Understanding Return on Equity

Section 2 of the Stock Selection Guide

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What We Will Cover

- **What is Return on Equity**
- **Why it is important**
- **What it means when Return on Equity declines**

Management

- Management only has two jobs.
  - Make money—we look at Pre-tax Profit as a % of sales

  - Spend the money in such a way that they will make more money in the future. This is called Return on Equity

Return on Equity (ROE)

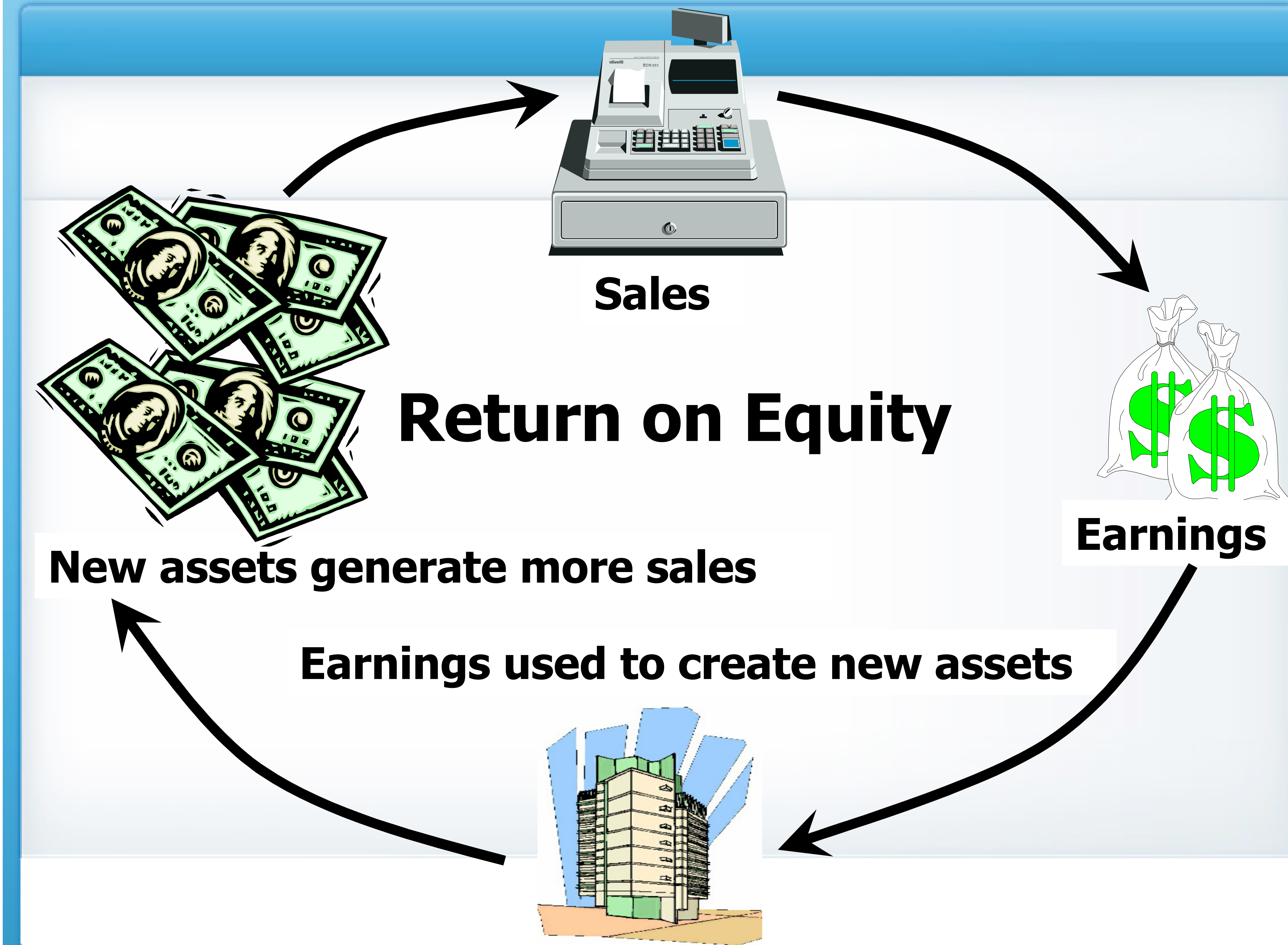
2 EVALUATING MANAGEMENT Company ______

	Year	____	____	____	____	____	____	____	____	____	____	LAST 5 YEAR AVG.	TREND UP	TREND DOWN
A	% Pre-tax Profit on Sales (Net Before Taxes ÷ Sales)													
B	% Earned on Equity (E/S ÷ Book Value)													

