Advanced Group Accounting (RIKA)

Block 4

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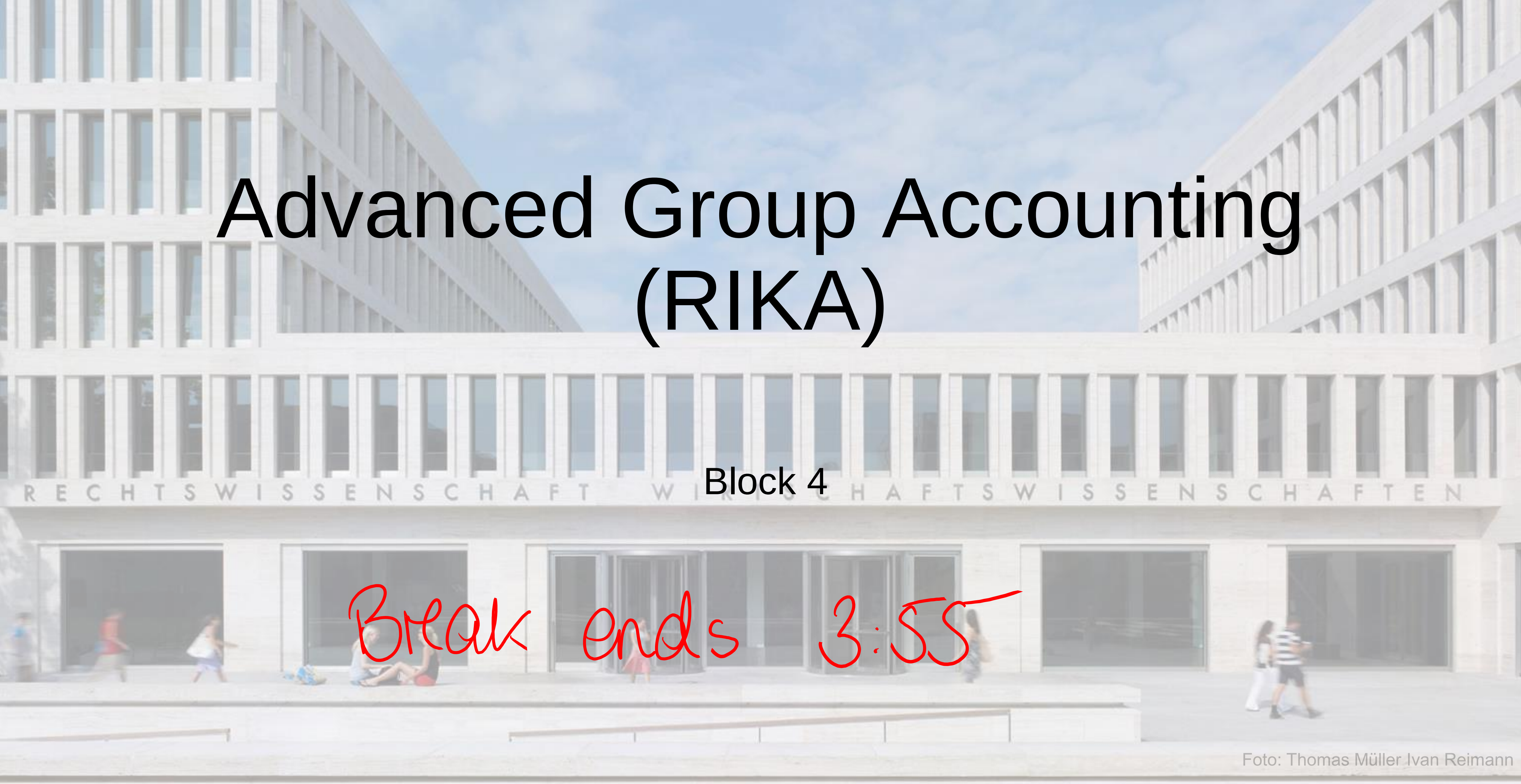


Foto: Thomas Müller Ivan Reimann

Course Structure

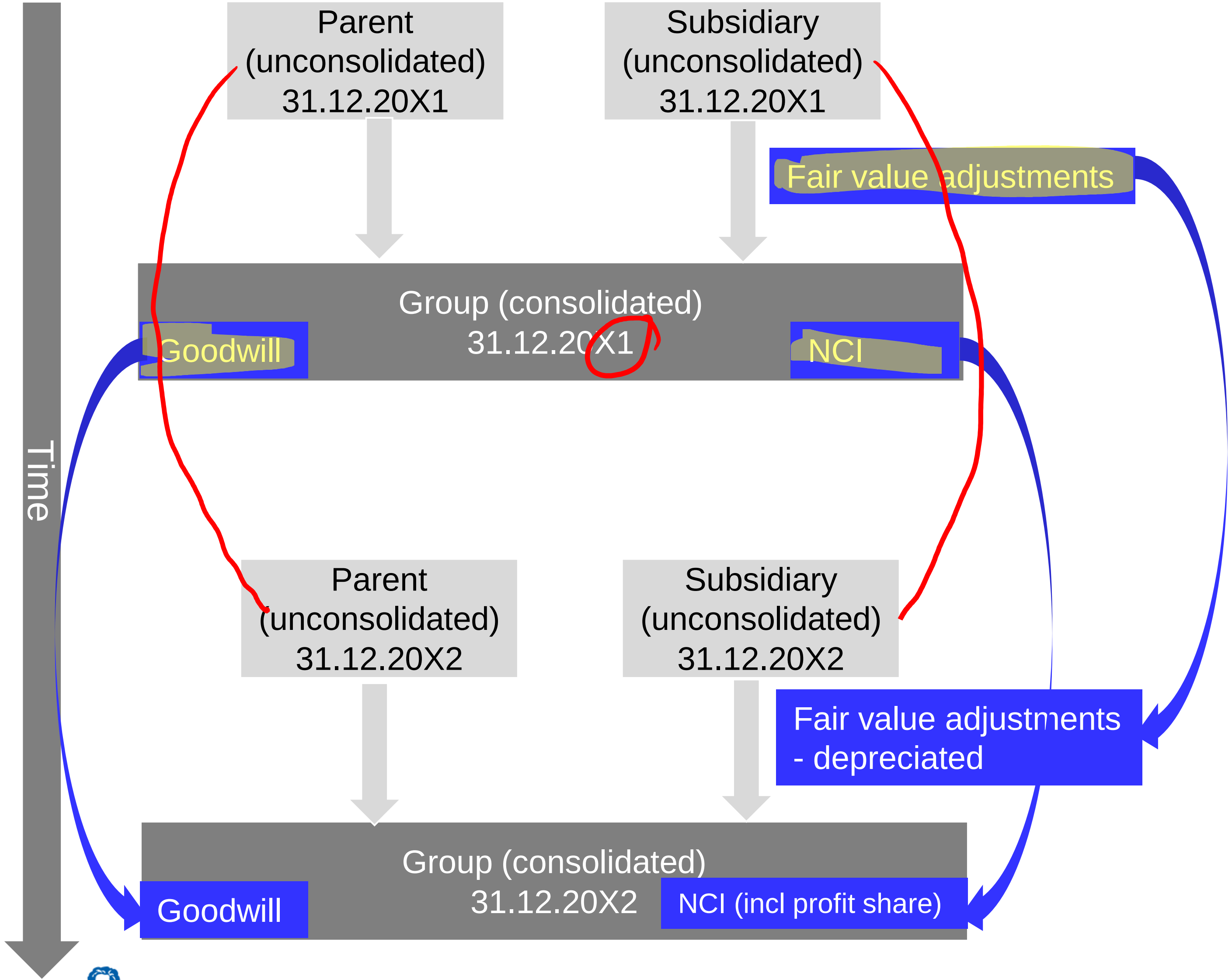
Block	Topic
	Preparation: recap double-entry bookkeeping (online, self-study)
1	Key Concepts
2	Acquisition Method
3	Consolidation | Initial
4	**Subsequent Consolidation** **Goodwill Impairment**
5	Joint Arrangement and Investments at Equity Changes in Control
6	Analyzing Consolidated F/S

