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Crowdsourcing Fraud Detection: Using Collective Wisdom to Expose the Next Madoff*



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The magnitude and duration of Bernard Madoff's Ponzi scheme establish the compelling need to dramatically improve the Security and Exchange Commission (SEC)'s ability to detect financial fraud. Perhaps Wikipedia can help or, more precisely, some of the ideas behind it.

Fraud detection is a tedious task that can involve sifting through large amounts of data seeking a signature pattern of discrepancies. This is where crowdsourcing, the chief concept underlying Wikipedia, may be quite useful. In the context of fraud detection, crowdsourcing entails making the relevant data available online and inviting the public to access it and report suspected irregularities.

This approach has already been used in Britain, where The Guardian newspaper created an online database of 700,000 expense claims by UK members of Parliament for anyone to search; the erroneous and outrageous expenses identified by some 20,000 participants fueled a national scandal.

How could crowdsourcing be used by the SEC? Assessing investment advisor performance claims and reviewing tips are two of the major tasks on Chairman Mary Schapiro's plate that lend themselves to this approach. The investment community possesses crucial skills and information that could be brought to bear in getting the job done. These private sector resources go far beyond what is available to the SEC and would likely be volunteered in a suitably designed Internet application.

* This paper couples the fraud detection proposal first advanced by Dr. Mayer in her 3 August 2009 NERA working paper, "Ponzi Scheme Detection: How the SEC Can Catch the Next Thief," with another idea for enlisting the public to help detect Ponzi fraud.

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Validation of Performance Claims Via Multiple-Source Reporting

Using third-party data to test the performance claims of investment advisors is the “gold standard” of review but has not been standard practice at the SEC. The Inspector General’s report reveals multiple occasions when investigators considered obtaining independent data to determine whether Bernard Madoff was misrepresenting his trading activities but either did not do so (once citing the time it would have taken to process the records) or did not act on the information thus gleaned. This job should be crowdsourced for all advisors, not just those under investigation.

Under this proposal, the SEC would require advisors to report their quarter-end assets under management by account code and, separately, by position. Custodians would be required to report the quarter-end positions of each advisor. Individual account owners—the advisory clients—would be invited to enter into the system the total asset value on their account statements.

Account-level data would be restricted to the account owner, the advisor, and regulators. However, anyone would be able to view aggregations of the account-level data input by participating clients and those same aggregates as computed from advisor-input data. Firm-wide totals for the advisor, as input by that firm and its custodian, would also be viewable by anyone.

If even a handful of individual clients were to access the system to validate their own positions, an investment advisor who reported higher numbers to clients than to the SEC would risk swift detection. A scheming advisor could of course overstate account values in their reports to the SEC as well as on client account statements, but then they would need a complicit custodian to avoid detection. Otherwise, anyone who compared the asset tally reported by an independent custodian to the overstated tally obtained by summing the advisor’s account-level numbers could spot a discrepancy.

If these were its only elements, this multiple-source reporting proposal would not have exposed Mr. Madoff because he provided self-custody, and hence could have reported the same fictional asset values to the SEC as he did to clients, without increasing his risk of detection. To detect fraud in cases with a controlled or complicit custodian, the “crowd” (for these purposes limited to the advisor’s clients, custodian, and regulators) would also need access to third-party trading data. Accordingly, trading data are an essential element of this proposed reporting system.

Quarterly trading records for each advisor would be produced by the Depository Trust Company (DTC), the central entity that processes all investment advisor trades post-execution. (Notably, the SEC considered approaching DTC for Madoff trading data but did not follow through). Anyone with access to Madoff trading records from DTC and to the aggregate security positions that Mr. Madoff would have self-reported into the system could have uncovered the scam by comparing quarterly changes in the reported positions to trades covering the same time period. The dearth of purchases would have quickly revealed the growth in purported security positions to be nothing but a sham.

Tip Review

Crowdsourcing could also help the short-staffed SEC sort through patterns among the hundreds of thousands of tips that it receives annually. Current investors, potential investors, competitors, financial reporters, and academics (among others) would all be able to examine and form an opinion about the merits of reports of suspected malfeasance and record their impressions in the database. The SEC might decide to preserve a private channel for tips that otherwise would not be forthcoming, but all others would be publicly available by investment advisor, broker-dealer, type of product, particular fund or security, or registered representative.

The accuracy and integrity of individual tips could not be assured, but persuasive or oft-repeated claims might spur interested parties to examine those tips in the context of other information, conduct specific validation efforts, or just add observations and insights of their own. In the process, any given tip might be reinforced or undermined. Even if no clear signal emerged, cautious investors could make more informed judgments, deciding whether the risk was one they cared to assume.

Likely Objections

Both crowdsourcing proposals are admittedly radical, for they would put vast quantities of hitherto private information into the public domain. Confidentiality and compliance costs would be sensitive issues, but these could be addressed through careful program design, as suggested below.

A crowdsourcing review of advisors' performance claims could only be implemented under a new regulatory mandate for data disclosure. It would require more frequent and more disaggregated reporting by advisors, and it would impose entirely new reporting requirements on custodians and the central trade-processing organization. To contain costs without sacrificing much in terms of impact, these new mandates could be applied only to investment advisors who operate—as Mr. Madoff did—outside the regulatory protection of the Investment Company Act; it is uncontested that regulated investment companies (such as mutual funds) have not been fertile ground for Ponzi schemes. To limit the revelation of proprietary trading strategies, a major concern of hedge fund advisors, the scope could be further restricted by exempting advisors who exclusively serve sophisticated, so-called “qualified” investors. While a relatively narrow group of investment advisors might be required to participate in the program, all should have the option of doing so, as this could provide an additional measure of comfort to wary current and would-be advisory clients. Program costs would be largely borne by participating advisors, as their clientele would be the primary beneficiaries.

Tip review would also expose a wealth of new information to public view, and here crowdsourcing would come with no access restrictions. This raises concerns about undeserved reputational harm, but over time, baseless claims would be discredited through exposure to public scrutiny. It might also be feasible for the system to “score” tippees based on their track record, with those whose tips are followed by SEC or DOJ investigations, settlements, or convictions flagged as more credible than those whose tips lead nowhere.

Crowdsourcing offers an effective response to the public's demand for dramatic improvement in the policing of financial markets. By harnessing the private information, market sophistication, and manpower of self-motivated members of the investment community, crowdsourcing could significantly improve fraud detection, supplementing resources in short supply at the SEC.

About NERA

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