



Global Equity Strategy

Abu Ghraib: Lessons from behavioural finance
and for corporate governance

Prisons & corporate malfeasance

Bad apples or bad barrels? It is tempting to believe bad behaviour is the result of a few rotten individuals. However, the overwhelming psychological evidence suggests that if you put good people into bad situations they usually turn bad. Corporate malfeasance and the events in Iraqi prisons are examined and the lessons explored.

- ▶ We all tend to assume that our own actions are the results of a careful analysis of the situation we find ourselves in. However, we also assume that everybody else's actions are the result of their inherent attitudes. This is called the fundamental attribution error. It means that we shouldn't be so fast to judge others, since we can't be sure that we would act differently if we found ourselves in their shoes.
- ▶ Back in 1971, Zimbardo (a psychology prof) put willing mentally and physically sound volunteers into a mock prison environment. People were randomly assigned to be guards or prisoners. Despite this random allocation of roles, the guards abused the prisoners, and the prisoners became zombie-like. The experiment was halted after just six days.
- ▶ Milgram (another psychology prof) was horrified to find that over 60% of people were willing to subject others to a potentially lethal electric shock merely at the instruction of a man in a white coat with a clipboard. Such is our obedience to authority.
- ▶ Both experiments are classic evidence for the importance of understanding context on predicting behaviour. The factors that lead to increased risk of turning bad are explored inside.
- ▶ From a corporate governance point of view, the importance of situational factors should lead us to be on our guard for situations and incentives that could give rise to bad behaviour. If found guilty, the men now standing trial for misbehaviour during the bubble years are unlikely to be the last corporate wrong-doers. Investors should note that academic work has shown that good governance does pay.

James Montier

+44 20 7475 6821
james.montier@drkw.com

Global Investment Strategy

Global Asset Allocation Albert Edwards

+44 20 7475 2429
albert.edwards@drkw.com

Global Equity Strategy James Montier

+44 20 7475 6821
james.montier@drkw.com

Global Sector Strategy Philip Isherwood

+44 20 7475 2435
philip.isherwood@drkw.com

PLEASE REFER TO THE TEXT AT THE END OF THIS REPORT FOR OUR DISCLAIMER AND ALL RELEVANT DISCLOSURES. IN RESPECT OF ANY COMPENDIUM REPORT COVERING SIX OR MORE COMPANIES, ALL RELEVANT DISCLOSURES ARE AVAILABLE ON OUR WEBSITE www.drkwresearch.com/disclosures OR BY CONTACTING DRKW RESEARCH DEPARTMENT, 20 FENCHURCH STREET, LONDON, EC3P 3DB.

Online research: www.drkwresearch.com Bloomberg: DRKW<GO>

Dresdner Kleinwort Wasserstein Securities Limited, Authorised and regulated by the Financial Services Authority and a Member Firm of the London Stock Exchange PO Box 560, 20 Fenchurch Street, London EC3P 3DB. Telephone: +44 20 7623 8000 Telex: 916486 Registered in England No. 1767419 Registered Office: 20 Fenchurch Street, London EC3P 3DB. A Member of the Dresdner Bank Group.





Prisons and corporate malfeasance

This week sees the start of three trials in the US all related to corporate malfeasance during the bubble years. Bernie Ebbers, formerly of WorldCom fame goes on trial in New York. Dennis Kozlowski, formerly head of Tyco will also enter the dock for his second trial, the first having ended with a hung jury. Down in Alabama, Richard Scrushy, former head honcho of HealthSouth will also be appearing before the courts.

Also in court in the US are some more of the soldiers accused of abusing prisoners in the Abu Ghraib prison. Our own press here in the UK are full of stories of prisoner abuse by UK soldiers.

What could connect these events? The answer is that human nature lies at the root of both sets of problems. In order to understand what drives this behaviour we need to outline two diametrically opposed views – the situational and dispositional perspectives. Those who subscribe to the situational viewpoint argue that if you put good people in bad places, they tend to become bad. That is, it is the situation that determines behaviour. Those who follow the dispositional school believe that people's actions reflect their attitudes, or that it is people's nature that determines their behaviour.

Fundamental attribution error

We all tend to believe that our own actions are the considered reflective outcome of our analysis of the situation. At the same time we believe that others' actions are reflections of their underlying disposition. We see ourselves from a situational viewpoint, and others from a dispositional perspective. Psychologists call this the fundamental attribution error (also known as actor/observer bias).

Nisbett et al¹ were the first to observe this schism in beliefs. Nisbett and his co-authors asked male students to write four paragraphs on why they had liked the girl they had dated most regularly in the past year or so, and why they had chosen their particular major at university. They were then asked to repeat the process but pretending to be their best friend. Finally, they were asked to repeat the process pretending to be their best friend being them (i.e. seeing themselves through their best friends eyes).

