APA Training
Adjusting Comparables' Results
(Including Asset Intensity Adjustments)

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Agenda

- Asset Intensity Adjustments
  - Regulations
  - Economic Rationale
  - What items should be adjusted
  - Formulas
  - Interest rate
  - Limitations
- Inventory Valuation Method Adjustment
- Currency Adjustments
- Miscellaneous Adjustments

Regulations

- General Standards of Comparability
  - "If there are material differences between the controlled and uncontrolled transactions, adjustments must be made if the effect of such differences on prices or profits can be ascertained with sufficient accuracy to improve the reliability of the results." (Treas. Reg. Sec. 1.482-1(d)(2))

Regulations

- CPM Regulations
  - "If there are differences between the tested party and an uncontrolled comparable that would materially affect the profits determined under the relevant profit level indicator, adjustments should be made according to the comparability provisions of Sec. 1.482-1(d)(2). … For example, where there are material differences in accounts payable among the comparable parties and the tested party, it will generally be appropriate to adjust the operating profit of each party by increasing it to reflect an imputed interest charge on each party's accounts payable." Treas. Reg. Sec. 1.482-5(c)(2)(iv)

Economic Rationale

- ROA and variants are standard measurement tools of financial performance

- Operating Margin is a component of ROA

Economic Rationale

Profit Margin	x	Asset Turnover	=	Return on Assets
<u>Op. Profit</u> Net Sales	x	<u>Net Sales</u> Operating Assets	=	<u>Operating Profit</u> Op. Assets

<u>Examples</u>

Mfg.

6%	x	1x	=	6%

Dist.

2%	x	3x	=	6%

Economic Rationale

Operating margins are meaningful for firms with similar levels of:

- Working capital as a percent of sales;
- Fixed assets as a percent of sales;
- Intangible assets as a percent of sales;
- Risk

Economic Rationale

Should the following be acceptable?

	Tested Party: US Dist.	Comparable
Sales	100	100
Op. Profit	5	3
Op. Margin	5%	3%

Economic Rationale

Should the following be acceptable?

	Tested Party: US Dist.	Comparable
Sales	100	100
Op. Profit	5	3
Op. Margin	5%	3%
Assets	50	10

Economic Rationale

	Tested Party: US Dist.	Comparable
Sales	100	100
Op. Profit	5	3
Op. Margin	5%	3%
Interest Rate	10%	10%
Assets	50	10
Imputed Interest	5 (=10% * 50)	1 (=10% * 10)
Adj. Op. Profit	0 (=5 – 5)	2 (= 3 – 1)
Adj. Op. Margin	0%	2%

Economic Rationale

- Should we use a different income statement measure (i.e., profit after interest) instead?
- Issues:
  - Interest expense is dependent upon capital structure
  - Interest expense may relate to non-operating assets

Economic Rationale

- There is opportunity cost of holding assets
  - Attempt to arrive at reliable economic operating profit
  - Brings imputed interest expense above the op. profit line
- Operating assets can increase profits:
  - Credit to customers
    - Customers should be willing to pay imputed interest
  - Pay suppliers more promptly
    - Suppliers should be willing to accept a lower price
  - Hold more inventory
    - Volume discounts from suppliers
    - Premium paid for quick order fulfillment
  - PP&E

Economic Rationale

- Embedded interest expense for NIBLs
  - Option I:
    - Pay upon delivery
    - Price = $90
  - Option II:
    - Pay one year from delivery
    - Interest rate = 10%
    - Willing to pay $90 + (10% * $90) = $99

What items should be adjusted

- Regulations
  - Non-interest bearing liabilities (per preamble to regs.)
    - Accounts payable explicitly mentioned in 1.482-5(c)(2)(iv) and Example 6 in 1.482-5(e)
  - Accounts receivable explicitly mentioned in 1.482-5(e) Example 5

What items should be adjusted

- What about other balance sheet items?

