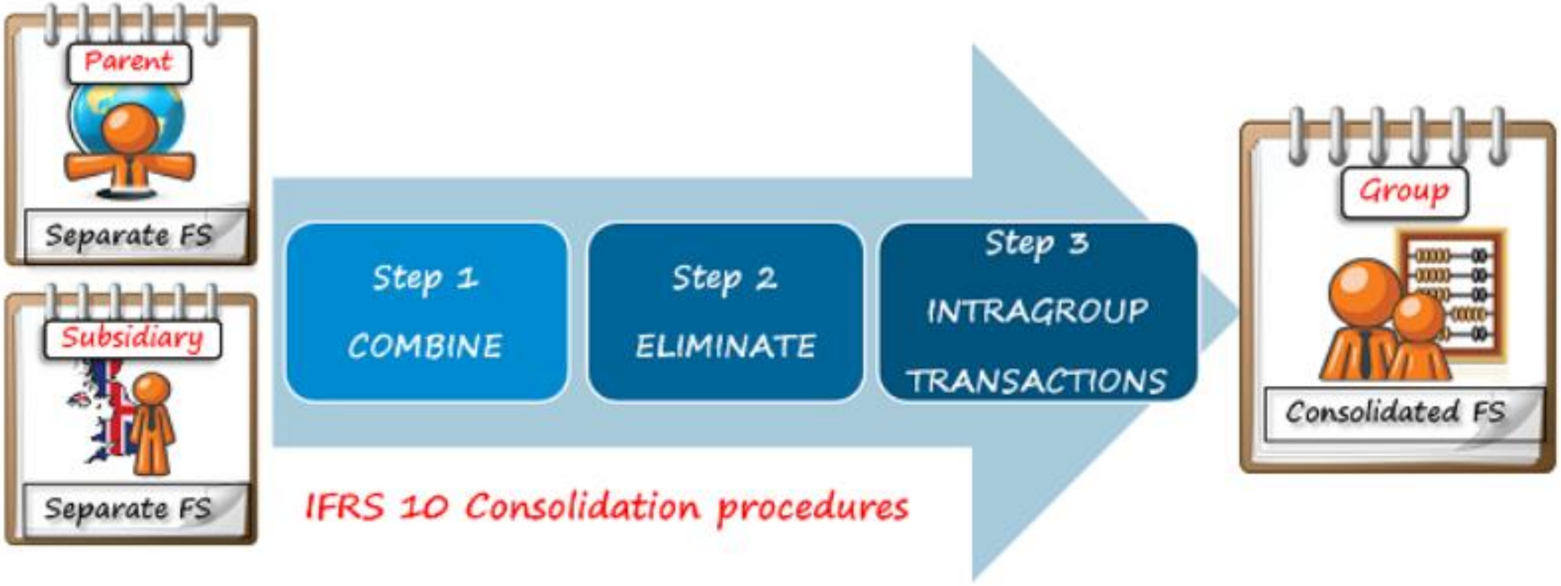
- Remember 3 basic elements inherent in control: **power, ability to use this power** and **variable returns**.
- Power is the existing rights that give the current ability to direct the relevant activities. Let's break it down a bit:
  - The rights must be substantive, not only some minor rights;
  - The ability must be current, exercisable in the present time;
  - The relevant activities must be significant and related to major activities of investee.
- When assessing whether an investor controls an investee, more than one factor need to be considered. IFRS 10 contains guidance in this area.

Accounting requirements of IFRS 10
Consolidation procedures

- In order to prepare consolidated financial statements, IFRS 10 prescribes the following consolidation procedures:

COMBINE	• Combine like items of assets, liabilities, equity, income, expenses and cash flows of the parent with those of its subsidiaries;
ELIMINATE	• The carrying amount of the parent's investment in each subsidiary; and • The parent's portion of equity of each subsidiary;
INTRAGROUP TRANSACTIONS	• Eliminate in full intragroup assets and liabilities, equity, income, expenses and cash flows relating to transactions between entities of the group.