The sentences they had written were then scored on the basis of the number of times situational remarks were made (i.e. she's a relaxing person – a comment about external factors) and the number of times dispositional remarks were recorded (i.e. I need someone I can relax with – a comment about internal factors or one's self).

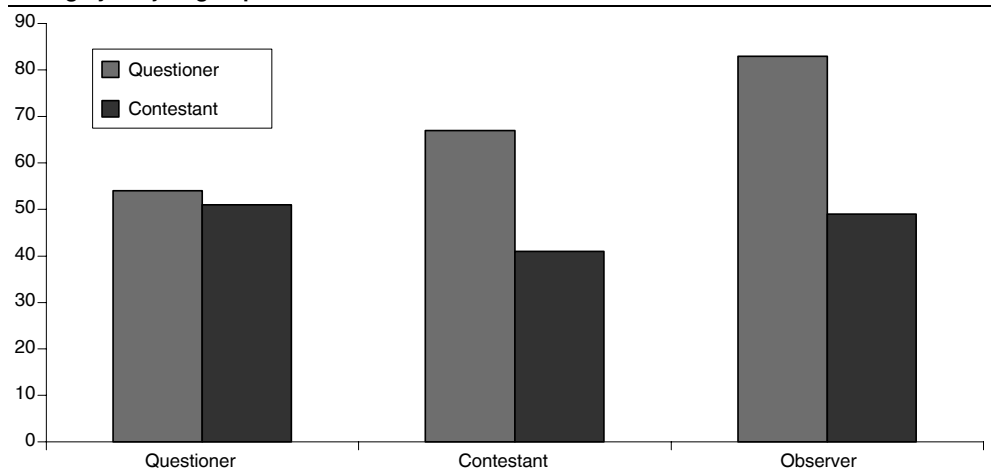
¹ Nisbett, Caputo, Legant and Maracek (1973) Behaviour as seen by the actor and as seen by the observer

Subjects gave more than twice as many situational reasons compared to dispositional reasons when talking about their girlfriends. Subjects gave four times as many dispositional reasons for their friend's choice of college course than situational reasons. When pretending to be their best friend commenting upon themselves, subjects duplicated the results for when they were commenting upon their best friend's choices.

Ross et al² offer an alternative example. They asked people to participate in a quiz game. The subjects were divided into three groups, questioners, contestants and observers. Questioners had to compose 10 difficult questions to ask the contestants. The contestants, of course, had to try and answer. The final group watched the interaction.

The subjects were asked to rate the general knowledge of the questioners and the contestants. The results are shown in the chart below. The contestants' ratings are consistent with the fundamental attribution error. That is to say, they rated the questioners as having higher levels of general knowledge than they themselves had. The observer's scores were even more pronounced in favour of the questioners. Behaviour was essentially ascribed to dispositional qualities, rather than the subject's role in the study. That is, the participants who asked the questions were seen as having very good general knowledge, whilst those who answered them were seen as having limited general knowledge – their actions and behaviour were attributed to their underlying nature (dispositional view). Whereas in fact they reflected the random role assignment at the start of the experiment (situational factor).

Rating by subject group



Source: Ross et al (1975)

The fundamental attribution error leads us to believe that the various heads of US corporates who are now on trial are essentially bad people. In a similar fashion, it is tempting to believe that the actions of the prison guards at Abu Ghraib are just the limited actions of a few 'bad apples'.

² Ross, Amabile and Steinmetz (1977) Social roles, social controls, and biases in social perception processes, *Journal of Personality and Social Psychology*, 35

However, two classic experiments in social psychology argue strongly for a more situational perspective. That is we shouldn't be so fast to judge the accused as bad or evil people. We simply cannot be sure that we wouldn't act in a similar fashion if placed in a similar circumstance.

Zimbardo's prison experiment³

The events in Abu Ghraib and other prisons were actually sadly predictable (of course, all the more so with hindsight). In 1971, Philip Zimbardo⁴ designed an experiment that has eerie parallels with events of late.

Zimbardo and his colleagues literally built a prison under the psychology department of Stanford University. The experimenters selected 22 subjects to participate in the prison environment. The 22 were selected from an initial pool of 75. The chosen 22 were judged to be the most stable, both mentally and physically, the most mature, and the least involved in anti-social behaviour. They were, to all intents and purposes, the most 'normal' of the potential candidates. The resulting group predominately consisted of middle class Caucasians. They were unknown to each other. All participants were paid \$15 per day.

On a *random* basis, half the subjects were assigned to the role of guards, and half to the role of prisoners. The 'prisoners' were to remain in the prison for 24 hours a day for the duration of the experiment. The 'guards' worked on three-man, eight hour shifts, going about their usual lives at other times.

