Foundations Course in Utility Regulation in Africa

Understanding & Using Utilities' Financial Statements

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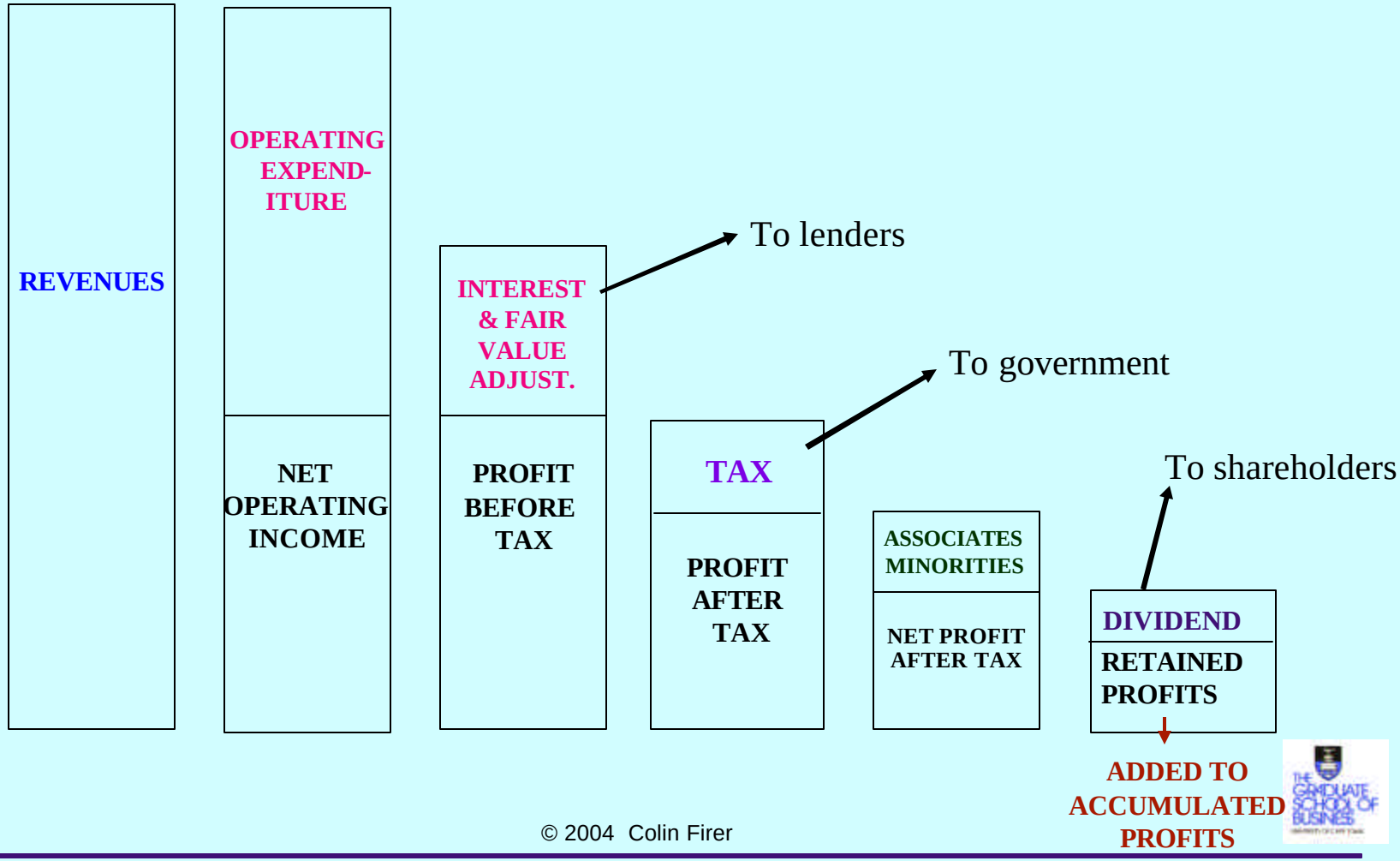
The Financial Statements

- **Income Statement's Purpose:**
  - ***How*** **did the business make/lose money through operations over the past year.**
- **Balance Sheet's Purpose:**
  - **From what *source* were the funds for the assets of the business provided; and**
  - **In which assets are those funds invested.**
- **Cash Flow Statement's Purpose:**
  - **How much cash was generated by the businesses operations.**

The Income Statement for the Year Ended …….



