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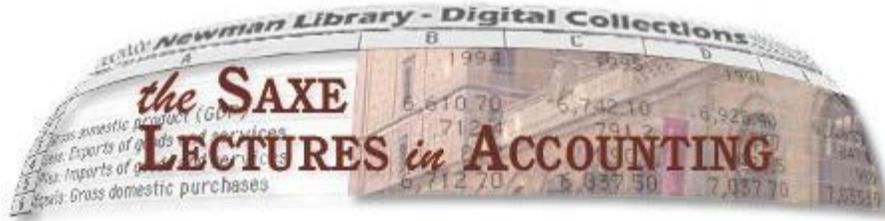
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The Challenges Facing Auditors and Analysts in U.S. Capital Markets

by

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Paul Healy joined Harvard Business School as a Professor of Business Administration in 1997. His primary teaching interests include corporate financial reporting and analysis, corporate governance, and corporate finance. Professor Healy received his B.C.A. Honors (1st Class) in Accounting and Finance from Victoria University, New Zealand in 1977, his M.S. in Economics from the University of Rochester in 1981, his Ph.D. in Business from the University of Rochester in 1983, and is a New Zealand CPA. In New Zealand, Professor Healy worked for Arthur Young and ICI. Prior to joining Harvard, Professor Healy spent fourteen years on the faculty at the M.I.T. Sloan School of Management, where he received awards for teaching excellence in 1991, 1992, and 1997. He is the coauthor (with Professor Krishna G. Palepu and Victor Bernard) of one of the leading financial analysis textbooks, *Business Analysis and Valuation*. In 1993-94 he served as Deputy Dean at the Sloan School, and in 1994-95 he visited London Business School and Harvard Business School.

Professor Healy's research includes studies of how firms' disclosure strategies affect their costs of capital, how investors interpret firms' dividend policy and capital structure decisions, the performance of merging firms after mergers, and the effect of managerial compensation and lending contracts on financial reporting. His work has been published in *The Accounting Review*, *Journal of Accounting and Economics*, *Journal of Accounting Research*, and *Journal of Financial Economics*. In 1990, his article 'The Effect of Bonus Schemes on Accounting Decisions,' published in *Journal of Accounting and Economics*, was awarded the AICPA/AAA Notable Contribution Award. His text *Business Analysis and Valuation* was awarded the AICPA/AAA's Wildman Medal for contributions to the practice in 1997, and the AICPA/AAA Notable Contribution Award in 1998.

In the last few years, the integrity of U.S. capital markets has been challenged. Accounting scandals and fraud have led to the demise of several large public companies and one of the Big Five audit firms. A record number of public companies have been forced to restate their earnings. And investors have lost trillions of dollars investing in dot.com and telecom companies, many of which had flawed strategies. Why did these events occur? Were they caused by a few bad apples? It would be very comforting to conclude that the problems were confined to a few rogue executives at Enron and WorldCom. An alternative explanation is that there were systemic problems in our financial system.

In this talk I discuss how the U.S. financial system works. I then examine the challenges faced by two of the key players in the market, auditors and financial analysts, assess the root causes of their problems, explore whether recent regulatory responses to the problems address these root causes, and suggest some other solutions.

Capital Markets and Investor Challenges

The capital market plays a critical role in a country's economic development. It is truly remarkable that

in a well-functioning capital market, individual savers are willing to turn over their savings to someone whom they have never met before on the promise that they will get a return of and a return on their capital. Savers' confidence in this system ensures that capital is available to fund new ideas. If the system works well, a virtuous cycle is created - new ideas get funded, new products and services are provided to customers, new employment opportunities are created for the labor force, and new wealth is generated for investors who in turn can reinvest their returns in other new ideas. In sum, the system is a vehicle for delivering economic growth. In contrast, if the system fails, investors are reluctant to part with their savings, new ideas are not funded, no new products or services are created, workers have to be laid off, and we have negative economic performance.

At a broad level, two key players are central to the capital market. One is the individuals who supply capital, savers in the economy. The second is individuals who demand capital to fund their business ideas, entrepreneurs and managers. The challenge is to create a system that encourages savers to channel their hard-earned savings to entrepreneurs and managers who have the best business ideas. This sounds straightforward - but it's really a very complex process. In recent years we have seen how difficult it is for countries that have not had experience with this system, such as Russia and former Communist countries in Eastern Europe, to develop an effective capital market.

Investor Challenges

Savers face three fundamental challenges from participating in capital markets. First, they have to decide which investment opportunities to pursue. In a developed economy, there are many investment opportunities. For example, in the U.S. investors can choose between thousands of public companies seeking debt and equity capital, real estate investment opportunities, and government securities. Ideally, investors would allocate capital to only the best investment ideas. Yet choosing between these different options is extremely challenging. Managers at every firm argue that their ideas are worth supporting - no one is going to argue that they have a poor investment idea. As a result, it's fundamentally important in our economy, that investors be well-informed about which ideas are likely to be successful and which ones are not.

