ACCT 101: Cash Flows, Part 2

Session 10

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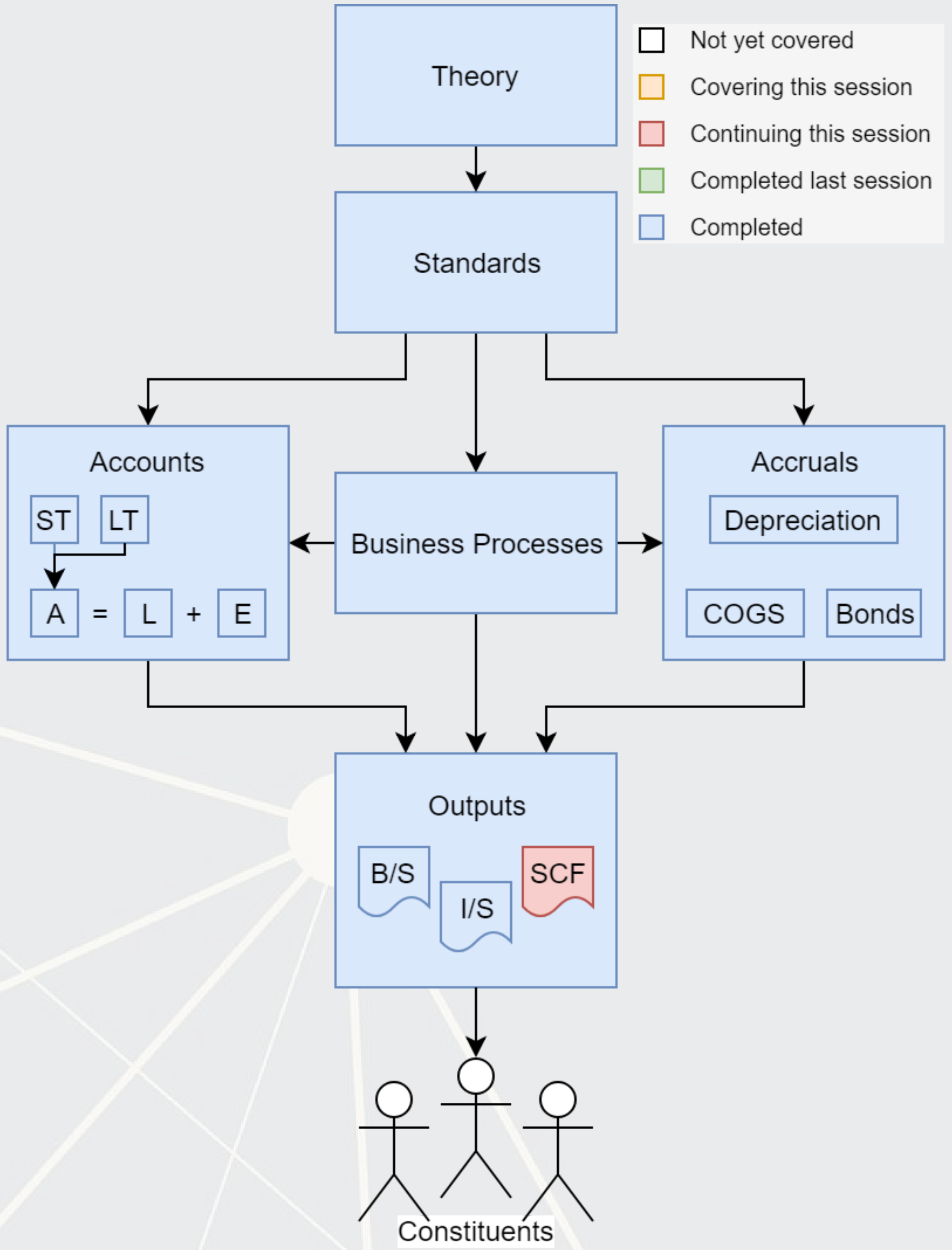
Front matter

