Advanced Group Accounting (RIKA)

Block 3

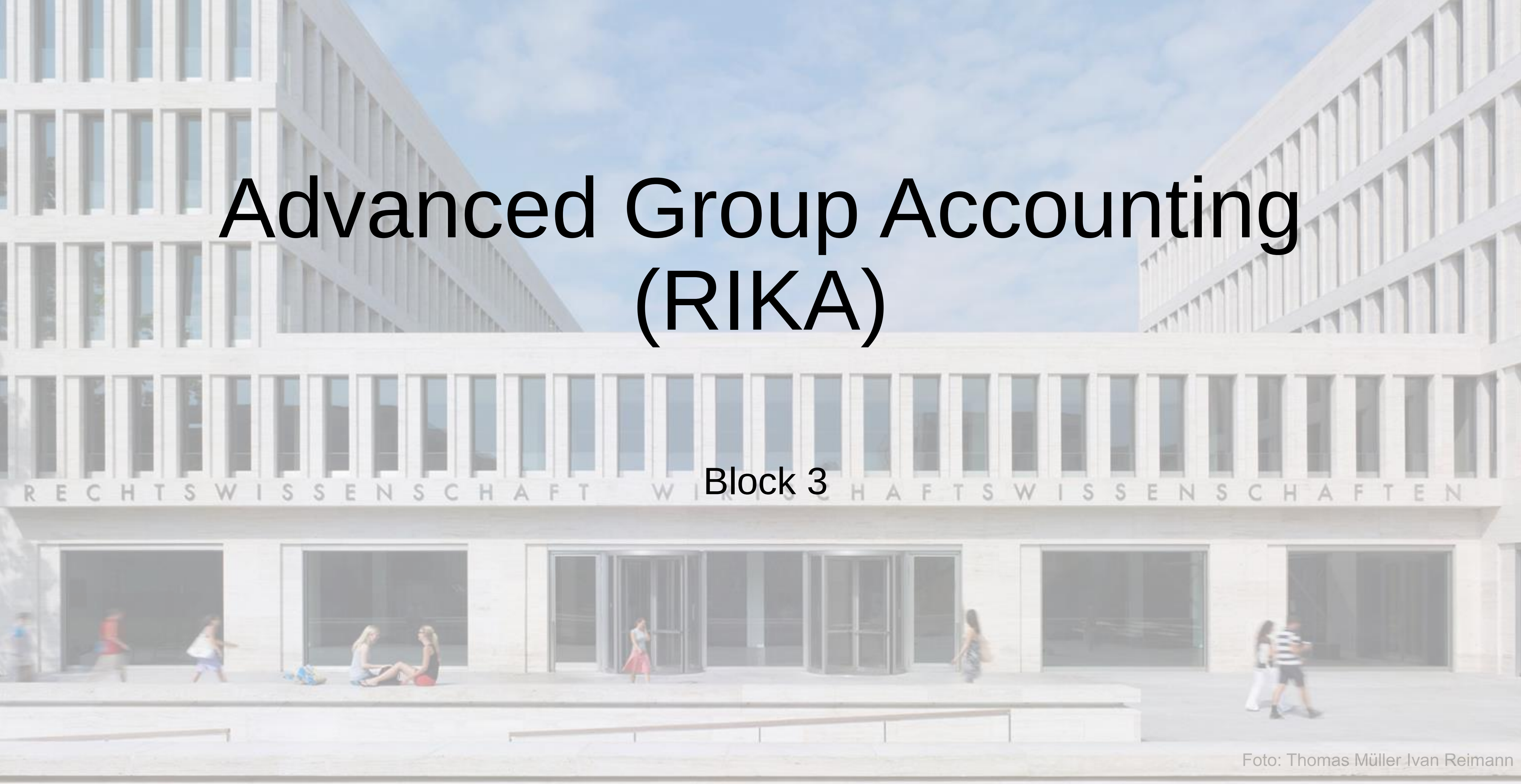


Foto: Thomas Müller Ivan Reimann

Break ends 3:35

Course Structure

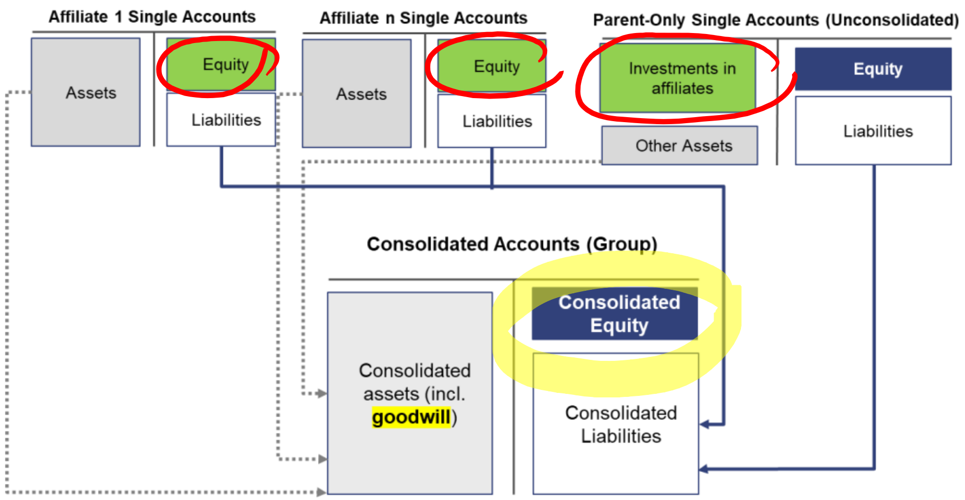
Block	Topic
	Preparation: recap double-entry bookkeeping (online, self-study)
1	Key Concepts
2	Acquisition Method
3	**Consolidation**
4	Subsequent Consolidation Goodwill Impairment
5	Joint Arrangement and Investments at Equity Changes in Control
6	Analyzing Consolidated F/S