Eskom 2003: Abbreviated Income Statements (R bn)

Income Statement

	2002	2002	2001	2000	1999
Revenues	32.8	29.7	26.1	24.4	22.2
Operating expenses	-26.0	-21.4	-19.4	-18.0	-16.8
Operating income	6.8	8.3	6.7	6.4	5.4
Interest income	4.0	2.5	3.3	1.1	1.0
Interest expenses	-5.3	-5.2	-6.1	-4.2	-4.2
Profit after interest	5.5	5.6	3.9	3.3	2.2
Net fair value loss	-0.3	-0.2	-0.2		
Profit before taxes	5.2	5.4	3.7	3.3	2.2
Income tax expenses	-1.8	-1.2	-1.2	-1.5	-0.024
Profit after tax	3.4	4.2	2.5	1.8	2.2
Income from associates	0.050	0.026			
Minority interest	0.100	-0.002			
Net profit after tax	3.4	4.2	2.5	1.8	2.2

The Balance Sheet

EQUITY & LIABILITIES

EQUITY
Capital & Reserves

NON-CURRENT LIABILITIES
Financial market liabilities
Retirement benefit oblig.
Decommissioning
Deferred tax

CURRENT LIABILITIES
Creditors/payables
Financial market liabilities
Taxation
Provisions (current portion)

ASSETS

NON-CURRENT ASSETS

Property
Plant & equipment
Financial market assets
Investments

CURRENT ASSETS

Inventory
Debtors/receivables
Financial market assets
Cash

Eskom 2003: Abbreviated Balance Sheets (R bn)

	2003	2002	2001	2000	1999
Assets					
Non-Current Assets	74.7	64.4	59.6	61.7	60.5
Property, plant & equipment	53.5	51.8	50.2	50.2	50.4
LT financial market investments	14.9	6.7	3.9	5.5	4.5
Loans receivable	2.6	2.5	2.4	2.4	2.2
Future fuel supplies	2.8	2.4	2.5	2.7	3.0
Other NCA	0.9	1.0	0.6	0.9	0.4
Current Assets	21.8	17.0	17.3	12.3	11.4
Inventory	2.4	2.4	2.3	2.4	2.3
Receivables	4.2	3.8	4.2	3.5	3.6
ST financial market investments	15.2	10.8	10.8	6.4	5.5
Total Assets	96.5	81.4	76.9	74.0	71.9

Eskom 2003: Abbreviated Balance Sheets (R bn)

	2003	2002	2001	2000	1999
Equity & Liabilities					
Capital reserves	40.7	37.8	34.1	30.9	27.5
Non-Current Liabilities	35.9	31.2	26.7	28.9	31.4
LT financial market liabilities	21.3	19.0	17.9	22.3	25.6
Retirement obligations	4.3	4.7	3.9	3.4	3.0
Decomissioning/rehab	2.8	3.1	2.8	2.5	2.3
Other	7.5	4.4	2.1	0.7	0.5
Current Liabilities	19.9	12.4	16.1	14.2	13.0
Payables	5.4	4.1	3.5	3.8	4.3
ST financial market liabilities	12.3	7.5	11.5	9.0	7.8
Other	2.20	0.80	1.10	1.4	0.9
Total Equity & Liabilities	96.5	81.4	76.9	74.0	71.9

Cash Flow Statement

Cash flow from operating activities

- Net operating income
- Non-cash items
- Changes in working capital
- - Net interest paid
- - Income tax paid
- - Dividends paid

Cash utilised in investing activities

Cash effects of financing activities

- - Debt repaid
- + New debt & equity raised
- - Share buyback programme

Net increase/decrease in cash & cash equivalents for year

Eskom 2003: Abbreviated Cash Flow Statements (R bn)

Cash Flow

	2003	2002	2001	2000	1999
Net operating income	6.8	8.3	6.7	6.5	5.4
Non-cash items	6.0	4.4	4.5	4.0	4.5
	12.8	12.7	11.2	10.5	9.9
Changes in working capital	1.0	0.2	0.0	-0.5	-0.5
Inventory	-0.0	-0.1	0.1	-0.1	-0.4
Receivables	-0.1	-0.7	0.1	0.1	-0.2
Payables	1.1	1.0	-0.2	-0.5	-0.0
Cash Flow from Trading	13.8	12.9	11.2	10.0	9.4
Interest received	3.3	3.6	4.6	1.8	1.7
Interest paid	-3.9	-4.6	-7.1	-4.1	-4.8
Tax paid	-0.08	-0.05	-0.07	-0.03	
Dividend paid	-0.5				
Cash Flow from Operations	12.7	11.8	8.7	7.7	6.3
Cash Used in Investing	-7.0	-5.7	-3.7	-3.6	-4.4
	5.7	6.1	5.0	4.1	1.9
Financing activities	-7.5	-3.6	-3.6	-2.4	-4.6
Debt raised	0.9	2.3	0.5	0.2	1.8
Debt repaid	-1.5	-5.1	-5.5	-1.9	-5.1
Increase in NC financial assets	-6.9	-0.8	1.4	-0.6	-1.3
Change in cash/cash equival	-1.8	2.5	1.4	1.7	-2.7

Financial Analysis

- **Were we profitable?**
- **How well did we manage our assets?**
- **How much risk did we take by using debt financing?**

Operating Performance : Return on Assets

$$\text{ROA (before tax)} = \frac{\text{Operating income}}{\text{Assets}} = \frac{\text{Operating income}}{\text{Sales}} \times \frac{\text{Sales}}{\text{Assets}}$$

$$\text{ROA (after tax)} = \frac{\text{Net profit after tax}}{\text{Assets}}$$

$$\text{ROA (after tax)} = \text{ROA (before tax)} \times (1 - \text{tax rate})$$

What is the Value of the Assets?

