## ABSTRACT

*Epidemics of "Control Fraud" Lead to Recurrent, Intensifying Bubbles and Crises*



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"Control frauds" are seemingly legitimate entities controlled by persons that use them as a fraud "weapon." A single control fraud can cause greater losses than all other forms of property crime combined. This article focuses on the role of control fraud in causing financial crises. Financial control frauds' "weapon of choice" is accounting. Fraudulent lenders produce guaranteed, exceptional short-term "profits" through a four-part strategy: extreme growth (Ponzi-like), lending to uncreditworthy borrowers, extreme leverage, and minimal loss reserves. These exceptional "profits" render "private market discipline" perverse, often defeat regulatory restrictions, and allow the CEO to convert firm assets to his personal benefit through seemingly normal compensation mechanisms. The short-term profits also cause the CEO's stock options holdings to appreciate. Fraudulent CEOs that follow this strategy are guaranteed to obtain extraordinary income while minimizing the risks of detection and prosecution.

The optimization strategy for lenders that engage in accounting control frauds explains why such firms fail and cause catastrophic losses. Each element of the strategy dramatically increases the eventual loss. The record "profits" allow the fraud to continue and grow rapidly for years, which is devastating because the firm grows by making bad loans. The "profits" allow the managers to loot the firm through exceptional compensation, which increases losses.

The accounting control fraud optimization strategy hyper-inflates and extends the life of financial bubbles, which causes extreme financial crises. The most "criminogenic environment" in finance for accounting control fraud will attract an initial cluster of frauds. The factors that make a finance sector most criminogenic are the absence of effective regulation and the ability to invest in assets that lack a readily verifiable asset value. Unless those initial frauds are dealt with effectively by the regulators or prosecutors they will produce record profits and other firms will mimic them. Those control frauds can be a combination of "opportunistic" and "reactive" (moral hazard). If entry is relatively easy, opportunistic control fraud is optimized. If the finance sector is suffering from severe distress, reactive control fraud is optimized. Both conditions can exist at the same time, as in the early years of the savings and loan (S&L) debacle.

When many firms follow the same optimization strategy in the same financial field a financial bubble will arise, extend, and hyper-inflate. This further optimizes accounting control fraud because the rapid rise in values allows the frauds to hide the real losses by refinancing the bad loans. Mega bubbles can produce financial crises.

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*Modern Finance Theory and Its Implications for the Developing New Criminology*

Traditional economics and modern finance theory have failed to understand or counter even hyper-inflated financial bubbles, the financial crises they cause, and the resultant severe recessions. This failure arises from a more basic failure – modern finance theory is fatally flawed. The theory is premised on the existence (indeed, the virtual inevitability) of "efficient markets" absent government "interference." While there are variant definitions of "efficient markets," even the weakest meaningful definition requires that the markets (1) not make *systematic* pricing errors and (2) move consistently towards more accurate pricing when there are random pricing errors.

"Private market discipline" was the dynamic asserted to make contracts efficient. Creditors are assumed to understand the risk of fraud, to have the ability to protect by contract against the risk, and to take effective action to protect against fraud. Honest, low-risk borrowers (and issuers of stock) are assumed to have the incentive to "signal" their status to lenders and investors and to have the *unique* ability to send such signals. Lenders and purchasers of stock are presumed to be rational. Rational lenders and purchasers do not want to be defrauded. Modern finance theory, therefore, presumed that lenders and purchasers of stock would only deal with companies that sent "honesty" "signals." It follows that "control fraud" is impossible. "Control fraud" (a new criminology theory) refers to frauds in which those that control (typically, the CEO) an entity use it as a "weapon" to defraud (Black 2005; Wheeler & Rothman 1982). Among finance firms, accounting is the "weapon of choice." Accounting control frauds grossly inflate their accounting "profits" in order to enrich the senior officers. If markets are efficient, accounting control fraud should be impossible because the fraudulent firms could not send the requisite "honesty" "signals." Rational lenders and purchasers of shares would not deal with an accounting control fraud. This is an example of "private market discipline" and it would – even if there were no rules, laws, regulators, or prosecutors – prevent all accounting control fraud.

Criminologists' research has documented that accounting control fraud can "mimic" the "honesty" signals and that each of the signals that economists asserted could only be sent by honest companies were routinely sent by accounting control frauds. Moreover, the accounting control frauds used these signals to aid their frauds and turned private market discipline into an oxymoron (Black 2005).

These new criminology theories also showed what conditions could produce an intensely criminogenic environment that would lead to an epidemic of accounting control fraud. Criminologists borrowed the economics/finance concept of optimization to examine how lenders engaged in accounting control fraud would operate and why an epidemic of accounting control fraud would likely hyper-inflate financial “bubbles.” The term “bubble” refers to situations in which the prices of certain assets, e.g., homes, inflate rapidly in excess of the asset’s fundamental values. Bubbles are impossible if markets are efficient because they represent systematic pricing errors (values are consistently overstated) and bubbles expand because market-pricing errors increase. Under the efficient markets hypothesis errors should be random and the markets should consistently reduce pricing errors. Bubbles, however, do exist and they sometimes hyper-inflate and cause catastrophic damage. Bubbles, therefore, falsify the claims that “free” markets (and contracts) are inherently “efficient” (Black 2005). The housing bubble that triggered “The Great Recession” is only the most recent example.

*White-collar Criminology’s Struggle to Address Elite Financial Frauds*

Finance scholars could have avoided modern finance theory’s fundamental errors had they read the white-collar crime literature. Sutherland, in his 1939 presidential address to the American Sociological Association, first created the term (and concept of) white-collar crime: "a crime committed by a person of respectability and high social status in the course of his occupation." We will see that each of these three elements represented a vital insight into what produced uniquely dangerous crimes: respectability, high social status, and crime done in the course of one’s occupation. Sutherland demonstrated that large corporations frequently violated the law. Control frauds are the epitome of white-collar crime. The recent global crisis falsified modern finance theory, which is premised on the efficient markets hypothesis. The remarkable fact, however, is that Sutherland’s work falsified the efficient markets hypothesis 60 years ago – roughly 30 years before modern finance theory triumphed.

Unfortunately, criminology did not advance rapidly from Sutherland’s creation of a new field of study. Few criminologists studied white-collar crime and many of those that did revolted against Sutherland’s use of class in his definition (“high social status”). Cressey (1973), one of Sutherland’s students, interviewed embezzlers imprisoned in the 1940s. He found that they were disproportionately female, rarely had college degrees, and were relatively low social status. The low status embezzlers caused minor losses compared to more senior embezzlers.

Cressey’s research taught us a great deal about minor embezzlers, but it had two unfortunate consequences. First, white-collar criminologists, from virtually the birth of the field, began to spend much of their time studying minor occupational crime rather than white-collar crime. There have never been large numbers of white-collar criminologists, so the diversion of such a high proportion of its scholars to the study of minor occupational crimes minimized advances in white-collar criminology. The diversion also reflected the continuation of precisely the perverse distortion of law enforcement priorities that Sutherland sought to change. A single high-status embezzler will often embezzle more funds than 100 low-status embezzlers combined. Financial institutions commonly refused to make criminal referrals when they discovered embezzlement by senior officers because they feared adverse publicity. When white-collar criminologists focused on low-status employees they inherently focused on relatively minor financial crimes and reinforced instead of challenged the normal law enforcement predisposition to concentrate on relatively minor occupational crimes. Worse, it led many scholars to redefine "white-collar crime" by removing Sutherland's third element ("high social status"), from the definition of white-collar crime. This redefinition made it easier for scholars to consider themselves white-collar criminologists even though they rarely studied the elite white-collar offenders that cause the vast bulk of all financial fraud losses.

Second, Cressey's interviews of embezzlers led him to develop what he eventually termed the "fraud triangle." He viewed embezzlers as engaging in fraud when three factors came together: a non-shareable need (i.e., an embarrassing financial need that they could not discuss with their superiors), the opportunity to commit the crime, and the ability to rationalize the fraud. Embezzlers are unique fraud offenders. They frequently confess upon being confronted and often indicate relief that they have been caught and can end their lies. Embezzlement is a crime in which women are the majority of those imprisoned (which is why it is sometimes called "pink collar crime"). The embezzlers Cressey studied were overwhelmingly from lower social classes. In sum, the embezzlers he studied are exceptionally unlike the elites that Sutherland was concerned about because he recognized that their violations of law caused massive losses – often with impunity from prosecution. Nevertheless, Cressey, generalized from his study of lower social class embezzlers to apply his "fraud triangle" theory to all fraudsters.

Cressey was so famous and well respected that the accounting profession enshrined his fraud triangle in its auditing standards (SAS 99) – even though the fraud triangle's predictive failures are at their worst when applied to accounting control fraud. Outside auditors' central priority should be accounting control fraud – which causes greater losses than all other forms of corporate fraud combined and which can cause the failure of massive corporations. "Fraud triangle" analysis leads outside auditors to ignore what should be their central priority because it predicts that fraudsters are low status, poorly educated, and in embarrassing, personal financial crises. Cressey urged us to look at the bottom of the organizational chart to find fraud. The *last* employee or officer that an auditor would suspect of fraud under Cressey's analysis is the CEO. Even if the auditor overcame Cressey's presumption that senior officers, particularly the CEO, will rarely if ever engage in fraud, and auditor relying on the fraud triangle would only suspect that a CEO would engage in fraud if he were in a personal financial crisis. Even if the auditor was willing to consider that the CEO might engage in fraud and even if the auditor found that the CEO was engaged in a hidden, personal financial crisis, the fraud triangle would still mislead the auditor because it predicts that such CEOs will defraud the company through embezzlement. None of the fraud triangle's predictions of most importance to an outside auditor is correct. First, control frauds, not embezzlers, cause the vast bulk of corporate fraud losses. Control frauds are led by elites – not lower social class embezzlers. Second, wealthy CEOs engage in accounting control fraud. They do not need any personal financial crisis to engage in fraud. Third, accounting control fraud inherently poses a far lower risk of prosecution for a CEO than does embezzlement while providing greater gains in income and status.