A second challenge for investors is monitoring how managers use the firm's resources. Managers' incentives frequently do not coincide with those of investors. So it is important to align managers' incentives with owners and to ensure that there are controls that limit managers' ability to abuse investors' funds by, for example, growing the company for their own aggrandizement, rewarding themselves excessive compensation, or by buying private jets to travel at the investors' expense.

Finally, investors want to be able to invest in a fair and liquid capital market, where they can buy and sell stocks without facing costly transactions costs, or being at a competitive disadvantage to insiders. However, creating a fair and liquid market is challenging. It requires that insiders who have an information advantage be restricted from trading, that security prices quickly and accurately reflect information about firm's prospects, and that companies make information on their performance available regularly to investors.

The Role of Information and Intermediaries

Information plays a critical role in alleviating the investor challenges in the capital market. Information is valuable to investors in helping them evaluate investment opportunities to decide how to allocate their savings. It is also important because it enables investors to monitor whether their resources have been used wisely by managers. Finally, information is critical to the creation of a liquid and fair market. Markets where information is irregular create opportunities for investors who are more informed to take advantage of those who are less informed, and makes it more costly for investors to buy or sell a security without affecting its price. The flow of reliable information is therefore critical to the flow of capital - without it savers would simply keep their hard-earned savings under their mattress.

As shown in Figure 1, in our current market system, many different actors are involved in creating and providing investors with reliable information, and in helping them to make sound investment decisions. These intermediaries include professional investors and financial analysts (who demand information from companies), and auditors and boards of directors (who are involved in supplying information about a company to the market). Finally, there are market regulators who set the rules for participating in the capital market. Each plays a somewhat different role in helping address investors' challenges.

(i) *Professional Investors.* Professional investors are responsible for investing individual investor savings on their behalf. Professional investors include mutual fund managers and hedge fund managers who run funds that invest in established equity or debt securities, venture capitalists who invest in new enterprises, and financial advisors who manage investors' savings. Professional investors do their own analysis on companies and demand access to reliable information to help them decide whether to buy, sell, hold, or not invest in a company.

(ii) *Financial analysts.* Financial analysts analyze companies to provide information to professional investors and to retail investors on their relative investment merits. Financial analysts can work for investment banks and brokerage houses (as sell-side analysts) and for professional investor firms directly (as buy-side analysts). In either case, their function is to analyze firms' businesses, their financial performance, the quality of their management, and to forecast their future prospects. Usually, financial analysts conclude their analysis with a recommendation on whether to buy or sell a company's stock. Financial analysts therefore also demand access to company information through public annual reports and Security and Exchange Commissions' documents, as well as through private informal meetings with top management.

(iii) *Auditors.* The auditor's job is to attest to whether the financial information provided by the firm's managers are prepared following consistent application of (Generally Accepted Accounting) principles. Without the auditor, external users of financial information would be highly skeptical of the firm reports, since they are prepared by self-interested managers. Auditors have access to internal firm documents and accounts, and private access to management to help them attest on a firm's financial statements. They therefore play an important role in the supply of information to the capital market.

(iv) *Boards of Directors.* The board of directors oversees, appoints, and advises management. In its role, a sub-committee of the board (the Audit Committee) appoints and relies heavily on the work performed by the external auditor to ensure that the financial information prepared by management is reliable and reflects the economic performance of the firm. In addition, the board oversees the internal audit to ensure that there are adequate internal protections against fraud and misreporting.

(v) *Regulators.* Finally, the system includes regulators who set the rules of the market and enforce them. These include accounting standard setters (who set accounting standards), the SEC (who oversee the standard setters, set standards for disclosure, review company accounting and disclosure, and take action against companies with reporting/disclosure problems), the stock exchanges (who set their own reporting and disclosure standards and enforce them), and the courts (who adjudicate in legal disputes between management, regulators, and investors).

Overall, the above intermediaries capture a sizeable share of investors' savings in the form of fees. Many MBA students are attracted to careers in these industries because they are able to make a good living. Of course, the reason that investors and firms agree to pay these fees is that they believe that the problems that the intermediaries are addressing are important and challenging. As noted above, the challenges faced by investors (and therefore by managers in raising capital) are indeed non-trivial, implying that they are willing to pay handsomely to those intermediaries who can address the problems.

Auditor Problems

The scandals at companies like Enron and WorldCom, as well as the increase in public company

restatements (which increased by 130% between 1997 and 2001) (1) have contributed to a decline in public respect for the accounting profession, as well as to the demise of one of the largest audit firms, Arthur Andersen. Who would have thought five years ago that a large and respected company like Arthur Andersen could fail so quickly?

So let's go back and try to understand how these problems arose in the audit industry.