The 'guards' were briefed on the day before the arrival of the 'prisoners'. Their instruction was simple "maintain a reasonable degree of order within the prison necessary for its effective functioning". The specifics of how this was to be achieved were left to the discretion of the guards. An explicit prohibition against the use of physical punishment or aggression was given. The guards wore khaki shirts and trousers, carried a whistle and a nightstick, and were told to wear reflecting sunglasses.

The prisoners had a somewhat rougher time. The police 'arrested' each of the prisoners at their residences. They were charged with either armed robbery or burglary, read their rights, and handcuffed, and taken to the police station. At the station, each was fingerprinted and photographed just like any other suspect. They were then blindfolded and taken to the mock prison.

On arrival, the prisoners were stripped, sprayed with a delousing liquid, left to stand naked alone for a while and then put into their new prison uniform. These consisted of a loose fitting smock, with an id number on the front and back. Underwear was not allowed, a light lock and chain was placed on the ankle.

The prisoners were to be served three bland meals per day, were allowed three supervised toilet visits, and given two hours of reading or letter writing per day. Work

³ See www.prisonexp.org for a slide show and further details on this experiment

⁴ Haney, Banks and Zimbardo (1973) A study of prisoners and guards in a simulated prison, Naval Research Reviews



assignments were issued. Two visiting periods per week were scheduled. Three times a day the prisoners assembled for a roll call, during which they were tested on their id numbers and the rules of the prison.

At first such roll calls lasted only around ten minutes. However, as the days progressed so these calls extended until some lasted several hours! Many of the pre-set features of the routine were modified or ignored by the guards, and many of the privileges (such as reading) were forgotten as time went on.

The results of this experiment were dramatic to say the least. Zimbardo et al note “guards and prisoners showed a marked tendency toward increased negativity of affect...prisoners expressed intentions to do harm to others more frequently...encounters became negative, hostile, and dehumanizing. Prisoners immediately adopted a generally passive response mode, while guards assumed a very active initiative role in all interactions.”

The prisoners became zombie-like in obedience. Even trying to side with the guards against each other. The guards became sadists who seemed to enjoy dominating and humiliating the prisoners.

Zimbardo⁵ recently noted the disturbingly similar outcomes of his prison experiment and events in Abu Ghraib. The similarities even extend to the sorts of humiliation inflicted by the guards on the prisoners! Zimbardo notes that in his ‘prison’ the guards forced the prisoners to engage in mock sodomy, a feature repeated in Abu Ghraib.

The most dramatic evidence of the impact was seen in the extreme reactions of five prisoners. They had to be released because of extreme emotional depression, crying, rage and acute anxiety. The experiment was terminated after just six days!

As you read this, the chances are you are sitting saying to yourself, I would behave differently. After all, there was nothing to stop the guards and prisoners interacting in a pleasant fashion. They were simply put into an environment. The rules of which were largely flexible and endogenously determined. But remember, these were ordinary young men, fit, healthy and generally well adjusted. Also remember, the fundamental attribution error outlined at the very start of this note. Zimbardo’s work seems to offer massive support for a situational view of the world.

Milgram: The man that shocked the world⁶

The second classic experiment from social psychology that is relevant here is Stanley Milgram’s⁷ work. Intriguingly, Milgram was a classmate of Zimbardo. Milgram’s work was triggered in the wake of World War II. He wanted to investigate why it was that so many ordinary people either simply said nothing about their leaders clearly abhorrent policies, or even worse chose to follow their example.

⁵ Zimbardo (2005) You can’t be a sweet cucumber in a vinegar barrel, Interview with *Edge*

⁶ This title is stolen from Thomas Blass’ excellent biography of Stanley Milgram

⁷ Milgram (1974) Obedience to authority



Milgram devised a simple but stunningly effective experiment. Subjects were asked to help in an experiment. They were told they would be administering electric shocks to a 'learner' at the instruction of a 'teacher'. The subjects were told that they were involved in a study on punishment effects on learning and memory.

