

# **Regulating the Financial Sector in New York:**

## **Have the Activities of the State Attorney General Been Good or Bad for the Industry?**

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The Fiscal Policy Institute (FPI) is a nonpartisan research and education organization that focuses on the broad range of tax, budget, economic and related public policy issues that affect the quality of life and the economic well-being of New York State residents. Founded in 1991, FPI's work is intended to further the development and implementation of public policies that create a strong, sustainable economy in which prosperity is broadly shared by all New Yorkers. FPI has offices in Albany and New York City.

## **Regulating the Financial Sector in New York**

### **Executive Summary**

Following the bursting of the “dot-com” and stock market bubbles of the late 1990s, and several widely publicized corporate-finance scandals, new federal regulations were put into place, most notably the Sarbanes-Oxley Act. At the State level, local regulatory institutions also focused new attention on the financial-services sector. In particular, the Office of the Attorney General (OAG) of New York State has been extremely active in investigating various financial-services firms in New York. These investigations resulted in a number of large financial settlements and some industry-level restructuring.

There have been concerns that actions taken by the New York OAG in the past few years regarding the investment banking, mutual fund, and insurance industries, have cost jobs in New York. This paper takes an early look at whether or not the new regulatory scrutiny hurt these sectors by introducing unwarranted penalties and restructuring, or fixed it, by restoring informational symmetry and investor confidence.

The earliest OAG regulatory actions in New York's financial-services sector were made public in April 2002 with the investigation of a prominent investment bank. Investigations into mutual fund industry practices were initiated in September 2003, and insurance industry legal action got underway in October 2004.

The historical volatility of the financial-services sector has long been a factor in New York's economic picture. The pronounced run-up in financial markets in the late 1990s ended with the bursting of the "dot-com" bubble in March 2000. New York City securities subsector employment peaked at the end of 2000, reflecting the peak levels of activity in mergers and acquisitions and initial public offerings. Financial-services employment retreated sharply through the middle of 2003, in New York and nationally. The financial markets, and New York financial-services employment, were also buffeted during this period by the September 11<sup>th</sup> terrorist attacks, corporate financial scandals affecting Enron, WorldCom and other companies in mid- and late-2002, and by the build-up to the Iraq War from the fall of 2002 through the spring of 2003. Nationally, investor, consumer and business confidence did not begin to rebound until mid-2003.

Econometric analysis was used to separate out macroeconomic factors from OAG regulatory actions in their effects on financial sector activity. Employment in investment banking and the securities subsector declined sharply in the wake of the dot-com crash, but the statistical analysis shows that there was no drop in employment following the OAG actions other than that predicted by market fundamentals and the macroeconomy. Investment banking employment has increased in recent years as the financial markets have rebounded and New York has maintained its share of national employment.

OAG enforcement actions may have benefited the mutual fund industry by restoring investor confidence. In the period since OAG actions, the inflow of funds into the mutual

fund industry has increased relative to overall market performance. Because OAG enforcement action in the insurance industry has been more recent and is ongoing, it is premature to conclude anything about the possible effects of regulatory activity. It can be noted, however, that through consolidations and other developments, insurance brokerage employment in New York has experienced long-term structural decline since at least 1990, but that there has been a very slight up-tick in employment since the fall of 2004.

Although it is too early to make definitive judgments, the data and analysis presented here suggest that the financial-services sector is no worse off, and quite possibly better off, than it would have been absent OAG actions, because of improved confidence on the part of investors stemming from the more effective regulation and the corrective actions that followed widely publicized scandals.

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## **Introduction**

Financial markets have historically been among the most regulated of industries in the United States, especially since the Depression of the 1930s. Financial market failures, and perceived failures, of that era led to sweeping new regulation of the banking and financial system. The legacies of these regulations endure, although there has been a gradual (and sometimes dramatic) loosening of restrictions over the past two decades. After the bursting of the “dot-com” and stock market bubbles of the late 1990s and several widely publicized corporate-finance scandals, there have been new federal regulations put in place for corporations and the securities industry—notably the Sarbanes-Oxley Act—as well as enhanced scrutiny and legal action using the existing regulatory regimes.

There is currently much debate about the impact of Sarbanes-Oxley (SO), and many have noted that the costs of complying with the new accounting and disclosure rules are extremely high. Others argue that SO impedes business innovation by discouraging economic activity which is hard to account for under current practices. On the other hand, it is unclear how much broad-based investor confidence there would be in the markets today absent some sort of regulatory assurance that companies were not pulling Enron-style financial manipulations.<sup>1</sup>

Despite a thriving academic and lay debate about the wisdom of Sarbanes-Oxley, much less attention has been paid to the economic impact of the renewed regulatory scrutiny at the State level using existing regulatory institutions and laws. In particular, the Office of the Attorney General of New York State (OAG), led by Eliot Spitzer, has been extremely active in investigating firms in the financial industry in New York. The OAG has sued dozens of firms, resulting in large negotiated financial settlements and even industry-level restructuring. This paper takes a preliminary look at the key parts of the financial industry that were most heavily investigated by the New York OAG and gauges the early impact on the economic health of the industry.

## **The Economics of Regulation**

Neoclassical economic theory offers a potential but fairly limited endorsement of regulation of market activities. In the standard model, there are specific conditions present in markets that would justify some form of intervention, but absent those conditions, it is generally posited that markets function more efficiently without government tinkering. The specific conditions which may justify some form of intervention are usually organized into the following three categories:

First, there can be either too few buyers or too few sellers in the market to ensure “perfect competition.” With too few players in the market, there is no guarantee that there is

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<sup>1</sup> For a review of the issues and the early empirical evidence, see Ribstein, L.E. 2002. Market vs. Regulatory Responses to Corporate Fraud: A Critique of the Sarbanes-Oxley Act of 2002. Working Paper (January 2005) University of Illinois College of Law.

adequate price competition. The clearest examples are the cases of monopolies—especially those “natural monopolies” whose markets lend themselves best to a single producer—whose pricing power must be regulated by government in order to have efficient quantities produced. Historically, regulation has been well accepted in cases like the telephone services, utility providers, and similar markets where economies of scale are large and a single producer may be most cost efficient.

Second, there can be “externalities” in the market, where producers or consumers of goods impose costs (or benefits) onto others in the process of producing or consuming goods. If these costs imposed on others are not naturally embodied into the cost of production, then there can be over-production relative to the efficient outcome. The classic example is the pollution caused in manufacturing, where pollution causes economic costs that are widespread, but not paid for by a manufacturer unless a tax is imposed. Alternatively, externalities may be regulated in quantity, although this is usually not as efficient as a tax.

Finally, there can be less than “perfect information” in the market. In the efficient-market model, buyers and sellers have full information about the product and can make an efficient choice about the costs and benefits. If a buyer is purchasing a pair of shoes, the assumption of perfect information is probably a reasonable one. A buyer can try on a pair of shoes and determine style, fit, and quality prior to purchase. Purchasing a home, however, is a clear case where the seller would know more than the buyer does, and without regulation would not always have the incentive to share, for example, all the hidden flaws. Markets with such asymmetries, where the buyer has a difficult time assessing the true nature of the product, are often the subject of “disclosure” regulations. Depending on the kind of information failure, other regulatory actions may be appropriate.

In the market for any one product, the costs of too little or too much regulation may be fairly small. But at the macroeconomic level, there is much theory and empirical literature exploring the role of regulation in well-functioning economies. Excessive government involvement in markets is often blamed for anemic growth and slow adjustment to structural shifts. But too little regulation can also hurt economies. Regulation can be, and often is, essential for the healthy functioning of businesses, and properly directed, can promote rather than hinder job and income growth.

Financial markets in particular are often identified as key sectors that need effective institutions. This means that there may need to be a set of laws governing financial activities, transparency of process, and a system for settling disputes. Because financial markets allocate capital, and capital is a key input in economic growth, functioning financial systems are tightly linked, at least theoretically, to development and prosperity. A recent paper by Rafael LaPorta *et al.* demonstrates that effective regulatory regimes—especially the facilitation of civil suits—is linked to economic performance worldwide.<sup>2</sup>

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<sup>2</sup> Rafael La Porta, Florencio Lopez-de-Silanes, and Andrei Shleifer, “What Works in Securities Laws?” Typescript. Dartmouth College, Yale University, and Harvard University. June 11, 2004



There are several mechanisms through which good regulation can foster growth. At the core, a functioning legal system undergirds all economic transactions by ensuring their legitimacy.<sup>3</sup> But financial markets are particularly prone to informational problems, not so much because the information is not attainable but because it is often extraordinarily complex and hard to assess. More and more consumers are purchasing financial products for themselves—stocks, bonds, mutual funds—and are relying on various kinds of public information to do so. But not even corporations are expert investors, and therefore rely heavily on services from the financial sector.

When only one party to a transaction is fully informed, markets can suffer from the “lemons problem,” first elaborated by George Akerlof using the example of the market for used cars.<sup>4</sup> Potential buyers of used cars have no way to tell if the car offered for sale is a “lemon”—or for that matter has been totaled and rebuilt—or is a perfectly well-functioning car that the previous owner simply wants to sell. Akerlof demonstrated that this asymmetry of information—the seller knows more about the car than the buyer does, and has no way to credibly share the true information—can make the market extremely inefficient. Advances in regulation—such as unique vehicle identification numbers which are linked to accident histories—can improve such markets by giving buyers more confidence in what they are buying. Fewer “lemons” are sold, and the used-car market thrives.