Learning objectives



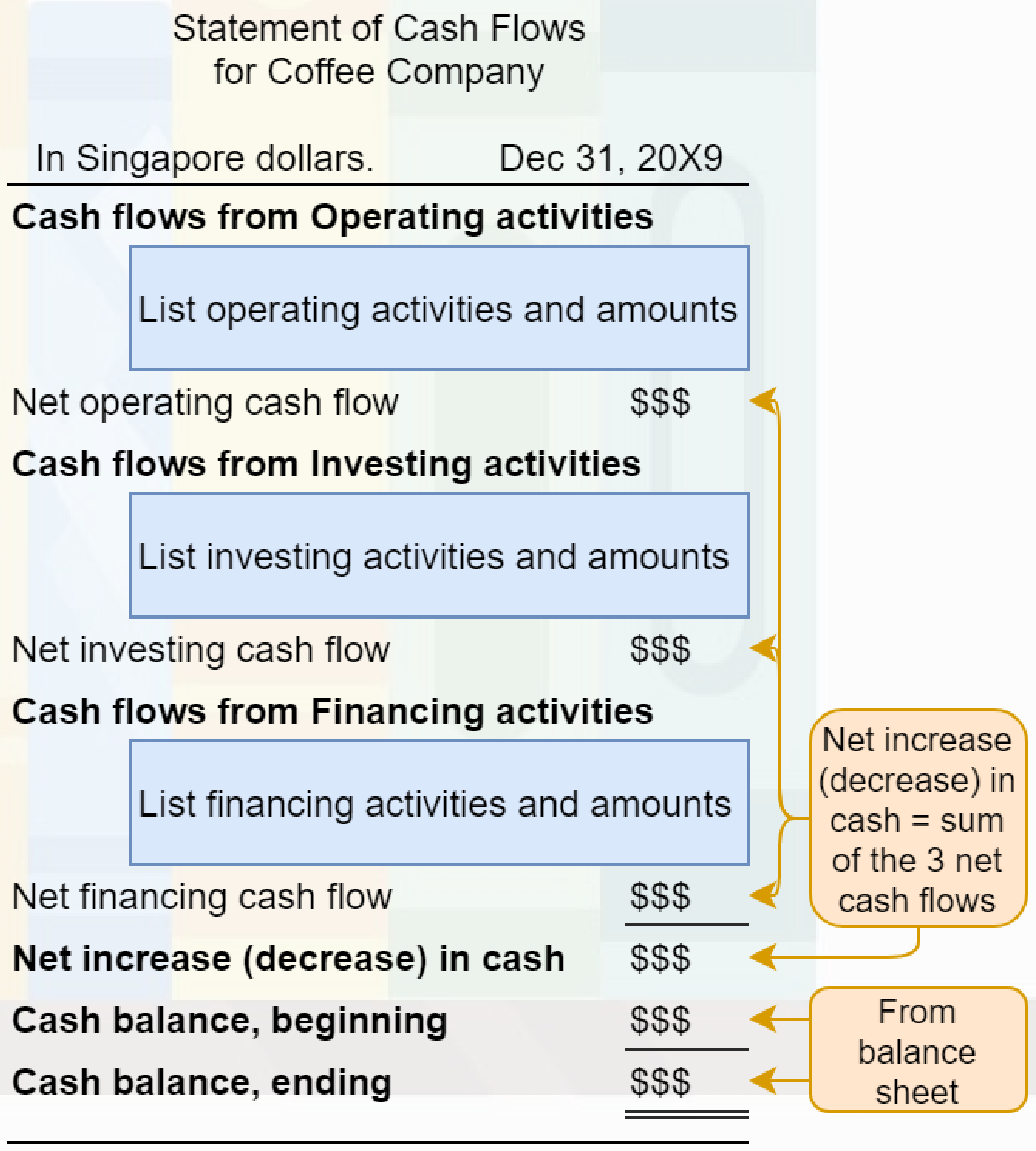
Cash Flows

1. Learn how to construct a statement of cash flows
2. Apply the *direct* method
3. Calculate net investing cash flow
4. Calculate net financing cash flow

Statement of cash flows

Format

1. Start with a comparative balance sheet and the year's income statement
2. List all operating cash flows and sum
   - Can use direct or indirect method
3. List all investing cash flows and sum
4. List all financing cash flows and sum
5. Sum all cash flows
6. Reconcile this change using balance sheet cash



Operating cash flows

Operating cash flows

Two equivalent methods:

Indirect method

- Backs out operating cash flow by starting with net income and adjusting out accruals
- Most commonly used
- Easiest to do

Direct method

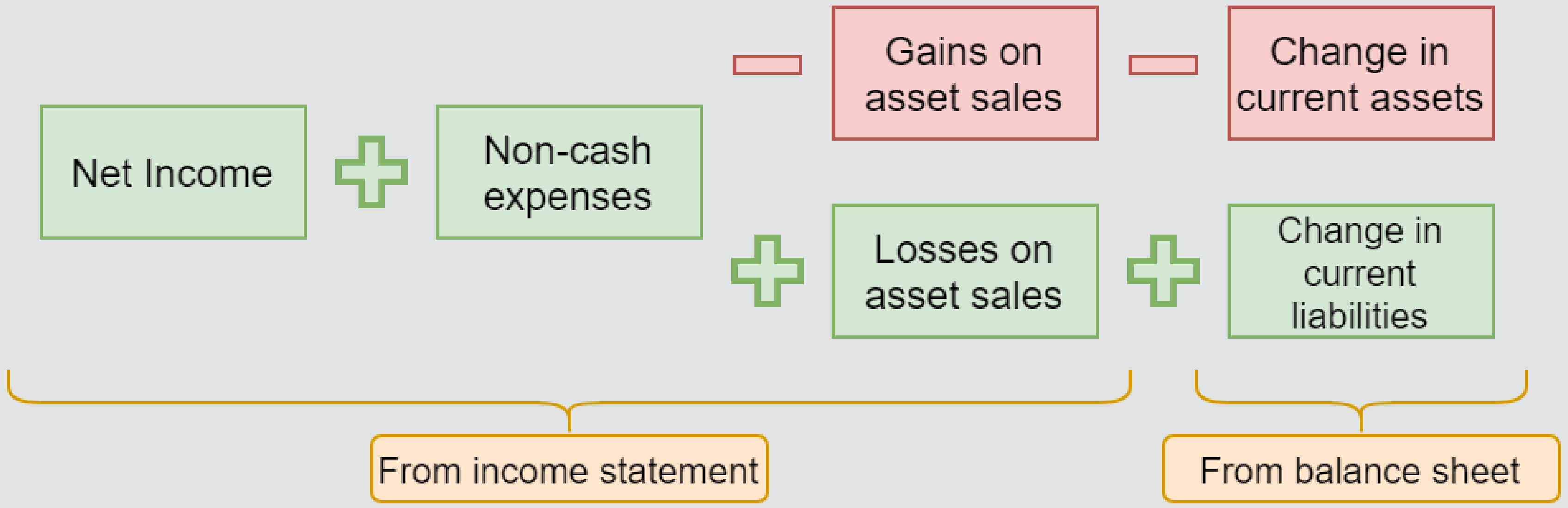
- Tracks and reports exactly where operating cash flows came from
- Preferred by IFRS
- Most useful for investors

- Both methods will get you to the same operating cash flow amount

> We will cover the direct method today

Indirect method for OCF recap

- Use information from the income statement first
- Adjust for changes in current assets and current liabilities
  - Transactions with working capital can affect cash while not affecting the income statement



Formatting OCF

Indirect method

Cash flows from Operating activities	
Net income	
Adjustments for:	
+/- each adjustment from an I/S item	
Ex.: + Depreciation expense	
Changes in working capital:	
+/- Changes in current assets and liabilities	
Ex.: - change in inventory	
Ex.: + change in accounts payable	
Net operating cash flow	$XX

Direct method

Cash flows from Operating activities	
+ Cash collected from customers	
- Cash paid to suppliers	
- Cash paid to employees	
- Cash paid for other operating expenses	
+ Dividends received**	
+ Interest received**	
- Interest paid**	
- Taxes paid	
Net operating cash flow	$XX

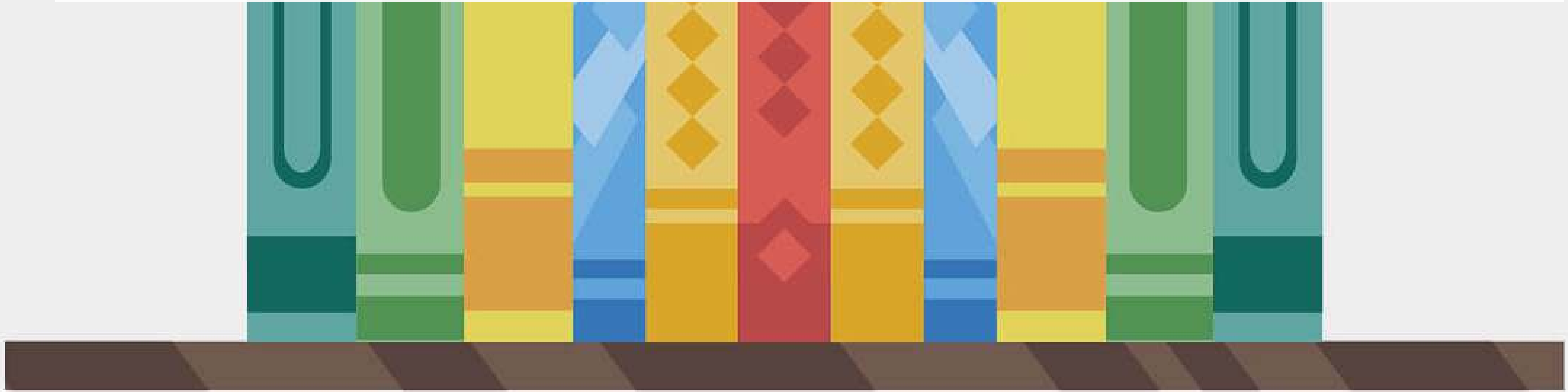
**Optional placement under IFRS, mandatory placement under US GAAP

