

## **The Capture of Government Regulators by the Big 4 Accounting Firms: Some Evidence**

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*This paper examines evidence that government regulators have been captured by the Big 4 accounting firms. Economists characterize the auditing services marketplace as an oligopoly. The collapse of Arthur Anderson in 2002 reduced the then Big 5 accounting firms to the Big 4. Government regulators acknowledge that the increased market power of the Big 4 firms has negative implications. They have, however, failed to indict any of the Big 4 for known criminal actions. A skeptic might question whether government regulators have been captured by these key market players. One outcome of this “capture” is moral hazard, which implies that the Big 4 accounting firms may place less emphasis on quality audits. Such an approach to the audit function places the self-interests of the audit firm above the public interest. The paper provides suggestions to protect the public interest and to help rectify the market power of the Big 4.*

### **INTRODUCTION**

Regulation of business has always been a topic of considerable debate. Regulatory proponents call for more regulation of the private sector in order to protect the public good, while regulatory opponents claim that additional regulation further damages a free-market economy by unduly constraining business. The theory of regulatory capture posits that regulators, including government bureaucrats who oversee the regulatory process and legislators who write the regulations, are routinely and predictably “captured” and manipulated to serve the interests of those who are supposed to be subject to them.

For public choice theorists, regulatory capture occurs because groups or individuals with a high-stakes interest in the outcome of policy or regulatory decisions can be expected to focus their resources and energies to gain their preferential policy. Meanwhile, members of the public, each with an insignificant individual stake in the regulatory outcome, will either ignore or pay scant attention to the regulatory process altogether. Regulatory capture results when this imbalance of focused resources devoted to a particular policy outcome is successful at “capturing” influence with elected officials or regulatory agency bureaucrats so that the preferred policy outcomes of the special interest(s) are implemented. A captured regulatory agency serving the interests of its invested patrons and wielding the power of the government behind its decisions is often worse than no regulation. Galbraith (1955) posited that captured regulators were part of the problem rather than the solution. He suggested that regulators

were vigorous in their youth, moving to complacency in middle age, until they became in old age either senile or arms of the sector they are supposed to regulate.

Ample evidence suggests that regulatory capture is indeed widespread and takes a variety of forms. For example, the U.S. Department of Transportation enacted a rule, according to industry watchdogs, which was actually written by railroad lobbyists, and the coal industry convinced federal regulators to lift federal environmental restrictions on waste dumping (Etzioni, 2009). Etzioni (2009) pointed out that when Countrywide Financial, a national commercial bank, felt pressured by federal regulators at the Office of the Comptroller of the Currency it simply redefined itself in 2007 as a “thrift.” The newly defined Countrywide became regulated by the Office of Thrift Supervision (OTS), which had a reputation of being a more “flexible” regulator. Unfortunately, over the next couple of years OTS proved to be too flexible in its oversight of Countrywide’s mortgage lending, as well as in its regulation of IndyMac, Washington Mutual and other major lenders. In hindsight, Countrywide’s regulator swap played a key role in the subprime mortgage crisis that followed. Given the evidence that regulatory capture appears to be evasive throughout the economy, a skeptic might question how accounting regulators have escaped a similar fate. This paper proffers that they have not escaped regulatory capture.

The Big 5 accounting firms were reduced to the Big 4 with the criminal indictment of Arthur Andersen in 2002 and the firm’s ultimate collapse. The vacuum created by the demise of Arthur Andersen and, ironically, the constraints of the Sarbanes-Oxley Act of 2002 (SOX), i.e., the unlinking of audit and consulting services, have contributed to increased market power for the remaining Big 4 firms. One negative aspect of this increased market power is the reluctance of government regulators to indict any of the Big 4 for criminal actions, creating moral hazard. Corporate executives, government regulators and politicians have all expressed concerns about the lack of choices that large public companies have when selecting a public accounting firm. In response to these concerns, the U.S. Congress, as part of SOX, required the General Accounting Office, now the General Accountability Office (GAO), to examine the effects of consolidation in the public accounting industry on competitive forces, audit costs and quality, and audit independence.

As a result of its mandate, the GAO has issued two reports: (1) *Public Accounting Firms: Mandated Study on Consolidation and Competition* (GAO 2003), and (2) *Audits of Public Companies: Continued Concentration in Audit Market for Large Public Companies Does Not Call for Immediate Action* (GAO 2008). Among other findings, both of these reports stated that the Big 4 audited 97% of all U.S. public companies with sales between \$250 million and \$5 billion dollars (GAO 2003, 2008). This Big 4 dominance is global in scope, not just a U.S. phenomenon. Affiliates of the Big 4 are also the largest auditing firms in Turkey, South Korea, India and the Philippines. The Big 4 audit all of the FTSE 100 companies in England (Simms 2002). They also audit more than 80% of the public companies in Japan, two-thirds of those in Canada and, according to the International Accounting Bulletin, they hold over 70% of the European market by fee income (*Economist*, 2004).

