# Conflict of Interest: The Common Thread Underlying Ethical Lapses

By: Robert I. Bell

RIBELL@VOILA.FR

Hershey H. Friedman

X.FRIEDMAN@ATT.NET

Linda Weiser Friedman

LINDA\_FRIEDMAN@BARUCH.CUNY.EDU

#### **Abstract**

The purpose of this paper is to examine various industries for examples of conflicts of interest, and the resulting harmful ethical and managerial effects. All of these examples are well known, having appeared in various news sources. However, each incident has been viewed as an isolated case with no common lessons to be learned. The authors posit that, were it not for the presence of conflict of interest, these abuses might never have occurred.

Even the most ethical of people might succumb to temptation when the potential gains are large. It may be impossible to eliminate all conflicts of interest but reducing them will certainly enhance the chance that people will do what is right. Organizations that are truly concerned about ethics must first ensure that there are few conflicts of interest present. Of course, the same may be said about textbooks discussing ethics; first explain the concept of conflict of interest and show how it often produces unethical behavior and then talk about ethics.

#### **Conflicts of interest**

Conflicts of interest have caused a great number of problems in numerous areas and have been responsible for financial harm and injury to millions of innocent people. The following are just a small sample of some of the conflicts of interest that have helped undermine the public's faith and confidence in numerous institutions ranging from the securities industry to Congress. Attempts are being made now to curb some of the abuses that we are noting.

#### In the Boardroom

The compensation of CEOs should ideally be determined by a compensation committee consisting entirely of independent directors. This has not been the case in many firms and members of compensation committees have often had ties to the CEO (Henriques and Fabrikant, 2002). To make matters worse, the CEO was often involved in determining the compensation of board members, some of whom were on the compensation committee. Needless to say, this conflict of interest resulted in astronomical compensations for CEOs. In fact, whereas in 1973, the average compensation of a CEO in the United States was about 45 times more than the salary of the lowest paid employee; today, this ratio has skyrocketed to 500:1. In Europe, where management is just as effective, the ratio is 40:1 (Axtman and Scherer, 2002).

#### In Accounting Firms

The Enron/Arthur Andersen case demonstrated what can happen when an accounting firm earns fees for both consulting and auditing. Indeed, in many cases that have resulted in financial scandals, accounting firms such as Arthur Andersen earned considerably more money from consulting fees than from audits. It is difficult for auditors to be objective if this means that their firm will lose millions of dollars in consulting fees. Mills (2003: pp. 81-90) notes "CEOs found their accountants to be allies in the at-

tempt to exaggerate companies' financial performance." One key reason had to do with the fact that accounting firms were making a considerable amount of money from consulting. From 1977 to 2002 the auditing profession policed itself by the use of a "peer review" system. Needless to say, this system did not work. It did not result in even one negative report in the 25 years of its existence.

#### In Investment Banking Firms

There is a potentially severe conflict of interest when a securities firm is involved in both investment banking and research. The investment banking division would be quite upset if the research analysts were to advise clients not to purchase securities they were trying to sell. Mills (2003, p. 267) notes, "CEOs award lucrative investment banking contracts to banks in return, in part, for investment bankers influencing analysts to make favorable recommendations to investors on behalf of the CEO's companies." In fact, three major banks were concerned about the financial soundness of WorldCom in 2001 but had no problem recommending that their clients purchase \$12 billion worth of WorldCom bonds (Morgenson, 2004). One of them, Citigroup, settled with investors and agreed to pay \$2.65 billion to investors. This is the second largest settlement ever in a securities class action. What has emerged from this case is that Jack Grubman, the Citigroup analyst, was recommending the stock of Worldcom and other firms despite the fact that his firm had a very profitable investment banking relationship with them. Moreover, as if this were not bad enough, Grubman was very close to Bernard Ebbers, the CEO of Worldcom.

These conflicts of interest were responsible for the loss of trillions of dollars of market capitalization, a loss borne mainly by investors and pension funds. The Sarbanes-Oxley Act of 2002 has attempted to reduce or eliminate several of the above-mentioned conflicts of interest. This law requires that the CEO and CFO sign off on the firm's financial statements. In addition, an accounting oversight board was established to set au-

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diting standards and keep watch over the accounting industry. A summary of the Act may be found at the American Institute of Certified Public Accountants website (AICPA, 2003).

