ACCT 101: Control Systems

Session 4

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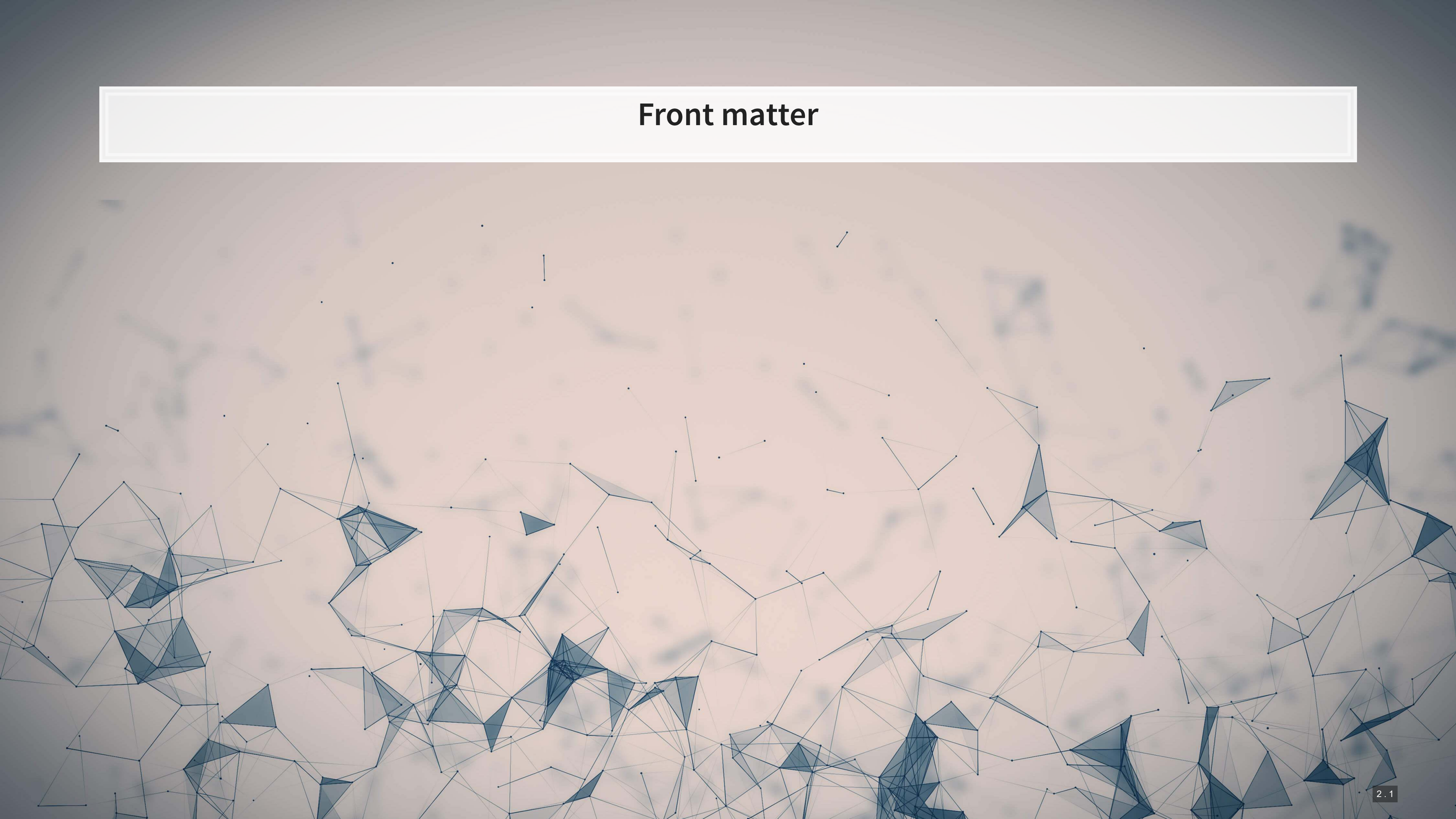
Front matter



Homework 1 Review

- Closing entries
  - Accounts are: Revenues, Expenses, *Gains*, *Losses*, Dividends
- Depreciation
  - (Price paid - salvage value) / [life length from purchase]
  - In homework: (100,000 - 20,000) / 5 = 16,000
- Accrual entries:
  1. Bring an expense or revenue forward
  2. Create a payable or receivable as well
  3. Payable or receivable reversed upon payment

Example: Accruals and subsequent payment

Date	Account	DR	CR
20YY.12.31	Utilities expense	200	
	Utilities payable		200
1/2 month of unpaid utilities expense, estimated usage is $200			
20YZ.01.15	Utilities payable	200	
	Utilities expense	300	
	Cash		500
Received and paid utilities bill of $500			

Reverse payable

Part not accrued before

From bill amount

Quiz details

- Like the practice quizzes on eLearn, except 60 minutes long
- What can be covered:
  - Everything in the session 1 to 4 slides

Not on the quiz

- Par value accounting
- Concept names and definitions
  - Matching principle, periodicity, etc.