In both its reports on the accounting profession, the GAO expressed concern about the lack of competition between the Big 4 in the large public company segment. The GAO, however, failed to recommend either antitrust legislation to break up the Big 4 into smaller firms or a strategy to provide the next largest public accounting firms the resources to compete with the Big 4. Even though the GAO deferred to call for legislative or regulatory action, the report included a discussion about the possible negative impact on the financial markets of the failure of one of the Big 4 accounting firms.

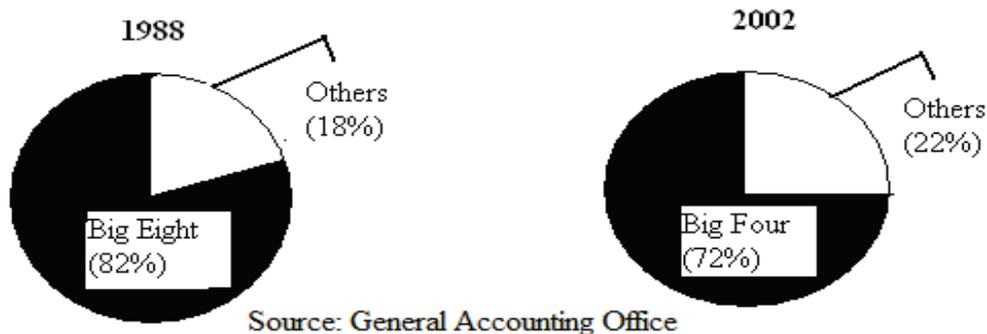
Although the collapse of one of the Big 4 firms could have dire consequences for participants in the financial markets, it appears that the GAO has discounted the impact of not only the current lack of competition facing the Big 4 but also the possible capture by the Big 4 of government regulators charged with the oversight of the accounting profession. In the section that follows, this paper examines the oligopolistic nature of the audit services market. In the next section of this paper, the authors review the relationship between oligopoly and consumer surplus. The paper then briefly discusses the role of reputation in the auditing services marketplace. Next, the authors provide anecdotal evidence that special interests have captured the accounting regulators. In the last section, the authors discuss the implications for the public interest and propose alternatives for accounting regulators and their “captured” mindset.

## OLIGOPOLISTIC NATURE OF THE AUDIT SERVICES MARKET

An oligopoly can be defined as a market dominated by a small number of strategically interdependent firms. Economists define a “tight oligopoly” as a market structure where the top four providers in the industry have captured at least 60% of the market and smaller providers encounter significant barriers to entry (GAO 2003, 2008). The public accounting services market can be classified as a “tight oligopoly”. For example, a “tight oligopoly” exists in the petroleum and coal products industry, where Ernst and Young and PriceWaterhouseCoopers conduct 94% of the audits. “Tight oligopolies” are also found in the air transport sector, where Ernst and Young and Deloitte Touche Kohmatsu carry out 86% of the audits, and in the building sector, where Ernst and Young and Deloitte Touche Kohmatsu conduct 80% of the audits (GAO 2008). A key characteristic of oligopolies is interdependence. Interdependence implies that each of the Big 4 firms must consider the reaction of their Big 4 rivals when pricing their products or when offering new services.

Additional measures may be used to illustrate the level of concentration within public accounting. For example, the 2002 revenues of the fourth largest firm, KPMG, were eight times greater than those of the fifth largest firm, Grant Thornton. KPMG had five times as many staff members as Grant Thornton (GAO 2003a: 17, table 1). In 2002 KPMG had total audit revenues of \$2.016 billion. The combined audit revenues for the next 21 firms were \$1.231 billion (GAO 2003a: 17, table 1). Figure 1 below depicts the concentration in the public company audit market by number of clients.

**FIGURE 1**  
**PERCENTAGE OF PUBLIC COMPANY AUDIT MARKET (BY NUMBER OF CLIENTS)**



Another measure that can be used is the Herfindahl-Hirschman Index (HHI) — a metric commonly used by the US Department of Justice to assess the potentially anti-competitive effects of concentration within an industry. In 1998, the year of the last great merger within the industry—the combination of PriceWaterhouse with Coopers Lybrand—the HHI score for the accounting industry was more than 10 per cent above the level normally associated with a score that is likely to permit industry participants to maintain prices above competitive periods for significant periods of time. Following the demise of Arthur Andersen in 2002, the HHI increased to more than 40 per cent above this anti-competitive warning level (Cox, 2006).