Direct method for OCF

- Still based on:
  - Income statement
  - Changes in current assets
  - Changes in current liabilities
- Goal is to directly calculate:
  - Cash collections
    - From customers
    - Optionally, from interest and dividends
  - Cash payments
    - To suppliers
    - To employees
    - For operating expenses
    - Optionally, for interest and dividends
    - For taxes

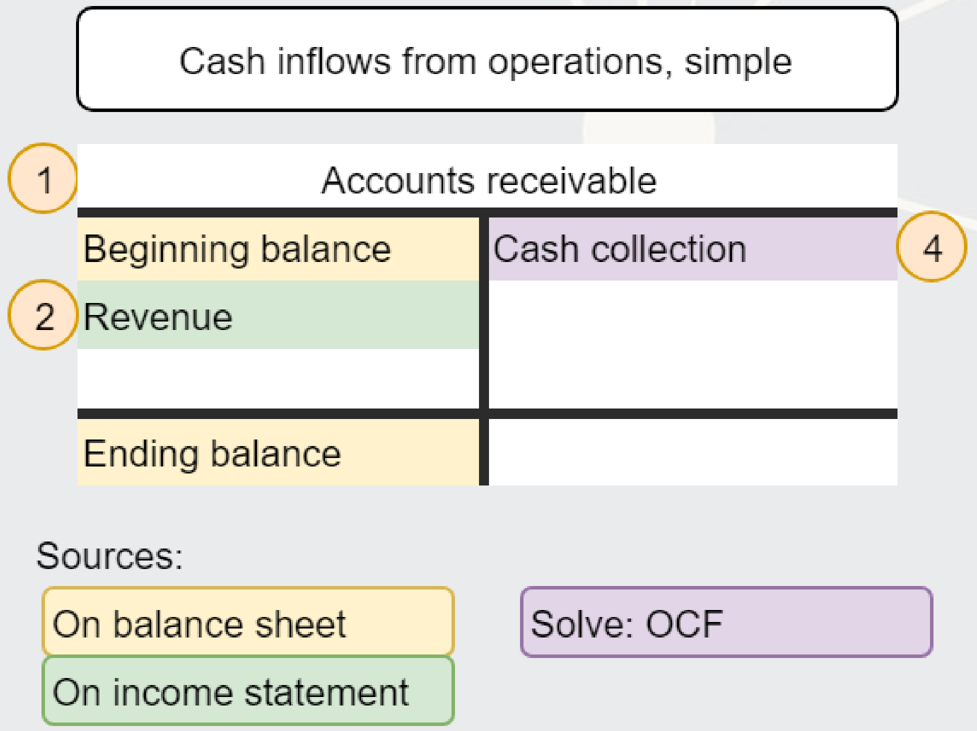
Direct method: General approach

1. Start with the related current asset or liability account
   - Record all steps in a T-account
2. Consider changes in the account(s) recorded on the income statement
3. Are there any non-cash changes to this account?
4. The cash collection will balance the T-account



Direct method: Collections, simple

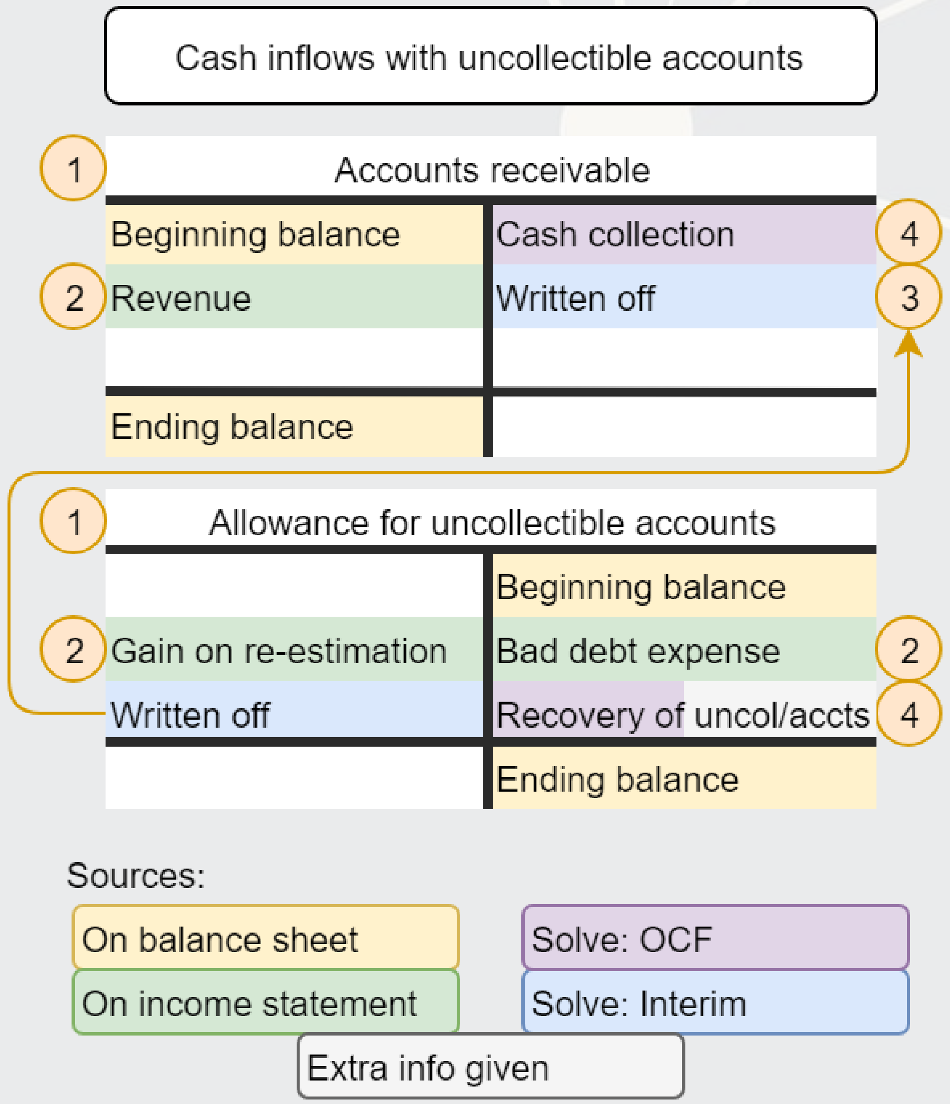
1. Start with A/R
2. Income statement info:
   - Revenue
3. No non-cash changes in simple cases
4. The cash collection will balance the T-account