Course Structure

Block	Topic
4	Subsequent Consolidation & Goodwill Impairment
4.1	**Subsequent Consolidation**
4.2	Goodwill Impairment

- How do we account for an acquisition after its initial consolidation?

Subsequent Consolidation



20X1: Initial consolidation

- Uncovering of fair value adjustments
- Uncovering of goodwill

20X2: Subsequent consolidation

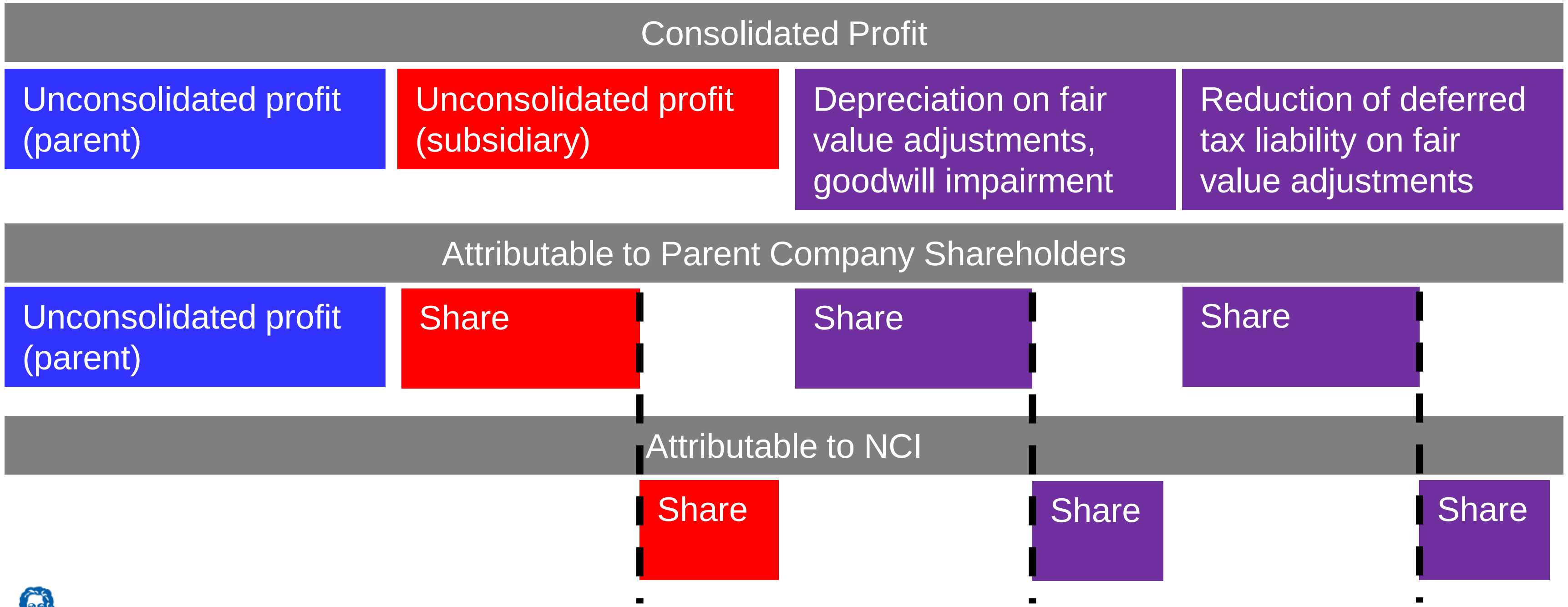
- Redo initial capital consolidation step
- Depreciate fair value adjustments, related deferred taxes, and adjust NCI
- Test goodwill for impairment

Subsequent Consolidation

- After subsequent consolidation, the financial statements reflect:
  - The unconsolidated profits/loss of parent and subsidiaries

    no intra-group profits
  - The additional profit/loss that arises from depreciation of fair value adjustments, goodwill impairment (if any), and changes in deferred taxes

- Consolidated profit is allocated between parent company shareholders and NCI:



Subsequent Consolidation – Exercise

Fact Pattern:

- X AG purchases 75% of Y GmbH‘s shares at a price of 900 on Dec 31, **20X1**.
- Y GmbH’s book value of equity equals 500 with hidden reserves (in non-current assets) of 300.
  - Hidden reserves are depreciated over 3 years.
- Non-controlling assets are carried at their proportionate share of revalued equity. (partial goodwill)
- Goodwill at initial consolidation is 300; no impairment in 20X2.
- Y GmbH made a profit (after tax) of 50 in 20X2, X made a profit (after tax) of 150.
- For simplicity, abstract from deferred taxes.

Questions:

- Calculate goodwill and non-controlling interests at initial consolidation. ✓
- Calculate consolidated profit in 20X2 and its allocation across parent company shareholders and NCI. ✓
- Calculate the amount of NCI including their allocated profit at the end of 20X2. ✓
- Perform the subsequent consolidation on Dec 31, **20X2** measuring the non-controlling interest at their proportionate share of revalued equity.

