

Advanced Group Accounting (RIKA)

Block 3

RECHTSWISSENSCHAFT WIRTSCHAFTSWISSENSCHAFTEN

Foto: Thomas Müller Ivan Reimann

Course Structure

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

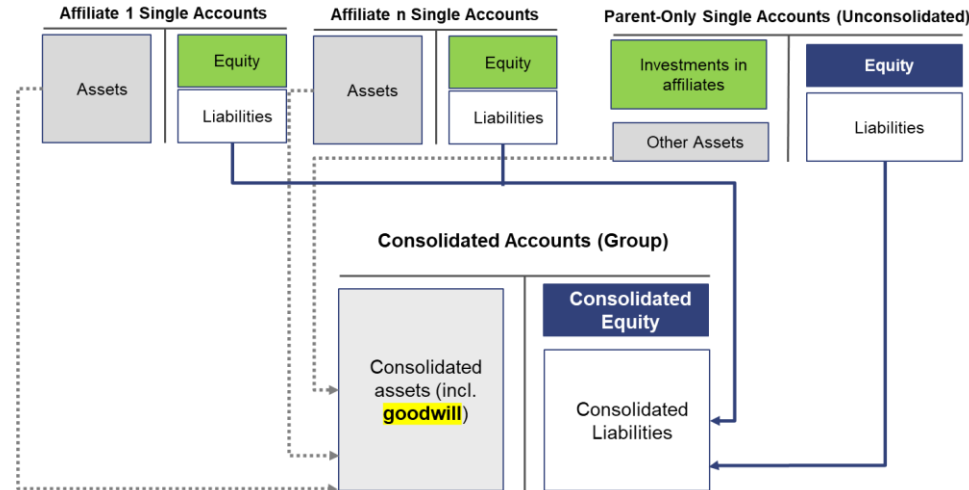
Course Structure

Block	Topic
3	Consolidation
3.1	Capital Consolidation
3.2	Intra-Group Transactions



- How can we combine the financial statements of the parent company and a subsidiary?
- How do we avoid double-counting of equity capital within the corporate group?

Consolidation



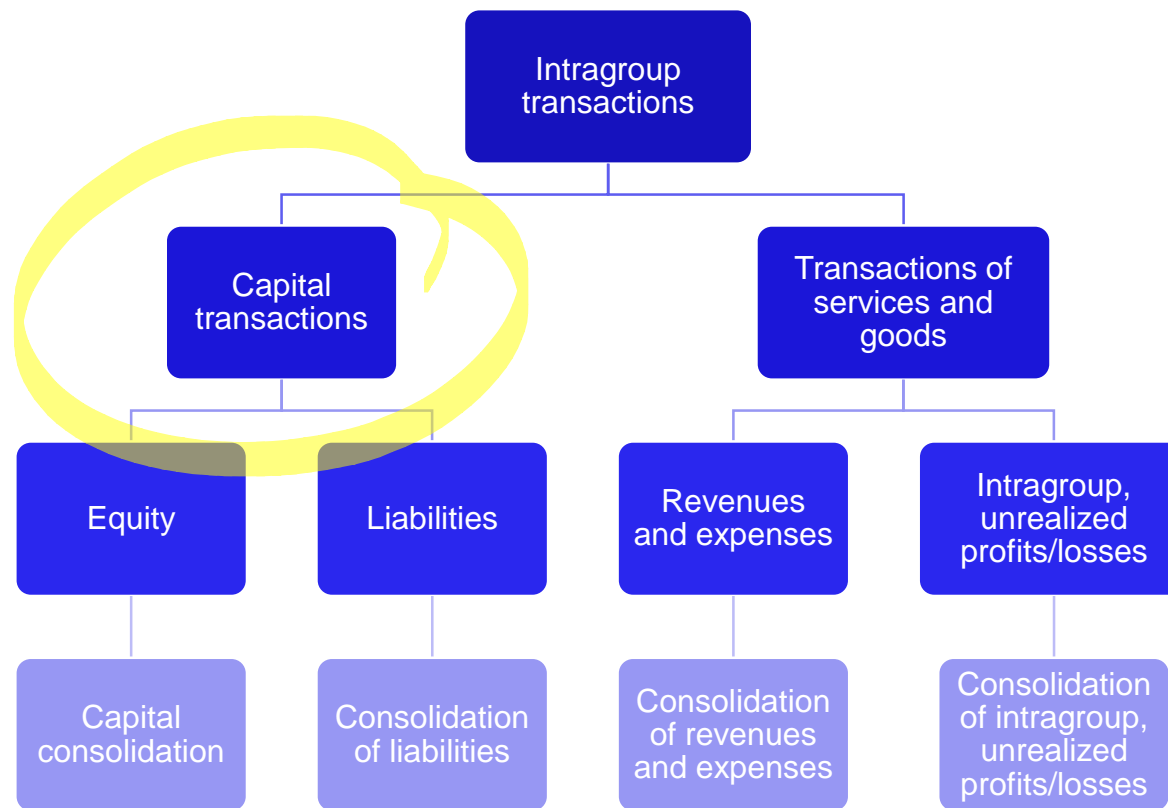
- Bringing together assets and liabilities of different entities in the corporate group
- Objective: consolidated financial statements represent financial position of the corporate group as one economic entity
- Features:
 - Position “Investments in affiliates” from parent company’s unconsolidated accounts is resolved
 - (Revalued) assets and liabilities from affiliates are combined with parent’s other assets and liabilities (at historical cost)
 - Goodwill is recognized on the consolidated financial statements
 - Consolidated equity without non-controlling interests = parent’s equity

Preparation for consolidation

- Uniform accounting policies
- Reporting date
- Foreign currency translation
- Combing like items

Consolidation: Overview

IFRS 10. B86: intragroup assets and liabilities, equity, income, expenses and cash flows relating to transactions between entities of the group are eliminated in full.