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



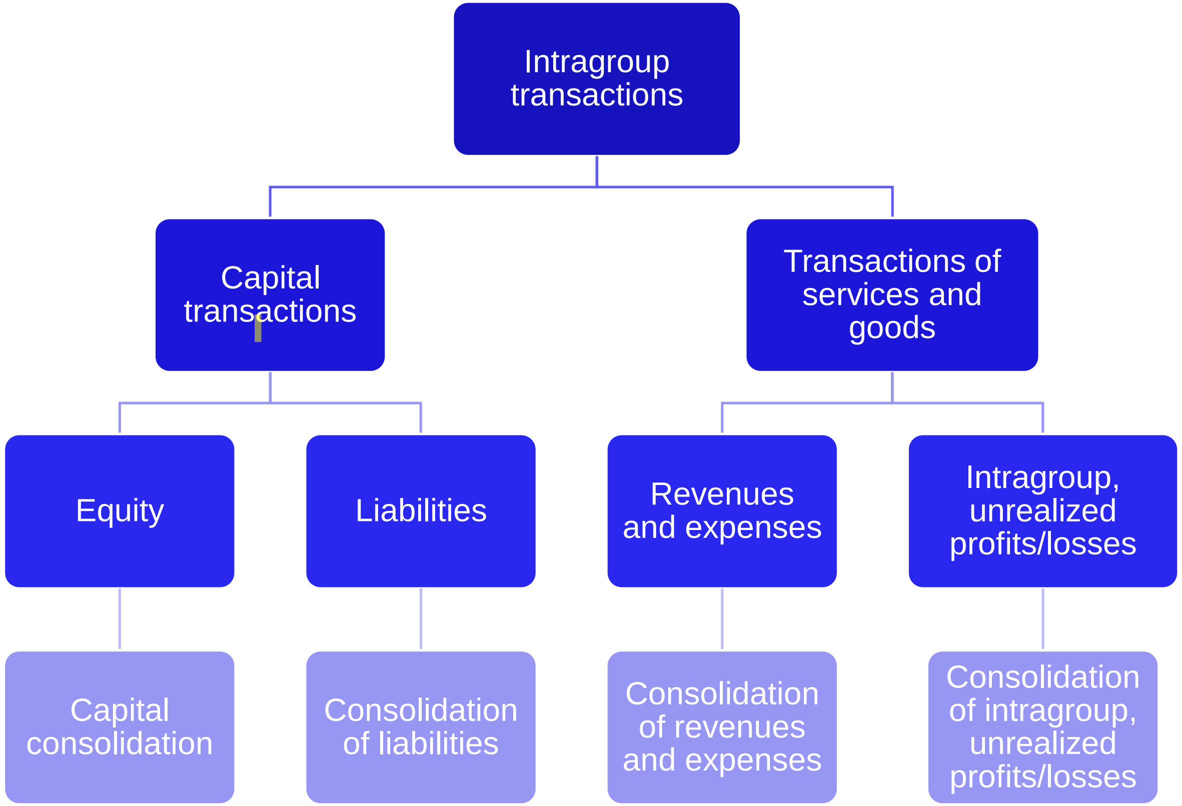
- Bringing together assets and liabilities of different entities in the corporate group
- Objective: consolidated financial statements represent financial position of the corporate group as one economic entity
- Features:
  - Position “Investments in affiliates” from parent company’s unconsolidated accounts 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.