In some industries, market concentration for accounting services has become even more significant and reaches the dominant firm market structure, defined as one provider with over 60% of the market and no significant competitors (GAO 2008). For example, Ernst and Young accounts for 77 percent of the audit fees generated in the agricultural sector, with the next largest firm generating 12 percent of the audit revenue in that market. Both tight oligopoly and dominant firm market structures create the potential for the Big 4 to use their market power, either unilaterally or through collusion, to their advantage. When one firm has a dominant position in the market, the result may be price leadership. The firms with lower market shares may simply follow the pricing changes prompted by the dominant firm. If all oligopolists in

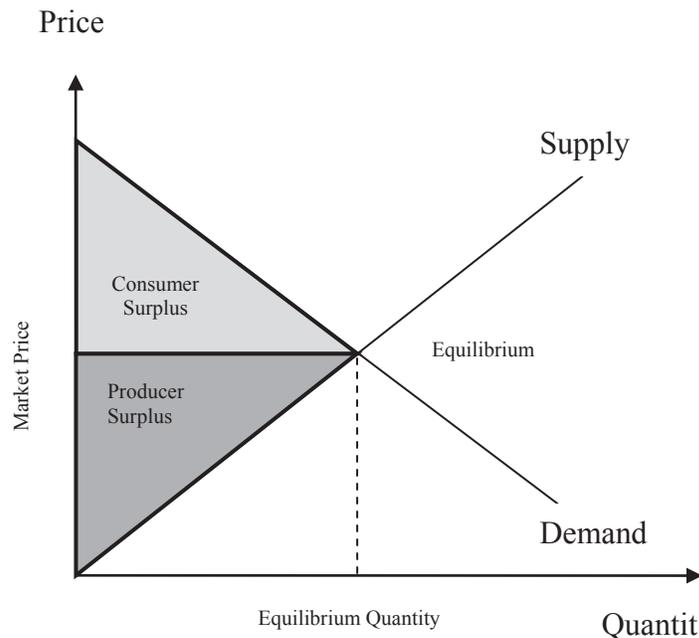
a particular market follow the lead of one firm in raising prices, the result is the same as if they had all agreed to raise prices simultaneously (Schiller, 2008).

## OLIGOPOLY AND ECONOMIC SURPLUS

When markets are not perfectly competitive, or when they fail to function in other ways, they are inefficient. By comparing the actual benefits in an inefficient market with its potential benefits we can estimate what we lose from this inefficiency. While defining an oligopoly in theory is straight-forward, applying the definition to real-world markets raises a host of problems, making regulation more complex.

Economic surplus is the overall benefit a society composed of consumers and producers receives when a good or service is bought or sold, given a quantity provided and a price attached. Economic surplus is divided into two parts: consumer and producer surplus. A buyer's consumer surplus on a unit of a good is the difference between its value to the buyer and what the buyer actually pays for that unit. The total consumer surplus enjoyed by all consumers in a market is called market consumer surplus, the sum of the consumer surplus on all units. An individual seller's producer surplus on a unit of a good is the difference between what the seller actually gets and the additional cost of providing it. The total producer surplus gained by all sellers in the market is called market producer surplus. A market is said to be efficient when the sum of producer and consumer surplus is maximized in that market. See Figure 2 below.

**FIGURE 2**  
**CONSUMER AND PRODUCER SURPLUS**



An oligopoly leads to deadweight loss. Whenever quantity is below the perfectly competitive quantity and price is above perfectly competitive price, there is a loss in total economic surplus. The firms will have a higher producer surplus, but the consumer and the total surplus are lower. When oligopolistic firms act collectively and behave like a monopoly, the market demand curve is strongly elastic like a monopoly's leading to a reduction in total and consumer surplus.

Sakai and Yamato (1989) investigated how and to what extent information sharing influences the welfare of producers, consumers, and society as a whole. They demonstrated that the welfare implications of information exchange are quite sensitive to the number of firms in an industry. They showed that if the

number of firms in a market is small, then information pooling among firms is likely to harm consumers although it increases social surplus. Under such circumstances, it appears that we encounter a dilemma, since consumer protection is often regarded by antitrust policy makers as their main objective. Therefore, when the government decides to adopt public policies for information transfer, they recommended that they be supplemented with income distribution policies so that some of the increased social surplus may be shifted to consumers .