This is why accounting, not embezzlement, is a control fraud's "weapon of choice." The officers that lead control frauds have always thought "outside the triangle" – it is time for criminologists, economists, finance specialists, auditors, and regulators to join (and combat) them.

As scholars that considered themselves white-collar criminologists increasingly chose to study minor occupational crimes by lower status offenders, the dismissive phrase "so-called white-collar crimes" became widespread. Some blue-collar criminologists sought to trivialize white-collar criminology on the bases that (1) all criminality arises from common genetic or environmental factors and (2) so-called white-collar criminals are overwhelmingly lower-status individuals that commit minor property crimes. Wilson & Herrnstein (1985) blamed criminality on genetics (gender, intelligence – which they saw as primarily determined by genetics – and body-type, i.e., dumb, hulking males), age (young), and personality (aggressive, fearless, and impulsive). Their title: *Crime & Human Nature* reflects their claim that their theories explain all criminality (or at least all criminality worthy of study). In *The Bell Curve* (1994), Herrnstein & Murray made clear their belief that intelligence was largely determined by genetics and that blacks were less intelligent than Asians and whites. They explicitly endorsed the link between low intelligence and criminality.

Wilson (political science) and Herrnstein (psychology) had little use for criminologists or their research. They viewed adult criminals as sharply distinct from normal human beings. Their theories imply that an experienced police officer could identify any "criminal" within minutes of meeting them. The police officer could tell from looking at them that their gender, age, and body type fit the profile of the classic offender. Even a brief conversation would reveal their low intelligence, high aggressiveness, and impulsiveness. "Criminals" could not rise to positions to positions of authority in an honest business. They could not pass for respectable people. They would not be smart enough to be promoted, their aggressiveness would lead to constant altercations, and their inability to control their impulses would cause recurrent embarrassing blunders, violence, or thefts that would get them fired. Even so-called white-collar criminals were not like "us." Wilson & Herrnstein's message to criminologists, policy, and policy-makers was to look at losers at the bottom of the organization chart to find the criminal risk in any business. The CEO was the last person to suspect of criminality.

In *The General Theory of Crime* (Gottfredson & Hirschi 1990) argued that that their "control theory" explained all crime. Criminals have extremely poor control over their impulses. They are not like normal adults, who learn to control their impulses. Their poor impulse control marks them not only as criminals, but also as more general failures in life, for they lack the self-discipline essential to making the investments (e.g., saving money and getting a good education) that are increasingly essential to employment success and they are more likely to engage in extremely risky and self-destructive behavior. Relying in part on "occupational crime" scholars, Gottfredson & Hirschi argued that so-called white-collar criminals were really low-status employees with poor impulse controls. Again, the message was to look for criminality only at the bottom rung of a company's employees.

Sutherland, of course, falsified Wilson's & Herrnstein's claim that low intelligence and poor impulse control were factors in predicting all criminality 45 years before they published it. He falsified Gottfredson's & Hirschi's claim that poor impulse control was a universal cause of crime over 50 years before they published it. Elite white-collar criminals are generally highly intelligent and older. They demonstrate higher impulse control than the general population. On many dimensions, elite white-collar criminals are the antithesis of Wilson's & Herrnstein's and Gottfredson's and Hirschi's supposed universal criminal traits.

Sutherland's work showed great sophistication along several related dimensions relevant to the later control theorists' claims that criminality was the sole province of the underclass and "organizational crime" scholars' findings that incarcerated "white-collar criminals" were frequently from lower social classes. First, he emphasized that the damage a relatively small number of elite white-collar criminals could do was immense – far exceeding that of all of the lower-class offenders. Second, he explained that incarceration should never be the measure of criminality given how rare it was to imprison elite white-collar criminals. Third, he made the logical point that the ultimate triumph of elite white-collar criminals is to have the state define actions as at most unlawful – not criminal. This is a moderately subtle distinction that all criminologists must master. An action that is criminal can be punished by criminal prosecution and, generally, by imprisonment (though Sutherland noted that elites were commonly fined or given probation instead of being imprisoned). An action that is unlawful can only be sanctioned by a civil or administrative order, e.g., that a bank "cease and desist" from a particular "unsafe and unsound" practice. In general, corporations that violate federal rules are acting unlawfully, but not criminally.

Sutherland never claimed that only high-status individuals committed crimes in the course of their employment. He defined "white-collar crime" to describe a type of criminal behavior that he felt was uniquely harmful, poorly understood and reported, and rarely prosecuted.

### *Wheeler & Rothman Point the Way*

Few white-collar criminologists explored the significance of the third element of Sutherland's definition: "respectability." The powerful exception was Wheeler & Rothman (1982), and their insight about the large losses that seemingly legitimate organizations cause when they are used as a "weapon." Their work filled an odd gap in Sutherland's conceptualization of white-collar crime. As they note, Sutherland's research into white-collar crime was in the organizational context, but his definition ignores how much greater damage an organization can cause compared to an individual "in the course of his occupation." Under Sutherland's logic (and consistent with his research findings), "respectable" elite officers would use organizations as a "weapon" and cause exceptional harm. Geis' classic work on the heavy electrical equipment cartel (1961) had shown how elites created corrupt corporate cultures and deniability designed to make it more difficult to prosecute the senior officers.

Many white-collar scholars, particularly Geis and his colleagues and students, kept alive Sutherland's emphasis on how much greater damage elites could cause and researched the crimes of organizations, but the theories of organizational criminality either implied that it should be omnipresent (because it was prompted by the profit motive itself) or found primarily among failing firms and industries (where prior frauds were implicitly assumed not to have caused the failure). Wheeler & Rothman decried what they described as the "confusion" in the literature:

> Unfortunately, no one has specified what difference it makes when a crime is committed under the cover of an organization or in some occupational context (1982: 1405-1406).

White-collar criminologists did not systematically study how an organization could be used as a weapon – they lacked expertise in accounting, finance, corporate governance, economics, and executive compensation. Traditional criminology has not even attempted to explain financial bubbles and crises. Wheeler & Rothman did not have this expertise and did not study these components of what makes a seemingly legitimate organization such a destructive weapon. This makes their ability to infer that there must be something special about seemingly legitimate organizations' ability to cause exceptionally large losses worthy of careful study by criminologists all the more impressive.

Wheeler & Rothman used an empirical methodology that was inherently crude due to the Department of Justice's failure to compile comprehensive data on crimes by organizations. That failure continues. Wheeler & Rothman's work was done as part of the immensely fruitful Yale studies in white-collar crime – the only time in recent (27 years ago!) history when the National Institute of Justice (NIJ) has funded a comprehensive study of white-collar crime. NIJ's continuing failure to fund research into elite white-collar crime is scandalous.

Wheeler & Rothman's empirical work used data drawn from a sample of presentence investigative reports (PSIs) of eight "presumptively white-collar crimes" (1982: 1406). Wheeler & Rothman do contemplate that crimes committed by the organization may be more severe, but they did not envision control fraud and they did not design their study to research situations in which the person controlling a seemingly legitimate organization would hone it as a "weapon." They made clear that they wanted to study the most *common* uses of the organization as weapon – not necessarily the most *destructive* uses (*Ibid*). Their empirical findings are entirely consistent with control fraud theory, but because of their study design these findings offer only modest empirical information relevant to control fraud. Their findings also support Sutherland's definition of white-collar crime and further falsify the "control theorists'" claimed general theory of crime. Senior corporate officials that commit white-collar crimes in organizations are older and well educated. They cause "vastly greater" financial losses (*Ibid*: 1420-1421).

Wheeler & Rothman made insightful comments about the needs for regulators to develop means of controlling corporate crime other than the criminal justice system.

> [M]ore thought should be given to alternative mechanisms of control. Is it possible, for example, to develop better warning signs that would indicate when a company is in financial trouble and, therefore, more likely to adopt illegal solutions to its problems? Given the power of the organizational form, should we create more windows into the organization so that outsiders can see more clearly what insiders are doing? Can we make better use of the accountants and lawyers whose presence lends legitimacy to organizational conduct? Maybe we can predict under what circumstances organizations will be more likely to violate the law. Perhaps more sophisticated indicators can be developed, allowing regulatory and other enforcement workers to focus all-too-limited investigative resources in areas where they will be most effective (1982: 1425-1426).

Wheeler & Rothman deserve special praise for their innovative suggestions on the research topics that were most needed and methodological steps to redress the crippling data problems. They urged the creation of analogs to "ballistics laboratories" to analyze major crimes by organizations.

> The areas for research are fertile. What are the most crucial features of organization for the commission of specific white-collar offenses? Can we develop the organizational equivalent of the ballistics unit for common crime to identify readily features that link characteristic attributes of organizational style to particular offenses? These and related questions are prompted by viewing the organization as the white-collar criminal's most powerful weapon (1982: 1426).

## *The Confluence of Research Streams that Generated a New Approach to the Study of Elite White-Collar Criminology*

### The S&L Regulators (and an introduction to the economics a criminologist needs)

Wheeler & Rothman's work was brilliantly timed, for it came out just as an epidemic of accounting control fraud was about to cause the savings & loan (S&L) debacle. The S&L regulators began, in late 1983, to realize that interest rate risk was no longer the industry's primary problem and identify a new type of S&L (the "high flier") and their CEOs as the problem. In 1984, the agency began to "reregulate" the industry and launched a campaign against the CEOs that were destroying "their" S&Ls.

The regulators came primarily from financial and legal backgrounds. Their primary influences were those fields and closely related fields such as economics, accounting, fraud, fiduciary duties, and corporate governance. We were often critical of the conventional wisdom and dominant methodologies in these fields, but we drew heavily on financial concepts in understanding accounting control fraud and developing regulatory strategies to counter the epidemic. In so doing, we demonstrated the utility of many of Wheeler & Rothman's insights and created a new type of white-collar criminology that added key financial concepts to explain *how* the people that controlled seemingly legitimate organizations used them as fraud weapons. To understand this new approach to the study of elite white-collar criminology it is necessary to understand some key financial concepts. This section of the essay assumes that the reader is unfamiliar with such concepts. It introduces new economics terms in **bold** and explains their meaning briefly (without mathematics or graphs). This level of detail is sufficient to enable even the beginning reader to understand how these economic concepts and terms helped produce a new criminology that can explain how those controlling seemingly legitimate firms can use them as a "weapon" to produce not only massive individual failures but also enormous financial bubbles and global financial crises.