Accounting requirements of IFRS 10
Consolidation procedures



Accounting requirements of IFRS 10
Other accounting requirements

- Except for basic consolidation procedures, IFRS 10 prescribes number of other rules for preparing consolidated financial statements, such as:
  - Presentation of non-controlling interests: in equity, but separately from the equity of owners of the parent;
  - Uniform accounting policies shall be used by both parent and subsidiary;
  - The financial statements of the parent and the subsidiary shall have the same reporting date;
  - How to deal when the parent loses its control over subsidiary,
- and number of other rules dealing with the specific circumstances.

Business Combinations (IFRS 3)

IFRS 3
Learning objectives

- Scope and definitions
- Business Combinations step-by-step
- Step acquisitions
- Presentation and disclosure

IFRS 3
When does IFRS 3 apply?

IFRS 3 applies to all business combinations

IFRS 3: ”A business combination should be accounted for by applying the acquisition method. The acquirer recognises the acquiree’s identifiable assets, liabilities and contingent liabilities at their fair values at the acquisition date and also recognises goodwill”.

IFRS 3
When does not IFRS 3 apply?

IFRS 3 does not apply to:

- Formation of a joint venture
- Common control transactions
- Acquisition of asset / group of assets that is not a business
  - Cost allocated to identifiable assets / liabilities on basis of relative fair values

IFRS 3
What is a business?

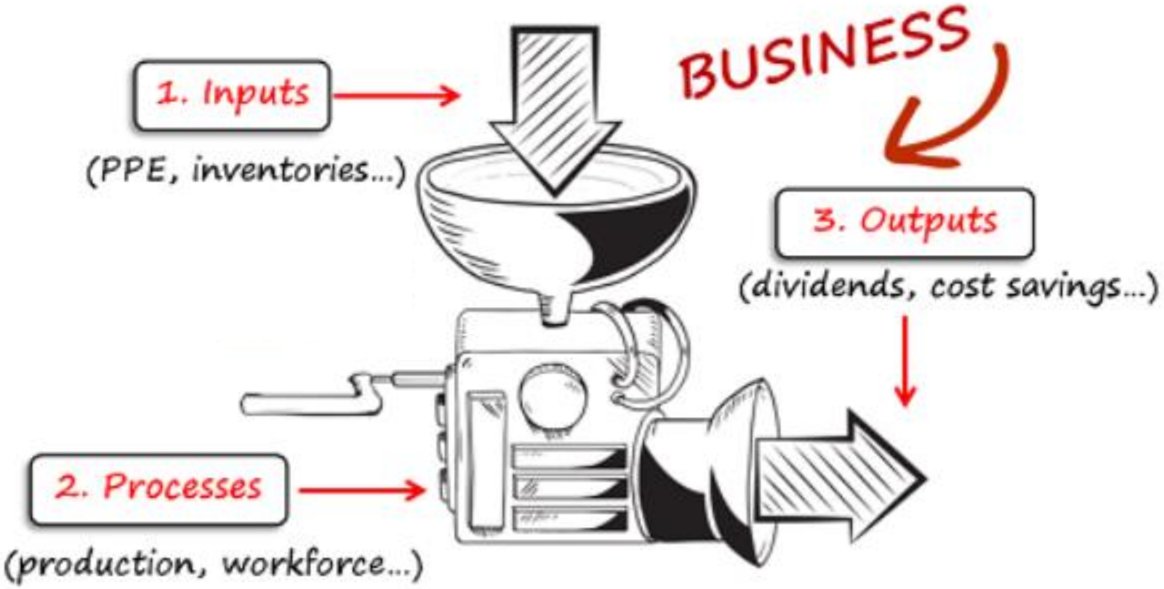
A *business* is an integrated set of activities and assets capable of being managed to provide a return to investors via dividends, lower costs or other economic benefits

Inputs

Processes

Ability to create outputs

Rebuttable presumption that a group of assets in which goodwill is present is a business


BUSINESS
1. Inputs
(PPE, inventories...)
2. Processes
(production, workforce...)
3. Outputs
(dividends, cost savings...)

IFRS 3
Case

- Which of the following transactions are in the scope of IFRS 3 and why?
  - Company A purchases a building from Company B
  - Company A purchases 100 % of shares in Company C
  - Company A purchases a development project, e.g. test results, rights
  - Company A purchases a development company with only one development project
  - Company A purchases Company B. The owners are the same.

