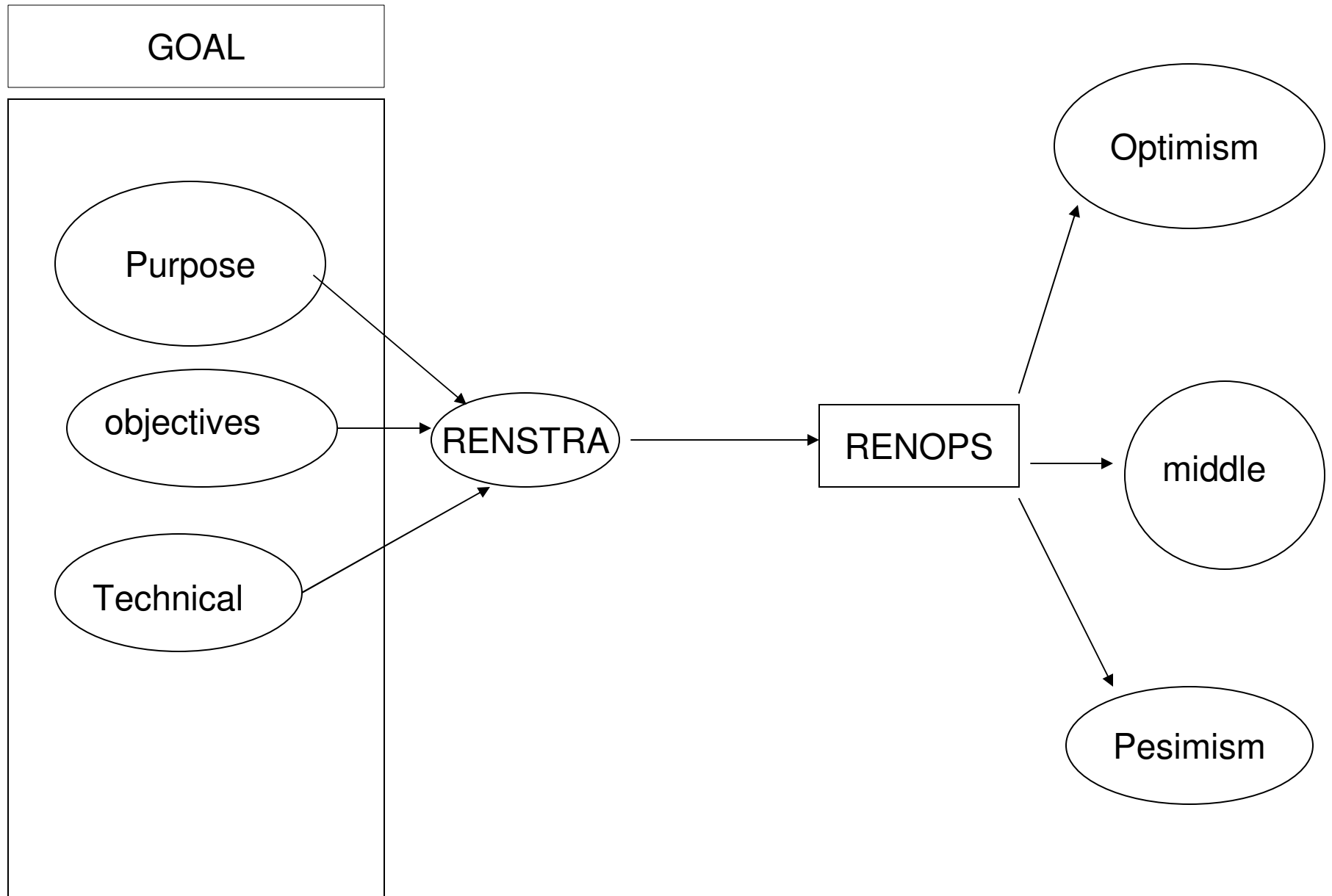
