

Fraudulent Financial Reporting: How Do We Close the Knowledge Gap?

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Abstract

Fraudulent financial reporting (FFR) is an issue of great concern to the business community. Previous academic and professional research offers important insights into the FFR problem; however, FFR remains difficult to detect and represents an ongoing, serious threat to investor confidence. We believe that much more remains to be learned about FFR, and we offer a host of future research questions, using the fraud diamond to organize our thinking. Answering these questions will require a “marriage” between researchers, who have the necessary analysis skills, and practitioners and regulators, who have access to rich data underlying instances of FFR. A national fraud center, as envisioned by the U.S. Treasury’s Advisory Committee on the Auditing Profession (ACAP 2008), may provide the platform for bringing together researchers and those with data, so that our understanding of FFR can expand. Such understanding is the key to preventing and detecting FFR in the future.

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I. INTRODUCTION

Fraudulent financial reporting (FFR) is an issue of great concern to the business community. Auditors, boards of directors, and managers all have an interest in preventing and detecting fraud before investment decisions are made on materially-misstated financial statements. Moreover, unlike many accounting issues, FFR is of concern to the general public and, as a result, to regulators, legislators, and other public policy makers. The revelation of materially-misstated financial statements due to fraud often results in large investor losses, subsequently followed by intense media and regulatory scrutiny.

A recent indication of the importance that policy makers attach to FFR is reflected in a recommendation of the U.S. Treasury's Advisory Committee on the Auditing Profession (ACAP). Treasury's ACAP (2008) recommended that the Public Company Accounting Oversight Board (PCAOB) create a national fraud center whose purpose would be to share fraud prevention and detection experiences, practices, data, and innovation. In addition, another major topic examined by the ACAP was the accounting profession's request for relief from potentially-catastrophic legal liability. The accounting profession often faces large liability judgments when auditors fail to detect fraudulently-misstated financial statements. For example, Ernst & Young (E&Y) paid over \$600 million as a result of the Cendant fraud – \$335 million in a securities class action lawsuit (Treaster 1999) and almost \$300 million to Cendant in a derivative suit brought against E&Y (Reilly and Koppel 2008). There is a clear public policy objective in reducing the incidence of FFR and in improving the ability of auditors, boards of directors, and investors to detect fraud.

II. EXISTING RESEARCH

Given the broad importance of FFR, it is not surprising that a significant body of research exists. A number of salient findings have emerged from these studies. First, members of senior management (e.g., CEO, CFO) often are involved in perpetrating FFR. For example, in a study performed for COSO, Beasley, Carcello, and Hermanson (1999) find that either the CEO and/or CFO was involved in 83 percent of the frauds resulting in an SEC enforcement action from 1987-1997.

Second, FFR firms generally have weak overall corporate governance. For example, Beasley, Carcello, and Hermanson (1999) find that many fraud companies: (1) either did not have an audit committee or had a committee that met only once per year, (2) had audit committees that lacked accounting and financial expertise, (3) had boards of directors that were dominated by inside and grey directors (also see Beasley 1996), and (4) had the company founder serving as the CEO or the original company CEO was still in that position. Moreover, Dechow, Sloan, and Sweeney (1996) find that fraud firms, relative to control firms, are: (1) more likely to have a board dominated by management, (2) more likely to have the same person serving as CEO and Chairman of the Board, (3) more likely to have a CEO who is also the company's founder, (4) less likely to have an audit committee, and (5) less likely to have an outside blockholder.

Third, FFR is strategic in nature – that is, perpetrators of fraud typically devise fraud schemes to minimize the likelihood of detection, and as auditors and other outside monitors change their technology to better detect fraud, the nature of the fraud schemes evolves to minimize the likelihood of detection (Bloomfield 1997; Newman, Rhoades, and Smith 1996; Wilks and Zimbelman 2004). As a result, FFR is difficult to detect,

especially for auditors and other outside monitors (e.g., audit committees, investors, regulators, etc.).

Fourth, when FFR occurs, the consequences to investors, the entity itself, and the fraud perpetrators often are severe. For example, Beasley, Carcello, and Hermanson (1999) find that over 50 percent of the fraud companies from 1987-1997 filed for bankruptcy, became defunct, or experienced a significant change in ownership following the fraud disclosure. They also find that a significant number of company executives were terminated or forced to resign, and that class action lawsuits and SEC enforcement actions against the fraud perpetrators were common. However, during the 1990s, few fraud perpetrators were criminally prosecuted and even fewer served prison terms.