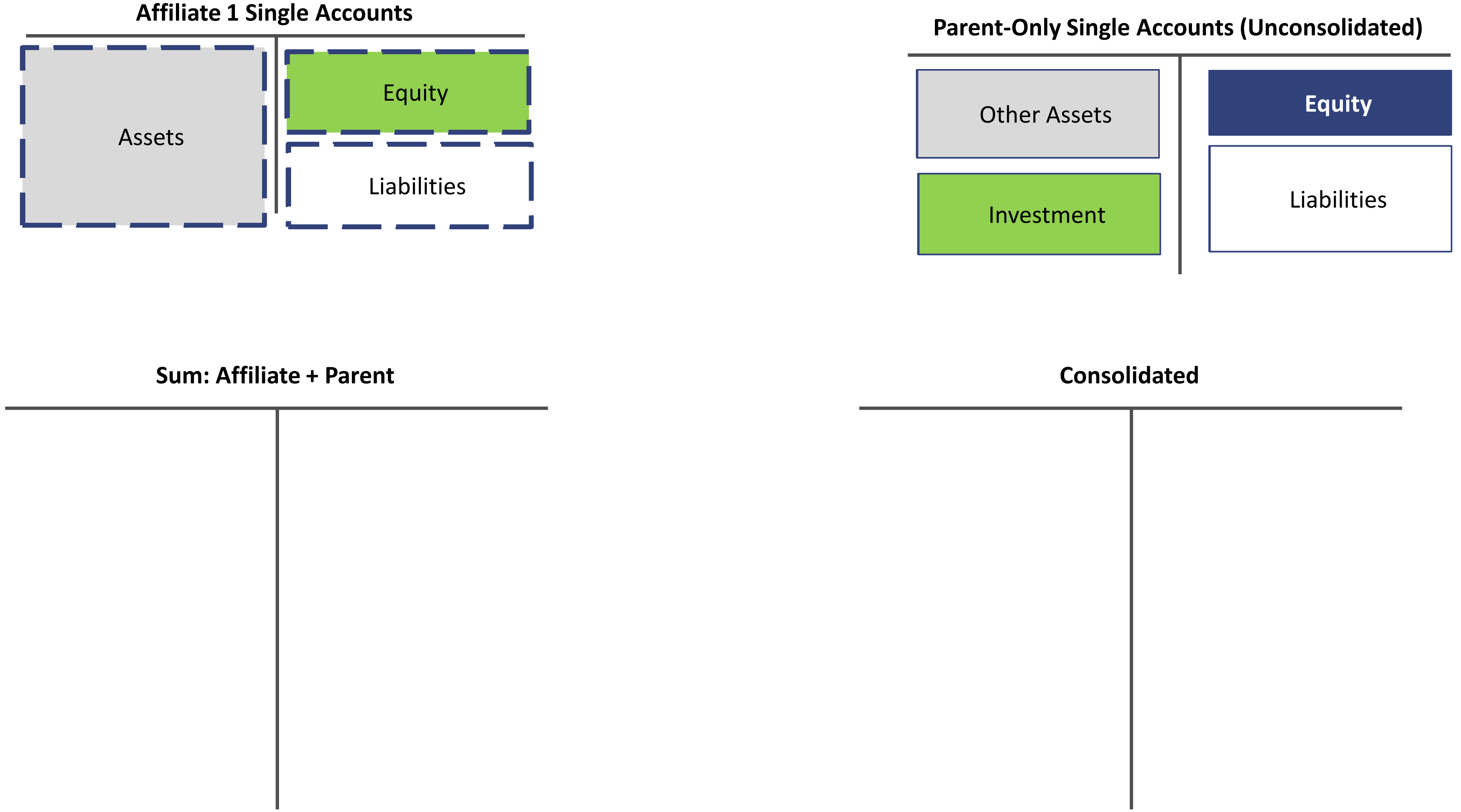
Consolidation of capital

- 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)

