



1. Consider the following relationship between the amount of money spent by a state on welfare programs ( $Y$ ) and the state's revenue ( $X$ ):

$$Y = \alpha_1 + \alpha_2 D1 + \alpha_3 X + \alpha_4 (D1 * X) + \mu$$

where  $D1$  is a dummy variable that takes the value 1 if the state legislature is controlled by Democrats and 0 otherwise and  $*$  means multiplication. Your research assistant decided to define another dummy variable,  $D2$ , which takes the value 1 if the legislature is controlled by non-Democrats and 0 otherwise, estimate the following model instead:

$$Y = \beta_1 + \beta_2 D2 + \beta_3 X + \beta_4 (D2 * X) + \mu$$

Derive expressions for  $\alpha_3$  in term of the  $\beta$  s. \_\_\_\_\_ . (10 points)

2. Consider the following set of hypothetical data:

$Y$	$X_2$	$X_3$	
-10		1	1
-8		2	3
-6		3	5
-4		4	7
-2		5	9
0		6	11
2		7	13
4		8	15
6		9	17
8		10	19
10		11	21

Suppose you want to fit the model with the OLS method:

$$Y_i = \beta_1 + \beta_2 X_{2i} + \beta_3 X_{3i} + \mu_i$$

to the above data. (1) Can you estimate the three unknowns? Why or why not? \_\_\_\_\_ . (5 points) (2) If not, write down the linear function of  $\beta_2$  and  $\beta_3$  that can you estimate? \_\_\_\_\_ . (5 points)

3.  $X_1$ ,  $X_2$ , and  $X_3$  are uncorrelated variable each having the same standard deviation. What is the coefficient of correlation between  $X_1 + X_2$  and  $X_2 + X_3$ ? \_\_\_\_\_ . (10 points)
4. Suppose in the model  $Y_i = \beta_1 + \beta_2 X_{2i} + \beta_3 X_{3i} + \mu_i$ ,  $r_{23}$ , the coefficient of correlation between  $X_2$  and  $X_3$ , is zero. Therefore, someone suggest that you run the following regressions:  
 $Y_i = \alpha_1 + \alpha_2 X_{2i} + \mu_{1i}$  and  $Y_i = \gamma_1 + \gamma_3 X_{3i} + \mu_{2i}$   
 Express  $\hat{\beta}_1$  in term of  $\hat{\alpha}_1$ ,  $\hat{\gamma}_1$ , and  $\bar{Y}$  (where  $\hat{\beta}_1$  is the OLS estimator of  $\beta_1$ ,  $\hat{\gamma}_1$  is the OLS estimator of  $\gamma_1$ ,  $\bar{Y}$  is the sample mean of  $Y$ ). \_\_\_\_\_ . (10 points)  
 , and  $\hat{\alpha}_1$  is the OLS estimator of  $\alpha_1$





5. Let  $X_i^* = (X_i - \bar{X})/S_x$  and  $Y_i^* = (Y_i - \bar{Y})/S_y$  where  $\bar{X}$  and  $\bar{Y}$  are sample means and  $S_x$  and  $S_y$  are standard deviations of  $X$  and  $Y$  in the sample. Consider the following models:  
 Model 1:  $Y_i = \beta_1 + \beta_2 X_i + \mu_i$   
 Model 2:  $Y_i^* = \alpha_1 + \alpha_2 X_i^* + \mu_i$   
 Express  $\hat{\alpha}_2$  in term of  $\hat{\beta}_2$ ,  $S_x$ , and  $S_y$  (where  $\hat{\alpha}_2$  is the OLS estimator of  $\alpha_2$  and  $\hat{\beta}_2$  is the OLS estimator of  $\beta_2$ ). \_\_\_\_\_ . (10 points)
6. The following regression equation is estimated as a production function for Q:  