Finally, as mentioned previously, auditors, particularly external auditors, often are not effective in detecting fraud given fraud's strategic nature (ACFE 2008; KPMG 2003). As a result, the most effective mechanisms for detecting fraud generally are internal controls and tips from those inside, or connected to, the entity committing the fraud (ACFE 2008; KPMG 2003).

While we have highlighted some of the major insights from fraud research above, the academic literature on FFR is vast. An excellent research synthesis paper on this literature is Hogan et al. (2008). We refer the interested reader to the Hogan et al. paper. To build upon Hogan et al., in the next section we briefly summarize more recent academic papers on FFR, as well as selected practitioner research on FFR.

Contemporary Academic Research on FFR

We discuss five recent studies that are not addressed in the Hogan et al. (2008) paper. First, Gao and Srivastava (2008) study recent SEC Accounting and Auditing

Enforcement Releases (AAERs) to analyze how frauds are perpetrated (account schemes) and how they are concealed (evidence schemes). They find that certain types of concealment patterns are associated with particular types of account schemes. By studying how different types of fraud schemes are concealed, Gao and Srivastava's work aims to help auditors tailor their audit effort in account areas where higher fraud risk exists. Gao and Srivastava demonstrate how auditors could apply this approach by examining different types of revenue fraud, the most common type of FFR (Beasley, Carcello, and Hermanson 1999; Deloitte 2007).

Second, Dechow et al. (2007) study AAERs from 1982 through 2005 in an effort to develop a model that predicts material accounting manipulation of the financial statements. They examine financial statement variables, off-balance sheet and non-financial variables, and market-related variables. Financial statement variables useful in predicting fraud are those that measure accrual quality and firm performance. Off-balance sheet and non-financial variables that are useful predictors are the existence of operating leases, abnormal changes in employees, and order backlog. The book-to-market and earnings-to-price ratios are useful market-related variables in predicting accounting manipulations, as are prior stock price performance and the amount of new financing.

Third, Pittman and Lennox (2008) examine AAERs between 1981 and 2001 to determine whether Big 5 auditors perform higher quality audits. They find that FFR is less likely given a Big 5 auditor, and that this relation continues even in the latter years of their sample when the incidence of fraud rose substantially.

Fourth, Cotter and Young (2007), relying on AAERs issued between 1995 and 2002, find some evidence that stock analysts anticipate accounting fraud. For example,

firms committing larger frauds are more likely to have analysts drop coverage of the firm earlier in the period preceding the announcement of the fraud. However, analysts, like the investing public, appear to be fooled by frauds involving fictitious amounts.

Finally, Beasley et al. (2009) examine, among other topics, the processes that audit committee members use to address the risk of FFR and to assess top management's integrity. Based on interviews with 42 public company audit committee members, the authors find little consensus on how audit committees assess the risk of FFR or how they assess management integrity. Most surprisingly, there was a lack of consensus on the audit committee's responsibility for assessing fraud risk. Some interviewees viewed this role as central to audit committee service, while others argued strongly that the audit committee is not responsible for assessing fraud risk or that it is impossible to assess fraud risk. It appears that audit committee members vary widely in their commitment to assessing the risk of FFR, as well as in the methods used to perform such assessments.

Practitioner Research on FFR

Deloitte's Forensic Center recently completed an analysis of SEC AAERs from 2000 to 2006. The final sample included 344 individual AAERs involving FFR. Deloitte found that a single AAER often alleges multiple fraud schemes. The main fraud schemes identified are: (1) aiding and abetting, (2) asset misappropriation, (3) bribery and kickbacks, (4) misstatement of goodwill, (5) improper disclosures, (6) misstatement of investments, (7) manipulation of accounts receivable, (8) manipulation of assets, (9) manipulation of expenses, (10) manipulation of liabilities, (11) manipulation of reserves, and (12) improper revenue recognition. Consistent with prior research (e.g., Beasley, Carcello, and Hermanson 1999), Deloitte finds that revenue recognition schemes are by

far the most common fraud schemes, and recording fictitious revenue is the most common sub-type among revenue recognition frauds. Also, there is some evidence that revenue recognition schemes have become more common in recent years. The industries with the highest incidence of FFR are technology, media, and telecommunications, followed by consumer business.

