



# Western Capital Markets

Recruiting Workshop: Preparation & Technical Foundations

Sample Educational

# Disclaimer

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## I. Finding the Right Firm & Job

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## Criteria for Selecting Your Job

1. **How much will you enjoy the work you will be doing?**
  - a. Especially at the junior level, work will be mostly administrative level and there will be fewer opportunities to offer your opinion or dictate your work
  - b. However, some firms offer more opportunities for personal growth than others
  - c. Think about the flexibility of the team and talk to people about their personal responsibilities
2. **How much will you enjoy the people you will be working with?**
  - a. Ask people at the firm about the culture during info sessions, and particularly ask people who have summered there who you are close with
  - b. If you're going to work in a generalist team, talk with previous summers to see which types of deals they (1) got to work on and (2) enjoyed the most
3. **How strong is the group?**
  - a. Consider both the firm and the specific group within it (e.g. MS M&A, GS TMT, etc.)
  - b. The stronger the group, the better the deals you will be able to work on
  - c. Additionally, consider the benefits of the global network a Bulge Bracket bank will provide over boutiques

**WHERE TO FIND THIS:** Wall Street Oasis / BIWS Forums

# Choosing the Right Job



## Understanding US vs. Canada Recruiting



| Canada                                          | Factor                          | United States                                                        |
|-------------------------------------------------|---------------------------------|----------------------------------------------------------------------|
| Mixed, though some more technical (e.g. MS, GS) | <b>Interview Question Focus</b> | <b>Bulge Bracket:</b> Behavioural, Fit<br><b>Boutique:</b> Technical |
| All Firms                                       | <b>Firms that Target Ivey</b>   | Evercore (NY), HL (LA), Silver Lake (SF),<br>Credit Suisse (SF)      |
| 30+                                             | <b># of 2019 Placements</b>     | ~15                                                                  |
| Generalist                                      | <b>Group Allocation</b>         | Industry or Product Group                                            |
| ~16 weeks OR ~10 weeks                          | <b>Internship Length</b>        | ~10 weeks                                                            |

# US Recruiting



## Firms That Target Ivey

- Evercore (NY)
  - 3 - 8 Students
- Houlihan Lokey (LA)
  - 0 - 2 Students for M&A
  - 1 - 2 Students for Restructuring
- Silver Lake (SF)
  - 0 - 2 Students
- Credit Suisse (SF)
  - 1 - 3 Students
- Macquarie (LA)
  - 1 Student

## Firms That (Might) Sponsor Visas

- Evercore (SF, Houston)
- Goldman Sachs (SF, LA, NY)
- Credit Suisse (NY)
- Moelis (SF, LA, NY)
- Centerview Partners (SF, NY)
- Ares Management (LA)
- Point72 (NY)
- Blackstone (NY)

## II. Historical Timelines

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# Historical Timelines



## Firms in The US That Target Ivey

- **March – April:** Credit Suisse, Houlihan Lokey
- **August – September:** Evercore, Silver Lake Partners
- **October:** Macquarie

## Other US Processes

- **May – September:** Point72, Blackstone
- **July – August:** Goldman Sachs, Moelis, Lazard, PJT, Silver Point Capital, D.E. Shaw
- **September:** Centerview Partners

## Toronto

- **January:** Lazard
- **April – August:** Credit Suisse
- **July – August:** Greenhill, Morgan Stanley, Goldman Sachs, CPPIB
- **September – October:** OMERS, CPPIB, OTPP, PSP, Barclays, Bank of America, Rothschild, Wells Fargo, Citi, Big 5