Given that Wheeler & Rothman published their "weapon" article in the *University of Michigan Law Review* (the law school from which the author of this essay graduated), their suggestions could have greatly aided the regulators. Sadly, I was not aware of their article until 1993. Instead of Wheeler & Rothman pointing the theoretical way and suggesting the appropriate methodology, we were forced to rely primarily on economic discussions of fraud. Economic discussions of fraud were rare and their applicability to our problems was not obvious. Becker (1968) wrote about the economics of deterring crime. Virtually all of his writings dealt with blue-collar crime. He asserted, incorrectly, that his model was applicable to white-collar crime (it is not because his optimal deterrence model requires knowing the incidence of each crime – which is impossible to know in the case of fraud). He did, however, champion two points that proved useful in studying elite white-collar crimes. First, he viewed those that commit crimes as normal humans instead of a distinct criminal class. Second, he assumed that criminals **optimized**.

Akerlof (1970) wrote about anti-consumer control frauds in his famous article about markets for "lemons." A **"lemons" market** is a market in which the seller exploits its superior information (**"asymmetrical information")** to defraud the customer by misleading him into believing that inferior quality goods (e.g., cars that are "lemons") are superior quality. Akerlof discussed the costs of this "dishonesty." He provided several insights critical to our success in developing the concept of control fraud and understanding how CEOs optimize accounting control fraud.

- The corporation has superior information about its operations ("asymmetrical information")
- Some seemingly legitimate firms are able and willing to maximize profits by committing fraud
- If a seller gains a competitive advantage through fraud, markets will drive honest competitors out of the industry – Akerlof termed this a **"Gresham's dynamic"** because bad cars and ethics drive good cars and ethics out of the marketplace (1970: 489-490). A dishonest used car dealer could buy "lemons" at a very low price, use deceit to make customers pay a very high

price for the car because they believed that it was a high quality car, and make large profits that no honest used car dealer could match.
  - Lemons markets are **inefficient** – they misallocate capital and reward the dishonest. They harm not only the customer but also honest competitors.

Becker and Akerlof were awarded the Nobel Prize in economics in 1992 and 2001, respectively, so while the economic literature on fraud was sparse, the field's top scholars provided it.

The S&L regulators added elements drawn from their knowledge of economics, accounting, regulation, corporate governance, and executive compensation to these economic concepts in order to develop a theory of accounting control fraud. The three most important economics principles that we drew on were adverse selection, moral hazard, and agency cost theory.

- **Adverse selection:** when a lender cannot determine the credit risk that borrowers pose it will charge an interest rate that is grossly inadequate to compensate for making loans to fraudulent or high risk borrowers. Eventually, only the worst borrowers will use the lender and it will suffer large losses and fail.
- **Moral hazard:** when rewards and risks are asymmetrical an individual or company has a **perverse incentive** to engage in fraud or imprudent risks. For example, shareholders have **"limited liability."** That means that if a corporation becomes **insolvent** – its **liabilities** (debts) exceed its **assets** – its shareholders can take advantage of the asymmetry of risk and reward. The formula has three parts: assets minus liabilities = **capital**. The shareholders own corporations and (theoretically) control them. The shareholders have the claim to the corporation's capital (if it is positive). If the corporation has no capital its shareholders' financial interest is wiped out. They lose whatever they paid for their shares if the shares become worthless. If the corporation becomes deeply insolvent the shareholders are not responsible for any of those additional losses (that is what "limited liability" means) – the **creditors** suffer all the additional losses. (Creditors are the entities, usually banks, which lend money to the corporation.) The result is that shareholders of insolvent corporations have no downside risk. If the shareholders still control the insolvent corporation they have a perverse incentive to cause it to engage in control fraud or wildly imprudent risks. Control fraud is a "sure thing" – if optimized, it produces guaranteed, record "profits." The great bulk of these exceptional profits will go to the shareholders – not the creditors. The same is true of taking (honest) extreme risks, but the greater the risk the lower the chance that it will succeed. The bottom line is that the shareholders of an insolvent corporation have no downside risk and immense upside potential. This creates powerful, perverse incentives to engage in accounting control fraud.
- **Agency cost theory:** shareholders own corporations, therefore, they are its **principals**. Officers and directors run corporations as **"agents"** for the

shareholders. It is very difficult for the shareholders to monitor these agents, so there is a serious danger that the agents will act **"unfaithfully"** to further their own interests at the expense of the shareholders. (Traditionally, the law has imposed **fiduciary duties of loyalty and care** on officers and directors in order to induce them to act faithfully.) Agency cost theory predicts that shareholders will bear costs designed to increase the chance that the officers and directors will act in the shareholders' interests, e.g., by providing bonuses based on performance.

While the regulators drew heavily on economic theories relevant to control fraud, they did so selectively. They disregarded the core principles of modern finance and economics and their defining methodology. The core principle of modern finance is **"the efficient markets hypothesis" (EMH)**. There are multiple versions ("weak", "semi-strong", and "strong") of the EMH. The technical details are not critical for these purposes. The key is that accounting control fraud would inherently make the stock markets grossly inefficient under any version of EMH. Virtually everything in modern finance assumes that stock markets are efficient, so control fraud theory falsifies modern finance.

The **"efficient contracts" hypothesis** is not microeconomics' sole pillar, but it is one the core assumptions underlying the study of the price system. It predicts that lenders will accurately evaluate the **credit risk** of lending to particular classes of borrowers and price the risk appropriately to compensate themselves. In plain English, lenders will charge riskier borrowers higher interest rates.

Economics and finance are supremely proud of their reliance on quantitative analysis. They believe it demonstrates that they are hard sciences. Economists refer to their use of statistics as **econometrics**. The greatest methodological insult an economist can make is to call someone's work **"merely anecdotal."** The central problem the regulators faced with econometrics is that it provides the worst possible information about accounting control fraud. This essay explains why optimizing accounting control fraud produces guaranteed, record "income." Econometric studies typically use either income or stock price as the outcome variable (and accounting "income" is the key driver of stock prices). If an economist were asked in 2005 to study whether it was good public policy to permit banks to make mortgage loans without verifying and documenting the borrower's income, employment, and assets she would design an econometric study to test whether banks that made such loans produced higher income (profit). If making "no doc" loans optimized accounting fraud (and this essay shows why it did), then the econometric study would have to show a strong *positive correlation* between making "no doc" loans and increased profitability. The economist would then conclude that there was strong empirical evidence that allowing lenders to make "no doc" loans would be desirable. In reality, "no doc" loans were known in the trade as "liar's loans." These loans eventually caused the massive losses characteristic of accounting control fraud. A study done now would reveal that the true "sign" of the correlation has emerged and that it is the reverse of that found by prior econometric studies. (Making "no doc" loans is *negatively correlated* with bank income, i.e., banks that made "no doc" loans were deeply unprofitable.)

The regulators used an alternative methodology. We conducted an "autopsy" of each S&L placed in **conservatorship** or **receivership** to determine its causes. The regulators can take over failing or failed banks and appoint an official (a conservator) to manage the bank and attempt to stabilize it or to sell its assets (receivership). The number of takeovers of failed S&Ls was so great that it created a substantial research opportunity. The "sample" of S&Ls that we reviewed was not random. The agency attempted to prioritize for takeover the worst accounting control frauds. The results of our analyses demonstrated that accounting control frauds exhibited a distinctive operational pattern that would have been profoundly irrational for any honest firm. The identification of the pattern led the agency to be even more effective in targeting accounting control frauds for early closure. This made the sample consist over time even more heavily of accounting control frauds.

The formula for a lender optimizing accounting control fraud has four parts:

1. Grow extremely rapidly (Ponzi-like)
2. Lend to the **uncreditworthy** (borrowers that have high **credit risk**, i.e., they are unlikely to repay their loans – a borrower that does not pay its debts **"defaults"** on its loans)
3. Extreme **leverage** (the firm finances itself primarily by borrowing money instead of by raising capital through the sale of stock or retaining profits)
4. Grossly inadequate **loss reserves** (the lender does not set aside funds it will need to pay for future **defaults –** this creates fraudulent "income" or profits in the early years and leads to catastrophic losses in later years)

The autopsies revealed other aspects of the distinctive pattern that arises from accounting control fraud:

- The frauds were led from the top by those controlling the S&L
- The frauds invested overwhelmingly in a small category of assets that were optimal for accounting fraud (because it was easy to inflate their market values)
- The first two parts of the formula are intertwined: it is very difficult to grow extremely rapidly as a lender in a mature, competitive market by making high quality loans, but it is easy to grow rapidly by making bad loans (and the lender can charge a premium interest rate for such loans)
- In order to make large quantities of bad loans a lender must gut its underwriting and suborn its **internal and external controls** (e.g., the credit committee, the internal auditor, and the external audit firm)
- They invariably chose top tier audit firms and typically were able to get **"clean" audit opinions** "blessing" financial statements showing high profitability and minimal losses even when the S&L was insolvent and deeply unprofitable (a clean audit opinion certifies that a business has prepared its financial statements in accordance with **generally accepted accounting principles (GAAP)**
- They covered up their losses on bad loans by refinancing those loans

- The large, guaranteed "profits" allowed CEOs to use normal corporate compensation mechanisms to convert firm assets to the CEO's benefit

The reader may have noted how closely our actions resemble Wheeler & Rothman's methodological and policy recommendations:

> What are the most crucial features of organization for the commission of specific white-collar offenses? Can we develop the organizational equivalent of the ballistics unit for common crime to identify readily features that link characteristic attributes of organizational style to particular offenses?
>
> Perhaps more sophisticated indicators can be developed, allowing regulatory and other enforcement workers to focus all-too-limited investigative resources in areas where they will be most effective (1982: 1425-1426).

In addition to being able to identify the accounting control frauds while they were still reporting record profits and minimal losses, understanding the fraud pattern allowed the regulators to target the frauds' Achilles' heel. A Ponzi scheme must grow rapidly or collapse. The agency passed a rule restricting growth, which caused the control frauds to implode.