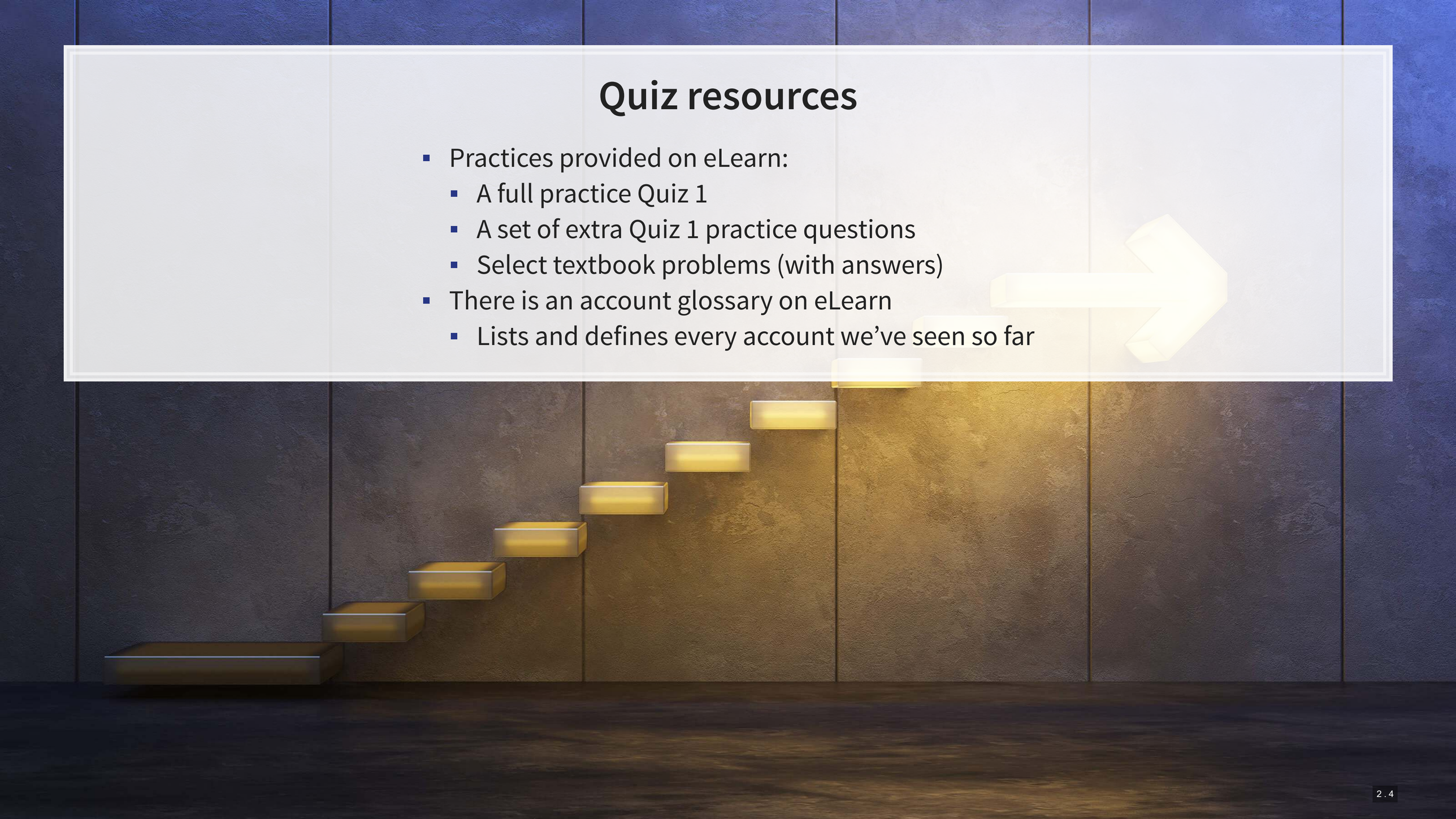
Potentially on the final

- Par value accounting for equity

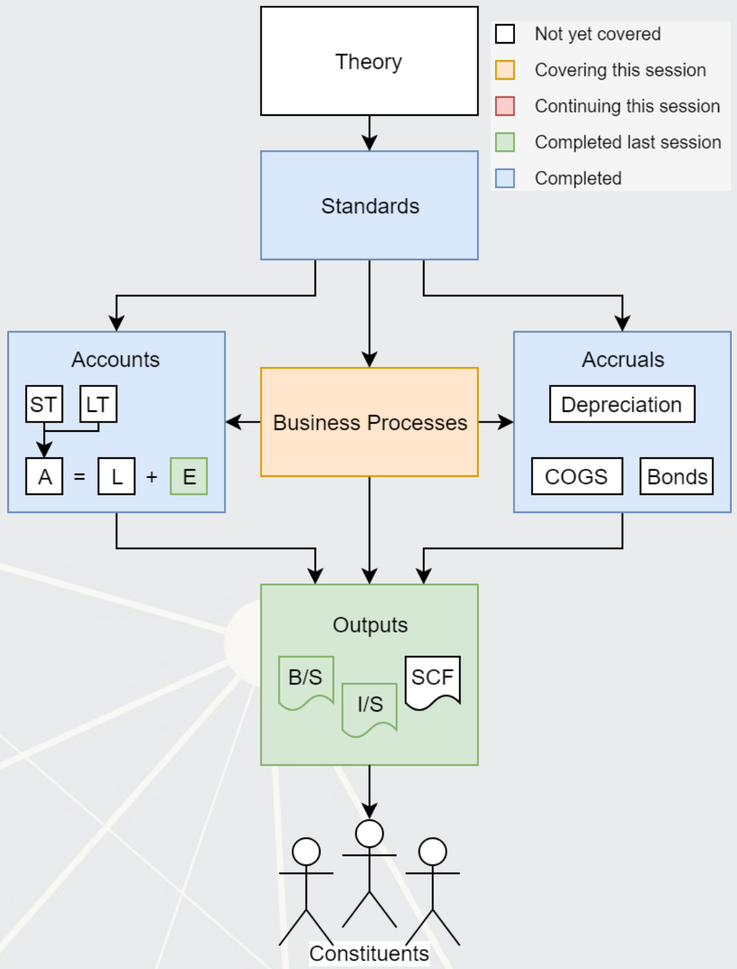
> The quiz is to makes sure you have the fundamentals down

Quiz resources

- Practices provided on eLearn:
  - A full practice Quiz 1
  - A set of extra Quiz 1 practice questions
  - Select textbook problems (with answers)
- There is an account glossary on eLearn
  - Lists and defines every account we've seen so far