The Association of Certified Fraud Examiners (ACFE) periodically releases a *Report to the Nation on Occupational Fraud and Abuse*. The ACFE defines occupational fraud and abuse widely, encompassing corruption, misappropriation of assets, and FFR. The ACFE finds that losses from FFR are the most costly of all of the categories of fraud. The ACFE's (2008) most recent report examined 959 cases of occupational fraud and abuse investigated between January 2006 and February 2008 and finds that fraud is extremely costly, especially to smaller organizations. The median fraud loss is \$175 thousand, and more than 25 percent of the frauds involve losses exceeding \$1 million. Finally, the ACFE finds that frauds are more likely to be detected by tips than by internal controls or audits.

KPMG's (2003) study of fraud was based on interviews with almost 500 executives in medium-sized and large organizations across a range of industries. Similar to the ACFE, KPMG defines fraud broadly. Fraud categories include employee fraud, consumer fraud, vendor fraud, computer crime, and FFR. Employee fraud is by far the most common type of fraud, whereas FFR is by far the least common. This result is perhaps not surprising given the often-immaterial amounts associated with employee fraud as compared with the typically very material amounts associated with FFR. Consistent with the ACFE study, losses associated with FFR were by far the largest. The

average cost of FFR incidents was more than \$258 million, and the average loss associated with the next closest fraud type was only \$34 million. KPMG reports that frauds are uncovered by internal controls, internal audit, and tips (employee tips and anonymous tips). External audits uncovered the fewest number of frauds, perhaps because the focus of external auditors is on the fair presentation of the financial statements in accordance with GAAP and the incidence of FFR is rare. The most common explanations offered for the existence of fraud are collusion between employees and third parties, inadequate internal controls, and management override of internal controls.

III. GAPS IN OUR KNOWLEDGE AND CLOSING THE GAP

In discussing gaps in our knowledge of FFR, and suggesting ways to close these gaps, it is useful to begin with an overarching framework. We begin with the fraud triangle, the framework that has essentially been codified in the auditing literature (SAS No. 99, as codified in AU Section 316) (AICPA 2002). The fraud triangle suggests that fraud occurs when an individual has an **incentive** to commit fraud or is under pressure to do so, an **opportunity** to commit fraud exists (often due to weak internal controls), and the individual has an attitude that enables him or her to commit fraud without any moral compunction or the individual is able to **rationalize** his or her involvement with fraud.

Hogan et al. (2008, 16), in their FFR literature synthesis paper, find that the academic FFR literature largely supports the fraud triangle:

There is a significant amount of literature on the characteristics of fraud firms, providing support for the fraud triangle classifications and the list of “red flags” used in both SAS No. 82 and SAS No. 99.

1. *Pressures to meet analysts' forecasts, rapid growth, compensation incentives, stock options, the need for financing, and poor performance increase the likelihood of fraudulent financial reporting.*
2. *Effective corporate governance, including the board of directors, audit committee, and internal controls, and also the external auditor, play key roles in reducing the opportunity to commit fraud.*
3. *Research is limited in the attitudes and rationalizations area.*

Based on the research, the focus areas of SAS No. 99 (incentives, opportunity, and rationalization) are grounded in empirical evidence.

We extend the fraud triangle by including a fourth element, the **capability** of the potential fraud perpetrator that is cited by Wolfe and Hermanson (2004). By adding the capability to commit fraud to the model – expanding the fraud triangle to the fraud diamond – we recognize that although an individual may have an incentive to commit fraud, an opportunity to commit fraud may exist, and the individual may be able to rationalize the behavior, fraud will not occur unless the potential perpetrator has the personal capability (knowledge, skill, position, ability to handle stress, etc.) to commit the fraud. In other words, the potential perpetrator has to have the right skills to recognize and exploit the generic fraud opportunity. With this fraud diamond framework in mind, the sections below present issues worthy of additional research. We also discuss the data sources needed to close our FFR knowledge gap.