The regulators also recognized that the Ponzi nature of the frauds, the CEOs' efforts to optimize accounting fraud, and the fact that certain assets and particular states (due to exceptionally weak regulation) combined to make an epidemic of accounting control fraud the perfect device for hyperinflating a **financial bubble** (a sharp rise in the price of a category of assets not caused by economic fundamentals). The regulators deliberately burst the Southwest regional bubble in commercial real estate.

**Criminologists, Regulators & Economists Combine to Create a New Criminology of Elite White-Collar Crime**

Wheeler & Rothman proved influential with a group of sociologists (Calavita, Pontell & Tillman 1997) with expertise in white-collar crime that received a rare NIJ grant to study an epidemic of elite white-collar crime – the S&L debacle. Pontell and his colleagues interviewed a large number of regulatory and law enforcement officials and wrote extensively about the role of elite white-collar criminology. They realized that the debacle demonstrated Wheeler & Rothman's primary thesis that the organization was used as a "weapon" to cause enormous damage to the nation and profit to the senior officers.

The criminologists/sociologists did not, however, have expertise in accounting, economics, finance, law, or corporate governance and they struggled to find regulators and prosecutors that could explain *how* the frauds were using the S&L as a weapon. They attempted to use (1) the existing white-collar crime categories and (2) to fit the regulators' motif in explaining the debacle – "risk" – into a criminological framework. The first attempt led them to coin the term "collective embezzlement." This term proved both vague and misleading. It was vague because it was unclear what the "collective" was and it was misleading because the key to accounting control fraud is that it closely approaches a perfect crime because the large, guaranteed (albeit fictional) "profits" allow the person controlling the corporation to convert its assets to his personal benefit through seemingly normal corporate compensation mechanisms (bonuses, salaries, perks, stock options, and the appreciation in value of stock owned by the CEO). Embezzlement, by contrast, requires the employee to take an unlawful action to convert the firm assets' to the employee's benefit, e.g., by writing an unauthorized check on the firm's bank account for his own benefit.

The term "unlawful risk taking" was also misleading. The criminologists argued that it described what was known as the "heads, I win; tails, FSLIC loses" (or "gambling for resurrection") strategy. (FSLIC was the acronym for Federal Savings and Loan Insurance Corporation.) The purported strategy was an example of "moral hazard." The idea was that an insolvent S&L would take extreme (imprudent) risks knowing that if it won its gamble the shareholders would win, while if it lost the gamble the creditors (in the first instance) would bear the losses. Ultimately, however, because the S&L was insolvent and because an S&L's creditors are overwhelmingly depositors the federal insurance fund for S&Ls (FSLIC in that era) would bear the cost because it guaranteed that insured depositors would suffer no loss when an S&L failed. There were two difficulties with the concept of unlawful risk taking. First, it wasn't unlawful. Taking imprudent risks can be a civil and a regulatory wrong, but it is not a crime. Second, it didn't describe a real strategy. The conventional economic wisdom was that (honest) "gambling for resurrection" caused the second phase of the S&L debacle, but that was inaccurate (as the criminologists' research confirmed).

In 1993, the criminologists repeatedly interviewed the regulator that had been responsible for the autopsies of the failed S&Ls and provided the staff leadership of the reregulation of the industry in 1984-87 (the author of this essay). The author was also serving as the Deputy Staff Director of the National Commission on Financial Institution Reform, Recovery and Enforcement, which was charged with researching and reporting on the causes of the S&L debacle. In that capacity the author, in 1993, met and collaborated with the economists George Akerlof and Paul Romer, who were independently investigating the role of elite fraud in the debacle. The result of these discussions was a multi-disciplinary cross-fertilization. The criminologists and the author provided shared their extensive scholarship about the debacle and engaged in detailed discussions of about the causes of the debacle. This alerted the author for the first time to these critical criminological concepts:

- The organization as a weapon
- "Criminogenic environment"
- "Systems capacity"
- "Neutralization"

Akerlof & Romer (1993) also worked with the author and engaged in detailed discussions and exchanged scholarship about the debacle (and about Drexel Burnham

Lambert and Michael Milken). In particular, the author emphasized the actual mechanisms that accounting control frauds used, why these mechanisms optimized accounting fraud and the tradeoff between the amounts of corporate funds the CEO could convert to his personal benefit versus the risk of prosecution. The author also explained why the control frauds' distinctive lending practices would never be used by an honest S&L "gambling for resurrection." Akerlof & Romer's endorsement of the concept of control fraud, and the ability of widespread control fraud to hyperinflate financial bubbles was of great importance because it represented a refutation of the conventional economic wisdom about the debacle by economists of impeccable reputations.

The criminologists gained both a coherent explanation of the mechanisms that accounting control frauds used and confirmation that what they were observing at the most expensive S&L failures were criminal frauds. They had always been uncomfortable with the conventional economic wisdom ("gambling for resurrection") about the debacle and now they had a firm basis (1) from the regulators' findings, (2) from two top economists, and (3) from the National Commission on Financial Institution Reform, Recovery and Enforcement rejecting the conventional wisdom and confirming the decisive role of elite white-collar criminals at the most expensive S&L failures. They also confirmed the importance of systems capacity and criminogenic environments in explaining why the epidemic of accounting control fraud occurred in the S&L industry during the 1980s. The cross-fertilization demonstrated the enormous advantages of multi-disciplinary and multi-methodological research.

**The Conventional Economic Wisdom Did not Recognize that Criminology had Falsified the Efficient Markets Hypothesis**

White-collar criminology falsified the efficient market hypothesis over a half century prior to the housing bubble. Savings and loan (S&L) regulators and criminologists recognized the decisive role that fraud played in causing the worst losses during the S&L debacle and the fact that these frauds were led by the CEOs and used accounting as their "weapon of choice." Fraudulent S&Ls always used accounting fraud to overstate asset values and hide real losses, producing inflated market values for their stocks. This is impossible if markets are efficient. The regulators (Black 1993), and two prominent economists, (Akerlof & Romer 1993) showed how these frauds hyper-inflated the regional bubble in commercial real estate. The existence of the bubble and the S&L frauds' role in causing it to hyper-inflate further falsified the efficient markets and contracts hypotheses.

Unfortunately, Akerlof & Romer assumed that the inefficiency was caused by the existence of federal deposit insurance and did not falsify the general efficiency of markets and contracts. Their logic was that private market discipline is expensive for creditors and that if the creditors (depositors in the S&L context) were protected from loss by deposit insurance they would not exert effective discipline (Akerlof & Romer 1993: 5-6). More traditional economists simply ignored the research by the criminologists and regulators.

White-collar criminologists and regulators writing about the S&L "control frauds" never accepted the claim that deposit insurance caused the failure of private market discipline. "Control frauds" are seemingly legitimate entities used as fraud "weapons" by the individuals that control them (Black 2005; see also Wheeler & Rothman 1992). They saw that *uninsured* creditors (including subordinated debt holders – who traditional economics presumes are the ideal source of discipline due to their financial exposure and greater risk exposure) – and shareholders failed to exercise effective discipline against any S&L control fraud. Criminologists argued that control frauds did not simply evade effective private market discipline, but actually profited from it because even uninsured creditors and shareholders funded the control frauds' growth.

Economists, however, ignored the criminologists' and the regulators' findings, theories, and methodologies. Their belief in efficient markets and contracts became even more fervent as the housing bubble hyper-inflated. Their failure to consider criminologists' findings is ironic because criminologists have built control fraud theory in substantial part on economic theory.

**Criminologists have developed unique expertise in understanding:**

- Which environments are most "criminogenic" for accounting control fraud
- Why individual accounting control frauds can cause massive losses
- How control frauds optimize accounting fraud
- Why accounting control frauds produce guaranteed, extreme "profits"
- How executive compensation optimizes CEO looting via accounting fraud
- How executive compensation aids accounting fraud
- How executive compensation reduces whistle blowing
- Why control frauds routinely defeat private market discipline
- Why control frauds defeat regulators that do not understand how they operate
- How control frauds suborn internal and external controls and make them allies
- Why control fraud epidemics occur
- Why control fraud epidemics extend and hyper-inflate financial bubbles
- Why econometric studies are perverse when a bubble is inflating
- Why accounting control frauds follow a distinctive operational pattern
- Why accounting control frauds have an "Achilles' heel"
- Why accounting control frauds erode trust and can shut down markets

Criminology has a comprehensive set of theoretical, methodological, and policy findings that could be of critical help in avoiding, or minimizing financial bubbles and financial crises. It is well past time for economists and policy makers to learn from criminologists and develop a comprehensive theory of control fraud. Economics offers many of the building blocks to create such a theory. Whether or not economists make the intellectual journey to use these building blocks to build a comprehensive theory, modern criminologists have recognized that they must understand economics, finance, and accounting if they are to understand the most harmful white-collar crimes. A modern criminologist

*Optimizing Accounting Control Fraud*

Recall that the formula for a lender optimizing accounting control fraud has four parts:

- Grow extremely rapidly (Ponzi-like)
- Lend to the uncreditworthy
- Extreme leverage
- Grossly inadequate loss reserves

The central fact that must be understood is that this formula produces nearly immediate, extraordinary, and guaranteed short-term "profits." The formula is simple accounting mathematics. Accounting fraud is a sure thing – not a "risk" as we think of that term in finance (Akerlof & Romer 1993; Black 2005). Accounting frauds rarely engage in fraud for the purpose of slightly increasing reported profits. They typically engage in fraud to report exceptional profits.

The reason that extreme growth optimizes accounting fraud is obvious, but the concept that *deliberately* making uncreditworthy loans optimizes short-term accounting profits is counter-intuitive. The first two ingredients in the accounting fraud formula are related. Lenders in a mature market such as home mortgages cannot simply decide to grow rapidly by making *good* loans. Lenders can grow rapidly by making good loans through two means. They can acquire competitors (a strategy that inherently cannot be followed by a very large number of lenders) or they can drop their yields and seek to compete on the basis of price (i.e., their mortgage interest rate in this context). Their competitors are almost certain to match any reduction in mortgage interest rates, so the latter strategy generally fails to provide substantial growth while the lower price leads to reduced "profit" margins.