- **The first line in Section 2 tells us if management can make money.**
- **Second line in Section 2 tells us if they can use these earnings to grow future earnings.**

Return on Equity

- Assets are everything the company owns
- Equity is the amount of the company assets owned by the shareholders
- Return on Equity tells us if management is spending the earnings on assets that will generate more revenue


Sales
Return on Equity
Earnings
New assets generate more sales
Earnings used to create new assets

How Important Is ROE?

- **The primary test of management economic performance is the achievement of a high earnings rate on equity capital employed (without undue leverage, accounting gimmickry, etc.) and NOT the achievement of consistent gains in earnings per share. ***

- ***Warren Buffett, Berkshire Hathaway, 1979 Annual Report**

Return on Equity

- **Not dependent on how large the percent of pre-tax profit is.**

Sysco

2004	2005	2006	2007	2008	LAST 5 YEAR AVG.
5.0	5.0	4.3	4.6	4.8	4.7
33.8	33.5	27.4	29.9	31.9	31.3

Digital River Inc.

2003	2004	2005	2006	2007	LAST 5 YEAR AVG.
16.9	23.5	32.5	29.1	29.5	26.3
12.4	16.8	15.6	9.4	9.5	12.7

What is a “Good” ROE?

“The investor usually finds the greatest opportunity in companies where the percent earned on equity is above 20 percent. This is a very significant indicator of the rate at which shareowner value is increasing.”

Starting and Running A Profitable Investment Club, page 96 (1998 edition)

What is a “Good” ROE?

2004	2005	2006	2007	2008	LAST 5 YEAR AVG.
5.0	5.0	4.3	4.6	4.8	4.7
33.8	33.5	27.4	29.9	31.9	31.3

- 20% or better is excellent
- 15% is average
- If you see a lot of single digit numbers management is not doing a good job

Compare with Competitors

Company CINTAS CORP (CTAS)

B	% Earned on Equity (E/S ÷ Book Value)	18.9	18	14.5	14.1	15.2	15.3	14.7	14.8	EVEN	EVEN

Company UNIFIRST CORP (UNF)

B	% Earned on Equity (E/S ÷ Book Value)	9.1	7.3	9.1	10.5	8.4	9.1	10.9	9.6	UP	

- **Do more than look at the trend**
- **Look at the numbers**

Return on Equity

- Three things affect ROE
  - net profit margin
  - asset turnover rate
  - financial leverage
- If any of these go up, ROE will go up
- If any of these declines, the ROE goes down.

Return on Equity

- A decline in ROE can mean
  - Expenses are getting out of control
  - Money is being spent on assets that will not produce future income
  - The company has paid off some of their long term debt
- Two of the above items are early warning signs of serious problems

Example 1
Net Profit Margin Declines
Abbott Labs

Net Profit Margin

- **Net profit margin is the net profit expressed as a percent.**
  - **Example– A company could have $60M in sales and $6M in net profit. They would have a net profit margin of 10%.**
- **Net Profit divided by Sales equal the Net Profit Margin.**

Net Profit Margin

- Only difference between net profit and pre-tax profit is taxes.

	Sales
minus	Expenses
equals	Pre-tax Profit
minus	Taxes
equals	Net Profit

Net Profit Margin

- **Generally if both the pre-tax profit and the Return on Equity go down in the same year, you will find the reason ROE declined was due to a problem with Net Profit Margin.**

2 EVALUATING MANAGEMENT Company ABBOTT LABORA

	1998	1999	2000	2001	2002	2003	200
A % Pre-tax Profit on Sales (Net Before Taxes ÷ Sales)	26.0	27.2	26.8	21.8	24.4	23.3	23.
B % Earned on Equity (E/S ÷ Book Value)	40.1	34.4	31.0	28.8	30.2	26.4	24.