- **Book value**
  - **How much depreciation?**
- **Current value**
- **Replacement value**

Is ROA misleading?

ROE & Operating Profitability

- **In an all-equity financed firm:**
  - **ROA (after tax) = ROE**
- **Adding debt …. has two effects**
  - **A financial structure effect – increases ROE**
    - **less equity is needed**
  - **A financial cost effect – reduces ROE**
    - **interest costs are incurred**

Overall Performance

$$\text{ROE} = \frac{\text{NPAT}}{\text{Equity}}$$

$$= \frac{\text{NPAT}}{\text{Sales}} \times \frac{\text{Sales}}{\text{Assets}} \times \frac{\text{Assets}}{\text{Equity}}$$

$$\frac{\text{Assets}}{\text{Equity}} = \frac{\text{Debt}}{\text{Equity}} + 1$$

Financial Leverage and Risk

- **Business risk**
  - The impact of fixed costs
- **Financial risk**
  - The impact of debt

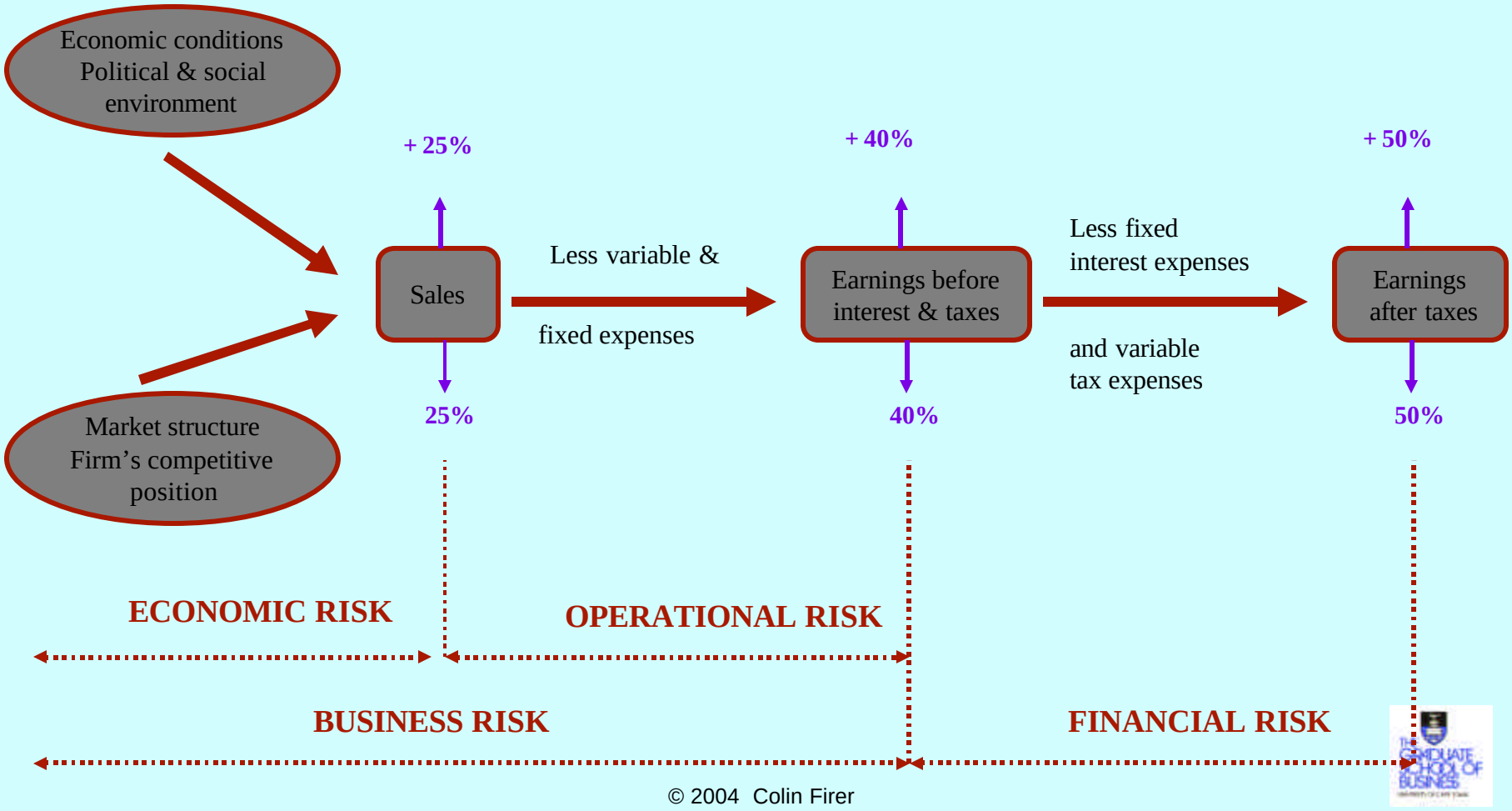
$$ROE = ROA \times (1-t) + [ROA - \text{Cost of debt}] \times (1-t) \times \frac{\text{Debt}}{\text{Equity}}$$