Learning objectives



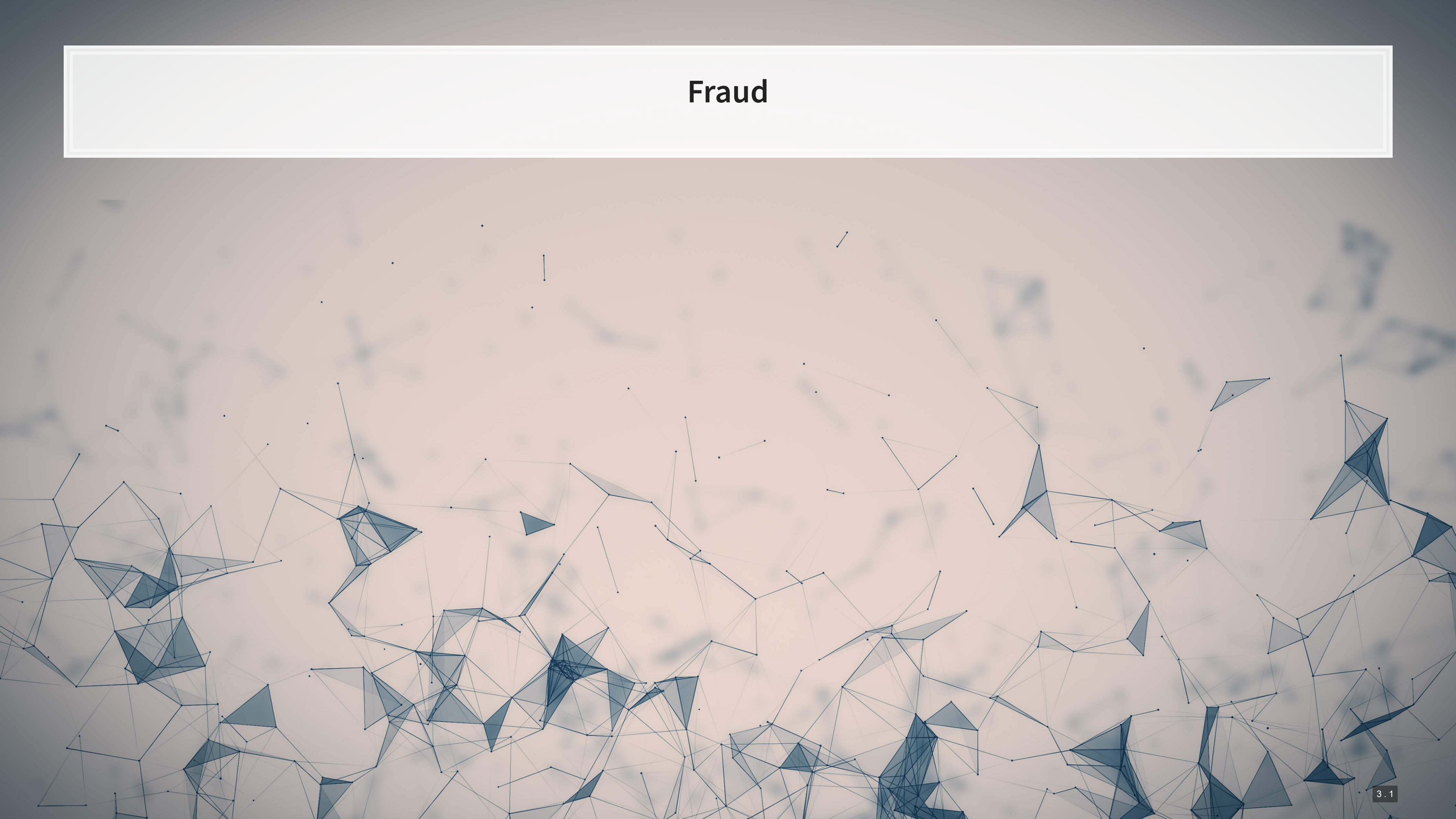
Control Systems (Chapter 4)

1. Understand the drivers of fraud
2. Be able to identify weaknesses in firms' systems and suggest improvements
3. Be able to reconcile book and bank cash

A/R (Chapter 5)

1. Understand how to write off uncollectible A/R

Fraud



Misreporting: A simple definition

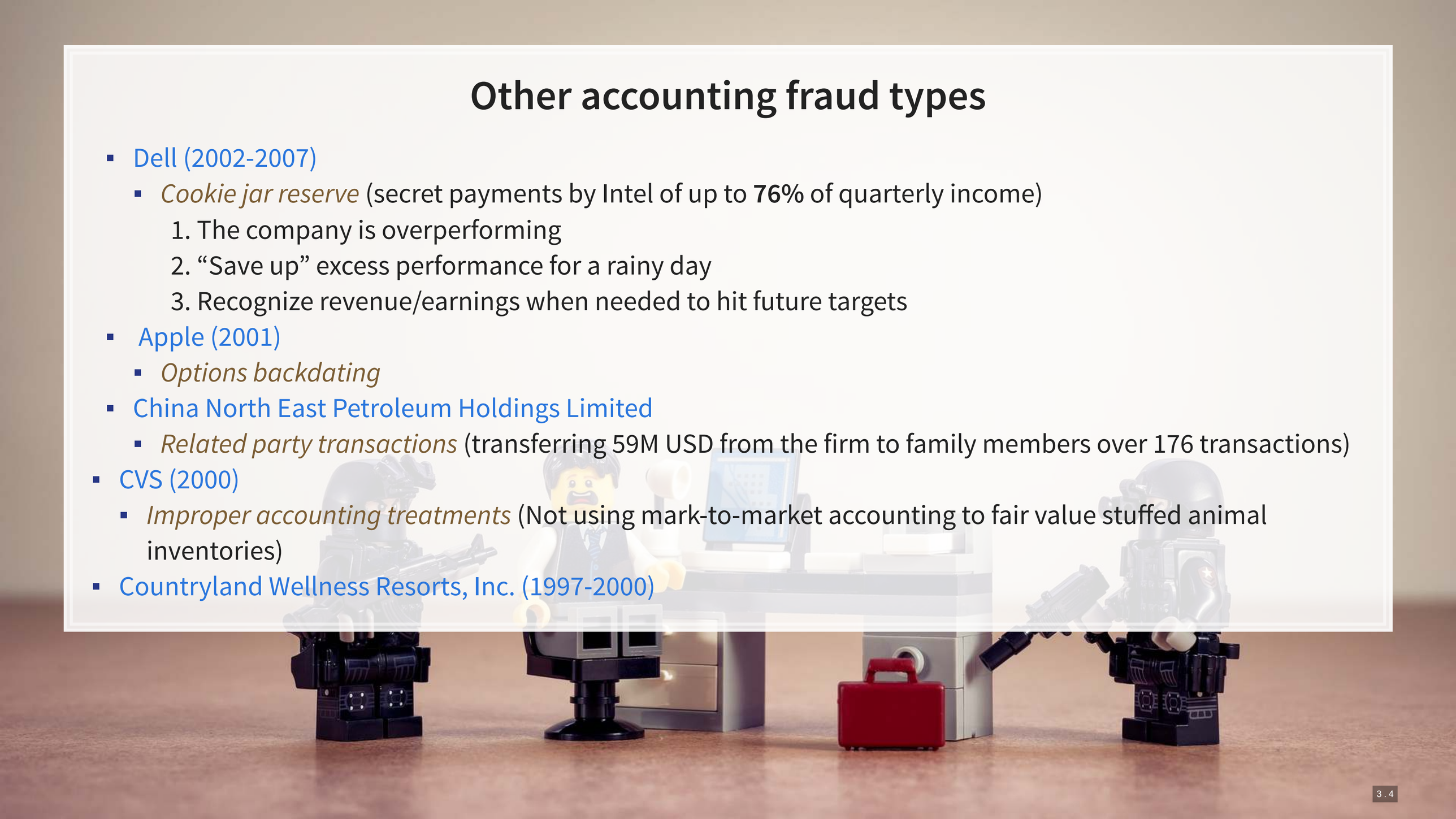
Errors that affect firms' accounting statements or disclosures which were done seemingly *intentionally* by management or other employees at the firm.