Please share your thoughts with a friend

IFRS 3
Step – by – step

What is a business combination	**A *business combination* is a transaction or other event in which an acquirer obtains *control* of one or more *businesses***
Step 1:	Identify the acquirer
Step 2:	Identify the date for obtaining control
Step 3:	Recognition and measurement of assets acquired and liabilities assumed
Step 4:	Determine the consideration transferred
Step 5:	Measure non-controlling interest (NCI)

IFRS 3
Step – by – step

Step 6:	Determine goodwill or negative goodwill, including allocation
Step 7:	Recognise any adjustment in the allowed adjustment period

STEP 1
Identify the acquirer

The *acquirer* is the entity that obtains control of the business

Use IFRS 10 to determine who has control

Consider additional factors identified in IFRS 3

- Relative voting rights in combined entity
- Existence of large minority voting interest in combined entity
- Composition of governing body and senior management of combined entity
- Terms of exchange of equity instruments
- Relative size of entities

Normally Group Accounting will determine the acquirer

STEP 2
Determine the acquisition date

The *acquisition date* is the date on which acquirer obtains control of acquiree

Date on which fair values of identifiable assets acquired and liabilities assumed determined and goodwill is measured

Date from which comprehensive income of acquiree is included in consolidated financial statements of acquirer

Normally Group Accounting will determine the acquisition date

Determine the acquisition date
Case

- Based on the information below, please assess the acquisition date to be used for accounting purposes.

A. Letter of intent is signed on 1 January 2016

B. Sale and purchase agreement (SPA) is signed on 15 September 2016

C. According to the contract, the sale will be effective as of 1 January 2017, the expected date of closing

D. Payment of 90% of the purchase price is due 15 days after the SPA has been signed and the remaining 10% 15 days after closing

Determine the acquisition date
Case 2

- Based on the information below, please assess the acquisition date to be used for accounting purposes.

  A. Letter of intent is signed on 1 January 2016

  B. Sale and purchase agreement (SPA) is signed on 15 September 2016

  C. According to the contract, the sale will be effective as of 1 January 2017, the expected date of closing

  D. Payment of 90% of the purchase price is due 15 days after the SPA has been signed and the remaining 10% 15 days after closing

Same scenario as above but according to the SPA, the sale is effective as of 1 January 2016, the same date as letter of intent was signed. Does this change the conclusion?

Determine the acquisition date
Case 3

- Based on the information below, please assess the acquisition date to be used for accounting purposes.
    A. Letter of intent is signed on 1 January 2016
    B. Sale and purchase agreement (SPA) is signed on 15 September 2016
    C. According to the contract, the sale will be effective as of 1 January 2017, the expected date of closing
    D. Payment of 90% of the purchase price is due 15 days after the SPA has been signed and the remaining 10% 15 days after closing

Same scenario as above but the contract is contingent upon approval from the competition authorities. Does this change the conclusion?

STEP 3

Recognition and measurement of assets acquired and liabilities assumed

Acquired assets and liabilities

- An acquirer or investor shall recognize all identifiable assets acquired, liabilities assumed and non-controlling interests in the acquiree separately from goodwill.
- Made at acquisition date
- All assets and liabilities are measured at acquisition-date fair value.

Case: Prices stated in the agreement

- When purchasing an activity, the individual assets and liabilities are often priced in the purchase agreement.

Is it possible for the acquirer to use these prices in the purchase price allocation?

Fair value measurement in a business combination

Fair value is amount for which an asset could be exchanged or liability settled between knowledgeable, willing parties in an arm's length transaction

Market approach

Income approach

Cost approach

i.e. from the perspective of a *hypothetical market participant*

Overview of valuation methods used in practice

Income method

- The value of the future cash flows that an asset will generate over its remaining useful life
- Project the cash flows that the asset is expected to generate over its remaining economic life
- Convert these cash flows into a present value equivalent through discounting
- Use a rate of return that discounts for the relevant risk associated with the asset and the time value of money

Market approach

- The fair value of the asset reflects the price at which comparable assets are purchased under similar circumstances
- Requires that comparable transactions be available. This situation is most commonly found when the acquired asset is widely marketed to third parties
- Under these circumstances, the market approach represents the most appropriate approach for determining the fair value of the asset