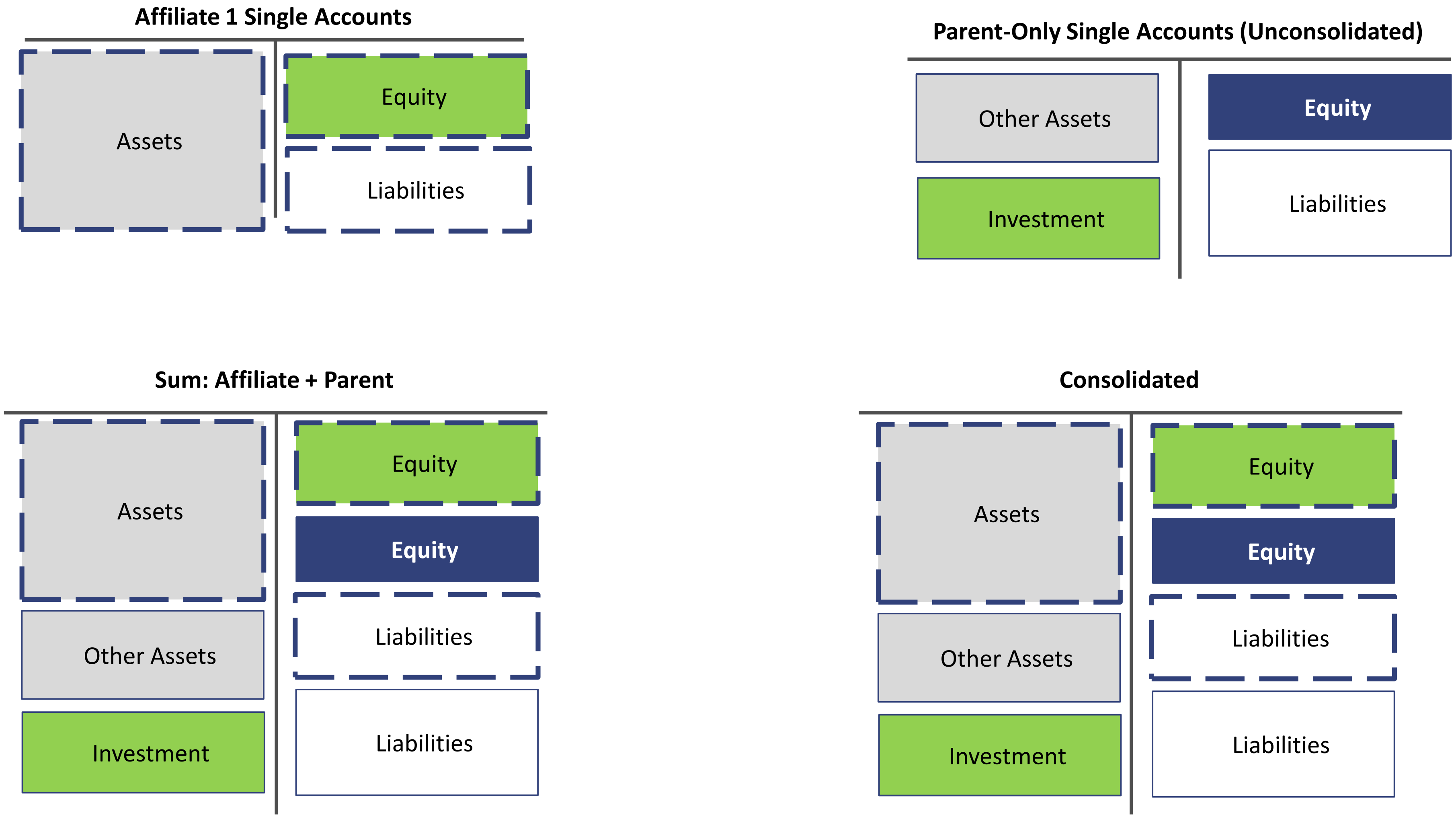
- Solution:
  - Recognize assets and liabilities (= net assets) acquired at fair value
  - Recognize any residual as goodwill or bargain purchase