This requires careful consideration of business activities

Direct method: Collections with bad debt

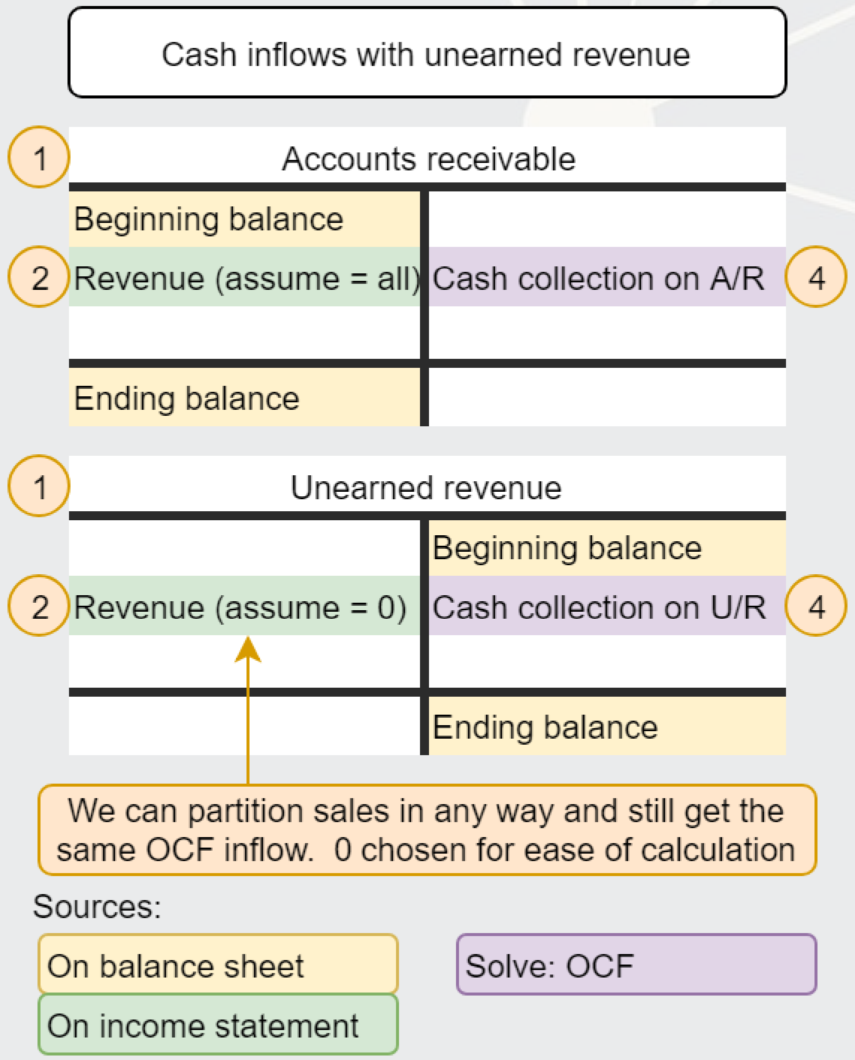
1. Start with A/R and Allowance for Uncollectible Accounts
2. Income statement info:
   - Revenue
   - Bad debt expense
   - Gain on re-estimation
3. Non-cash changes:
   - Write-off of A/R
4. The cash collection will balance the T-accounts



We need to consider effects from other accounts

Direct method: Collections with unearned revenue

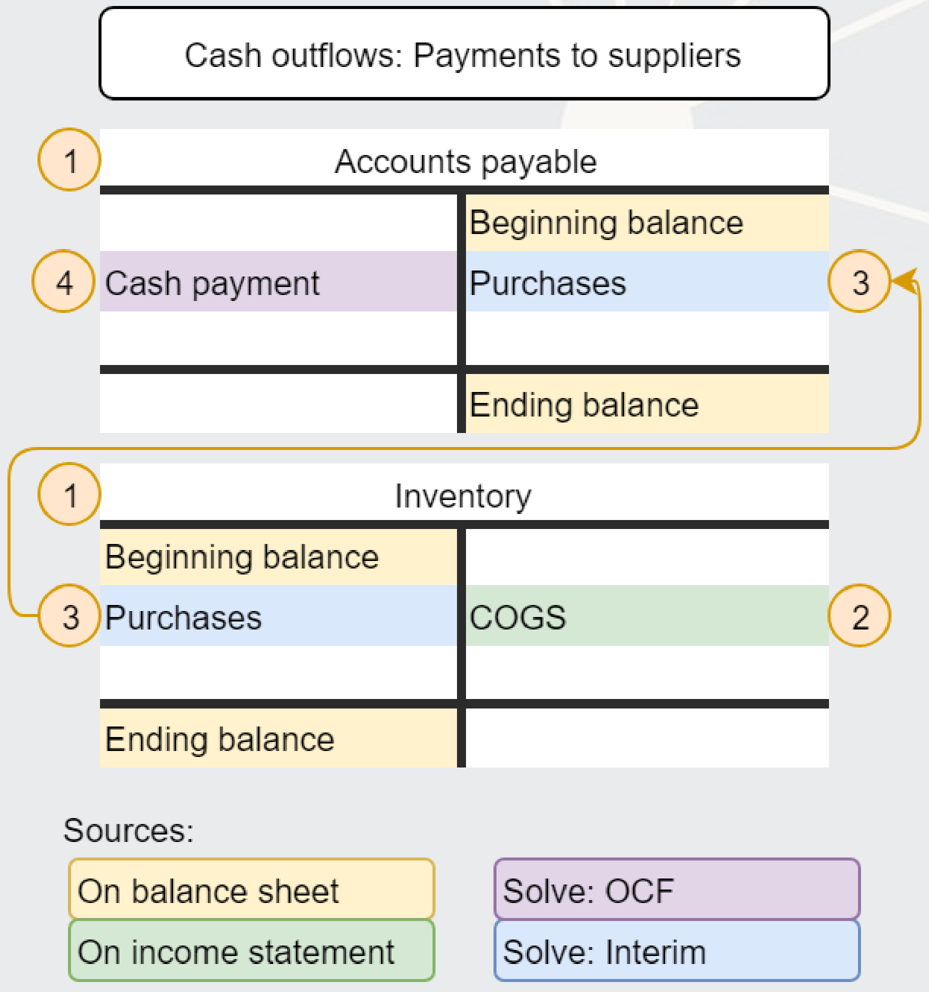
1. Start with A/R and Unearned Revenue
2. Income statement info:
   - Revenue
3. No non-cash changes
4. The cash collection will balance the T-accounts