Solution

Subsequent Consolidation

Purchase Price (75%) 900

↳ Purchase Price (100%) $\frac{900}{0.75} = 1.200$

Revalued equity (100%) = 500 + 300 = $\boxed{800}$

Goodwill (100%) = 400

Goodwill (75%) = 300

25% = 200 = NCI

15

Solution

Subsequent Consolidation

Revalued equity = book value of equity plus fair value adjustment = 500 + 300 = 800

Purchase price (75%):	900
Plus: NCI (25% * 800):	200
Less: revalued equity:	(800)
= Goodwill	300

Consolidated profit:

Profit X	150
Plus: Profit Y	50
Less: Depreciation on FVA	(300 / 3) = (100)
= Consolidated profit	100

Attributable to parent company shareholders:	150 + 75% * (50 – 100) = 112.5
Attributable to NCI:	25% * (50 - 100) = -12.5

Value of NCI after profit allocation: 200 + (-12.5) = 187.5

Solution

Subsequent Consolidation

31.12.20X2	X		Y		Reval.		Sum		Consolidation		Consolidated	
	Dr.	Cr.	Dr.	Cr.	Dr.	Cr.	Dr.	Cr.	Dr.	Cr.	Dr.	Cr.
Non-current assets	1,800		550		300		2650					
Inv. in Y	900						900					
Goodwill												
Current assets	1,000		350				1350					
Equity		2,100		500		300		2900				
Profit		150		50				200				
non-controlling interest												
Debt		1,450		350				1800				
Sum							4900	4900				

Solution

Redo Initial Consolidation Steps

31.12.20X2	X		Y		Reval.		Sum		Consolidation		Consolidated	
	Dr.	Cr.	Dr.	Cr.	Dr.	Cr.	Dr.	Cr.	Dr.	Cr.	Dr.	Cr.
Non-current assets	1,800		550		300		2,650					
Inv. in Y	900						900			900		
Goodwill									300			
Current assets	1,000		350				1,350					
Equity		2,100		500		300		2,900	600 200			
Profit		150		50				200				
non-controlling interest										200		
Debt		1,450		350				1,800				
Sum	3,700	3,700	950	950			4,900	4,900				

Depreciation on Fair Value Adjustments – Illustration

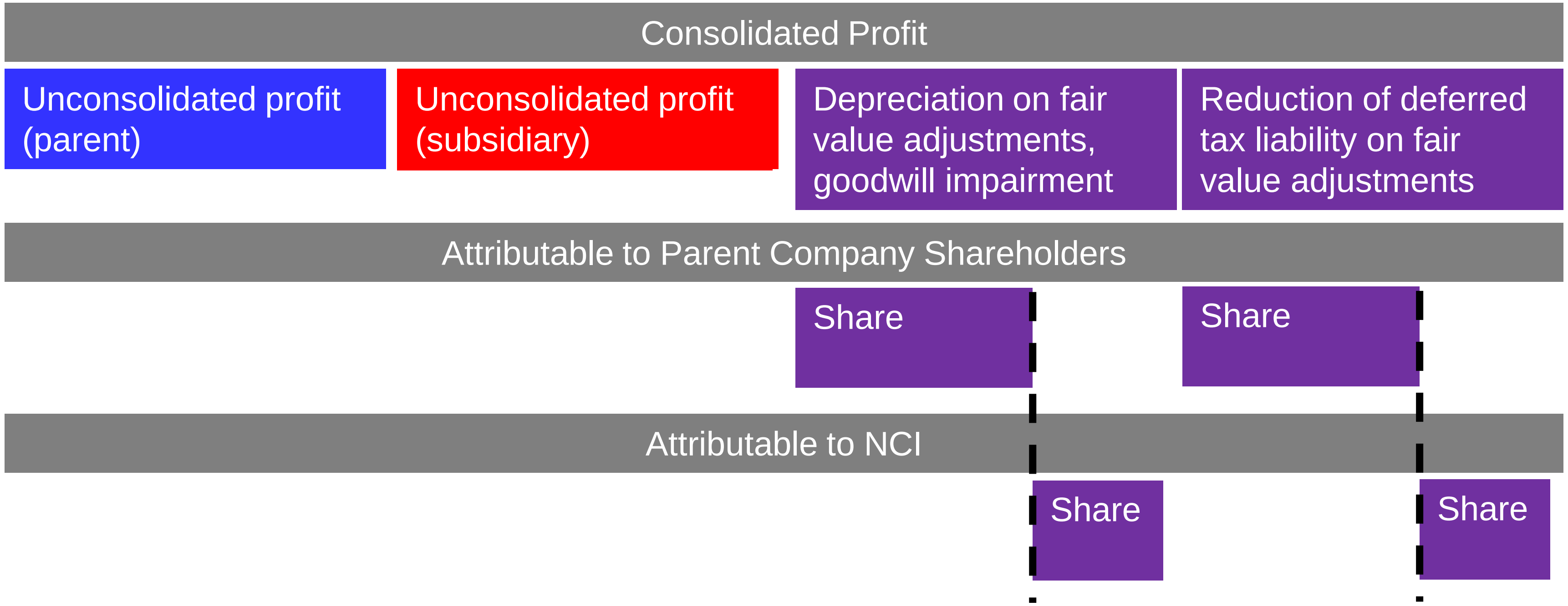
	Assets	Equity & Liabilities	
	Non-current assets	Equity	
100% Depreciation	- Incl. fair value adjustments	- Incl. profit attributable to parent company shareholders	75% Depreciation
	Other assets	- Incl. profit attributable to NCI	25% Depreciation
		Liabilities	
	Total	Total	

Solution

Depreciate Fair Value Adjustments

31.12.20X2	X		Y		Reval.		Sum		Consolidation		Consolidated	
	Dr.	Cr.	Dr.	Cr.	Dr.	Cr.	Dr.	Cr.	Dr.	Cr.	Dr.	Cr.
Non-current assets	1,800		550		300		2,650			100		
Inv. in Y	900						900			900		
Goodwill									300			
Current assets	1,000		350				1,350					
Equity		2,100		500		300		2,900	600 200			
Profit		150		50				200	75			
non-controlling interest									25	200		
Debt		1,450		350				1,800				
Sum	3,700	3,700	950	950			4,900	4,900				