$$\ln Q = 1.37 + 0.632 \ln K + 0.452 \ln L$$

$$(0.257) \quad (0.219)$$

$$R^2 = 0.98 \quad \text{cov}(b_k, b_l) = 0.055$$
 where the standard errors are given in parentheses. Test the following hypotheses:  
 (i) The capital and labor elasticities of output of output are identical. (5 points)  
 (ii) There are constant returns to scale. (5 points)
7. Given the following least-squares estimates,  
 $C_t = \text{constant} + 0.92Y_t + e_{1t}$   
 $C_t = \text{constant} + 0.84C_{t-1} + e_{2t}$   
 $C_{t-1} = \text{constant} + 0.78Y_t + e_{3t}$   
 $Y_t = \text{constant} + 0.55C_{t-1} + e_{4t}$   
 calculate the least-squares estimates of  $\beta_2$  and  $\beta_3$  in  
 $C_t = \beta_1 + \beta_2 Y_t + \beta_3 C_{t-1} + u_t$  (10 points)
8. In the linear regression model  $y_i = \alpha + \beta x_i + u_i$   
 the errors  $u_i$  are presumed to have a variance depending on a variable  $z_i$ . Explain how you will choose among the following four specifications:  
 1.  $\text{var}(u_i) = \sigma^2$       2.  $\text{var}(u_i) = \sigma^2 z_i$   
 3.  $\text{var}(u_i) = \sigma^2 z_i^2$       4.  $\text{var}(u_i) = \sigma^2 z_i^3$  (10 points)
9. Examine whether the following statements are true or false. Give an explanation.  
 (i) In multiple regression, a high correlation in the sample among the regressors (multicollinearity) implies that the least squares estimators of the coefficients are biased. (10 points)  
 (ii) Serial correlation in the errors  $u$  leads to biased estimates and biased standard errors when the regression equation  $y = \beta x + u$  is estimated by ordinary least squares. (10 points)





**Note: There are five questions in the test. Each of them is graded by 20 points.**

1. Why does the proposition "More is preferred to less" imply downward-sloping indifference curves?

2. Consider the class of utility functions that are "additively separable," i.e.,

$$U(x_1, x_2) \equiv U^1(x_1) + U^2(x_2)$$

- (i) Find the first-and second-order conditions for utility maximization for these utility functions. Show that diminishing marginal utility in at least one good is implied.
- (ii) Show that if there is diminishing marginal utility in each good, then both goods are "normal," i.e., not inferior.

3. Suppose that marginal costs are constant at  $c > 0$  and that the demand function is given by

$$D(p) = \begin{cases} 10/p & \text{if } p \leq 20 \\ 0 & \text{if } p > 20 \end{cases}$$

What is the profit-maximizing price?

4. The aggregate supply relation for an economy implies the Phillips Curve. Assume the aggregate supply relation and the Phillips Curve are respectively given by the following equations:

$$P_t = P_t^e (1 + \mu)(1 - \alpha u_t + z) \quad (1)$$

where  $P_t$  = price level at time  $t$ ,

$P_t^e$  = expected price level at time  $t$ ,

$u_t$  = unemployment rate at time  $t$ ,

$\alpha$ ,  $\mu$ , and  $z$  = constant ( $\alpha > 0$ ).

$$\pi_t = \pi_t^e + (\mu + z) - \alpha u_t \quad (2)$$

where  $\pi_t$  = inflation rate at time  $t$ ,

$\pi_t^e$  = expected inflation rate at time  $t$ .

Show how to go from equation (1) to equation (2).





5. Consider an open economy and ignore movement in the real exchange rate (i.e. the real exchange rate = 1). Assume consumption, investment, imports, and exports for the given country are given by

$$C = c_0 + c_1(Y - T),$$

$$I = d_0 + d_1Y - d_2r,$$

$$IM = m_1Y,$$

$$X = x_1Y^*,$$

where C = consumption

I = investment

Y = domestic output

T = taxes

r = interest rate

IM = imports

X = exports

$Y^*$  = foreign output

$c_0, c_1, d_0, d_1, d_2, m_1, x_1 = \text{constants.}$

- (i) Show the effect of an increase in government spending of  $\Delta G$  on change in net exports of  $\Delta NX$  as follows:

$$\Delta NX = -\frac{m_1}{1 - (c_1 + d_1 - m_1)} \Delta G$$

- (ii) Explain the effect of an increase G on output is small and trade balance is large in the small country.





Please read the paper of Jensen (2005), "Agency Costs of Overvalued Equity" in the following pages and answer question 1 by English, question 2 to 5 by Chinese.