It should be noted that the conflict of interest problem that occurs when a securities analyst works for a firm involved in underwriting initial public offerings (IPO) has been written about in academic journals (Dugar and Nathan, 1995; Rajan and Servaes, 1997; Michaely and Womack, 1999). The academic research indicates that security analysts who work for the underwriting firm are significantly more optimistic in their forecasted earnings for the IPO than analysts that have no connection to the company.

#### At the New York Stock Exchange

Richard A. Grasso, as chairman of the New York Stock Exchange (NYSE), in effect wore two hats: He was supposed to protect investors in his role as regulator but he also worked for the members of the NYSE. In fact, it was the members of the NYSE that paid Grasso the huge compensation package that ultimately forced him to resign.

#### In the Mutual-Fund Industry

The Investment Company Institute (ICI), the trade association consisting of several hundred major mutual funds, was successful in convincing Congress that it speaks for millions of shareholders and protects their interests. The reality was that the ICI also represented the companies that run the mutual funds. Some of the practices investigated in 2003 were late trading and market timing, practices that are beneficial to certain investors at the expense of everyone else. A new conflict of interest has come to light and is now being investigated by the S.E.C. It involves "pay-to-play," i.e., payments made by mutual fund companies to ensure that their funds are included in corporate 401(k) plans and retirement plans overseen by firms. It is now clear after the mutual-fund scandal, that the loyalty of the ICI was mainly with the companies, not the shareholders (Dwyer, 2003).

#### In the Insurance Industry

New York Attorney General Eliot Spitzer is suing Marsh & McLennan, the largest insurance broker in the world over their alleged collusion with the insurance companies in bilking clients. Marsh & McLennan has been accused of bid-rigging and price fixing. Phony, artificially-high quotes, referred to as "throwaway quotes," "protective quotes," backup quotes," or "B quotes," were used to give the appearance of competitive bidding and customers were deceived into believing that they were getting good deals (Vickers, 2004). It is becoming apparent that the fraud and deceit was caused to a large degree by the conflicts of interest that arose because insurance brokers receive fees from clients and commissions from the insurers (Berenson, 2004).

#### In the Political System

The entire political system is replete with conflicts of interest. Special interest groups contribute to politicians and they in turn vote in a manner that helps these groups. It is apparent

that a key purpose for many campaign contributions is to influence the way legislators will vote. There have been complaints that major contractors such as Halliburton and Bechtel have spent huge sums of money on political influence and in turn allegedly been repaid with lucrative government contracts. Indeed, many politicians have received contributions from these firms and have allegedly repaid them with lucrative government contracts. However, it is not only corporations that seek to influence legislation by contributing to politicians and political parties. Organizations ranging from labor unions to the NRA to the AMA have contributed huge sums of money to politicians and political parties in order to influence the political process. Common Cause has a website that attempts to make the public aware of the numerous benefits provided to corporate special interests, i.e., corporate welfare (Common Cause, 2002). The purpose of the Bipartisan Campaign Reform Act law is to limit the influence of the wealthy special interest groups in the political process.

The chairman of the Senate Appropriations Committee is Senator Ted Stevens of Alaska. Since he has become chairman of the committee, federal spending per capita in Alaska is the highest in the nation (Rosenbaum, 2004). Approximately 4% of the overall spending in the Consolidated Appropriations Act of 2005 is for what is referred to as "earmarks," i.e., for pork barrel projects. In fact, Taxpayers for Common Sense, a watchdog group, claims that there are 11,772 pork projects in the Appropriations Act (Rosenbaum, 2004).

As Krugman (2004) points out, the head of the Environmental Protection Agency's Office of Air and Radiation previously worked for the industries involved in much of the polluting of the environment. These firms are among the very large donors to politicians and political parties. Putting the fox in charge of the henhouse has resulted in the easing of many restrictions, especially with regard to dangerous pollutants such as mercury. Krugman notes that 8% of American women have excessive amounts of mercury in their bloodstreams; this can be very harmful to fetuses.

Gerrymandering has made a mockery of the democratic process. Election district boundaries are redrawn in a way that gives one party an advantage. This is accomplished by drawing the boundaries in such a way that the opposition is in as few districts as possible. This explains why re-election rates are so high. Redistricting provides an unfair advantage in elections to the political party that draws the districts; it is a tool used to ensure that incumbents have little chance of losing an election. According to Drum (2004), "Computer optimized gerrymandering has taken us to the point where no more than about 5% of House seats are seriously competitive in each election. The rest are mere shams, not much more real than elections in Iran or the old Soviet Union." The cause of the problem is the conflict of interest that arises when election districts are drawn by legislators rather than independent bodies.