Allocation of Profit to Non-Controlling Interests - Illustration



Allocation of Profit to Parent Company and NCI

Consolidated Profit = 100

Unconsolidated profit (parent) = 150

Unconsolidated profit (subsidiary) = 50

Depreciation on fair value adjustments = -100

Reduction of deferred tax liability on fair value adjustments

Attributable to Parent Company Shareholders = 112.5

Unconsolidated profit (parent) = 150

Share = 37.5

Share = -75

Share

Attributable to NCI = -12.5

Share = 12.5

Share = -25

Share

Solution

Allocate Profit Share to Non-Controlling Interests

31.12.20X2	X		Y		Reval.		Sum		Consolidation		Consolidated	
	Dr.	Cr.	Dr.	Cr.	Dr.	Cr.	Dr.	Cr.	Dr.	Cr.	Dr.	Cr.
Non-current assets	1,800		550		300		2,650			100	2,550	
Inv. in Y	900						900			900	---	
Goodwill									300		300	
Current assets	1,000		350				1,350				1,350	
Equity		2,100		500		300		2,900	600 200			2,100
Profit		150		50				200	75 12.5			112.5
non-controlling interest									25	200 12.5		187.5
Debt		1,450		350				1,800				1,800
Sum	3,700	3,700	900	900			4,900	4,900			4,200	4,200

Subsequent Consolidation – Exercise

Fact Pattern:

- X AG purchases 75% of Y GmbH‘s shares at a price of 900 on Dec 31, **20X1**.
- Y GmbH’s book value of equity equals 500 with hidden reserves (in non-current assets) of 300.
  - Hidden reserves are depreciated over 3 years.
- Non-controlling assets are carried at their proportionate share of revalued equity.
- Goodwill at initial consolidation is 300; no impairment in 20X2.
- Y GmbH made a profit (after tax) of 50 in 20X2, X made a profit (after tax) of 150.
- Consider deferred taxes (tax rate 30%).

Questions:

- Calculate goodwill and non-controlling interests at initial consolidation.
- Calculate consolidated profit in 20X2 and its allocation across parent company shareholders and NCI.
- Calculate the amount of NCI including their allocated profit at the end of 20X2.
- Perform the subsequent consolidation on Dec 31, **20X2** measuring the non-controlling interest at their proportionate share of revalued equity.

Adding Deferred Taxes (Tax Rate: 30%)

Revalued equity = book value of equity plus fair value adjustment = 500 + 300 = 800

Purchase price (75%):	900
Plus: NCI (25% * 800):	200
Less: revalued equity:	(800)
= Goodwill	300

Consolidated profit:

Profit X	150	
Plus: Profit Y	50	
Less: Depreciation on FVA	(300 / 3)	(100)
= Consolidated profit	100	

Attributable to parent company shareholders:	150 + 75% * (50 – 100) = 112.5
Attributable to NCI:	25% * (50 – 100) = -12.5

Solution

Adding Deferred Taxes (Tax Rate: 30%)

Deferred tax liability = 300 * 30% = 90

Revalued equity = book value of equity plus fair value adjustment = 500 + 300 – 90 = 710

Purchase price (75%):	900
Plus: NCI (25% * 710):	177.5
Less: revalued equity:	(710)
= Goodwill	367.5

(Intiution: Deferred tax liability of 90 is allocated to reduction of NCI (25% * 90 = 22.5) and an increase in goodwill attributable to parent company shareholders (75% * 90 = 67.5).)

Solution

Adding Deferred Taxes (Tax Rate: 30%)

Consolidated profit:

Profit X	150
Plus: Profit Y	50
Less: Depreciation on FVA (300 / 3)	(100)
Plus: Reduction of DTL (90 / 3)	+30
= Consolidated profit	130

Attributable to parent company shareholders:	150 + 75% * (50 – 100 + 30) = 135
Attributable to NCI:	25% * (50 – 100 + 30) = -5

Value of NCI after profit allocation:	177.5 + (-5) = 172.5

Solution

Adding deferred taxes (Tax Rate: 30%)

31.12.20X2	X		Y		Reval.		Sum		Consolidation		Consolidated	
	Dr.	Cr.	Dr.	Cr.	Dr.	Cr.	Dr.	Cr.	Dr.	Cr.	Dr.	Cr.
Non-current assets	1,800		550		300		2,650			100	2,550	
Inv. in Y	900						900			900	---	
Goodwill									367.5		367.5	
Current assets	1,000		350				1,350				1,350	
Equity		2,100		500	90	300		2,810	532.5 177.5			2,100
Profit		150		50				200	75 12.5	22.5		135
NCI									25	177.5 12.5 7.5		172.5
DTL						90		90	30			60
Debt		1,450		350				1,800				1,800
Sum	3,700	3,700	900	900			4,900	4,900			4,267.5	4,267.5

Course Structure

Block	Topic
4	Subsequent Consolidation & Goodwill Impairment
4.1	Subsequent Consolidation
4.2	**Goodwill Impairment**

- How do we account for the “consumption” of synergies (if any) following an acquisition?

Bayer + Monsanto = Synergies?

€ million	Note	Dec. 31, 2017	Dec. 31, 2018
Noncurrent assets			
Goodwill	[14]	14,751	38,146
Other intangible assets	[14]	11,674	36,746
Property, plant and equipment	[15]	7,633	12,944
Investments accounted for using the equity method	[16]	4,007	515
Other financial assets	[17]	1,634	2,212
Other receivables	[20]	400	511
Deferred taxes	[11]	4,915	4,278
		45,014	**95,352**

Acquired Assets and Assumed Liabilities (Fair Values at the Respective Acquisition Dates)

€ million	2017	2018	Of which Zydus	Of which Monsanto June 30, 2018	Adjustment of purchase price allocation	Of which Monsanto December 31, 2018
Goodwill	51	24,503	48	22,998	1,457	24,455
Patents and technologies	–	17,152	–	17,350	(198)	17,152

Change in accounting methods

In connection with the planned acquisition of Monsanto and in preparation for the future combined business, the structure of the Crop Science segment was adjusted as of January 1, 2018, in line with the internal financial reporting system (management approach). In the new structure, all the strategic business entities are organizationally located directly below the operating and reportable Crop Science segment. Global impairment testing of goodwill will also be carried out at the Crop Science segment level each year in the future.

Source: AR 2018 Bayer AG.