For the average consumer, the markets for investments and insurance have similar properties. Especially following the “dot-com” boom and then bust, those who are not well versed in financial markets undoubtedly had difficulty determining if their investment losses were due to poor fund choices, poor portfolio management, or the kinds of illegal activities that occurred at Enron, WorldCom, and other companies. Regulatory scrutiny can serve, under such circumstances, as assurance that someone is “minding the store,” allowing consumers more confidence to make financial decisions. The confidence brings money back into the markets, and fuels their growth.

Regulatory actions against individual firms may or may not have market-wide impacts. To the extent that the targeted firm is the only one in the market whose behavior is problematic, it may lose business, profits, and market share. But if the firm was at unfair advantage before the regulatory intervention, the shift presumably increases social welfare by moving business to more efficient competitors. Although the transition may cost jobs in the industry in the short run, in the long run one would not expect any major change in the market. On the other hand, if a single firm is the only firm that was caught—while others engage in the same behavior—there may be industry-wide behavioral changes to avoid future problems. In such cases, regulatory scrutiny may

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<sup>3</sup> At the other end of the theoretical spectrum are economics-oriented legal scholars, who presume an economic value to certain degrees of deterrence, and then demonstrate how best to get economically optimal behavior. Polinsky and Shavell develop such a theory with a focus on the role of public enforcer. See A. Mitchell Polinsky & Steven Shavell, 2000. “The Economic Theory of Public Enforcement of Law,” *Journal of Economic Literature*, American Economic Association, vol. 38(1), pages 45-76.

<sup>4</sup> Akerlof, George, “The Market for ‘Lemons’: Quality Uncertainty and the Market Mechanism.” *Quarterly Journal of Economics*, 84(3), pp. 488-500, 1970. This article was cited as a major factor in the award of the Nobel Prize in Economics to Akerlof.

encourage compliance even without legal action, much as a patrol car on the highway slows down all the cars.

### **Regulatory Actions of the Office of the Attorney General**

Regulation can also have costs. For example, there have been concerns that actions taken by the Office of the Attorney General in the past few years regarding the investment banking, mutual fund, and insurance industries, have cost jobs in New York. Although no one argues that illegal actions taken by corporations should be allowed to continue in the name of job protection, there are legitimate concerns that regulation can be overly burdensome to business. Regulation often has unforeseen side effects, so there are both direct and indirect costs, as well as benefits.

Since 2002, The Office of the Attorney General has undertaken investigations into three key areas of the finance and insurance sector: investment banking, mutual funds and insurance.<sup>5</sup> In April of 2002, the first announcement was made of inquiry into the practices at investment banks, and a settlement was agreed to in December 2002 and finalized in April 2003, with a total of ten firms agreeing to pay a combined \$900 million in penalties and to restructure some of their core operations. The OAG charged that firms routinely disseminated investment advice that was designed to help investment banking clients but which harmed individual investors. The investigations into the mutual fund industry, with concerns about market-timing and late trading, were officially noted in September 2003, with the announced settlement with Canary Partners. Settlements with dozens of additional fund companies were negotiated through November of 2004. More recently, the OAG has been investigating the insurance industry, citing fraud and anti-competitive practices, including an insurance brokerage that had improper payment agreements for insurance contracts. Since these investigations are ongoing, this paper will provide only a limited analysis of their impact on the insurance industry.<sup>6</sup>

There is little debate that the companies that have been party to the negotiated settlements were engaging in behavior that improperly hurt consumers. This paper will not address the distributive consequences of the OAG actions, nor try to ascertain whether the outcomes were equitable. Rather, given the fact that the finance sector is an important employer and generator of revenues for New York State, this paper will assess whether or not regulatory actions have been helpful in promoting macroeconomic employment and income growth. The focus here is whether the new regulatory scrutiny hurt the sector, by introducing unwarranted penalties and restructurings, or fixed it, by restoring informational symmetry and consumer confidence.

What does the evidence suggest about the OAG investigations and the outcome of regulatory action?

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<sup>5</sup> Details about all of the OAG actions can be found at the official OAG website:  
<http://www.oag.state.ny.us/>

<sup>6</sup> In addition, the OAG has been involved in an ongoing investigation of New York Stock Exchange executive compensation practices.

## **I. Investment Banking and other Financial Services**

The Office of the Attorney General announced its investigation into the practices in the Investment Banking industry in April 2002, when it revealed that Merrill Lynch was under scrutiny. Shortly thereafter, nine other firms were confirmed to be under investigation. Among the key charges by the OAG were that the research analysts at the Banks were not offering independent analysis, but had strong incentives to rate more highly companies with which the Banks were doing business. By December 2002, a “Global Settlement” had been agreed to by the ten Banks involved. The settlement involved a restructuring of their research departments to assure more independence from banking activities, a ban on IPO “spinning,” and \$900 million in penalties and restitution as well as additional funds for third-party research.<sup>7</sup>

The OAG actions and the Global Settlement occurred at a time--following the bursting of the stock-market bubble--when Investment Banks were seeing a decline in revenues and began layoffs. Financial market woes were compounded by a series of financial scandals: e.g., Enron and Worldcom. Both the collapse of the stock market and these financial scandals served to undermine investor confidence. The uncertainties that preceded the invasion of Iraq in March 2003 kept confidence from rebounding. It is not easy to separate out what effect, if any, the OAG actions had on employment in the sector, given the concurrent decline in financial markets worldwide. However, the data presented below suggest that employment has generally kept its historical relationship with the markets, and has increased in recent years as the markets themselves have rebounded.

In what follows, the data and classification terminology are from the Bureau of Labor Statistics, focusing on the subsector of “Securities, Commodity Contracts, and other Financial Investments and Related Activities,”(securities subsector for short). Data for the securities subsector are available throughout the 1990s and through the first part of 2006.<sup>8</sup> Data for the Investment Banking industry (an industry within the subsector) are available only for the past three years.

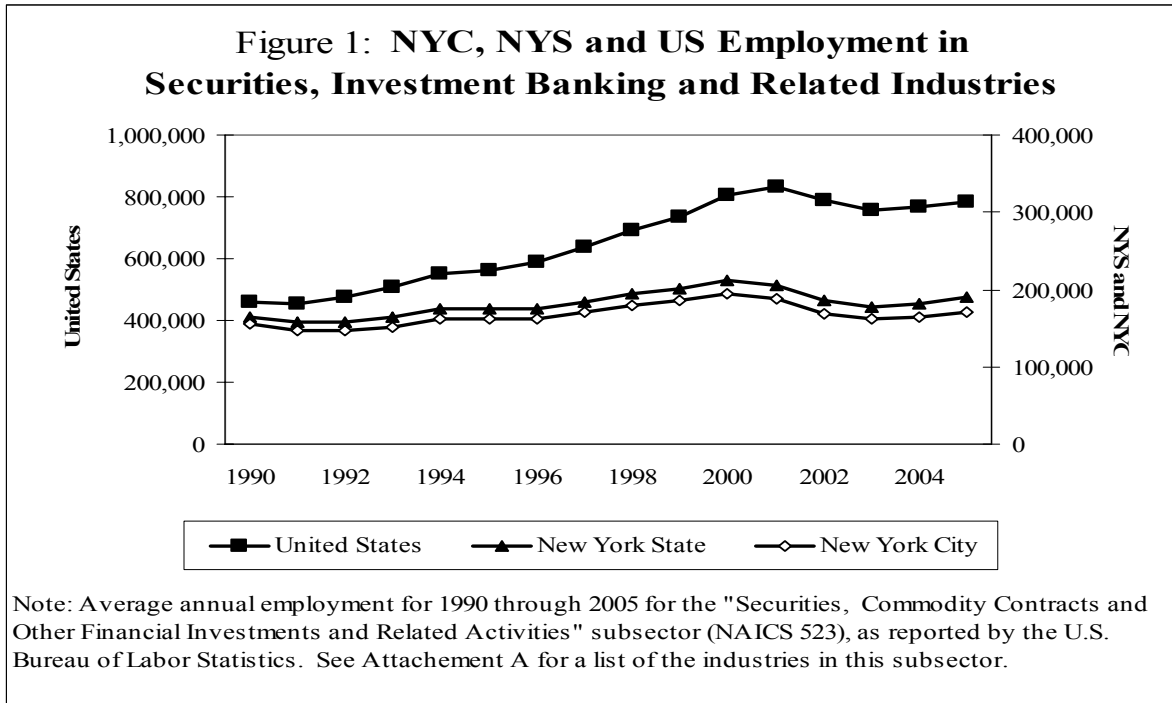
Figure 1 illustrates the employment trends at the national and state level, as well as for New York City, for the past 16 years. Most of the financial-services employment in New York State is in New York City, although non-NYC employment has increased from

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<sup>7</sup> The ten investment banks which are collectively referred to as Global Settlement firms are: Bear Stearns, Credit Suisse First Boston, Deutsche Bank, Goldman Sachs, J.P Morgan, Lehman Brothers, Merrill Lynch, Morgan Stanley, Salomon Smith Barney, and UBS Warburg. The settlement was finalized in April 2003. Statement by Attorney General Eliot Spitzer regarding the “Global Resolution” of Wall Street Investigations. April 28, 2003, [http://www.oag.state.ny.us/press/statements/global\\_resolution.html](http://www.oag.state.ny.us/press/statements/global_resolution.html)

<sup>8</sup> The graphs use NAICS industry classifications from the Bureau of Labor Statistics, and here “Securities Subsector” refers to NAICS classification 5230001: “Financial Activities: Securities, Commodity Contracts, and other Financial Investments and Related Activities.” Investment banking is an industry within this subsector.

roughly 10,000 in 1990 to 18,500 in 2005. Over the period, total employment in NYC has increased by about 16,000 jobs.<sup>9</sup>