## **THE ROLE OF AUDITOR REPUTATION**

Adam Smith argued that when like-minded managers operate in the same industry and band together they usually engage in activities that are detrimental to the public interest (Elliott 2002). Proponents of Smith's philosophy argue that the small number of large competitors associated with an oligopoly have the market power to influence price and to pass market risk on to other, usually smaller, entities. Standard economic theory suggests that consumers make rational economic decisions based on cost or efficiency. Because the market for professional accounting services fails to provide consumers with cost or efficiency information, consumers make their choices based on reputation.

The economics literature suggests that auditors' loss of reputational capital is incentive enough to prevent auditors from colluding with management. The marketplace reality is less favorable than the theory suggests. In response to a Harvard Business School article entitled "*Are conditions right for the next accounting scandal?*" (James Heskett, 2003), Dr. B. V. Krishnamurthy, Executive Vice-President and Professor of Strategy, Alliance Business Academy, Bangalore, India stated, "The service providers and their clients have a vested interest, as their survival depends on each other. Due diligence becomes another buzzword to be used at every seminar or symposium and quickly forgotten thereafter. The relationship between service providers and clients, unfortunate as it might sound, is likely to be in the nature of 'You scratch my back and I'll scratch yours.'"

Accounting researchers have long posited that loss of reputation would result in a loss of clients. No single transaction or unethical act would provide a return to the auditors greater than their diminished reputation. Thus, rational audit firms would not participate in or condone any activity that might tarnish their reputational capital. Obviously, more than just a few auditors at Arthur Andersen engaged in "irrational" thought. The threat of loss of reputational capital and clients failed to check the unethical behavior of too many Arthur Andersen auditors.

## **EVIDENCE OF REGULATORY CAPTURE: TOO CONCENTRATED TO INDICT**

When the U.S. government deems that a company's failure would have significant ramifications for the national economy, elected officials make the argument that the company is "too big to fail." This reasoning is used to justify government bailouts and, in some cases, the loosening or repeal of regulatory policies. The bailouts of Chrysler in the late 1970s and Long Term Capital Management in the late 1990s provide examples (Cunningham 2006). More recently, the U.S. Treasury loaned in excess of \$700 billion to several of the nation's largest financial institutions and other large non-banking companies such as American Insurance Group, General Motors and Chrysler. Once again, government officials argued that the failure of these large corporations, either together or individually, would have a dire negative impact on the economy. Once the "too big to fail" mentality becomes the modus operandi of government, large firms may get a "leg up" on their smaller competitors. In other words, government regulators give the special interests favorable differential treatment.

In August of 2004, documents released by a Senate subcommittee revealed that KPMG had engaged in rigorous and extensive efforts to create and sell dozens of tax shelters from the mid-1990s until 2003. KPMG stated that it earned \$124 million from the sale of these shelters, which government officials classified as aggressive relative to a reading of the tax code (Browning 2004). The subcommittee investigators stated that the dispute over KPMG was more than just a linguistic difference examining a benign tax solution versus an illegal tax shelter; rather the real issue was whether a here-to-fore respected

professional services firm had crossed the line of acceptable conduct (Senate Committee on Government Affairs, Permanent Subcommittee on Investigations, Minority Staff, 2003). The evidence supports the committee's contention that KPMG knowingly broke the law and was uncooperative with federal investigators. Internal e-mail messages at the firm disclosed that KPMG developed a large bureaucracy to engage in an exhaustive analysis of rulings by tax and civil courts and the IRS to find loopholes in the tax code that would justify its "abusive" shelters (Browning 2004). The company created a cold-call center in Fort Wayne, Indiana, for the purpose of aggressively selling its tax shelters (Reilly 2007). In spite of the implosion of Arthur Andersen and the emergence of a "populist" environment that created conditions hostile to big business and big accounting, internal e-mails indicated that KPMG dragged its feet in cooperating with federal investigators.

Records show that the other firms in the Big 4 abandoned these types of tax shelters and settled with the government. For several months, KPMG lawyers argued that the firm had only given tax advice and had not committed an illegal act. In May of 2005, prosecutors at the U.S. Department of Justice communicated to KPMG CEO Timothy Flynn that the firm faced imminent criminal indictment over the tax shelters that it once sold to wealthy clients. After discussing the possible indictment with several members of KPMG's management team and the firm's legal counsel, Flynn attended a meeting with Justice Department officials. During that meeting, Flynn reversed KPMG's stance and admitted wrongdoing. Eventually, the firm settled with the Justice Department for \$456 million plus other stipulations such as federal monitoring through 2008. Justice Department officials noted that they were aware that a criminal indictment of KPMG could harm the financial markets (Reilly 2007).