What items should be adjusted

Assets		Liabilities and Net Worth
Current Assets - Total		Current Liabilities - Total
Cash and Equivalents		Debt in Current Liabilities
Receivables - Total		Accounts Payable
Inventories - Total		Income Taxes Payable
Current Assets - Other		Current Liabilities - Other
Current Assets - Total		
		Debt (Long-Term) - Total
PP&E (Net) - Total		Liabilities - Other
Investments and Advances - Equity Method		Deferred Taxes
Investments and Advances - Other		Investment Tax Credit
Intangibles		Minority Interest
Assets - Other		Stockholders' Equity

What items should be adjusted

Assets	**Liabilities and Net Worth**
Operating Assets	NIBLs
Non Operating Assets	Debt
	Stockholders' Equity

What items should be adjusted

- Income statement vs. balance sheet based PLI
  - Income statement based PLI with full asset intensity adjustments converges with ROCE
    - Issue: interest rate

What items should be adjusted

- Reliability of segmented balance sheet data
- Fully (or nearly fully) depreciated assets
- Consideration of effect of inflation on PP&E
- Seasonality
- M&A Activity
- Past vs. Future

What items should be adjusted

- Magnitude of effect on range
  - Unreliable set of comparables?
  - Unreliable PLI?
- Tested party deviates from industry practices

Formulas

- Who to Adjust?
  - Adjust tested party to comparables
  - Adjust comparables to tested party
  - Adjust both tested party and comps to cash
    - Enables use of firm/market specific interest rates
  - Adjust both tested party and comps to median
    - Enables use of firm/market specific interest rates

Formulas

- Who to Adjust?
  - See handout, “Who to Adjust: Tested Party, Comparables, or Both”

Formulas: Who to Adjust?

- 1.482-5(c)(2)(iv)
  - For assets adjust the comparables
  - For accounts payable adjust both the tested party and the comparables
- 1.482-5(e), Example 5
  - For accounts receivable adjust the comparables
- 1.482-5(e), Example 6
  - For accounts payable adjust both the tested party and the comparables

Formulas

- How should asset intensity be measured?
  - Relative to sales? (see 1.482-5(e), Example 5)
  - Relative to related income statement item (e.g., AR to Sales, AP to COGS)?
  - Relative to denominator of PLI?

Formulas

- Effect on income statement
  - AR affects Sales
  - AP affects COGS
  - Inventory affects COGS (Sales?)
  - PP&E affects ?

Formulas

- One Step vs. Multi Step
  - One Step: all adjustments feed into one category on income statement
  - One Step: inability to use different interest rates for different categories of assets

Formulas

- APA (TPTOOL, Annual Report to Congress)
  - AR, AP, Inventory, (PP&E)
  - AR = Trade receivables
  - Interest rate
    - Discount for AR, AP
    - Holding period adjustment
    - Different rates for PP&E permitted
  - Use of denominator of PLI to measure intensity
  - Adjust comparables to tested party
  - AR affects sales; AP, Inv. affect COGS;PP&E affect operating expenses
- Field Economists Model