Causes of Problems

In recent research, Krishna Palepu and I argue that two events that occurred during the mid-1970s gave rise to the problems observed in the audit industry in the late 1990s. (2) The first was the Federal Deposit Insurance Corporation (FDIC) and the Justice Department decision to push the then Big Eight to compete more aggressively with each other. Prior to the mid-1970s, professional etiquette created an environment where it was rare for audit firms to compete aggressively with each other for clients, and advertising was prohibited. The FDIC and Justice Department put pressure on the audit firms for more competition within the industry - more competitive bidding for clients, more client turnover, and the ban on advertising was dropped. As a result, firms began to compete more aggressively for clients, usually by lowering fees.

The second change that occurred in the mid-1970s was in the litigation environment for audit firms. This arose from the Fraud on the Market ruling, which enabled investors to sue the auditors for accounting problems regardless of whether they actually read or relied on the audited financial statements personally. The argument underlying this ruling was that in an efficient market, financial information was rapidly reflected in stock prices. So if investors relied on the stock price when buying or selling stock, they had implicitly relied on the audited financial statements (since that information would have been incorporated in price.) This ruling led to a marked increase in auditor legal exposure for financial statement problems.

Audit firms responded to the decline in fees and rise in litigation costs in several ways. One was to pursue more standardized audit processes that could be performed by less experienced, and less highly-paid audit professionals. The more standardized audits were more cost-efficient, enabling auditors to compete more effectively. They were also seen as an effective way to combat audit liability risks, since firms could argue that they had followed a standard, defensible approach to auditing.

However, standardized audits also raised several challenges for the industry. First, given a highly dynamic business environment with new business models and new more sophisticated types of securities, standardization, which reduced the role of professional judgment, probably contributed to a decline in audit quality. In a rapidly changing economy, it is difficult for standards to always keep pace. An audit partner used to exercising sound business judgment might have recognized the financial reporting problems arising from Enron's Special Purpose Entities (SPEs), when they were first created.

A second challenge from standardization is that the changes in audit process made the job of auditing inherently less interesting, making it difficult for the firms to attract talented personnel. Of course, the firms actually encouraged this because they wanted to have a lower cost structure. The erosion of talent in the industry was exacerbated by the rapid growth of consulting and investment banking since the mid-1970s, since these professions offered particularly attractive salaries and job opportunities to talented personnel entering the job market.

Finally, as audit competition increased, pressure to retain clients probably made it more difficult for audit partners to say 'no' to management of major clients. Consistent with this problem, I have found that when I have taught partners at major audit firms they have almost always argued that their primary client is management. Very few appreciated their professional obligation to consider the well-being of investors.

A second response to the challenges facing auditing was to pursue alternative businesses that did not face the same challenges. For audit firms this translated into the rapid expansion of consulting services.

Arthur Andersen had expanded into consulting in the late 1950s, when Leonard Spacek saw the opportunities created by computerization of financial systems. All of the major firms developed profitable consulting practices during the 1960s and 70s. Ironically, questions about conflicts of interest were raised about these practices by Congress in the mid-1970s. However, at that stage consulting revenues were modest compared to audit fees. The 1990s saw a dramatic growth in consulting at the large firms. By 2001, consulting revenues at some firms exceeded those for audits, and consulting profits were considerably higher than those from audits.

Put yourself in the position of the large audit firms. With revenues and profits from consulting growing at much faster rates than from audits, where would you focus your energy? Obviously, on consulting - not on audits. And bright young hires - where would they want to work? Again - in consulting not in standardized auditing. So, even if there were no conflicts of interest between the two businesses (and I believe that there are), the rise of consulting was leading to a very significant change in the major firms. Their focus was on how to grow their consulting practice, rather than how to improve the quality of their audits.

The final response of audit firms to the challenges faced in auditing was to push for more rule-based accounting standards. Remember that the auditor's job is to judge whether a firm's financial statements are prepared using GAAP. If GAAP is easy to interpret, then their job is easier to perform, reducing costs. Also, it is easier to defend audits in legal battles when accounting standards require less judgment. Further, rules make it easier to confront client management if there is an accounting problem, since the auditor is simply following the rules, rather than expressing personal judgment about an accounting treatment.

Of course, it is not surprising to see problems surface from the use of rule-based accounting. Companies can tailor transactions to satisfy the letter of a rule, even though the spirit is violated. This clearly happened in Enron's case, where management argued that its SPEs satisfied the technical rules for non-consolidation, even though the company continued to bear much of the economic risks that were off its balance sheet. In addition, in a complex and dynamic economy, it is difficult for regulators to keep pace in creating rules to account for new types of transactions. And the rules that are created become overly-complex as regulators try to consider every possible arrangement. The derivative rules certainly have this feel.

So these were the problems that the audit industry faced. The 1990s saw a steady deterioration in the audit industry as a profession. Auditors ended up being rule- and compliance-focused, compliant to their clients, and had little professional commitment to investors. Audits were considered secondary to more profitable consulting business, and there was a steady erosion of talent within the industry. Given the increasingly complex business world, I believe that the audit problems at companies like Enron and WorldCom were inevitable.