1. Write an English abstract within 100 words. (20 points)
2. Explain the conceptual differences between the "agency cost" terminology proposed by Jensen and Meckling (1976) and Jensen (2005). (10 points)
3. Why corporate managers play "earning management game"? Why corporate governance systems fail to prevent the gambling? Do you have any good ideas to solve this problem? (20 points)
4. In this paper, except for governance systems, Jensen had mentioned some other solutions to the problem of overvalued equity. But why are they still invalid? (20 points)
5. From the implications of Jensen's paper, please list at least 3 interesting and important research topics and explain its motivations and research purposes. (30 points)





## Agency Costs of Overvalued Equity

Michael C. Jensen  
mjensen@hbs.edu

Jesse Isidor Straus Professor, Emeritus, Harvard Business School;  
Managing Director Organizational Strategy Practice, Monitor Group, Cambridge, Massachusetts.

In the past few years, we have seen many fine companies end up in ruins and watched record numbers of senior executives go to jail. And we will surely hear of more investigations, more prison terms, and more damaged reputations. Shareholders and society have borne value destruction in the hundreds of billions of dollars.

What went wrong? Were managers overtaken by a fit of greed? Did they wake up one morning and decide to be crooks? No. Although there were some crooks in the system, the root cause of the problem was not the people but the system in which they were operating—a system in which equity became so dangerously overvalued that many CEOs and CFOs found themselves caught in a vicious bind where excessively high stock valuations released a set of damaging organizational forces that led to massive destruction of corporate and social value. And the problem was made far worse than it had to be because few managers or boards had any idea of the destructive forces involved.

### What is Overvalued Equity?

Equity is overvalued when a firm's stock price is higher than its underlying value. And the problems I shall be discussing today arise not when there are small overvaluations, but when there is substantial overvaluation, say by 100 or 1,000 percent. By definition, an overvalued equity means the company will not be able to deliver—except by pure luck—the performance to justify its value. If it could it would obviously not be overvalued.

To my knowledge, with the exception of Warren Buffett (who hints at these forces in his 1988 letter to Berkshire shareholders) no leaders in the business and financial community have recognized the dangers of overvalued equity. Nor have they publicly acknowledged their frequent contributions to creating this overvaluation.

Almost 30 years ago when Bill Meckling and I wrote our original paper on Agency Theory (Jensen and Meckling (1976)), we defined agency costs as the costs associated with cooperative effort by human beings. We focused on the agency costs arising when one entity, the principal, hires another, the agent, to act for him or her. While the issues are general, we developed the theory in the context of the conflicts of interest between corporate managers and outside equity and debt holders. We defined agency costs as the sum of the contracting, monitoring and bonding costs undertaken to reduce the costs due to conflicts of interest plus the "residual loss" that occurs because it is generally impossible to perfectly identify the agents' interests with that of the principal. In that article and others since then, we (and others) viewed markets as potent forces to help





control agency costs. What I'm going to describe today is how securities markets can sometimes create and exacerbate conflicts of interest between managers and owners rather than resolve them. Thus, this paper can be understood as expanding the range of costly conflicts of interest that the Agency Model can handle, in particular market and managerial optimism (even delusion) and the forces that allow or even encourage markets to become enablers of value destroying managerial behavior. I hasten to add that the problems I am addressing here are difficult ones and I do not have solutions that I consider satisfactory at this time. It will take concentrated effort by the profession to work them out over the next five years or so.

In particular I focus on how powerful forces leading to value destruction are created by situations in which securities markets substantially overvalue a company's equity. I am not going to spend much time discussing why or how such overvaluation occurs (although these are important for our eventual complete understanding of the issues) or

whether it is consistent or inconsistent with market efficiency. While these are interesting questions, I ask you today to simply focus with me on the forces bearing on the many firms who experienced large stock price run ups and subsequent large declines in what has been described as the internet/technology/telecom bubble. I recognize that there are those who argue that there was no bubble at the turn of this century. I have no desire to enter this debate today, because I want to get on to analyzing what happens to organizations if and when their stock price (for whatever reason) becomes substantially overvalued.