It appears that in the case of the Big 4 accounting firms, the U.S. government considered the negative impact of an enforcement action against KPMG and substituted "too concentrated to indict" for "too big to fail." Both mentalities reflect the mindset of "captured regulators" and create the potential for moral hazard behavior. Coffee (2005, p. 1) noted that the government's mentality of "too concentrated to indict" gave KPMG a "strange kind of immunity." He suggested that although prosecutors in principle wield the club of possible indictment, Big 4 firms know that they are unlikely to be put in a criminal dock. As a result, the firms gain an undue leverage in marketplace negotiations. Critics of the Big 4 suggest that such market power produces moral hazard behavior.

On January 7, 2009, Satyam Computer Services, one of India's largest software and services companies, disclosed a \$1.47 billion fraud on its balance sheet. B. Ramalinga Raju, the company's founder and chairman, confessed that he and his brother had hid financial information from the company's board, senior managers and auditors for several years. For the third quarter, Satyam reported 50.4 billion rupees (\$1.03 billion) of cash and 3.76 billion rupees of earned interest that were fictitious. Receivables were overstated and liabilities were understated by 4.9 billion rupees and 12.3 billion rupees, respectively.<sup>1</sup>

The firm, which trades on the New York and Bombay Stock Exchanges, is required to file financial reports with the SEC. Price Waterhouse of India, the local member of PricewaterhouseCoopers (PWCP), serves as its auditor. After news of the scandal hit the airwaves, Price Waterhouse of India issued a press release and stated that its audit was conducted in accordance with applicable auditing standards and was supported by sufficient audit evidence. In 2008, the Public Company Accounting Oversight Board of the U.S. (PCAOB) had inspected selected audits of Price Waterhouse of India, but the PCAOB's findings were not released.<sup>2</sup>

Cash is one of the easiest accounts to audit. The question of how the audit of a cash account failed to disclose a shortage of \$1.03 billion dollars remains unanswered. Further compounding PWC's troubles is the business relationship between PWC and Satyam in the U.S. Both firms worked on a major IT contract for Idearc, a spinoff of telecom firm Verizon. Because Satyam shares are quoted on Wall Street, SEC rules prohibit auditors from having business relations with their clients. U.S. regulators have yet to take action against PWC. Is this lack of enforcement related to PWC's size and the impact that the failure of a Big 4 firm would have on the global financial marketplace?

Recently, global financial markets were sent into a tailspin by the subprime mortgage crisis. One of the first investment banks to fail as a result of this crisis was Lehman Brothers. On December 21, 2010,

Andrew Cuomo, New York Attorney General, filed a lawsuit accusing Ernst & Young (E&Y) of helping Lehman Brothers hide its declining financial health for several months before its implosion in September 2008. Cuomo's suit against E&Y is a civil suit, not a criminal indictment like the one brought against Arthur Andersen, and may, as many suggest, be settled out of court. E&Y responded by stating that the Lehman bankruptcy resulted from a series of unprecedented adverse events in the financial markets. A spokesman stated that E&Y stood by its December 31, 2007 audit of the company (Frea and Spence, 2010).

A couple of observations are in order. First, the Arthur Andersen (AA) effect appears to be impacting regulators. Once AA was served with a criminal indictment, SEC rules prohibited the firm from auditing SEC registered companies. As a result, most of its large clients (and some partners) left AA in search of one of the other four international audit firms. Regulators learned their lesson. Repetition of this scenario with E&Y would create turmoil in global financial markets which are just now beginning to show signs of recovery from the subprime mortgage crises. Regulators have decided to bring a civil indictment against E&Y rather than a criminal indictment, allowing the firm to continue auditing its SEC clients. Second, the disintegration of one of the remaining Big 4 firms would result in an audit services market that would be even more concentrated than it is today. An increase of just 50 points in the Herfindahl-Hirschman Index (HHI) would put the accounting industry in violation of antitrust guidelines (Sloan 2010). Feldman (2010) estimated that the failure of E&Y would add 733 points to the HHI, unacceptable to the Department of Justice's Antitrust Division. Regulators may punish E&Y with significant monetary fines and perhaps suspend them from accepting new clients for a short period of time, but regulators and those clients seeking the services of one of the Big 4 accounting firms want E&Y to survive. Once again, it appears that one of the Big 4 accounting firms is too big for a regulator to protect the public interest, i.e., serve E&Y a criminal indictment.