Traditional accounting fraud

1. A company is underperforming
2. Management cooks up some scheme to increase earnings
    - Wells Fargo (2011-2018?)
        - Fake/duplicate customers and transactions
3. Create accounting statements using the fake information

Other accounting fraud types

- Dell (2002-2007)
  - *Cookie jar reserve* (secret payments by Intel of up to **76%** of quarterly income)
    1. The company is overperforming
    2. “Save up” excess performance for a rainy day
    3. Recognize revenue/earnings when needed to hit future targets
- Apple (2001)
  - *Options backdating*
- China North East Petroleum Holdings Limited
  - *Related party transactions* (transferring 59M USD from the firm to family members over 176 transactions)
- CVS (2000)
  - *Improper accounting treatments* (Not using mark-to-market accounting to fair value stuffed animal inventories)
- Countryland Wellness Resorts, Inc. (1997-2000)

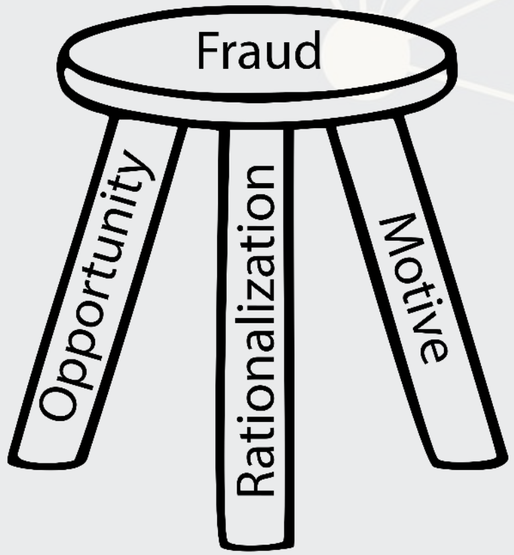


Fraud in Singapore

- Keppel O&M
  - $55M USD bribery in Brazil for contracts
  - Highly profitable, until fines rolled in
    - Profit of $351.8M USD
    - Fines of $422M USD (to US, Brazil, Singapore) [so far]
  - 6 employees implicated
  - 1 Keppel lawyer pleaded guilty in USA for drafting bribery contracts
- Keppel Club
  - Employees created 1,280 fake memberships, sold them, and retained all profits
  - $37.5M from June 1 to August 1, 2014
- Asia Pacific Breweries (Chia Teck Leng)
  - Forged documents from 1999 to 2003 to obtain $117M from 4 banks
    - To fund gambling addiction
  - 42 year jail sentence

Fraud triangle

- Opportunity
  - Hole in the control system
  - Profitably exploitable
- Rationalization
  - Resentment of corporation
  - Poor culture
  - “Borrowing”
- Motivation
  - Family needs
  - Maintaining lifestyle
  - Maintaining performance



Need all 3 for fraud to happen

Control Systems

Systems

- Each part of the company is dependent on other parts
- Consider how all parts work together

> Simplest case is a linear assembly line

- Pass the product from one stop to the next until it’s done
- Except for…
  - Maintenance
  - Input selection
  - Product mix
  - Quality control
  - …
- Where does information flow?

Basic goals of control systems

- Prevention
  - Make sure something doesn’t go wrong
    - Ex.: Inspect raw materials before assembly
- Detection
  - Check if something went wrong
    - Ex.: Check products randomly after assembly
- Correction
  - Something went wrong, so we need to fix it
    - Ex.: Determine cause of defects & learn from problems

Basic mechanisms/solutions

- Separation of duties
  - Different parts of a system are handled by different employees
    - Ex.: Inspection not done by assembly line worker
- Monitoring
  - Check if things are normal
    - Ex.: Boss stops by every now and then
- Limited access
  - Employees only have access to what they need
    - Ex.: Line workers can’t access inventory records
    - Ex.: Raw material purchasers can’t access salary records
- Approvals
  - Require oversight for some actions
    - Ex.: Buying from a new vendor may require boss’s signature

Limitations

- Collusion
  - Multiple people can jointly subvert systems
- Fatigue
  - People are not perfect
- Negligence
  - Not every employee does what they are supposed to

Example: Car manufacturer

- How would we control car quality?
  - Prevention
  - Detection
  - Correction

Champaign Parking Enforcement

Their Objectives

1. *Validity*: All recorded transactions ocurred
2. *Completeness*: All valid transactions have been recorded
3. *Valuation*: Amounts measured properly
4. *Security*: Information system protected from unauthorized access or destruction

Discussion questions

- What are some risks that threaten these objectives?
  - How frequent is the risk?
  - How serious is the risk?
- How could they be addressed?

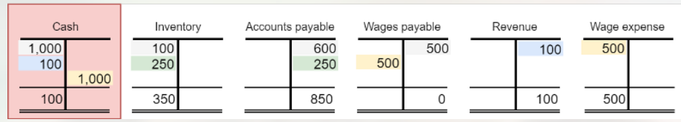
Cash reconciliation

Cash on companies' books

Documents:

- Purchase orders
- Invoices for purchases/sales
- Checks
- Payment records
- Petty cash
  - Small amount set aside for **small** purchases

Date	Account	DR	CR
20XY.01.01	Cash	100.00	
	Revenue		100.00
Cash sale			
20XY.01.02	Inventory	250.00	
	Accounts payable (A/P)		250.00
Purchased inventory on account			
20XY.01.03	Wage expense	500.00	
	Wages payable	500.00	
	Cash		1,000.00
Paid wages, of which $500 was previously recognized (prerecorded)			



Cash in the bank

Documents:

- Cash deposits, withdrawals
- Checks
- Electronic checks
  - EFT, ACH, GIRO, etc.
- Bank interest and fees
- Nonsufficient funds
  - Customer’s check is rejected
  - Check writer didn’t have enough cash in the bank