- **Borrow if ROA > Cost of debt**
  - Size of future ROAs? Risk of non-achievement?
  - Does higher expected ROE = value creation?

Impact of Leverage on Risk

	EXPECTED	BOOM	% CHANGE
Revenues	3200	4000	⇧ 25%
Variable costs	1600	2000	
Contribution	1600	2000	
Fixed Costs	600	600	
Op Profit	1000	1400	⇧ 40%
Interest	200	200	
NPBT	800	1200	
Tax (40%)	320	480	
NPAT	480	720	⇧ 50%

A Risk Model of the Firm

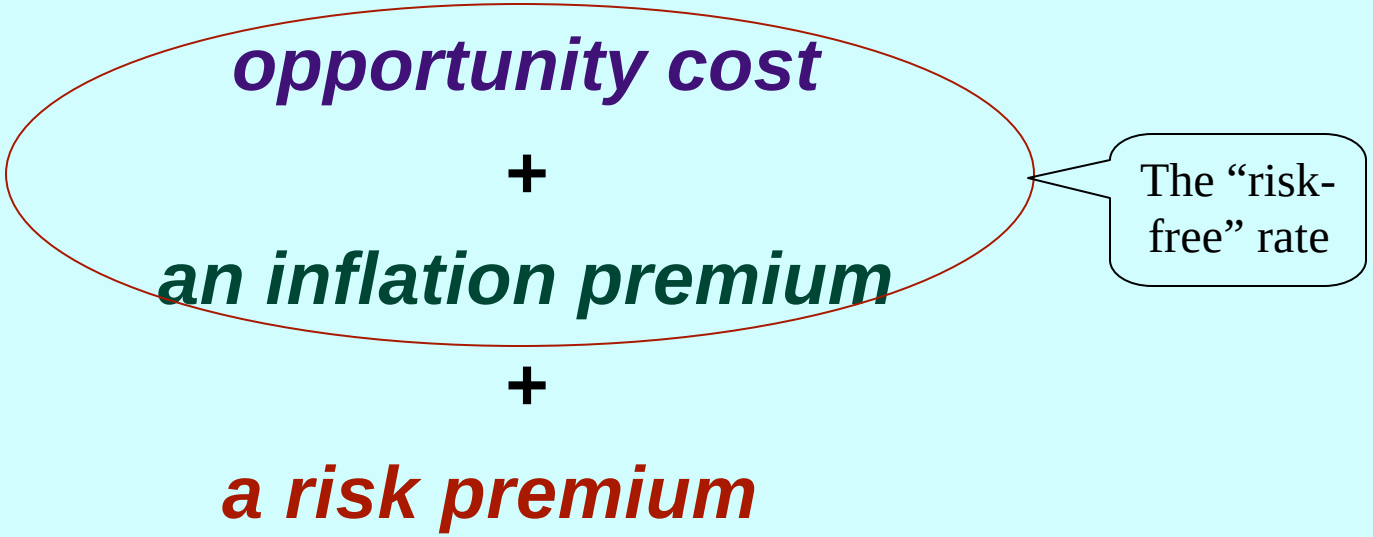


What Creates Value?

- **How good an objective is growth?**
- **Will growth lead to value creation?**
- **Is there a minimum required return the firm must earn?**

The Cost of Capital

Investors require a return which will cover …



Weighted Average Cost of Capital

$$WACC = \frac{E}{D+E} \times R_e + \frac{D}{D+E} \times R_d \times (1-T)_c$$

proportion of equity * cost of equity

+

proportion of debt * after-tax cost of debt

Value created

Operating returns achieved – Cost of capital

$$\frac{\text{NOPAT}}{\text{Capital}} - \text{WACC}$$

Drivers of Value Creation … or … Improving Economic Value Added!

$$EVA = \left(\frac{NOPAT}{Sales} * \frac{Sales}{Assets} - WACC\right) Capital$$

Improve profitability

Improve Asset Turnover

Decrease WACC
- Re
- Rd
- Capital structure

Invest in more positive NPV projects