In part, the massive overvaluation of equity that occurred in the late 1990s and early 2000s is consistent with what we have seen in the past. Society often seems to overvalue what is new —in this case, high-tech, telecommunications, and internet ventures. But we must be careful to not assume that the overvaluation that occurred was simply due to mistakes by market makers and investors. We now know that managers, securities analysts, auditors, investment and commercial banks, law firms, and others knowingly contributed to the misinformation and manipulation that fed the overvaluation. I need not take the time here to list all those individuals and firms who have been successfully prosecuted or have entered into billions of dollars of settlements as a result of their activities. But a short list of formerly reputable firms includes Enron, Xerox, Worldcom, Global Crossing, Vodaphone, Nortel, HealthSouth, Lucent, Tyco, Ahold, Royal Dutch Shell, Computer Associates, and many others. I explain in what follows some of the reasons why overvaluation can induce inappropriate behavior on the part of managers and the gatekeepers in situations where corporate equity prices become substantially overvalued.

It is important for managers and boards to recognize that overvaluation triggers organizational forces that are very difficult to control and which will almost certainly destroy value. For the first time in my career I can't tell a simple incentive story that will resolve the problem, and I'd like to enroll all of you in resolving these conflicts. But this much I do know, managers must avoid contributing to the trap, and boards of directors must take accountability for preventing the value destruction that overvaluation causes. The first step in the solution is to identify the phenomenon, because we cannot manage





things that we cannot distinguish. Put differently, that which is undistinguished runs us. And distinguishing something means we must have language for it. And that is my task for today.

### The Context: Gaming the System

I've written in recent years about the fundamental problems of target-based corporate budgeting systems. Because compensation is tied to budgets and targets, people are paid not for what they do but for what they do relative to some target. And this leads people to game the system by manipulating both the setting of the targets and how they meet their targets. These counterproductive target-based budget and compensation systems provide the fertile foundation for the damaging effects of the earnings management game with the capital markets. And the resulting lack of integrity is the foundation for the release of the value-destroying forces of overvaluation.

Corporate managers and the financial markets have been playing a game similar to the budgeting game. Just as managers' compensation suffers if they miss their internal targets, CEOs and CFOs know that the capital markets will punish the entire firm if they miss analysts' forecasts by as much as a penny. And just as managers who meet or exceed their internal targets receive a bonus, the capital markets reward a firm with a premium for meeting or beating the analysts' expectations during the quarter. When a firm produces earnings that beat the consensus analyst forecast for the quarter the stock price rises on average by 5.5% more during the quarter than the returns on a size matched portfolio. For negative earnings surprises the stock price falls on average by -5.04% more during the quarter than a size matched portfolio. Generally, the only way for managers to meet those expectations year in and year out is to cook their numbers to mask the inherent uncertainty in their businesses. And that cannot be done without sacrificing value.