#### In the Pentagon

There have been complaints that individuals working for the Pentagon in the purchasing of weapons and other products from companies are later offered jobs from these same firms. A recent case involved an officer at Boeing who openly "discussed" a job opening with a Pentagon weapons purchaser (Holmes, 2003). Recently, Senator John McCain tried to have E.C. "Pete" Aldridge – formerly a weapons purchaser for the Pentagon and currently a member of the board of directors of Lockheed Mar-

tin, a major defense contractor – removed from a committee set up by the president to advise NASA on the best approach to explore space. McCain felt that the conflict of interest was too strong.

#### In Medical Journals

There are a number of conflicts of interest in the medical scholarship that have recently come to light. Nature Neuroscience, a major medical journal, announced that henceforth, authors of articles evaluating products would have to indicate whether they had any financial ties to companies making these products. There was a case in which the author of a review article describing "promising" new therapies for depression stood to gain financially (he owned shares in the company associated with one of the therapies and was a board member with stock options of another company whose product had been promoted by him) from the adoption of these treatments (Petersen, 2003).

#### In Medicine

Several years ago, Consumer Reports did a study on needless surgery (Consumer Reports on Health, 1998). One finding was that for some procedures the percentage of operations that were unwarranted was more than 50%! The problem of unnecessary surgery may very well be due to the conflict of interest a surgeon has when a patient is examined. Clearly, a surgeon stands to make considerably more money by recommending surgery than by informing the patient that surgery is not necessary. This is the reason that many HMOs require a second opinion before allowing surgery. Another conflict of interest may be present when doctors prescribe medication. If a doctor tells a patient to wait until the problem gets better on its own (which will happen in many cases), they make very little. If they prescribe drugs and/or send the patient to take expensive tests, they can have the patient return to discuss the results. With some prescription drugs, the doctor has to monitor the patient, which means additional visits. Another problem that should be noted is that the pharmaceutical companies often pay doctors for recruiting patients for drug trials. Some doctors have been able to earn hundreds of thousands of dollars in recruitment fees.

#### In the Pharmaceutical Industry

Pharmaceutical companies fund virtually all the research being done testing the efficacy of new drugs. The high price for a new drug ends when the patent expires, typically after 17 to 21 years. Since the drug companies make considerably more profit from new drugs than from older drugs, there is a serious conflict of interest. Pharmaceutical firms are mainly interested in funding studies that demonstrate that a new, patentable drug is effective. New drugs tend to be tested against placebos rather than existing drugs. This is done because a new drug is more likely to "beat" a placebo than an existing drug (Angell, 2004). An even more serious problem is that "according to a 1996 study published in the Annals of Internal Medicine, an amazing 98% of company-sponsored drug studies published between 1980 and 1989 in peer-reviewed journals or in symposia proceedings favored the funding company's drug" (Bodenheimer and Collins, undated). Bodenheimer and Collins feel that this is due to the conflict of interest that arises because the pharmaceutical companies fund the research that determines whether their drug is efficacious.

Topol (2004), in describing the decision by Merck to remove the arthritis drug Vioxx, after three years of denying that it could cause heart attacks, makes the following remark: "...despite studies showing the magnitude of the public health problem, for several years Merck did nothing to investigate. This surely represents a conflict between the interests of the public and the interests of a company with a blockbuster drug that had sales of \$2.5 billion in 2003." Topol notes that the FDA should have forced Merck to conduct a study in order to determine whether or not Vioxx could cause heart attacks, but instead did nothing. The truth came out accidentally because Merck was conducting a study hoping to show that Vioxx could help patients with colon polyps.

Null et al. (2003) claim that the number of iatrogenic deaths in the United States is 783,936. They assert that many of the problems in the medical field are due to conflicts of interest. Null et al. cite the former editor of the New England Journal of Medicine, Dr. Marcia Angell, who has been demanding increased restrictions on financial incentives for medical researchers. Angell feels that growing conflicts of interest are tainting science.