The Bank
1234 Bank Street
Singapore, 123456

Statement, January 4, 20XY

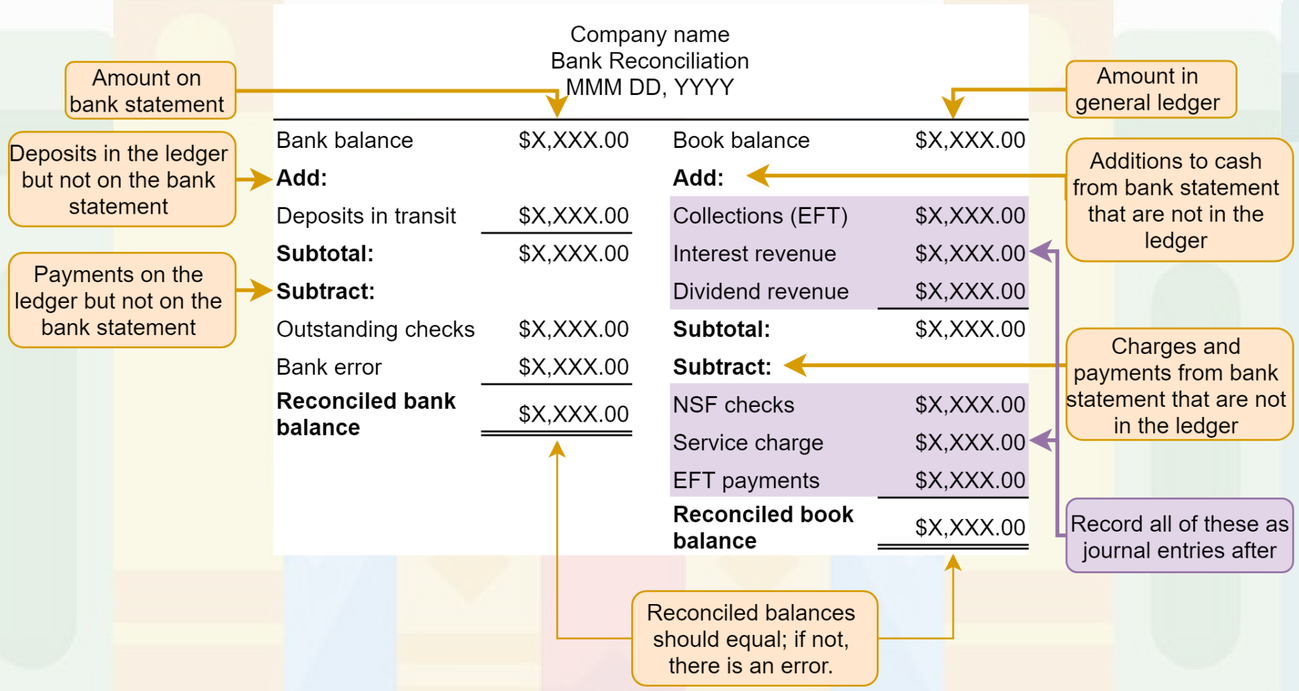
Checking account

Posting	Transaction	Debits	Credits	Balance
Jan 1	Beginning balance			1000.00
Jan 3	Check 3000		1000.00	0.00
Jan 3	EFT: Coffee club	300.00		300.00
Jan 4	Check fees		10.00	290.00
Jan 4	Interest earned (1%)	2.90		292.90

Inconsistencies between cash records

- The two records come from different sources
  - We can use this to verify the records!…
    - But they likely won’t be exactly the same
- Why are the records different?
  - Time lags
    - We receive cash and checks first
      - These may still be *in transit* to the bank
    - Banks receive electronic checks first
    - Banks know about fees and interest first
- Time lags are shorter these days with internet banking

Reconciliation process



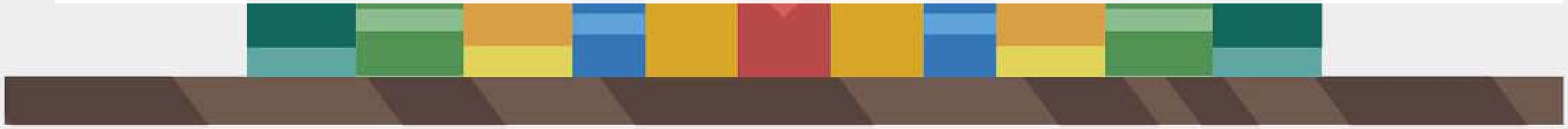
Journal entries to record

Cash up: DR cash, CR…

- Dividends received:
  - *Dividend revenue*
- EFT from customer:
  - *A/R*
- Interest from bank:
  - *Interest revenue*
- Prepayment:
  - *Unearned revenue*

Cash down: CR cash, DR…

- Charges from the bank:
  - *Bank service charges*
    - This is an expense account
- Check failed (NSF):
  - Receivable the check was for (*A/R*)
- Charged expenses:
  - The expense



Reconciliation example

1

The Bank
1234 Bank Street
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Statement, January 4, 20XY

Checking account

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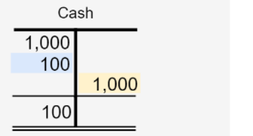
Need to reconcile



Deposit

Check 3000

Need to reconcile

2

Company name
Bank Reconciliation
January 04, 20XY

Bank balance	292.90	Book balance	100.00
Add:		**Add:**	
Deposits in transit	100.00	Collections (EFT)	300.00
Subtotal:	392.90	Interest revenue	2.90
Subtract:		**Subtotal:**	402.90
--		**Subtract:**	
Reconciled bank balance	392.90	Check fee	10.00
		Reconciled book balance	392.90

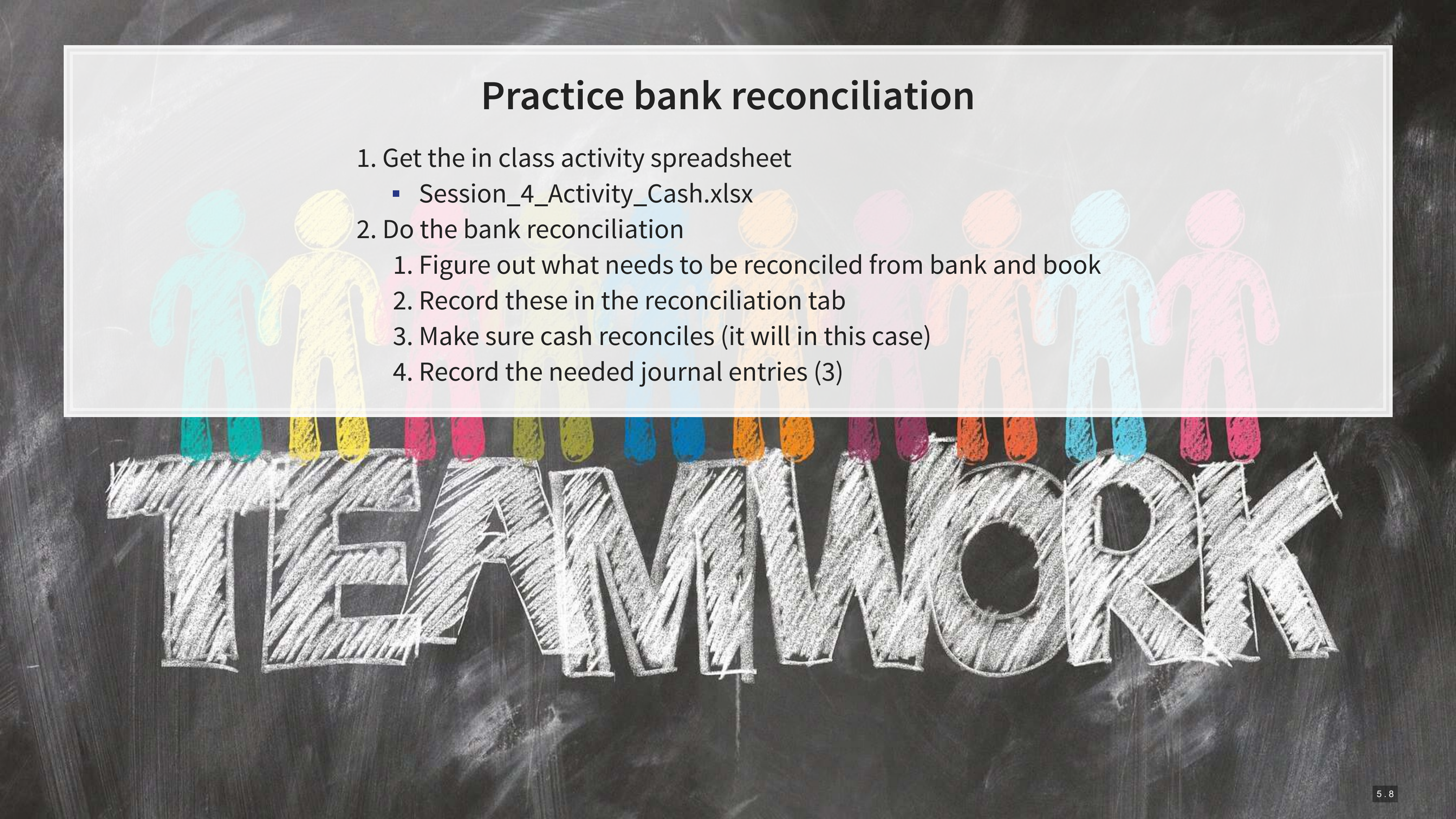
Reconciles!