Cost approach

- The fair value of an asset is estimated as a function of the current cost to purchase or replace the asset
- This is based upon the principle of substitution, which states that a prudent investor would pay no more for an asset than the amount necessary to replace the asset
- Adjustments to either the reproduction or replacement cost new are made to account for all forms of depreciation (physical, functional, and economic; as applicable) to determine the fair value of the asset

STEP 4
Identify and measure consideration transferred

Consideration transferred is measured at fair value at the acquisition date and includes:

- Assets transferred
- Liabilities incurred to previous owners
- Equity instruments issued

Acquisition-related costs excluded from consideration transferred, and expensed as incurred

Costs related to issue of equity or debt recognised in accordance with financial instruments standards

Contingent consideration

CONTINGENT CONSIDERATION

- Is an obligation of acquirer to transfer additional assets/equity interest to former owners as part of exchange for control if specified future events occur/conditions are met
- Recognised at fair value at acquisition date
- Classified as liability or equity

Cost of acquisition
Case

What would be the cost of acquisition when Entity N acquires Entity M?

- Entity N acquires Entity M. The outflows of economic benefits from Entity N in respect of this transaction are as follows:
  - Entity N issues 1000 new shares to shareholders of Entity M with terms equivalent to those traded on the market. The par value of Entity N's shares is CU2 and the market price of Entity N's shares is CU4.
  - Entity N pays CU1000 in cash to the previous shareholders of Entity M.
  - Entity N has an acquisition department, which incurred CU200 in running costs over the period of completing the business combination. Staff in the department estimate they have spent 25% of their time on the acquisition of Entity M over this period.
  - Entity N incurs liability of CU500 to a customer of Entity M in respect of termination of a supply agreement that was necessitated by the business combination.
  - Entity N will incur expenditure of CU200 on updating Entity M's accounting systems to be consistent with those used by Entity M.
  - Entity N pays accounting fees in relation to the transaction of CU200 and legal fees of CU200.
  - Entity N extends the terms of its finance arrangement in order to obtain the cash required for the transaction. The cost of the extension CU50.

STEP 5
Measure non-controlling interest (NCI)

NCI are measured either at:

- **Their proportionate interests in fair value of identifiable net assets**
- **Fair value**

Election made on a transaction-by-transaction basis

NCI
Case

- Company P pays 800 to acquire an 80% interest in the ordinary shares of S. The aggregated fair value of 100% of S's identifiable assets and liabilities (determined in accordance with the requirements of IFRS 3) is 600, and the fair value of the non-controlling interest (the remaining 20% holding of ordinary shares) is 185. The measurement of the non-controlling interest, and its resultant impacts on the determination of goodwill, under each option is illustrated below:

	NCI based on fair value	NCI based on net assets
Consideration transferred	800	800
Non-controlling interest	185*	120**
	985	920
Net assets	(600)	(600)
Goodwill	385	320
*The fair value of the 20% non-controlling interest in S will not necessarily be proportionate to the price paid by P for its 80% interest, primarily due to any control premium or discount [IFRS 3.B45]		
**Calculated as 20% of the fair value of the net assets of 600.		

STEP 6
Determine goodwill or gain on bargain purchase

Option 1: NCI measured at fair value, the aggregate of

Goodwill = Considera-tion transferred + NCI at FV − Fair value of net identifiable assets

Option 2: NCI measured at their proportionate interest in identifiable net assets, the net of the acquisition-date fair values

Goodwill = Considera-tion transferred + NCI based on net assets − Fair value of net identifiable assets

Goodwill

- Goodwill acquired in a business combination represents a payment made by the acquirer in anticipation of future economic benefits from assets that are not capable of being individually identified and separately recognised.

- Goodwill is measured as the residual cost of the business combination after recognising the acquiree’s identifiable assets, liabilities and contingent liabilities. Negative goodwill can consequently arise.

- Goodwill is subject to impairment testing in accordance with IAS 36.

Negative goodwill – Gain on bargain purchase

- Negative goodwill arises if the acquirer’s interests in the net fair value of acquired identifiable assets and liabilities exceed the cost

- When negative goodwill arises:
  - The acquirer is required to undertake a review to ensure the identification of assets and liabilities is complete, and that measurements appropriately reflect consideration of all available information.
  - Negative goodwill/gain on bargain purchase is to be immediately recognised as a gain in profit or loss.