Consolidation – basic logic
Example without revaluation, goodwill, or NCI



Stylized example; simplifying assumption: 100% stakes in all affiliates (i.e., there are no so-called non-controlling interests)

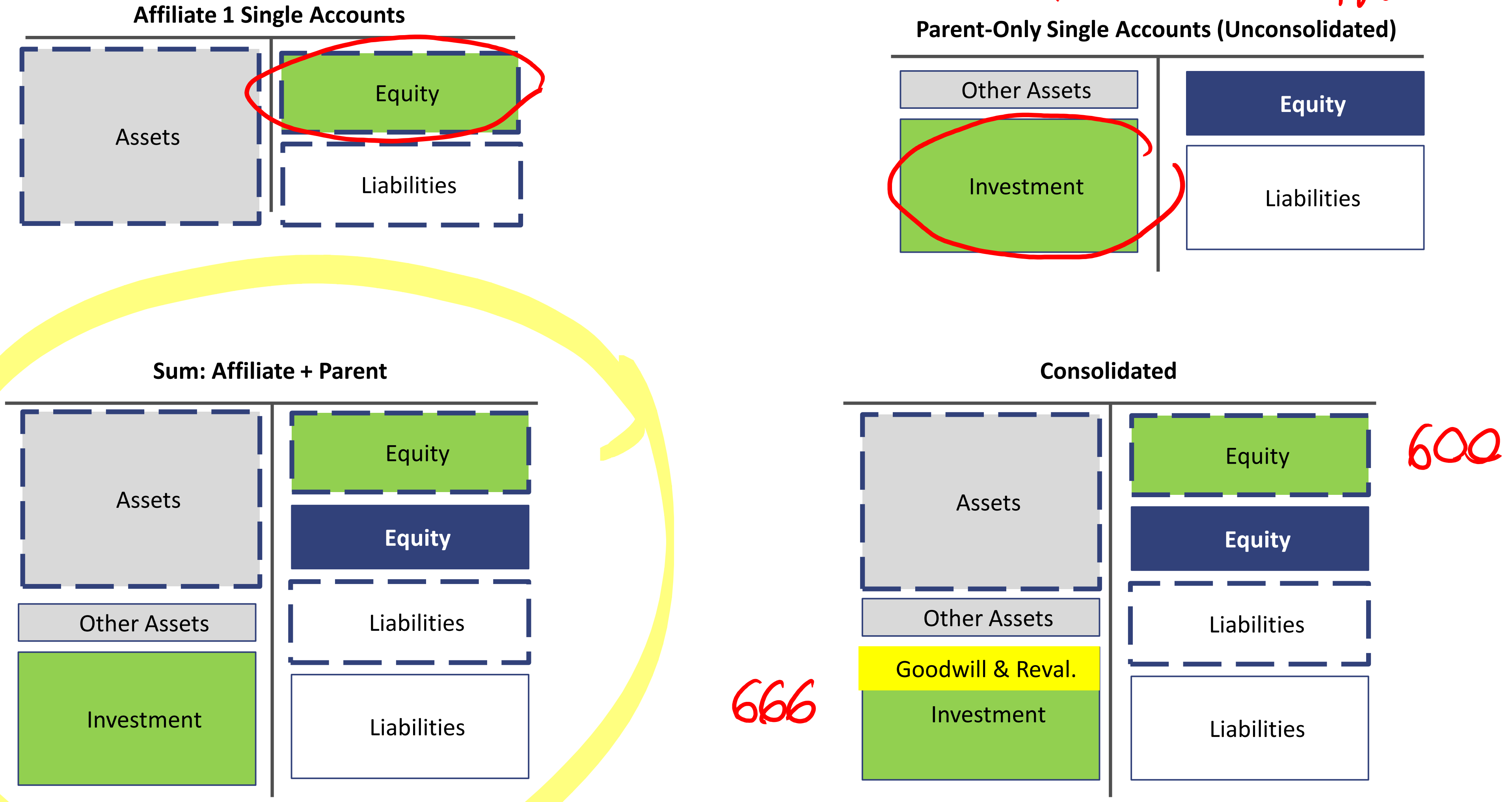
Consolidation – basic logic
Example without revaluation, goodwill, or NCI



Stylized example; simplifying assumption: 100% stakes in all affiliates (i.e., there are no so-called non-controlling interests)

Consolidation – basic logic
What if Investment > Equity (Book Value)?