There can be multiple sources for **Revenue**

Direct method: Payments to suppliers

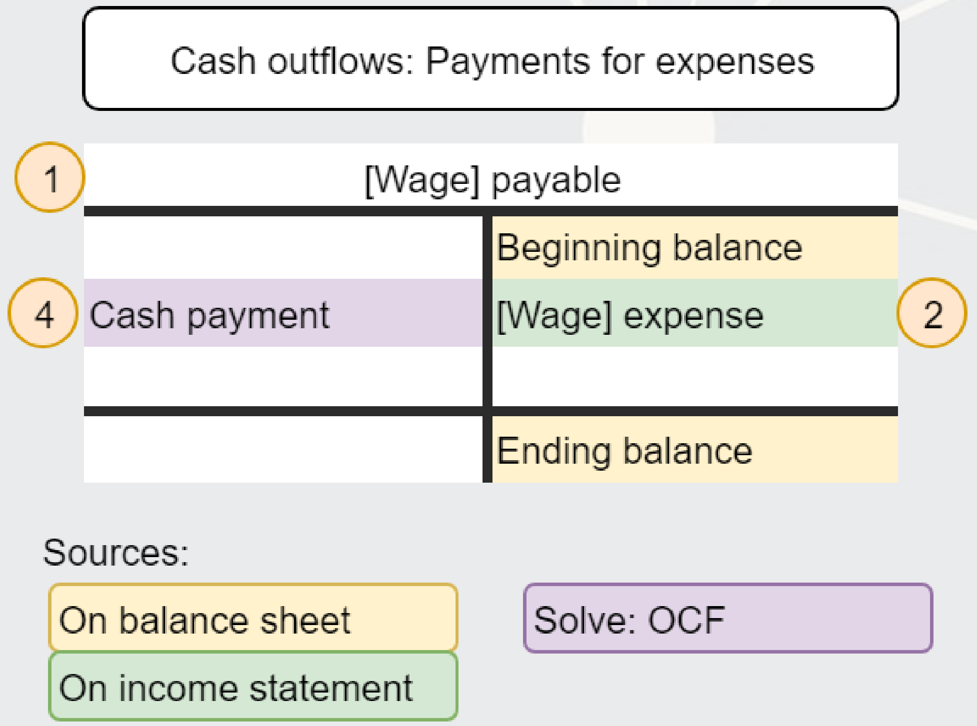
1. Start with A/P and Inventory
2. Income statement info:
   - COGS
3. Non-cash changes:
   - Purchases on account (assume all purchases)
4. The cash collection will balance the T-account



Use A/P and Inventory to find payments to suppliers

Direct method: Payments for expenses

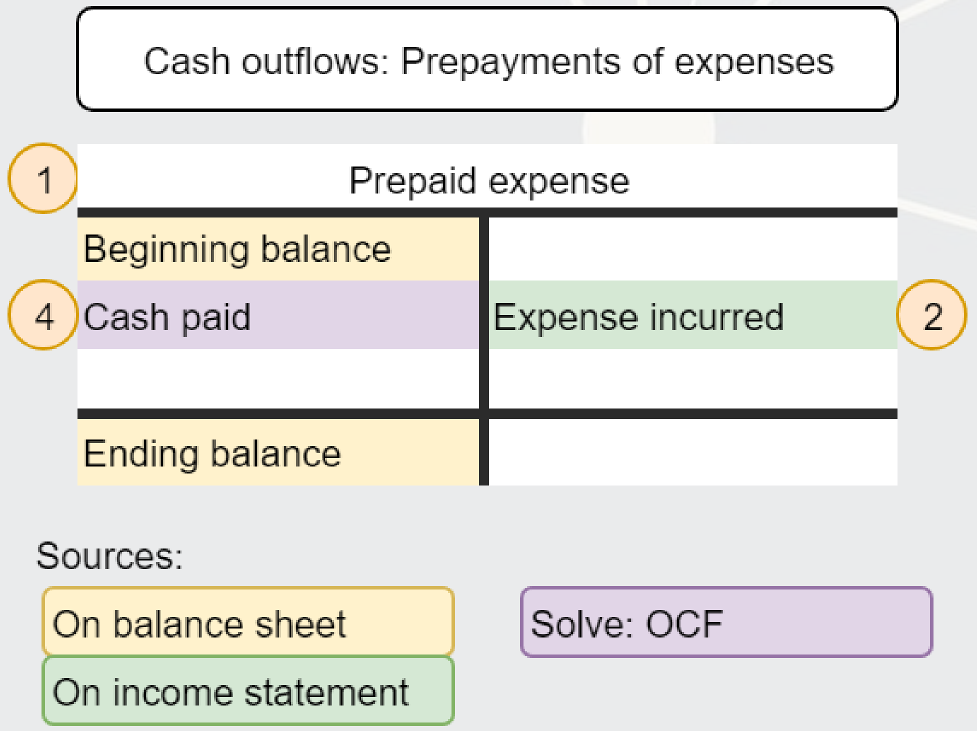
1. Start with the payable associated with the expense
2. Income statement info:
   - The expense amount
3. No non-cash changes in simple cases
4. The cash collection will balance the T-account



Use payable and expense to find payments for prepaid expenses

Direct method: Payments for expenses (prepaid)

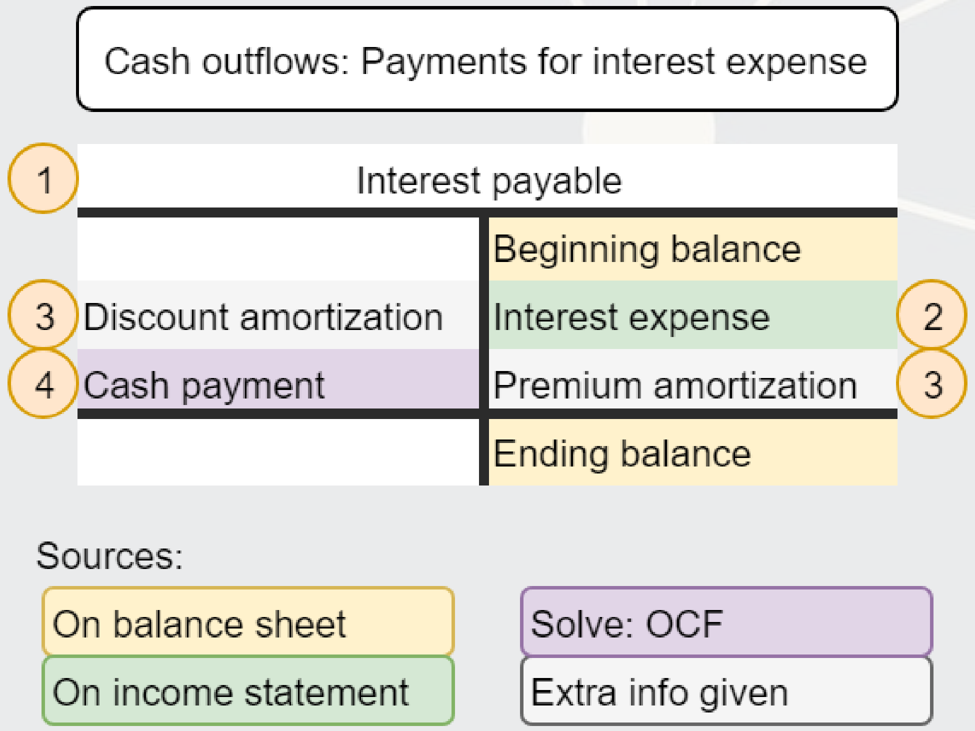
1. Start with the prepaid expense associated with the expense
2. Income statement info:
   - The expense amount
3. No non-cash changes
4. The cash collection will balance the T-account