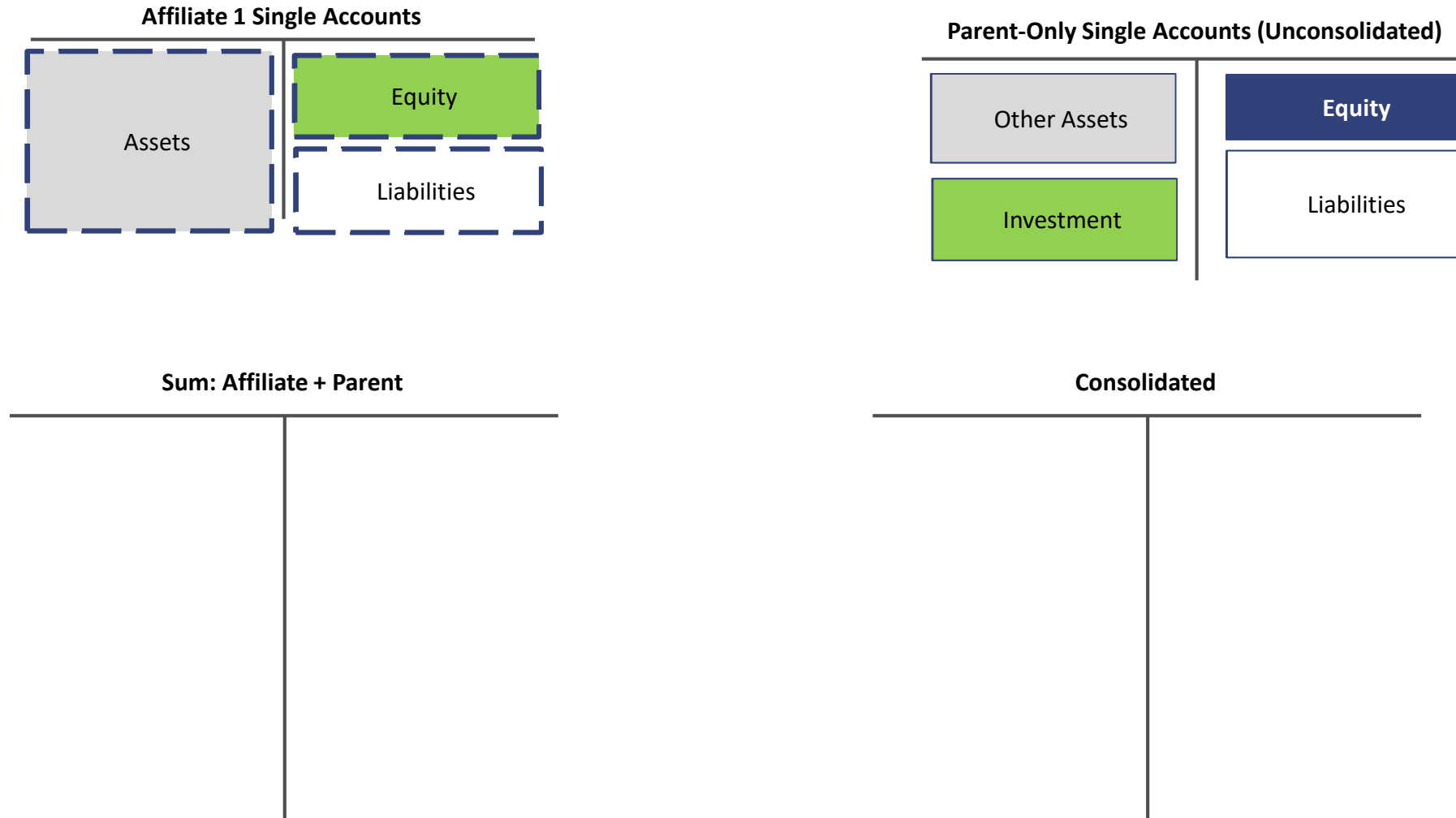
Note: Deferred taxes may additionally occur due to consolidation.

Consolidation of capital

- Consolidation of capital = Elimination of a double count:
Sum balance sheet contains
 - the equity of the subsidiary (from the subsidiary's balance sheet)
 - the purchase price of the subsidiary (from the parent's balance sheet)
 - all assets and liabilities of the subsidiary (from the subsidiary's balance sheet)
- Consolidation of capital (acquisition method)
 - Offset **purchase price (investment book value)** against **equity (only assets and liabilities will remain)**
 - Problem: Usually, the amount of equity and the purchase price do not match (e.g. hidden reserves; control premium)
- Solution:
 - Recognize assets and liabilities (= net assets) acquired at fair value
 - Recognize any residual as goodwill or bargain purchase

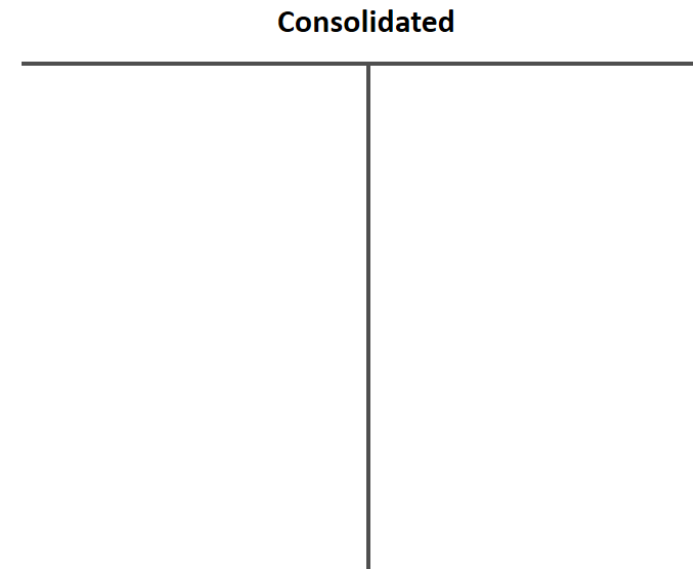
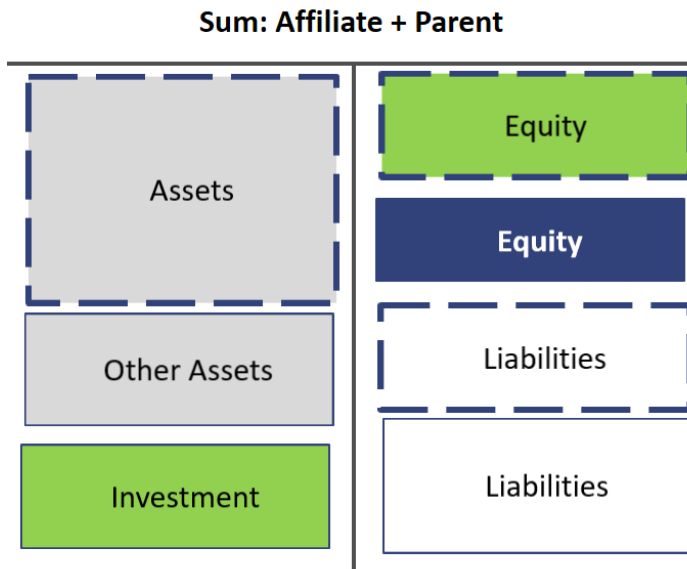
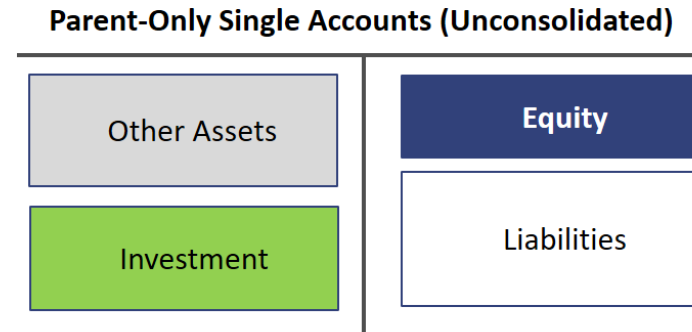
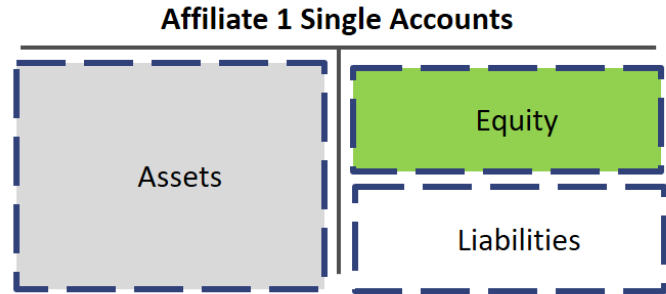
Consolidation – basic logic