Linking FFR to Incentives/Pressures

Much of the prior research on FFR has focused on company-level incentives to commit fraud, while some research has explored executive-level financial incentives to commit fraud. Several company-level variables are important to consider in the FFR arena: going public, debt/equity issuances, closeness to covenant violations/leverage, analyst forecasts/EPS targets/PE ratios, overall organizational culture, rapid growth, and financial distress.

In addition, there are several executive-level variables that have been addressed or that are important to address, including:

- Mix between fixed and variable executive compensation – stock option amount and vesting period, restricted stock amount and vesting period, and stock ownership amount.
- Provisions of bonus plans – magnitude and ties to accounting numbers.
- Percentage of an executive’s net worth in securities of company.
- Personal addictions (drugs, alcohol, etc.).
- Personal ego/identification with company success/desire to be a team player.
- For non-C-suite employees, the weight of short-term accounting numbers in performance reviews.

These company-level and executive-level incentives/pressures lead to three important research questions that warrant further attention:

1. Are company-level or executive-level incentives/pressures to commit FFR generally more important?
2. Are there specific conditions (e.g., industry conditions, financial performance, company age, etc.) under which company-level or executive-level incentives/pressures become relatively more (or less) important?
3. Do company-level and executive-level incentives/pressures interact with each other, such that certain combinations of incentives/pressures are particularly dangerous?

Although many of the data items needed to study the effects of firm incentives/pressures on the likelihood of FFR are publicly available, data on only some of

the incentives/pressures at the individual level are publicly available. There are two options for studying the effects of incentives/pressures at the individual level on the risk of FFR given the current data limitations. First, in the short run, either behavioral studies (quasi-experiments) or experimental-market-based studies could be used to study the effects of incentives/pressures at the individual level, and how these individual-level incentives/pressures interact with incentives/pressures at the company level. We view such studies as a useful beginning, but since laboratory-based studies always simplify from the actual institutional environment, any results in the laboratory ideally should be corroborated by archival studies. Therefore, as a second step, we encourage West Virginia's IFP to work with interested parties (e.g., Congress, Department of Justice, SEC, PCAOB) to develop a database of the individual incentives/pressures that existed in cases of FFR that resulted in criminal and/or civil regulatory actions.

Linking FFR to Opportunity

One way that previous research has examined the role of opportunity is by considering governance, internal control, and audit variables that may serve to reduce FFR opportunities. To build upon previous research, we encourage additional work on the following question, "What company-level and/or executive-level characteristics effectively mitigate FFR incentives/pressures?" Specifically, research may address the following characteristics:

- Internal audit function – existence, relative size, quality of personnel, financial statement focus, budget, and reporting relationships.

- Company governance – with particular emphasis on governance processes, not just the composition of the board and audit committee or other publicly-available measures of governance characteristics or inputs.
- Fraud hotline – characteristics of the hotline (internal versus external), who monitors the hotline, etc.
- ERM processes – including the scope of ERM, who oversees ERM, and degree of management and board support for ERM.
- Code of conduct – including the scope of the Code, who oversees the Code, and degree of management and board support for the Code.
- Individual factors – gender, age, religious background, and personal background of key executives.

A second way to address opportunity is to examine FFR instances in detail to better understand FFR methods and how controls have been circumvented. We encourage on-going research in the coming years to provide fresh insights into the following issues (some of which have been examined previously, but results may change over time), *on an overall basis and at the financial statement account level*:

1. How are cases of FFR perpetrated?
2. How often is collusion involved? What type of collusion?
3. What specific controls are missing?
4. What specific controls are poorly designed?
5. What specific controls are not operating effectively?
6. How much FFR involves accounting estimates?
7. How much FFR involves application of accounting procedures?

8. How much FFR involves management override of controls?
9. How much FFR involves the period-end close and reporting process?
10. How much FFR involves related party transactions?

An ideal data source for research on those company-level and/or executive-level characteristics that effectively mitigate FFR incentives/pressures is audit firm workpapers. The auditor considers and evaluates, often in a quantitative manner, many of the above characteristics. Access to these workpapers would greatly expand our understanding of how certain company-level and/or executive-level characteristics affect the likelihood of fraud. We understand that the Center for Audit Quality (CAQ) is working with the major accounting firms to develop a database to facilitate auditing research. We encourage West Virginia's IFP to work with the CAQ and the profession to ensure that a robust number of fraud-related variables are included in the database.