Tyrone B. Hayes, a Berkeley researcher claimed that the pesticide manufacturer that sponsored his research tried to suppress it when it was demonstrating that its product had adverse effects on the sexual development of frogs. It turned out that the company sponsoring the research did have the final say as to whether the research could be published. Later on, the company tried to bribe Professor Hayes with a \$2 million lab if he would continue doing his research in a "private setting," i.e., keep quiet about it (Blumenstyk, 2003).

Parkinson (2004) asserts that "when a single vested interest, for example a corporation, funds a research study on an area of relevance to them, that study is much more likely to yield results which favour the vested interest." Parkinson also notes the problem that results in scientific research because negative results tend to be suppressed. Null et al (2003) also believe this to be the case and cite many sources supporting this view.

#### In Psychology

Goode (2004) discusses the conflict between the American Psychological Association (155,000 members) and the American Psychological Society (15,000 members). The latter organization was formed by researchers who broke off from the American Psychological Association because they felt that it was not scientific enough. A number of researchers, for example, feel that there is little evidence supporting the validity of the Rorschach inkblot test or the existence of repressed memories of childhood sexual abuse. They have been critical of various new untested therapies and labels such as sexual addiction and codependency. Each side has claimed that the other has financial interest in defending its point of view. It would appear that an impartial organization is needed to determine whether untested forms of psychotherapy are effective.

It has been noted – specifically in a Congressional hearing regarding Insurance coverage of mental health benefits – that the Diagnostic and Statistical Manual for Mental Disorders of the American Psychiatric Association, a catalog of mental diagnoses, contains a built-in conflict of interest: The individuals who determine the disorders to be included in the manual are

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the ones who profit from it, since the DSM manual is used to provide diagnoses to insurance companies for reimbursement.

#### In the Food and Drug Administration

The Food and Drug Administration (FDA) is mandated by law to use independent experts to determine which medications should be approved, what information should be stated on warning labels, and in deciding how drug studies should be conducted. These experts are not supposed to have a financial stake in the drugs they are asked to evaluate. Amazingly, a study conducted by USA TODAY found that more than half of the experts used by the FDA have a financial relationship with the drug company whose drug they are asked to evaluate (Cauchon, 2000).

In high school guidance counseling. Winter (2004) describes how guidance counselors, who are supposed to be objective sources of information for high school students, are being wooed by colleges. These lavish perks may include skiing trips, vacations, golfing trips, going to the racetrack, luxurious rooms, fancy meals, tickets to sporting events and/or spending time at a spa, all with the hope that the counselor will recommend a particular college to students. It becomes very difficult to be impartial and provide reliable information when one has received numerous inducements that might even include a vacation for one's entire family.

#### In the Publishing Industry

College textbooks should be revised only when the information in an existing text is outdated. This decision should not be made by publishers who make little money from a textbook that has been around for a few years since students purchase used copies of the textbook. It is in the publishers (and authors) interest to revise a textbook as frequently as possible in order to maximize profits. In many cases, the major change in a new edition of a text is in the arrangement of chapters rather than in the addition of new material.

#### **Voting Machine Testing**

According to a New York Times editorial (2004) the federal labs that have the responsibility of ensuring that voting machines are reliable are for-profit companies that are selected and paid for by the firms that manufacture the voting machines. This is an obvious conflict of interest. What is interesting is that the same cannot be said of the lab that certifies gambling equipment. The Nevada Gaming Control Board lab is a state

agency so there is no conflict of interest here. There have been problems with voting machines that miscount and voting software that contains "back doors" that make it possible for elections to be stolen. Black Box Voting is a consumer protection organization for voting (see www.blackboxvoting.org).

#### **Testing of Tasers**

Police departments throughout the United States are using Tasers, a gun that fires barbs that deliver electric shocks, to subdue suspects. According to Berenson (2004), the number of people who have died from Tasers is at least 50. It is possible that the shock may be lethal for certain individuals, e.g., those with heart conditions or using pacemakers. According to Taser International, the manufacturer of the Taser, the gun is safe. However, safety studies were conducted by a company-paid researcher, not an independent testing lab. Furthermore, the tests were conducted on only one pig in 1996 and five dogs in 1999. Independent studies conducted in England, however, have not been able to support the claim that the weapon is safe.