Impact of New Regulations

The reforms mandated by the Sarbanes-Oxley Act of 2002 are intended to correct the problems facing the audit profession. I believe that a number of the changes are likely to have apposite effect.

First, the new legislation makes it very clear that the audit committee (and not management) is responsible for appointing and overseeing the auditor. The audit committee decides whether to retain the services of the auditor, how much they should be paid, and oversees the relationship. So audit partners today would probably view the audit committee as their client rather than top management. This is a healthy change. Of course, it does raise the question of whether the audit committee itself will do a good job of overseeing the auditors. The assumption is that the audit committee is going to be independent of management, and represent the interests of investors. Today audit committees are particularly aware of this obligation. Whether that commitment continues in five or ten years time, when the current scandals are forgotten, however, remains to be seen.

The second regulatory change mandated by the Sarbanes-Oxley Act is for Chief Executive Officers (CEOs), and Chief Financial Officers (CFOs) to sign-off that to the best of their knowledge their financial statements present a fair picture of the firm's performance. For the few CEOs and CFOs intent on committing fraud this is probably not much of a deterrent, but for most top management I believe that it aligns their incentives much more closely with the auditors than before. Prior to this rule, many CEOs considered the audit to be a regulatory tax, and considered it their duty to shareholders to ratchet the audit fee down every year. Today, if you're the CEO of a company, you are more likely to see value in the audit. You recognize that high quality internal and external audits provide some comfort when you sign off on the financial statements.

A third change bars audit firms from performing consulting for their own clients. This rule certainly addresses the conflict of interest concerns about audit firms performing consulting. However, if audit firms respond by aggressively attempting to grow their consulting to non-clients, the change will not lead to a needed refocusing on the core audit business.

Finally, the legislation creates a new regulatory body (the Public Company Accounting Oversight Board) to monitor and discipline firms that audit public companies. This change appears to be welcome, since accountants have not done a very good job of monitoring themselves.

However, it is unclear whether the changes made by the Sarbanes-Oxley Act will alter the fundamental economic challenges that have confronted the audit firms. The decline in audit fees may be ameliorated by the reduction in the number of global audit firms (from five to four) and by top management's and audit committee's increased recognition of the value of audits. Litigation reform that occurred in the mid-1990s may reduce auditors' legal exposure. However, audit methodology continues to rely on standardized processes, rather than auditor judgment. There continues to be demand for rule-based accounting standards. And auditing continues to be perceived as an unexciting career for many talented young graduates, particularly compared to investment banking and consulting. These challenges are exacerbated by the public perception that auditors acted unprofessionally during the scandals, worrying more about their own self-interest than investors.

How Should the Profession Proceed?

I believe that the profession itself has a responsibility to correct the industry problems. While regulation can provide a stimulus for change, ultimately, auditors have to recognize that they need to fundamentally rethink their business model. Some suggestions are as follows:

(i) *Focus on High Quality Clients.* Audit firms today would probably argue that they are very selective in determining which clients to take on. Yet, the percentage of public firms audited by the top four firms continues to be very high. My casual observation is that the top firms are far less selective in choosing clients than the leading investment banks. It seems to be far easier for initial public offering (IPO) firms to obtain a Big Four audit than to have Goldman Sachs take them public.

Perhaps the top audit firms should become more selective in the types of clients that they are willing to audit. That way, a Big Four audit will actually provide investors with a better signal of the quality of a firm's financial reporting than is currently the case. Of course, such a strategy will almost surely mean that the top four firms will have to shrink in size. But if investors and managers value more credible financial information, the remaining partners will be better compensated for their services.

Auditors typically respond to this argument by pointing out that many of their clients are not willing to pay for such a high quality service. This may well be true for the lower quality clients, or for managers of clients who do not value high quality reporting. Yet, these are precisely the firms that the big firms should want to get rid of. Given the changed accounting environment, I believe that the best clients would gladly pay for a higher quality service.

(ii) Improve Audit Quality

By focusing on clients that value audits, the large firms can work on improving the quality of their service. What types of changes are needed? Auditors need to be willing to exercise more judgment in assessing areas of business risk, and then undertaking adequate tests to evaluate how effectively these risks are being managed. This will require additional work - and a different mindset. In today's cost-cutting environment, conducting additional tests is simply not in the auditor's interest - a lowball price for the audit has already been set and any unplanned work will not be reimbursed. It is important that audits be performed efficiently, but not by ignoring key risks and hoping that bad outcomes will not arise.

Second, there is no reason that auditors cannot become more entrepreneurial in providing attestation services that better meet market needs. Unfortunately, the firm's statutory mandate has led to very limited experimentation in audit services. For example, the current two paragraph opinion is relatively uninformative. It does not inform investors whether the client has pushed every available loophole in GAAP, or whether the client is very conservative in its reporting. Auditors are not precluded from providing their own 'branded' report to investors that provides more information on areas of concern. Once again, the firms' worst clients will not be attracted to such a report - but as noted above, these are not the clients that the top firms should be catering to.

