

# Part III: A Guide to Stock Market Investment

# 5 Stock Market Dynamics: An Illustration

## Introduction

Part Three of the *CVT* companion text translates conflicting *theories* of share valuation into *practical* terms with reference to *real world* share price listings, based on the *capitalisation of a perpetual annuity*.

Chapter Five explains how published stock market data relating to price, dividends (the yield and cover) and earnings (the P/E ratio) are analysed by the investment community, supplemented by other informed sources to implement trading decisions (whether buy, sell or hold).

Chapters Six and Seven evaluate various strategies for investment based on dividends, growth and whether we can “beat” the market.

Assuming that you are already familiar with this material:

The purpose of this Chapter is to illustrate how the distillation of company data into a few select metrics can provide the private investor with a disciplined framework for analysing the dynamics of its stock market performance

## Exercise 5.1: Published Accounting and Stock Market Data

Consider the following financial data for Ozzy plc.

Share Capital: Par or Nominal Value (£1.00)	£ 100 million
Profit after Tax	£ 10 million
Dividend Percentage	5 %
Market Capitalisation of Equity	£ 200 million

### Required:

Reformulate the data to provide *accounting* (cost) and *market* (value) investment profiles as a basis for analysing the company’s performance and comment on their utility.

### An Indicative Outline Solution

The *accounting* profile for Ozzy plc comprises:

Par Value: £1.00; Dividend per share (DPS):5p; Dividend %:5%; Earnings per share (EPS):10p; ROCE 10%

Because this data is *cost* based it reveals absolutely nothing about the “true” performance of the company, even if we have similar figures for previous years, or data for similar firms in a similar industry,

In contrast, a *value* investment profile, based on the market capitalisation of equity, takes us beyond the “regulatory” (GAAP) framework of accounting and out into the “real world” of financial analysis.

The *market* profile for Ozzy (as published in the financial press) can be derived from a reformulation of the accounting data derived from DPS (5 pence) EPS (10 pence) and the *market price per share* of £2.00 (rather than £1.00 par or nominal value).

Price: £2.00; Dividend Yield: 2.5%; Cover: 2.0; P/E: 20; Earnings Yield: 5%

- The Dividend yield is the *percentage* dividend received for every £100 invested in a company.
- The Dividend cover gauges the *quality* of dividends (i.e. their risk of being cut) in relation to earnings
- The P/E ratio is the *reciprocal* of the earnings yield for every £100 invested.

Admittedly, this listing also reveals little about the company in isolation. Remember that performance is *relative* and *dynamic*. So, it must be placed in context using comparisons, such as movements in the market, similar firms in similar industries, or the firm itself over time.

However, armed with benchmark data for Ozzy plc and these comparisons (which are freely available) a *value* rather than *cost* based analysis should reflect current economic reality more accurately.



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## Exercise 5.2: “Beating” the Market

To analyse the dynamics of stock market performance, assume that Ozzy plc is a *blue chip* company with a reasonable investment profile in a sound market sector, all of which you have gleaned from the financial press, analyst reports, media comment and the internet.

You will recall that the company’s latest *investment* profile, published by the financial press in their stock exchange listings comprises:

Price: £2.00; Dividend Yield: 2.5%; Cover: 2.0; P/E: 20; Earnings Yield: 5%

So, would you include this company in a *diversified* portfolio of investments?

Without *comparative* price, yield, cover and P/E data relative to the market or competitors over time, there is no definitive answer. Like all companies, Ozzy plc must be placed in context. But on the available qualitative information, it is reasonable to assume that rational, risk-averse investors would hold a proportion of the company’s shares in their portfolio.

### Required:

Assume you therefore own a proportion of Ozzy’s shares and over lunch with a board member she reveals that the company is about to issue a *profit warning*. Having recently attended a government conference on the Eurozone crisis, she also believes that the economy will suffer a 50 per cent downturn in the near future.

Armed with this information

1. What is your next move?
2. How will markets react when your “insider” information enters the public domain?
3. What are the eventual implications for the company’s stock exchange listing when recession bites?
4. Did you “beat” the market?

As a guide to your answers, incorporate a hypothetical sequence of stock market indicators, beginning with Ozzy’s current *investment* profile, as the company and the economy take a turn for the worse.

### An Indicative Outline Solution

Whilst stock market analysis is not an exact science, the traditional view based on the EMH asserts that:

Without access to “insider” information (which is illegal) in the long run it is impossible to beat the market (except by accident and not design) because investors are *rational*, markets are reasonably *efficient* and therefore movements in price and returns are *random*.

But you are in a “privileged” position with access to information that has not yet entered the public domain.

## 1. What is your next move?

The future profits and prices for Ozzy plc will fall as the economy moves into recession. If you accept the illegality of your actions, your *rational* response should be to sell immediately and reap a capital gain, whilst the rest of the market is oblivious to future events.

2. How will markets react when *all this information* enters the public domain?

If the stock market is reasonably efficient, Ozzy's price should fall, simply because something must give; either distributions or retentions used to finance re-investment. Otherwise, the company must increase its borrowing to maintain the balance between the two

And this is where more information and figures would be useful.

Let us assume that with the profit warning and a 50 per cent economic down turn, the company's share price *tracks* the market's recession. EPS also halves, falling from 10 pence to 5 pence. However, management decide to maintain a dividend of 5 pence per share.