3

Date	Account	DR	CR
20XY.01.04	Cash	300.00	
	Unearned revenue		300.00
Prepayment of purchase by Coffee club			
20XY.01.04	Cash	2.90	
	Interest revenue		2.90
Interest on bank account, January 4th bank statement			
20XY.01.04	Bank service charges	10.00	
	Cash		10.00
Check fees, January 4th bank statement			

Practice bank reconciliation

1. Get the in class activity spreadsheet
   - Session_4_Activity_Cash.xlsx
2. Do the bank reconciliation
   1. Figure out what needs to be reconciled from bank and book
   2. Record these in the reconciliation tab
   3. Make sure cash reconciles (it will in this case)
   4. Record the needed journal entries (3)



A/R tracking

Why have uncollectible accounts?

- Case: Hanjin shipping
- Read: rmc.link/101class4

Accounting for unexpected events

- Companies can go bankrupt, forget to pay, or breach contracts
- Two approaches:

Allowance method

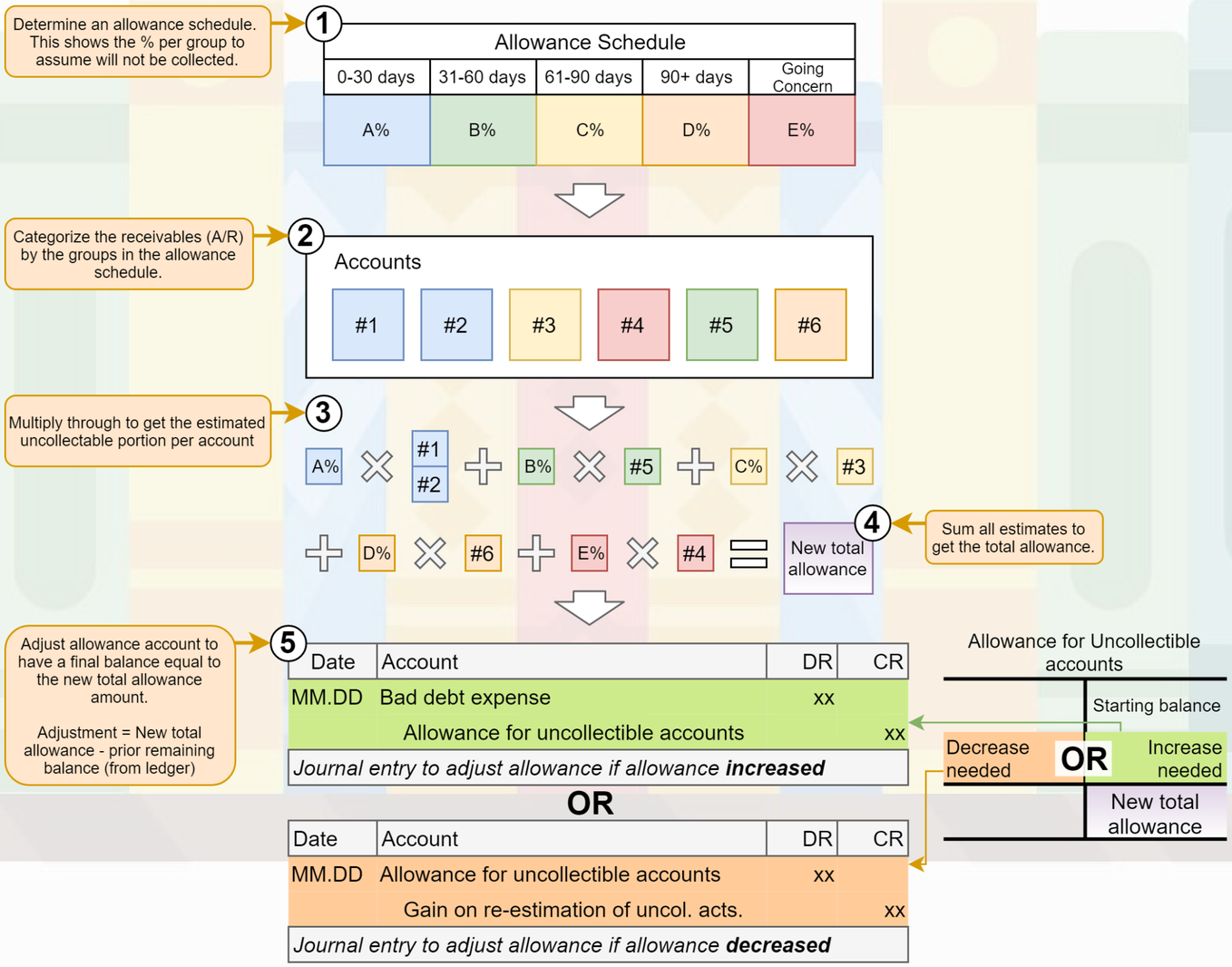
- Estimate decrease in asset values beforehand
- *Allowance for uncollectible accounts*
  - Contra asset
- *Bad debt expense*

Direct write-off method

- Write-off when the loss is guaranteed
- Violates the matching principal

We will use the allowance method (as does IFRS)

A/R allowance process



A/R allowances example

- Suppose we have the following allowance schedule and accounts receivables outstanding at year end

Allowance Schedule				
Days	0-30 days	31-60 days	61-90 days	90+ days
Percent Uncollectible	2%	10%	30%	100%

Accounts receivable			
Customer	Amount	Days outstanding	Notes
PGUS, Inc.	$1,000	73	Probably going under soon
Slow, Pte. Ltd.	$5,000	45	
GC Corp	$2,000	29	Auditor declared going concern
Standard & Co.	$9,000	10	
Good Co.	$2,000	2	

- What should our allowance be?