STEP 7
Recognise any measurement period adjustments

Measurement period **is period after acquisition date when entity can adjust preliminary business combination accounting**

If new information obtained about facts and circumstances that existed at acquisition date

Ends when information obtained or determined not available

Measurement period adjustments are not to exceed 12 months after the acquisition date

Measurement period adjustments are recognised in GW

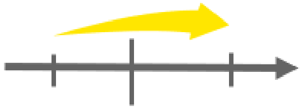
Subsequent adjustments to the PPA
Case

- Do the following situations require subsequent adjustments?
  A. Six months after the business combination, a factory of the acquired company is sold.
  B. The acquired company has subsequent to the date of acquisition finished the construction of extravagant new headquarters. It turns out that the market value is considerably lower than the carrying amount.
  C. Three months after the date of acquisition, the extravagant headquarters burn to the ground.
  D. The acquired company has completed tests of a new product one week before the date of acquisition, but analysis of the test results is not available until three months after the acquisition.

Business combinations achieved in stages (Step acquisitions)

Step acquisitions

Step acquisitions



50 %

Previously owned ownership interest revalued at fair value through profit or loss

Reclassify amounts previously in OCI as if NCI had been disposed of through profit or loss

Presentation and disclosure

Presentation and disclosure

- An acquirer shall disclose information that enables users of the financial statements to evaluate:
- The nature and financial effect of business combinations that were effected:
  - During the current reporting period; or
  - After the end of the reporting period but before the financial statements were authorised for issue
- Information that is required to be disclosed by the acquirer to meet the above objective is specified in the application guidance of the standard

8. Group structure

8.1 Business acquisitions and disposals

In 2018, UPM made a minor business acquisition by acquiring the assets of Converters Express in the United States. In 2017, UPM made a minor business acquisition by acquiring the assets of Southwest Label Stock in the United States.

In 2018 and 2017 no business disposals were made.

Accounting policies

UPM consolidates acquired entities at the acquisition date which is when it gains control using the acquisition method. Consideration transferred is determined as the fair value of the assets transferred, the liabilities incurred and equity instruments issued including the fair value of a contingent consideration. Acquisition related transaction costs are expensed as incurred. Identifiable assets acquired and liabilities and contingent liabilities assumed are measured initially at their fair values at the acquisition date. The group measures any non-controlling interest in the acquiree either at fair value or at the non-controlling interest's proportionate share of the acquiree's net assets.

The excess of the consideration transferred, the amount of any non-controlling interest in the acquiree and the acquisition-date fair value of any previous equity interest in the acquiree over the fair value of the identifiable net assets of the subsidiary acquired is recorded as goodwill.

Operating segments (IFRS 8)

IFRS 8
Learning objectives

- Operating segment versus reportable segment
- Identify entity’s reportable segments
- Disclosure requirements

What is the aim of IFRS 8?

Core principle

- An entity must: "*Disclose information to enable users of its financial statements to evaluate the nature and financial effects of the different business activities in which it engages and the economic environments in which it operates.*"

What are operating segments and how are they determined?

An operating segment is defined as: “A component of an entity:

that engages in business activities from which it may earn revenues and incur expenses (including revenues and expenses relating to transactions with other components of the same entity)

whose operating results are regularly reviewed by the entity’s chief operating decision maker to make decisions about resources to be allocated to the segment and assess its performance

and for which discrete financial information is available

What are reportable segments and how are they determined?

- IFRS 8 requires an entity to provide separate information about each of its ”reportable segments”. This information is disclosed in the notes to the financial statements. The following rules are used to identify an entity’s reportable segments:

What are reportable segments and how are they determined?

A. Multiple operating segments may be aggregated into a single reportable segment if aggregation is consistent with the core principle of IFRS 8, the segments have similar economic characteristics, and the segments are similar in all of the following respects:
   - the nature of the products and services
   - the nature of the production processes
   - the type of class of customer for the products and services
   - the distribution methods used
   - the nature of the regulatory environment, for example, banking, insurance or public utilities

What are reportable segments and how are they determined?

B. A reportable segment is a single or combined operating segment which meet any of the following “quantitative thresholds”:

- contributes 10% or more of the entity’s total sales (combining internal and inter-segment sales),
- earns 10% or more of the combined reported profit of all operating segments that did not report a loss (or 10% or more of the combined reported loss of all operating segments that reported a loss), or
- has 10% or more of the combined assets of all operating segments.

