

Estimating Investment Risk, Post-Enron

Alan Banks, CEO, Global Risk Management

Forget media and advertising – today’s creative types are the CEOs and finance directors of major corporations. All jesting aside, however, they are not entirely to blame for the wanton destruction of value we have seen in companies such as Global Crossing, Enron, WorldCom, Qwest, Dynegy, Xerox, Vivendi, and Tyco – although their current reluctance to sign off on their company balance sheets might indicate otherwise. Major fraud requires major collusion – and companies have found many willing partners in the auditing profession and among financial analysts – whose firms’ profits depend on fees from equity trading, IPOs and M&A, all of which in turn depend on rising share prices.

Of course, to some extent that is old news and is already in the price of financial assets. What investors are struggling with is how to assess the fair value of financial assets in a very different financial environment. There are significant returns to be made from many shares and bonds at current prices, but at what risk?

During my career I have been both a financial analyst and an investment banker. Now I run Global Risk Management (GRM), Europe’s leading provider of non-financial research to the international investment community, and it seems to me we haven’t had a decent and informed debate on risk and its effect on the price of financial assets for some time. There have been lots of throwaway lines like “shares are at their riskiest for 30 years” but what does that mean? And what about other investment capital providers – in many instances bondholders and lending banks have lost as heavily as equity investors and may end up with equity as companies restructure.

ASSESSING THE INTANGIBLES

It is worth revisiting the accepted method of valuing investments, the capital asset pricing model as it is generally called, and seeing whether that model is still valid, and what changes to the assumptions might

have to be made to account for the current environment. My hypothesis is that it is the nature of companies that has changed, not the way of valuing them. As a result the different elements of investment risk have changed, not in their nature but in their relative importance in the calculation of value.

The value of intangible assets is significantly influenced by the qualitative aspects of company performance, and therefore these aspects have gained in importance versus financial criteria.

We are in the era of the intangible corporation. Stock, fixed assets and debtors have been replaced by goodwill, brand value, intellectual property, intellectual capital (including people assets) and off-balance sheet assets and liabilities. The value of intangible assets is significantly



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influenced by the qualitative aspects of company performance, and therefore these aspects have gained in importance versus financial criteria. Qualitative criteria arise in three main areas: corporate governance, the environmental impact of company operations, manufacturing processes and products, and corporate social behaviour. They include critical areas of equity risk such as bribery and corruption, management culture and process (e.g. Enron, Worldcom, Vivendi), environmental claims (Exxon), product liabilities (e.g. the tobacco companies), impact of new technologies (Monsanto and GMOs), child and bonded labour (e.g. Nike, GAP, Nestlé) and human rights – all areas that have the potential these days to shatter company reputations. The potential financial effect of this type of risks has increased substantially as a result of the rising number of cases being brought under the US’s 200-year old Alien Torts act which allows US class actions for non-US domiciled litigants.

But where in the capital asset pricing model are we meant to account

for the enhanced sensitivity to these risks, and where can we find an assessment of them? Although many people in the investment world are apt to forget it, the theoretical value of a share is the value of future distributable earnings discounted back to the present day. As a shareholder all you really get is the right to those distributable earnings, and (arguably) the value of your vote. However, your vote only has a financial value if it is exercised in a way that increases distributable earnings in the future – by improving management, directing management strategy, or changing capital investment policy. So you don't normally ascribe a separate value to it, except if you are acquiring majority control.

Therefore, to value a company's equity you need a reliable model for distributable earnings, and an informed estimate for the discount rate. Sounds easy? Unfortunately reliable estimates of both historic and future company earnings have become rarer than financial analysts' bonuses, and the factors affecting the discount rate have become more opaque than Enron's accounts.

ARRIVING AT THE DISCOUNT RATE

It is worth remembering that if a future risk to company earnings is quantifiable – both as to amount and time – then it should be included in the earnings model. If a risk is known to exist but is not quantifiable, it should be adjusted for in the discount rate.

So, how do you calculate the discount rate? Well it is comprised of three main elements, all of which have become very difficult to estimate in current market conditions, see figure 1.

The risk free rate is usually taken to be the government bond yield of the country of domicile of the company being valued. In fact you should time match the risk free rate to the period of the earnings, so that really means using the government bond yield curve. Let's not get into the fascinating question as to whether

government bonds should be considered to be risk free – they shouldn't. The current difficulty with the risk free rate is that it is artificially low because of the liquidity being pumped into world financial markets to try to sustain asset prices. A couple of years ago when we had robust economic performance and rising stock markets (i.e. stable investment conditions) the 10-year US risk free rate was around 6.5%. In the current period of economic slump and declining equity prices – intuitively one would believe that the risk of owning financial assets has significantly increased – the 10-year risk free rate is 4.25%. If the real risk of owning equities has gone up, and the risk free rate has gone down, then either or both of the individual stock Beta or the investment risk premium must have increased dramatically! I contend that both are currently much higher than most analysts assume.