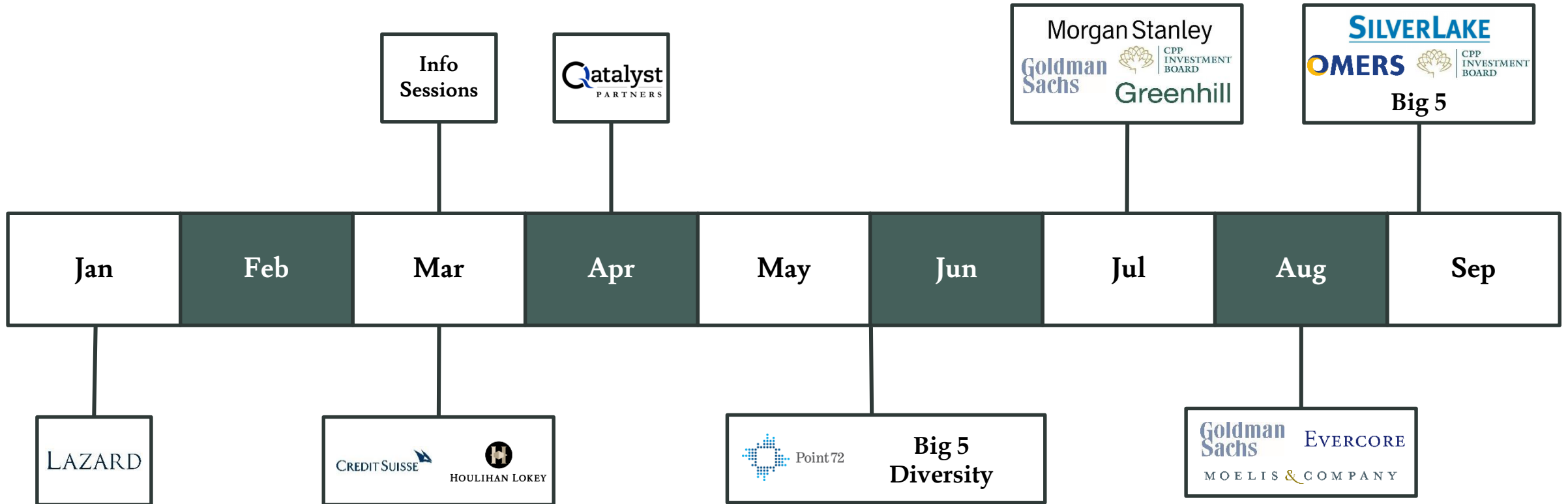
## Diversity Events

- **Applications Due:** Dec – May
- **Conferences/Events:** Feb – July
- **Accelerated Processes:**
  - **March:** Evercore, Moelis
  - **May:** Point72, RBC Scholarship
  - **June – August:** Other Big 5

# Historical Timelines



## 2019 Finance Recruiting Timeline (for Summer 2020)



### III. TECHNICALS: Accounting

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## Common Topics

- **Testing Understanding of Statements/Ratios**
  - Pros/cons/intricacies of each statement
  - Working Capital ratios
- **Flow-Through Questions**
  - Purchasing Inventory
    - Often with debt (and often with PIK interest)
  - Purchasing capital assets (with various types of financing)
  - Deferred revenue increases and decreases
  - Selling an asset for an amount not equal to its book value
- **Changes to Balance-Sheet Only**
  - Acquiring a company (with various types of financing and creation of goodwill)



## Understanding of Statements

**What kind of items would you see on all 3 financial statements?**



## Understanding of Statements

**What kind of items would you see on all 3 financial statements?**

1. Net Income

2. Depreciation / Amortization

3. Taxes

4. Inventory



## Understanding of Statements

**If you could only pick one statement which would you use? What about for a high-growth start-up?**



## Understanding of Statements

**If you could only pick one statement which would you use? What about for a high-growth start-up?**

1. Cash Flow Statement

2. Income Statement





## Understanding of Statements

**You have 2 balance sheets from the start and end of the year. How do you calculate EBITDA?**



## Understanding of Statements

**You have 2 balance sheets from the start and end of the year. How do you calculate EBITDA?**

Take difference in Retained Earnings to calculate Net Income, adjust for dividends through Dividends Payable if necessary.