Example without revaluation, goodwill, or NCI



Consolidation – basic logic

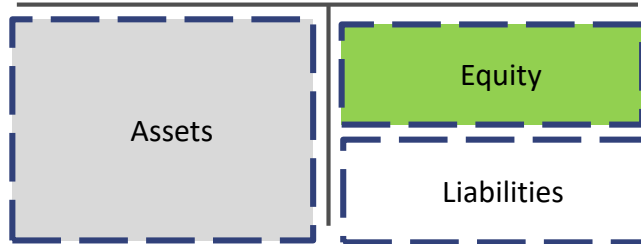
Example without revaluation, goodwill, or NCI



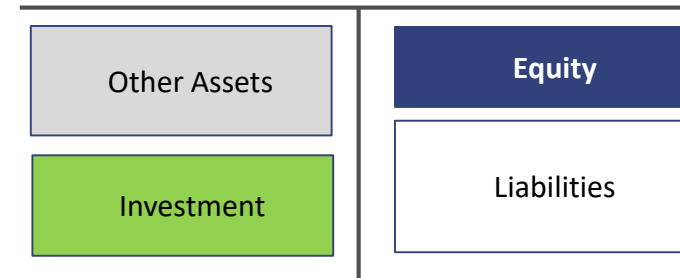
Consolidation – basic logic

Example without revaluation, goodwill, or NCI

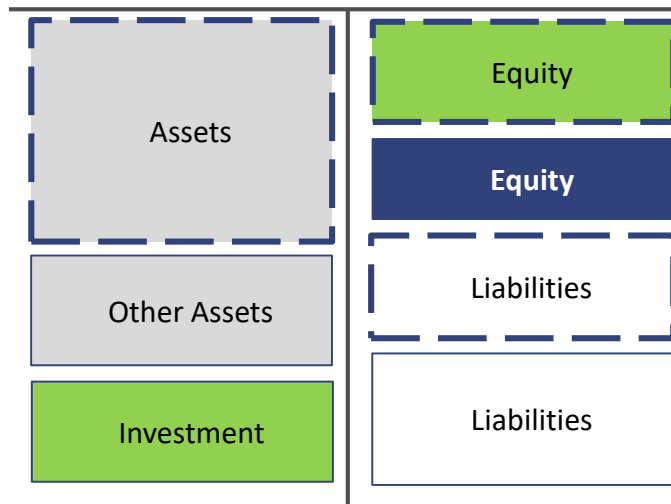
Affiliate 1 Single Accounts



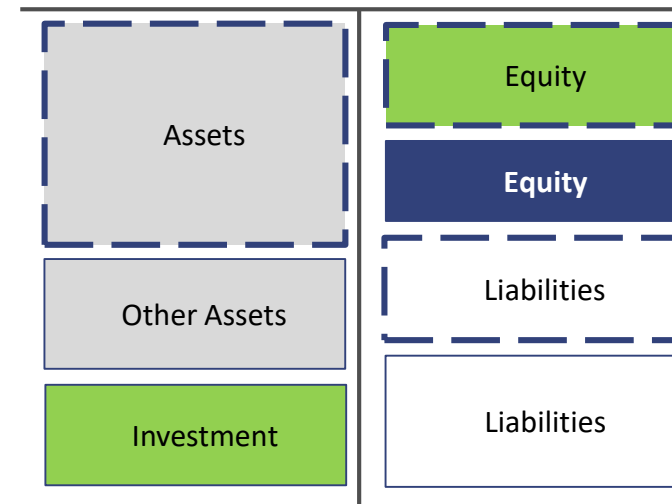
Parent-Only Single Accounts (Unconsolidated)