What are reportable segments and how are they determined?

C. An operating segment that does not meet any of the 10% thresholds may nonetheless be treated as a reportable segment if management believes that information about the segment would be useful to the users of the financial statements. Alternatively:

- Such segment may be combined into a reportable segment with one or more similar operating segments that also fail to meet any of the 10% thresholds, or
- It may be included in an “all other segments” category in the segment report

What are reportable segments and how are they determined?

D. If the total external revenue reported by operating segments constitutes less than 75% of the entity’s revenue, additional operating segments must be identified until at least 75% of the entity’s revenue is included in reportable segments. For this purpose, operating segments that do not meet the quantitative thresholds may be combined to produce a reportable segment only if they share similar economic characteristics and a majority of the aggregation criteria

Reportable segments
Case

- A listed company has identified 7 operating segments. The following information is available for the segments as of 31 December 2018 (000)

	External revenue	Internal revenue	Profit or (loss)	Assets
Segment A	3,040	2,440	720	3,170
Segment B	1,460	0	(160)	1,590
Segment C	1,580	60	(60)	1,480
Segment D	1,720	0	120	2,150
Segment E	760	520	150	1,620
Segment F	2,360	1,740	560	3,780
Segment G	1,520	0	(50)	1,460
TOTAL	12,440	4,760	1,280	15,250

Identify reportable segments

Disclosures required by IFRS 8

- IFRS 8 requires that entities should disclose four main classes of information for each accounting period. These are as follows:

General information	Information about each reportable segment	Certain reconciliations	Entity-wide information

The group disaggregates its external sales by business areas, because UPM business areas are reported consistently with the internal reporting provided to UPM's President and CEO who is responsible for allocating resources and assessing performance of the business areas. The goods and services included in sales revenue of each business area are presented in below table:

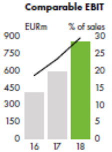
BUSINESS AREA	DESCRIPTION AND PRODUCTS
UPM Biorefining	UPM Biorefining consists of UPM Pulp, UPM Biofuels and UPM Timber business units. UPM Pulp has three pulp mills in Finland, one pulp mill and plantation operations in Uruguay. UPM Pulp serves the global market with a comprehensive assortment of sustainably produced eucalyptus, birch and softwood pulp grades for a variety of tissue, specialty paper, board, printing and writing paper and other applications. UPM Biofuels has one biorefinery in Finland. UPM Biofuels products include wood-based renewable diesel for transport and renewable naphtha for transport and for bioplastics. UPM Timber has four saw mills in Finland. UPM Timber products include certified sawn timber from Nordic pine and spruce to joinery, packaging, distribution and construction industries.
UPM Energy	UPM Energy assets consists of hydro power assets in Finland and shareholdings in energy companies. UPM Energy is the second largest electricity producer in Finland. UPM Energy operations include electricity generation, and operations in both physical electricity and financial portfolio management. UPM Energy sells low emission electricity to NordPool electricity market.
UPM Raflatac	UPM Raflatac is one of the world's leading producers of self-adhesive label materials. UPM Raflatac supplies high-quality film and paper label stock for consumer product and industrial labelling. Customers include label printers and brand owners.
UPM Communication Papers	UPM Communication Papers is the world's leading producer of graphic papers. UPM Communication Papers customers include newspaper publishers, telephone directory publishers, cataloguers, retailers, magazine publishers, printers, merchants, office supply distributors, office equipment manufacturers and envelope manufacturers.
UPM Plywood	UPM Plywood manufactures high-quality plywood and veneer products mainly for construction and transport industries and thermo-formable wood material for the form pressing industry. Production facilities are located in Finland, Estonia and Russia.
UPM Specialty Papers	UPM Specialty Papers produces office papers to Asian markets and labelling and packaging materials to global markets. High performance papers are manufactured in China and Finland.
Other operations	Other operations include wood sourcing and forestry, UPM Biocomposites, UPM Biochemicals business units and group services. Wood sourcing operations sells wood and wood-based biomass (logs, pulpwood, chips, forest residues) to other UPM Business Areas as well as third party customers. Forestry operations provides forest expertise and contracting services to woodland and forestry owners. UPM Biocomposites combines cellulose fibres and polymers into UPM ProFi decking products and UPM Formi granules. UPM Biochemicals produces wood-based lignin products for industrial use and cell culture hydrogel products for biomedical applications.