Lending to the uncreditworthy, however, allows exceptional growth and allows one to charge a higher interest rate. The combination maximizes accounting income. As James Pierce, Executive Director of the National Commission on Financial Institution Reform, Recovery and Enforcement (NCFIRRE) explained:

> Accounting abuses also provided the ultimate perverse incentive: it paid to seek out bad loans because only those who had no intention of repaying would be willing to offer the high loan fees and interest required for the best looting. It was rational for operators to drive their institutions ever deeper into insolvency as they looted them. (1994: 10-11; see also Robinson 1990: 64-65)

"Bo" Cutter, former managing partner of the prestigious Wall Street firm Warburg Pincus, describes the same phenomenon during the nonprime lending crisis:

> In fact, by 2006 and early 2007 everyone thought we were headed to a cliff, but no one knew when or what the triggering mechanism would be. The capital

> market experts I was listening to all thought the banks were going crazy, and that the terms of major loans being offered by the banks were nuttiness of epic proportions.

When competitors mimic this optimization strategy the net effect of this competition further optimizes accounting fraud. This perverse competitive effect is also counter-intuitive. As more firms emulated the initial accounting control frauds strategy of making subprime and "liar's loans" to buyers that could not repay the loans the competition among the lenders reduced non-prime mortgage interest rates. That effect, of course, reduced their accounting profits. "Alt A" loans were, falsely, represented by their issuers as equivalent in risk to (extremely low risk) "prime" loans. They were made without verifying the borrower's most important representations. In the trade, they were known as "liar's loans" because failing to verify such information maximizes "adverse selection" and leads to pervasive deceit.) The dominant effects of rapidly expanding nonprime lending, however, were to massively expand growth and to extend and hyper-inflate the housing bubble. The net effect of increased competition among non-prime lenders was to substantially increase short-term "profits."

The greater a firm's leverage, the higher the ratio of its debt to its capital, the greater its return on capital. The greater its return on capital, the more likely its stock to increase in value, and the larger the executive compensation.

If the lender were to place the loss reserves appropriate to lending (and required by generally accepted accounting principles (GAAP)) primarily to the borrowers least likely to repay the loans its "profits" would disappear and it would report that it was insolvent and unprofitable. The executives would not be paid any bonuses and their stock options and shares would be worthless. It would also make it impossible to sell their non-prime mortgages to others. Accounting control frauds therefore do not comply with GAAP and record proper loss reserves. This optimizes their short-term "profits" but constitutes securities fraud if they are publicly traded. A.M. Best warned in its 2005 report that "the industry's reserves-to-loan ratio has been setting new record lows for the past four years."

*Optimizing the Ability to Make Bad Loans*

The glaring difficulty with a lender adopting a strategy of deliberately making an enormous number of bad loans is that an honest lender's entire institutional structure and culture is designed to prevent bad loans. Large lenders, and bubbles are inherently the product of the actions of large lenders, have multiple layers of internal and external controls that are typically extremely effective in preventing bad home mortgage loans. Losses on prime home mortgage loans are generally well under one percent.

The internal controls at large lenders are supposed to include the loan officer, the loan officer's supervisor, loan underwriters, internal appraisers, the credit committee, the senior risk manager, the internal auditor, the audit committee, the chief operations officer (COO), CFO and CEO, the asset/liability committee, and the board of directors. The external controls include the outside auditor, rating agencies, and appraisers. A large lender will have roughly a dozen overlapping controls that are supposed to stop any practice that leads to significant numbers of preventable bad loans.

Each of these control layers must fail – contemporaneously – to permit an overall strategy of making tens of thousands of bad loans. The odds against each of these controls failing contemporaneously and independently due to random events are miniscule. The odds that the controls will all fail independently and the failures will continue for five years without being restored are essentially zero.

Lenders that engage in accounting control fraud need to end normal, prudent underwriting and to pervert multiple layers of "controls" into non-controls that will (1) endorse a lending strategy of making bad loans, (2) fail to book loss reserves that will cover the resultant losses, (3) produce and "bless" fraudulent accounting statements that purport to show that making bad loans is exceptionally profitable, and (4) pay extraordinary bonuses premised on the fraudulent profits. It is impossible to produce and maintain such a pervasively fraudulent firm (and suborn the external controls) without the active support of the senior officers controlling the firm (Black, Calavita & Ponetell 1995; Calavita, Pontell & Tillman 1997; Black 2002).

### *Creating a Corrupt "Tone at the Top" Suborns Internal Controls*

A large firm obviously cannot send a memorandum or email message to a thousand employees instructing them to commit accounting fraud. The firm can, however, send the same message without any risk of criminal prosecution through its compensation system.

Modern executive compensation systems suborn internal controls. (Control frauds do not "defeat" controls — they turn them into oxymoronic allies.) The Business Roundtable is made up of the nation's 100 largest firms. In response to the series of accounting control fraud failures (e.g., Enron and WorldCom) in 2001 and 2002, the Roundtable chose Franklin Raines, then Fannie Mae's CEO, as its spokesman to explain why that epidemic of fraud had occurred. In a *Business Week* interview he was asked:

> [*Businessweek:*] **We've had a terrible scandal on Wall Street. What is your view?**
>
> [Raines:] Investment banking is a business that's so denominated in dollars that the temptations are great, so you have to have very strong rules. My experience is where there is a one-to-one relation between if I do X, money will hit my pocket, you tend to see people doing X a lot. You've got to be very careful about that. Don't just say: "If you hit this revenue number, your bonus is going to be this." It sets up an incentive

> that's overwhelming. You wave enough money in front of people, and good people will do bad things.

Unfortunately, Raines' insights stemmed from his implementation of just such a system. Raines knew that the unit that should have been most resistant to this "overwhelming" financial incentive, Fannie Mae's Internal Audit department, had succumbed to it. Mr. Rajappa, its head, instructed his internal auditors in a formal address in 2000 (and provided the text to Raines, who praised it):

> By now every one of you must have 6.46 [the earnings per share bonus target] branded in your brains. You must be able to say it in your sleep, you must be able to recite it forwards and backwards, you must have a raging fire in your belly that burns away all doubts, you must live, breath and dream 6.46, you must be obsessed on 6.46…. After all, thanks to Frank [Raines], we all have a lot of money riding on it…. We must do this with a fiery determination, not on some days, not on most days but day in and day out, give it your best, not 50%, not 75%, not 100%, but 150%. Remember, Frank has given us an opportunity to earn not *just* our salaries, benefits, raises, ESPP, but substantially over and above if we make 6.46. So it is our *moral obligation* to give well above our 100% and if we do this, we would have made tangible contributions to Frank's goals [emphasis in original].

Internal audit is the "anti-canary" in the corporate "mines"; by the time it is suborned every other unit is corrupted.

The CEO does not have to order, or be aware of, the specific frauds – some employees will do whatever is needed to "earn" their top bonus. The CEO simply communicates – by paying large bonuses based on fictional profits – that he does not care *how* they meet the target. This can create a perfect crime for it gives the CEO ideal deniability. The most common example of this in the housing crisis was the nearly universal practice among nonprime lenders of paying loan officers bonuses on the basis of loan volume irrespective of loan quality. As their peers see that the worst loan officers who make the worst loans maximize their bonuses (and that the "controls" approve even horrific loans), many of them will mimic the worst loan officers' practices. The most moral loan officers leave. This is one example of a Gresham's dynamic in which bad ethics drive good ethics out of the marketplace.

By paying large bonuses if extreme "profits" are obtained even to junior officers the CEO also minimizes the risk of whistleblowers. Whistleblowers are the most common means by which authorities learn of these elite frauds. They pose a special risk to the senior officers running an accounting fraud because they can place the officers on notice of the firm's fraudulent accounting practices by communicating the frauds to the officers. Ignoring the fraudulent practices, or covering them up, can establish the senior officers' knowledge of the frauds and their intent to permit or assist the fraud. Even if the whistleblower communicates the fraud only to junior officers they may inform the senior managers or the internal or external auditors in the belief that it reduces their risk of prosecution.  Some potential whistleblowers may be discouraged from blowing the whistle because they will lose their bonus.  More, however, are likely to be discouraged from blowing the whistle if scores of their friends and peers will lose their bonuses and cease to be their friends.

When the CEO leads the fraud and uses executive compensation to suborn internal "controls" he and his subordinate officers can also use the power to hire, fire, reward, and discipline to break any resistance to making bad loans.  The best employees will reject bad loans – and be criticized and overruled by their superiors.  If they persist in rejecting bad loans they can be disciplined or fired – and their vacant cubical will serve as a warning to their peers.  It is less grisly than the King placing his enemy's head on a pike, but probably more effective in deterring undesired (desirable) behavior.

*Using Compensation to Suborn External Controls*

Accounting control frauds optimize their frauds not by "defeating" external controls, but rather by suborning them and turning them into their most valuable allies.  U.S. accounting control frauds typically retain top tier audit firms precisely because these firms' reputation is so valuable in assisting their frauds.  The value of a top tier audit firm "blessing" fraudulent financial statements is obvious.  The blessing helps the control fraud deceive creditors, investors, and regulators.  It also makes it difficult to prosecute the CEO who "relied" on the outside auditors.

The value of having one of the top three rating agencies give a collateralized debt obligation (CDO) "tranche" backed by "liar's loans" a "AAA" rating is even more obvious.  (CDOs are a variety of "structured finance" in which the cash flows from the underlying mortgages go in order of priority to the owners of different layers of financial derivatives.  The top CDO layer (tranche) has the first claim to cash flows and is the least toxic of an extraordinarily toxic instrument.  A tranche rated "AAA" (while the nonprime secondary market was still operating), was considerably more valuable and more liquid.  The "AAA" rating also appears to validate the "high" quality of the nonprime assets and demonstrate that the nonprime mortgage lenders must be prudent.

Appraisers cannot provide substantial reputation advantages to a control fraud because no appraisal firm has a national reputation remotely analogous to a top tier audit or ratings firm.  Nevertheless, outside appraisers can appear to provide an independent, expert, and professional opinion of the market value of the pledged real estate.  That opinion, if materially inflated, offers two advantages to accounting control frauds.  It allows the lender to make a substantially larger loan (which increases fees and "income") and it allows the lender to claim that the loan is prudent even if the borrower defaults.  Appraisers can make horrific loans appear to be good loans.