Sum: Affiliate + Parent



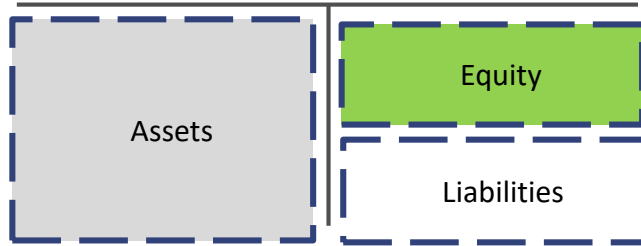
Consolidated



Consolidation – basic logic

Example without revaluation, goodwill, or NCI

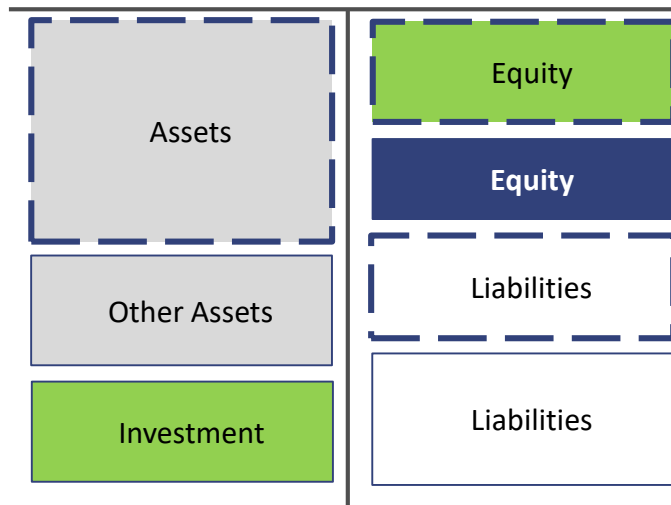
Affiliate 1 Single Accounts



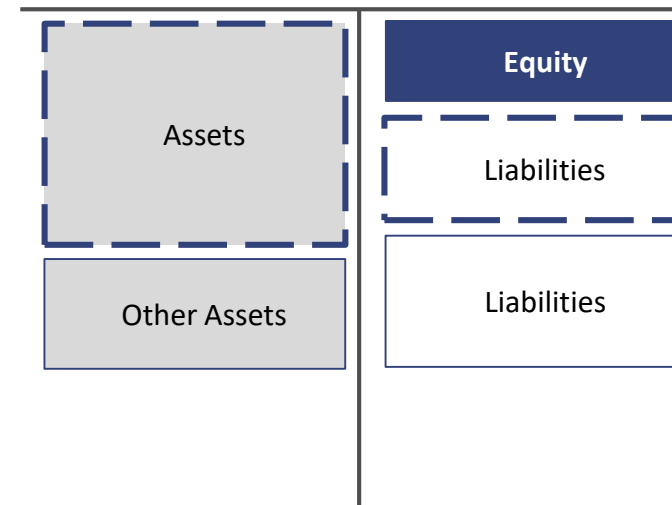
Parent-Only Single Accounts (Unconsolidated)



Sum: Affiliate + Parent



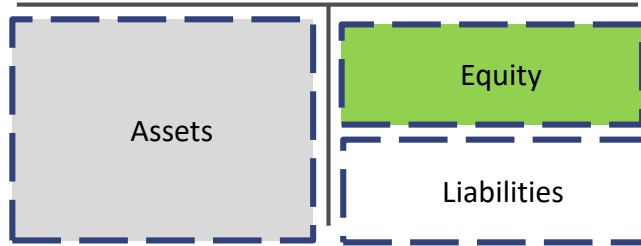
Consolidated



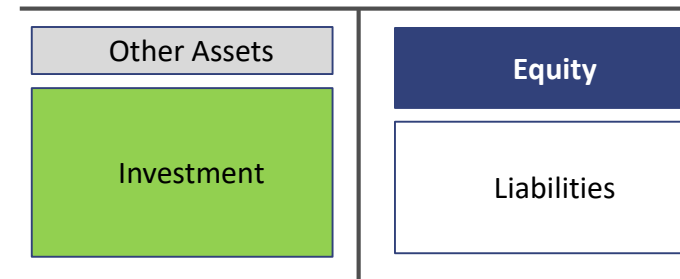
Consolidation – basic logic

What if Investment > Equity (Book Value)?

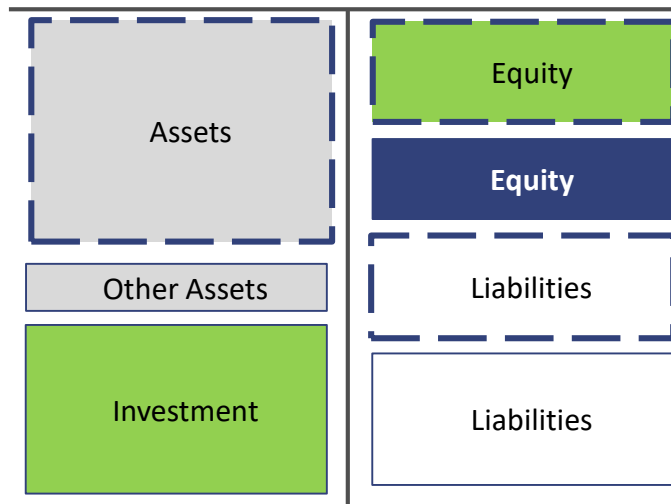
Affiliate 1 Single Accounts



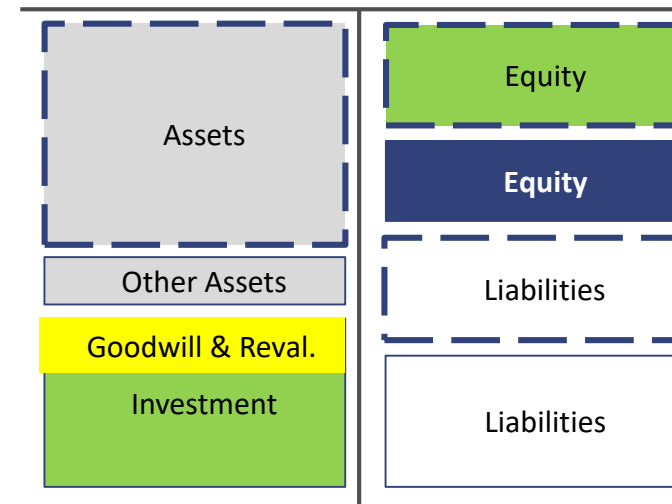
Parent-Only Single Accounts (Unconsolidated)



Sum: Affiliate + Parent



Consolidated



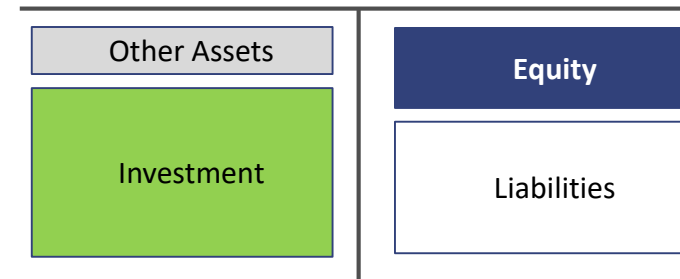
Consolidation – basic logic

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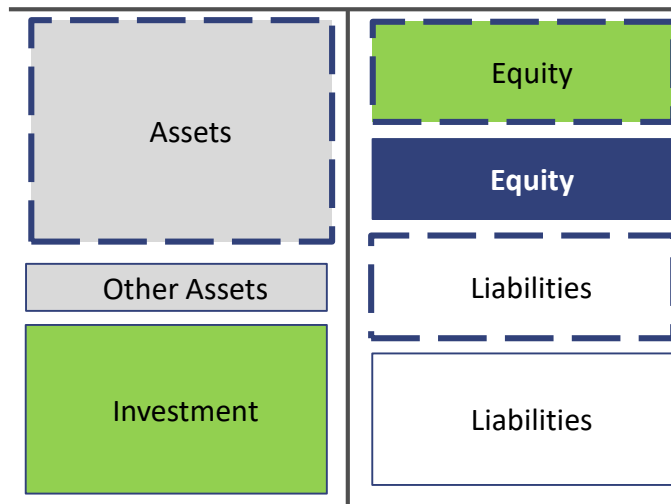
Affiliate 1 Single Accounts