Can you now fill in the gaps in the following investment profile post-recession denoted by a question mark?

Pre- Recession:	Price: £2.00;	Yield: 2.5%;	Cover: 2.0;	P/E: 20;	Market Capitalisation: £20 million.
Post-Recession:	Price: £1.00;	Yield: ?;	Cover: ?;	P/E: ?;	Market Capitalisation: ?

If so, you will note that:

- The dividend yield has doubled to 5 per cent and the dividend cover has halved to one.
- The P/E ratio remains unchanged at 20, which is equivalent to the original earnings yield of 5 per cent.
- The market capitalisation of equity has halved to £10 million.

The market's *dynamics* can be explained as follows

- Although the 5 pence dividend per share is maintained, the "quality" of the dividend (financial risk) measured by the cover deteriorates because EPS has halved from 10 to 5 pence.
- Shareholders receive twice the previous dividend yield but not because the investment is more profitable.
- New investors will now pay only half the price (£1.00) for the same distribution (5 pence) to compensate for twice the financial risk (*i.e.* the rising yield reflects the increased likelihood of the non-payment of a dividend).

## 3. What are the eventual implications for the company's stock exchange listing?

As we observed in *CVT*:

A basic stock market law is the <i>higher</i> the risk, the <i>lower</i> the price, the <i>higher</i> the yield and <i>vice versa</i> .
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However, a piece of this puzzle still doesn't fit. Why do the company's earnings yield and corresponding P/E ratio remain the same, once the recession sets in?

You will recall from our previous discussion of the MM *dividend irrelevancy* hypothesis that yields based on the quality of earnings only remain *constant* for a *given* investment policy of *equivalent* risk that *will not change*

But in our scenario, the company's future re-investment policies and earnings potential have been cut back by management's desire to maintain dividend distributions, despite a profit warning and economic recession. So, shouldn't the earnings yield also rise (and the P/E ratio fall) to compensate for *business* risk?

To illustrate how the market might react according to MM, let us assume that rational, risk-averse investors therefore continue to sell their shares and its price falls further to 75 pence. This is reasonable, given another fundamental rule of stock market law explained in *CVT*.

The *higher* the dividend yield, or the *lower* the P/E ratio, or the *lower* the dividend cover: then the higher the risk of an investment, (and *vice versa*).

After the recession we therefore observe the following revised *equilibrium* share price listing for Ozzy plc:

Price: £0.75; Yield: 6.66%; Cover: 1.0; P/E: 15; Market Capitalisation: £75 million.

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#### 4. Did you “beat” the market?

Based on *insider information*, of course you did!

Selling “high” at £2.00 produced a profit of £1.25 per unit on your shareholding, which now trades at only 75 pence.

## Summary and Conclusions

In Chapter One of this Exercise series and our *CVT* theoretical companion text, we have emphasised that irrespective of whether markets are efficient, behaviour is rational and prices or returns are random, every investor requires standards of comparison to justify their next trading decision. For example, has a firm’s current price, dividend or earnings prospects risen, fallen, or remained the same, relative to the market, its competitors, or own performance over time? And how are they trending?

Subsequently, we have observed that the key to unlocking these questions presupposes a theoretical understanding of how shares are valued and its application by investors (institutional or otherwise) using information that may, or may not, lie in the public domain.

We have also noted that without access to insider information, stock market analysis is not an exact science. You are one of a multiplicity of *ordinary* market participants, rather than a member of the *privileged few*. You “win some” you “lose some” because overall investment is a “fair” game for all. However, this is where individual attitudes to risk come into play and the “science” breaks down.

You will recall from Part Three of *CVT* that another “golden” rule for profitable investment is to sell shares when their price is high and buy when low. So looking back to Exercise 5.2 and the final *equilibrium* profile for Ozzy plc you obviously have a “golden” opportunity to reinvest the profit from insider trading of the company’s shares before the market bottoms out and *speculative* investors, or *predatory* companies motivated by takeover, express an interest that could force price up.

Notice, however, that Ozzy plc might seem a bargain buy but only because the company is currently worth more “dead than alive”. Private investors should therefore be cautious.

Explained simply, the new market capitalisation of equity (£75 million) is not only less than its market valuation (£20 million) prior to the profit warning and recession, but also the original issue price of £100 million based on its nominal (par) value of £1.00 per share revealed by the Balance Sheet. So, there is certainly no evidence of “goodwill” and the tangible assets (even at historical cost) are likely to be worth more than 75 pence per share. All of which means that the company is ripe for take over, not as a *going concern* but for “asset stripping”.

To prove the point, consider the original data set for Ozzy plc presented in Exercise 5.1 before any public or private knowledge of a profit warning or economic recession.

Share Capital: Authorised and Issued (£1.00)	£100 million
Profit after Tax	£10 million
Dividend Percentage	5%
Market Capitalisation of Equity	£200 million

And as a prelude to the Exercises in Part Five that deal with takeover activity, it would be useful to amend this table for future reference using the post-recession data.

## Selected References

1. Hill, R.A., *Corporate Valuation and Takeover: Parts One, Two and Three*, [bookboon.com](http://bookboon.com) (2011).
2. Miller, M. H. and Modigliani, F., "Dividend policy, growth and the valuation of shares", *The Journal of Business of the University of Chicago*, Vol. XXXIV, No. 4 October 1961.



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