2005	2006	2007	LAST 5 YEAR AVG.
22.9	22.4	20.9	22.7
26.5	27.7	24.6	26.0

Sales

Net Profit

- **If this margin between net profit and sales declines it is an early warning sign of trouble**
- **The company is not controlling expenses**

Return on Equity

- What if our company that had sales of $60M and a net profit of $6M during the next year had sales of $70M and a net profit of $6.8million
  - Sales are going up; earnings are going up
  - Net profit margin declined to 9.5%, an early warning sign of trouble

Net Profit Margin

- **Why be concerned if the Net Profit margin declines**
  - **It is an <u>early warning sign</u> that expenses are growing faster than sales**
  - **Eventually the earnings will decline and the price of the stock will drop**

Net Profit Margin

- We need to do three things when the Net Profit Margin declines
  - Find the problem
  - Find out what the company says they are going to do about the problem
  - Decide if we are going to hold or sell the stock

Abbott Labs

- **Find the problem by comparing the growth rate of sales with the growth rate of various expenses**

	2007	2006	% Change
Sales	$25,914.20	$22,476.30	15.30%
Cost of Goods Sold	$11,422.50	$9,815.10	16.30%
Research & Development	$2,505.60	$2,255.30	11%
Selling, General & Administrative	$7,407.90	$6,349.70	16.60%
Interest Expense	$593.10	$416.10	42.50%

- **The numbers are on the Income Statement**

Where to Get Information

- One of the best sources of information about sales, cost of goods sold and overhead is the 10K or 10Q.
  - Read the <u>Management Discussion and Analysis.</u>

Abbott Labs Net Profit Margin

- Causes of the decline
  - Higher commodity costs
  - Expenses associated with acquisitions
  - Increase in bad debt reserve associated with an unfavorable court ruling

NET Profit Margin

- Do your research
- Find out what the company plans to do to reduce expenses
- Decide if you are going to keep the stock or sell

Example 2
Asset Turnover Rate Declines
3M

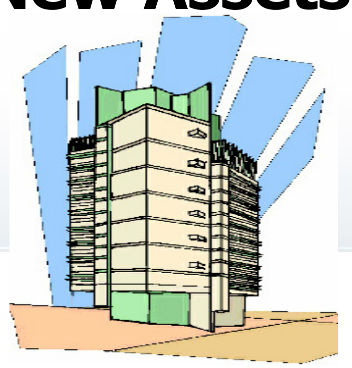
Sales

Earnings are used to create new assets that will grow future sales.

Compare sales to assets

Earnings

New Assets



Asset Turnover Rate

- Asset turnover rate tells us how well management is using the assets to grow sales.
- Divide sales by assets to find this ratio.

Invest in New Assets

- Good management will invest our equity in new assets that will grow future sales and earnings.
  - New stores or factories
  - New products
  - Open up new markets
  - Acquisitions

Asset Turnover Ratio

- What determines a “good” ratio varies from industry to industry.
  - Compare companies in the same industry.
- Higher numbers are better.

Asset Turnover Ratio

Company 3M CO (MMM) 12/05/08

									TREND	
0	2001	2002	2003	2004	2005	2006	2007	5 AVG.	UP	DOWN
9	16.7	19.6	20.6	22.8	23.7	22.3	22.2	3	EVEN	EVEN
4	28.0	34.2	30.7	27.9	32.0	33.1	30.1	8		DOWN

- **If the Pre-tax Profit increases or stays the same then generally the net profit margin will be growing.**
- **3M has problem with the asset turnover rate or financial leverage.**

Asset Turnover Ratio

Year	Sales	Total Assets	Turnover Ratio
2006	$22,923	$21,294	1.07
2007	$24,462	$24,694	0.99

- **In 2006, 3M generated $1.07 in sales for every dollar of assets. In 2007 it dropped to $0.99.**
- **Our Shareholder Equity (retained earnings) was invested in assets that were not generating new revenue.**

Asset Turnover Ratio

- Assets are listed on the Balance Sheet
- Start by checking these four assets
  - Cash on hand
  - Receivables
  - Inventory
  - Goodwill
- They should all grow about the same rate as sales.