Use prepaid expense and expense to find payments for expenses

Direct method: Payment for interest expense

1. Start with tinterest payable
2. Income statement info:
   - The expense amount
3. No non-cash changes
   - Bond amortization
4. The cash collection will balance the T-account



Make sure to take bond amortization into account

Investing cash flows

Investing cash flows

- Based on:
  - Income statement
  - Balance sheet
  - Additional information
- Goal is to directly calculate:
  - Inflows:
    - Sales of long-term assets
    - Collection of loan principle
  - Outflows:
    - Purchases of long-term assets
    - Loans made to other

Determining investing cash flows

- Only 1 method to use
  - Essentially the direct method
- Investing cash flows can be a bit trickier
  - Need to consider cash from journal entries

Format

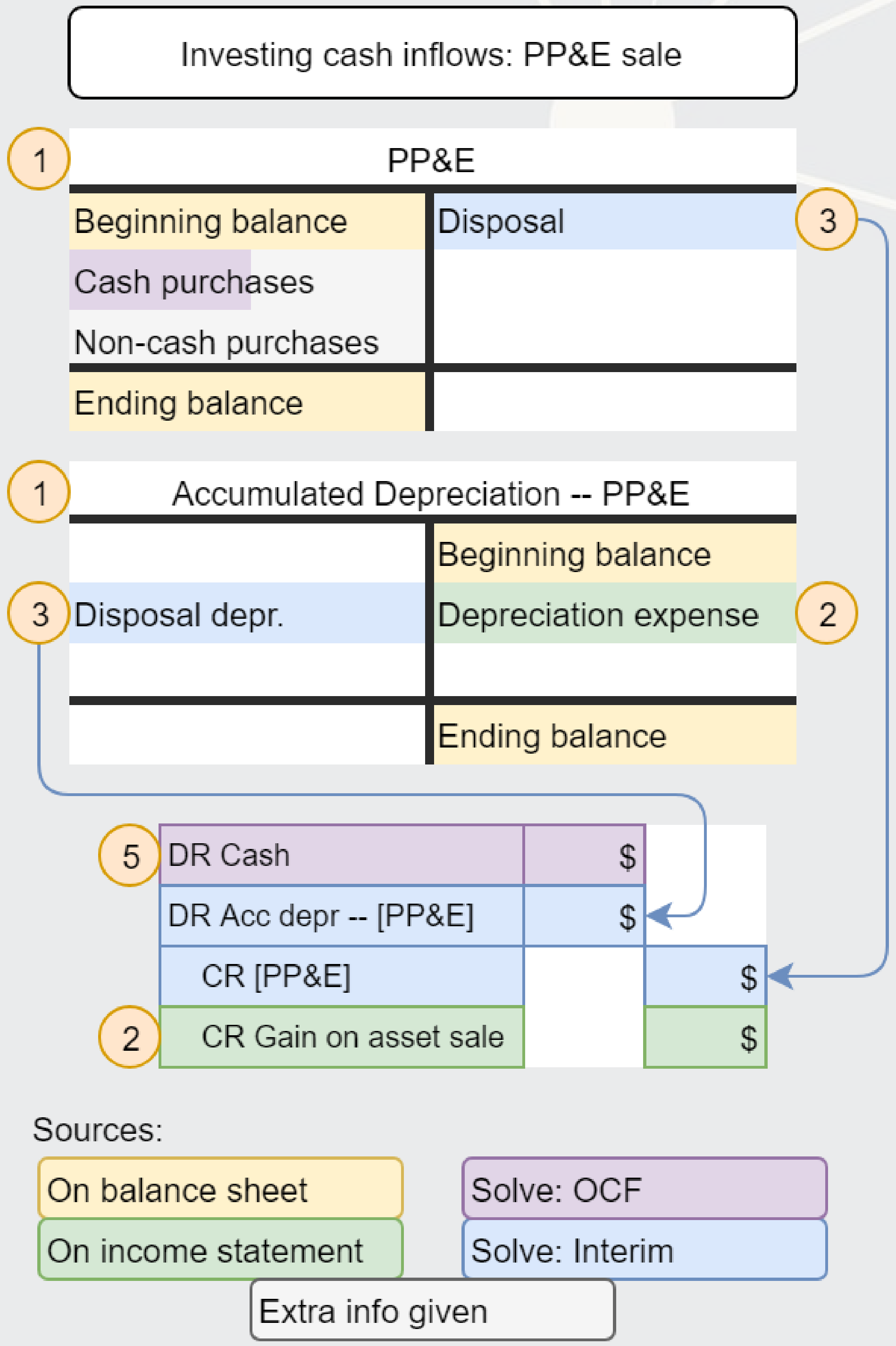
Cash flows from Investing activities	
+ Sales of long-term assets	
- Purchases of long-term assets	
+ Collections of loan principle	
- Loans made to others	
Net investing cash flow	$XX

Investing cash flows: General approach

1. Start with the asset account and any related accounts
   - Record all steps in a T-account
2. Consider changes in the account(s) recorded on the income statement
3. Are there any non-cash changes to these accounts?
4. Cash collections are either in the T-account OR…
5. Re-construct the journal entry to determine them

Investing: Inflows from PP&E sale

1. Start with the PP&E account and accumulated depreciation
2. Income statement info:
   - Gain/loss on asset sale
   - Depreciation expense
3. Non-cash changes:
   - Disposal amount
   - Disposal depreciation amount
4. Finish tallying T-Accounts
5. Cash will be in the journal entry



Financing cash flows

Financing cash flows

- Based on:
  - Income statement
  - Balance sheet
  - Additional information
- Goal is to directly calculate:
  - Inflows:
    - Issuance of shares
    - Sales of treasury shares
    - Receipt of bond or loan principle
  - Outflows:
    - Purchases of treasury shares
    - Payment of principle
    - Optionally, payment of dividends