#### Conclusion

The above examples reflect only the tip of the iceberg and demonstrate that the factor that has arguably produced the greatest most widespread management failure ever has been the presence of conflicts of interest. The problems that might be caused by ignoring conflicts of interest are not necessarily small. Marsh & McLennan lost \$11.5 billion of its market capitalization in just a few days after Eliot Spitzer announced his investigation (Vickers, 2004). Even if a firm is not under investigation for fraud, it cannot run efficiently if there are serious conflicts of interest present. Corporate America pays a heavy price for rigged markets. Think of all the additional costs that are the result of corruption in the insurance industry. Many firms cannot afford the high cost of health insurance. These additional expenses make corporate America less competitive in the world economy.

Where are the valuable lessons to be learned regarding the effects of conflicts of interest? Not in our business schools. In what might be the most egregious omission, management textbooks either have nothing to say about conflicts of interest or no more than a paragraph.

Conflicts of interest are more than an ethical issue: They are quite possibly the major obstacle confronting effective management today. The first task of a firm that is interested in running efficiently is eliminating or reducing the presence of conflicts of interest.

#### References

AICPA (2003). "Summary of Sarbanes-Oxley Act of 2002," <a href="http://www.aicpa.org/info/sarbanes\_oxley\_summary.htm">http://www.aicpa.org/info/sarbanes\_oxley\_summary.htm</a>, (May 2004). Angell, Marcia (2004). The Truth About Drug Companies: How They Deceive us and What to do About it. New York: Random House.

Axtman, Kris and Ron Scherer (2002). "Enron Lapses and Corporate Ethics," Christian Science Monitor. Feb. 4, <a href="http://csmonitor.com/2002/0204/p01s01-ussc.html">http://csmonitor.com/2002/0204/p01s01-ussc.html</a>, (May 2004).

Berenson, Alex (2004). "As Police Use of Tasers Soars, Questions Over Safety Emerge." New York Times. July 18, pp. A1, A25.

Berenson, Alex (2004). "Insurance Investigation Widens to Include a Look at Costs: If Past is Prologue, Brokers Face Turmoil." New York Times. October 19, pp. C1-C2.

Blumenstyk, Goldie (2003). "The Price of Research." Chronicle of Higher Education. October 31. pp. A26 - A30.

Bodenheimer, Thomas and Ronald Collins (undated). "Telling the Truth: What Drug Companies Don't Want You to Know," <a href="http://www.cspinet.org/integrity/tell\_truth.html">http://www.cspinet.org/integrity/tell\_truth.html</a> (May 2004).

Cauchon, Dennis (2000). "FDA Advisors Tied to Industry: Approval

Process Riddled with Conflicts of Interest." USA TODAY. Sept. 25. p. 1A.

Common Cause (2002). <a href="http://www.commoncause.org">http://www.commoncause.org</a> (May 2004). Consumer Reports on Health (1998). "Needless Surgery, Needless Drugs," Vol. 10, No. 3, (March), pp. 1-4.

Drum, Kevin (2004). "Gerrymandering." Washington Monthly, February 22. <a href="http://www.washingtonmonthly.com/archives/individual/2004\_02/003330.php">http://www.washingtonmonthly.com/archives/individual/2004\_02/003330.php</a> (November 2004).

Dugar, Amitabh and Siva Nathan (1995). "The Effect of Investment Banking Relationships on Financial Analysts' Earnings Forecasts and Investment Recommendations." Contemporary Accounting Research. Vol. 12 (4), pp. 131-160.

Dwyer, Paula (2003). "Breach of Trust." Business Week. December 15, pp. 98 - 108.

Goode, Erica (2004). "Defying Psychiatric Wisdom, These Skeptics Say 'Prove It'." New York Times. March 9. pp. F1, F6.

Henriques, Diana B. and G. Fabrikant (2002). "Deciding on Executive Pay: Lack of Independence Seen." New York Times. December 18, pp. A1, C8.

Holmes, Stanley (2003). "Boeing: Caught in its own Turbulence." Business Week. December 8, p. 37.

Krugman, Paul (2004). "The Mercury Scandal." New York Times OP-ED. April 6, p. A23.

Michaely, Roni and Kent L. Womack (1999). "Conflict of Interest and the Credibility of Underwriter Analyst Recommendations." Review of Financial Studies. Vol. 12 (4), pp. 653-686.

Mills, D. Quinn (2003). Wheel, Deal, and Steal: Deceptive Accounting, Deceitful CEOs, and Ineffective Reforms. Upper Saddle River, NJ: FT Prentice Hall.