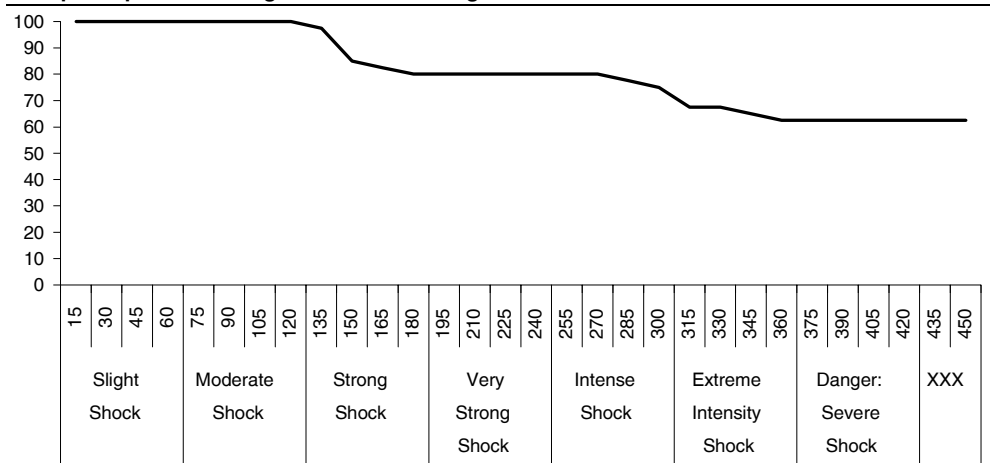
The subjects sat in front of a box with electric switches on it. The switches displayed the level of volts that was being delivered, and a text description of the level of pain ranging from 'slight' through to 'very strong' and up to 'danger severe', culminating in 'XXX'. When the buttons were depressed, a buzzing sound could be heard. The 'teacher' was a confederate of the experimenters, and wore a white coat and carried a clipboard. They would instruct the subjects when to press the button.

In the classic variant of the experiment, the subject couldn't see the person they were shocking, but they could hear them. At 75 volts, the 'learner' grunts, at 120 volts he starts to complain verbally, at 150 volts he demands to be released, at 285 volts the 'learner' makes a response that Milgram said could only be described as 'an agonized scream'.

Before conducting the experiment, Milgram's prior belief was that very few people would administer high levels of shock. Indeed forty psychiatrists canvassed by Milgram thought that less than 1% would give the full 450-volt shock. After all, they reasoned, Americans just didn't engage in such behaviour. (Sounds like a classic case of the fundamental attribution error doesn't it!)

The chart below shows the percentage of respondents who progressed to each level of voltage. 100% of ordinary Americans were willing to send up to 135 volts (at which point the 'learner' is asking to be released) through someone they didn't know. 80% were willing to go up to 285 volts (at which point they are hearing agonising screams). Over 62% were willing to administer the full 450 volts, despite the screams and the labels on the machine stating 'severe danger' and 'XXX'!

% of participants reaching each level of voltage



Source: Milgram (1974)



Nor are Milgrams results unique. The table below shows the average compliance level to the maximum voltage from a number of studies. Incidentally, university ethics boards outlawed Milgram style experiments in the late 1980s, so no more modern studies are available, although we have little reason to believe they would show anything different from the majority of findings below.

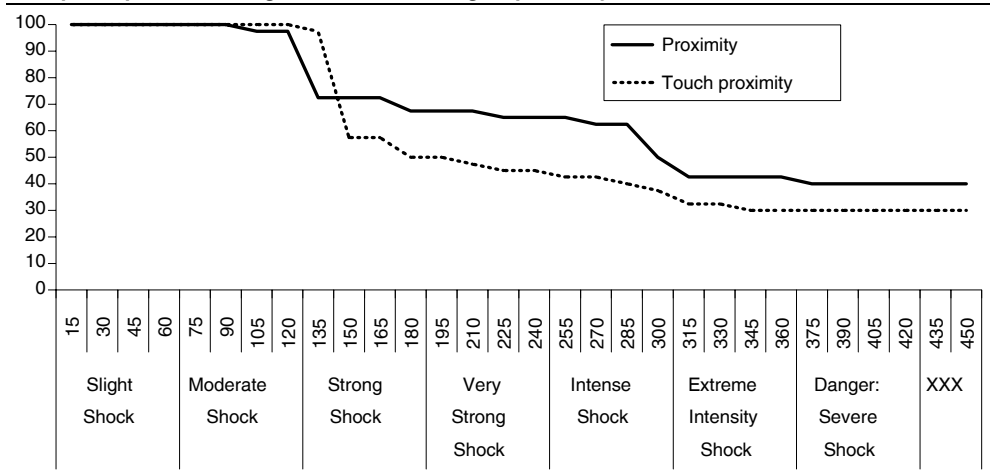
International 'Milgram' studies

Study	Country	Percentage obedient to the highest level of shock
Milgram	USA	62.5
Rosenham	USA	85
Ancona and Pareyson	Italy	85
Mantell	Germany	85
Kilham and Mann	Australia	40
Burley and McGuiness	UK	50
Shanab and Yahya	Jordan	62
Miranda et al	Spain	90
Schurz	Austria	80
Meeus and Raaijmakers	Holland	92

Source: Smith and Bond (1994)

Milgram tested many variations of his experiment. However few seemed to have major impacts upon the level of obedience to authority. For instance, the chart below shows the effects of enabling the subject to now see (as well as hear) the 'learner', and when the subject had to force the 'learners' hand onto a metal plate to administer the shock. In the former condition still 40% of subjects went to 450 volts. In the latter, 30% still went to the maximum level of shock!