But then…

- 2023: https://www.ft.com/content/61a3b59d-4cd3-42d6-856e-4b133b9455c5

Opinion Lex + Add to myFT

Monsanto: Anderson must uproot Bayer's perennial problem

New chief needs to signal to investors whether a restructuring is likely

Activist investors favour a spinout of Bayer's crop science unit © Jean-Francois Monier/AFP/Getty Images

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Changes in Intangible Assets

€ million	Acquired goodwill	Patents and technol-ogies	Trade-marks	Marketing and distribution rights	Production rights	R&D projects	Other rights and advance payments	Total
Cost of acquisition or generation, December 31, 2022	**44,374**	**33,167**	**13,766**	**3,778**	**1,656**	**5,454**	**4,172**	**106,367**
Acquisitions	68	10	–	–	–	–	–	78
Capital expenditures	–	110	–	57	13	90	582	852
Retirements	–	(114)	(65)	(33)	–	(2)	(93)	(307)
Transfers	–	495	–	8	1	(495)	(9)	–
Transfers (IFRS 5)	–	–	–	–	–	–	–	–
Divestments/changes in scope of consolidation	6	–	–	(2)	–	–	(3)	1
Inflation adjustment (IAS 29)	41	11	–	3	–	–	17	72
Exchange differences	(1,033)	(744)	(293)	(50)	(2)	(130)	(89)	(2,341)
December 31, 2023	**43,456**	**32,935**	**13,408**	**3,761**	**1,668**	**4,917**	**4,577**	**104,722**
Accumulated amortization and impairment, December 31, 2022	**4,726**	**22,029**	**7,574**	**2,377**	**1,647**	**1,690**	**2,493**	**42,536**
Retirements	–	(98)	(37)	(33)	–	–	(86)	(254)
Amortization and impairment losses	6,690	2,393	539	161	2	259	410	10,454
Amortization	–	1,406	371	136	2	–	401	2,316
Impairment losses	6,690	987	168	25	–	259	9	8,138
Impairment loss reversals	–	(1,823)	(462)	(64)	–	(387)	–	(2,736)
Transfers	–	154	–	–	–	(154)	–	–
Transfers (IFRS 5)	–	–	–	–	–	–	–	–
Divestments/changes in scope of consolidation	–	–	–	(2)	–	–	(1)	(3)
Inflation adjustment (IAS 29)	8	11	–	3	–	–	16	38
Exchange differences	(267)	(427)	(149)	(41)	(1)	(32)	(58)	(975)
December 31, 2023	**11,157**	**22,239**	**7,465**	**2,401**	**1,648**	**1,376**	**2,774**	**49,060**
Carrying amounts, December 31, 2023	**32,299**	**10,696**	**5,943**	**1,360**	**20**	**3,541**	**1,803**	**55,662**
Carrying amounts, December 31, 2022	**39,648**	**11,138**	**6,192**	**1,401**	**9**	**3,764**	**1,679**	**63,831**

But then…

Impairment testing was conducted in the second quarter of 2023 in the Crop Science segment due to a further deterioration in business prospects and updated long-term corporate planning.

The unscheduled impairment testing in the Crop Science segment resulted in net impairment losses on intangible assets totaling €2,020 million. An impairment loss of €2,436 million was recognized on goodwill due to deteriorating business prospects overall, largely driven by significantly lower price expectations for glyphosate.

Impairment testing was conducted in the third quarter of 2023 due to interest-rate developments at that time and their related impact on the weighted average cost of capital.

Within the Crop Science segment, it resulted in the recognition of net impairment losses of €3,951 million on intangible assets, of which €3,621 million on goodwill, in the third quarter of 2023. In addition, there

But then…

Our regular annual impairment testing in the fourth quarter of 2023 resulted in the recognition of net impairment loss reversals of €562 million on intangible assets in the Crop Science segment. This included €633 million in impairment losses on goodwill, which were primarily the result of a deterioration in business prospects, particularly in the area of crop protection, and an inflation-driven increase in costs. This effect was offset by a decrease in the weighted average cost of capital compared to the third quarter of 2023.

Impairment loss reversals arose at the cash-generating units Corn Seed & Traits (€1,130 million, comprising €202 million on research and development projects, €721 million on patents and technologies, €176 million on trademarks and €31 million on marketing and distribution rights) and Soybean Seed & Traits (€65 million, comprising €8 million on research and development projects, €50 million on patents and technologies, €6 million on trademarks and €1 million on marketing and distribution rights). These impairment loss reversals were mainly attributable to a decrease in the weighted average cost of capital compared to the third quarter of 2023.

Questions

- How did Bayer account for the changes in its expected synergies with respect to Monsanto?
- Can you think of possible alternative accounting treatments?

Goodwill Impairment

- "Impairment only approach":
  - At a minimum, annual impairment tests (irrespective of indicators)
  - No scheduled amortization
  - No reversal of goodwill impairment losses
  - Impairment tested together with other assets (at the cash-generating unit)

- Advantages/disadvantages?

⊖ more discretionary

⊕ closer to "true" market value of combined entity

Impairment Test (IAS 36): Basic Idea

1

Identifying an asset that may be impaired

All assets in the scope of IAS 36:

Identifying an asset that may be impaired
- External sources
- Internal sources

Intangibles assets with indefinite useful life, intangible assets not yet available for use, goodwill acquired in a business combination

Annual impairment testing

2

Measuring recoverable amount

Higher of

- Fair value less costs to sell and
- Value in use

3

Recognizing and measuring impairment losses

Recoverable amount
<
carrying amount

Impairment is recognized in profit or loss

4

Reversing impairment losses

Assessment at each balance sheet date

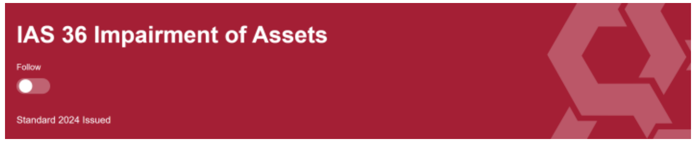
Increased carrying value shall not exceed the carrying amount without impairment

Reversal is recognized in profit and loss

Impairment loss recognized for goodwill cannot be reversed.

backdoor capitalization!

Impairment Test (IAS 36): Basic Idea



59 **If, and only if, the <u>recoverable amount</u> of an asset is less than its <u>carrying amount</u>, the carrying amount of the asset shall be reduced to its recoverable amount. That reduction is an <u>impairment loss</u>.**

Recoverable amount >?< **Carrying amount**

Carrying amount: The amount at which an asset is recognized after deducting any accumulated depreciation (amortisation) and accumulated impairment losses.

higher of

keep

sell

1 **Value in use**

The present value of the future cash flows expected to be derived from an asset or cash-generating unit.

2 **Fair value less cost to sell**

The amount obtainable from the sale of an asset or cash-generating unit in an arm's length transaction between knowledgeable, willing parties, less the costs of disposal. Fair value is determined in accordance with IFRS 13.