Add back ending value of Income Tax Payable to get EBT.

Calculate interest using given coupon rates and terms in footnotes or line items to get EBIT.

Take difference in Accumulated D&A for each capital asset / intangible, assuming no CapEx, and add difference back to get EBITDA.



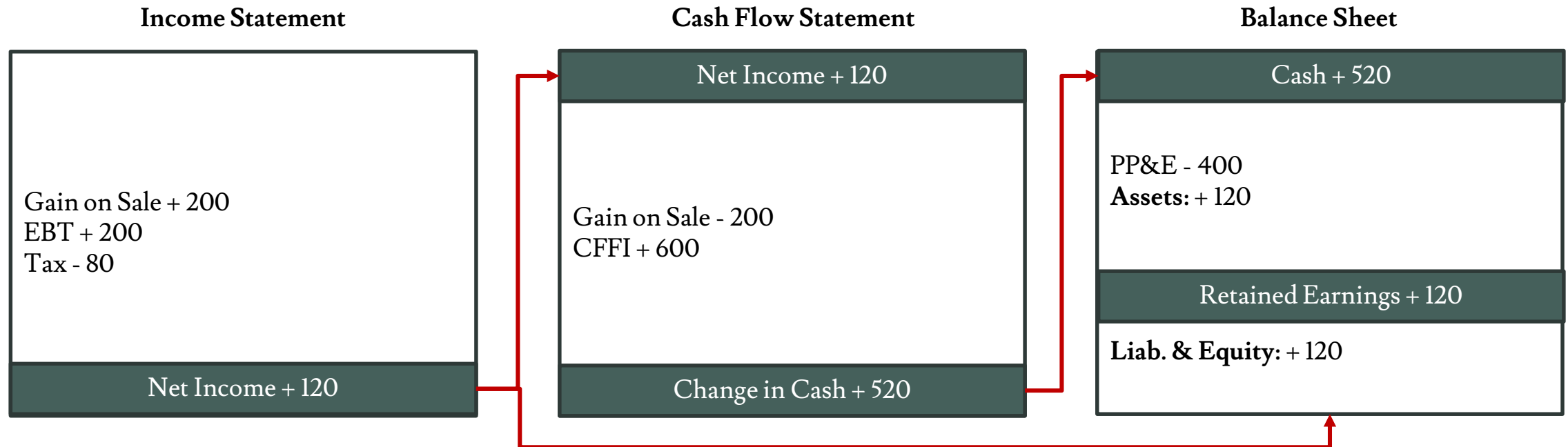
## Flow-Through Questions

- Almost all accounting questions are application-based and are flow-through questions
- **General Format:** Some event happens. What happens to the 3 financial statements?
  - E.g. You buy \$100 of capital assets with \$50 of cash and \$50 of debt. What happens to 3 statements?
- These questions always focus on the *change* in every relevant line item (IS, CFS) or account (BS)
- Often, you will not be provided all the necessary information (e.g. depreciation rate, tax rate, interest rate) so you will have to ask for this yourself
- Make sure you say out loud what you do at every single step so the interviewer can see your thought process
  - Sometimes the interviewer will bless you with some help if they see where you've went wrong