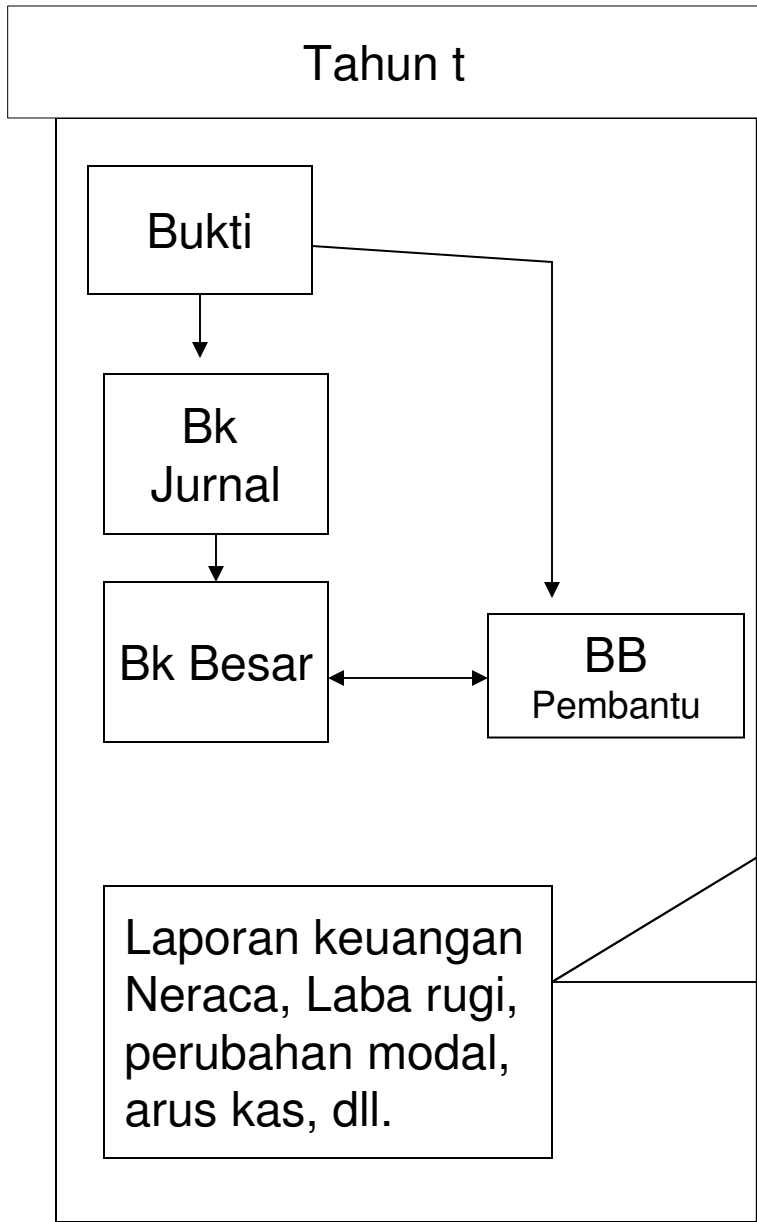