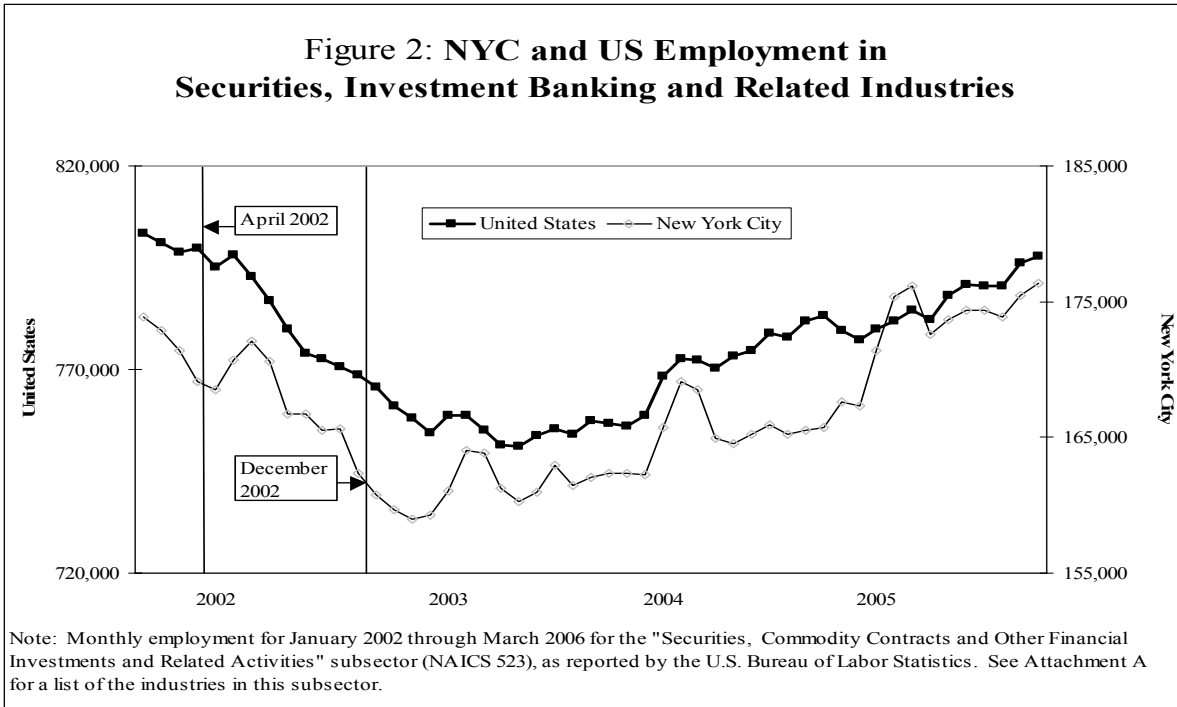


Employment in the securities subsector peaked in 2000 in New York City, along with the peak of activity in the financial markets (e.g., mergers and acquisitions, IPOs, and the “dot-com” boom). Nationally, employment peaked in 2001, and absent the events of September 11, the New York experience would most likely have also peaked in 2001.

Following the dot-com crash, the general decline in stock prices, and a dramatic slow-down of M&A and IPO activity, employment levels declined through the middle of 2003 (May being the lowest) before rebounding. Employment continues to increase through 2006, as the following graph with monthly data illustrates. The two key dates of OAG action are noted on Figure 2: April 2002 when the first suit against Merrill Lynch was announced, and December 2002 when the Global Settlement was reached.

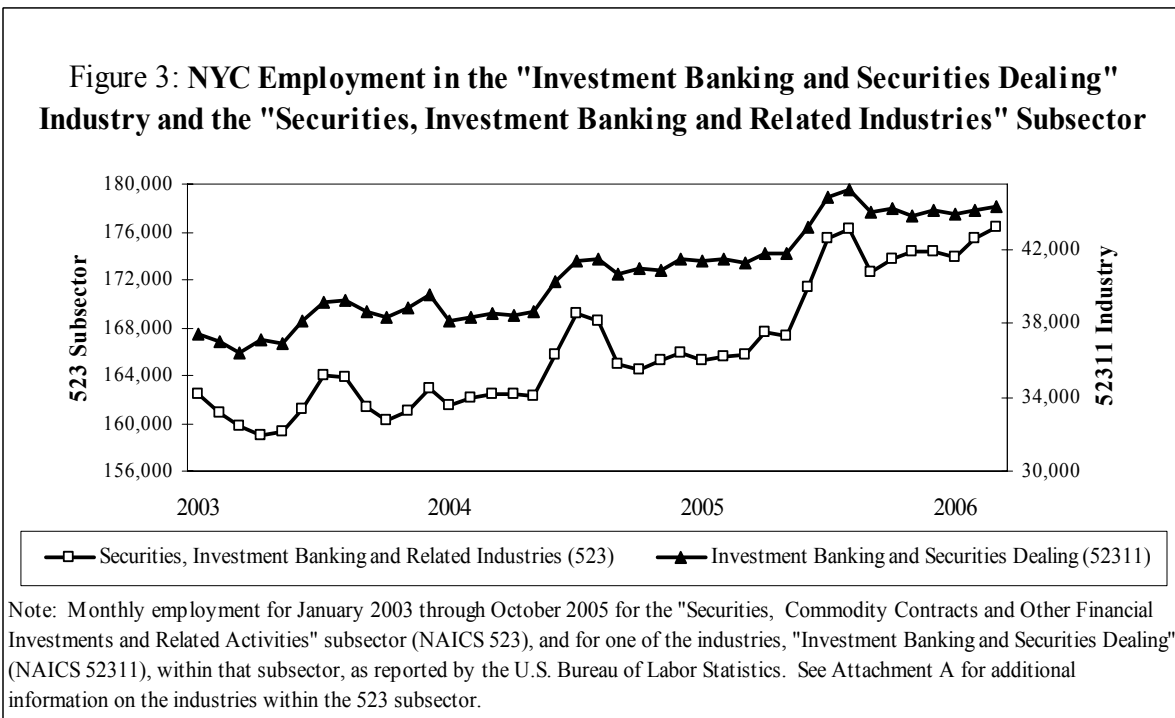
<sup>9</sup> The employment data, with the exception of the data on the Global Settlement firms, come from the Bureau of Labor Statistics.

**Figure 2: NYC and US Employment in Securities, Investment Banking and Related Industries**



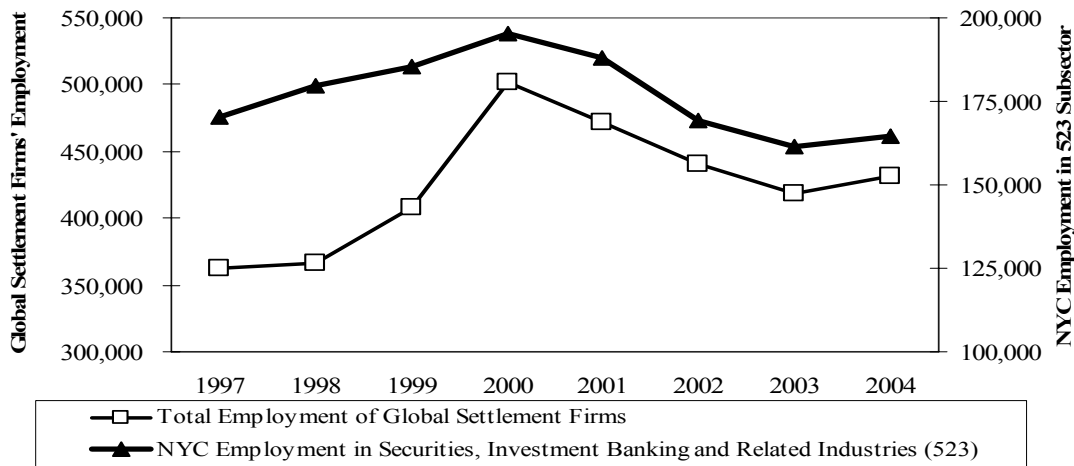
Since 2003, the Bureau of Labor Statistics has tracked employment in investment banking (hereafter IB) as a separate sub-category of the securities subsector. Figure 3 shows that IB employment is a relatively stable subset of employment in the securities subsector.

**Figure 3: NYC Employment in the "Investment Banking and Securities Dealing" Industry and the "Securities, Investment Banking and Related Industries" Subsector**



With respect to the impact of the investigation of and settlements with the major investment banking firms in New York undertaken by the OAG, did the investigation hurt employment in the firms who paid penalties and agreed to restructure their operations? We do not have monthly data for the firms involved in the global settlement, nor do we know their employees within NY only, but as Figure 4 illustrates, we can compare the annual total employment at the companies involved (hereafter GS firms) with employment trends in NYC.<sup>10</sup>

**Figure 4: Total Employment of Global Settlement Firms and NYC Employment in Securities, Investment Banking and Related Industries**



Note: Average annual employment in NYC for the "Securities, Commodity Contracts and Other Financial Investments and Related Activities" subsector (NAICS 523) as reported by the U.S. Bureau of Labor Statistics; and total employment by the firms covered by the global settlement as reported in their 10-K filings with the U.S. Securities and Exchange Commission. Both series are for 1997 through 2004.