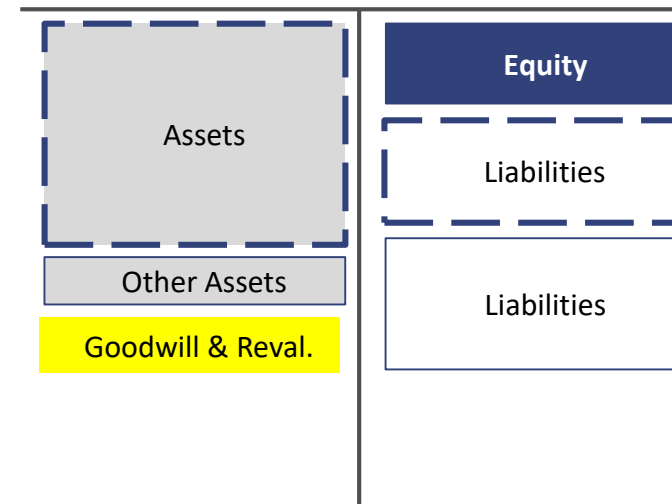
Parent-Only Single Accounts (Unconsolidated)



Sum: Affiliate + Parent



Consolidated



Consolidation of capital – exercise 1

X AG purchases 100% of Y GmbH's shares for 666 CU on December 31, 20X1. Account for the business combination and consider that the non-current assets include hidden reserves of 100 CU. For now, neglect deferred taxes!

Balance sheet of Y GmbH as of 31.12.20X1 (in CU)

Non-current assets	550	Equity	500
Current assets	300	Debt	350
Sum	850	Sum	850

Balance sheet of X AG as of 31.12.20X1 (in CU)

Non-current assets	1,800	Equity	2,100
Investment Y	666	Debt	1,750
Current assets	1,384		
Sum	3,850	Sum	3,850

31.12.20X1 CU	X AG		Y GmbH		Sum Balance sheet before revaluation	
Non-current assets	1,800		550		2,350	
Investment Y	666		—		666	
Current assets	1,384		300		1,684	
Equity		2,100		500		500 + 2,100
Debt		1,750		350		2,100
Sum	3,850	3,850	850	850	4,700	4,700

Consolidation of capital – exercise 1

Dr. Non-current assets
Cr. Revaluation Reserve (EQ) 100

Dr Equity 600
Goodw. 66

Cr. Inv. 666

Dr Cr

Acquisition Price	666
- Equity	500
- Fair Value Adjustments and Other Identifiable Assets	400
Goodwill	

31.12.20X1 CU	Revaluation		Sum Balance		Consolidation		Consolidated	
Non-current assets	100		2,450			2450 ✓		
Goodwill					66	66 ✓		
Investment Y			666		666	-	-	
Current assets			1684			1684		
Equity		100	600 + 2100	600		2100 ✓		
Debt			2100			2100		
Sum			4800	4800		4200	4200	

Consolidation of capital – exercise 1

Acquisition Price	666
- Equity	500
- Fair Value Adjustments and Other Identifiable Assets	100
Goodwill	66

31.12.20X1 CU	Revaluation		Sum Balance		Consolidation		Consolidated	
Non-current assets	100		2,450				2,450	
Goodwill					66		66	
Investment Y			666			666		
Current assets			1,684				1,684	
Equity		100		600 + 2,100	600			2,100
Debt				2,100				2,100
Sum			4,800	4,800			4,200	4,200

Consolidation of capital – exercise 2

X AG purchases 100% of Y GmbH's shares for 666 CU on December 31, 20X1. Account for the business combination and consider that the non-current assets include hidden reserves of 100 CU. **Adaptation:** Also, consider deferred taxes (tax rate 30%)!

Balance sheet of Y GmbH as of 31.12.20X1 (in CU)

Non-current assets	550	Equity	500
Current assets	300	Debt	350
Sum	850	Sum	850

Balance sheet of X AG as of 31.12.20X1 (in CU)

Non-current assets	1,800	Equity	2,100
Investment Y	666	Debt	1,750
Current assets	1,384		
Sum	3,850	Sum	3,850

31.12.20X1 CU	X AG		Y GmbH		Sum Balance sheet before revaluation	
Non-current assets	1,800		550		2,350	
Investment Y	666		—		666	
Current assets	1,384		300		1,684	
Equity		2,100		500		500 + 2,100
Debt		1,750		350		2,100
Sum	3,850	3,850	850	850	4,700	4,700

Consolidation of capital – exercise 2

Dr NCA 100 CR EQ 100
 Dr EQ 30 CR. PTL 30
 Dr. EQ 570 Cr. Inv. 666
 Dr. Goodw. 96

Acquisition Price	666
- Equity	(500)
- Fair Value Adjustments and Other Identifiable Assets	(100)
+ Tax Liability	30
Goodwill	96

31.12.20X1 CU	Revaluation		Sum Balance		Consolidation		Consolidated	
Non-current assets	100		2450				2450	
Goodwill					96		96	
Investment Y			666			666	-	-
Current assets			1684				1684	
Equity	30	100		570 + 2100	570			2100
Debt				2100				2100
Deferred tax liability		30		30				30
Sum			4800	4800			4230	4230

Consolidation of capital – exercise 2

Acquisition Price	666
- Equity	500
- Fair Value Adjustments and Other Identifiable Assets	100
+ Tax Liability	30
Goodwill	96

31.12.20X1 CU	Revaluation		Sum Balance		Consolidation		Consolidated	
Non-current assets	100		2,450				2,450	
Goodwill					96		96	
Investment Y			666			666		
Current assets			1,684				1,684	
Equity	30	100		570+	570			2,100
				2,100				
Debt				2,100				2,100
Deferred tax liability		30		30				30
Sum			4,800	4,800			4,230	4,230

Consolidation of capital – exercise 3

- Fair value adjustments to sub's ~~net~~ identifi. assets!
- future tax implications of the acquisition of subsidiary
- Goodwill

Adaption: X AG purchases 60% of Y GmbH's shares for 400 k€ on December 31, 20X1. Account for Non-controlling interest a) at their proportionate share of Y GmbH's revalued equity or b) at fair value. The Non-current assets include hidden reserves of 100 k€. Also, consider deferred taxes (tax rate 30%)!