Chapter 8

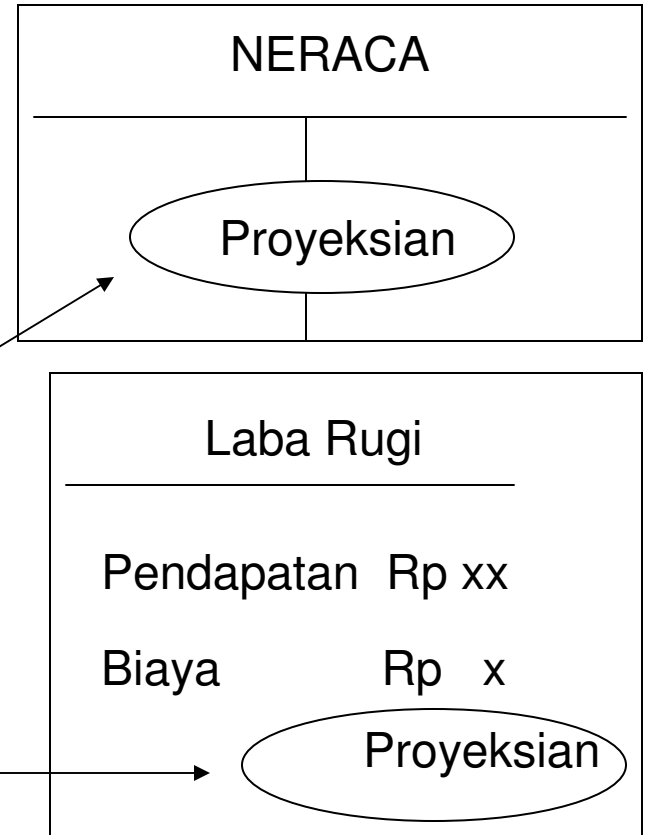
FINANCIAL PLANNING AND FORECASTING FINANCIAL STATEMENT

MENINGKATKAN NILAI PERUSAHAAN





Tahun t+1



31 Des th t

1 Jan th t+1

Bandi, 2007

PENDAHULUAN

- Manajer & investor perlu tahu ramalan hasil yg akan datang
- Manajer: ~ buat & gunakan LK "pro forma" atau "proyeksian"
 - ~ meramal "free cashflow" melalui bbg rencana operasi
 - ~ meramal "capital requirements".
 - ~ memilih "rencana" yg memaksimalkan nilai pemilik shm
- Analisis sekuritas: ~ buat "jenis proyeksian yg sama";
 - ~ peramalan: laba, arus kas, dan harga saham.
- ➔ Manajer memiliki informasi (tentang pershn) lb banyak dibanding investor
 - ~ Manajer merupakan pihak yg akan membuat keputusan yad.
- ➔ Analisis mempengaruhi investor
 - ~ Investor menentukan nasib manajer yad (referensi: analisis).

CHAPTER 8

Financial Planning and Forecasting Financial Statements

- ~ Teknik meramal LK
- ~ Penggunaan teknik peramalan oleh investor & manajemen
- ◆ Perencanaan Finansial
- ◆ Formula Kebutuhan Dana Tambahan (Additional Funds Needed= AFN)
- ◆ Laporan Keuangan Pro forma:
 - Ramalan Penjualan
 - Metode persentasi dari Penjualan

STRATEGIC PLANS

- ~ Manajer berusaha agar perusahaan lebih *valuable*
- ~ untuk penciptaan nilai diperlukan rencana strategis (*well-articulated plan*)

Corporate Purpose

- ~ menyatakan filosofi bisnis umum

Corporate Scope

- ~ Lini bisnis persh dan wilayah geografis operasi

Corporate Objective

- ~ Lebih khusus dp purpose
- ~ Pedoman bg manajemen

Rencana strategis

- ~ Rencana global

OPERATING PLANS

- ~ Petunjuk implementasi detail, didasarkan pd strategi, untuk membantu mencapai *objective* persh
- ~ Horison waktu beberapa tahun, biasaya 5 th.

Financial Planning and Pro Forma Statements

- ◆ Tiga kegunaan perencanaan keuangan dan LK Proforma:
 - Meramal jumlah pendanaan eksternal yg akan diperlukan
 - Mengevaluasi dampak perubahan di rencana operasi pd nilai perusahaan
 - Menyusun target yg tepat bagi rencana kompensasi manajer

THE FINANCIAL PLAN

~ Tahapan perencanaan keuangan:

1. Memproyeksi Lap keuangan
2. Menentukan dana yg dibutuhkan unt rencana 5 th
3. Meramal ketersediaan dana selama 5 th ke depan
4. Menetapkan dan mempertahankan sistem kontrol
5. Mengembangkan prosedur unt penyesuaian atas perbedaan dg peramalan
6. Menetapkan sistem kompensasi "manajemen berbasis kinerja"

Steps in Financial Forecasting

- ◆ Meramal Penjualan
- ◆ Merencanakan aset yg diperlukan untuk mendukung penjualan
- ◆ Merencanakan dana yg dihasilkan scr internal
- ◆ Merencanakan dana luar yg diperlukan
- ◆ Menetapkan bagaimana dana diperoleh (*raise funds*)
- ◆ Melihat efek rencana pd rasio dan harga saham

2003 Balance Sheet

(Millions of \$)

Cash & sec.	\$ 20	Accts. pay. & accruals	\$ 100
Accounts rec.	240	Notes payable	100
Inventories	<u>240</u>	Total CL	<u>\$ 200</u>
Total CA	\$ 500	L-T debt	100
Net fixed assets	<u>500</u>	Common stk	500
Total assets	<u>\$1,000</u>	Retained earnings	<u>200</u>
		Total claims	<u>\$1,000</u>

2003 Income Statement

(Millions of \$)

Sales	\$2,000.00
Less: COGS (60%)	1,200.00
SGA costs	700.00
EBIT	\$ 100.00
Interest	10.00
EBT	\$ 90.00
Taxes (40%)	36.00
Net income	\$ 54.00
Dividends (40%)	\$21.60
Add'n to RE	\$32.40