An impairment loss has occurred when an asset's recoverable amount has fallen below its carrying amount. In that case, an impairment write-off is recorded

Impairment Test (IAS 36): Example

Fact pattern:

- Company X owns a machine with a carrying amount (after regular depreciation) of 26,000 CU at the end of 20X1; this machine could be sold at an active market for 12,000 CU (no costs to sell).
- Over the last three years combined, the machine generated positive cash flows of 13,500 CU. It can be estimated reliably, that the average cash flow per year of the last three years will be earned in the next six years (20X2 – 20X7) as well.
- Company X expects that the machine can be sold for 1,500 CU by the end of 20X7.
- The interest rate is 5%.

Task:

- Provide the journal entries to account for the machine by the end of 20X1.
- Calculate the annual depreciation in 20X2.

Solution

Impairment Test (IAS 36): Example

26?

Dr Impairment loss 2040 (1000)

Cr PPE 2040 (1000)

→ sell: 12 (25)

→ keep: value in use = PV(E(CF))

$$\frac{4{,}500}{1{,}05} + \frac{4{,}500}{1{,}05^2} \ldots \frac{4{,}500}{1{,}05^6} + \frac{1{,}500}{1{,}05^6}$$

$$\boxed{\approx 23{,}960}$$

Solution

Impairment Test (IAS 36): Example

- Comparison of book value (= 26,000 CU) and recoverable amount

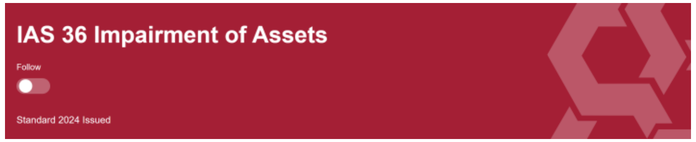
- **Calculation of recoverable amount:** higher value of
  - FV less cost to sell = 12,000 CU (take from fact pattern)
  - Value in use $= 4{,}500 \times [(1.05)^6-1]/ [(1.05)^6 \times 0.05] + 1{,}500/1.05^{6}$
    $= 4{,}500 \times 5.07569 + 1{,}119.32$
    $= 23{,}959.93 \sim 23{,}960$ CU
    (discounted yearly cash flows plus discounted residual value)

- max(12,000 CU; 23,960 CU) < 26,000 CU impairment loss needs to be recognized!
- Journal entry:
  Dr. Impairment loss Cr. Machine 2,040

- Depreciation for 20X2: 23,960 CU / 6 = 3,993.33 CU

Goodwill Impairment Test: CGU

Cash generating unit = the **smallest identifiable group of assets** that generates **cash inflows** that are largely **independent** of the cash inflows from other assets or groups of assets



80 **For the purpose of impairment testing, goodwill acquired in a business combination shall, from the acquisition date, be allocated to each of the acquirer's cash-generating units, or groups of cash-generating units, that is expected to benefit from the synergies of the combination, irrespective of whether other assets or liabilities of the acquiree are assigned to those units or groups of units. Each unit or group of units to which the goodwill is so allocated shall:**

(a) **represent the lowest level within the entity at which the goodwill is monitored for internal management purposes; and**

(b) **not be larger than an operating segment as defined by paragraph 5 of IFRS 8 *Operating Segments* before aggregation.**

Cash Generating Unit - Examples

- Stores of a supermarket chain that have different customer bases
  - Independent cash flows because of differences in customer base
  - Notwithstanding centralized management, HR, accounting department, etc.

- Two plants within a firm, where the output of Plant A is used as input to Plant B and no other (‘outside’) market exists for Plant A’s product
  - Cash flow of the two plants are linked
  - Alternative scenario: Plant A’s also sells its products in another market

Cash Generating Units – Bayer

- CGUs defined based on product families:

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Impairment Testing Parameters

%	After-tax cost of capital Q4 2023	Q3 2024	Q4 2024
Corn Seed & Traits	10.3	9.3	9.7
Soybean Seed & Traits	9.9	9.1	9.3
Glyphosate	11.7	10.4	10.4
Dicamba	7.6	7.1	7.7
Cotton Seed	7.8	7.4	7.8
Canola	7.8	7.5	8.0
Vegetable Seeds	11.4	10.0	9.2

Cash Generating Units – L'Oreal

Goodwill is allocated by Cash Generating Units or by groups of Cash Generating Units. A Cash Generating Unit corresponds to one or more worldwide brands.

€ millions 2024	31.12.2023	Acquisitions/ Disposals	Other movements	Translation difference	31.12.2024
Redken/PureOlogy	698.4	4.9		33.2	736.5
L'Oréal Professionnel/Kérastase	422.4	14.6		12.7	449.7
Matrix	416.5			22.3	438.9
Professional Products Total	**1,537.4**	**19.5**	**—**	**68.2**	**1,625.1**
L'Oréal Paris	1,180.4		14.5	14.5	1,209.4
Mass Market make-up	1,038.6		5.6	38.3	1,082.5
Garnier	425.9		4.1	(18.2)	411.8
Stylenanda	406.9			(11.4)	395.5
NYX Professional Makeup	331.4			18.5	349.9
LaSCAD	156.4				156.4
Other	352.9		(48.4)	15.2	319.8
Consumer Products Total	**3,892.6**	**—**	**(24.1)**	**56.9**	**3,925.4**
Retail Skincare(1)	1,751.6		102.0	(50.3)	1,803.3
Perfumes	1,471.8			2.0	1,473.8
Lancôme	831.4		20.3	3.6	855.3
Skincare(2)	623.5			6.6	630.2
Make up(3)	547.9			16.4	564.2
YSL Beauté	536.2			0.5	536.7
Luxe Total	**5,762.4**	**—**	**122.3**	**(21.3)**	**5,863.4**
SkinCeuticals/Skinbetter Science	727.9	35.1		31.6	794.6
CeraVe	639.6			21.1	660.7
Vichy	322.4			6.3	328.7
La Roche-Posay	169.6		10.1	4.2	184.0
Dermatological Beauty Total	**1,868.5**	**35.1**	**10.1**	**63.3**	**1,968.1**
Lactobio(4)	50.7		(50.7)		—
GROUP TOTAL	**13,102.6**	**54.6**	**57.7**	**167.1**	**13,382.0**

(1) The Cash Generating Unit includes Aēsop and Kiehl's.
(2) The Cash Generating Unit includes Biotherm, Carita, HR, Takami and Youth To The People.
(3) The Cash Generating Unit includes IT Cosmetics, Shu Uemura and Urban Decay.
(4) The goodwill from Lactobio has been allocated to the CGUs Lancôme, L'Oréal Paris and La Roche-Posay.