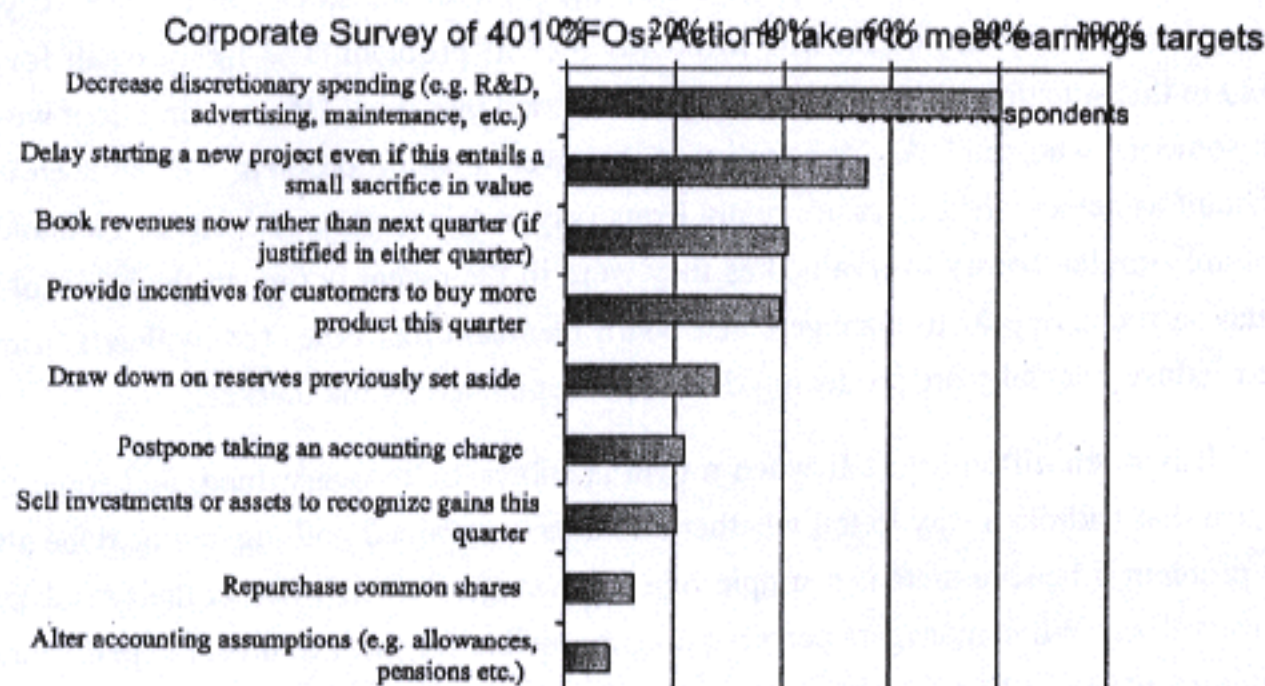
Indeed, "earnings management" has been considered an integral part of every top manager's job for at least the last two decades. But when managers smooth earnings to meet market projections, they're not creating value for the firm; they're both lying and making poor decisions that destroy value. I realize it is not fashionable to use such harsh language to describe what are almost universal practices. But when numbers are manipulated to tell the markets what they want to hear (or what managers want them to hear) rather than the true status of the firm—it is lying, and when real operating decisions that would maximize value are compromised to meet market expectations real long-term value is being destroyed.

Once we as managers start lying in the earnings management game, it's nearly impossible to stop because the game cascades forward. If we're having trouble meeting the earnings targets for this year, we push expenses forward, and we pull revenues from next period into this period. Revenues borrowed from the future and today's expenses pushed to tomorrow require even more manipulation in the future to forestall the day of reckoning.





And the evidence indicates this earnings manipulation has become widespread. As Fig. 1 shows, Graham, Harvey, and Rajgopal (2004) in their Survey of 401 CFOs ask the following question: "Near the end of the quarter, it looks like your company might come in below the desired earnings target. Within what is permitted by GAAP, which of the following choices might your company make?" They find 80% of CFOs saying their companies are willing to delay discretionary spending such as R&D, advertising and maintenance, and over 55% saying that their company would knowingly sacrifice a small value by delaying the start of projects. Almost 40% would book revenues now rather than next quarter or provide incentives for customers to buy now. These results are consistent with the widespread gaming that has been viewed as acceptable and normal business behavior in the last decade or two. And this is one source of restated financial results that has become so common. Indeed, recently announced results (see Glater (2005)) indicate that in 2004 a record number (253) companies restated their annual audited financial statements — a 23% increase over 2003. In addition, another 161 companies restated their quarterly statements, another record high.



### Organizational and Managerial Heroin

Now let us examine the damaging forces that are generated by what seems on the surface to be desirable — a high stock price. An important part of the problem is that in the early stages of overvalued equity managers and boards are receiving exactly the wrong signals from the market and the world. To communicate the seductive and misleading nature of the environment I liken it to organizational or managerial heroin. Like an addictive drug, manning the helm of an overvalued company feels great at first. If you're the CEO or CFO, you're on TV, and covered by the press, investors love you, your options are increasing in value, and the capital markets are wide open to your firm. But as drug users learn, massive pain lies ahead.

The core source of the problems caused by overvalued equity lies in the following fact: by definition if your stock price is overvalued we know that you cannot, except by pure luck, produce the performance required to justify that stock price. If you could it would not be overvalued. So as time goes by it begins to dawn on managers of such





overvalued firms that times are getting tough. You realize the markets will hammer you unless your company's performance justifies the stock price. So after all value creating alternatives have been taken you start to take actions that destroy long run value that you hope will at least appear to generate the market's expected performance in the short run. By doing this you postpone the day of reckoning until you are gone or you figure out how to resolve the issue.