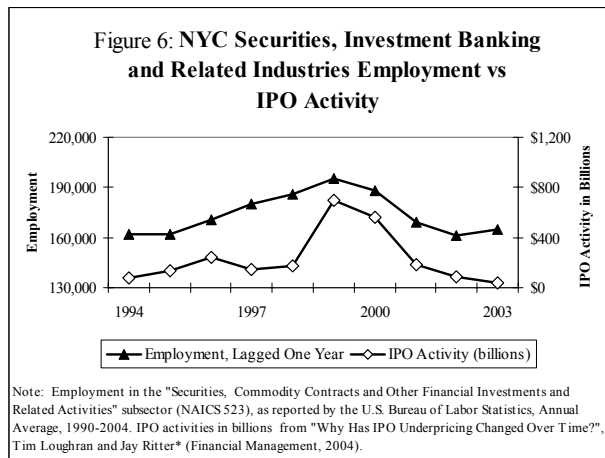
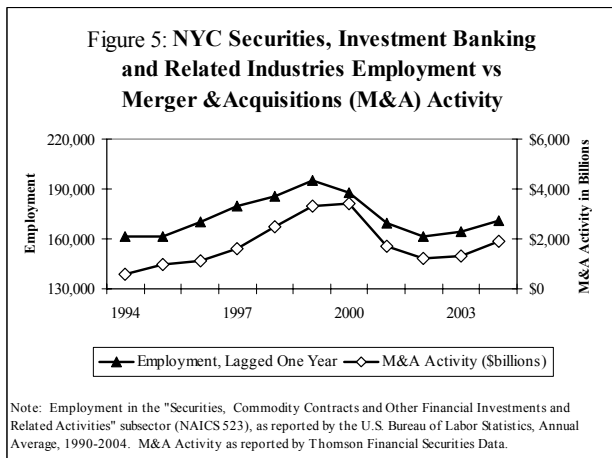
Two things should be apparent from Figure 4. First, employment in GS firms tracks NYC securities employment very closely, especially after 2000. Thus there is no evidence that the firms that were subject to the OAG investigation performed less well than the subsector overall. Second, GS firms are actually doing a bit better than the securities subsector overall. GS firms' employment is up 13% since 1997, whereas overall employment in NYC is flat. Removing the European-based firms (who maintain a large presence in NYC, but also a larger number of overseas employees), the increase in employment since 1997 is even more impressive: the NY-based firms have grown 20% since 1997.<sup>11</sup>

<sup>10</sup> Data on the Global Settlement firms come from EDGAR, the SEC online database of company filings. All data on employment of the ten Global Settlement firms were taken from their annual 10-K filings. Data are used only from 1997 forward, because there were too many mergers during the first half of the 1990s to accurately gauge firm-specific employment. J.P. Morgan acquired BankOne in 2003, and the 2004 employment numbers for J.P. Morgan are corrected for this acquisition, by subtracting from the total employment in 2004 the 2003 employment at BankOne, less the 6500 layoffs that were announced.

<sup>11</sup> It is not possible to track all the Global Settlement firms back to 1990, because the companies themselves have changed ownership and structure over time.

It cannot be said for certain that the OAG investigation and settlement did not have an effect on the securities subsector overall, but we can demonstrate from the above data two things: First, New York has not suffered in comparison with the US as a whole. Second, the firms that were under investigation and signed onto the Global Settlement have not been hurt *relative* to the sector in New York overall. Actually, they have increased employment.

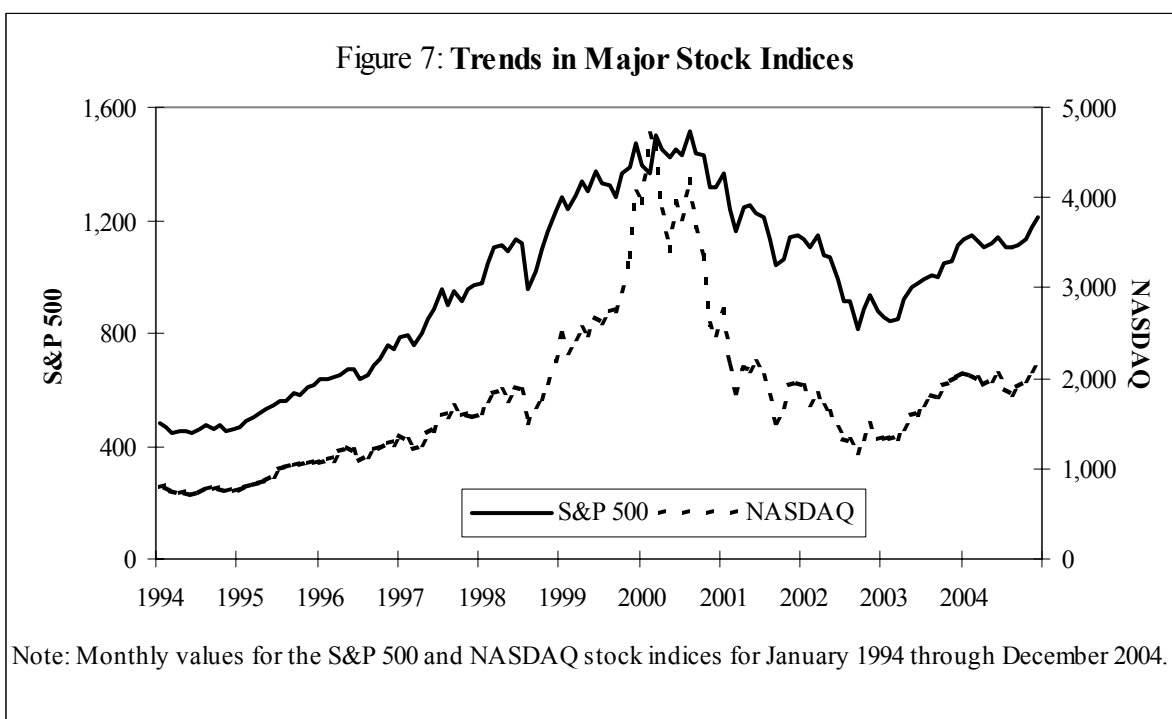
Although there was a continuing decline in employment in the sector from December 2000 until April 2003, the most likely cause of the downturn was the stock-market collapse that began in 2000 and the subsequent slowdown of demand for banking activity. To examine this hypothesis, the following two graphs show New York City employment in the securities subsector plotted with the dollar-value of M&A activity and the post-IPO market capitalization of all IPOs. Employment is lagged one year relative to the banking-activity data, because employment generally follows business trends, rather than preceding them.



These two comparisons demonstrate that there is a close relationship between M&A activity and employment in the finance sector the following year. The correlation between the two from 1994 through 2004 is .925.<sup>12</sup> Because of the lag structure, we can infer that employment trends may be the result of M&A activity, and we can be confident that the causal relationship does not run the other direction. The relationship with IPO activity is not quite as strong, with a correlation of .828. And it might especially be worth noting that employment picked up in 2004 when IPO activity was still in decline the previous year, suggesting that IPO activity may be of secondary importance to the industry compared with M&A work.

<sup>12</sup> There is an outlier data point in 2001, following the events of 9/11, when several thousand financial jobs were relocated to New Jersey (mostly temporarily).

The major stock-price indices exhibit the same general pattern as the above graphs, with peaks in 2000 followed by decline. Figure 7 shows the historical price data for the S&P 500 and NASDAQ indices.



Using monthly employment data from 1994, the elasticity of New York securities subsector employment with respect to the S&P index is calculated to be 0.76. That is, for every 1% increase in the stock market, employment in the securities subsector in New York State increases 0.76%. Although it is appropriate to be agnostic as to the underlying relationship between stock prices and IPO and M&A activity, the data taken together make a strong case that the downturn in employment from 2001 to 2003 was due to market forces and the impact of 9/11, not regulatory action.

In order to test more formally whether there has been any employment cost to the OAG actions, statistical analysis can be done predicting monthly employment in the securities subsector in New York using data from January 1994 through December 2004.<sup>13</sup> Unfortunately, information on the dollar value of M&A activity and IPOs are not readily available as monthly data. However, given the strong correlations between IPO and M&A activity and stock market levels, the S&P Index can serve as a proxy for activity in the financial sector.<sup>14</sup> Also included are data on national employment levels, the yield curve (as a forward-looking indicator of economic growth), and the yield on the 3-month

<sup>13</sup> The statistical analyses reported in Tables 1 and 2 were completed prior to the release of revised estimates of finance-sector employment from the BLS. (The updated data are reported in the graphs and discussed in the text.) For the period of the analysis, the changes to employment estimates were minor.

<sup>14</sup> Omitting the M&A data and IPO data will bias upwards the estimate of the importance of the stock market, so the coefficients should not be taken at face value. Rather, they indicate the strong relationship between the financial markets and employment in the sector.



treasury note, to capture short-run interest rates.<sup>15</sup> Finally, two dummy variables are included for two different OAG eras of intervention. A dummy is included from April 2002 onwards, to capture the effects of the investigation itself, and one from December 2002 onwards, to capture the effects of the Global Settlement.

Two different lag structures were tested to determine the appropriate choice for the model. It turns out that the stock market and yield curve data best predict employment six months into the future. For this reason, the regressions use 6-month lags of these variables as predictors, which is roughly consistent with the data presented above, suggesting that employment lagged activity in the financial markets. National employment, although not a significant predictor of NY finance employment, was roughly equivalent whether lagged or not; the analysis uses the lagged values. The contemporaneous 3-month treasuries were a stronger predictor than the lagged values, perhaps because short-run interest rates are themselves a lagging indicator.