In addition, with respect to better developing our understanding of actual frauds (e.g., how perpetrated, accounts affected, controls overridden, etc.), we suggest that the IFP work with the SEC to encourage the Commission to complete certain standardized electronic data fields (e.g., fraud period, fraud method, accounts affected, titles of parties involved, and many other items) when an enforcement action is filed and to make this electronic database publicly available. Finally, although SEC files of enforcement investigations theoretically are available through Freedom of Information Act (FOIA) requests, there are exemptions to FOIA requests and these requests are sometimes not filled promptly. We encourage the IFP to work with Congress to strengthen the FOIA, and to work with the SEC to more expeditiously respond to FOIA requests that are valid under current law.

Linking FFR to Attitudes/Rationalizations

Relatively little research has addressed attitudes/rationalizations and their role in FFR. This is likely due to the difficulty of measuring or assessing individuals' attitudes. Such research may require different methods than typically are used in fraud research, such as field studies or interviews.

Given the paucity of research in this area, we offer several questions for further examination:

1. What specific management attitudes indicate a poor tone at the top, and which of these attitudes are diagnostic of FFR?
2. When does nonfinancial management's involvement in the financial reporting process indicate a preoccupation with reported results, and is such preoccupation diagnostic of FFR?
3. What organizational characteristics are associated with hiring members of senior management with a history of violations of securities laws (or other laws and regulations) or with a history of pushing the boundaries of acceptable financial reporting? What audit firm characteristics are associated with firms that agree to audit these clients? Do auditors adjust for this potential impairment of management integrity, how do they do so, and why are these adjustments sometimes not effective?
4. What specific managerial attitudes, behaviors, and statements indicate that management has an excessive interest in maintaining or increasing the entity's stock price or earnings trend? Is such excessive interest diagnostic of FFR?

5. When is an earnings or revenue forecast aggressive or unrealistic? What management or entity characteristics are associated with making such forecasts? Is such behavior diagnostic of FFR?
6. What specific management or entity characteristics are associated with failing to identify or correct material weaknesses in internal control on a timely basis? Is such behavior diagnostic of FFR?
7. Does managerial behavior to minimize reported taxable earnings to reduce taxes augur the future willingness to commit FFR? Do differences exist based on the manner in which taxable income is reduced?
8. Are unreasonable management demands on the auditor (e.g., deadlines, fees) diagnostic of FFR?
9. Is domineering management behavior toward the auditor diagnostic of FFR? Are there differences depending on the nature of the domineering behavior? What auditor characteristics are associated with a willingness to accept this behavior? Do, and if so how, auditors adjust their audit program in the presence of this behavior? Why are these adjustments sometimes not effective?
10. Are restrictions on the scope of the audit diagnostic of FFR? Are there differences depending on the nature of the scope restrictions? What auditor characteristics are associated with a willingness to accept this behavior? Do, and if so how, auditors adjust their audit program in the presence of this behavior? Why are these adjustments sometimes not effective?

11. Are there organizational controls (see above list) that can offset a management team that has attitudes that would permit their involvement in FFR or enable management to rationalize such behavior?
12. What personality characteristics, experiences, and personal circumstances would lead to individuals having attitudes that would permit their involvement in FFR or enable management to rationalize such behavior (e.g., personal ego, identification with company success, desire to be a team player)?

As discussed previously, research into attitudes/rationalizations related to fraud is in an embryonic stage. Lack of data is a particular challenge in researching these issues. We suggest three ways to facilitate research in this area.

First, as was the case with the first two elements of the fraud diamond, a database of fraud-related characteristics drawn from audit firm workpapers could shed light on the attitudes/rationalizations of fraud perpetrators. The importance of efforts by the CAQ and the major accounting firms to develop such a database simply cannot be overstated.

Second, notwithstanding the potential usefulness of such a database, we believe that a number of attitudes/rationalizations germane to a study of fraud are either not analyzed by auditors or are analyzed in a superficial manner. Therefore, other data sources are needed. In many fraud cases, the firm and/or its audit committee hires an outside law firm to conduct a special investigation. These special investigation reports are a potentially fruitful, yet largely untapped, source for studying the circumstances surrounding frauds, including the attitudes/rationalizations of the fraud perpetrators. Although these special investigation reports sometimes are filed with the SEC as a Form 8-K attachment, this is not always the case. Additionally, identifying the SEC filings

containing the investigation reports is non-trivial. We suggest that the IFP work with Congress and the SEC to require that special investigation reports be filed with the SEC, and that the SEC store the investigation reports in a separate database readily identifiable on the SEC's website.