% of participants reaching each level of voltage – proximity variants



Source: Milgram (1974)

Once again these were ordinary people, people like you and I, yet simply because a figure in authority instructs them to do so they become willing to make another person suffer. Another clear win for the situational perspective.

The Milgram experiment has some very clear implications for finance. Firstly, given people's tendency to obey, **a culture of corporate integrity must come from the very top down**. Simply stated, if the head of an organisation orders an employee to do something, the evidence here suggests they will generally comply.



From a situational viewpoint the man at the top may not be intrinsically bad, but if put in the 'correct' environment may turnout that way. I have regularly berated the use of stock options to pay management. In our view, it tends to cause the holders of such options to be extremely myopic and take on excessive risk since they enjoy an asymmetric payoff due to the nature of zero downside inherent within options. However, once such devices are in place, the situational prediction is that management will behave in a manner consistent with the incentive. Often, share options are enough to turn otherwise good people bad.

Another application of Milgram's results is that we should train analysts to be critical of company management. The more god-like the management, the easier it will be for them to influence analysts who cover the stock. CEOs are generally successful people. They have made it. As such we tend to interpret their success as the result of their disposition (the fundamental attribution error). We are in awe of such individuals. Few, if any, analysts were willing to ask questions of Bernie Ebbers at the height of the TMT boom, when he and his ilk were regarded as the new masters of the universe⁸.

Dissent is key. We must learn to question those in authority. In the past, my managers have often reminded me that investment banking is not a democracy. Indeed it is not, but if we lose the will to dissent the results can be disastrous (at least that is my defence for being a cantankerous pain to manage!).

The only thing Milgram found that consistently resulted in rapid drop offs in compliance within his experiment was dissent. For instance, Milgram ran one variant of his experiment with one psychologist and three helpers (two of whom were confederates of the experimenters, and one genuine subject). One of the helpers asks the question, another says whether the answer is correct, the third (the real subject) throws the switch to administer the shock.

At 150 volts one of the helpers (one of the confederates) walks out of the experiment. At 210 volts, the other helper (confederate) also walks out. The psychologist goes on alone with the true subject. The chart below shows the percentage of compliance at various voltages.

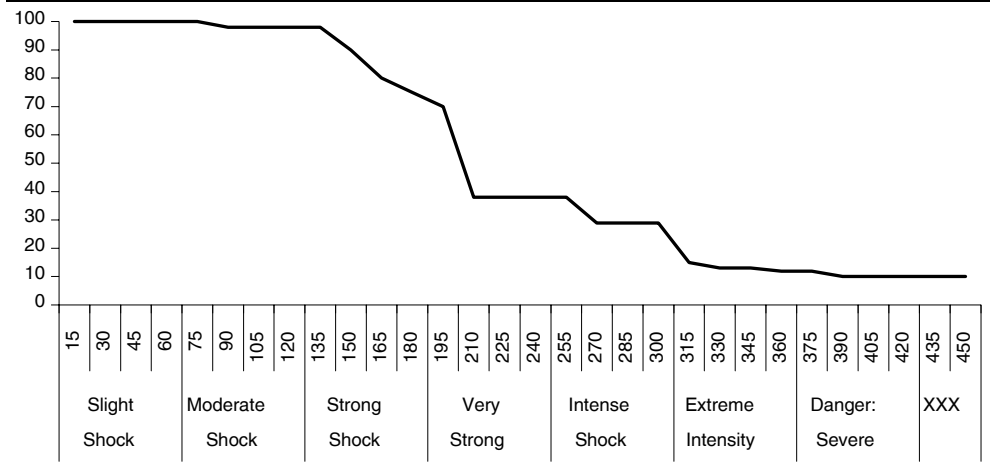
Once the first helper leaves the number of compliant subjects drops from 90% to around 35%. Following the second helper walking out, the compliance rate drops steadily, although 10% still go on to administer the maximum voltage.

The single best method of generating dissent amongst the subjects was to have conflicting authorities. In this version two psychologists were present and one subject. At 150 volts, one of the psychologists began a prepared argument with the other over whether the experiment should be stopped. As the chart below shows, this argument resulted in the complete cessation of shocking.

⁸ Intriguingly, Malmendier and Tate (2004) Superstar CEOs show that award winning CEOs extract more compensation from their companies following awards. They spend more time writing books and lecturing and gaining board seats. Most importantly, firms with Superstar CEOs have stocks that underperform the market on a one, three and five year horizon!