Balance sheet of Y GmbH as of 31.12.20X1 (in CU)

Non-current assets	550	Equity	500
Current assets	300	Debt	350
Sum	850	Sum	850

Balance sheet of X AG as of 31.12.20X1 (in CU)

Non-current assets	1,800	Equity	2,100
Investment Y	400	Debt	1,750
Current assets	1,650		
Sum	3,850	Sum	3,850

31.12.20X1 CU	X AG		Y GmbH		Sum Balance sheet before revaluation	
Non-current assets	1,800		550		2,350	
Investment Y	400		—		400	
Current assets	1,650		300		1,950	
Equity		2,100		500		500 + 2,100
Debt		1,750		350		2,100
Sum	3,850	3,850	850	850	4,700	4,700

Consolidation of capital – exercise 3 solutions

→ 60% → 400
 100% → 667

EQ 570
 bW 97
 cr. Inv: 400
 NCI 267

Acquisition Price (100%)	667
- Equity	(500)
- Fair Value Adjustments and Other Identifiable Assets	(100)
+ Tax Liability	30
Goodwill (100%)	97
Goodwill (60%)	58

31.12.20X1 CU	Revaluation	Sum Balance	Consolidation	Consolidated
Non-current assets	100	2450	58	
Goodwill			97	
Investment Y		400	400	
Current assets		1950		
Equity	30	570 + 2100	570	
Non-controlling interest			267	228
Debt		2100		
Deferred tax liability	30	30		
Sum		4800	4800	

60%!

Consolidation of capital – exercise 3 solutions

Acquisition Price (100%)	667
- Equity	500
- Fair Value Adjustments and Other Identifiable Assets	100
+ Tax Liability	30
Goodwill (100%)	97
Goodwill (60%)	97 x 0.6 = 58

31.12.20X1 CU	Revaluation		Sum Balance		Consolidation		Consolidated	
Non-current assets	100		2,450				2,450	
Goodwill					58		58	
Investment Y			400			400		
Current assets			1,950				1,950	
Equity	30	100		570 + 2,100	342 228			2,100
Non-controlling interest						228		228
Debt				2,100				2,100
Deferred tax liability		30		30				30
Sum			4,800	4,800			4,458	4,458

Consolidation of capital – exercise 3 solutions

31.12.20X1 CU	Revaluation		Sum Balance		Consolidation		Consolidated	
Non-current assets								
Goodwill								
Investment Y								
Current assets								
Equity								
Non-controlling interest								
Debt								
Deferred tax liability								
Sum								

Consolidation of capital – exercise solutions

The shares of Y's equity that are not held by X have to be recognized as non-controlling interest; they are recognized at fair value As fair value of 60% of Y GmbH = 400, 100% = 666.66 and 40% = 266.66. The difference between 266.66-228 is recognized in goodwill and, likewise, non-controlling interest are increased.

31.12.20X1 CU	Revaluation		Sum Balance		Consolidation		Consolidated	
Non-current assets	100		2,450				2,450	
Goodwill					58 39		97	
Investment Y			400			400		
Current assets			1,950				1,950	
Equity	30	100		570 + 2,100	342 228			2,100
Non-controlling interest						228 39		267
Debt				2,100				2,100
Deferred tax liability		30		30				30
Sum			4,800	4,800			4,497	4,497