Table 1 reports several of the regression results:

<i>Independent Variables:</i>	<i>Dependent Variable is Monthly Employment in the Finance Sector (thousands)</i>						
	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>6</b>	<b>7</b>
S&P Index (lagged)	0.042 *** 0.0037	0.037 *** 0.0014	0.042 *** 0.0038	0.042 *** 0.0039	0.037 *** 0.0015	0.037 *** 0.0014	0.037 *** 0.0015
Yield Curve (lagged)	-1.819 *** 0.4704	-1.727 *** 0.4691	-1.647 *** 0.6014	-1.769 *** 0.4909	-1.441 ** 0.5841	-1.6419 *** 0.484	-1.469 ** 0.591
3-Month Treasuries	2.212 *** 0.4465	2.733 *** 0.289	2.114 *** 0.4952	2.17 *** 0.4616	2.494 *** 0.4104	2.59 *** 0.3485	2.475 *** 0.415
National Employment (lagged)	-0.0003 0.0002		-0.0003 0.0002	-0.0003 0.0002			
OAG Era April 2002 onwards			-0.993 2.149		-1.721 2.088		-1.257 2.448
OAG Era December 2002 onwards				-0.556 1.4868		-1.07 1.4446	-0.621 1.6927
# of observations	126	126	126	126	126	126	126
F(n, df)	311.52	410.11	247.64	247.48	306.95	306.58	243.83
R-squared	0.911	0.91	0.912	0.912	0.91	0.91	0.91
Adj R-squared	0.909	0.908	0.908	0.908	0.907	0.907	0.907

(Standard errors are in grey. \*\*\* indicates significance at the .01 level, \*\* the .05 level, \* the .10 level.)

The results are striking: the economic variables are extremely robust and explain almost all of the variation in NY employment in the securities subsector. Model 2, with just three independent variables—the S&P Index, short-term interest rates, and the yield curve—is the best fit. Considering that there are no data included about M&A or IPO

<sup>15</sup> Data on Total Nonfarm Payroll Employment and New York State Employment are from the Bureau of Labor Statistics. The Yield Curve was calculated as the difference between 10-year treasury note yields and 3-month treasury note yields, using data from the Federal Reserve. Data for the S&P Index comes from finance.yahoo.com.

activity, these results are surprisingly strong, and suggest that the stock market is a fairly good overall proxy for activity in financial markets. National employment data are highly correlated with the stock market, and have no additional explanatory power.

Of more importance to the questions here, however, is the fact that the dummy variables for the OAG eras of investigation and settlement are never significant. Whether included individually or together, or with the national employment data or not, they never have any explanatory power. That is, we cannot reject the hypothesis that the OAG had no effect on employment. Putting it more directly: there is no evidence that the OAG actions towards the investment banks cost jobs in the industry.

## **II. Mutual Funds**

The OAG has also been actively investigating the mutual-fund industry, with a focus on two particular issues. First, there was concern that certain mutual funds were allowing major clients to trade shares at the current day's price, but after the market had closed. Legally, any trading orders placed after the close of the markets should be transacted at the following day's price. Second, there was concern that some funds were allowing clients to "time" the markets, by observing overseas markets and making strategic short-term bets about the next day's U.S. markets. These actions are not necessarily illegal *per se*, but would shift gains in the mutual funds towards the market timers at the expense of those who were not engaged in the active trading.

The actions taken by the OAG with respect to market timing and late trading began in September 2003, with an announced settlement with Canary Capital Partners, and continued through the end of 2004 with ongoing settlements and actions against other mutual fund companies.

From an economic perspective, the controversial trading activities were largely redistributive rather than surplus creating. That is, by allowing large customers to trade after the close of markets, the mutual funds shifted returns to those clients at the expense of other investors—their own as well as others. Similarly, the market-timing activities generated gains for those involved, at the expense of others in those markets. However, the mutual funds themselves had economic incentives to allow these "favors," because the clients were large and their business profitable. Thus, the activities also allowed mutual fund firms to redistribute business towards themselves away from other firms who obeyed the rules.

Certainly, for the individual firms that were named in investigations, it would be expected that they would lose business, because of the reputational effects. Indeed, there is anecdotal evidence that Fidelity and Vanguard were among the biggest beneficiaries of the OAG actions, as investors fled Putnam (the largest targeted firm) and others under investigation. Although there would be tax consequences and transaction costs involved, this process would also be primarily redistributive.

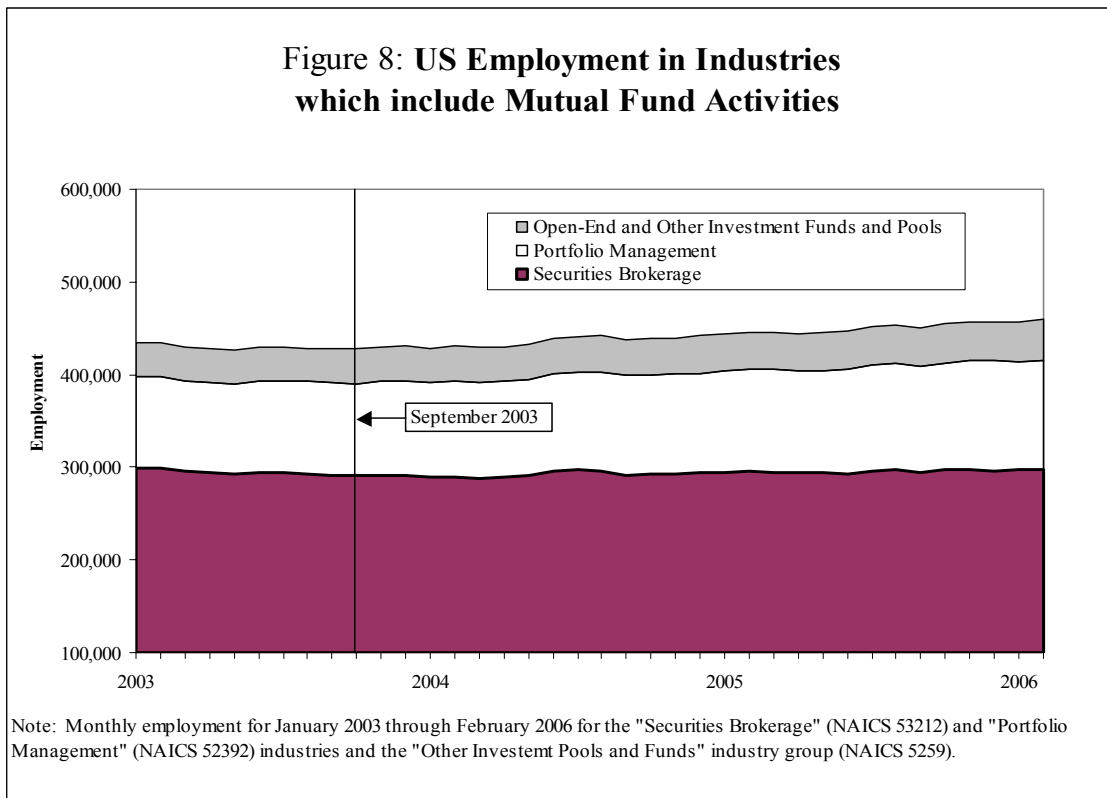
What is an open question is whether the OAG actions scared away investors more broadly, or whether the signal of OAG oversight actually gave investors confidence in the mutual fund industry. If the former, then we should expect less mutual-fund investment, lower firm profits, and less employment. If the latter is the case, we would expect to find more fund investment, increased profitability (taking into consideration the market rally), and increased employment.

Because of the recent nature of the investigations and settlements, it is difficult to determine what impact, if any, there might have been on employment and profitability. However, the analysis below presents some preliminary employment data, as well as statistical analysis to understand how investors have responded to the mutual fund inquiries.

The evidence on employment in the industry is not conclusive, in large part because the available data are not well aligned with the industry. However, the evidence from the statistical analysis is reasonably persuasive that the OAG actions have restored consumer confidence in mutual funds, and as a result, funds have brought in assets at a faster pace since 2003, even relative to overall market performance.

*Employment Data*

Employment at mutual fund firms would fall into one of three BLS-defined industries: portfolio management, securities brokerage, and open-end investment funds. Of these, only securities brokerage—an industry that includes far more than just mutual fund employees—is publicly available at both the national and municipal level. Mutual funds are primarily in the industry of open-end investment funds, but the BLS does not report



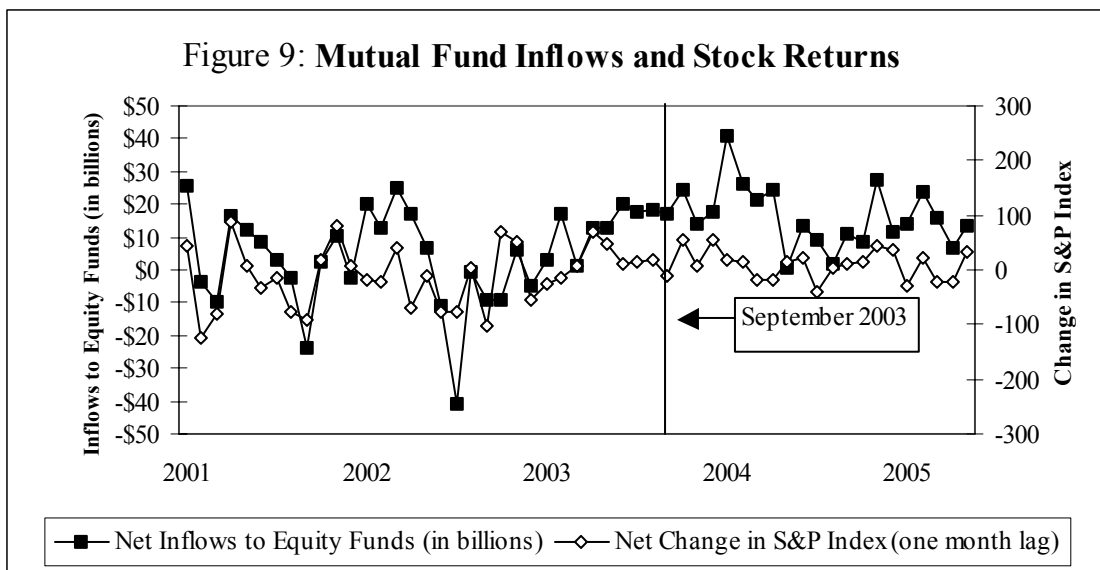
state- or municipal-level data for investment funds, so it cannot be readily tracked what has happened to employment in New York.