To appear to be satisfying growth expectations you use your overvalued equity to make long run value destroying acquisitions; you use your access to cheap debt and equity capital to engage in excessive internal spending and risky negative net present value investments that the market thinks will generate value ; and eventually you turn to further accounting manipulation and even fraudulent practices to continue the appearance of growth and value creation.

None of these actions truly improve performance. In fact, they destroy part or all of the firm's core value. But what's your alternative? How could you argue to your board that a major effort must be made to *reduce* the price of the stock? In the last 10 years there has simply been no listening in boards for this problem. The likely result for any CEO in this situation is that the board would respond by saying "If you can't do it we will get someone who can". And the reality of this overvaluation problem will be even more difficult to detect when there are many firms (say in telecommunications or technology) that are simultaneously overvalued as they were in the recent boom. In the midst of this situation it can appear to managers and board members that other (overvalued) firms in their industry actually are producing the results demanded by the markets.

It is often difficult to tell when a firm is substantially overvalued, and some have argued that without a way to tell whether a firm is overvalued nothing can be done about the problem. I believe there is a simple rule for managers to tell whether their stock price is overvalued: When managers perceive it is impossible for them to meet the performance requirements to justify the current price of their equity, the firm is overvalued. When managers cook the books or engage in other fraud and lying to support their firm's stock price we know that they knew with a great deal of certainty that their firm was overvalued. Otherwise they would not have pushed beyond the legal limits and risked jail or other damaging effects associated with lying to the capital markets.

#### **Failed Governance and Failed Incentives**

The market for corporate control solved many of the problems of undervalued equity in the 1970s and 1980s through hostile takeovers, leveraged buyouts, and management buyouts. It could not (and cannot), however solve the agency problems of overvalued equity. It is difficult, to say the least, to buy up an overvalued company, eliminate its overvaluation, and make a profit.





In addition, equity-based compensation in the form of options, restricted, unrestricted or phantom stock holdings by executives could not solve the problem either. In fact, in the context of overvalued equity such equity-based incentives are like throwing gasoline on a fire — they make the problem worse, not better. One obvious action that directors and compensation committees can take to reduce the problems with equity based incentives is to impose unwinding constraints on such holdings that prevent managers from being able to realize equity gains in the short run. (See Jensen, Murphy, and Wruck (2004) for an extended discussion of recommendations for changes in executive compensation practices.)

Consistent with the counterproductive effects of equity-based compensation in situations of overvaluation, Efendi, Srivastava, and Swanson (2004) in their recent study of 100 firms who restated their earnings in 2000 and 2001 document that firms with CEO's who have large amounts of "in-the-money" options are much more likely to be involved in restatements. Indeed, as compared to their control sample of 100 matched firms with no restatements the average value of in-the-money options for CEOs of restating firms is \$30.1 million vs \$2.3 million for the no-restatement firms.. They also find in their logistic regressions that the likelihood of an earnings restatement is "significantly higher for firms that make one or more sizable acquisitions, or are constrained by a debt covenant" and are more likely to have weaker corporate governance systems as measured by whether the CEO is also the Chairman of the Board and whether the board is "more likely to give the CEO a salary increase that is not warranted by the firm's performance"

Overvalued equity is but one example of problems that cannot be solved by compensation/incentive systems alone. Good control systems and monitoring by intelligent people of integrity in a well-designed governance system are always necessary for effective control of corporate agency problems. But the problem here is that we do not now know how to create such well-functioning governance systems. More research on the design of governance systems is required, and it must go forth in the next five years or so taking clear account the agency costs of overvalued equity as well as traditional agency problems associated with rational conflicts between managers and equity and debt holders, as well as agency problems involving information asymmetries, managerial self control problems, managerial biases such as systematic optimism, and market pricing mistakes.

It is also puzzling to me that short selling could not solve the problem. And there certainly were those who refused to buy into the overvaluation as sensible. Interestingly, two of the more successful hedge funds (run by George Soros and Julian Robinson at Quantum Fund and Tiger Management respectively) closed shortly before the bubble began to burst. In their paper "The Limits of Arbitrage" Shleifer and Vishny (1997) argue that it is possible "that arbitrage becomes ineffective in extreme circumstances, when prices diverge far from fundamental values". The experience in the recent bubble is consistent with their arguments. Understanding why short selling and those who refused to buy into the overvaluations were not sufficient to limit the phenomenon is an interesting area for additional research, and this would obviously be aided by further





considerations of the legal and social costs and constraints surrounding short selling and arbitrage.