Control frauds suborn each of these controls primarily by using compensation to create a Gresham's dynamic.  In the case of audit firms they also exploit "agency" problems.  It is important to understand that while a Gresham's dynamic can lead to endemic corruption of these “controls” they can cause a crisis by suborning only a small portion of the professionals. The senior officers at the control fraud choose the professionals the lender will employ and they can choose the weakest link to provide the opinions they need to aid their accounting fraud.

The existence of a strong Gresham’s dynamic has been confirmed in each of these three external “controls.” The National Commission on Financial Institution Reform Recovery and Enforcement (NCFIRRE) (1993), reported on the causes of the S&L debacle. It documented the distinctive pattern of business practices that lenders typically employ to optimize accounting control fraud.

> The typical large failure was a stockholder-owned, state-chartered institution in Texas or California where regulation and supervision were most lax…. [It] had grown at an extremely rapid rate, achieving high concentrations of assets in risky ventures…. [E]very accounting trick available was used to make the institution look profitable, safe, and solvent. Evidence of fraud was invariably present as was the ability of the operators to “milk” the organization through high dividends and salaries, bonuses, perks and other means (NCFIRRE 1993: 3-4).
>
> [A]busive operators of S&L[s] sought out compliant and cooperative accountants. The result was a sort of "Gresham's Law" in which the bad professionals forced out the good (NCFIRRE 1993: 76).

The typical large S&L fraud invariably used a top tier audit firm and was successful in getting “clean” opinions for several years. Enron, WorldCom and their ilk were consistently able to obtain clean opinions from top tier audit firms, as were the large nonprime specialty lenders.

A major rating agency has confirmed that customers created a Gresham’s dynamic during the current crisis. Moody’s (2007) reports how much business it lost when it sought to give more realistic (i.e., lower) ratings to the most toxic tranches of toxic CDOs:

> [I]t was a slippery slope. What happened in '04 and '05 with respect to subordinated tranches is … our competition, Fitch and S&P, went nuts. Everything was investment grade. We lost 50% of our coverage [business share]….

One should not have too much sympathy for Moody’s loss of market share on “subordinated tranches.” The real money for the agencies on CDOs was the top tranche. The agencies (ludicrously) helped their clients structure their CDO tranches such that the overwhelming bulk of CDOs composed of nonprime loans was purportedly top tier. Moody’s joined its peers in giving virtually all of the (toxic) top tier “AAA” or “AA” ratings even though that was facially absurd. Its competitors, by giving even the toxic subordinated tranches “investment grade” ratings, made it possible for pension funds and governments to acquire for investment billions of dollars of ultra-toxic assets that would suffer nearly total losses of market value.

The Gresham's dynamic in appraisals has been established repeatedly in surveys of appraisers.

> A new survey of the national appraisal industry found that 90 percent of appraisers reported that mortgage brokers, real estate agents, lenders and even consumers have put pressure on them to raise property valuations to enable deals to go through. That percentage is up sharply from a parallel survey conducted in 2003, when 55 percent of appraisers reported attempts to influence their findings and 45 percent reported "never." Now the latter category is down to just 10 percent.
>
> The survey found that 75 percent of appraisers reported "negative ramifications" if they refused to cooperate and come in with a higher valuation. Sixty-eight percent said they lost the client -- typically a mortgage broker or lender -- following their refusal to fudge the numbers, and 45 percent reported not receiving payment for their appraisal.
>
> Though mortgage brokers were ranked the most common source of pressure -- 71 percent of appraisers said brokers had sought to interfere with their work -- agents came in a close second at 56 percent. Both numbers were up significantly from where they were in the 2003 survey. Also identified as sources of pressure were consumers -- typically home sellers (35 percent) -- as well as mortgage lenders (33 percent) and appraisal management companies (25 percent) (*Washington Post*, February 3, 2007).

Appraisal profession leaders have been remarkably open about the destructive effects of t his Gresham's dynamic.

> Given the decline in mortgage activity, appraisers are scrambling for work in a way that's testing the industry's moral fiber, especially in hard-hit markets such as South Florida. It's getting to the point where, says Faravelli [Manager of the California Association of Real Estate Appraisers], with unusual candor for a trade-group official, "You show me an honest appraiser and I'll show you a [financially] poor one" (*Market Watch*, April 24, 2007).

The intimidation can be extreme. Mr. Inserra, an Illinois appraiser testified before Congress about a physical threat:

> Inserra knows how intense the pressure to inflate values can get. Three years ago, he found himself battling one of his largest clients. The bank's senior vice president in charge of mortgage lending tried to get Inserra to "hit a number," industry parlance for inflating the appraisal. He wouldn't do it.

> "The discussion got so heated," recalled Inserra, "that he threatened to do harm to my family if I didn't co-operate. I really thought he might do it. I got a restraining order from a judge."
>
> In the end, the banker didn't hurt his family, but he did punish Inserra by depriving him of the $200,000 in annual business he had been getting from the bank (*Ibid*).

Inflating an appraisal is an act of fraud and the only reason that a lender would seek an inflated appraisal – or tolerate inflated appraisals – is if it is an accounting control fraud. Lenders and their trade associations emphasize this point.

> “We have absolutely no incentive to have appraisers inflate home values," Washington Mutual said in a release. "We use third-party appraisal companies to make sure that appraisals are objective and accurate" (*The Seattle Times*, November 1, 2007).

The Mortgage Bankers Association (MBA) first noted why it would be irrational for a lender to inflate appraised values, particularly during a mortgage fraud epidemic.

> If the appraisal contains inflated, inaccurate or material omissions related to the value of the property, the lender will likely suffer a greater loss if the loan goes into foreclosure. Furthermore, a borrower who obtains financing based on an inflated value may be less likely to continue making payments when he or she discovers the value of their home is lower than the outstanding loan balance.
>
> MBA recognizes that mortgage fraud is a burgeoning crime that is impacting more and more companies and communities.
>
> MBA opposes all fraud that affects the mortgage industry, and it is important to understand that mortgage lending institutions do not benefit from inflated appraisals (MBA October 2007).

MBA’s logic is impeccable, but it does not explain why lenders were a significant direct source of pressure to inflate appraisals and why they permitted their agents (e.g., loan brokers) to be an even larger source of appraisal intimidation given their incentive and ability to ensure that appraisals they relied on were not inflated. Why did so many lenders directly, or indirectly through their agents, push for inflated appraisals when inflated appraisals are disastrous for the lender? Why did the nonprime specialty lenders routinely pay their loan officers and brokers primarily through compensation systems that created an intense incentive for them to pressure the appraisers to inflate the appraisals? The answer is accounting control fraud. Inflating the appraisal allowed the lender to make more, and larger, loans to uncreditworthy borrowers that would pay a premium interest rate. That maximized short-term accounting “profits” and the senior officers’ compensation. Accounting control frauds do not act to further the best interests of the lender. They maximize the CEO’s interests at the expense of the lender. The CEO loots the firm through accounting fraud.

The New York Attorney General's investigation of Washington Mutual (WAMU) (one of the largest nonprime mortgage lenders) and its appraisal practices supports this dynamic.

> New York Attorney General Andrew Cuomo said [that] a major real estate appraisal company colluded with the nation's largest savings and loan companies to inflate the values of homes nationwide, contributing to the subprime mortgage crisis.
>
> "This is a case we believe is indicative of an industrywide problem," Cuomo said in a news conference.
>
> Cuomo announced the civil lawsuit against eAppraiseIT that accuses the First American Corp. subsidiary of caving in to pressure from Washington Mutual Inc. to use a list of "proven appraisers" who he claims inflated home appraisals.
>
> He also released e-mails that he said show executives were aware they were violating federal regulations. The lawsuit filed in state Supreme Court in Manhattan seeks to stop the practice, recover profits and assess penalties.
>
> "These blatant actions of First American and eAppraiseIT have contributed to the growing foreclosure crisis and turmoil in the housing market," Cuomo said in a statement. "By allowing Washington Mutual to hand-pick appraisers who inflated values, First American helped set the current mortgage crisis in motion."
>
> "First American and eAppraiseIT violated that independence when Washington Mutual strong-armed them into a system designed to rip off homeowners and investors alike," he said (*The Seattle Times*, November 1, 2007).

Note particularly Attorney General Cuomo's claim that WAMU "rip[ped] off … investors." That is an express claim that it operated as an accounting control fraud and inflated appraisals in order to maximize accounting "profits." Pressure to inflate appraisals was endemic among nonprime lending specialists.

> Appraisers complained on blogs and industry message boards of being pressured by mortgage brokers, lenders and even builders to "hit a number," in industry parlance, meaning the other party wanted them to appraise the home at a certain amount regardless of what it was actually worth. Appraisers risked being blacklisted if they stuck to their guns. "We know that it went on and we know just about everybody was involved to some extent," said Marc Savitt, the National Association of Mortgage Banker's immediate past president and chief point person during the first half of 2009 (*Washington Independent*, August 5, 2009).

*Modern Executive Compensation Minimizes the CEO's Risk of Prosecution*

In addition to creating the perverse incentives discussed above, modern executive compensation allows CEOs running accounting control frauds to become enormously rich while minimizing the risk of detection and prosecution. Modern executive compensation is premised on the claim that senior officers must be paid extremely high bonuses to incentivize them to cause the firm to engage in riskier activities that could produce exceptional returns. Proponents claim that such compensation "aligns" the CEO's interests with those of the shareholders (Easterbrook & Fischel 1991). Control fraud theory demonstrates that it can do the opposite – further misalign the interests of fraudulent CEOs to both encourage them to loot the firm and provide an optimal means of looting the firm. I have discussed both aspects in some detail elsewhere (Black 2003, 2005) and will limit this discussion to a brief summary relevant to this article's focus on the role of accounting control fraud in bubbles and crises. Accounting control frauds normally control their boards of directors and cause their compensation to be based largely on short-term accounting gains and to be exceptionally large if the firm is highly "profitable." Accounting fraud guarantees extreme short-term profits while the bubble is inflating. Fraudulent CEOs use normal corporate mechanisms to convert firm assets to his personal benefit on the basis of the firm's record "profits." This minimizes the risk that their frauds will be detected or prosecuted. They can get rich enough through a year or two of accounting fraud to retire wealthy. The firm's failure does not mean that the fraud mechanism has failed. Fraudulent CEOs maximize their "take" by maximizing accounting "profits" – through means that often cause the firm to fail. They maximize their income by causing the lender to grow rapidly as the bubble hyper-inflates, a strategy that often causes the firm to fail.