A/R allowances example

Allowance Schedule				
Days	0-30 days	31-60 days	61-90 days	90+ days
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Accounts receivable			
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Match accounts to the schedule by days outstanding

Days	Amount		Percent		Allowance
90+	$0	⨯	100%	=	$0
61-90	$1,000	⨯	30%	=	$300
31-60	$5,000	⨯	10%	=	$500
0-30	$13,000	⨯	2%	=	$260
				Total allowance =	$1,060

This is the new allowance amount

A/R allowances example: Going concern

- What about GC Corp?
  - The auditor issued a going concern opinion
  - High chance of bankruptcy
  - Let's update the allowance schedule for that:

Allowance Schedule					
Days	0-30 days	31-60 days	61-90 days	90+ days	GC
Percent Uncollectible	2%	10%	30%	100%	50%

Accounts receivable			
Customer	Amount	Days outstanding	Notes
PGUS, Inc.	$1,000	73	Probably going under soon
Slow, Pte. Ltd.	$5,000	45	
GC Corp	$2,000	29	Auditor declared going concern
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Good Co.	$2,000	2	

A/R allowances example: Going concern

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Standard & Co.	$9,000	10	
Good Co.	$2,000	2	

Days	Amount		Percent		Allowance
GC	$2,000	⨯	50%	=	$1,000
90+	$0	⨯	100%	=	$0
61-90	$1,000	⨯	30%	=	$300
31-60	$5,000	⨯	10%	=	$500
0-30	$11,000	⨯	2%	=	$220
					Total allowance = $2,020

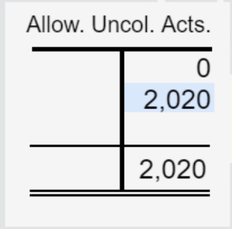
GC Corp matches two groups. Allocate to higher percent uncollectible

This is the new allowance amount

A/R allowances example: Journal entries

Example: Recording bad debt expense, no prior balance

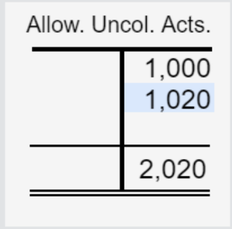
Date	Account	DR	CR
20YY.MM.DD	Bad debt expense	2,020	
	Allowance for uncollectible accounts		2,020
New allowance of 2,020, no prior balance.			



Example: Recording bad debt expense, lower prior balance

Date	Account	DR	CR
20YY.MM.DD	Bad debt expense	1,020	
	Allowance for uncollectible accounts		1,020
New allowance of 2,020, prior balance of 1,000			

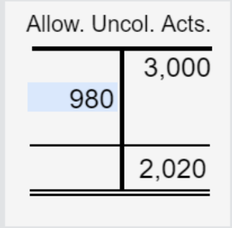
Current balance - prior balance
2,020 - 1,000 = 1,020



Example: Recording bad debt expense, higher prior balance

Date	Account	DR	CR
20YY.MM.DD	Allowance for uncollectible accounts	980	
	Gain on re-estimation of uncol. accounts		980
New allowance of 2,020, prior balance of 3,000			

Current balance - prior balance
2,020 - 3,000 = -980
Negative => DR allowance

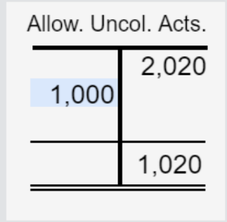


A/R allowances example: Bankruptcy

- *Bankruptcy follows the direct write-off method*
  - We record it when it happens
  - Use up some of the allowance (DR), decrease our A/R (CR)
- If the firm recovers, we reverse this transaction
- Example: PGUS goes bankrupt. During bankruptcy they pay us $300, and we expect no further payments from them.

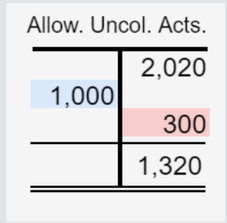
Example: Recording bankruptcy

Date	Account	DR	CR
20YY.MM.DD	Allowance for uncollectible accounts	1,000	
	Accounts receivable		1,000
Write off PGUS' account due to bankruptcy. PGUS owed us $1,000			



Example: Payment from written off account

Date	Account	DR	CR
YYYY.MM.DD	Accounts Receivable	300	
	Allowance for uncollectible accounts		300
PGUS paid $300 on previously written-off account. Restored partial allowance amount.			
20YY.MM.DD	Cash	300	
	Accounts Receivable		300
PGUS paid $300 on previously written-off account. Recorded payment.			