Determining financing cash flows

- Only 1 method to use
  - Essentially the direct method
- Financing cash flows can be a bit trickier
  - Need to consider cash from journal entries

Format

Cash flows from Financing activities	
+ Issuance of shares	
- Purchases of treasury shares	
+ Sales of treasury shares	
+ Receipt of bond or loan principle	
- Payment of principle	
- Payment of dividends**	
Net financing cash flow	$XX

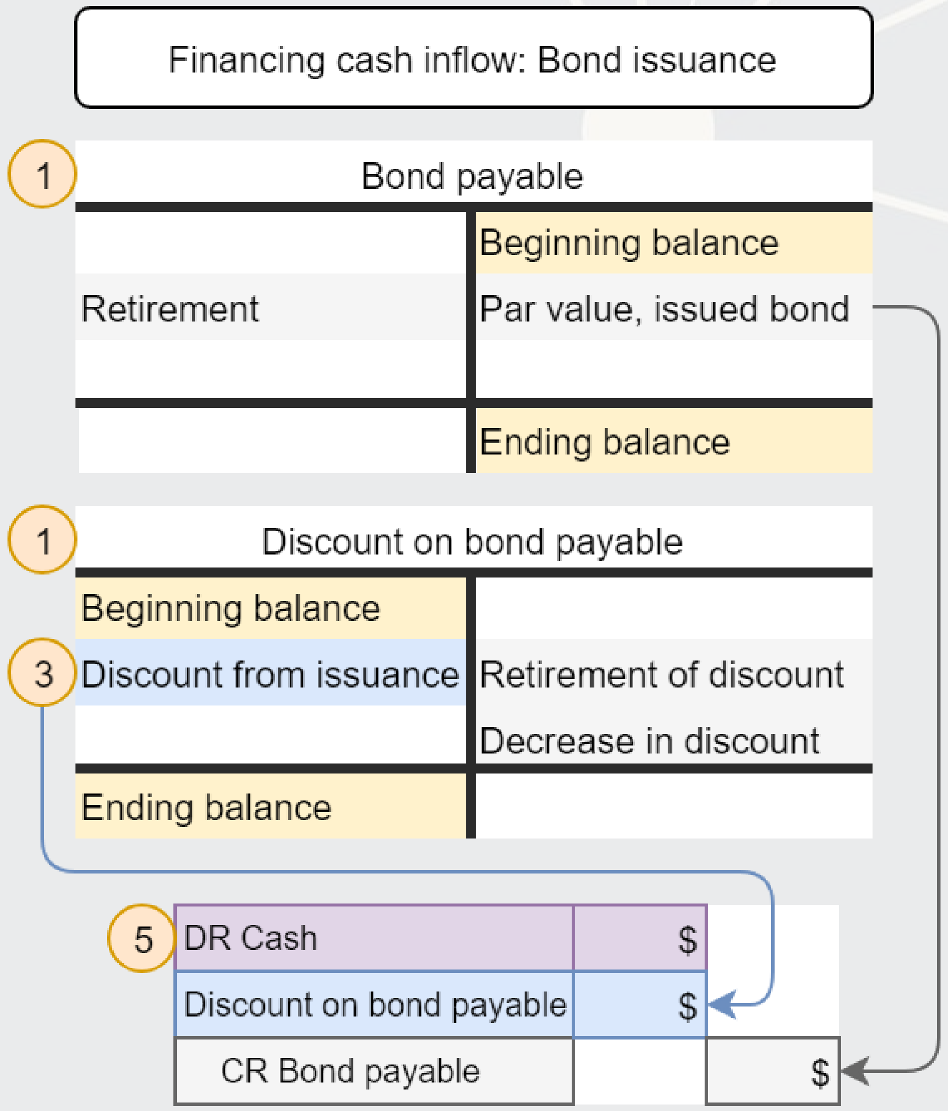
**Optional placement under IFRS, mandatory placement under US GAAP

Financing cash flows: General approach

1. Start with the liability or equity account and any related accounts
   - Record all steps in a T-account
2. Consider changes in the account(s) recorded on the income statement
3. Are there any non-cash changes to these accounts?
4. Cash collections are either in the T-account OR…
5. Re-construct the journal entry to determine them