### *Why Individual Control Fraud Failures Can be Massive*

The reasons why a lender's means of optimizing accounting control fraud cause crushingly costly individual failures are easy to understand. The four-part recipe means that accounting control frauds' business model maximizes failures and losses because:

- Making loans to uncreditworthy borrowers maximizes defaults
- Making loans to uncreditworthy borrowers on the basis of false representations of creditworthiness maximizes defaults
- Inflating the appraised "market value" of the home pledged to secure the loan maximizes losses upon default
- Growing extremely rapidly greatly increases the number of bad loans and eventual losses
- Extreme leverage and failing to provide meaningful loss reserves multiplies total losses
    - By funding extremely rapid growth
    - By setting the firm up for failure because it will have little capital to absorb losses

Other less obvious aspects of fraud optimization add greatly to the losses individual control frauds cause:

- Ending effective loan underwriting and suborning internal and external controls cripples the lender's ability to prevent *unintended* frauds

- Creating a Gresham's dynamic that degrades the ethics of the lender's officers and agents' ethics makes them more likely to engage in opportunistic frauds that the CEO does not know of or sanction because they are primarily for the officer's own benefit rather than the CEO's benefit (e.g., Enron's fraudulent CFO, Andrew Fastow)
- Accounting frauds' creation of guaranteed record short-term "profits" and hiding of real losses suborns and renders oxymoronic "private market discipline" and greatly delays regulatory action if the agency does not understand accounting control fraud schemes. This allows the control fraud to persist, and grow massively, for a number of years – producing extraordinarily expensive failures.
- The payment of extreme compensation to officers and to suborn "controls" leads to far more expensive failures by adding considerably to expenses
- Corrupt CEOs may exploit their power to cause further losses through abusing their power by creating conflicts of interest such as corporate loans to the CEO
- Corrupt CEOs often seek to gain status and fend off sanctions by using the firm's assets to make large political and charitable contributions – adding to expenses

*Why Epidemics of Control Fraud Occur and Cause Recurrent, Intensifying Crises*

At any given time a small number of industries and assets are the best available setting for accounting control fraud. Optimization will lead to accounting fraud naturally clustering in these superior settings. When an environment creates strong incentives to act criminally we term it a "criminogenic environment." Neither the creation of such an environment nor the initial clustering requires any conspiracy.

The factors that make a finance sector most criminogenic are the absence of effective regulation and the ability to invest in assets that lack a readily verifiable asset value. Unless those initial frauds are dealt with effectively by the regulators or prosecutors they will produce record profits and other firms will mimic them. Those control frauds can be a combination of "opportunistic" and "reactive" (moral hazard). If entry is relatively easy, opportunistic control fraud is optimized. If the finance sector is suffering from severe distress, reactive control fraud is optimized. Both conditions can exist at the same time, as in the early years of the savings and loan (S&L) debacle.

When we fail to regulate or supervise financial firms effectively we create a criminogenic environment because we, *de facto*, decriminalize accounting control fraud. Even the FBI, which has agents that specialize in white-collar crime investigations, cannot effectively prosecute a control fraud epidemic. Most nations have far less capability than the FBI to investigate elite white-collar crimes. The regulators rarely have sufficient staff, but compared to even the FBI they generally have greater staff and staff with vastly more industry expertise. Similarly, the way to reverse a Gresham's dynamic is to take prompt action to ensure that cheaters do not prosper. Regulatory enforcement is often the quickest way to ensure that cheaters lose.

In the current crisis the nonprime housing sector provided the most criminogenic environment. It was overwhelmingly unregulated – unregulated lenders made nearly 80 percent of total nonprime loans.

> In 2005, 52% of subprime mortgages were originated by companies with no federal supervision, primarily mortgage brokers and stand-alone finance companies. Another 25% were made by finance companies that are units of bank-holding companies and thus indirectly supervised by the Federal Reserve; and 23% by regulated banks and thrifts (*Wall Street Journal,* March 22, 2007).

The regulated sector was rendered ineffective by the appointment of regulatory leaders by the Bush administration that opposed (because they thought it unnecessary and harmful) regulation. They generally did not remove the regulations, but they largely ceased to enforce the rules – even when lenders they were supposed to regulate specialized in making "liar's loans." I refer to this process as "desupervision."

Nonprime loans also offered the best available (huge) criminogenic environment because it offered the potential for massive growth (nonprime loans peaked at roughly 40 percent of total home mortgage lending) and offered assets whose value could be inflated easily through accounting fraud and whose real losses could be hidden by refinancings made possible by the rapid inflation of the housing bubble that nonprime lending helped drive. Refinancings create fictional short-term fee income. (The net effect of refinancing at a higher loan level is the creation of a major larger longer-term loss that, eventually, swamps the fee income.)

The initial clustering produces "learning effects." Other CEOs observe that the initial frauds' business practices produce guaranteed, record profits and minimal reported delinquencies and losses – followed by exceptional bonus payments to the officers. CFOs that fail to emulate these practices will fail to achieve exceptional bonuses and appreciation of their stock. More importantly, their CEOs will fail to come close to their maximum possible compensation. This produces a Gresham's dynamic where cheaters are guaranteed to prosper while honest CFOs will tend to be driven out of the marketplace.

I explained above why a lender cannot simply decide to grow rapidly in a mature field (such as home lending in the U.S.) by making honest loans. A lender that wants to take market share from rivals honestly will typically have to cut its interest rate on loans and its rivals are likely to match that cut. The result is reduced profitability and only small increases in the quantity of home loans demanded. By loaning to the uncreditworthy, however, accounting control frauds are able to grow extremely rapidly and increase the interest rate and fees that they charge. In the case of U.S. housing lenders, the result was an immediate, large, and guaranteed surge in short-term "profits" and acted like a shift in the demand curve for housing outward from the origin – causing home prices to surge as well. Because accounting control frauds grow extremely rapidly to optimize their shortrun “profits,” they will generally continue to lend to uncreditworthy borrowers even as the bubble extends for years and hyper-inflates.

The Gresham’s dynamic and “learning effects” (and, more technically, the false market price signals that such lenders provide) combine to encourage even more firms to mimic the accounting control frauds’ business practices as the bubble continues to inflate. The same dynamic greatly aids the coverup of the true losses because extending the life of the bubble and increasing its rate of inflation make it easy to cover-up loss recognition through the repeated refinancing of troubled loans. The ability of epidemics of accounting control fraud to hide such losses can fool regulators that do not understand accounting control frauds. The same dynamic makes “private market discipline” an oxymoron.

Epidemics of accounting control fraud create a dynamic that extends the life of bubbles and hyper-inflates them. In the current crisis, when such a massive housing bubble finally bursts it will cause losses so great that many of the accounting control frauds will become insolvent and most recent purchasers of homes will suffer serious losses.

Three other factors related to the accounting control fraud epidemic exacerbated the ongoing crisis: CDO, credit default swaps (CDS), and accounting control frauds’ unique ability to erode trust and cause financial markets to fail. By hiding nonprime loans’ massive real losses the epidemic of accounting control fraud made it commercially feasible to suborn the rating agencies and have the top tranches of CDOs backed even by liar’s loans rated “AAA.” These are the derivatives that played a key role in causing Fannie Mae and Freddie Mac to become insolvent. The rating agencies, therefore, acted like “vectors” spreading the nonprime mortgage fraud epidemic through much of the global economy.

CDS, which are typically (but inaccurately) referred to as “insurance,” do not meet the requisites for insurance. The entity purchasing the guarantee does not have to have an insurable interest in the instrument that is the subject of the guarantee and the entity selling the guarantee does not have to establish reserves to ensure that it can honor the guarantee. AIG, a massive insurance company, was rendered insolvent by selling these guarantees to back nonprime mortgage assets without establishing reserves from which it could honor the guarantees. (The final section of this paper explains why the nonprime CDO and CDS markets could not have grown so massively without the endemic destruction of underwriting standards, controls, and professional ethics unleashed by the accounting control frauds that specialized in nonprime lending.)

At law, “deceit” is the defining element that distinguishes fraud from other forms of larceny. Fraudsters get the victim to trust them – and then betray that trust in order to gain something of value. As a result, accounting frauds by elite financial officers are the most powerful acid for eroding trust and causing financial markets to fail. The ongoing crisis saw the collapse of hundreds of financial markets. Regulators did not shut down these markets – bankers did, because they no longer trusted other bankers’ asset valuations. Losses from fraudulently overvalued assets can be so large that even relatively small positions can be fatal to troubled banks in a crisis. Therefore, long before accounting control fraud becomes endemic it can cause financial markets to close.

*The Epidemic of Nonprime Mortgage Fraud that Drove the Crisis*

The FBI began to warn publicly in its congressional testimony in September 2004 that an “epidemic” of mortgage fraud was developing and that it would cause an economic crisis if it were not dealt with (FBI) (CNN, Sept. 17, 2004.). No one in the industry, regulators, ranks of investors or creditors, or law enforcement personnel took effective action against the epidemic. Instead, the nonprime loan control fraud specialists exported their bad ethics and bad business practices throughout the global economy.

The latest FinCEN data show that the filing of mortgage fraud Suspicious Activity Reports (SARs) (their term for criminal referrals) is for the first half of 2009 is running at roughly the same rate as the most recent data available for a full fiscal year – over 62,000. That is a staggering figure and the fact that the rate of criminal referrals for mortgage fraud has not declined even two years after the secondary market for nonprime loans collapsed in Spring 2007 makes it more ominous. The FBI clears roughly 1000 mortgage fraud cases in a year, so it is clear that it has been overwhelmed by the epidemic and failed to prevent the economic crisis that it so aptly predicted in 2004.