## Flow-Through Questions

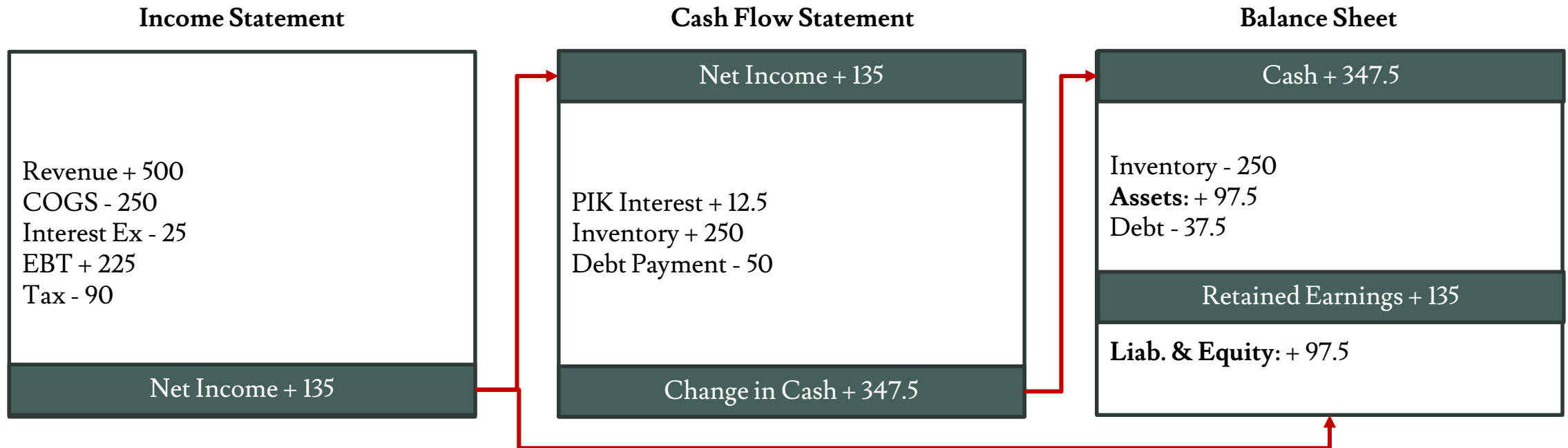
**Example 1:** You have an asset with a gross value of \$1000 and a net book value of \$400. You sell the asset for \$600 cash. What happens to the 3 financial statements, assuming a 40% tax rate?





## Flow-Through Questions

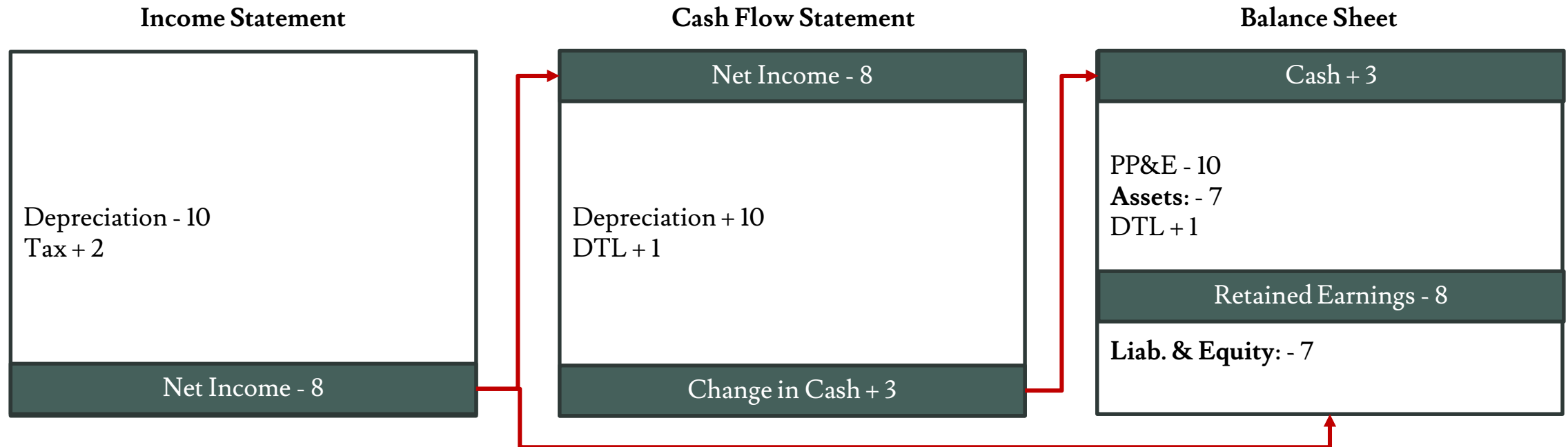
**Example 2:** If \$250 of inventory is purchased using debt (5% bank debt, 5% PIK, 20% amortized), with a 40% tax rate, then sold at \$500 the next year, walk me through the statements for next year.