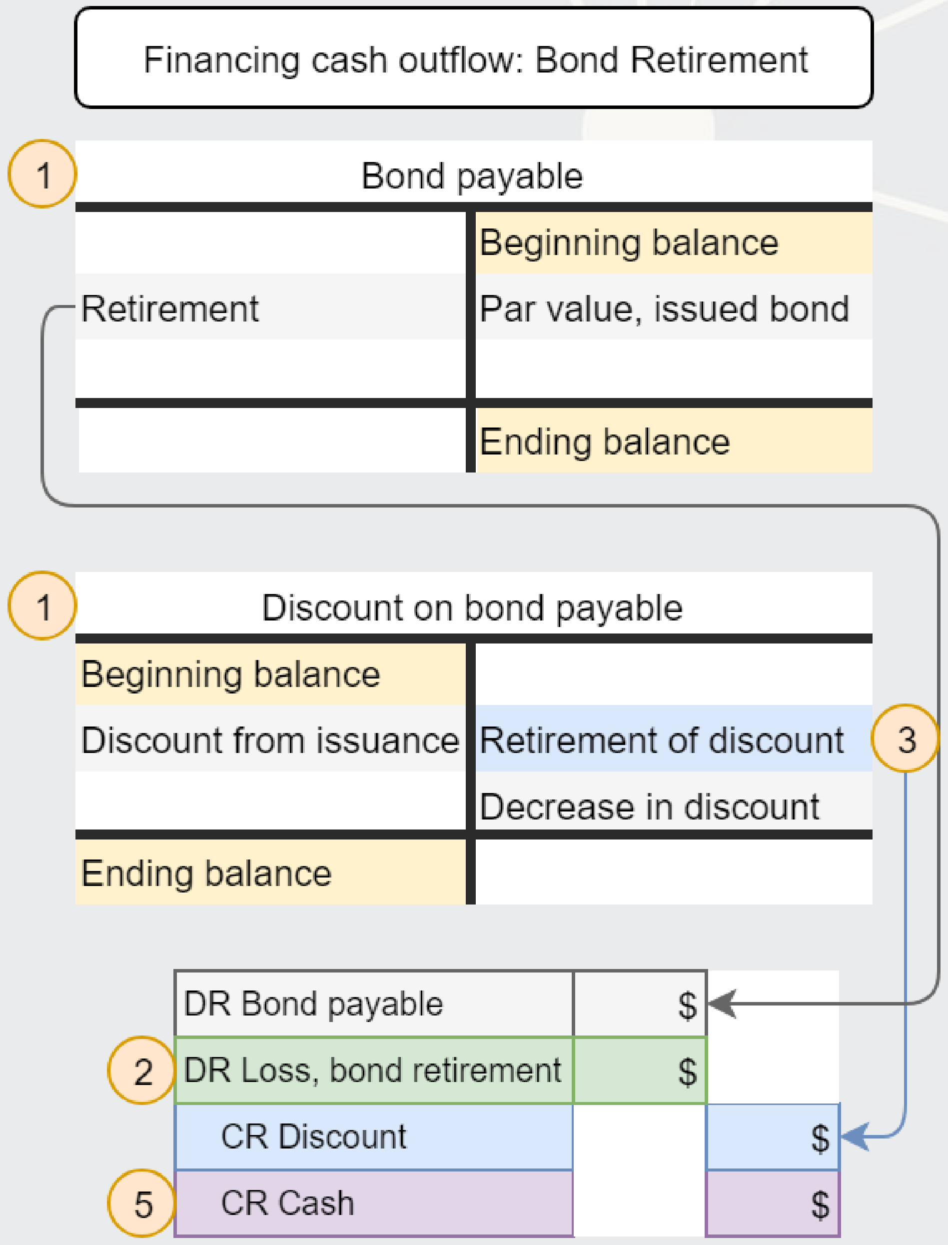
Financing: Bond issuance

1. Start with the bond payable account and its discount or premium account
2. Income statement info:
   - Interest expense can be relevant
3. Non-cash changes:
   - Changes in discount after issuance
   - Bond retirement (in part)
4. Finish tallying T-Accounts
5. Cash will be in the journal entry



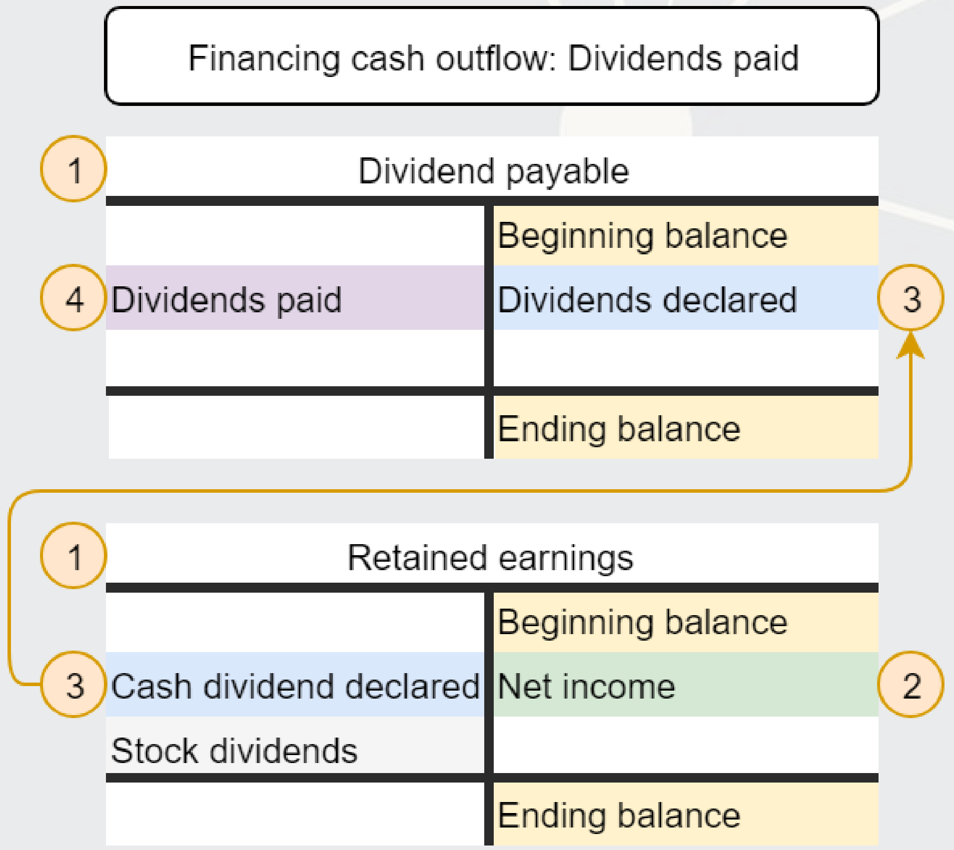
Financing: Bond retirement

1. Start with the bond payable account and its discount or premium account
2. Income statement info:
   - Interest expense can be relevant
   - Gain or loss on retirement
3. Non-cash changes:
   - Changes in discount from retirement
   - Issuance (in part)
4. Finish tallying T-Accounts
5. Cash will be in the journal entry



Financing: Dividends paid

1. Start with the dividends payable account and retained earnings
2. Income statement info:
   - Net income
3. Non-cash changes:
   - Stock dividends
4. The cash collection will balance the T-account



Bringing it all together

Analysis of Cash flow

Operating	Investing	Financing	Activity
+	+	+	Building up cash; looking for acquisition?
+	+	−	Paying off debt by growing CFO and PP&E sales
+	−	+	Expanding via internal growth and borrowing
+	−	−	Improved CFO used to buy PP&E and pay off debt
−	+	+	Covering CFO shortfall via borrowing and PP&E sale
−	+	−	Sale of PP&E to cover debt payment and CFO shortfall
−	−	+	Rapid growth but shortfall in CFO
−	−	−	Using cash reserves to finance shortfalls and pay debt

Practice: Constructing an SCF

> Construct an SCF using the following information. Use the indirect method to determine OCF.

Statement of Financial Position
Coffee Company

	Dec 31, 20X9	Dec 31, 20X8
Cash	29,000	10,000
A/R	22,000	39,000
Inventory	45,000	58,000
Prepaid expenses	9,000	8,000
Accounts payable	28,000	17,000
Other current payables	58,000	99,000
Dividends payable	5,000	10,000

Additional data

- Net income for 20X9 was $75,000
- Depreciation expense was $25,000. There were no other non-cash items on the income statement.
- Acquisition of PP&E was $240,000. Of this amount, $70,000 was obtained by signing a note payable, while the rest was paid in cash.
- Proceeds from sale of land totaled $25,000.
- Proceeds from share issuance totaled $90,000.
- Payment of a long-term note payable was $15,000.
- Retained earnings increased by $70,000. The only changes in retained earnings came from cash dividend issuance and net income.

End matter

Wrap up

- For next week
  1. Chapter 12: Financial statement analysis
  2. Next week:
     - Homework 5 will be provided
     - We will discuss financial ratios
     - We will have some time for in class review
  3. In two weeks:
     - Group project presentations
     - Email me slides by 10am of the class day
  4. Extra practice available
     - Cash flow statement eLearn quiz

Packages used for these slides

- kableExtra
- knitr
- revealjs