Business area information for the year ended 31 December 2018

EURm, OR AS INDICATED	UPM BIOREFINING	UPM ENERGY	UPM RAFLATAC	UPM SPECIALTY PAPERS	UPM COM PAPERS	UPM PLYWOOD	OTHER OPERATIONS	ELIMINATIONS AND RECONCILIATIONS [2]	GROUP
External sales	2,223	109	1,488	1,213	4,664	458	321	7	10,483
Internal sales	669	282	–	216	26	22	6	–1,220	–
Total sales	2,892	391	1,488	1,429	4,690	480	326	–1,214	10,483
Comparable EBIT	847	123	126	90	267	52	35	–26	1,513
Items affecting comparability in operating profit	–	–9	–	–	46	–	345	1	382
Operating profit	847	114	126	90	312	52	380	–25	1,895
Finance costs, net									–56
Income taxes									–342
Profit for the period									1,496
Operating assets [1]	3,540	2,506	701	1,158	2,228	353	1,847	–362	11,970
Deferred tax assets									397
Other non-operating assets									97
Other financial assets									1,532
Total assets									13,996
Operating liabilities [1]	288	45	172	265	624	51	183	–310	1,318
Deferred tax liabilities									535
Other liabilities									826
Other financial liabilities									1,520
Total liabilities									4,199

UPM Biorefining

UPM Biorefining consists of pulp, timber and biofuels businesses. UPM has three pulp mills in Finland and one mill and plantation operation in Uruguay. UPM operates four sawmills in Finland. UPM's biorefinery producing wood-based renewable diesel started up in early 2015. The main customers of UPM Biorefining are tissue, specialty paper and board producers in the pulp industry, fuel distributors in the biofuel industry and construction and joinery industries in the timber sector.



	2018	2017
Sales, EURm	2,892	2,531
Comparable EBITDA, EURm	970	714
% of sales	33.5	28.2
Change in fair value of forest assets and wood harvested, EURm	30	33
Share of results of associates and joint ventures, EURm	2	2
Depreciation, amortisation and impairment charges, EURm	–155	–162
Operating profit, EURm	847	557
% of sales	29.3	22.0
Items affecting comparability in operating profit, EURm [1]	–	–30
Comparable EBIT, EURm	847	587
% of sales	29.3	23.2
Capital employed (average), EURm	3,180	3,225
Comparable ROCE, %	26.6	18.2
Pulp deliveries, 1,000 t	3,468	3,595

[1] In 2017, items affecting comparability relate to the reorganisation of pension schemes.

2018 compared with 2017

Comparable EBIT increased due to significantly higher pulp sales prices. Variable costs increased and delivery volumes were lower. Fixed costs increased, partly due to several large scheduled maintenance shutdowns in Q2 and Q4 2018.

The average price for UPM's pulp deliveries in euros increased by 22% .

Market environment

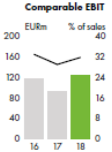
Global chemical pulp demand was strong in H1 2018. Market balance was further tightened as supply was restricted due to production outages in the industry. In H2 2018, uncertainties in global economy, gradually slowing growth in China and destocking in the value chain reduced growth in market pulp shipments somewhat.

In 2018, the average European market price in euros was 27% higher for NBSK and 21% higher for BHKP compared to the previous year. In China, the average market price in US dollars was 19% higher for NBSK and 26% higher for BHKP compared to the previous year.

Demand for advanced renewable diesel and naphtha remained strong.

UPM Energy

UPM Energy creates value through cost competitive, low-emission electricity generation and through physical electricity and financial trading. UPM Energy is the second largest electricity producer in Finland. UPM's power generation capacity consists of hydropower, nuclear power and condensing power.