## Flow-Through Questions

**Example 3:** Last year you purchased a capital asset for \$100. If you decide to now depreciate it by \$15 in your government filings but \$10 on your own books, what happens to the 3 statements? (20% tax)



## IV. TECHNICALS: Valuation Basics

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## Common Examples

- Dilution Questions
- Calculating **Enterprise Value (EV)**
- Impact of events on **Equity Value** and EV
- High-Level Understanding of **Valuation Methods**
  - Pros/Cons of each and when to use





## Dilution

**RSUs:** Reverse Stock Units. Treat these as stock. Add # of RSUs to share count.

**Convertible Stock:** Divide total balance by conversion price *only if in the money*. Add quotient to share count.

**Outstanding Options:** *Only if options are in the money*, use the Treasury Stock Method. Unlike convertible stock, when options are exercised the company receives the strike price. Calculate the amount received by the company by multiplying outstanding options \* strike price, then divide this by the market share price to determine how many shares the company can repurchase.

$$\text{Total new shares} = \text{Outstanding in-the-money options} - \text{shares repurchased}$$

Once you determine total new shares from all dilutive instruments, add to current share price and multiply the sum by the current share price to determine fully diluted equity value.



## Dilution

**Example:** A company's share price is \$50 and it has 200 shares outstanding. There are 50 options outstanding with a strike price of \$20, 30 RSUs and \$6000 in convertibles with \$1000 par value and conversion price of \$40. What is the fully diluted equity value?



## Dilution

**Example:** A company's share price is \$50 and it has 200 shares outstanding. There are 50 options outstanding with a strike price of \$20, 30 RSUs and \$6000 in convertibles with \$1000 par value and conversion price of \$40. What is the fully diluted equity value?

1) **RSUs:** 30 new shares created

2) **Convertibles:**  $\$6000 / \$40 = 150$  new shares created

3) **Options:**  $\$20 < \$50$ , so in-the-money.  $50 * \$20 = \$1000$  to company /  $\$50 = 20$  shares repurchased. 50 exercised options - 20 repurchased shares = 30 net new shares.

4) **Total Shares:**  $200 + 30 + 150 + 30 = 410$  shares

5) **Fully Diluted Equity Value:**  $410 \text{ shares} * 50 = \$20,500$



## EV and Equity Value Definitions

- **Enterprise Value:** Represents only the *core business operations* of a business
  - REMEMBER: If the operations do not change, neither should EV. Any changes in the components of EV (Equity Value, Debt, NCI, Preferred and Cash) must cancel each other out
- **Equity Value:** Represents the market value of shares outstanding. Therefore, it is calculated by multiplying # shares outstanding with price/share



## Steps to Determining EV

- **Steps to Determining EV:**
  - Add LT funding sources for operations (debt + equity, pension obligations -- borrowed money to fund operations)
  - Subtract items that are non-core operating assets (Cash & Short-term Investments)
  - Create apples to apples comparison and reflect core operating assets of business
    - Add back Non-controlling Interest
    - Subtract equity investment



## Determining EV

**Example:** You have an EPS of \$2, 100 shares outstanding, a P/E of 4x, \$200 in debt, \$75 in NCI, \$50 in cash and \$100 in inventory. What is the EV?



## Determining EV

**Example:** You have an EPS of \$2, 100 shares outstanding, a P/E of 4x, \$200 in debt, \$75 in NCI, \$50 in cash and \$100 in inventory. What is the EV?