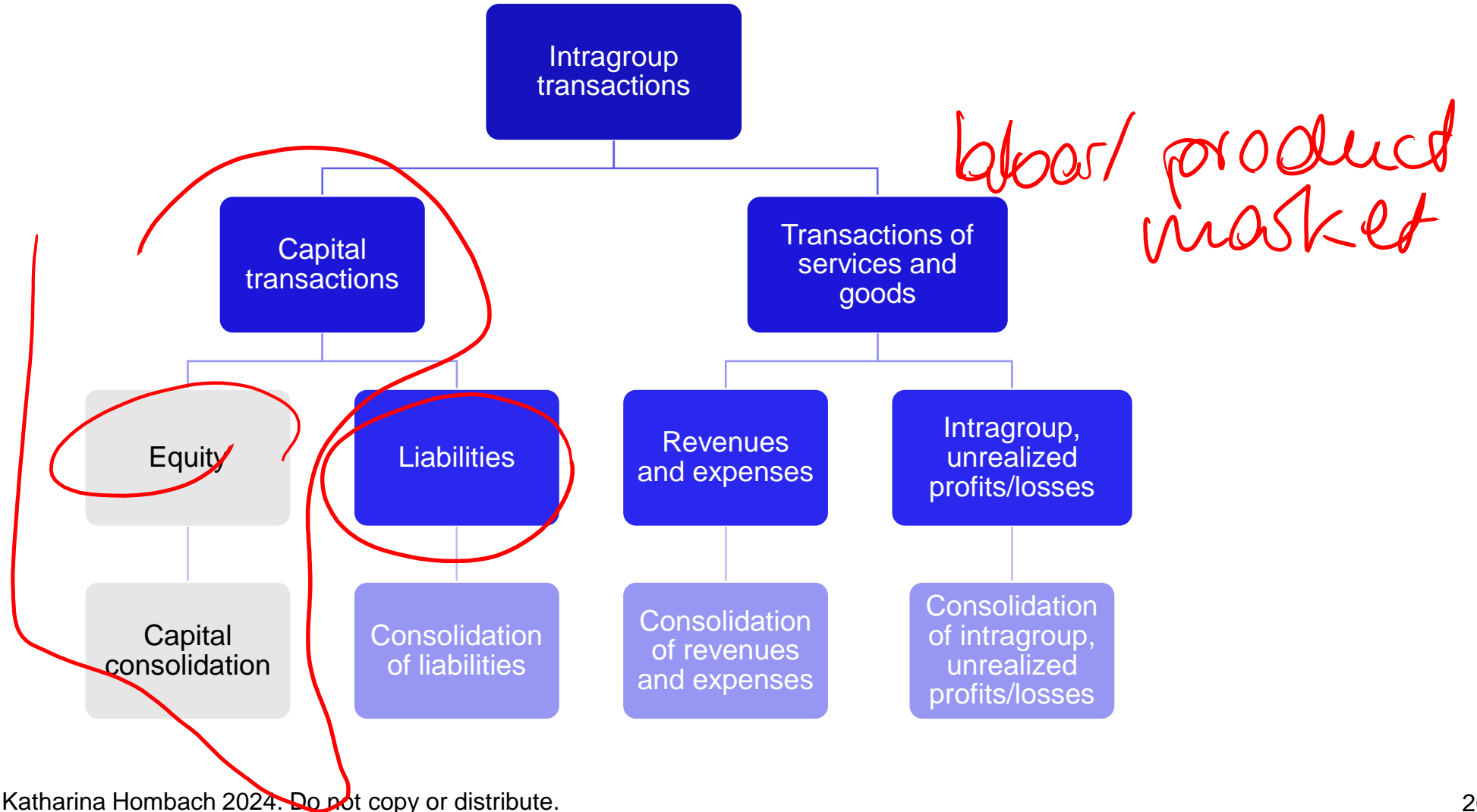
Course Structure

Block	Topic
3	Consolidation
3.1	Capital Consolidation
3.2	Intra-Group Transactions



- How do we ensure that the consolidated financial statements of the group capture its transactions with third parties?

Other consolidation procedures

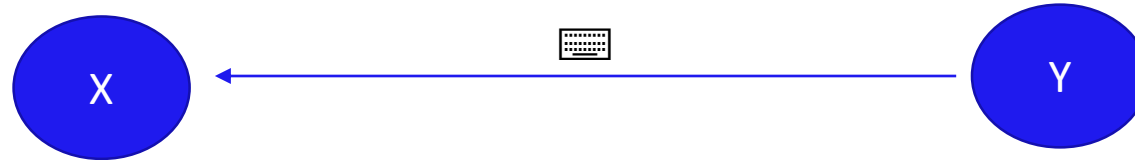


Intra-Group Liabilities

- Elimination of intra-group liabilities important to get meaningful consolidated leverage ratios
 - Assess leverage of group based on obligations owed to third parties
- **Case 1: Liability (e.g., loan) of one entity corresponds to asset (e.g., financial instrument) of another entity within the group (pure financial transaction)**
 - “Zero sum game”
 - Netting out of positions in sum balance (“shortening”)
- **Case 2: One entity records a liability (e.g., provision) and corresponding expense, but the other entity within the group does not record a corresponds asset, or a lower asset**
 - Result of conservative accounting practices
 - Need to eliminate positions on the balance sheet as well as corresponding earnings/expenses

Intra-Group Liabilities

Fact pattern



Subsidiary recognizes a warranty provision of 25 CU (NPV) in 20X1 for warranty payments that it will possibly have to make to Parent.

What are the necessary journal entries to eliminate the transaction in the consolidated accounts of 20X1? Consider a tax rate of 40%.

Intra-Group Liabilities

Intra-Group Liabilities

Solution

20X1:

Journal entry at Subsidiary to recognize provision in unconsolidated accounts:

Dr. Expense Cr. Provision 25

→ Consolidation needs to eliminate provision and expense for building provision

Consolidation journal entry:

Dr. Provision Cr. Expense 25
 Dr. Deferred tax expense Cr. DTL 10

(Profit of the consolidated accounts increases by 15 CU (25 CU – 10 CU).

*“reverse” transaction
 25 x 40%*

subsequent years

→ Consolidation needs to eliminate pre-existing “stock” of provision (25 CU) and offset the reserve and deferred taxes.

Dr. Provision 25 Cr. Reserve (equity) 15
 Cr. DTL 10

Intra-Group Transactions of Goods/Services

- When goods/services are sold from one group company to another, this will affect their unconsolidated financial statements:

- Sales / Cost of Sales
- Changes in Inventory
- Changes in Cash



S (unconsolidated)

B (unconsolidated)

S (unconsolidated)		B (unconsolidated)	
Assets	Equity and Liabilities	Assets	Equity and Liabilities
Inventory ↓	Equity ↑	Inventory ↑	Equity →
Cash ↑	... Profit for the year: ↑	Cash ↓	... Profit for the year: →

- From the perspective of the group, the transaction should have **no effect on the consolidated statements**.
 - Transactions should only be realized to the extent that they are conducted with third parties.
- Problem: **intra-group profits/losses do not cancel out “automatically”**

Intra-Group Transactions of Goods/Services



- Sister Company (S) sells inventory to Buyer Company (B)
 - Carrying amount at Sister (unconsolidated financial statements): 8 CU
 - Purchase price: 10 CU

Journal entries Sister (unconsolidated):

Dr. Cash 10 CU	Cr. Revenue 10 CU
Dr. Cost of Sales 8 CU	Cr. Inventory 8 CU

→ Net profit (intra-group): 2 CU

Journal entries Brother (unconsolidated):

Dr. Inventory 10 CU	Cr. Cash 10 CU
---------------------	----------------

Cost of inventory to group (8 CU)
+ intra-group profit (2 CU)

Scenario 1

Intra-Group Transactions of Goods/Services

⊗ current tax expense cancelled out against deferred tax income



- Sister Company (S) sells inventory to Buyer Company (B)
 - Carrying amount at Sister (unconsolidated financial statements): 8 CU
 - Purchase price: 10 CU

Consolidation: Eliminate sales transaction

Dr. Revenue 10 CU

Cr. Cost of Sales 8 CU

Cr. Inventory 2 CU

re-do sales transactions
+ adjustment of intra-group profit of 2, "contained" in inventory
book value

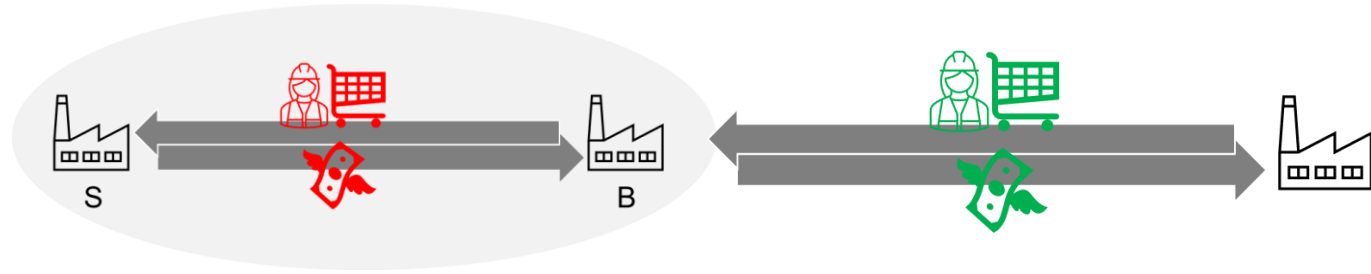
Tax effects (tax rate: 30%):