3M Asset Turnover Ratio

	2007	2006	% Change
Sales	$24,462	$22,923	6.70%
Cash on Hand	$1,896	$1,447	31.00%
Receivables	$3,362	$3,102	8.30%
Inventories	$2,852	$2,601	9.60%
Goodwill	$4,589	$4,084	12.40%

- **All of these assets grew faster than sales and none of them contribute to future sales and earnings**
- **Early warning sign of potential problems.**

Cash on Hand

- **Companies need a certain amount of cash on hand.**
- **Excess cash generates very little revenue.**
- **Do they have plans for using the excess cash?**
  - **Acquisitions**
  - **New stores or factories**

Receivables

- Receivables should grow about the same rate as sales.
- Why aren't customers paying?
  - Industry problem?
  - Is the company stuffing the pipeline?
- If the Receivables continue to grow faster than the Sales it will eventually create a cash flow problem

Inventory

- Should grow about the same rate as sales.
- Why the excess inventory?
  - Management error?
- Will the inventory become obsolete and have to be written off?

Goodwill

- Usually comes from an acquisition
- As long as the amount stated can be justified it can remain on books
  - If it can't be justified must be written off

Asset Turnover Ratio

- **Large increases in receivables and inventory are often very early warning signs of trouble.**

- **<u>Section 2 Row B is only place on the SSG that will warn you to check these items.</u>**

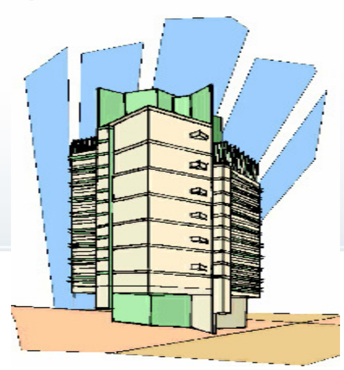
Asset Turnover Ratio

- Much harder to find causes and proposed solutions to these problems.

- Management does not have to explain increases in assets unless shareholders ask.

Example 3
Leverage Declines
Schlumberger LTD

- **A company has three ways to obtain money to buy new assets**
  - **Retained Earnings**
  - **Sell more shares**
  - **Borrow money**



Financial Leverage

- Financial leverage (borrowing money) is not necessarily a bad thing
- Financial leverage will increase the ROE if it is spent on assets that create future sales and earnings.

Financial Leverage

- **There is a risk to borrowing money**
  - **Interest has to be paid.**
  - **The borrowed money had better add more to the bottom line than the interest costs.**
- ***<u>If a company borrows money we want to see the ROE increase.</u>***

Financial Leverage

- If a company borrows money they will eventually have to repay the loan with future earnings
- The earnings used to repay a loan are not creating new assets and so will cause the ROE to decline

Financial Leverage

- The Financial Leverage Ratio tells us how much a company is using borrowed funds.
- Divide the Total Assets by the Shareholder Equity to determine the financial leverage.

Schlumberger LTD

SCHLUMBERGER LTD			
2002	2003	2004	20
7.0	8.7	13.1	19
12.1	15.0	18.9	25

2006	2007
26.0	28.4
34.5	33.6

- **Net Profit did not decline**
- **Asset Turnover Rate stayed the same**

Schlumberger	Sales	Assets	Turnover Rate
2006	$19,230.50	$22,832.10	0.84
2007	$23,276.50	$27,853.40	0.84

Balance Sheet Numbers

CONSOLIDATED BALANCE SHEET

(Stated in thousands)