1) **Net Income** =  $\text{EPS} * \text{Shares Outstanding} = \$2 * 100 = \$200$

2) **Equity Value** =  $\text{P/E} * \text{Net Income} = 4 * \$200 = \$800$

3) **Enterprise Value** =  $\text{Equity Value} + \text{Debt} + \text{NCI} - \text{Cash} = \$800 + \$200 + \$75 - \$50 = \$1,025$



## Impact of Events to Equity Value and EV

- Financing events DO NOT affect enterprise value, but many do affect equity value
  - If anything related to common equity → equity will change
- Only changes to company's core business will affect EV
  - Changes that affect expected future cash flow from core business → expected future cash flow affects all investors





## Impact of Events to Equity Value and EV

- **Example:** What happens to equity value and EV if the CEO burns \$100 of cash?



## Impact of Events to Equity Value and EV

- **Example:** What happens to equity value and EV if the CEO burns \$100 of cash?
  - Equity Value:
    - - \$100 Cash  $\rightarrow$  ( - \$100 Equity Value)
  - EV:
    - - \$100 Cash  $\rightarrow$  ( + \$100 EV)
    - - \$100 Equity Value  $\rightarrow$  ( - \$100 EV)
    - = No Change
  - Basic EV Equation: **Equity Value** + Debt - **Cash**

## V. TECHNICALS: DCF

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## Common Examples

- Differences between types of cash flows
- Pros/Cons of DCF, including when you wouldn't use one
- Impact changes in line items have on valuation
- Questions about terminal value calculation
- Questions about each of the components that go into WACC and how changes impact your valuation



## Types of Cash Flows

- **Unlevered Free Cash Flows (UFCF):**  $\text{EBIT (Operating Income)} * (1 - \text{Tax Rate}) + \text{D\&A} - \text{CapEx} - \text{Change in Working Capital}$
- **Levered Free Cash Flow (LFCF):**  $\text{Net Income} + \text{D\&A} - \text{CapEx} - \text{Change in Working Capital} - \text{Mandatory Debt Repayments}$
- **Cash Flow From Operations (CFO)**
- **Free Cash Flow (FCF) :**  $\text{CFO} - \text{Capex}$
  
- **Example:** Why do we use typically use UFCF in a DCF?



## Types of Cash Flows

**Example:** Take me from Unlevered Free Cash Flow to Levered Free Cash Flow.



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**Example:** Take me from Unlevered Free Cash Flow to Levered Free Cash Flow.

Start with Unlevered Free Cash Flow

Less: Tax-Adjusted Interest Payments (i.e. Interest Expense \* (1 – Tax Rate))

Less: Mandatory Debt Repayments

= Levered Free Cash Flow



## Impact of Events on DCF

**Example:** What happens to your valuation if you switch from straight line to double-declining balance?





## Impact of Events on DCF

**Example:** What happens to your valuation if you switch from straight line to double-declining balance?

- Identify which line items are impacted
  - Expense: Depreciation
  - Adjustments to Non-Cash Items: Depreciation
- Compare magnitude of change in your line items
  - Expense : Depreciation increases → Valuation decreases
  - Adjustments to Non-Cash Items: Depreciation increases → Valuation increases
    - The impact here is greater as you add back the FULL non-tax affected amount, therefore valuation increases
- **Bonus:** Consider how this is accounted for in your terminal value calculation
- **Tip:** Use this framework to consider other items that appear twice (e.g. Working Capital)



## Terminal Value

**Example:** What are the two methods to calculate terminal value? Which should you use?



## Terminal Value

**Example:** What are the two methods to calculate terminal value? Which should you use?

- **Gordon/Perpetuity Growth Method**

- $(FCF \text{ from last year of projection period} * (1 + \text{Growth Rate})) / (\text{Discount Rate} - \text{Growth Rate})$
- As you're assuming constant growth & discount rate - you're valuing the business as if its a perpetuity
- In the denominator you subtract the growth rate because you're willing to pay more for the business

- **Exit Multiple**

- Assume business is sold to determine what others might be willing to pay for your company at the end of the projection period
- Determine what others are willing to pay using comparable companies