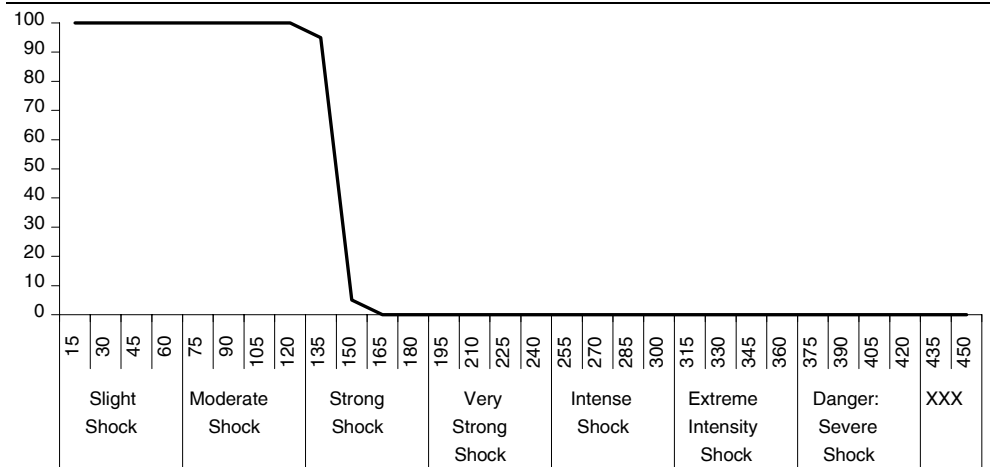


% of participants reaching each level of voltage – dissenting peers



Source: Milgram (1974)

% of participants reaching each level of voltage –dissenting authority



Source: Milgram (1974)

Morck⁹ has used the Milgram experiments to argue that truly independent directors are our best hope of good governance. Too many boards are populated by cronies of the management. The Higgs report finds that almost half of the so-called independent directors on UK boards are recruited by the CEO through personal contacts or friendships! Morck argues that dissenting boards may help “induce greater rationality and more considered ethics in corporate governance”.

New support for good governance comes from a recent study by Bebchuk et al¹⁰. They construct an entrenchment index, which attempts to measure the limits of shareholders to impose their will onto management. There are six inputs into their score – whether the company has a staggered board, whether it has limits to shareholders’ amendments of the bylaws, whether a supermajority is required for merger and charter amendments, whether poison pill and golden parachutes are used. Firms are ranked

⁹ Morck (2004) Behavioral finance in corporate governance – independent directors and non-executive chairs, HIER Working papers 2037

¹⁰ Bebchuk, Cohen and Ferrell (2004) What matters in corporate governance, DP 491, available from www.ssrn.com

on the basis of the number of these provisions they have with 0 being a low entrenchment firm, and 6 being firms with very high levels of entrenchment.

Bebchuk et al find that an equal weighted long short portfolio which is long those stocks with a 0 score and short those stocks with a 6 score generates a 7.2% annual compound abnormal return (after correcting for market, size, style and momentum) in the sample 1990-2003. They also find that the return rises to 9.6% when value weighted portfolios are used! So good governance pays, but it is much more than just a box ticking exercise. Indeed just as this note was going to press, an email interview with Thomas Donaldson, a legal studies professor from Wharton, arrived in my inbox. The interview contained the following passage: "We have followed a mythology that if you write an elaborate code of ethics, appoint people to distribute it, and get everybody to sign off on a fat rule book every year, this will somehow prevent major disasters. We have abundant evidence now that it simply doesn't work this way."

The conditions that turn good people bad

In order to understand the factors that lead good people to behave in a bad way, we can turn to the work of Albert Bandura¹¹. Bandura has spent many years studying the factors that lead to moral disengagement. His major findings can be summarised as follows:

Moral justification – behaviour is reconstructed so it is no longer deemed to be immoral. The clearest examples of such behaviour are wars in which the enemy is seen as a ruthless oppressor, and thus those fighting the war are morally justified.

Euphemistic labelling – language is very important as it shapes and frames our thoughts. Harmful conduct can be made seemingly respectable if it is given the right name. For instance, the euphemism of 'resettlement' for the mass murder, 'voluntary refugee camps' for concentration camps and 'collateral damage' for civilians killed during military actions.

Advantageous comparison – how behaviour is viewed is coloured by what it is compared against. Setting up off balance sheet entities to hide transactions may seem perfectly reasonable when compared to the evils of murder.

Displacement of responsibility – this is the key finding from Milgram's work. People seem able to suspend moral judgement if a 'legitimate' authority accepts responsibility for their actions. The 'I was only following orders' defence.

Diffusion of responsibility – moral disengagement is easier in groups. Bandura et al¹² found that people acted far more cruelly under group responsibility than when they hold themselves personally accountable for their actions.