December 31,	2007	2006
ASSETS		
Current Assets		
Cash	$ 197,233	$ 165,817
Short-term investments	2,971,800	2,833,056
Receivables less allowance for doubtful accounts (2007 – $85,780; 2006 – $114,654)	5,361,114	4,242,000
Inventories	1,638,192	1,246,887
Deferred taxes	182,562	162,884
Other current assets	704,482	535,018
	11,055,383	9,185,662
Fixed Income Investments, held to maturity	440,127	153,000
Investments in Affiliated Companies	1,412,189	1,208,323
Fixed Assets less accumulated depreciation	8,007,991	5,576,041
Multiclient Seismic Data	182,282	226,681
Goodwill	5,142,083	4,988,558
Intangible Assets	902,700	907,874
	214,745	412,802
	495,872	173,197
Assets	$27,853,372	$22,832,138
Current Liabilities		
Accounts payable and accrued liabilities	$ 4,550,728	$ 3,848,017
Estimated liability for taxes on income	1,071,889	1,136,529
Dividend payable	210,599	148,720
Long-term debt–current portion	638,633	602,919
Convertible debentures	353,408	–
Bank & short-term loans	679,594	718,610
	7,504,851	6,454,795
Convertible Debentures	415,897	1,424,990
Other Long-term Debt	3,378,569	3,238,952
Postretirement Benefits	840,311	1,036,169
Other Liabilities	775,975	257,349
	12,915,603	12,412,255
Minority Interest	61,881	–
Stockholders' Equity		
Common stock	4,136,363	3,381,946
Income retained for use in the business	15,461,767	11,118,479
Treasury stock at cost	(3,549,243)	(2,911,793)
	(1,172,999)	(1,168,749)
Shareholder Equity	14,875,888	10,419,883
	$27,853,372	$22,832,138

See the *Notes to Consolidated Financial Statements*

- **Assets and Shareholder Equity are Balance Sheet numbers**
- **Divide total Assets by Shareholder Equity to determine leverage**

Financial Leverage

Schlumberger	Assets	Shareholder Equity	Leverage
2006	22,832	10,420	2.19
2007	27853	14,876	1.87

- **Financial leverage will decline when a company pays off long term debt.**
- **This is the only time when a decline in ROE is a good thing.**

Financial Leverage

2004	2005	2006	2007	2008	2009	© VALUE LINE PUB., INC.	11-13
9.75	12.15	16.33	19.47	***23.05***	***25.70***	Sales per sh	***35.00***
2.16	2.86	4.51	5.94	***6.80***	***7.55***	"Cash Flow" per sh	***9.45***
1.03	1.67	3.04	4.18	***4.80***	***5.25***	Earnings per sh [A]	***6.30***
.38	.41	.48	.70	***.81***	***.84***	Div'ds Decl'd per sh [B]	***.95***
1.03	1.35	2.09	2.45	***3.50***	***3.25***	Cap'l Spending per sh	***2.25***
5.20	6.45	8.85	12.44	***15.95***	***20.50***	Book Value per sh [C]	***33.10***
1177.0	1177.6	1177.9	1195.6	***1200.0***	***1200.0***	Common Shs Outst'g [D]	***1200.0***
30.3	23.7	20.5	20.0	*Bold figures are Value Line estimates*		Avg Ann'l P/E Ratio	***20.0***
1.60	1.26	1.11	1.05			Relative P/E Ratio	***1.35***
1.2%	1.0%	.8%	.8%			Avg Ann'l Div'd Yield	***.8%***
11480	14309	19230	23277	***27670***	***30850***	Sales ($mill)	***42000***
25.2%	28.7%	33.6%	36.2%	***35.5%***	***35.0%***	Operating Margin	***32.0%***
1307.9	1351.0	1561.4	19[illegible]	[illegible]	[illegible]00	Depreciation ($mill)	***3600***
[illegible]	[illegible]	[illegible]747.1	51[illegible]	[illegible]	[illegible]50	Net Profit ($mill)	***7725***
[illegible]	[illegible]	[illegible]4.0%	2[illegible]	[illegible]	[illegible]%	Income Tax Rate	***23.0%***
[illegible]	[illegible]	[illegible]9.5%	22.1[illegible]	***21.3%***	***20.9%***	Net Profit Margin	***18.4%***
2358.6	3039.2	[illegible]730.9	3550.[illegible]	***4700***	***4500***	Working Cap'l ($mill)	***5000***
3944.2	3591.3	4663.9	3794.5	***3600***	***3600***	Long-Term Debt ($mill)	***4500***

4663.9

3794.5

- **An easy way to check Financial Leverage is to check Long Term Debt in Value Line**

Review

- Three items affect the Return on Equity
  - net profit margin
  - asset turnover rate
    - Balance Sheet items
  - financial leverage

- If any of these declines, the ROE goes down.

Review

- A decline in Return on Equity can be an early warning sign of a developing problem or it can be a good thing.

- Must determine what caused the decline.

Conclusions

- Management has two jobs
  - Make money
  - Spend money
- When the ROE numbers go down:
  - Find the cause - research
  - Make a decision - judgment
  - Take action