## Impact of Events / WACC on DCF

**Example:** How would an increase in the tax rate impact your valuation?



## Impact of Events / WACC on DCF

**Example:** How would an increase in the tax rate impact your valuation?

- Identify which components of the model are affected
  - Net Operating Profit After Tax (-) → decrease in valuation
  - Cost of Debt (-) → decrease in WACC → increase in valuation
  - Beta (-) → decrease in WACC → increase in valuation
- Give general conclusion based on materiality
  - Typically the discount rate has a greater impact on valuation than change in cash flows, so the valuation likely increases
- Assess different scenarios
  - E.g. If the company has no debt, than there will not be a debt tax shield meaning there will not be a decrease in WACC, therefore the valuation will decrease

## VI. TECHNICALS: Multiples

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## Common Examples

- Understanding the intuition behind multiples
- How to pair metrics together
- When to use what multiple
- Forward vs historical multiples
- Impacts of events on multiples



## Intuition Behind Multiples

- A multiple is a shorthand for valuation that makes it easy to compare investments on a relative basis
  - A multiples is driven by key value drivers: (1) Growth, (2) Magnitude of Cash Flows, (3) Uncertainty and time value of money
- The denominator is the operating metric you are basing performance on
  - Project it out based on a certain growth rate
  - Depending on margins/cash flow conversion this value can be much greater/smaller
  - Then discount it based on how risky this business is perceived
- The implied value is reflected in your numerator what investors perceive the present value of the business to be on a per unit basis





## Intuition Behind Multiples

- **Example:**
  - Net Income: \$866
  - Shares Outstanding: 100
  - Earnings Per Share (EPS): \$8.66
  - Price per share: \$117.16
  - **Why are investors willing to pay \$13.5 for each \$1 of earnings?**



## Intuition Behind Multiples

- **Example:**
  - Net Income: \$866
  - Shares Outstanding: 100
  - Earnings Per Share (EPS): \$8.66
  - Price per share: \$117.16
  - **Why are investors willing to pay \$13.5 for each \$1 of earnings?**

$$\begin{aligned} \text{PE} &= \frac{\text{Market Cap}}{\text{Net Income}} = \frac{\$117.16 \times 100 \text{ S}}{\$866} = \frac{\$11,716}{\$866} \\ &= \frac{\text{Price / Share}}{\text{EPS}} = \frac{\$117.16}{\$8.66} = \frac{\$13.5}{\$1} = 13.5\text{x} \end{aligned}$$



## Intuition Behind Multiples

- **Discount Rate** – the inverse of the PE multiple or the company's earnings yield is also an approximation for the cost of equity (COE)
- **Cash Flows** – Net income is used as a proxy for cash flows to equity holders in this case

$$\text{Earnings yield} = \frac{\text{EPS}}{\text{Share Price}} = \frac{\$8.66}{\$117.16} = 7.4\%$$

$$\begin{aligned} \text{PV of perpetuity} &= \frac{\text{Cash Flow}}{(\text{Discount rate} - \text{Growth rate})} = \frac{\$8.66}{7.4\%} = \$117.16 \text{ (Share Price)} \\ &= \frac{\$866}{7.4\%} = \$11,716 \text{ (Market Cap)} \end{aligned}$$



## When To Use Which Multiple

- 1) To Whom the money is available
- 2) Operating Expenses vs Capex (e.g. EBITDA vs EBIT)
- 3) Interest, taxes and non core business activities (E.g. EBITDA vs Net income)
- 4) When they're useful

**Example:** When would you use EV/EBIT vs EV/EBITDA vs P/E?



## When To Use Which Multiple

- 1) To Whom the money is available
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- 4) When they're useful

**Example:** When would you use EV/EBIT vs EV/EBITDA vs P/E?

- EBIT → core business profitability, before impact of capital structure and taxes, closer to FCF (accounts for capex)
- EBITDA → proxy for core recurring cash flow before impact of Capital and taxes → closer to CFO
- EPS or Net income → includes impact of capital structure and non-core business activities



## Impact of Events on Multiples

- **Example:** What happens EV/EBITDA, P/E, P/Book when companies issues dividends?