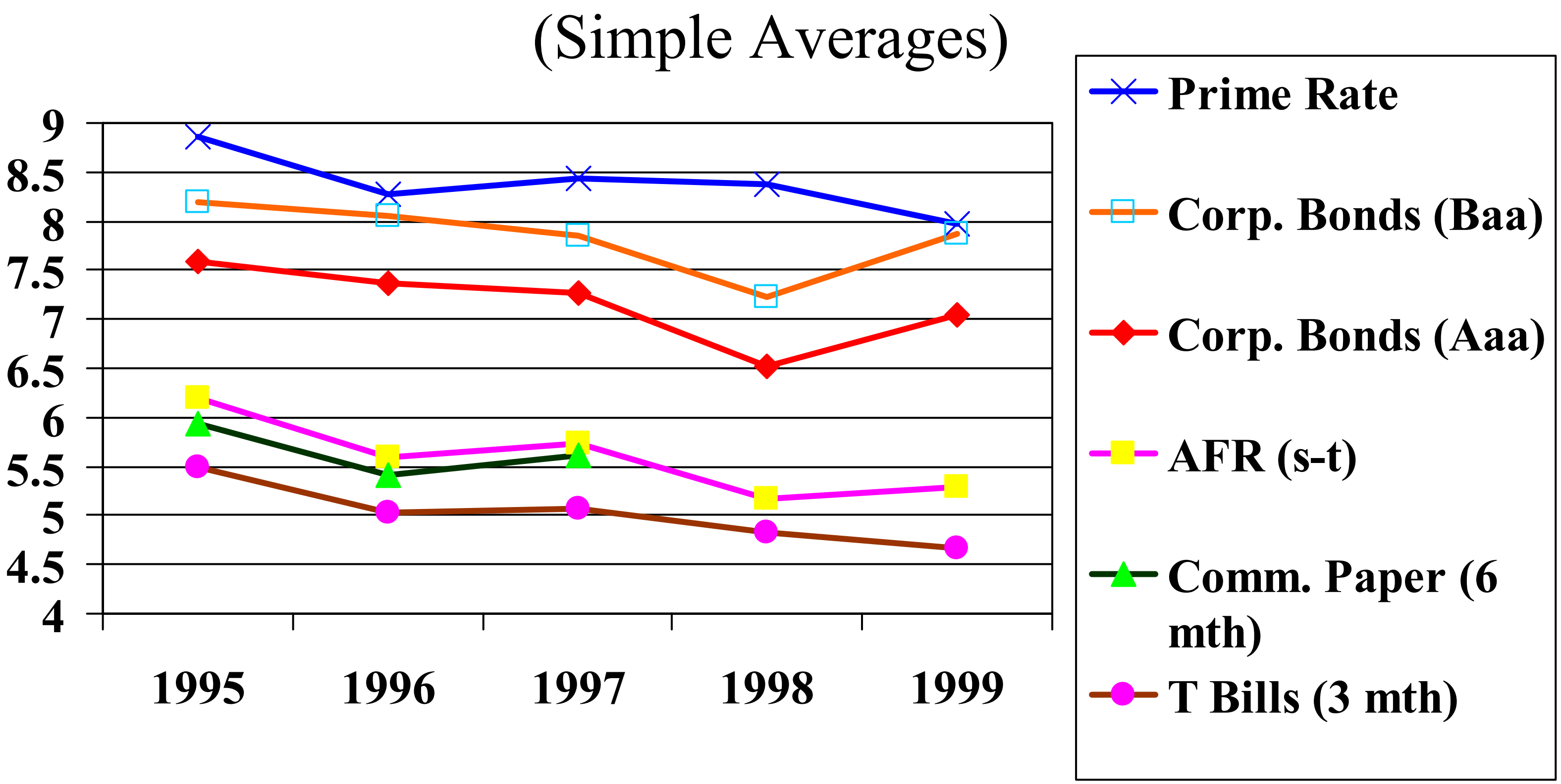
Interest Rate

- Prime
- WACC
  - Create another area of controversy
  - CAPM vs. APT
- Commercial Paper
- Bankers Acceptance
- Tested Party’s Internal Debt Rate
- AFR

Interest Rate

- Different rates for different categories? (risk level, long-term vs. short term)

Interest Rate



Interest Rate

- Discount for AR, AP
  - Booked sales contains interest component
- Holding period adjustment
- Compounded
- Country specific

Inventory Valuation Method Adj.

- Places companies on a FIFO basis
- Affects both Inventory and COGS

Inventory Valuation Method Adj.

- COGS $(FIFO)_t$ = COGS $(LIFO)_t$ + LIFO $Reserve_{t-1}$ – LIFO $Reserve_t$
- Inventory $(FIFO)_t$=Inventory$(LIFO)_t$+LIFO $Reserve_t$

Currency Adjustment

- Types of Currency Risk
  - Transactional
  - Translational
  - Operational/Economic
    - Is it appropriate for distributor to share in the risk?
      - Does the distributor have financial capacity to fund losses?
      - Is a collar appropriate?
      - Pass-through rates
      - Which transactions would adjustment apply to?
      - Should operating profit be subject to adjustment?
      - Is there a risk premium for assuming exchange rate risk?

Miscellaneous Adjustments: Modified Resale Price

- Operating Expense Adjustment
  - $GM_{target}=(OI_c/X_c * X_{tp}/S_{tp}) + OpEx_{tp}/S_{tp}$
  - $GM_{target}= GM_c + (OpEx_{tp}/S_{tp} – OpEx_c/S_c)$

Miscellaneous Adjustments

- Geographic market adjustment
  - Recognizes cost of capital differences
- Adjustments for additional functions
- Adjustments for level of market
- Adjustments for startup costs
- Adjustments for capacity utilization
- Adjustments for sales shock
- Adjustments for dumping
- Adjustments based on regressions