## **CONSUMER WELFARE AND SOCIETAL IMPLICATIONS**

The attitude of the Big 4 toward their social responsibility for quality audits or alerting a board of directors to an unhealthy level of financial management risk is more than just about the reputational capital of the Big 4 or captured government regulators. It has implications for world-wide financial stability. Commenting on the great financial crash of 1929 in the United States, J.K. Galbraith (1955) saw the crash as a symptom of a wider problem. He believed that the world of finance was incapable of expressing even the most basic and necessary self-criticism. "The sense of responsibility in the financial community for the community as a whole is not small," he observed, "It is nearly nil." (Galbraith, 1955). Turner (2006, p. 395) noted the fact that Big 4 firm-on-firm peer reviews "never resulted in a negative or qualified report on one of the major international accounting firms, and had engrained a culture in which one firm had agreed not to tell on the other. When Galbraith's observation is combined with Turner's statement, marketplace stakeholders could question if the Big 4 view audit quality with a critical eye.

A major concern in the marketplace is over the possible demise of one of the remaining Big 4 firms, especially if one of the firms faces a criminal indictment. While such concern has some validity, neither the global community nor government regulators can afford for the Big 4 to disregard legal, regulatory and ethical standards. Friedland (2004) noted that the break-up of Arthur Andersen unfolded in a relatively smooth manner. With this in mind, we posit that rather than forming the mentality of "too concentrated to indict," government agencies, particularly the Securities and Exchange Commission (SEC), should inform the Big 4 and large corporations that the agency has formed a mentality of "here is the plan" in case one or more of the Big 4 are brought to court on criminal charges.

International Financial Reporting Standards (IFRS) are a set of accounting standards developed by the International Accounting Standards Board (IASB) that is becoming the global standard for the preparation of public company financial statements. With the Securities and Exchange Commission (SEC) likely to set a date for voluntary or even mandatory adoption of IFRS by all U.S. public companies, there will be a huge increase in the demand for accounting and audit services. The Big 4 firms are considered experts in the area and have been using IFRS in other countries for years. Does that imply that this increase in

demand has to be met by these existing 4 firms, thereby allowing consumers little to no choice? What can we do now to encourage more competition? Perhaps, a solution is to allow the next 5 largest firms to become more competitive in the arena. This increased competition will not be possible without some form of incentive or tax subsidy by the Government since the resources at the disposal of the next 5 largest firms are very miniscule compared to those at the disposal of the Big 4. Perhaps the SEC could set a fee in place, the receipts of which could be used to provide smaller firms the opportunity to get training and compete with the Big 4.

We also suggest that regulators revisit mandatory rotation of audit firms. Opponents to mandatory rotation of audit firms argue that a new audit firm would face a steep learning curve. This in turn would increase audit staffing requirements, resulting in higher audit fees. While the basic premise of this argument is correct, the concern may be an overstatement. Hundreds of companies change auditors each year. In 2003, 905 companies changed auditors, while in 2004, 1,609 companies made an auditor switch. Of these companies, 69% in 2003 and 59% in 2004 were “mum” in their explanation to their shareholders as to the reason for the change (Turner et al., 2005)

Currently, approximately 17,000 companies file audit reports with the SEC. If the SEC required mandatory audit firm rotations every ten years, approximately 1,700 companies would change audit firms each year. Thus, mandatory rotations every ten years would result in an annual total approximately double the number of auditor changes that occurred in 2003 and nearly equal to the number of auditor changes in 2004. With such a rotation requirement in place, other accounting firms, particularly the second-tier accounting firms, may take the necessary steps to obtain audit staff and partner expertise to compete with the Big 4 for the clients that are required to rotate audit firms.

Another suggestion addresses the issue of audit quality. Information asymmetry exists between the consumers and providers of audit services. Consumers lack the information necessary to arrive at an informed decision when they are in the market to purchase an audit. While The Public Company Accounting Oversight Board (PCAOB) conducts annual inspections of all audit firms that perform 100 or more audits of public companies, the PCAOB shares little of its findings with the public. The PCAOB states that to comply with Sections 104(g)(2) and 105(b)(5)(A) of the Sarbanes-Oxley Act of 2002:

“A substantial portion of the Board's criticisms of a firm (specifically criticisms of the firm's quality control system), and the Board's dialogue with the firm about those criticisms, occurs out of public view, unless the firm fails to make progress to the Board's satisfaction in addressing those criticisms. In addition, the Board generally does not disclose otherwise nonpublic information, learned through inspections, about the firm or its clients. Accordingly, information in those categories generally does not appear in the publicly available portion of an inspection report.” (PCAOB, 2008, p5)