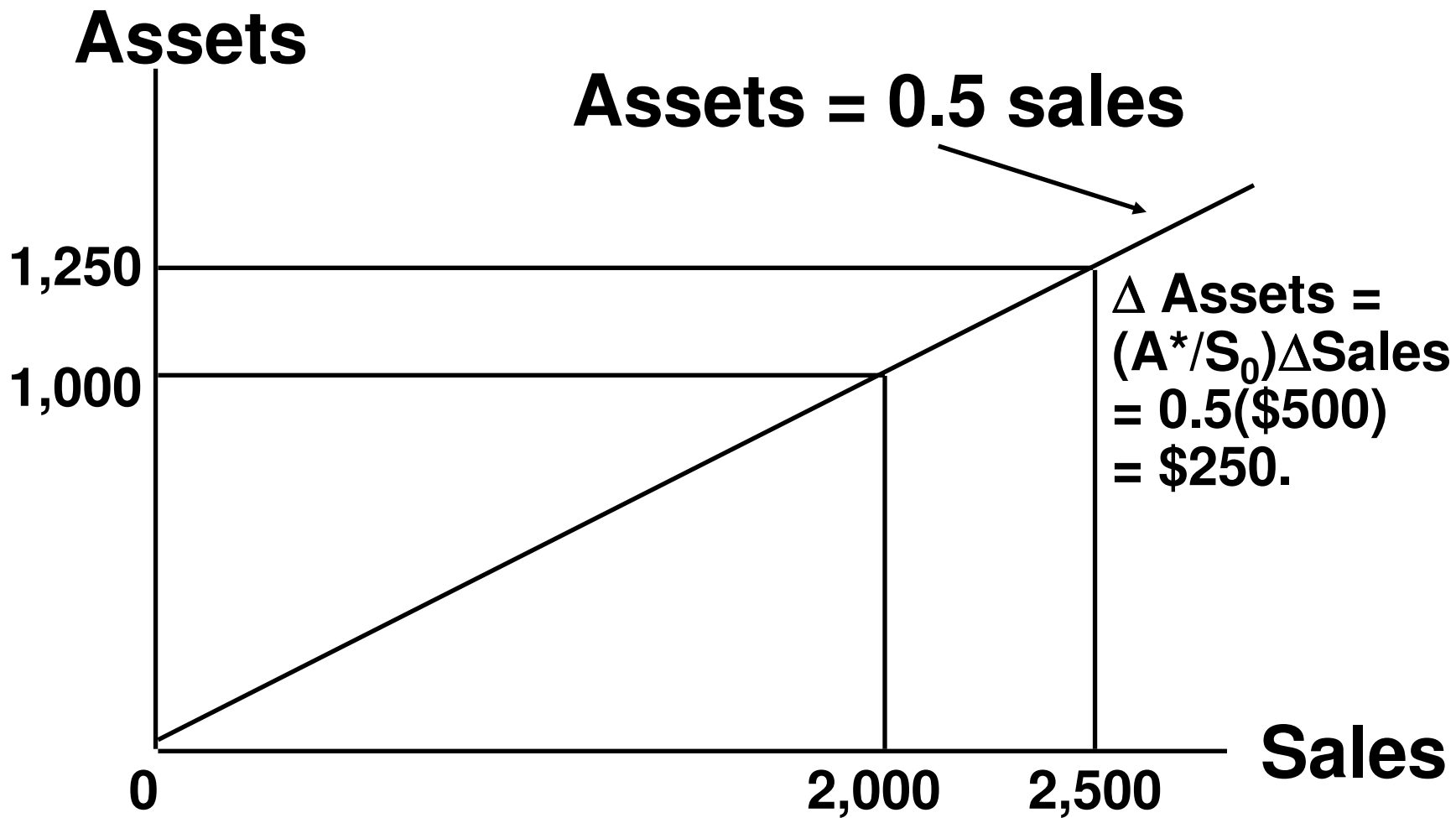
AFN (Additional Funds Needed):

Key Assumptions

- ◆ Beroperasi pd kapasitas penuh dlm 2003.
- ◆ Tiap aset tumbuh scr proporsional thd penjualan.
- ◆ Utang dan akrual tumbuh scr proporsional thd penjualan.
- ◆ Marjin laba (*profit margin*) 2003 ($\$54/\$2,000 = 2.70\%$) dan pembayaran (payout) 40% tetap dipertahankan.
- ◆ Penjualan diharapkan meningkat sebesar \$500 million.

