



SESSION 11: LOOSE ENDS IN  
VALUATION – I  
FROM OPERATING ASSETS TO EQUITY  
VALUE

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# The loose ends matter...

- Once you have discounted cash flows back at the cost of capital, you have estimated the value of operating assets in the firm. To get to the value of equity, you need to deal with the following.
  - a. Cash and marketable securities: If the income from these investments is not in your cash flows, you need to incorporate their value into the company. But what should that value be? The number that is on the balance sheet? A discount on that value? A premium?
  - b. Cross holdings in other companies: Depending on how the income for these holdings is accounted for, you may or may not have valued them already.
  - c. Other assets: If there are any other assets that have not been counted in your DCF valuation, here is your last chance to mop up.
  - d. Debt: Finally, if you have valued the firm, you need to net out debt (but what should be in this number?)

# 1. The Value of Cash

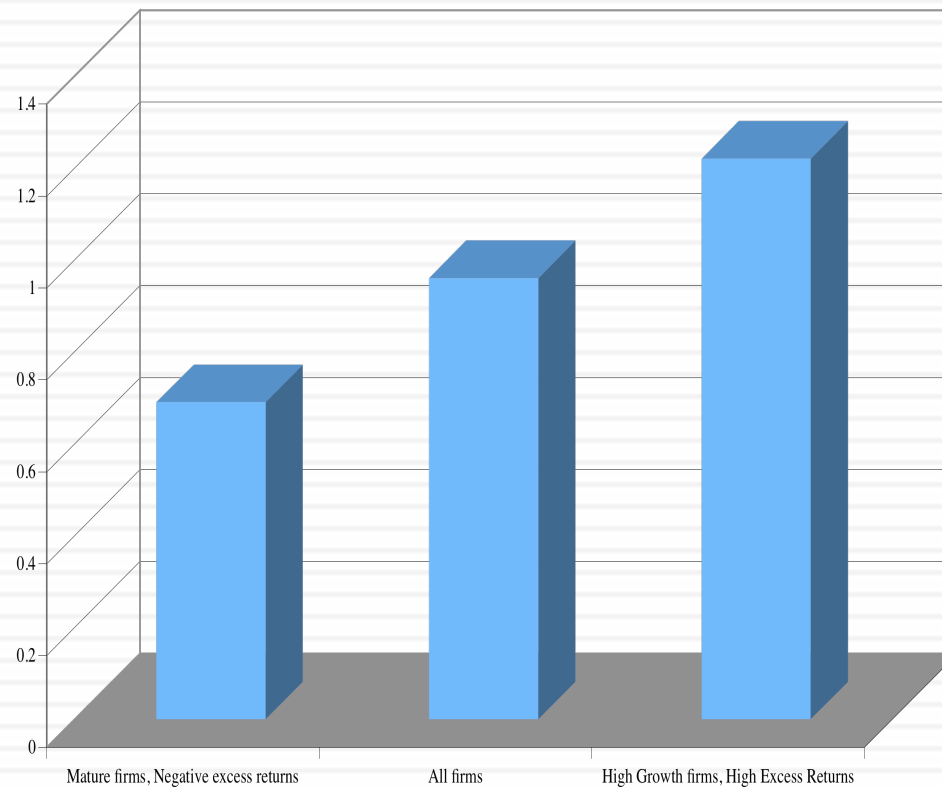
## An Exercise in Cash Valuation

	Firm A	Firm B	Firm C
Enterprise Value billion	\$ 1 billion	\$ 1 billion	\$ 1
Cash	\$ 100 mil	\$ 100 mil	\$ 100 mil
Return on Capital	10%	5%	22%
Cost of Capital	10%	10%	12%
Trades in	US	US	Argentina

- In which of these companies is cash most likely to trade at
  - ▣ Face value?
  - ▣ At a discount?
  - ▣ At a premium?

# Cash: Discount or Premium?

*Market Value of \$ 1 in cash:  
Estimates obtained by regressing Enterprise Value against Cash Balances*



## 2. Dealing with Holdings in Other firms

- Holdings in other firms can be categorized into
  - ▣ Minority passive holdings, in which case only the dividend from the holdings is shown in the balance sheet
  - ▣ Minority active holdings, in which case the share of equity income is shown in the income statements
  - ▣ Majority active holdings, in which case the financial statements are consolidated.
- We tend to be sloppy in practice in dealing with cross holdings. After valuing the operating assets of a firm, using consolidated statements, it is common to add on the balance sheet value of minority holdings (which are in book value terms) and subtract out the minority interests (again in book value terms), representing the portion of the consolidated company that does not belong to the parent company.

# How to value holdings in other firms.. In a perfect world..

- In a perfect world, we would strip the parent company from its subsidiaries and value each one separately.
  - Value of the combined firm= Value of parent company + Proportion of value of each subsidiary
- To do this right, you will need to be provided detailed information on each subsidiary to estimated cash flows and discount rates.
- In practice, you generally will not have or be provided enough information to value the subsidiaries fully or even partially, especially if the subsidiaries are privately owned.
- In many cases, that opacity on the part of firms with cross holdings is intentional and is a way of preserving control over these firms.

# Two compromise solutions...

- The market value solution: When the subsidiaries are publicly traded, you could use their traded market capitalizations to estimate the values of the cross holdings. You do risk carrying into your valuation any mistakes that the market may be making in valuation.
- The relative value solution: When there are too many cross holdings to value separately or when there is insufficient information provided on cross holdings, you can convert the book values of holdings that you have on the balance sheet (for both minority holdings and minority interests in majority holdings) by using the average price to book value ratio of the sector in which the subsidiaries operate.

# 3. Other Assets that have not been counted yet..

- Assets that you should not be counting (or adding on to DCF values)
  - If an asset is contributing to your cashflows, you cannot count the market value of the asset in your value. Thus, you should not be counting the real estate on which your offices stand, the PP&E representing your factories and other productive assets, any values attached to brand names or customer lists and definitely no non-assets (such as goodwill).
- Assets that you can count (or add on to your DCF valuation)
  - Overfunded pension plans: If you have a defined benefit plan and your assets exceed your expected liabilities, you could consider the over funding with two caveats:
    - Collective bargaining agreements may prevent you from laying claim to these excess assets.
    - There are tax consequences. Often, withdrawals from pension plans get taxed at much higher rates.
  - Unutilized assets: If you have assets or property that are not being utilized to generate cash flows (vacant land, for example), you have not valued it yet. You can



## 4. Be circumspect about defining debt for cost of capital purposes...

- General Rule: Debt generally has the following characteristics:
  - ▣ Commitment to make fixed payments in the future
  - ▣ The fixed payments are tax deductible
  - ▣ Failure to make the payments can lead to either default or loss of control of the firm to the party to whom payments are due.
- Defined as such, debt should include
  - ▣ All interest bearing liabilities, short term as well as long term
  - ▣ All leases, operating as well as capital
- Debt should not include
  - ▣ Accounts payable or supplier credit

# But should consider other potential liabilities when getting to equity value...

- If you have under funded pension fund or health care plans, you should consider the under funding at this stage in getting to the value of equity.
  - ▣ If you do so, you should not double count by also including a cash flow line item reflecting cash you would need to set aside to meet the unfunded obligation.
  - ▣ You should not be counting these items as debt in your cost of capital calculations....
- If you have contingent liabilities - for example, a potential liability from a lawsuit that has not been decided - you should consider the expected value of these contingent liabilities
  - ▣ Value of contingent liability = Probability that the liability will occur \* Expected value of liability