Obviously regulation was not sufficient to prevent the damage from the overvaluation. It is hard to create laws that prevent people from spending their money foolishly without damaging the productivity of the market system. We have yet to see whether the legal system will be able to punish those who engaged in fraud enough to provide preventative incentives in the future. And this is another area that can benefit from careful analysis beyond that which is currently available.

Thus, it appears that the major, and perhaps the only private, solution to the agency problem of overvalued equity was the corporate governance system. And what we witnessed was massive failure in which the boards of directors of company after company failed to stop the corruption and the associated destruction of organizational value. Many, including me, have warned for decades that corporate governance systems were woefully inadequate. The results of the last few years have substantially buttressed this position. The result has been widespread re-examination of governance systems and principles and calls for reform of governance systems that leave top management effectively unmonitored. This is not a simple task.

One change that could help boards protect themselves and the firms they serve from the counterproductive effects of overvalued equity would be to establish a regular practice of communicating with short sellers of the firms securities. This would require a major shift in the belief systems and culture of most boards and management teams. One of the most difficult tasks in dealing with the organizational costs of overvalued equity is getting data and analysis that indicates the market price is substantially out of line with the fundamental value of the firm. Short sellers are an obvious source of potentially valuable information for the governance system. Indeed, it should probably be standard practice for the audit and compensation committees of every major corporation to talk to major short sellers of their stock to hear their story and their reasoning. Such information would have to be carefully evaluated, but my guess is that it would often prove to be of great value to the audit committee in performing their task. Establishing such practices would require abandoning the generally held belief that short sellers are evil and damaging to the firm. Compensation and Audit committees might well discover important information about failings in their company's strategy and/or management team by communicating with short sellers who have bet on future declines in the price of the company's stock. And that might allow the board to take action to eliminate the overvaluation before the damage to the true underlying value of the organization became too great.

Some suggest that one solution to the problem of overvalued equity is for the firm to issue overpriced equity and pay out the proceeds to current shareholders. I have grave doubts that this is a sensible or even workable solution for several reasons. First there are requirements for full disclosure to shareholders, both present and future that management would probably have to violate to accomplish this transfer of wealth from new shareholders to old shareholders. And there is a question whether it can be done because





regulations require firms to specify what the funds will be used for, and who would be foolish enough to buy high priced equity so that other shareholders could be bought out? Furthermore, assuming the transaction could be completed it will surely generate strong pressures on managers and boards from the new shareholders when they discover they have been taken to benefit the old shareholders.

Moreover, legitimizing the principle that it is ok as a matter of practice to engage in transactions that benefit one group of shareholders at the expense of another is likely to cause a serious increase in agency conflicts between various groups of shareholders at the expense of overall corporate efficiency and value creation. Pursuing this line of thought leads to the conclusion that managers and the board will maximize long run value (private and social) by treating all shareholders equally — and this means present and future shareholders in particular. I believe it is impossible to create a system with integrity that is based on the proposition that it is ok to exploit future shareholders to benefit current shareholders. I realize this is not a generally accepted proposition in today's finance profession, not even among scholars, but it would take us too far from my topic today to discuss it thoroughly.

Some might be tempted to conclude that the problems associated with overvalued equity are likely to be an occasional episodic phenomenon that may not recur for many years. I doubt this. Although it is probably true that an event like the recent simultaneous overvaluation of many firms will occur only occasionally we can expect there to be problems with a few substantially overvalued firms on a annual basis. Consider the cases of Planet Hollywood and Boston Chicken, founded in 1991 and 1985 respectively, went public in the early 1990s, and have both been bankrupt (twice in the case of Planet Hollywood, once in 1998 and again in 2001). Krispy Krème is another example of overvaluation that had nothing to do with the recent internet/technology/telecom bubble.