But the total SARs figure is only a faint indication of the true incidence of mortgage fraud. Only federally insured and regulated depository institutions are required to file criminal referrals for mortgage fraud. Honest, unregulated, lenders specializing in nonprime mortgage lending should, logically, aggressively file SARs. Deterring fraudulent borrowers should be one of their top priorities. Their failure to file SARs for mortgage fraud is not irrational – the last thing they want is to encourage the FBI to investigate their loans. Because unregulated lenders nearly 80 percent of nonprime loans (and did so without any regulatory quality standards) extrapolating from the SARs data to the total nonprime lending industry would require multiplying 62,000 by five.

Even that extrapolation would not capture the true incidence because it implicitly assumes that the regulated lenders (A) discover all mortgage frauds and (B) file SARs when they discover evidence of mortgage fraud. Neither assumption is warranted. The FBI estimates that regulated lenders detect roughly one-third of the cases of mortgage fraud at their institutions prior to loan disbursement.

> Indeed, according to a report on mortgage fraud released Thursday by the Financial Crimes Enforcement Network, a unit of the Treasury Department, only 31 percent of suspected fraud was detected before loan disbursements in the 12 months ended March 31, 2007. On stated income loans, only 19 percent of the cases of suspected fraud were detected before the loans were financed, versus 33.5 percent on more fully documented loans (*New York Times,* April 6, 2008).

The data also indicate that the typical regulated lender does not file SARs notifications when it discovers mortgage fraud. The FBI has reported that 80 percent of total mortgage fraud losses are caused by frauds in which lender personnel are involved.

> The FBI reports that, based on existing investigations, 80 percent of all reported fraud losses arise from fraud for profit schemes that involve industry insiders (MBA/MARI 2007).

The October 2009 FinCEN report on mortgage fraud SARs provides these facts essential to evaluating whether the regulators have been effective:

> In the first half of 2009, approximately 735 financial institutions submitted SARs, or about 50 more filers compared to the same period in 2008. The top 50 filers submitted 93 percent of all [mortgage fraud] SARs, consistent with the same 2008 filing period. However, SARs submitted by the top 10 filers increased from 64 percent to 72 percent.

Only a small percentage of mortgage lenders, 735 in total, file even a single criminal referral for mortgage fraud. Of the 735 that make at least one filing, only a small number file more than five referrals. A mere ten filers provide the FBI with almost three-quarters of all SARs mortgage fraud filings.

Putting these factors together, one can infer that the lowest bound estimate of the true annual incidence of mortgage fraud during the later years of the housing bubble would be 500,000.

A small sample review of nonprime loan files by Fitch (2007), the smallest of the three large rating agencies, adds support for the view that fraud became endemic in nonprime mortgage lending.

> Fitch's analysts conducted an independent analysis of these files with the benefit of the full origination and servicing files. The result of the analysis was disconcerting at best, as there was the appearance of fraud or misrepresentation in almost every file.
>
> [F]raud was not only present, but, in most cases, could have been identified with adequate underwriting, quality control and fraud prevention tools prior to the loan funding. Fitch believes that this targeted sampling of files was sufficient to determine that inadequate underwriting controls and, therefore, fraud is a factor in the defaults and losses on recent vintage pools.

Fitch also explained why these forms of mortgage fraud cause severe losses.

> For example, for an origination program that relies on owner occupancy to offset other risk factors, a borrower fraudulently stating its intent to occupy will

> dramatically alter the probability of the loan defaulting. When this scenario happens with a borrower who purchased the property as a short-term investment, based on the anticipation that the value would increase, the layering of risk is greatly multiplied. If the same borrower also misrepresented his income, and cannot afford to pay the loan unless he successfully sells the property, the loan will almost certainly default and result in a loss, as there is no type of loss mitigation, including modification, which can rectify these issues. "The Impact of Poor Underwriting Practices and Fraud in Subprime RMBS Performance" (11.28.07).

Other relatively small sample reviews also find extreme incidences of mortgage fraud and confirm the power of the Gresham's dynamic. The testimony of Thomas J. Miller, Attorney General of Iowa, at a 2007 Federal Reserve Board hearing shows why fraud losses are enormous:

> Over the last several years, the subprime market has created a race to the bottom in which unethical actors have been handsomely rewarded for their misdeeds and ethical actors have lost market share…. The market incentives rewarded irresponsible lending and made it more difficult for responsible lenders to compete. Strong regulations will create an even playing field in which ethical actors are no longer punished.
>
> Despite the well documented performance struggles of 2006 vintage loans, originators continued to use products with the same characteristics in 2007.
>
> [M]any originators … invent … non-existent occupations or income sources, or simply inflat[e] income totals to support loan applications. A review of 100 stated income loans by one lender found that a shocking 90% of the applications overstated income by 5% or more and almost 60% overstated income by more than 50%. Importantly, our investigations have found that most stated income fraud occurs at the suggestion and direction of the loan originator, not the consumer.

Fitch rightly emphasized that any reputable underwriting process by the nonprime lenders would have prevented the fraudulent loans from being funded by an honest lender. This finding is consistent with the view that the lenders were accounting control frauds. The obvious questions are (1) why did Fitch only conduct this study in November 2007 – after the secondary market in subprime had collapsed and nonprime CDOs were no longer being created and (2) why would anyone have purchased the fraudulent nonprime loans from the originator (and the CDOs backed by the fraudulent loans) when any competent due diligence would have revealed the endemic fraud? The answer to both questions is the same – no one asked, and no one told because the entire immensely profitable scam would have collapsed had anyone done even rudimentary due diligence of a sample of the nonprime loan files. A S&P message illustrates this point.

> "Any request for loan level tapes is TOTALLY UNREASONABLE!!!. … Most investors don't have it and can't provide it. … we MUST produce a credit estimate. … It is your responsibility to provide those credit estimates and your responsibility to devise some method for doing so."
> E-mail from Frank Raiter to Richard Gugliada et al., March 20, 2001
> http://oversight.house.gov/story.asp?ID=2250 (emphasis in original).

Let me translate a few terms that may not be clear and provide the setting. The professional credit rater at S&P has been assigned to provide a rating for a CDO backed by nonprime loans. He has requested the "tapes" that contain images of the documents in the underlying loan files so that he can review a sample of them to better evaluate their credit risk. His boss fires back an impassioned email message denouncing his request. He is ordered not to seek the information on the loan files (making any effective evaluation of credit risk impossible). He is told that the "investors" (typically, investment banks) that purchased the nonprime loans and "pooled" them to create the CDO don't even have the loan tapes and therefore could not provide it. That almost certainly means that the investment bank that purchased the nonprime mortgage loans did so without reviewing a sample of the loan files. It also means that it is impossible for the investment bank creating and selling interests in the CDO to others to provide those buyers with the loan files for their review. Instead, the S&P rater is instructed by his boss to make up a rating through "some method." The rating, of course, has to be at least "AA" and was almost certainly "AAA."

The entire massive toxic market in nonprime CDOs was premised on no one every looking at a sample of the loan files and discovering the embarrassing truth of endemic fraud led by lenders. If even one person actually competently reviewed a sample of the loans they (1) could not have been have been made by an honest lender, (2) they could not have been purchased by an honest investment bank, (3) they could not have been pooled to (supposedly) support a CDO, (4) they could not have received any positive rating, and (4) the CDOs backed by the fraudulent loans could not have been sold. That's why Fitch didn't look until after the secondary market had collapsed and there was no revenue to lose.

The fact that Fitch could identify the frauds simply through a file review without any investigation tells us something else about the accounting control frauds. They, correctly, determined that the risk of detection of their frauds was so minimal that it was not even worth the minimal cost of creating fictional, but credible, financial statements. They knew that the fix was in at every level because everyone in the finance industry selling the toxic product maximized his bonus by adopting a financial "don't ask; don't tell" policy.

The contrast with the S&L debacle, where roughly 1000 "priority" defendants were convicted of felonies, is stark. The FBI did not even begin to investigate the large nonprime lending specialists until the nonprime secondary market collapsed in Spring 2007. The uninsured nonprime lending specialists began collapsing in 2006 when housing prices stalled and the ability to refinance bad loans to hide their losses began to end. It has been years, and not a single senior officer of a nonprime lending specialist has been indicted, much less convicted, of accounting/securities fraud. (Two Bear Stearns officials have been indicted for alleged false statements about the true financial condition of a hedge fund they managed.)

The FBI indicates that the difficulty is not the lack of criminal culpability on the part of the nonprime lending specialists, but rather acute "systems capacity" problems. Deputy Director John Pistole testified before the Senate on February 11, 2009:

> [I]t would be irresponsible to neglect mortgage fraud's impact on the U.S. housing and financial markets.
>
> The number of open FBI mortgage fraud investigations has risen from 881 in FY 2006 to more than 1,600 in FY 2008. In addition, the FBI has more than 530 open corporate fraud investigations, including 38 corporate fraud and financial institution matters directly related to the current financial crisis. These corporate and financial institution failure investigations involve financial statement manipulation, accounting fraud and insider trading. The increasing mortgage, corporate fraud, and financial institution failure case inventory is straining the FBI's limited White Collar Crime resources.
>
> In December 2008, the FBI dedicated resources to create the National Mortgage Fraud Team at FBI headquarters in Washington, D.C. The Team has the specific responsibility for all management of the mortgage fraud program at both the origination and corporate level. This Team will be assisting the field offices in addressing the mortgage fraud problem at all levels. The current financial crisis, however, has required the FBI to move resources from other white collar crime and criminal programs in order to appropriately address the crime problem. Since January 2007, the FBI has increased its agent and analyst manpower working mortgage fraud investigations. The Team provides tools to identify the most egregious mortgage fraud perpetrators, prioritize pending investigations, and provide information to evaluate where additional manpower is needed.
>
> While the FBI has increased the number of agents around the country who investigate mortgage fraud cases from 120 Special Agents in FY 2007 to 180 Special Agents in FY 2008….

The current epidemic of accounting control frauds has caused far greater damage than did their S&L counterparts, but the number of FBI agents assigned to deal with the current epidemic is roughly one-sixth the agents assigned to the investigations of the S&L control frauds.

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