The national trend gives no support to concerns that the OAG has cost jobs in the industry. Indeed, the lowest point was in September 2003, which was the first announcement of OAG action, and employment has increased since then (with the exception of one month in 2004). In the open-end investment fund industry, employment had grown 18% since September of 2003.

*Equity-Fund Inflows*

A more straightforward way to look at the health of the mutual fund industry is to look at cash inflows into funds. There may be reasons that employment does not track assets under management—for example, the outsourcing of back offices—but asset flows are probably a good indicator of profitability. It can also be investigated whether money flowing into mutual funds has continued to follow historical patterns, or if there is any evidence that the OAG investigations and findings have scared away investors or, conversely, encouraged them to invest post-settlement. A graph of S&P returns and net inflows into equity mutual funds reveals a couple of things:

First, the relationship between the S&P and mutual fund inflows is positive, but not particularly tight. From 2001 through early 2005, the correlation between monthly changes in the S&P and inflows (one month later) is about 0.52. Second, inflows have been consistently positive since the beginning of 2003, notably since the variance in the S&P visibly dropped and returns overall picked up. Interestingly, a four-month moving average of fund inflows indicates that the most substantial sustained inflows since the market peak in 2000 occurred at the end of 2003 and into 2004, in the middle of the OAG investigations and settlements.



The regulatory actions undertaken by the OAG and the SEC may have some impact on mutual fund assets, but will do so within the context of the broader market. In order to

sort out these effects, multivariate regressions have been run using a range of market data. Because the focus of the OAG action was on equity funds (as opposed to bond funds or international funds), the data used are monthly net inflows to domestically-oriented equity funds.<sup>16</sup> These regressions were estimated using data for the period from January 2001 through May of 2005.

Following a long literature predicting mutual-fund inflows, a variety of capital-market data are used as explanatory variables for fund inflows. Research suggests that inflows are a result of past returns, so the S&P500 Index is used as a proxy for past equity-market returns. To control for substitute investments, AAA corporate-bond yields are included, or the inverse of these yields (i.e., bond prices). To control for volatility in the market, which might hypothetically lower inflows, the Chicago Board Options Exchange Volatility Index, known as the Vix, is included.<sup>17</sup> In addition to data on capital markets, total payroll employment in the U.S., from the Current Employment Statistics is used as a measure of the overall health of the economy.<sup>18</sup> A time trend is also included, to control for any underlying trend in mutual fund investing, such as an increasing diversification away from equity funds.

Finally, and most importantly, a dummy variable was coded for the period of OAG action. Specifically, this variable is 0 for the months prior to September 2003, and 1 for the months thereafter. Thus, if there is an effect on equity-fund inflows due to the actions of the OAG, the coefficient on this dummy should be significantly different than zero.

Table 2 (below) reports the results for some of the regressions that were run. The “best fit” model, which is reported in column 7 of the table, is as follows:

$$\text{Net Inflows} = 694.4 - 0.62(\text{Time}) + 81.1*(\% \Delta \text{S\&P}_t) + 58.0*(\% \Delta \text{S\&P}_{t-1}) + 310.3*(\text{Bond Prices}_{t-1}) - 31.0*(\% \Delta \text{Vix}_t) - 0.9*(\text{Vix}_{t-1}) - 0.003*(\text{Employment}_t) + 11.7*\text{OAG}$$

The variables in the above equation were, as expected, consistently significant predictors of monthly inflows: S&P index returns and past returns, market volatility, and macroeconomic health. These variables were of intuitive directionality: higher S&P returns in the current and previous month led to higher inflows into funds; higher market volatility, and change in that volatility, lowered inflows. The macroeconomic measure—total payroll employment—follows historical findings that savings are countercyclical. The relationship between bond markets and equity funds is not always statistically

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<sup>16</sup> These data are taken from the AMG Data Services website, <http://www.amgdata.com/>, which is an independent data source for mutual fund data. They publish monthly bulletins with their estimates of net inflows.

<sup>17</sup> Data on the S&P Index and the Vix are taken from [finance.yahoo.com](http://finance.yahoo.com). Data on bond yields are Moody’s AAA corporate bond index, as reported by the Federal Reserve Board online at <http://research.stlouisfed.org/fred2/data/AAA.txt>.

<sup>18</sup> These data are available online through the Bureau of Labor Statistics, <http://www.bls.gov/ces/cesbtabs.htm>. Monthly, non-seasonally adjusted non-farm payroll employment is used.

significant, but does have the expected sign: higher prices in bond markets (or lower yields) predict higher inflows into equities.

The OAG-era dummy is extremely robust and positive. That is, there seems to have been a highly significant *positive* impact of the OAG actions on mutual funds. Although there is some collinearity with the Vix data (which can be seen by the larger estimated  $\beta$  when the Vix is not included in regressions—see columns 3,4,5,and 6 in Table 1), a conservative reading of the results suggests that inflows have been \$10 billion/month higher than market-forces would predict since the OAG first announced its investigation of and settlement with Canary. That is, even controlling for the lower volatility in the markets and higher returns following the 2001-2002 slump, an additional \$10 billion/month has been flowing into funds since September 2003. Considering that the average monthly net inflow during this period was \$16.3 billion, the effect is enormous.

It should be noted that something else may have happened in mid-2003 that led investors to mutual funds.<sup>19</sup> It cannot be said that the effect is due to the OAG actions alone, because a dummy variable for an era simply measures a period of time. It can be said that there is strong evidence that the post-OAG-action mutual fund industry is doing far better than prior to September 2003, and far better than market fundamentals alone would predict. Moreover, there is a sound economic rationale for this finding: regulatory action has restored consumer confidence in the industry.<sup>20</sup>

In addition to these demand-side effects, there may also be some increased competitive pressure for funds as a result of the OAG settlement. It has recently been noted that many mutual funds—not just those who settled with the OAG—have begun to cut their fees.<sup>21</sup> Although the decrease in fees will likely hurt profitability in the industry as it makes the market more competitive, it should increase both consumer welfare and the size of the industry overall.

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<sup>19</sup> To control for overall market confidence, the regressions were also run with consumer confidence data from the Michigan Consumer Survey. Although consumer confidence is notably higher from 2003 onwards, including the variable in the regressions did not substantively alter the results.

<sup>20</sup> In the up-and-down market of the early '00s and parallel corporate and financial scandals, uninformed investors may have been skeptical about the sector. They were unable to discern whether weak performance was the result of weak overall markets, individual portfolio failure, or malfeasance. Regulatory scrutiny assures them that their interests are being tended to.

<sup>21</sup> McDonald, Ian, "More Funds Trim Fees to Restore Trust of Investors," *Wall Street Journal*, December 14, 2005. Page C1.

**Table 2: Net Inflows to Mutual Funds, 2001-2005**

*Dependent Variable is Monthly Net Inflows to Equity Mutual Funds (\$billions/month)*

<i>Independent Variables:</i>	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>6</b>	<b>7</b>
%Change in S&P Index	98.61 *** 28.45	98.57 *** 28.27	56.768 45.18	79.285 * 45.42	57.039 45.7	56.768 45.18	81.097 * 42.67
Change in S&P, lagged		55.447 * 27.9	85.765 *** 28.13	102.509 *** 29.4	87.297 *** 29.53	85.765 *** 28.13	58.017 ** 27.76
Bond Prices	296.8 * 171.8				-47.438 246.61	418.472 ** 185.47	
Bond Prices, lagged		277.129 171.42	418.472 ** 185.47		447.866 * 241.91		310.348 * 175.76
%Change in Bond Prices				47.296 40.89			
Vix	-1.29 *** 0.28	-1.016 *** 0.3					
%Change in Vix			-25.721 * 12.81	-21.512 13.15	-25.634 * 12.96	-25.721 * 12.81	-31.035 ** 12.01
Vix, lagged							-0.903 *** 0.31
OAG Era	9.467 * 5.39	10.536 * 5.37	19.516 *** 5.17	16.176 *** 5.18	19.366 *** 5.28	19.516 *** 5.17	11.683 ** 5.5
Employment	-0 *** 0.001	-0.003 *** 0.001	-0.003 ** 0.001	-0.003 *** 0.001	-0.003 ** 0.001	-0.003 ** 0.001	-0.003 *** 0.001
Time	-0.64 ** 0.26	-0.582 ** 0.26	-0.689 ** 0.28	-0.164 0.17	-0.666 ** 0.31	-0.689 ** 0.28	-0.621 ** 0.26
Constant	754.9 *** 156.4	704.774 *** 155.71	624.28 *** 165.76	522.851 *** 166.26	619.563 *** 169.39	624.28 *** 165.76	694.378 *** 155.39
# of observations	53	52	52	52	52	52	52
F(n, df)	15.63	14.36	11.56	10.2	9.9	11.56	12.84
R-squared	0.67	0.7	0.65	0.62	0.65	0.65	0.71
Adj R-squared	0.63	0.65	0.59	0.56	0.58	0.59	0.65

(Standard errors are in grey. \*\*\* indicates significance at the .01 level, \*\* the .05 level, \* the .10 level.)

