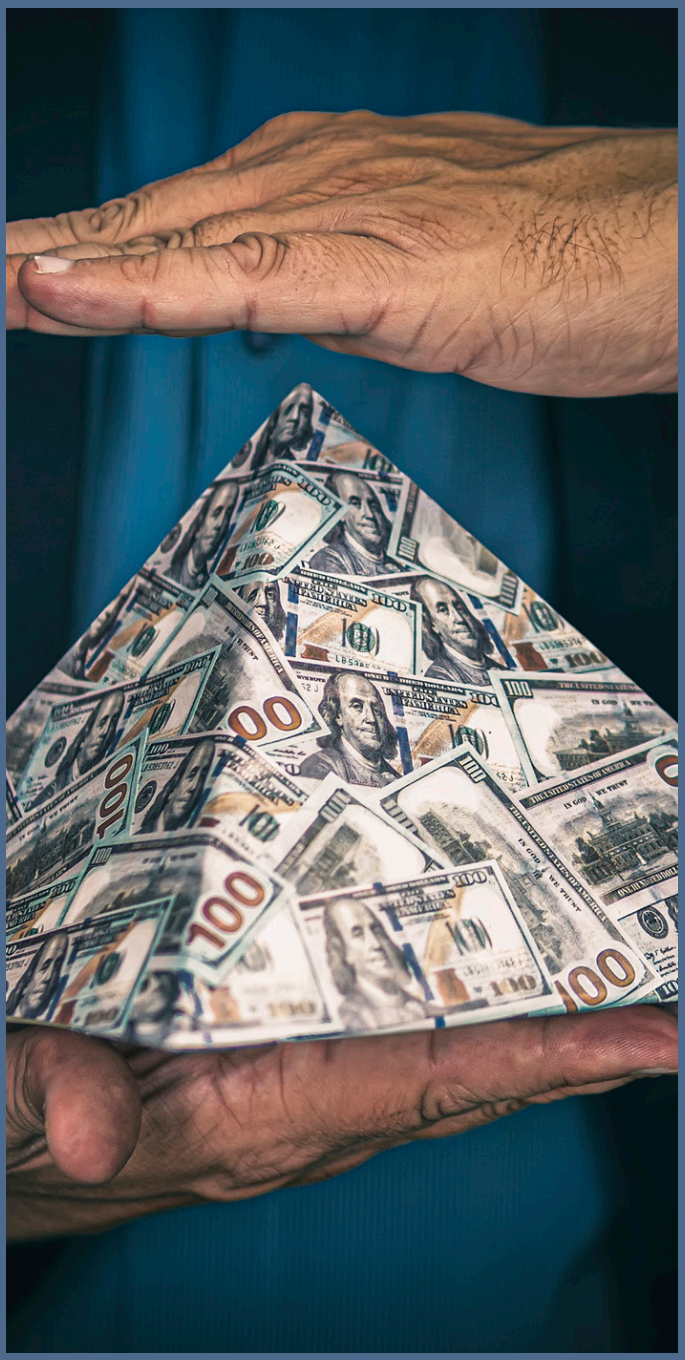

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PERSPECTIVES

Untangling The Fraud: Utilizing Data Analytics to Investigate Ponzi Schemes

Our perspectives feature the viewpoints of our subject matter experts on current topics and emerging trends.

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INTRODUCTION

It is widely recognized that deceiving investors is the bread-and-butter of a Ponzi Scheme[1]. However, the term "investors" often conjures images of Shark Tank or Wall Street – and this is far from the type of investor that many Ponzi schemes tend to obtain profit off. Many of the losses from Ponzi schemes are incurred by individuals with limited business or industry knowledge – and, often, limited financial resources. They are enticed by the promise of low risk and high reward, as well as the word-of-mouth recommendations from early investors. They fantasize about using their investment to send their kids to college or finally buy a home, unaware that in the unlikely event that they do receive a return on investment, it will be the money of later investors rather than company profits.

The defining characteristics of an effective Ponzi scheme can vary but generally include:

- Advertising low risk for a high reward in terms of investment
- Feigning profitability to earlier investors by providing them with purported returns that are actually money from later investors
- Growth via word-of-mouth and other marketing approaches.

Ponzi schemes tend to provide only high-level information, often a special "secret sauce" the fraudsters can't disclose to investors and apply pressure to invest quickly, often using time-sensitive offers. These schemes are also characterized by being strategically set up in a manner for which proper SEC registration is not required. In practice, the company, investment vehicle, and advisor often skirt regulations in this way.

This article examines how data analytics combined with other forensic accounting tools can help investigators uncover how investors in both traditional and newer types of Ponzi schemes were victimized, and how data can be compiled to locate stolen assets and create an analytical report that aids regulators and in legal proceedings focused on recovering funds or determining investor losses.

Traditionally, Ponzi schemes take cash investments and lead investors to believe that the return on investment will come from investments in the market, the sale of some product or provision of services. The traditional genre of Ponzi scheme is alive and well, but another iteration has evolved from it: cryptocurrency-based Ponzi schemes.

Although the rise of digital currency has enabled decentralized financial services which can empower everyday users, it also has opened a knowledge gap between crypto experts and those who are unfamiliar with the crypto space but don't want to miss the investment opportunity. Quick to follow was a massive influx of cryptocurrency-based Ponzi schemes, which profit off the general public's lack of understanding of cryptocurrency. In 2023, nearly $4 billion (71% of the $5.6 billion lost in crypto-related fraud schemes[2]) was lost in cryptocurrency investment scams such as Ponzi schemes.