Market Value / Purchase Price > BV of EQ



Stylized example; simplifying assumption: 100% stakes in all affiliates (i.e., there are no so-called non-controlling interests)

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

Solution

Consolidation of capital – exercise 1

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

31.12.20X1 CU	Revaluation		Sum Balance		Consolidation		Consolidated	
Non-current assets								
Goodwill								
Investment Y								
Current assets								
Equity								
Debt								
Sum								

Solution

Consolidation of capital – exercise 1

1800 (historical parent)
+ 650 (Fair value, target)

Dr Non-current
Cr. Equity 100

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		$\boxed{600 +}$ 2,100	600			2,100
Debt				2,100				2,100
Sum			**4,800**	**4,800**			**4,200**	**4,200**

Solutions 4:15

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

Solution

Consolidation of capital – exercise 2

Dr EQ 570
Goodw. 96

Cr Inv in Y 666

Acquisition Price	666
- Equity	500
- Fair Value Adjustments and Other Identifiable Assets	100
~~+ Tax Liability~~ Deferred tax l.	30 ? + 30%
Goodwill	96

31.12.20X1 CU	Revaluation		Sum Balance		Consolidation		Consolidated	
Non-current assets	100		2,450				2450	
Goodwill					96		96	
Investment Y			666			666	—	
Current assets			1,684				1,684	
Equity	30	100		~~570+~~ 2,100	570			2,100
Debt				2,100				2,100
Deferred tax liability		30		30				30
Sum			4,800	4,800			4,230	4230

Solution

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+ 2,100	570			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

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

Solution

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%) Full	97
Goodwill (60%) Partial	58

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								

Solution

Consolidation of capital – exercise 3 solutions

Dr. Goodwill 58 Cr. Inv. 400
Dr. EQ 342

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**

60%

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 (parent)	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**

Solution

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								

Full GW method

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.

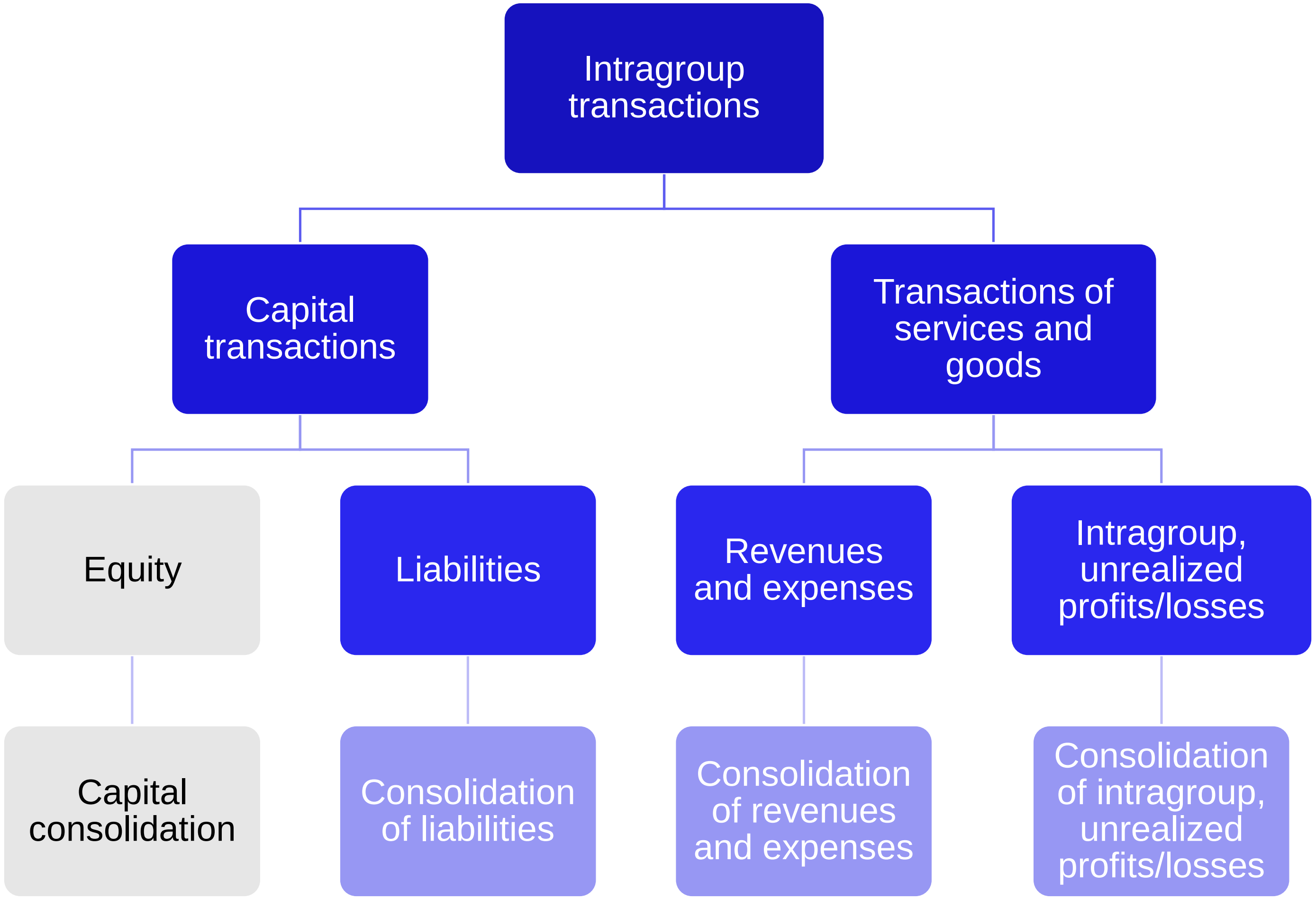
31.12.20X1 CU	Revaluation		Sum Balance		Consolidation		Consolidated	
Non-current assets	100		2,450				2,450	
Goodwill					97 58 39		97	
Investment Y			400			400		
Current assets			1,950				1,950	
Equity	30	100		570 + 2,100	342 228			2,100
Non-controlling interest					267	228 39		267
Debt				2,100			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