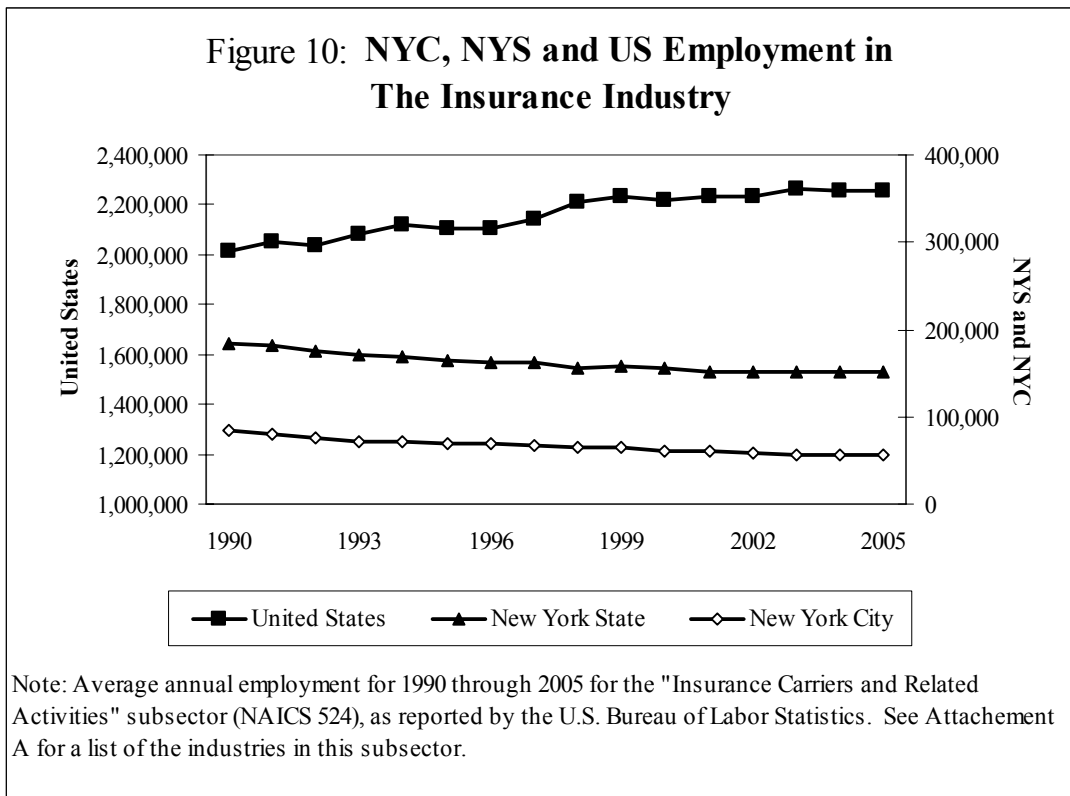
### III. The Insurance Industry

Although the insurance industry is not generally thought of by a lay person as part of the financial sector, it is considered to be a financial service, and is classified in the BLS data in the sector category of financial activity. The economics of the insurance subsector does have significant linkages to financial markets (in part because of the large reserves that insurance companies invest), but the health of the core business should not rise and fall with stock prices, the way that much of the financial sector does. The subsector also shares with investment banks and mutual funds the distinction of being at the center of OAG attentions in recent years, and so it is worth taking a very early look to see what has happened there.

In October 2004, the OAG sued the insurance brokerage Marsh McLennan over alleged fraud and antitrust violations, notably that the firm had illegal payment arrangements with insurance firms. Since then, the actions have targeted several insurance providers and brokerages, including AIG, Zurich American, Willis, and AON. In January of 2005,

Marsh McLennan agreed to a settlement that included \$850 million in restitution payments and a restructuring of its business. Settlements with other firms were negotiated throughout the first half of 2005.

The OAG investigations into the insurance industry are ongoing, so any real impact on employment will not yet be measurable. However, given the restructuring at Marsh McLennan and the 5500 workers laid off to date, it is important to put into context



structural changes in the industry. Figure 10 below shows employment from 1990 through 2005 at the national, state, and municipal level:

Nationally, employment has increased 12% over the past 16 years. In New York, employment has declined 18%, and in NYC, employment has declined 32%. These losses have come reasonably consistently throughout the period, and suggest a long-term trend in moving insurance jobs outside of New York. (New York State employment was unchanged between 2004 and 2005 while New York City actually added 400 jobs during this time period.)

The three major divisions in the insurance subsector are Property and Casualty insurers, Life and Health insurers, and Brokerages.

Over the past decade, employment has steadily increased in Property and Casualty insurance, while it has decreased in Life and Health Insurance. New York has been more dependent on Life/Health insurers. Of the top 20 Property/Casualty insurers, only AIG is based in New York, whereas five of the top 20 life/health insurers are based in New



York, and three of the top five. Of the revenues generated by top-20 firms, roughly double the share (43% versus 22%) of life insurers come from NY-based firms versus property/casualty insurers.<sup>22</sup>

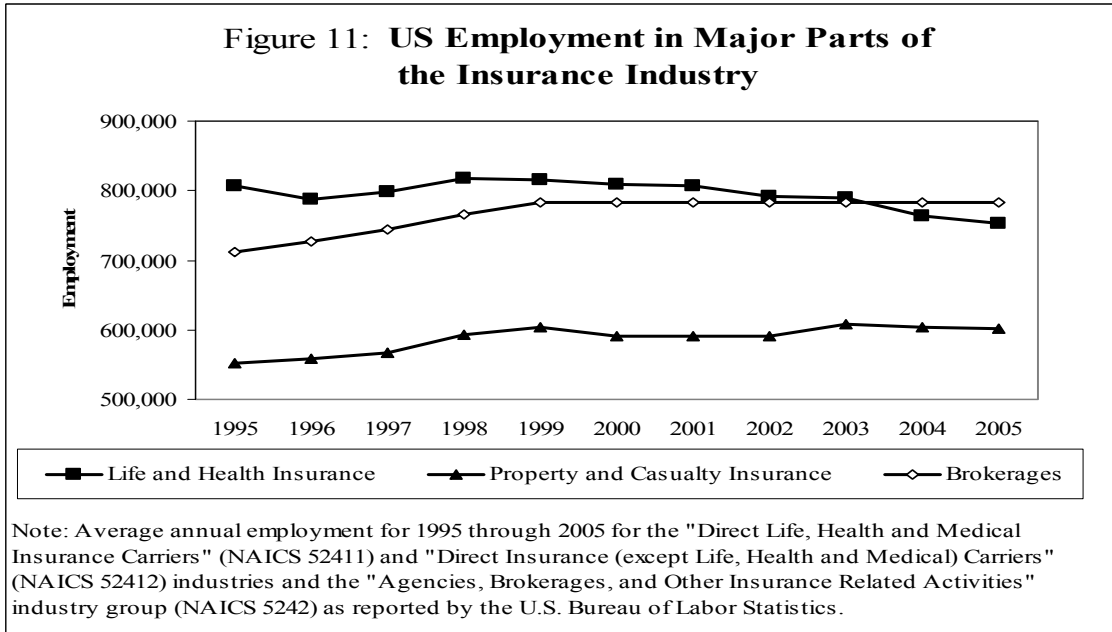
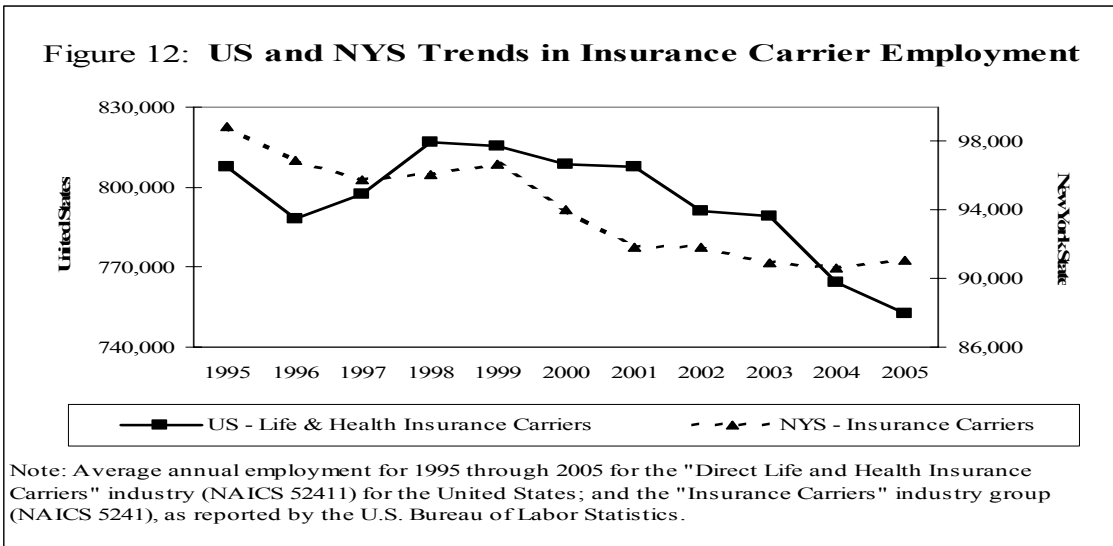
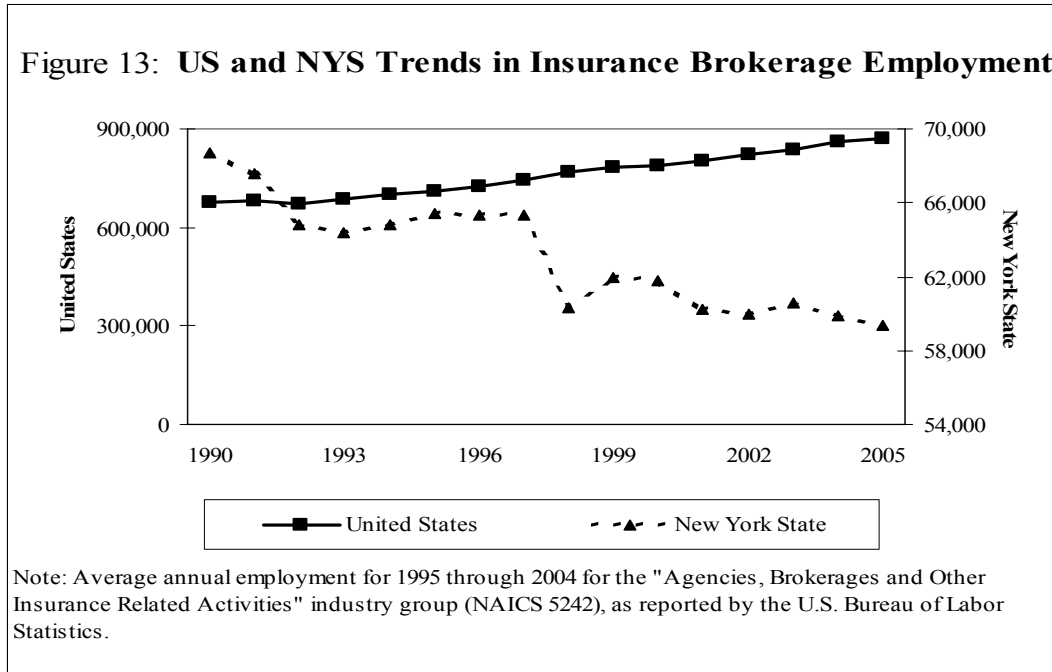