(iii) Understand and Price Risks

Many chairs of audit committees that I have talked with comment that today's auditors are unwilling to take any risks. They do not want to take any responsibility for their service and this is clearly reflected in their engagement letter. The auditor's concern about taking risks is clearly manifested in its unwillingness to take responsibility for fraud. Auditors point out that they are responsible for assessing whether the financial statements are consistent with GAAP, not for detecting fraud. Yet massive fraud, such as that uncovered for WorldCom, implies that the financials are not consistent with GAAP and do not reflect the economic performance of the firm.

Investors want someone in the economy to help provide checks on such massive frauds. If the auditors are unwilling to do so, they need to find someone else. Yet the auditors are well-placed to take on this responsibility. Is it risky - yes! But by accepting this responsibility, understanding the risks, designing additional audit work to help check for fraud, and pricing the audit accordingly, the audit firms will provide a valuable service to investors and to honest managers. By recognizing the risks and pricing them accordingly, auditors can manage their own risks. In fact, I believe that their litigation risks may even decline, since many juries believe that auditors are (or should be) responsible for fraud detection, consistent with their willingness to rule against audit firms in fraud cases, regardless of auditor protestations that they have not taken on this responsibility.

(iv) Refocus on the Auditor's Professional Responsibility

Unfortunately, auditors have all too frequently forgotten that their statutory mandate carries a professional responsibility to the investing public. Given the financial challenges accompanying auditing, auditors have typically recast their role as 'providing value for the client' which is often at odds with their professional responsibility. It is time for auditors to remember why they were granted a statutory mandate for performing audits of public companies, and to create a culture in their firms that recognizes and celebrates this responsibility.

(v) Attract More Talented Personnel

Audit firms in the U.S. have followed a very different model for attracting talent than in the United Kingdom (U.K.). In the U.S., firms have typically hired graduates from the leading accounting programs. In contrast, in the U.K., the audit firms have hired talented young graduates at the leading

universities, regardless of their field (liberal arts, sciences, etc.), and then provided the new hires with the needed accounting training once they are with the firm. U.K. partners argue that they want to hire outstanding, creative young people; they believe that these hires can receive training in business and accounting on the job. The rationale for this approach is that it provides a broader talent pool from which to recruit. It also leads to audit partners and staff who are better rounded personnel than those hired in the U.S. I believe that audit firms in the U.S. could benefit from adopting the U.K. model to upgrade the quality of their personnel.

(vi) Accounting Standards

Finally, I believe that the top audit firms should use their leverage with standard setters to push for standards that permit more auditor judgment in their interpretation. Of course, this will only be effective for investors if auditors simultaneously work on improving the quality of audits, hire more talented personnel and take their professional responsibilities more seriously. Reducing the use of detailed rule-based standards and permitting auditors to exercise their professional judgment reduces the opportunity for companies to design transactions to circumvent the rules. It will not work if auditors continue to view their job as to create value to management.

Analyst Problems

Auditors were not the only intermediary to lose public credibility following the accounting scandals and tech bubble. Sell-side analysts were severely criticized for providing poor, and in some cases conflicted, research. I will now discuss the challenges faced by analysts who provide sell-side research which is publicly-available to institutional and retail investors. In contrast, buy-side research is performed by analysts at management companies, and is made available only to their portfolio managers.

Sell-Side Analyst Challenges

In an efficient capital market, the information contained in public sell-side reports is reflected rapidly in prices. This implies that no single investor is likely to be able to benefit from trading on a sell-side report, no matter how good the research. This creates a problem. High quality research is needed to ensure that stock prices reflect firms' economic performance and potential, enabling savings to be allocated only to deserving investment ideas. But individual investors are unwilling to pay much for this research, since no one directly benefits from its production.

How then do we fund sell-side research? Historically, research been funded through trading. When investors buy and sell shares they pay a commission that covers two activities, the costs of research and the costs of executing the trade (that is from transferring a block of shares from the seller to the buyer). This seemed like a reasonable way to pay for research, since investors who trade stocks presumably do so because they have received information that induces them to buy or sell a stock. Commissions are therefore an attempt to indirectly charge the users of research for the costs of its production.

But in 1975, this arrangement changed. Commissions were deregulated. As a result, brokerage firms and investment banks that provided research began to compete more aggressively by reducing trading commissions. Since 1975, commissions have declined by around 75%. At one level this is good for investors since it lowered the costs of investing. However, it also reduced the resources available for research.

A second, more recent change, poses an additional threat to research. Online brokerage services (e.g. E-Trade) and trading platforms are increasingly offering investors low cost trading without any research. Of course, this puts additional pressure on research providers to also cut their commissions, forcing them to reduce their research. It also can create free rider problems, where investors can access research through full-service brokerage firms or investment banks, but then channel most of their trades through low-cost online trading services.