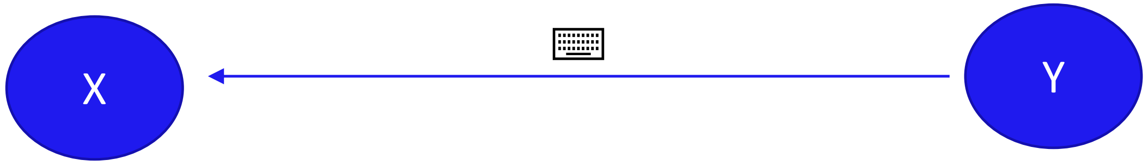
- Elimination of intra-group liabilities important to get meaningful consolidated leverage ratios
  - Assess leverage of group based on obligations owed to third parties

- 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%.

Solution

Intra-Group Liabilities

Solution

Intra-Group Liabilities

subs. income → retained earnings

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).

(no elimination of transaction in target's tax acc/))

Future periods:

→ 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)

Assets	Equity and Liabilities
Inventory ↓ Cash ↑	Equity ↑ … Profit for the year ↑

B (unconsolidated)

Assets	Equity and Liabilities
Inventory ↑ Cash ↓	Equity → … 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 Brother Company (B)
  - Carrying amount at Sister (unconsolidated financial statements): 8 CU
  - Purchase price: 10 CU

<u>Journal entries Sister (unconsolidated):</u>

Dr. Cash 10 CU | Cr. Revenue 10 CU
Dr. Cost of Sales 8 CU | Cr. Inventory 8 CU
→ Net profit (intra-group): 2 CU