Definitions of Variables in AFN

- ◆ A^*/S_0 : aset yg diperlukan unt mendukung penjualan; disebut rasio intensitas modal (*capital intensity ratio*).
- ◆ ΔS : peningkatan dlm penjualan.
- ◆ L^*/S_0 : rasio utang spontan (*spontaneous liabilities ratio*)
- ◆ M: Marjin laba (Net income/sales)
- ◆ RR: rasio retensi (*retention ratio*); persentasi laba neto yg tak dibayarkan sbg dividen.



$$A^*/S_0 = \$1,000/\$2,000 = 0.5 = \$1,250/\$2,500.$$

AFN (Additional Funds Needed):

- Aset ditingkatkan sebesar \$250 million.
- Berapa AFN, berdasarkan pd persamaan AFN?

$$\begin{aligned} \text{AFN} &= (A^*/S_0)\Delta S - (L^*/S_0)\Delta S - M(S_1)(RR) \\ &= (\$1,000/\$2,000)(\$500) \\ &\quad - (\$100/\$2,000)(\$500) \\ &\quad - 0.0270(\$2,500)(1 - 0.4) \\ &= \$184.5 \text{ million.} \end{aligned}$$

AFN (Additional Funds Needed):

Bagaimana pengaruh peningkatan penjualan dan rasio pembayaran dividen?

- ◆ Penjualan lebih tinggi:
 - Peningkatan kebutuhan aset, meningkatkan AFN.
- ◆ Rasio pembayaran dividen (dividend payout ratio) lebih:
 - Menurunkan dana yg tersedia scr internal, meningkatkan AFN.
- ◆ Marjin laba (PM) lebih tinggi:
 - Meningkatkan dana tersedia scr internal, menurunkan AFN.
- ◆ Rasio intensitas modal lebih tinggi, A^*/S_0 :
 - Meningkatkan aset yg diperlukan, meningkatkan AFN.
- ◆ Membayar Suplier lebih secap:
 - Menurunkan kewajiban spontan, meningkatkan AFN.

(More...)

Projecting Pro Forma Statements with the Percent of Sales Method

- ◆ Rencanakan penjualan berdasarkan pd tingkat pertumbuhan ramalan dalam penjualan
- ◆ Ramal pos-berikut atas persentasi dari penjualan ramalan sales
 - Kos
 - Kas
 - Piutang Dagang
 - Persediaan
 - Aset Tetap bersih
 - Utang dagang dan akrual
- ◆ Pilih pos-pos lainnya
 - Utang jk panjang (*Debt*)
 - Kebijakan Dividen (yg menentukan laba ditahan)
 - Modal saham

(More...)

Sources of Financing Needed to Support Asset Requirements

- ◆ Atas dasar asumsi dan pilihan sebelumnya, kita dpt mengestimasi:
 - Aset yg diperlukan untuk mendukung penjualan
 - Sumber khusus pendanaan
- ◆ Kebutuhan Dana Tambahan (AFN):
 - Aset yg diperlukan dikurangi sumber khusus pendanaan

Implications of AFN

- ◆ Jika AFN positif, maka anda hrs memperoleh pendanaan tambahan.
- ◆ Jika AFN negatif, maka memiliki lebih banyak pendanaan daripada yg diperlukan.
 - Membayar utang (debt).
 - Membeli kembali saham beredar.
 - Memberli investasi jk pendek.

How to Forecast Interest Expense

- ◆ Biaya bunga sebenarnya berdasarkan pada saldo harian utang selama setahun.
- ◆ Ada tiga cara untuk merencanakan (*approximate*) biaya bunga. Hitung biaya bunga atas dasar:
 - Utang pd akhir tahun
 - Utang pd awal tahun
 - Rata-rata utang awal dan akhir tahun

More...

Basing Interest Expense on Debt at End of Year

- ◆ Will over-estimate interest expense if debt is added throughout the year instead of all on January 1.
- ◆ Causes circularity called financial feedback: more debt causes more interest, which reduces net income, which reduces retained earnings, which causes more debt, etc.

More...

Basing Interest Expense on Debt at Beginning of Year

- ◆ Will under-estimate interest expense if debt is added throughout the year instead of all on December 31.
- ◆ But doesn't cause problem of circularity.

More...

Basing Interest Expense on Average of Beginning and Ending Debt

- ◆ Will accurately estimate the interest payments if debt is added smoothly throughout the year.
- ◆ But has problem of circularity.

More...

A Solution that Balances Accuracy and Complexity

- ◆ Base interest expense on beginning debt, but use a slightly higher interest rate.
 - Easy to implement
 - Reasonably accurate
- ◆ See *Ch 8 Mini Case Feedback.xls* for an example basing interest expense on average debt.