¹¹ See for example, Bandura (1999) Moral disengagement in the perpetration of inhumanities, *Personality and Social Psychology Review*, 3

¹² Bandura, Underwood and Fromson (1975) Disinhibition of aggression through diffusion of responsibility and dehumanization of victims, *Journal of Research in Personality*, 9



Disregard or distortion of consequences – it is easier to do the wrong thing when the consequences are ignored or minimised. The shareholder is a pretty abstract concept from a manager's point of view, so the consequences of harming the shareholder may be easily minimised. In the same way, smart bombs and surgical strikes enable us to wage war from a distance never before known.

Dehumanisation – It is far easier to hurt or harm someone who we view as non-human. In the Bandura et al study cited above, in one of the experiments a group of subjects were led to believe that they were overhearing the research assistant tell the experimenter that the students from another college were ready to start the study in which the listeners would be administering electric shocks to these students from another college.

The exact phrasing they overheard was randomly selected from one of three possible choices. The visiting students were either described as 'nice', 'animal-like' or without any descriptive label.

The shock intensity varied massively with the description the students overheard. When the visitors were described as 'animals', the shock level rose linearly over ten rounds. Those labelled 'nice' were given the least shock. So, just overhearing a single word proved to be enough to dehumanise in this study.

It is also worth noting the limits to self-control that we outlined in last week's note. The more we use self-control, the less self control we have ready to use for the next occasion.

Conclusions

People have a bad habit of believing others act according to their disposition, whilst simultaneously believing we act according to our circumstances. It is tempting to believe that bad behaviour is the result of a few bad apples. However, the bulk of evidence argues that in general, a situational perspective is much closer to the truth. That is to say, good people will go bad in the wrong situation. It isn't a particularly comforting view of humanity.

From a corporate governance point of view, the situational perspective tells us that we must always be on our guard for situations that could give rise to bad behaviour. The men now standing trial for misbehaviour during the bubble years are unlikely to be the last corporate wrong doers.



In respect of any compendium report covering six or more listed companies, please refer to the following website for all relevant Italian disclosures: <http://www.drkwresearch.com/disclosures/>

This report has been prepared by Dresdner Kleinwort Wasserstein, by the specific legal entity named on the cover or inside cover page.

The relevant research analyst(s), as named on the front cover of this report, certify that (a) the views expressed in this research report accurately reflect their own views about the securities and companies mentioned in this report; and (b) no part of their compensation was, is, or will be directly or indirectly related to the specific recommendation(s) or views contained in this report.

United Kingdom: This report is a communication made, or approved for communication in the UK, by Dresdner Kleinwort Wasserstein Securities Limited (authorised and regulated by the Financial Services Authority and a Member Firm of the London Stock Exchange). It is directed exclusively to market counterparties and intermediate customers. It is not directed at private customers and any investments or services to which the report may relate are not available to private customers. No persons other than a market counterparty or an intermediate customer should read or rely on any information in this report. Dresdner Kleinwort Wasserstein Securities Limited does not deal for, or advise or otherwise offer any investment services to private customers.

European Economic Area: Where this report has been produced by a legal entity outside of the EEA, the report has been re-issued by Dresdner Kleinwort Wasserstein Securities Limited for distribution into the EEA.

United States: Where this report has been approved for distribution in the US, such distribution is by either: (i) Dresdner Kleinwort Wasserstein Securities LLC (DrKWS LLC); or (ii) other Dresdner Kleinwort Wasserstein companies to US Institutional Investors and Major US Institutional Investors only; or (iii) if the report relates to non-US exchange traded futures, Dresdner Kleinwort Wasserstein Limited (DrKWL). DrKWS LLC, or in case (iii) DrKWL, accepts responsibility for this report in the US. Any US persons wishing to effect a transaction through Dresdner Kleinwort Wasserstein (a) in any security mentioned in this report may only do so through DrKWS LLC, telephone: (+1 212) 429 2000; or (b) in a non-US exchange traded future may only do so through DrKWL, telephone: (+ 11 44) 20 7623 8000.

Singapore: This report is being distributed for DrKW in Singapore by Dresdner Bank AG, Singapore Branch to clients who fall within the description of persons in Regulation 49 of the Securities and Futures (Licensing and Conduct of Business) Regulations 2002.

Hong Kong: This report is being distributed for Dresdner Kleinwort Wasserstein in Hong Kong by Dresdner Kleinwort Wasserstein Securities Limited. Unless permitted to do so by the securities laws of Hong Kong, no person may issue or have in its possession for the purposes of issue this report, whether in Hong Kong or elsewhere, which is directed at, or the contents of which are likely to be accessed or read by, the public in Hong Kong, other than with respect to the securities referred to in this report which are or are intended to be disposed of only to persons outside Hong Kong or only to "professional investors" within the meaning of the Securities and Futures Ordinance (Cap.571) of Hong Kong and any rules made thereunder, and to persons whose ordinary business is to buy and sell shares or debentures.