Regardless of how the funds are sourced, when a Ponzi scheme eventually and inevitably fails, the fallout is messy, expansive, and only recoverable through diligent investigation. By centering Ponzi scheme investigations around a thorough analysis of all relevant available data, forensic accountants and data analysts alike are instrumental in the distribution of justice and in delivering the resolution that the victims of Ponzi schemes deserve.

DATA-CENTRIC INVESTIGATION

Often times, by the time a Ponzi scheme case reaches the desks of forensic accounting and other analytic experts, the organization in question has failed and is typically already confirmed to be a Ponzi scheme. Proving that a Ponzi scheme can be labeled as such is a complex and data intensive exercise requiring expert knowledge of data analytics, forensic accounting, economic damages, and legal bases. However, forensic experts are often called upon after a Ponzi scheme is proven to exist to identify those affected, attribute

[1] Ponzi scheme: A scam, which is usually carried out on the general public, by making returns of high promises in a shorter time period. It is primarily based upon paying off the early investors first and the long term liabilities later on. However, the system is susceptible to crash, and usually, the perpetrators abscond before that happens. (Source: Black's Law Dictionary)

[2] Via FBI Cryptocurrency 2023 Annual Fraud Report

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each investment and payout to its rightful investor, and calculate the losses (or gains) for each participant. These steps are complex because Ponzi schemes can have tens of thousands of victims, many of whom made several investments, and the operators of Ponzi schemes rarely invest time into keeping neat or truly accurate accounting records – though they have to establish somewhat accurate records for credibility – which is often a portal for investors, their contributions, and payouts.

As aforementioned, the largest challenge facing forensic experts in Ponzi scheme investigations is the sourcing and compilation of reliable data. The perpetrators of Ponzi schemes often do not maintain accurate accounting books, and investigators must keep in mind that some of the data sourced from the perpetrating organization helped to enable the business' misconduct. It is important to understand the difference between the unreliable data and the reliable information maintained to establish credibility with investors. Investors must have access to statements or information that is somewhat accurate, or they won't continue to invest. However, even reliable information is often not maintained in a way conducive to the analysis required by forensic experts.

In response to this challenge, forensic experts are resourceful and discerning in their use of the organization's data. As stated previously, the operators of Ponzi schemes tend to understand that they must maintain some level of reliability in their underlying transactional and demographic data – otherwise, no investors would continue to trust the organization. Therefore, data points such as account information and balances serve as a jumping-off-point for investigators. In addition, the organization's qualitative data in such forms as marketing materials, investment contracts, and communications received by investors is crucial to the investigation. This information provides insight into the nature of the relationship between the organization and its investors, as well as the extent to which the investors were misled or manipulated.

After obtaining and evaluating the organization's database, investigators will flesh out the stories it tells by acquiring additional data sources, such as bank statements, marketing materials, investment contracts, or other communications received by investors, among others. As this process unfolds, the team of investigators is often apt to collaborate and share information with any regulatory agencies involved in the case. A key touchpoint in this stage of the investigation is the banks with which the Ponzi scheme was transacted. Through subpoenas or direct requests from the receiver or trustee, investigators obtain electronic banking data, bank statements, and check images which add new dimensions to the base of reliable data. This data can be juxtaposed against the financial records provided by the organization to identify additional areas of suspicion.

The individuals who invested in the organization (and saw little to no return) also tend to be ready and willing to aid in the investigation. These individuals may provide personal records and narratives as individual claimants or members of a class, as it is not uncommon for Ponzi scheme victims to consider a class action to reclaim their investments. The investors are often able to produce records of their investments and account information in a quick and accurate manner, as receivers or a trustee seek to gain financial information from thousands of individuals. This often requires manual review, and the outcome helps verify the reliability of data that can be used on a widespread basis.

After sourcing all the pieces of the data puzzle, investigators must connect them. The process of matching together data points from a variety of sources is largely aided by data analysis and modeling tools such as SQL and Python. These tools allow forensic analysts to grapple with massive data sets and "fuzzy match" data points with similar identifying characteristics. However, because the structure and composition of the data sources can vastly differ, a large portion of the data may be matched manually rather than algorithmically. This requires investigators' patience and diligence, but the efforts are rewarded with a maximally precise dataset that can be used throughout the judicial process.

Using the bank / investment account statements combined with investor information, forensic accountants can track the flow of funds from new investors to older investors and identify unusual transfers or hidden

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assets, as well as establish the pattern of a Ponzi scheme. This analysis reveals the depth and breadth of the organization's fraud and the investors' losses. It aids regulatory bodies in administering justice and often acts as a piece of evidence in forthcoming legal proceedings.

IMPACT

Forensic accountants and analysts produce expert reports and testimonies that empower investigators and legal teams to effectively dismantle Ponzi schemes and to initiate repair. Additionally, the identification of victims and verification of their contributions and pay outs, resulting in the losses and gains, are necessary for the distribution of the receivership or bankruptcy, which seeks to return the funds of the Ponzi scheme back to the investors.

CONCLUSION

While the term "investor" is technically accurate, in approaching Ponzi scheme investigations, it is crucial to keep in mind that behind each investment is a once-hopeful person who was wrongfully disenfranchised by a deceptive organization. Although forensic accountants and data analysts are known to deal with the numbers, the accuracy and precision of their work directly impacts the justice and reparations that everyday people will receive in the wake of the Ponzi scheme's collapse. By championing a data-centric approach, forensic experts continue to support the administration of justice in Ponzi scheme cases.

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