The CGUs of the Luxe division were subject to a reallocation in connection with the reorganisation initiated in 2024 of the operating model focused on categories and the associated go to market. The 2023 and prior data have been restated to reflect this new organisation.

2024 acquisitions mainly relate to YesSkin for €35.1 million (purchase price allocation not yet finalised) and Gjosa for €14.6 million.

Other movements mainly include the impairment loss (€48.4 million) on Multicultural Brands and the definitive allocation of the goodwill of Aēsop and Lactobio.

The accumulated impairment losses related to IT Cosmetics, L'Oréal Beauty Device, Multicultural Brands, Magic and Yue Sai amounted to -€547.9 million, -€324.6 million, -€208.3 million, -€157.9 million and -€32.1 million respectively at 31 December 2024.

Cash Generating Units – Deutsche Bank

Goodwill allocated to cash-generating units

in € m.	Investment Bank	Corporate Bank	Asset Manage-ment	Private Bank	Total
Balance as of January 1, 2023	0	0	2,919	0	**2,919**
Goodwill acquired during the year	235	0	0	0	235
Purchase accounting adjustments	0	0	0	0	0
Transfers	0	0	0	0	0
Reclassification from (to) “held for sale”	0	0	(7)	0	(7)
Goodwill related to dispositions without being classified as “held for sale”	0	0	0	0	0
Impairment losses[1]	(233)	0	0	0	(233)
Exchange rate changes/other	(2)	0	(63)	0	(65)
Balance as of December 31, 2023	0	0	2,849	0	**2,849**
Gross amount of goodwill	4,175	615	3,336	3,723	**11,848**
Accumulated impairment losses	(4,175)	(615)	(487)	(3,723)	**(9,000)**
Balance as of January 1, 2024	0	0	2,849	0	**2,849**
Goodwill acquired during the year	0	0	0	0	0
Purchase accounting adjustments	0	0	0	0	0
Transfers	0	0	0	0	0
Reclassification from (to) “held for sale”	0	0	0	0	0
Goodwill related to dispositions without being classified as “held for sale”	0	0	0	0	0
Impairment losses[1]	0	0	0	0	0
Exchange rate changes/other	0	0	114	0	114
Balance as of December 31, 2024	0	0	2,963	0	**2,963**
Gross amount of goodwill	4,418	643	3,477	3,737	**12,275**
Accumulated impairment losses	(4,418)	(643)	(515)	(3,737)	**(9,313)**

[1] Impairment losses of goodwill are recorded as impairment of goodwill and other intangible assets in the income statemer

Goodwill on the acquisition of subsidiaries is capitalized and reviewed for impairment annually or more frequently if there are indications that impairment may have occurred. For the purposes of impairment testing, goodwill acquired in a business combination is allocated to cash-generating units (“CGUs”), which are the smallest identifiable groups of assets that generate cash inflows largely independent of the cash inflows from other assets or groups of assets and that are expected to benefit from the synergies of the combination and considering the business level at which goodwill is monitored for internal management purposes. In identifying whether cash inflows from an asset (or a group of assets) are largely independent of the cash inflows from other assets (or groups of assets) various factors are considered, including how management monitors the entity’s operations or makes decisions about continuing or disposing of the entity’s assets and operations.

1200 - 600 - 200
= 400

Goodwill allocation to CGU - exercise

- Chicken AG acquires 100% of the shares of Muller AG. The purchase price of Muller AG is 1,200 CU. The book value of Muller AG's equity capital is 600 CU. Muller AG has additional hidden reserves of 200 CU. Total goodwill is 400 CU.
- After the acquisition, Muller AG is an independent CGU within Chicken AG. In addition to Muller AG, there are three other independent CGUs operated by Chicken AG.

1. If no other independent CGU of Chicken AG generates any additional synergies from the acquisition of Muller AG, what is the goodwill allocated to Muller AG?
2. If three other independent CGUs of Chicken AG expect the following synergies from the acquisition of Muller AG, what is the goodwill allocated to Muller AG?

CU	CGU 1	CGU 2	CGU 3
Value without synergies	1,000	800	1,200
Value including synergies	1,060	800	1,220
	60		20

Solution

Goodwill allocation to CGU

Solution

Goodwill allocation to CGU

1. If no other independent CGU of Chicken AG generates any additional synergies from the acquisition of Muller AG, what is the goodwill allocated to Muller AG?

   → The total goodwill of 400 CU is allocated to Muller AG.

2. If three other independent CGUs of Chicken AG expect the following synergies from the acquisition of Muller AG, what is the goodwill allocated to Muller AG?

   → The goodwill of Muller AG is 320 CU.
   60 CU are allocated to CGU 1 and 20 CU are allocated to CGU

CU	CGU 1	CGU 2	CGU 3
Value without synergies	1,000	800	1,200
Value including synergies	1,060	800	1,220
Expected synergies = goodwill allocation	60	0	20

Testing Goodwill at the CGU-Level

Usually gross value

consistency

Usually sum of assets (liabilities not deducted; IAS 36.76(b))

CGU recoverable amount < CGU carrying amount

If YES

Impairment!

Has to be allocated to reduce the carrying amount of the assets of the unit in the following order:

- **first**, to reduce the carrying amount of any goodwill allocated to the cash-generating unit; and
- **then**, to the other assets of the unit pro rata on the basis of the carrying amount of each asset in the unit.

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Impairment test of a cash-generating unit

CGU recoverable amount

650

CGU carrying amount

Balance Sheet CGU 1			
Machinery	400	Equity	500
Property&Plant	150	Debt	250
Current assets	200		
Sum	750		750

Solution

Impairment test of a cash-generating unit

CGU recoverable amount < **CGU carrying amount**

650

Balance Sheet CGU 1			
Machinery	400	Equity Debt	500 250
Property&Plant	150		
Current assets	200		
Sum	750		750

➡ **Impairment loss!**

Journal Entries

Dr. Impairment loss 100	*Cr.*	*Machinery*	*73 (= 400/550*100)*
		PP&E	*27 (= 150/550*100)*

Impairment test of a cash-generating unit

Impairment loss: 850 – 700 = 150

CGU recoverable amount	<	CGU carrying amount
700		

Balance Sheet CGU 1			
Goodwill	100	Equity	600
Machinery	400	Debt	250
Property&Plant	150		
Current assets	200		
Sum	850		850

– 100

– 50

Solution

Impairment test of a cash-generating unit

CGU recoverable amount	<	CGU carrying amount
700		

Balance Sheet CGU 1			
Goodwill	100	Equity	600
Machinery	400	Debt	250
Property&Plant	150		
Current assets	200		
Sum	850		850

Impairment loss!