- Sister's (= group's) current tax, based on profit in unconsolidated F/S: $2 \text{ CU} * 30\% = 0.6 \text{ CU}$
- Temporary difference between inventory in Brother's tax statements (unconsolidated) (10 CU) and group's consolidated IFRS statements (8 CU) → $2 \text{ CU} * 30\% = 0.6 \text{ CU}$



Scenario 2

Intra-Group Transactions of Goods/Services



- Sister Company (S) sells inventory to Buyer Company (B)
 - Carrying amount at Sister (unconsolidated financial statements): **8 CU**
 - Purchase price: 10 CU

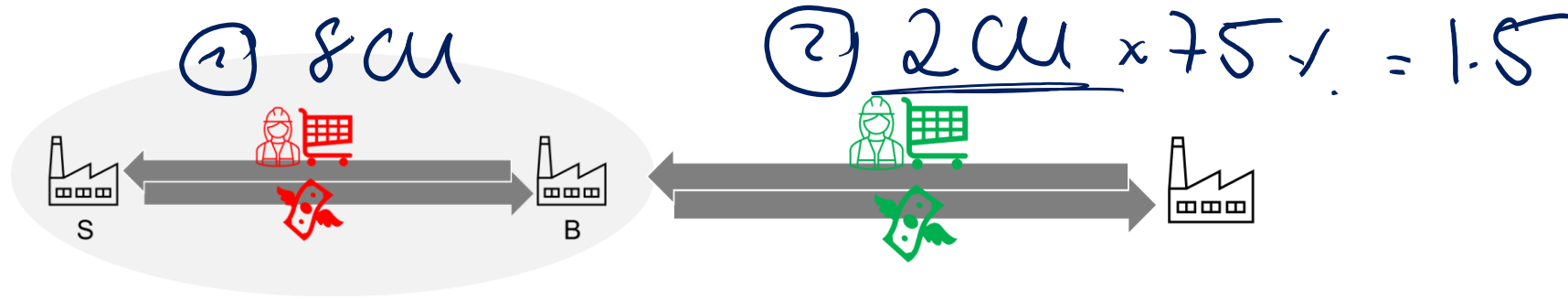
- Brother Company sells **75% of the** inventory to an external party
 - Carrying amount at Brother (unconsolidated financial statements): **7.5 CU**
 - Purchase price: **14 CU**

75% ultimately sold to external party
Group costs of sale = $75\% * 8 \text{ CU} = 6 \text{ CU}$

Remaining group inventory (after sale of 75%): $25\% * 8 \text{ CU} = 2 \text{ CU}$

Revenue with external party =
group revenue = 14 CU

Intra-Group Transactions of Goods/Services



- Sister Company (S) sells inventory to Buyer Company (B)
 - Carrying amount at Sister (unconsolidated financial statements): 8 CU
 - Purchase price: 10 CU
- Brother Company sells 75% of the inventory to an external party
 - Carrying amount at Brother (unconsolidated financial statements): 7.5 CU
 - Purchase price: 14 CU

Consolidation: Eliminate sales transaction to the extent it is internal to group

Dr. Revenue 10 CU

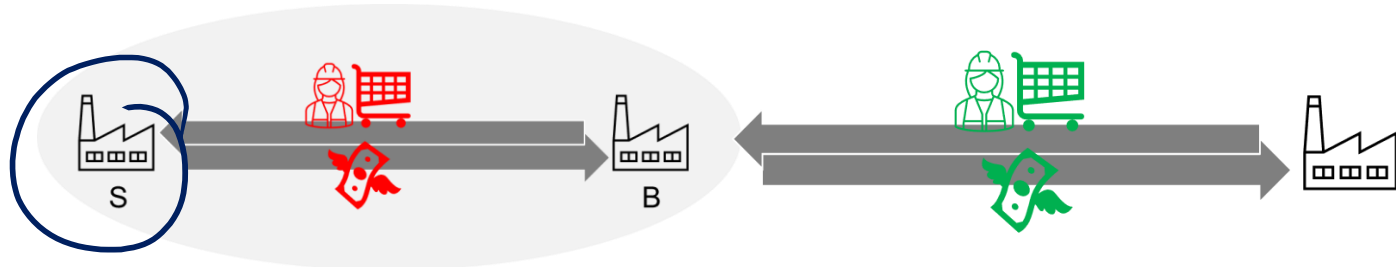
Cr. Cost of Sales 9.5 CU
 Cr. Inventory 0.5 CU

Elimination of intra-group profit of 2 CU:
 1.5 CU (=75%) from inventory that “left” the group (because of sales transaction with external party)
 0.5 CU (= 25%) “contained” in inventory that still is with the group

Intra-Group Transactions of Goods/Services

$$-0.6 - 1.95 + 0.15 = -2.4$$

+30%



- Sister Company (S) sells inventory to Buyer Company (B)
 - Carrying amount at Sister (unconsolidated financial statements): 8 CU
 - Purchase price: 10 CU

- Brother Company sells 75% of the inventory to an external party
 - Carrying amount at Brother (unconsolidated financial statements): 7.5 CU
 - Purchase price: 14 CU

current tax: 0.6

current tax: 1.95

desired tax income: 0.15

	Sister	Brother	Sum (S + B)	Elimination	Group
Sales	10	14	24	10	14
Cost of Sales	8	7.5	15.5	9.5	6
Profit	2	6.5	8.5	0.5 (implicit)	8
Inventory	2.5		2.5	0.5	2

Block 3: Key take-aways

Break ends 3:55



- Via **capital consolidation**, we:
 - Avoid double-counting of equity
 - Resolve the position “investments in affiliates” from the parent company’s unconsolidated financial statements
 - Bring the subsidiaries’ revalued assets/liabilities as well as goodwill of the transaction onto the consolidated financial statements
- The consolidated statements only reflect transactions that are carried out with third parties (**external to the group**). Thus, we need to eliminate intra-group transactions.
 - Case 1 (no adjustment necessary): asset at one company, liability of another company, same amount (example: bank loan) → cancel out positions against each others
 - Case 2 (adjustment necessary): intra-group profit/loss, so that there are no two positions of the same amount that can be canceled out (example: provision, transfer of inventory) → eliminate intra-group profit/loss and adjust corresponding positions on balance sheet