Investment banks responded to the challenge of declining commissions by funding the costs of research through investment banking. Financial analysts play a valuable role in investment banking activities by providing research that attracts investors and generates a liquid market for a firm's stock. Consequently, investment banks have allocated a share of investment banking budgets to research.

Unfortunately, there are conflicts of interest that arise from both these activities. The investment banking conflicts has been widely discussed in the popular and business press. Analysts working at investment banks have no incentive to provide critical or skeptical research on investment banking clients, or even potential clients.

But a conflict can also arise from trading. Brokerage firms earn commissions by generating trading volume. Research plays an important role in generating trades, by encouraging investors to buy or sell a stock. Analyst research is likely to have a larger impact on trading volume for buy rather than sell recommendations. This arises because any investor can respond to a buy recommendation by buying the stock, whereas given the costs of short-selling stocks, only investors who currently own stocks recommended as sells are likely to act on the recommendation. Given this incentive, it is not surprising that sell-side analysts make very few sell recommendations.

Pressure to generate trading volume can induce analysts to write reports purely to encourage trading, even if they do not represent analysts' true opinions on stocks. Following the dot.com bubble, analysts at Merrill Lynch were found to have recommended stocks to the public, even though in private they had been highly critical of the company's investment potential.

In a recent research project with Amanda Cowen and Boris Groysberg, we examined the relative importance of investment banking and trading conflicts of interest.⁽³⁾ Our study tested which types of analysts are most biased - those working at brokerage firms (which do no investment banking) or those working at full services investment banks (such as Morgan Stanley, Merrill Lynch, and Goldman Sachs) which provide underwriting for new issuers as well as brokerage services to investors. We also examine an intermediate type of firm, which we call syndicate firms. These firms' businesses are probably dominated by brokerage commissions, but they also participate in investment banking by distributing but not underwriting new issues. However, the fees for investment banking distribution are considerably smaller than those earned by underwriter firms.

We constructed an index of relative forecast bias that controlled for firm, time-period, and forecast horizon. Figure 2 shows the main findings and indicates that analysts at brokerage firms make the most biased forecasts of short and medium-term earnings forecasts, followed by analysts at syndicate firms. Analysts at the investment banks are actually the least biased. The pattern is even more dramatic for target price forecasts.

These results suggest that trading incentives have a powerful effect on analyst performance, perhaps just as large as investment banking incentives. In follow-up research we found that among investment banks, the least biased analysts worked for the six most reputable (Bulge) firms, suggesting that bank reputation is important in mitigating bias in analyst research. We also discovered that brokerage firms tended to be more biased if they focused on retail (individual) rather than on institutional clients. We were not surprised by this finding, since it is easier for institutions to detect research bias since they have their own research departments who compare research across many sell-side analysts. Finally, we found that analysts at brokerage firms were more likely to drop coverage on companies that they considered to be poor investments. After all, sell recommendations and reports on such companies would probably not generate much trading volume. In contrast, analysts at investment banks were more likely to continue covering a stock even if they were pessimistic about its prospects.

Effect of the Global Settlement

In June 2003, a settlement was reached between the New York State Attorney General, Eliot Spitzer, the SEC, the New York Stock Exchange (NYSE), and ten of the largest investment banks. Under this Global Settlement, the ten banks agreed to separate investment banking from research. Chinese walls were reinforced to prevent investment bankers from putting pressure on or providing financial incentives for analysts to participate in investment banking deals. The Settlement also required analysts to disclose when their firm had a relationship with a firm that could create a conflict of interest. And it required the largest investment banks to buy research from independent third-parties to distribute with their own research. So if Merrill Lynch issues a report on IBM, it would have to acquire independent research from three non-investment banks to publish with its own research.

How does the Global Settlement affect the challenges facing sell-side analysts? One problem is that it leaves unanswered the fundamental question of how firms fund research. A second question is whether the acquisition of independent research will improve the overall quality of research. As noted above, research by analysts at brokerage firms (which are independent non-investment banks) is even more optimistic than that provided by analysts at investment banks.

One outcome of the Global Settlement has been that many of the largest investment banks have cut back on their research budgets. Many analysts cut by sell-side firms were subsequently hired as buy-side analysts, continuing a steady fifteen-year trend of the growth in buy-side research. This may be an efficient allocation of resources since money management firms can internalize the benefits of private buy-side research. Presumably their portfolio managers can trade on the buy-side research and capture the benefits without facing competition from other investors. In addition, buy-side analysts are not subject to the investment banking and trading conflicts of interest suffered by the sell-side. Further, since their reports are private and not available to managers of the firms they cover, buy-side analysts are less likely than sell-side analysts to be concerned about issuing negative reports on stocks to preserve access to company information. This implies that in future much of the research that occurs in the capital market will be conducted by money management firms, rather than by investment banks or brokerage firms.