Finally, an ideal method to study the attitudes/rationalizations of fraud perpetrators is the interview method. However, such an approach is generally not viable because the researcher's notes could be subpoenaed in a criminal or civil action. Again, we encourage the IFP to work with Congress to enable interviews conducted as part of an approved research study (perhaps approved by the SEC) to be immune from criminal or civil discovery.

Linking FFR to Capability

In their paper highlighting a fourth component of fraud, Wolfe and Hermanson (2004) describe the elements of capability as position/function, brains, confidence/ego, coercion skills, effective lying, and immunity to stress. We offer several research questions regarding capability and FFR:

1. To what extent are the elements of capability cited by Wolfe and Hermanson (2004) diagnostic of FFR?
2. Are there other important elements of capability that are diagnostic of FFR?
3. Does capability interact with other components of the fraud diamond, such that there are particularly dangerous combinations of capability and, for example, opportunity or incentive?
4. What tools/methods can organizations use to assess capability?

Data sources to investigate the role of capability in FFR largely mirror those already discussed. For example, data on certain capabilities needed to commit fraud might be gathered by the audit firm when planning the audit. These factors could be included in the potential CAQ research database. Other relevant capabilities might be identified through special investigation reports or, at a minimum, could be explored through interviews with the alleged fraud perpetrators.

Other Issues

Beyond the issues above that relate to components of the fraud diamond, we believe that there are three additional avenues for future research. First, what roles can technology-based continuous transaction monitoring (CTM) play in the prevention and detection of FFR (see Hermanson et al. 2006)? Are there particular types of FFR that are more easily addressed with technology-based solutions? Is electronic CTM a substitute for or complement to auditor testing? The efficacy of CTM in preventing and/or detecting fraud could be examined by analyzing the experiences of those firms that have adopted CTM technology. But, again, a mechanism for encouraging companies to share this data with researchers needs to be developed. Alternatively, simulated corporate environments might be developed, with seeded frauds, and the researcher could examine the efficacy of CTM in detecting the fraud.

Second, to what extent could financial statement auditors adapt forensic accounting techniques or work with forensic accountants to enhance the probability of detecting FFR in a timely, cost-effective manner? Are there forensic accounting techniques that are well suited to discovering FFR, even in the absence of specific fraud allegations? Can forensic accountants help to train financial auditors to be more effective

in interviewing clients? As with CTM, simulated corporate environments with seeded frauds could be developed, and the efficacy of forensic techniques in detecting the fraud could be evaluated.

Finally, what is the “right” amount of FFR-related responsibility to be borne by auditors and audit committee members, both of whom seem prone to avoiding responsibility for detecting FFR? Conceptually, if the responsibility for FFR detection is too low, then the parties have an incentive to provide less vigilant monitoring of management. However, if the responsibility is too high, then there is an incentive to flee – such it is difficult to attract qualified audit committee members and difficult to attract top people into the auditing profession. To examine these issues, researchers could create experimental economies and vary the level of FFR-related responsibilities borne by auditors and audit committees. The researcher is seeking the equilibrium solution – i.e., the lowest cost-adjusted level of fraud.

IV. CONCLUSION

Previous academic and professional research offers important insights into the FFR problem; however, FFR remains difficult to detect and represents an ongoing, serious threat to investor confidence. We believe that much more remains to be learned about FFR, and we offer a host of future research questions, using the fraud diamond to organize our thinking.

Simply identifying future research questions, however, is not enough. As we have attempted to emphasize throughout our paper, answering these questions will require a “marriage” between researchers, who have the necessary analysis skills, and practitioners and regulators, who have access to rich data underlying instances of FFR. A national

fraud center, as envisioned by the ACAP (2008), may provide the platform for bringing together researchers and those with data, so that our understanding of FFR can expand. Such understanding is the key to preventing and detecting FFR in the future. We encourage West Virginia's IFP, working with Congress, the SEC, PCAOB, CAQ, and accounting firms and corporations, to take a leadership role in developing these fraud-related data sources.

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