<u>Journal entries Brother (unconsolidated):</u>

Dr. Inventory 10 CU | Cr. Cash 10 CU

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

Intra-Group Transactions of Goods/Services

~~Dr~~ Dr Tax exp. Cr. cash
Dr DTA Cr. Def. tax income

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

→ reversal of profit-generating journal entries from sister

- Consolidation: Eliminate sales transaction

  Dr. Revenue 10 CU — Cr. Cost of Sales 8 CU

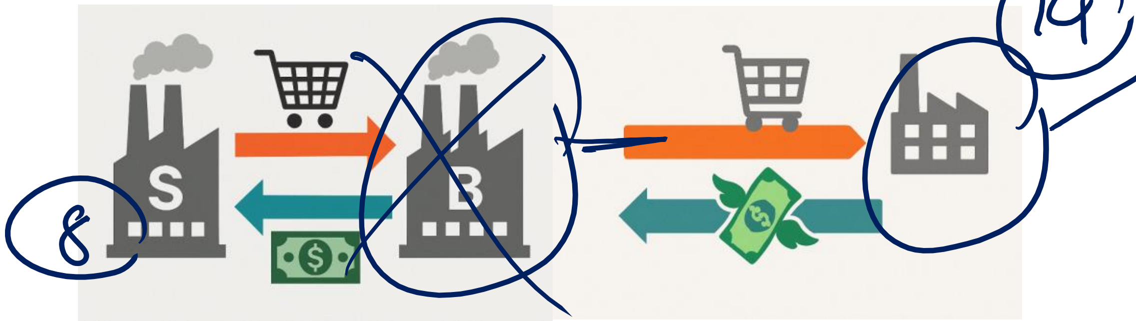
  Cr. Inventory 2 CU

  Elimination of intra-group profit of 2, "contained" in inventory

  ↳ take out capitalized intra-group profit

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

Intra-Group Transactions of Goods/Services



Third party

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

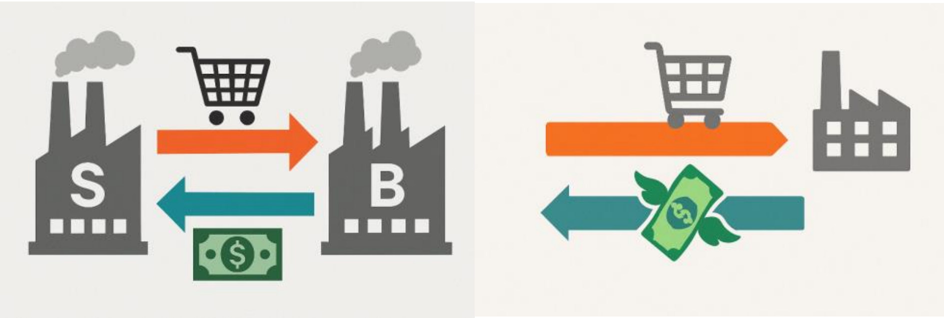
75% ultimately sold to external party
Group costs of sale = 75% * 8 CU = 6 CU

Remaining group inventory (after sale of 75%): 25 % * 8 CU = 2 CU

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

Revenue with external party = group revenue = 14 CU

Intra-Group Transactions of Goods/Services



- Sister Company (S) sells inventory to Brother 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

<u>Journal entries Brother (unconsolidated):</u>

Dr. Cash 14 CU	Cr. Revenue 14 CU
Dr. Cost of Sales 7.5 CU	Cr. Inventory 7.5 CU

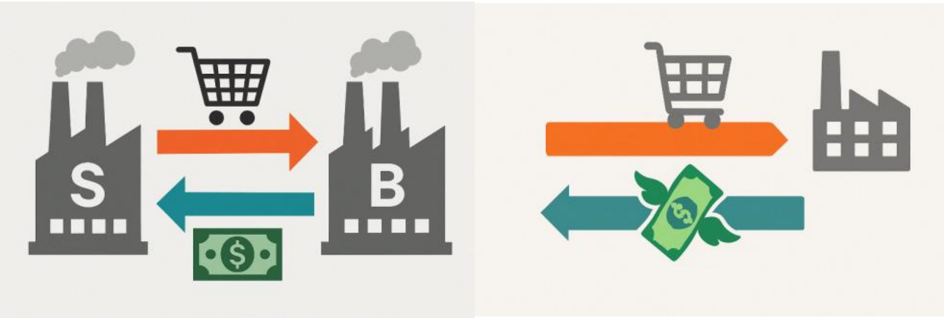
Cost of inventory to group (6 CU = 75% * 8 CU)
+ intra-group profit (1.5 CU = 75% * 2 CU)

DTA:

$(2.5 - 2.0) \times 30\% = 0.15$

Intra-Group Transactions of Goods/Services

between S+B



- Sister Company (S) sells inventory to Brother 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

<u>Consolidation: Eliminate sales transaction to the extent it is internal to group</u>

Dr. Revenue 10 CU

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

8 (cost of sales S→B)
1.5 (cost of sales B→3. party)

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

GOETHE UNIVERSITÄT FRANKFURT AM MAIN

Intra-Group Transactions of Goods/Services

6

14

- Sister Company (S) sells inventory to Brother 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

	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

- 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