Evaluating Buy-Side Research

But before we conclude that investors would be better off investing their savings in money management firms and having research performed at the buy-side, it is worth examining the quality of buy-side research. Because, buy-side reports are not publicly available, there has been very little work done on buy-side research. However, Boris Groysberg, Craig Chapman, Yang Gui and I were fortunate enough to be permitted to gain access to analyst reports from a top ten money management firm for the period 1997 to 2004. (4)

We examined earnings forecast optimism and accuracy, and recommendation optimism and performance for the buy-side firm analysts relative to the sell-side. Our tests controlled for the company and time period analyzed, the forecast horizon, and the industry-specialization and coverage of each analyst. The results surprised us. We found that the buy-side firm analysts were considerably more optimistic and less accurate than their sell-side counterparts. On average, earnings forecasts for the buy-side analysts were 20% more optimistic than for sell-side analysts. The differences were even more dramatic for forecast accuracy. For very short-term forecasts (with 0-3 month horizons), the average forecast error as a percent of the consensus forecast was 6% for sell-side analysts compared to 27% for the buy-side analysts. For the 18+ month horizon average forecast errors were 38% for sell-side analysts and 68% for the buy-side firm. These differences are economically significant as well as statistically reliable.

For stock recommendations, the buy-side firm analysts were actually less optimistic than their sell-side counterparts. Fifty-nine percent of sell-side analysts' recommendations were buys, versus 46% for buy-side analysts. And buy-side analysts were twice as likely as sell-side analysts to issue sell recommendations (11% versus 6%). These findings are consistent with concerns about conflicts of

interest biasing sell-side research.

However, buy-side recommendation conservatism was not accompanied by superior recommendation performance. In fact, the buy-side recommendations performed very poorly. Average annualized abnormal returns for buy-side analysts were negative for buy recommendations (-5%) and positives for sells (7%). In contrast, sell-side analysts' buy recommendations showed positive performance (4%) and holds were negative (-4%), consistent with the common perception that sell-side hold recommendations should really be viewed as sells.

We have examined several potential explanations for these findings. One is that the sample buy-side firm is a poor-performer within its industry, perhaps as a result of its poor research record. If such is the case, our findings are unlikely to be representative of the performance of buy-side analysts at other firms. However, this is not supported by the firm's Morningstar ratings or fund performance, which is at least as good as that at the other top ten money management firms.

A second explanation is that the buy-side firm hires lower quality analysts than would be found at a typical sell-side firm. Once again, this explanation is not supported. Roughly half of the buy-side analysts were hired from the sell-side. We examined these analysts performance separately when they were on the sell-side and when they moved to the buy-side. When they worked on the sell-side the analysts' forecast optimism and accuracy, and stock recommendation performance were comparable to that of other sell-side analysts. But when they moved to the buy-side, their performance showed a noticeable deterioration, both for companies that had previously been covered on the sell-side and for new companies covered.

We speculate that two factors could explain our findings. First, buy-side analysts are rewarded for analysis and recommendations that differ from the sell-side. In contrast, sell-side analysts' incentives are likely to make them cautious about issuing reports that differ from the market consensus. Unfortunately for the buy-side firm, there appears to be collective wisdom in consensus earnings forecasts and recommendations.

A second explanation is that regular sell-side analyst interactions with a diverse set of clients, as well as the firm's own traders and sales representatives provide valuable feedback on the merits of their investment ideas as well as timely market information which can improve the quality of their forecasts and recommendations. In contrast, buy-side analysts typically have a much narrower set of interactions - primarily with their own portfolio managers and staff.

Outstanding Questions

Financial analysis of the performance of public companies is critical for the effective functioning of the capital market. As I have discussed, a central challenge is how to pay for this service. The trend towards savers investing in money management firms rather than in companies directly, raises a number of important questions. We know very little about the quality of buy-side research. And what we do know is not very positive. Are the findings I discussed generalizable to other firms, and if so, how can money management firms improve the quality of their research? Second, will money management firms be willing to play a more active role in monitoring top management and encouraging boards to replace weak managers? To date, most institutional investors have preferred to sell stocks of companies with corporate governance problems than to actively push for effective corporate governance. Finally, will private buy-side research help create a fair and liquid market?

An alternative approach is to attempt to fix the funding model for sell-side research. One option is to charge investors a separate fee for research. Some research boutiques rely on this model. They charge institutional and retail investors an annual fee for information, or a fee per company report accessed. The research can be distributed online, making distribution cheap. However, as discussed earlier in my talk, it does not solve the problem that in an efficient capital market such research is not worth much to

any particular investor.

Another approach would be for the stock exchanges to fund research. Stock exchanges have an incentive to create liquid markets in the stocks that they trade. They could charge investors a small fee per transaction to support research. Alternatively, they could charge companies that list an annual fee for research support. The exchange would then have to decide which firms and analysts to fund, or whether it should hire analysts itself.