Such a policy fails to provide for greater transparency within the accounting profession. We believe that when the PCAOB finds a weakness or weaknesses in its review of selected audits of an audit firm, the details of the resulting inspection report should be public information, regardless of the size and reputation of the audit firm. Audit committees of publicly traded companies could examine these reports for evidence of systemic weakness associated with the audit process of any public accounting firm. Armed with such public information, audit committees could bring pressure on any audit firm to eliminate such weaknesses from the audit of their companies. Investors would also have the opportunity to monitor such PCAOB reports. At stockholder meetings, investors could make sure that a company's audit committee was practicing due diligence with respect to canvassing PCAOB reports.

In conclusion, a strong accounting profession provides global capital markets an invaluable service. The public interest, however, is not served by either the lack of competition in the auditing services marketplace or the capture of government regulators by special interests. A focus on publicly available information related to audit quality is long overdue. Increased competition via audit quality and mandatory audit firm rotation would be a move in the right direction to eliminating the oligopoly that the authors believe exists in the auditing services marketplace. An accounting industry characterized by several firms competing with the Big 4 for large clients would free regulators and allow them to take

actions that protect the public interest. When increased competition is combined with an SEC that has a “game plan” for the possible demise of one or more of the Big 4 accounting firms and a PCAOB that provides audit quality information to all capital market stakeholders, the global interest in the efficiency and sustainability of capital markets will be better served.

## ENDNOTES

<sup>1</sup> [http://www.economist.com/businessfinance/displayStory.cfm?story\\_id=12898777](http://www.economist.com/businessfinance/displayStory.cfm?story_id=12898777)

<sup>2</sup> [http://www.bloomberg.com/apps/news?sid=aov\\_laRpSmno&pid=20601109](http://www.bloomberg.com/apps/news?sid=aov_laRpSmno&pid=20601109)

## REFERENCES

Browning, L. (2004) “KPMG developed new version of tax shelter I.R.S. had disallowed”, *The New York Times*, August 26, p. C1.

Coffee, J. (2005) “The audit oligopoly” Retrieved June 18, 2009 from <http://www.oligopolywatch.com/2005/07/13.html>

Cunningham, L. (2006) “Too big to fail: Moral hazard in auditing and the need to restructure the industry before it unravels” *Columbia Law Review*, 106, 1698-1748.

Cox, James. D. (2006) *After Enron: Improving corporate law and modernizing securities regulation in Europe and the U.S.*, Chapter 9, Oxford, Forthcoming. Retrieved August 28, 2009 from [http://papers.ssrn.com/sol3/papers.cfm?abstract\\_id=926360](http://papers.ssrn.com/sol3/papers.cfm?abstract_id=926360)

Governmental Accountability Office (2003) *Public accounting firms: Mandated study on consolidation and competition*, GAO publication 03-864.

\_\_\_\_\_ (2008) *Audits of public companies: Continued concentration in audit market for large public companies does not call for immediate action*, GAO publication 08-163.

*Economist* (2004). “Called to account: The auditing industry has yet to recover from the damage inflicted by an era of corporate scandals”, 373, (8402), 71-73.

Elliott, L. (2002) “Finance: Economics: Break up the five bean counters,” *The Guardian (London)*, March 25, p. 23.

Etzioni, Amitai. (2009) “The Capture Theory of Regulations – Revisited,” *Society*, 46, (4), 319-323.

Feldman, E. (2010) in “Ernst & Young: Too big to fail” Allan Sloan, Ed., *Fortune Online*, December 21, 2010. Retrieved May 20, 2011 from <http://finance.fortune.cnn.com/2010/12/21/ernst-young-too-big-to-fail>

“Financial economic roundtable: statement on “The crisis in accounting, auditing, and corporate governance” (2002) *Journal of Applied Finance*, Fall/Winter, 61-65.