	2018	2017
Sales, EURm	391	317
Comparable EBITDA, EURm	132	100
% of sales	33.7	31.6
Depreciation, amortisation and impairment charges, EURm	–9	–9
Operating profit, EURm	114	91
% of sales	29.2	28.8
Items affecting comparability in operating profit, EURm [1]	–9	–
Comparable EBIT, EURm	123	91
% of sales	31.5	28.8
Capital employed (average), EURm	2,346	2,267
Comparable ROCE, %	5.3	4.0
Electricity deliveries, GWh	8,608	8,127

[1] In 2018, items affecting comparability of EUR 9 million relate to restructuring of ownership in Meri-Pori power plant.

2018 compared with 2017

Comparable EBIT increased due to higher electricity sales prices. Hydropower generation was lower due to weaker hydrology.

UPM's average electricity sales price increased by 17% to EUR 38.1/MWh (32.6/MWh).

Market environment

The Nordic hydrological balance has been below the long-term average since March 2018. The hydrological balance improved temporarily at beginning of Q4, but the year ended significantly below the long-term average level.

Coal prices increased in 2018 compared to the year 2017. The CO_2 emission allowance price of EUR 25.0/tonne at the end of 2018 was higher than at the end of year 2017 (EUR 8.2/tonne).

The average Finnish area spot price on the Nordic electricity exchange in 2018 was EUR 46.8/MWh, 41% higher than in 2017 (33.2/MWh).

2.2 Sales

UPM generates revenue mainly from the sale of goods, i.e. several types of products.

The majority of UPM's revenue comes from sales of graphic and specialty papers to publishers, retailers, printing houses, merchants and distributors, converters and label stock manufacturers; sales of self-adhesive label materials to label printers and brand owners and sales of pulp products to tissue, board, specialty and graphic paper producers. The revenue comprises also sales of energy, biofuels, sawn timber and plywood products and a very limited amount of services not related to sale of goods.

UPM sells a proportion of its products to several major customers. The largest customer in terms of sales represented approximately 3% of UPM's sales in 2018 and 2017, and the ten largest customers represented approximately 15% of such sales.

The group disaggregates its external sales by business area, because this depicts how the nature, amount, timing and uncertainty of revenue and cash flows are affected by economic factors. Sales by UPM business areas are reported consistently with the internal reporting provided to UPM's President and CEO who is responsible for allocating resources and assessing performance of the business areas. The goods and services included in sales revenue of each business area are presented in below tables.

» Refer Note 2.1 Business areas for information on UPM products.

Sales by business area

EURm	2018	2017	CHANGE
UPM Biorefining	2,892	2,531	14%
UPM Energy	391	317	23%
UPM Raflatac	1,488	1,495	0%
UPM Specialty Papers	1,429	1,336	7%
UPM Communication Papers	4,690	4,615	2%
UPM Plywood	480	484	−1%
Other operations	326	281	16%
Eliminations	−1,214	−1,048	–
Total	10,483	10,010	5%

External sales by major products

BUSINESS AREA	BUSINESS	2018	2017
EUR million			
UPM Biorefining	UPM Pulp, UPM Biofuels, UPM Timber	2,223	1,958
UPM Energy	UPM Energy	109	120
UPM Raflatac	UPM Raflatac	1,488	1,495
UPM Specialty Papers	UPM Specialty Papers	1,213	1,111
UPM Communication Papers	UPM Communication Papers	4,664	4,592
UPM Plywood	UPM Plywood	458	463
Other operations	Wood Sourcing and Forestry, UPM Biochemicals, UPM Biocomposites	321	274
Eliminations and reconciliations		7	−2
Total		10,483	10,010

BUSINESS	PRODUCT RANGE
UPM Pulp	Softwood, birch and eucalyptus pulp
UPM Biofuels	Wood-based renewable diesel for transport and renewable naphtha for transport and for bioplastics
UPM Timber	Standard and special sawn timber
UPM Energy	Electricity and related services
UPM Raflatac	Self-adhesive paper and film label stock
UPM Specialty Papers	Labelling materials, release base papers, flexible packaging materials, office papers, graphic papers
UPM Communication Papers	Graphic papers for various end uses
UPM Plywood	Plywood and veneer products, thermoformable wood material
Wood Sourcing and Forestry	Wood and wood-based biomass (logs, pulpwood, chips, forest residues etc.), full forestry service offering
UPM Biochemicals	Lignin products for industrial use, nanocellulos-based products for biomedical applications
UPM Biocomposites	UPM ProFi decking products and UPM Formi granules