Figure 12 shows that the national trends among Life/ Health Insurers and the trends in New York State, although far from identical, exhibit the same fundamental long-run decline. Between 2004 and 2005, New York added employment while national employment continued its longterm downward trend.



<sup>22</sup> Data on the market share of top firms are taken from the Insurance Information Institute website, "Facts and Statistics: Industry Overview—Insurance Industry at a Glance." <http://www.iii.org/media/facts/statsbyissue/industry/>



However, this is not the story for insurance brokerage. Despite significant growth in national-level employment in insurance brokerages, New York employment levels have seen a consistent decline. Nationally, employment is up 28.6% since 1990, but has declined 13.5% in New York State. This segment of the industry is not particularly concentrated, but Marsh McLennan—based in New York—generates 40% of the revenues of the top ten firms combined. What we do not know is whether Marsh—as the largest brokerage—has contributed to this trend or not. According to the *New York Times*,<sup>23</sup> Marsh was actually consolidating its global brokerage into Manhattan in the early to mid 1990s.<sup>24</sup>

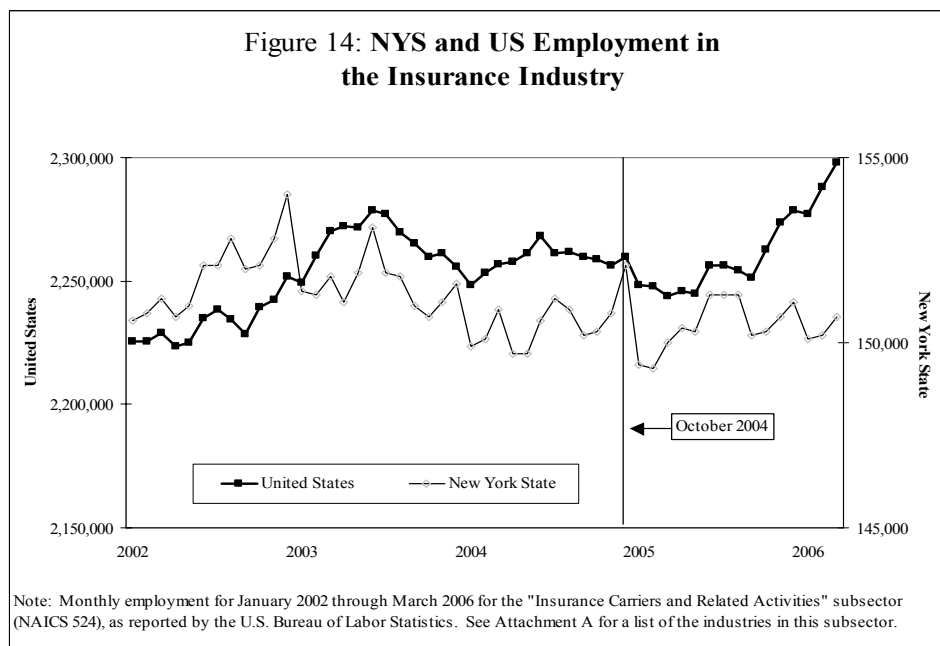
More broadly, the 1990s were a time of massive consolidation in the insurance industry, and undoubtedly the longer-run trends in employment reflect the mingling of insurance and finance that new regulatory freedom allowed. As an example, Consec was not even a top 100 company in 1993, but in 2004 was ranked 15, after an acquisitions binge. At the top end of the scale, Smith Barney Shearson bought Traveler’s Insurance in 1993, consolidated its property/casualty business with Aetna’s in 1996, and merged with CitiCorp in 1998. Since then, the Traveler’s business has been spun out (and is the 5<sup>th</sup> largest P/C insurer), and the life insurance business was sold to MetLife in July 2005.

Figure 14 presents the most recent monthly employment data, and illustrates that there is not yet any sign of trouble—beyond the long-run trends identified above—in the industry. In the seventeen months since the first actions taken against Marsh McLennan (October 2004), New York State has gained 400 jobs. Compare this to the long-run

<sup>23</sup> *The New York Times*, March 2, 2005, “Marsh, rebuilding, will cut dividend 50% and increase commissions.”

<sup>24</sup> We do know that Marsh merged with Johnson & Higgins (also a large NY-based firm) in 1997, which added employees to Marsh but did result in layoffs.

situation: from 1990 through September 2004, New York lost an average of 192 jobs per month, or a total of 34,500 jobs lost in the previous 15 years.



This is not to suggest that individual firms have not been hurt. On the days following the announcement of the OAG investigation, Marsh McLennan’s stock price declined as much as 46%, and still trades roughly 30% cheaper than it did prior to the news. But Marsh may reflect a different underlying problem than the industry as a whole: they appear to have had a number of unprofitable operations that were being subsidized by the commissions.<sup>25</sup> The OAG settlement required them to fundamentally restructure their business in order for it to be legal, which presumably ended the subsidization. The other big newsmaker in the industry, AIG, presents a more optimistic picture. Although the firm took a large hit—with high level indictments and resignations—it trades at higher stock price today than it did a 18 months ago, despite having lost as much as 30% of its value during the peak of the scandal.

Undoubtedly, the OAG attention focused on the insurance industry will result in some longer-run changes in the relationships between insurers and brokerages. To the extent that changes move toward more symmetric information for insurance buyers and fewer anti-competitive activities, these changes would cost profits to individual firms but should increase employment in the sector overall. But analysis of that question must wait for the dust to settle.

<sup>25</sup> For example, the President and CEO of Marsh said during the fourth quarter 2004 earnings call: “The prevalence of unprofitable accounts is in part a product of Marsh’s recent reliance on contingent commissions. Before the abandonment of MSA revenue, a break-even or losing account could still be a profitable account because of the back-end (MSA) revenue.” (Quoted in “Marsh Announces New Business Model, More Cuts,” *Insurance News and Views, Independent Agent Magazine*, March 3, 2005.)

## **Conclusion**

How much regulation one thinks is good for the economy depends very much on how much market failure one sees. And while it is fairly easy to point to complicated markets—like those in the financial sector—and intuit that there would be informational asymmetries, it is quite another matter to identify how *meaningful* those market failures are in terms of market efficiency. That is, simply because we can see that consumers do not have full information about the products they are buying does not necessarily mean that we are losing much social surplus to inefficient decision-making in that market. Conversely, although regulation is by its nature costly to at least one side of the market, it is not clear that regulation—warranted or not on efficiency grounds—has measurable impacts on the market either.

This paper has investigated a fairly distinct period of State regulatory enthusiasm in financial markets to see if there is any evidence of regulatory impact in either direction. The evidence is preliminary and far from conclusive, but suggests that there is no support for the idea that the OAG actions cost jobs in the finance sector overall. Certainly, employment is down in the insurance industry, but less so than the long-run trend would predict. Employment in investment banking and the securities subsector took a temporary hit following the dot-com crash, but the statistical analysis shows that there is no drop in employment since the OAG actions other than that predicted by market fundamentals and the macroeconomy. The firms that were a part of the Global Settlement have grown even faster than the industry overall.

There is evidence to suggest that the OAG may have benefited the mutual fund industry by restoring consumer confidence. The regression analysis used to predict inflows into equity funds demonstrates that following September 2003 (when the OAG first announced its investigations), inflows have been \$10 billion/month higher than can be predicted on the basis of market fundamentals alone. These higher inflows cannot be attributed definitively to the OAG actions, because the analysis indicates only that a shift happened in September 2003, not the *reason* for that shift. Nonetheless, these results suggest that the most measurable impact of the OAG actions may not have been the restructuring of businesses in the industry, but the signal to consumers that someone is looking out for their interests.

## About the Authors

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