Beta is a measure of the implied volatility in a company's share price. It is calculated by reference to historic share price movements and is heavily smoothed. This historic measure of Beta is used in the discount rate that is applied to future distributable earnings. Logically, this is only valid if Beta isn't changing, or changes slowly. However, recent market action has shown us that volatility does change – often dramatically – and it does matter when you measure it. Should we assume that the current exceptionally high volatility reverts to long-term trends, or not? What we need is a forward indicator of Beta: what will it be in 1, 5, 10 years' time? Unfortunately, I don't know if anyone can answer this question. So if we are going to have to guess future Beta, and the current risk free rate is artificially low, then it is even more important that we try to get the earnings model and the investment risk premium right if we are to have any chance of putting a value on equities.

Lets turn to the investment risk premium. First of all, what is it? Investments such as equities are

considered to be riskier than government bonds, so investors require a greater return for investing in equities to compensate for that greater risk. That greater required return is the investment (or equity) risk premium. So, how do analysts calculate it? Well, if you really want the awful truth – they guess. You can calculate what it has been in the past by looking backwards at share prices vs. bond yields and the empirical evidence from the market is that it has varied significantly over time – from between approximately 2% and 7%. However, we are left with the same intellectual problem as for Beta. In an era when careless or greedy managements are destroying shareholder value at an unprecedented rate, what we really need to know is what the equity risk premium should be in the future, in order to be able to discount future distributable earnings and therefore arrive at a fair value for equities today. We need a forward equity risk premium indicator.

ENTER NFA: A DIFFERENT VIEW OF CORPORATE PERFORMANCE

Luckily help is at hand, (there wouldn't be much point to this article if it wasn't!) There is a whole research industry dedicated to analyzing the different elements of equity risk, anticipating how those risks will change over time, and what new risks are likely to arise. The reason the asset management community doesn't know these researchers are analyzing the future equity risk premium is that many of the researchers don't realize it themselves!

Non-financial equity analysis (NFA) grew out of the need to provide a different view of corporate performance for 'ethical' or 'socially responsible investment' (SRI) funds. NFA is focused precisely on those qualitative areas of company performance that have to be accounted for in the equity risk premium (discount rate) because they cannot be accounted for in the earnings models. It is this ability of NFA to identify future equity risk that is leading

$$\text{Discount rate} = \text{Risk Free Rate} + [\text{Individual Stock Beta} \times \text{Investment Risk Premium}]$$

Figure 1

“Non-financial equity analysis (NFA) is focused precisely on those qualitative areas of company performance that have to be accounted for in the equity risk premium (discount rate) because they cannot be accounted for in the earnings models.”

active managers of all investment styles to use NFA, alongside and integrated with financial analysis, to enhance their stock picking.

NFA concerns itself with analyzing the risks companies are running in many areas including, for example:

- Management quality and culture
 - Processes for identification and control of business risks
 - Board committees: structure and operation
 - Alignment of management and investor interests
 - Bribery and corruption
 - Disclosure and transparency.
- Permanence of intangible value
 - Consumer attitudes to products and consumer boycotts
 - Impact of/acceptance of new technologies
 - Brand values vs. corporate values
 - Legislation affecting product design, manufacture and advertising/distribution.
 - Regulatory change affecting business environment
- Future liability to class actions:
 - Environmental damage: manufacturing processes, products, transportation and packaging
 - Product liability, particularly health and safety, manufacturing and labelling
 - Human rights.
- Long-term access to people skills
 - Labour relations
 - Training
 - Attractiveness of company to new recruits
 - Health and safety
 - Child and bonded labour.
- Collateral reputation risk
 - Supply-chain issues
 - Moral and ethical dilemmas: e.g. animal testing, GMOs, transgenics
 - Geographic location of

operations: e.g. implied support for corrupt regimes; activities in ‘axis of terror’ countries.

- Is the Finance Director an ex-investment banker?

OK, that last criterion was a bit unfair. The good news is that NFA can be used as a sophisticated indicator of current and future investment risk. The even better news is that non-financial analysts usually have no conflicts of interest. At GRM we have 25 analysts in London and Paris; and in common with similar firms we are wholly independent; our research is paid for directly by asset managers; and we are employed specifically to identify the risks that companies are running. We may be digging for diamonds, but usually you have to shift a lot of dirt to find a diamond.

NFA is becoming an essential part of company analysis. Its use in the capital asset pricing model is to identify current and future investment risk. It can be used to determine adjustments to estimates of distributable earnings (where the risks are quantifiable) and the discount rate to be applied to those earnings (where the risks are not quantifiable). As equity risk premiums, leveraged by higher volatility, have risen significantly it has become much more important to understand how and where investment risk arises. This is the central role of non-financial analysis. So, if you think there is value in the markets at current levels, but the sound of ticking bombs is keeping you awake at night, give me a call!

London-based GRM is Europe’s largest non-financial equity analysis firm. GRM provides independent research into approximately 1,000 companies and is developing a public ratings service for those companies. ■