Percent of Sales: Inputs

	2003	2004
	<u>Actual</u>	<u>Proj.</u>
COGS/Sales	60%	60%
SGA/Sales	35%	35%
Cash/Sales	1%	1%
Acct. rec./Sales	12%	12%
Inv./Sales	12%	12%
Net FA/Sales	25%	25%
AP & accr./Sales	5%	5%

Other Inputs

Percent growth in sales	25%
Growth factor in sales (g)	1.25
Interest rate on debt	10%
Tax rate	40%
Dividend payout rate	40%

2004 Forecasted Income Statement

	<u>2003</u>	<u>Factor</u>	<u>2004 1st Pass</u>
Sales	\$2,000	g=1.25	\$2,500.0
Less: COGS		Pct=60%	1,500.0
SGA		Pct=35%	875.0
EBIT			\$125.0
Interest		0.1(Debt₀₃)	20.0
EBT			\$105.0
Taxes (40%)			42.0
Net. income			\$63.0
Div. (40%)			\$25.2
Add. to RE			\$37.8

2004 Balance Sheet (Assets)

Forecasted assets are a percent of forecasted sales.

2004 Sales = \$2,500

	<u>Factor</u>	<u>2004</u>
Cash	Pct= 1%	\$25.0
Accts. rec.	Pct=12%	300.0
Inventories	Pct=12%	<u>300.0</u>
Total CA		\$625.0
Net FA	Pct=25%	<u>625.0</u>
Total assets		<u><u>\$1,250.0</u></u>

2004 Preliminary Balance Sheet (Claims)

	<u>2003</u>	<u>Factor</u>	<u>2004 Without AFN</u>
AP/accruals		Pct=5%	\$125.0
Notes payable	<u>100</u>	→	<u>100.0</u>
Total CL			\$225.0
L-T debt	100	→	<u>100.0</u>
Common stk.	500	→	500.0
Ret. earnings	<u>200</u>	+37.8*	<u>237.8</u>
Total claims	<u><u> </u></u>		<u><u>\$1,062.8</u></u>

***From forecasted income statement.**

What are the additional funds needed (AFN)?

◆ Required assets =
\$1,250.0

◆ Specified sources of fin. =
\$1,062.8

NWC must have the assets to make forecasted sales, and so it needs an equal amount of financing. So, we must secure another \$187.2 of financing.

Assumptions about How AFN Will Be Raised

- ◆ No new common stock will be issued.
- ◆ Any external funds needed will be raised as debt, 50% notes payable, and 50% L-T debt.

How will the AFN be financed?

$$\begin{aligned} \text{Additional notes payable} &= \\ &0.5 (\$187.2) = \$93.6. \end{aligned}$$

$$\begin{aligned} \text{Additional L-T debt} &= \\ &0.5 (\$187.2) = \$93.6. \end{aligned}$$

2004 Balance Sheet (Claims)

	w/o AFN	AFN	With AFN
AP/accruals	\$ 125.0		\$ 125.0
Notes payable	<u>100.0</u>	+93.6	<u>193.6</u>
Total CL	\$ 225.0		\$ 318.6
L-T debt	100.0	+93.6	193.6
Common stk.	500.0		500.0
Ret. earnings	<u>237.8</u>		<u>237.8</u>
Total claims	<u>\$1,071.0</u>		<u>\$1,250.0</u>

Equation AFN = \$184.5
vs.
Pro Forma AFN = \$187.2.
Why are they different?

- **Equation method assumes a constant profit margin.**
- **Pro forma method is more flexible. More important, it allows different items to grow at different rates.**

Forecasted Ratios

	<u>2003</u>	<u>2004(E)</u>	<u>Industry</u>
Profit Margin	2.70%	2.52%	4.00%
ROE	7.71%	8.54%	15.60%
DSO (days)	43.80	43.80	32.00
Inv. turnover	8.33x	8.33x	11.00x
FA turnover	4.00x	4.00x	5.00x
Debt ratio	30.00%	40.98%	36.00%
TIE	10.00x	6.25x	9.40x
Current ratio	2.50x	1.96x	3.00x

What are the forecasted
free cash flow and ROIC?

		<u>2003</u>
<u>2004(E)</u>		
Net operating WC (CA - AP & accruals)	\$400	\$500
Total operating capital (Net op. WC + net FA)	\$900	\$1,125
NOPAT (EBITx(1-T))	\$60	\$75
Less Inv. in op. capital		<u>\$225</u>
Free cash flow		-\$150
ROIC (NOPAT/Capital)		6.7%

Proposed Improvements

	<u>Before</u>	<u>After</u>
DSO (days)	43.80	32.00
Accts. rec./Sales	12.00%	8.77%
Inventory turnover	8.33x	11.00x
Inventory/Sales	12.00%	9.09%
SGA/Sales	35.00%	33.00%

Impact of Improvements
(see *Ch 8 Mini Case.xls* for details)

	<u>Before</u>	<u>After</u>
AFN	\$187.2	\$15.7
Free cash flow	-\$150.0	\$33.5
ROIC (NOPAT/Capital)	6.7%	10.8%
ROE	7.7%	12.3%

Suppose in 2003 fixed assets had been operated at only 75% of capacity.