## Impact of Events on Multiples

- **Example:** What happens EV/EBITDA, P/E, P/Book when companies issues dividends?
  - EV/EBITDA – no change
  - P/E – Cash decreases, in turn market cap decreases, therefore P/E decreases
  - P/B – Denominator is book value, while numerator is market value. Assume immediately after where market cap might not have adjusted to reflect book values.
    - If  $P/B < 1$ , P/B will decrease when the company issues dividends, because market values each dollar issued by company less than absolute value
    - If  $P/B > 1$ , P/B will increase when company issues dividends because market values each dollar issued by company greater than absolute value



## Calculations with Multiples

- **Example:** Company with 10x EV/EBIT and 5x EV/Revenue, what is the operating margin?





## Calculations with Multiples

- **Example:** Company with 10x EV/EBIT and 5x EV/Revenue, what is the operating margin?
  - Find common denominator for 5x and 10x → assume EV of \$10
    - You can make this assumption because the absolute value does not matter
  - Assuming EV of \$10, determine EBITD and Revenue
    - EBIT:  $10/10 = \$1$
    - Revenue:  $10/5 = \$2$
  - Calculate operating margin
    - $\text{EBIT}/\text{Revenue} = \$1/\$2 = 50\%$
  
- **Bonus:** What industry might this company be in?

## VII. Things to Remember

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# Things to Remember



## To-Dos

- **Individual Prep**
  - Read through BIWS/WSO/Ivey Finance Recruiting Guides
  - Go through Guides again this time covering answers and seeing if you can answer / **Tip:** Put questions on Quizlet
  - Summarize your knowledge in your own words in a doc or notebook
  - Behavioral Prep (More details at Behavioral workshop)
- **Keeping Up With News**
  - Start a document/notebook jotting down stories about specific business and the economy to build continuity in your understanding of the markets. Also, challenge yourself to draw your own implications from current events
- **Mocks**
  - Find a friend to prep with at a similar level as you – schedule weekly mocks to keep other on task
  - Start mocks with HBAs already in your network, then ask them to introduce you to others to mock you
  - Write down the questions you get to build your own database of questions that you now know how to answer
- **Before the Interview**
  - Learn as much as you can about the company through online research and speaking with people at firm
  - Try to connect with someone who has interviewed at the firm to get a gauge of what types of questions to expect (more conceptual vs more calculation heavy)

# Things to Remember



## Secrets to Success

- **KNOWING TECHNICALS WILL NOT GET YOU THE JOB**
  - Technical knowledge is a baseline. Your behaviours, delivery and personality will seal the deal
  - Also, always bring a pen & paper to interviews. Most will not allow you to use a calculator
- Canadian satellite offices will ask much harder technicals than their American counterparts
  - Also, earlier processes tend to be more about personal interest (& basic technicals); later processes will be more technical
- Always overprepare and prepare specifically for the product / coverage group you're applying for
  - If you're applying to a restructuring firm, **read the RX guides**
  - If you're applying to a TMT division, know some important public and private tech companies inside and out and have an opinion about them
- Let your 2<sup>nd</sup> year firm know ASAP about any work you will miss (esp. if for a large company) and make it up
- **Regarding Travelling:**
  - Be prepared for travelling to suck ass (rip LaGuardia) so keep in contact with HR when flying and let them know about any delays --> try to mitigate this by taking the earliest possible flight
  - For Goldman, if flying, make sure you DON'T book travel on a weekend or holiday
  - Keep receipts of everything you pay for (flight, baggage, hotel, taxi / Uber, lunch, dinner) for reimbursement
  - Arrive early for your superday in the morning



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