10%, is simply the current equity per share (equity × ROE10% ÷ RR10%).

What this theory fails to recognise is the difference between the cash flow retained by the company to increase subsequent internal cash flows and the cash flow received by the owners. I have even seen the value of the cash flow counted twice – once in the year in which it occurred and secondly when the future value it created is discounted back. When using the discounted cash flow method, the cash flow to be discounted is the owner's cash flow as measured by annual dividends and the terminal value of the stock – at some future point of time – that the reinvested cash flow (retained profits) creates.

Impact On Return Of Percentage Of Profit Reinvested At ROE

A contributing factor to mispricing is the perception that companies with identical PERs and ROEs should provide similar investment returns. The examples of Companies D and E in Table 4.3, whose identical PERs and ROEs produced annual investment returns of 5% for one company and 20% for the other, demonstrated that nothing could be further from the truth. While the means by which the reinvestment rate is measured and valued is revealed in the next chapter, let's look at its impact on the investment return.

The figures in the body of Table 4.6 show the annual investment return based on a buy and sell PER of 10 and the percentage of profit/ROE distributed and reinvested in the top two rows at the ROE in the first column.

Table 4.6

Distributed		**0%**	**25%**	**50%**	**75%**	**100%**
Reinvested		**100%**	**75%**	**50%**	**25%**	**0%**
ROE	**40.0%**	40.00%	32.50%	25.00%	17.50%	10.00%
	30.0%	30.00%	25.00%	20.00%	15.00%	10.00%
	20.0%	20.00%	17.50%	15.00%	12.50%	10.00%
	10.0%	10.00%	10.00%	10.00%	10.00%	10.00%
	5.0%	5.00%	6.25%	7.50%	8.75%	10.00%

The figures in the body of Table 4.7 show the annual investment return based on a buy and sell PER of 15 and the percentage of profit/ROE distributed and reinvested in the top two rows at the ROE in the first column.

Table 4.7

Distributed	0%	25%	50%	75%	100%
Reinvested	100%	75%	50%	25%	0%
ROE 40%	40.0%	31.7%	23.3%	15%	6.7%
30%	30.0%	24.2%	18.3%	12.5%	6.7%
20%	20.0%	16.7%	13.3%	10%	6.7%
10%	10.0%	9.2%	8.3%	7.5%	6.7%
6.7%	6.7%	6.7%	6.7%	6.7%	6.7%
5%	5.0%	5.4%	5.8%	6.2%	6.7%

You will note from the figures in the second column that given the same buy and sell PER, the annual return will be equal to ROE when all profits are reinvested. Conversely, when all profits are distributed (last column), the annual return will be the inverse of the PER. In Table 4.6, 1 ÷ PER10 = 10%, while in Table 4.7, 1 ÷ PER15 is 6.7%. When ROE is equal to 1 ÷ PER (second to last row in each table), the degree of profit retention has no impact on the investment return, but when ROE exceeds 1 ÷ PER, the greater the portion of profits reinvested the higher the investment return. Conversely, when ROE is less than 1 ÷ PER (bottom row in each table), the greater the portion of profits reinvested the lower the investment return.

The reinvestment principle provides a useful means of testing projected investment returns. For instance, let's say you came across a stock with a PER of 10 whose average historical ROE had been about 20% after reinvesting approximately 50% of profits and you had no reason to believe these performance characteristics were about to change to any marked degree. Reference to the 20% ROE row and 50% reinvestment column in Table 4.6 tells us the investment return will be 15% if the performance characteristics are maintained and the PER is unchanged. Interpolation of the surrounding figures provides a range of variables. The risk lies in buying a stock with the said characteristics at a PER of, say, 25 and hoping the price is justified when it clearly is not. If the PER of 25 is maintained at time of sale, the investment return would be: $(1 \div 25 \times (20\% - 10\%) \div 20\%) + 10\% = 12\%$. Still reasonable, but the downside risk is a fall in the PER to a more realistic level.

While the means of determining an appropriate PER in terms of value is revealed in the next chapter, our first observation is that PER25 ÷ 100 (25%) is greater than ROE of 20%. Therefore, in the absence of an immediate and dramatic sustainable improvement in the business performance, the stock will be overpriced.

At no time is the ability to value a stock more important than when the board considers a buyback. If their assessment of value is correct, remaining shareholders will benefit. If wrong, as often happens when directors are seeking to support the price with a buyback, the remaining shareholders will be penalised by the board's desire to avoid criticism for a falling share price.