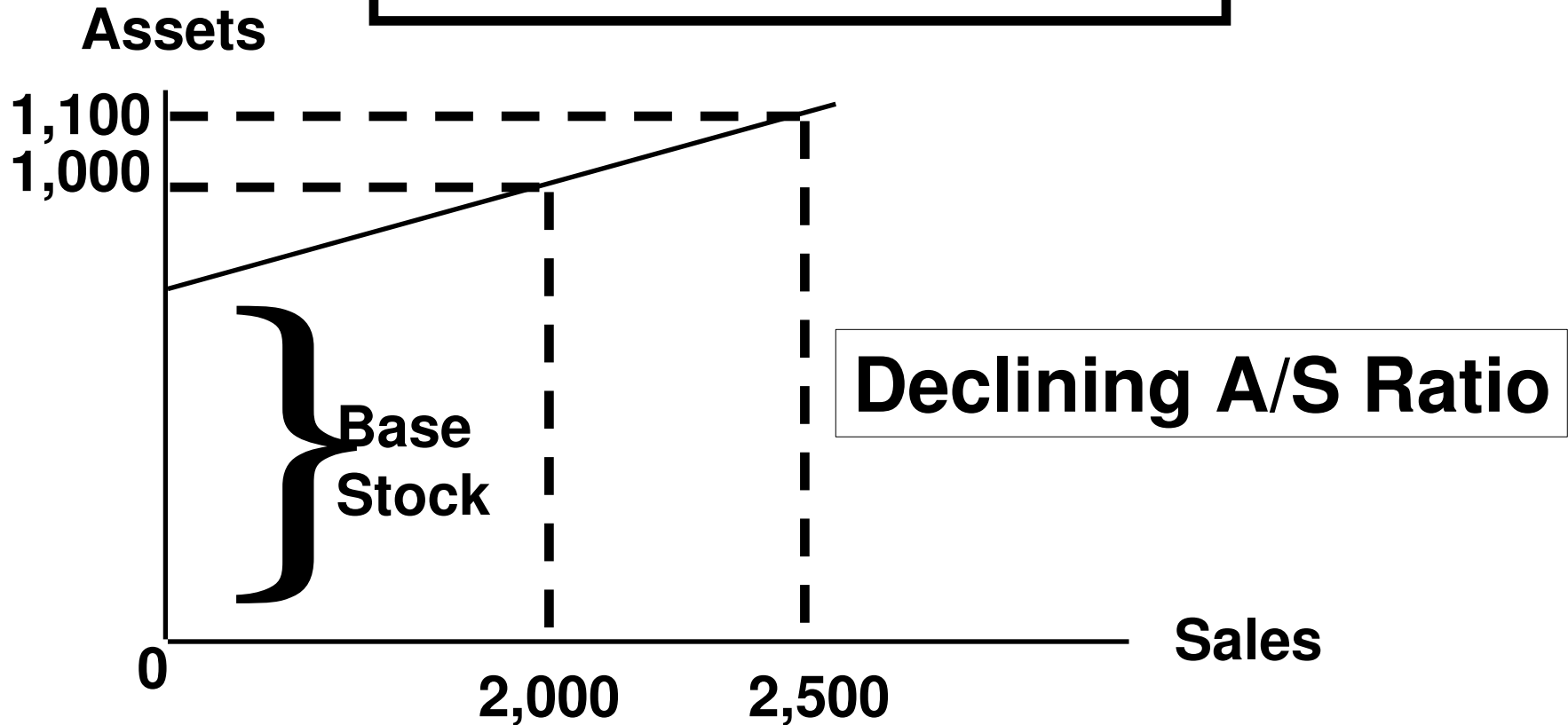
$$\begin{aligned}\text{Capacity sales} &= \frac{\text{Actual sales}}{\% \text{ of capacity}} \\ &= \frac{\$2,000}{0.75} = \$2,667.\end{aligned}$$

With the existing fixed assets, sales could be \$2,667. Since sales are forecasted at only \$2,500, no new fixed assets are needed.