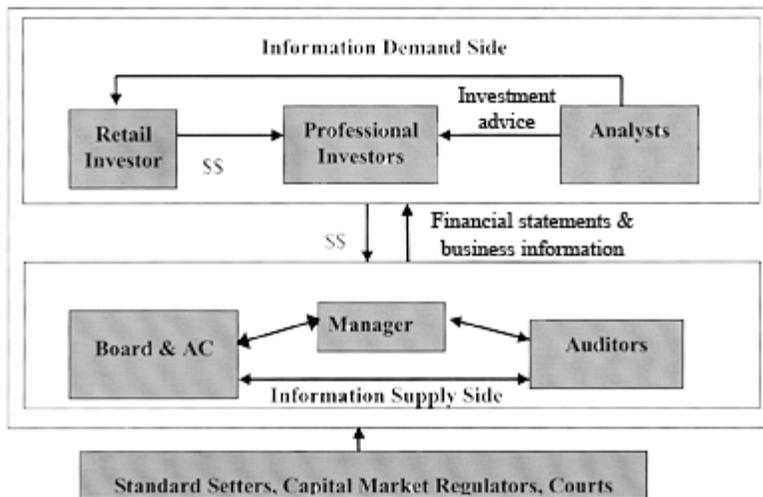
Conclusion

Our financial system is remarkably complex network. It is important that, in making any changes, we take account of how they will affect the system as a whole. In my talk today, I have focused on auditors and analysts. These are but two players in the system. A full analysis requires similar appreciation for the challenges facing the other participants, such as money managers, corporate boards, and standard setters.

I have suggested that the Sarbannes-Oxley and Global Settlement reforms that were intended to correct auditor and financial analyst problems are imperfect. Some of the changes that have been undertaken are certainly positive and much needed. But in both cases, the reforms do not seem to fully appreciate or address the root causes of the problems. For example, the changes do nothing to make the auditing profession more attractive to entice new talented professionals. For the sell side analyst business, the changes do not address how firms can recover the costs of research. These are fundamental questions. Without answers to these questions, there remains a very real risk that audit firms and sell-side firms will pursue strategies that will lead to future scandals.

Figure 1

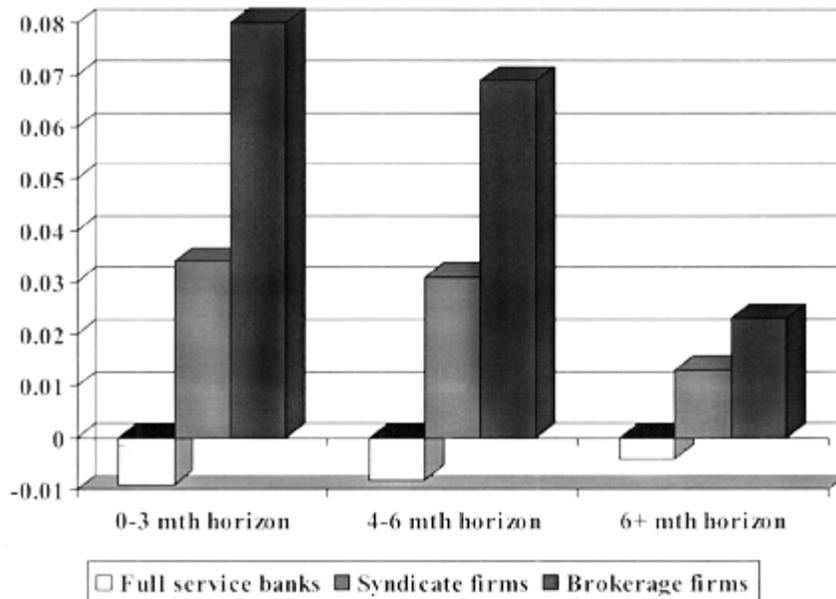
The workings of a modern capital market system



Source: P. Healy and K. Palepu, "The Fall of Enron" *Journal of Economic Perspectives*, Spring 2003.

Figure 2

Differences in analyst relative earnings forecast optimism by type of analyst firm



Source: Cowen, A., B. Groysberg and P. Healy, "Which Types of Analyst Firms Make More Optimistic Forecasts?" Working Paper, Harvard Business School, April 2005.

Footnotes

(1). Huron Consulting Group, "A Study of Restatement Matters for the Five Years Ended December 31, 2001."

(2). See P. Healy and K. Palepu, "The Fall of Enron," *Journal of Economic Perspectives*, Spring 2003, and P. Healy and K. Palepu, "How the Quest for Efficiency Corroded the Market," *Harvard Business Review*, July 2003.

(3). Cowen, A. B. Groysberg and P. Healy, "Which Types of Analyst Firms Make More Optimistic Forecasts?" Working Paper, Harvard Business School, April 2005.

(4). B. Groysberg, P. Healy, C. Chapman and Y. Gui, "Do Buy-Side Analysts Out-Perform the Sell-Side?" Working Paper, Harvard Business School, July 2005.