Morgenson, Gretchen (2004). "Three Banks had Early Concern on WorldCom." New York Times. March 17, pp. A1, C9.

New York Times (2004). "Gambling on Voting." Editorial. June 13, p. 12. Null, Gary, Carolyn Dean, Martin Feldman, and Dorothy Smith (2003). Death by Medicine. <a href="http://www.garynull.com/Article.aspx?Article=/documents/iatrogenic/deathbymedicine/deathbymedicine1.htm">http://www.garynull.com/Article.aspx?Article=/documents/iatrogenic/deathbymedicine/deathbymedicine1.htm</a> (September 2004).

Parkinson, Stuart (2004). "Corporate Influence on Science and Technology." Scientists for Global Responsibility. <a href="http://www.sgr.org.uk/SciencePolicy/SpeechGreenParty2004.htm">http://www.sgr.org.uk/SciencePolicy/SpeechGreenParty2004.htm</a> (September 2004).

Petersen, Melody (2003). ""Undisclosed Financial Ties Prompt Reproval of Doctor." New York Times. August 3.

Rajan, Raghuram, and Henri Servaes (1997). "Analyst Following of Initial Public Offerings." Journal of Finance. Vol. 52, pp. 507-529.

Rosenbaum, David E. (2004). "Call it Pork or Necessity, but Alaska Comes Out Far Above the Rest in Spending." New York Times. November 21, p. A28.

Rosett, Claudia (2004). "Anatomy of a Scandal: The Oil-for-Food Story." National Review Online April 26. <a href="http://www.nationalreview.com/rosett/rosett200404261356.asp">http://www.nationalreview.com/rosett/rosett200404261356.asp</a> (September 2004).

Topol, Eric J. (2004). "Good Riddance to a Bad Drug." New York Times OP-ED. October 2, p. A15.

Van Kolfschooten, Frank. (2002). "Conflicts of Interest: Can You Believe What You Read?" Nature. V. 416, March, pp. 360-363.

Vickers, Marcia. (2004). "The Secret World of Marsh Mac." Business Week. November 1, pp. 78-89.

Winter, Greg (2004). "Wooing of Guidance Counselors is Raising Profiles and Eyebrows." New York Times. July 8, pp. A1, A18.

Dr. Friedman received a bachelor's degree in Economics from Brooklyn College in 1968. He earned a masters degree in Eco-

nomics from Brooklyn College in 1971, an MBA in Marketing

from Bernard M. Baruch College in 1975, and a Ph.D. in Business

1977. Currently, he serves as a Professor of Business and Market-

from the Graduate Center of the City University of New York in

### Robert I. Bell

Ph.D.

Economics Department
Brooklyn College of the City University of New York
2900 Bedford Avenue
Brooklyn, New York 11210
PH. (718) 951-5317

E-mail: ribell@voila.fr

Dr. Bell received a B.A. in Political Science from the University of California, Berkeley in 1964, and a Ph.D. in Cybernetics from Brunel University, England, in 1972. He is Professor of Management and Chairman of the Economics Department, Brooklyn College. Bell is the author of seven books, most recently: Beursbedrog (The Stock Market Sting), De Arbeiderspers, Amsterdam, 2003; Les peches capitaux de la haute technologie (The Capital Sins of High Technology), Seuil, Paris, 1998. Impure Science, Wiley, New York 1992.

# Linda Weiser Friedman

ing at Brooklyn College.

Ph.D.

Department of Statistics and Computer Information Systems Baruch College and the Graduate Center of the City University of New York

17 Lexington Avenue – Box B11-220 New York, New York 10010 PH. (646) 312-3361

E-mail: Linda\_Friedman@baruch.cuny.edu

Dr. Friedman received a bachelor's degree in Biology/Statistics from Baruch College in 1976. She earned an M.S. degree in Applied Statistics in 1980 and a Ph.D. in Operations Research in 1983 from Polytechnic Institute of New York. She is Professor of Computer Information systems at Baruch College and is on the doctoral faculty in Business and Computer Science at the Graduate Center of CUNY. Currently, she is the Coordinator of the Information Systems specialization of the CUNY PhD in Business Program.

## Hershey H. Friedman

Ph.D.

Economics Department Brooklyn College of the City University of New York 2900 Bedford Avenue Brooklyn, New York 11210 PH. (718) 951-5119

E-mail: x.friedman@att.net

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