Journal Entries

Dr. Impairment loss 150	*Cr.*	*Goodwill*	*100*
		Machinery	*36 (= 400/550*50)*
		PP&E	*14 (= 150/550*50)*

Goodwill Impairment Testing - Reversals

Recoverable amount > Carrying amount

20X3

Because of new product innovations, the group expects to make up for the reduced customer demand by an improved cost structure.

20X1

Buyer acquires Seller because of expected synergies from combined product portfolios.

20X2

Because of macro-economic conditions, customer demand drops unexpectedly and goodwill is impaired.

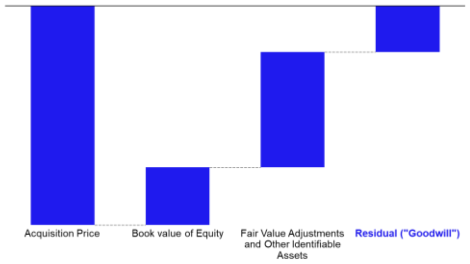
Recoverable amount < Carrying amount

No reversal of goodwill impairment loss! Why?

Goodwill Impairment Testing – Areas of Discretion

Initial Consolidation and Allocation of Goodwill

- **Purchase price allocation** / determination of goodwill amount relative to other assets



- Allocation of goodwill to **CGUs**

Subsequent Measurement

- Determination of recoverable amount
  - Cash flow forecasts
  - Discount rate
  - Terminal value

Break ends
4:20

Discretion in Goodwill Accounting – Purchase Price Allocation

- Buyer purchases 100% of the shares in Seller as of 01 January 20X1.
  - Acquisition Price: 120 CU

Seller (Unconsolidated)

Assets		Equity &Liabilities	
Cash	10	Equity	20
PP&E	50	Debt	40

  - Current estimates of the market value of Seller's investment property range between 60 CU and 100 CU.
  - Useful life of Seller's PP&E: 10 years

- What are the accounting consequences in future periods of a higher versus lower fair value adjustment of Sellers's investment property?

Solution

Discretion in Goodwill Accounting – Purchase Price Allocation

Low Fair Value Adjustment	
Acquisition Price	
Equity (Book Value)	
Fair Value Adjustments	
Goodwill	
Annual depreciation (PPE)	

High Fair Value Adjustments	
Acquisition Price	
Equity (Book Value)	
Fair Value Adjustments	
Goodwill	
Annual depreciation (PPE)	

Discretion in Goodwill Accounting – Purchase Price Allocation

Low Fair Value Adjustment	
Acquisition Price	120
Equity (Book Value)	20
Fair Value Adjustments	10
Goodwill	90
Annual depreciation (PPE)	60 / 10 = 6

High Fair Value Adjustments	
Acquisition Price	120
Equity (Book Value)	20
Fair Value Adjustments	50
Goodwill	50
Annual depreciation (PPE)	100 / 10 = 10

- Trade-off between higher goodwill amount (→ exposure to potential impairment loss) and higher annual depreciation on fair value adjustments

Discretion in Goodwill Accounting – Case Study

Fact pattern:

BUY AG purchases all shares of TARGET AG for a total purchase price of 1,000 CU at the beginning of year 20X1. You are provided with the following information about TARGET as of the beginning of year 20X1:

	Book value	Fair value
Cash (in TEUR)	500	500
Non-current assets (in TEUR)	100	?
Total liabilities (in TEUR)	300	200
Brand value (unregonized, in TEUR)		200

TARGET AG does not have any assets other than non-current assets and cash. The remaining useful life of non-current assets is 10 years.

Discretion in Goodwill Accounting – Case Study

Task (continued):
Assume BUYER AG's management has some discretion about the purchase price allocation. In particular, experts somewhat disagree on the fair value of TARGET's non-current assets (with estimates ranging between 50 CU and 500 CU).

BUYER AG has a credit covenant which is based on the group's EBIT. BUYER AG expects that, at the end of year 20X1, the EBIT of the group *without TARGET* will exceed the EBIT required in the covenant by 30 CU.

After the transaction, TARGET will be consolidated in BUYER's group financial statements and, hence, affect the group's EBIT relevant for the covenant.

Assume that BUYER wants to avoid goodwill impairments in future periods. How would the management of BUYER AG rationally exercise its discretion relating to the purchase price allocation? Please explain and provide the goodwill that would result under BUYER AG's rational accounting judgment.

Solution

Discretion in Goodwill Accounting – Case Study

Solution

Discretion in Goodwill Accounting – Case Study

- To avoid goodwill impairment, minimize the amount of goodwill uncovered in the purchase price allocation.
- They allocate as much as they can to non-current assets, without breaching the covenant.
- Advantage: non-current assets can be depreciated on a regular basis (without sending a bad signal to the market, by contrast to goodwill impairment).
- Maximum additional depreciation they can take on non-current assets without covenant breach: 30 CU. With a useful life of 10 years, this corresponds to book value of 300 CU.
- Hence, the purchase price allocation would look as follows:

Purchase price	1000
- Book value of equity	-300
- Brand	-200
- hidden reserves on liabilities	-100
- hidden reserves on non-current assets	-200
= Goodwill	200

Discretion in Goodwill Accounting – Allocation to CGUs

- Allocation to CGU with greater hidden reserves lowers probability of goodwill impairment
  - Hidden reserves provide a buffer, leading to recoverable amount > carrying amount of CGU

- Due to accounting rules, hidden reserves are typically more likely than hidden liabilities (i.e., most assets are carried at lower amounts compared to their recoverable amount)
  - Provides incentives to form large, high-level CGUs: accumulate hidden reserves across numerous assets
  - But: CGU must not be larger than segment!

Block 4: Key take-aways

- Subsequent consolidation builds upon the current year’s unconsolidated statements and:
  - A re-doing of the initial capital consolidation
  - Depreciation of fair value adjustments (incl. deferred tax implications)
  - Impairment of goodwill (if any)

- Consolidated profit for the year is allocated among parent company shareholders and NCI:
  - Parent company shareholders: 100% of parent company unconsolidated profit, share in profit of subsidiary, share in profit/loss from depreciation of hidden reserves
  - NCI: share in profit of subsidiary, share in profit/loss from depreciation of hidden reserves

- Goodwill in subsequent periods is accounted for using the “impairment-only” approach.
  - No scheduled/fixed amortization
  - Impairment test at the level of the CGU
  - Discretion w.r.t. measurement and allocation to CGUs