#### **What Can We Do About It?**

I believe the solution to the problem of massive overvaluation is to stop it from happening in the first place. This means going against our very human reluctance to endure short-term pain for long-term benefits. We must refuse to play the earnings management game. Joe Fuller and I (Fuller and Jensen (2002)) have written more extensively about how to accomplish this in "Just Say No To Wall Street: Putting A Stop To the Earnings Game". We must stop creating and consuming the heroin. If our company's stock price begins to get too high, we must talk it down. Warren Buffett is one of the few CEOs who regularly and beneficially warns shareholders and markets when he believes Berkshire Hathaway is overvalued. Although widely admired, few have followed Buffett's lead in these and other policies — the rationale seems to be that his policies are too "quirky" to be of practical use to the majority of businesses and boards.





We must help others in the business and financial communities recognize that growth is not a synonym for good or for value. Senior managers must understand what drives value in their organization and align internal goals with those drivers, not with analysts' expectations. Senior managers must promise only results they believe they can deliver, and they must provide auditable metrics on how they are performing against those strategic plans. Business educators teaching students the desirability of maximizing value must distinguish that from maximizing current stock price and teach about the dangers of overvaluation.

Resetting corporate value and resetting the conversation between corporate management and Wall Street won't be easy, but I see a window of opportunity. Executives and boards of directors are asking how to invest in their integrity. One of the major ways boards can do this is by taking responsibility for eliminating the target-based budget and compensation systems that create a climate of low integrity by punishing truth telling and rewarding gaming, lying, and value destruction in their organizations. This window won't remain open forever. We must seize the moment to identify the problem, and learn from it, so we do not find ourselves trapped once again in a vicious, destructive cycle. It is time now for boards of directors and senior managers to recognize that it is their responsibility to ensure that new cases are not added to the current load of damaged companies.





一、請你以模式分析方法、公式分析方法或圖形分析方法，解析下列各管理會計觀念性敘述或問題。本題評分標準以你所作分析內容的深度，所用分析方法之難度和所分析結果之正確性為依據。(50 分)

- 1.在分權組織績效評估時，採 residual income 可救濟 return on investment 只重效率卻忽略效果之缺點。
- 2.作 cost-volume-profit 分析時，簡化的模型中分析者常採用產銷一致的假設。請問為何作此假設？
- 3.在責任會計制度中作轉撥計價時，以增額變動成本計價，可使企業資源的使用達到最佳狀態。
- 4.一公司產銷多種產品，而 product mix decision 非以各產品之 contribution margin 為依據，請問此項決策是如何作成？
- 5.作跨年毛利分析時，吾人可將毛利之變動解構成
  - a.單位售價變動
  - b.單位成本變動
  - c.銷售量變動三項影響數，請設公式解構分析之。

二、爲了降低代理風險以及激發企業經理人努力極大化股東的利益，若干學者建議採用 EVA 作為企業經理人的績效衡量指標。請問：(50 分)

- 1.何謂 EVA？
- 2.如何讓 EVA 與激勵制度結合？
- 3.EVA 有何限制？





一、美國財務會計準則委員會發布一系列財務會計觀念公報，構成觀念性架構。(25%)

1. 試簡述觀念性架構之作用？
2. 試分別敘述財務會計觀念公報各號之主要內容？

二、過去相當長的一段時間我們反對資產以公平市價評價，但近年來會計準則逐漸接受市價法之作法。(25%)

1. 試舉一例說明近年來其評價方法改為採用市價法之案例？
2. 試說明過去反對採用市價法評價可能理由？
3. 試說明會計準則接受市價法之可能理由？

三、請回答下列問題：(20%)

- (1) 公司治理研究主要包括哪些研究主題？試舉出一個國內外公司治理失敗的實例，並精簡說明其內部人動機與公司治理缺失。(10%)
- (2) 關於盈餘管理研究，請問何謂 Jones Model(1991)? 請問後續的 Modified Jones Model 改善 Jones Model 什麼問題?(10%)

四、請解釋下列名詞：(每小題 3%，共 30%)

- (1) Agency problem
- (2) Earnings management
- (3) Earnings response coefficient
- (4) Corporate governance
- (5) Discretionary accruals
- (6) Ohlson model
- (7) Measurement error
- (8) Event study and abnormal return
- (9) Multicollinearity
- (10) Equity valuation and value-relevance