Japan: Where this report is being distributed in Japan, such distribution is by either (i) Dresdner Kleinwort Wasserstein (Japan) Limited, Tokyo Branch (DrKW(J)) to Japanese investors excluding private customers or (ii) other Dresdner Kleinwort Wasserstein companies, to entities falling within Article 2, Paragraph 1 of the Cabinet Ordinance for Enforcement of the Foreign Securities Firms Act. Any Japanese persons not falling within (ii) wishing to effect a transaction through Dresdner Kleinwort Wasserstein in any security mentioned in this report may only do so through DrKW(J), telephone: (+ 813) 6230 6000.

Australia: Neither Dresdner Bank AG ("DBAG") nor Dresdner Kleinwort Wasserstein Securities Limited ("DrKWSL") holds an Australian financial services licence. This report is being distributed in Australia to wholesale customers pursuant to an Australian financial services licence exemption for DBAG under Class Order 04/1313 or for DrKWSL under Class Order 03/1099. DBAG is regulated by BaFin under the laws of Germany and DrKWSL is regulated by the Financial Services Authority under the laws of the United Kingdom, both of which differ from Australian laws.

This report contains general information only, does not take account of the specific circumstances of any recipient and should not be relied upon as authoritative or taken in substitution for the exercise of judgment by any recipient. Each recipient should consider the appropriateness of any investment decision having regard to their own circumstances, the full range of information available and appropriate professional advice. The information and opinions in this report constitute judgment as at the date of this report, have been compiled or arrived at from sources believed to be reliable and in good faith (but no representation or warranty, express or implied, is made as to their accuracy, completeness or correctness) and are subject to change without notice. Any forecasts or price targets shown for companies discussed in this report may not be achieved due to multiple risk factors including without limitation market volatility, sector volatility, corporate actions, the unavailability of complete and accurate information and/or the subsequent transpiration that underlying assumptions made by DrKW or by other sources relied upon in the report were inapposite. This report does not constitute or form part of, and should not be construed as, any offer for sale or subscription of, or any invitation to offer to buy or subscribe for, any securities, nor should it or any part of it form the basis of, or be relied on in any connection with, any contract or commitment whatsoever. DrKW accepts no liability whatsoever for any loss or damage arising from any use of this report or its contents. Whilst DrKW may provide hyperlinks to web-sites of entities mentioned in this report, the inclusion of a link does not imply that DrKW endorses, recommends or approves any material on the linked page or accessible from it. DrKW accepts no responsibility whatsoever for any such material, nor for any consequences of its use. This report is for the use of the addressees only, is supplied to you solely in your capacity as an investment professional or knowledgeable and experienced investor for your information and may not be reproduced, redistributed or passed on to any other person or published, in whole or in part, for any purpose, without the prior, written consent of DrKW. DrKW may distribute reports such as this in hard copy, electronically or by Voiceblast. DrKW and/or any of its clients may undertake or have undertaken transactions for their own account in the securities mentioned in this report or any related investments prior to your receipt of it. DrKW may provide investment banking services (including without limitation corporate finance services), or solicit such business, for the issuers of the securities mentioned in this report and may from time to time participate or invest in commercial banking transactions (including without limitation loans) with the issuers of the securities mentioned in this report. Accordingly, information may be available to DrKW, which is not reflected in this report. DrKW and its directors, officers, representatives and employees may have positions in or options on the securities mentioned in this report or any related investments or may buy, sell or offer to buy or sell such securities or any related investments as principal or agent on the open market or otherwise. In this notice "DrKW" means Dresdner Bank AG and/or Dresdner Kleinwort Wasserstein Securities Limited and any of their affiliated or associated companies and their directors, officers, representatives or employees and/or any persons connected with them. **Additional information on the contents of this report is available on request.**

© Dresdner Kleinwort Wasserstein Securities Limited 2005

DRESDNER KLEINWORT WASSERSTEIN RESEARCH – RECOMMENDATION DEFINITION

(Except as otherwise noted, expected performance over next 12 months)

Buy	10% or greater increase in share price	Reduce	5-10% decrease in share price
Add	5-10% increase in share price	Sell	10% or more decrease in share price
Hold	+5%/-5% variation in share price		

Distribution of DrKW equity recommendations as of 31 Dec 2004

	All covered companies		Companies where a DrKW company has provided investment banking services (in the last 12 months)	
Buy/Add	280	49%	39	46%
Hold	202	35%	36	43%
Sell/Reduce	90	16%	9	11%
Total	572		84	

Source: DrKW