Frean, A. and Spence, A. (2010) “Linklaters and Ernst & Young face action over Lehman Brothers collapse” *The Times*, March 13, 2010. Retrieved May 20, 2011 from [http://business.timesonline.co.uk/tol/business/industry\\_sectors/banking\\_and\\_finance/article7060424.ece](http://business.timesonline.co.uk/tol/business/industry_sectors/banking_and_finance/article7060424.ece)

- Friedland, J. (2004) "Time to end the big 4 accounting cartel," *International Journal of Disclosure and Governance*, 1, (3), 211-213.
- Galbraith, J. K. (original 1955 Hamish Hamilton) *The Great Crash 1929* Pelican edition, 1961, 20-21.
- Hannaford, Steve. (2006) "Big 4 auditors and divestment." Retrieved August 23, 2009 from <http://www.oligopolywatch.com/2006/08/10.html>.
- Heskett, James. (2003) "Are conditions right for the next accounting scandal?" *Harvard Business School Working Knowledge*, March 3<sup>rd</sup>, p.1.
- "India's Enron" (2009) Retrieved September 19, 2009 from [http://www.economist.com/businessfinance/displayStory.cfm?story\\_id=12898777](http://www.economist.com/businessfinance/displayStory.cfm?story_id=12898777)
- "India's Enron puts auditors back under scrutiny" (2009). Retrieved September 19, 2009 from [http://www.bloomberg.com/apps/news?sid=aov\\_laRpSmno&pid=20601109](http://www.bloomberg.com/apps/news?sid=aov_laRpSmno&pid=20601109).
- "KPMG: Escaping Arthur Andersen's fate" (2005) *The Illinois Business Law Journal*. Retrieved June 18, 2009 from [http://iblsjournal.typepad.com/illinois\\_business\\_law\\_soc/2005/06/kpmg\\_escaping\\_a.html](http://iblsjournal.typepad.com/illinois_business_law_soc/2005/06/kpmg_escaping_a.html).
- Mathiason, Nick. (2009) "PWC audit of 'India's Enron' faces probe" *The Observer*. Retrieved September 19, 2009 from <http://www.guardian.co.uk/business/2009/jul/05/pwc-audit-satyam-assets>.
- Public Company Accounting Oversight Board (2008). *Report on 2007 inspection of PricewaterhouseCoopers LLP*. Retrieved September 3, 2009 from [http://www.pcaobus.org/Inspections/Public\\_Reports/2008/PricewaterhouseCoopers-0627.pdf](http://www.pcaobus.org/Inspections/Public_Reports/2008/PricewaterhouseCoopers-0627.pdf).
- Reed, John. (2010) "GM Prospectus lays risks on the line" *Financial Times*. Retrieved November 24, 2010 from [http://www.ft.com/cms/s/0/2ab3910c-ab11-11df-9e6b-00144feabdc0,dwp\\_uuid=1d202fd8-c061-11dd-9559-000077b07658.html#axzz16ca9BdF6](http://www.ft.com/cms/s/0/2ab3910c-ab11-11df-9e6b-00144feabdc0,dwp_uuid=1d202fd8-c061-11dd-9559-000077b07658.html#axzz16ca9BdF6)
- Reilly, D. (2007) "How a chastened KPMG got by tax-shelter crisis" *The Wall Street Journal*, February 15.
- Sakai, Y. and Yamato, T. (1989) "Oligopoly, information and welfare", *Journal of Economics (Zeitschrift für Nationalökonomie)*, 49, 3-24.
- Schiller, R. Bradley. (2008) *The Micro Economy Today*. McGraw-Hill Irwin.
- Senate Committee on Government Affairs, Permanent Subcommittee on Investigations, Minority Staff (2003) "U.S. Tax Shelter Industry: The Role of Accountants, Lawyers and Financial Professionals: Four KPMG Case Studies: FLIP, OPIS, BLIPS, and CS2" S. Prt. 103-34, 18 November 2003, 22.
- Simms, A. and J. Oram. (2002) *Five brothers: The rise and nemesis of the big bean counters*. New Economics Foundation, London.
- Sloan, A. (2010) "Ernst & Young: Too big to fail" *Fortune Online*, December 21, 2010. Retrieved May 20, 2011 from <http://finance.fortune.cnn.com/2010/12/21/ernst-young-too-big-to-fail>

“The KPMG fiasco,” (2007) *The Wall Street Journal*, July 10, p. A20.

“The big four firms: market domination” Retrieved September 27, 2009 from [http://www.big4firms.com/index\\_files/Page431.htm](http://www.big4firms.com/index_files/Page431.htm).

Turner, L., J. Williams and T. Weirich. (2005). “An inside look at auditor changes” *The CPA Journal Online*. Retrieved September 3, 2009 from [http://www.nysscpa.org/cpajournal/2005/1105/special\\_issue/essentials/p12.htm](http://www.nysscpa.org/cpajournal/2005/1105/special_issue/essentials/p12.htm).

Turner, L. (2006). Learning from accounting history: Will we get it right this time? *Issues in Accounting Education*, 21, (4), 383-407.