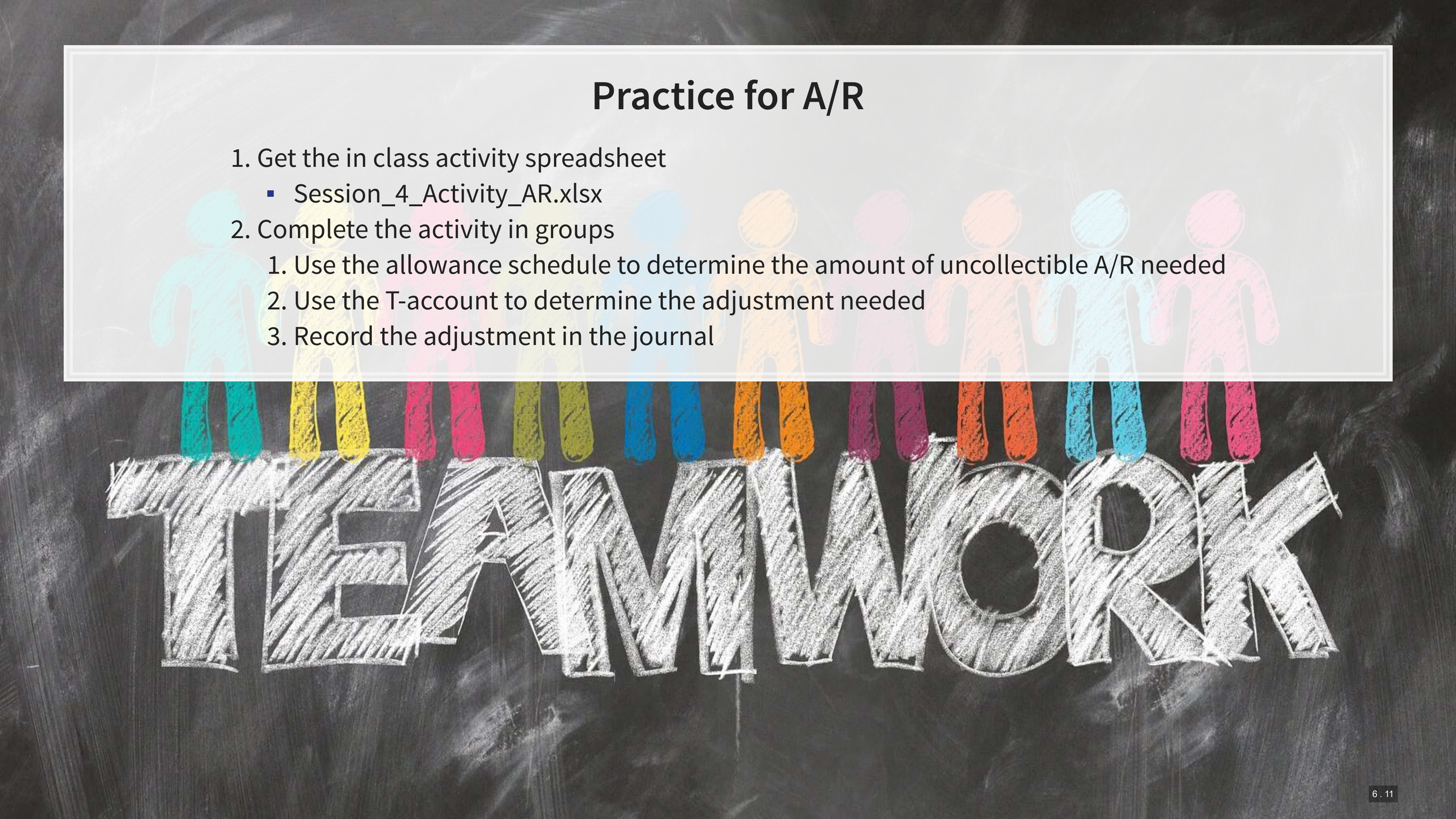


These changes in A/R cancel out

This restores the amount of the allowance that was paid

Practice for A/R

1. Get the in class activity spreadsheet
   - Session_4_Activity_AR.xlsx
2. Complete the activity in groups
   1. Use the allowance schedule to determine the amount of uncollectible A/R needed
   2. Use the T-account to determine the adjustment needed
   3. Record the adjustment in the journal



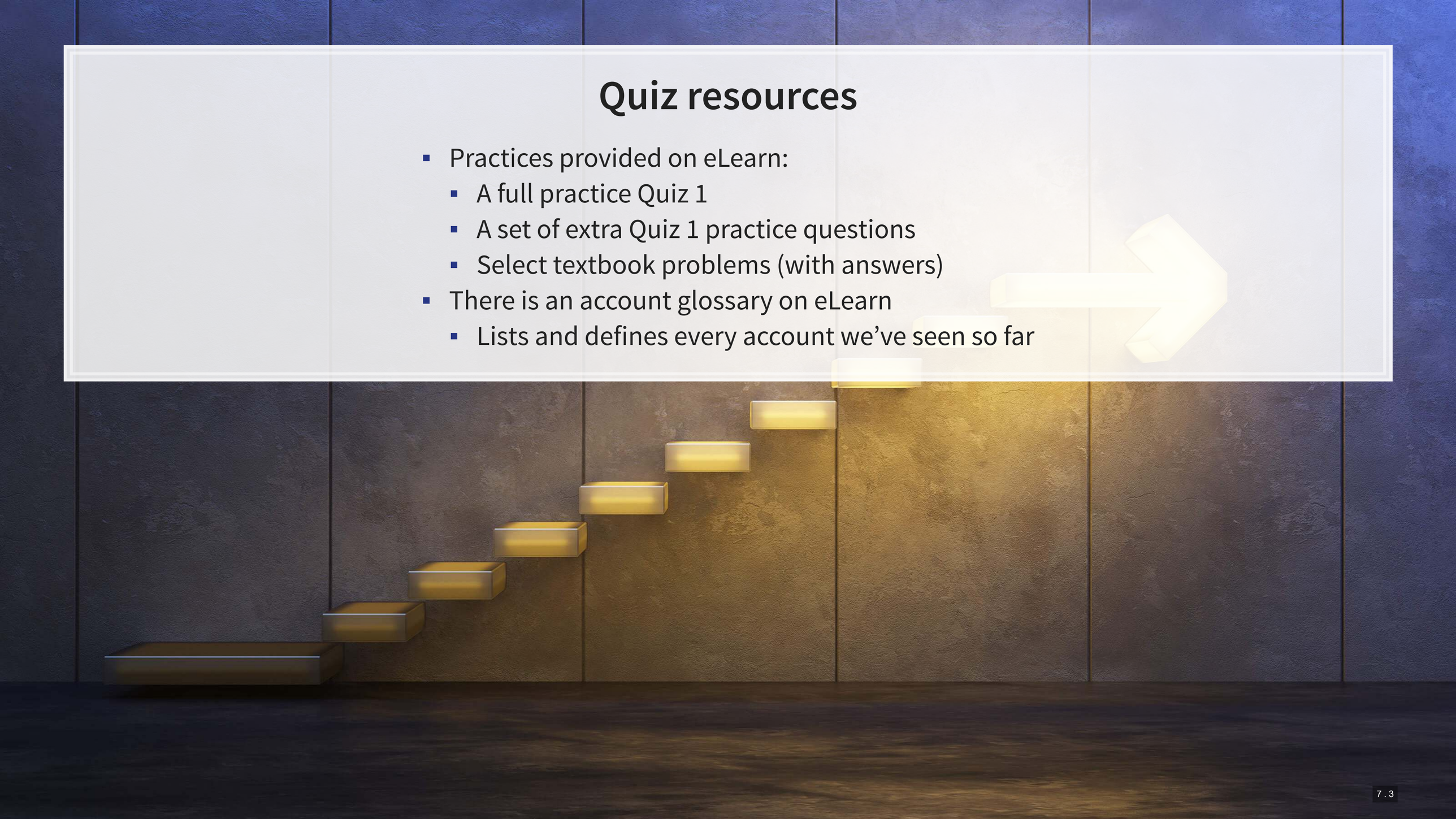
End Matter

Wrap up

- For next week
  1. **Quiz 1**
  2. Read the pages for next week
     - Chapter 5 (Part A)
     - Chapter 6 (Inventory)
  3. No homework
  4. Practice on eLearn
     - Covers bank reconciliation and A/R
     - Automatic feedback provided

Quiz resources

- Practices provided on eLearn:
  - A full practice Quiz 1
  - A set of extra Quiz 1 practice questions
  - Select textbook problems (with answers)
- There is an account glossary on eLearn
  - Lists and defines every account we've seen so far



Packages used for these slides

- kableExtra
- knitr
- revealjs