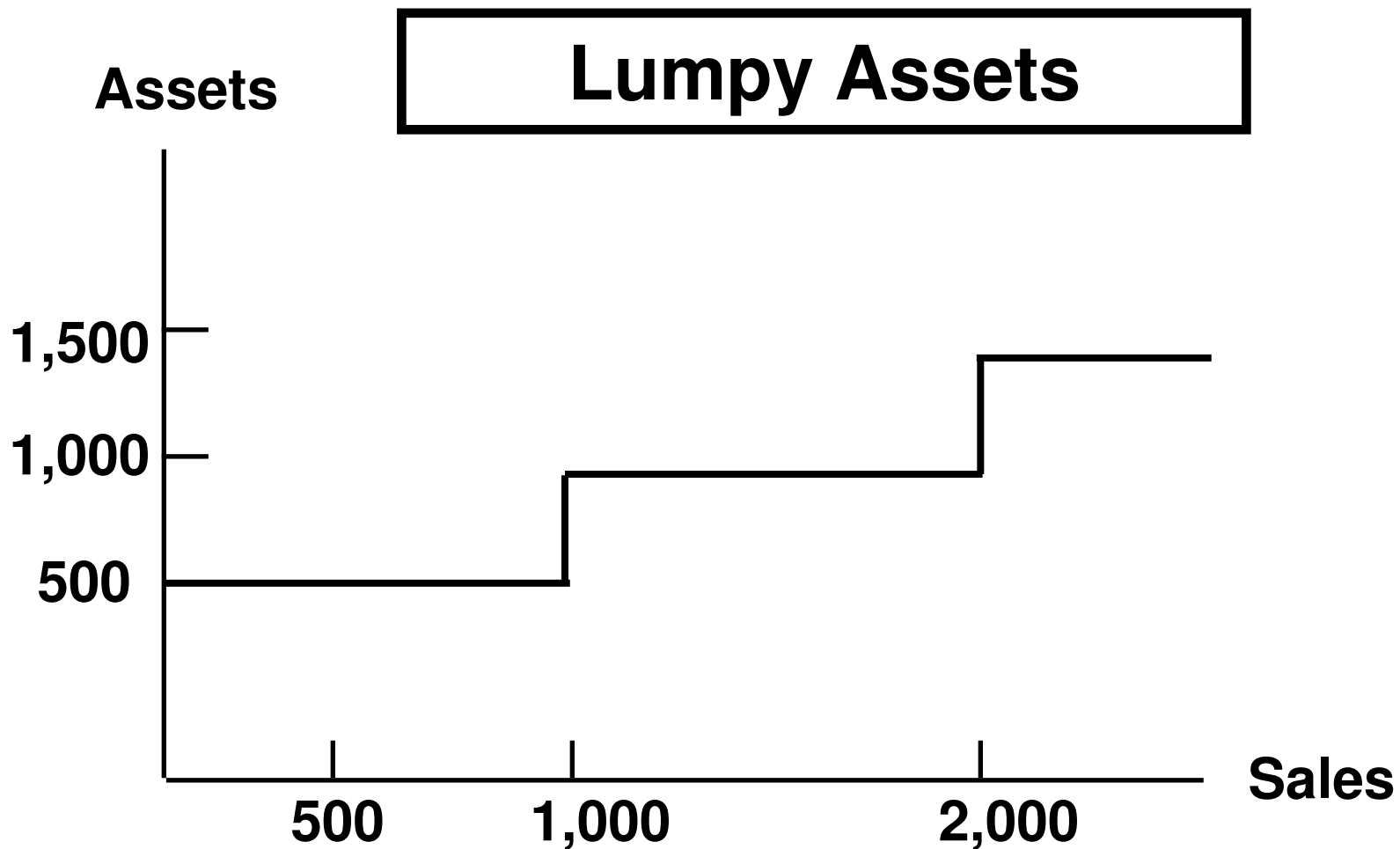
How would the excess capacity situation affect the 2004 AFN?

- ◆ The previously projected increase in fixed assets was \$125.
- ◆ Since no new fixed assets will be needed, AFN will fall by \$125, to
$$\$187.2 - \$125 = \$62.2.$$

Economies of Scale



$\$1,000/\$2,000 = 0.5$; $\$1,100/\$2,500 = 0.44$. Declining ratio shows economies of scale. Going from $S = \$0$ to $S = \$2,000$ requires \$1,000 of assets. Next \$500 of sales requires only \$100 of assets.



A/S changes if assets are lumpy. Generally will have excess capacity, but eventually a small ΔS leads to a large ΔA .

Summary: How different factors affect the AFN forecast.

- ◆ Excess capacity: lowers AFN.
- ◆ Economies of scale: leads to less-than-proportional asset increases.
- ◆ Lumpy assets: leads to large periodic AFN requirements, recurring excess capacity.