

The Best Practices Guide to Financial Disputes and Investigations

A 7-Step Guide to Navigating Pitfalls and
Optimizing Resolutions



Contents

STEP 1:	Determine Software Needed Based on Document Type	03
	Hard copies Scanned images Native PDFs TIFF/Other document type	
STEP 2:	Review and Organize All Documents	05
STEP 3:	Load and Extract Data	06
	Bank Statements Brokerage Statements Check and Deposit Slip Images	
STEP 4:	Reconcile Data	08
	Identify account periods Find and Fix Incorrect or Duplicate Bank Statement Data Load or Integrate Data with Master Copy Identify Missing Data (and repeat)	
STEP 5:	Primary Analysis	10
	Categorize and Group Transactions Identify Transfers Identify Undisclosed Accounts (and repeat)	
STEP 6:	Additional Analytics	13
	Threshold Analysis Benford's Law Even \$ Check Analysis	
STEP 7:	Reporting	16

How to Best Use This Guide

Navigating financial investigations and dispute resolutions demands a keen understanding of the intricate and challenging processes involved. From the moment bank statements and other financial documents land on your desk to crafting a compelling case narrative, the journey is riddled with nuances that can significantly impact the outcome.

This guide is intended to serve as a beacon, illuminating the best practices while shedding light on common pitfalls to sidestep along the way. We've identified and outlined 7 steps to help equip you with the tools and insights needed to traverse the complexities of disputes and investigations with precision and confidence.

STEP 1: Determine Software Needed Based on Document Type

The initial step in any engagement is obtaining the necessary documents, often through subpoena requests. These documents can vary widely in format and type, with some being easier to extract transaction data from than others. The format type of documents received determines the types of software tools required for the engagement.

A. HARD COPIES

In contentious matters, professionals are sometimes forced to “dumpster dive” for documents, searching through garages, attics, boxes, and filing cabinets. The resulting finds are typically old, incomplete, and sometimes marked-up documents. Regardless of quality, the documents need to be digitized. The good news is that most modern printers also offer scanning and copying capabilities and can therefore be used to digitize the hard copies into PDF files.



Pitfall

You might be tempted to run stacks of hard copy documents through the scanner without reviewing and organizing first, thinking it will be easier once everything is in digital format. However, doing this will result in a single digital file with thousands to tens of thousands of pages. This creates time-intensive complexity during data extraction, reconciliation, and quality assurance procedures.



Best Practice

At a minimum, you should organize the documents by account before scanning. If time permits, further organize the documents by individual statement period. By taking the time to create one file for each account or one file per statement period, you will dramatically simplify your ability to do quality assurance on the data extracted from the documents.

B. SCANNED IMAGES

In many instances, PDF documents may already be available, or the financial institution may provide the files to you in a PDF format. This sounds like good news, but it is often quite challenging, as the information is typically provided as a single file with multiple accounts spanning many months or years.



Pitfall

Professionals sometimes attempt to extract data from the scanned image file without first performing a thorough review to understand how many different accounts, financial institutions, account types, and statement periods exist.



Best Practice

Before beginning data extraction, use a PDF or image editor to split the document into separate files – with each file containing information for a single account. Be sure to pay attention to pages that may contain data from two different accounts to ensure data extraction is not duplicated.

C. NATIVE PDF FILES

Native PDF files are the easiest to work with. Many tools exist to extract data and error rates are extremely low. Also, native files will likely be organized by individual account period which helps avoid the pitfalls associated with hard copies and scanned images.



Pitfall

While faster than manual extraction, using traditional OCR (optical character recognition) software to extract data can take weeks or months before you get to the analysis. Instead of focusing on developing professional opinions and strategy, you're spending most of your time preparing financial evidence.



Best Practice

At the risk of sounding like a broken record: organize! Even with the ease and organization that comes with the native PDF format, the more organized you can be pre and post extraction, the more time you can spend on high-value analysis activities.

D. TIFF / OTHER DOCUMENT TYPES

On occasion, financial institutions may provide transaction lists via XLSX, CSV, or TXT/JSON among others. Excel handles dozens of file types and is very useful.



Pitfall

While receiving data already in Excel or a similar digital file sounds like the best possible option, you need to watch out for common issues. Digitized data is often incomplete and therefore needs to be integrated with other data sources, likely in a variety of different formats. Additionally, because the data has already been digitized, there may be issues with the evidentiary chain of custody.



Best Practice

To make integration easier, consider using a software database solution that allows uploads as CSV or other text file formats

STEP 2: Review and Organize All Documents

Once you've gained an understanding of the different types of documents you will be working with, it's worth it to take the time to organize and review all documents, statements, images, and transaction lists. This will provide you with a high-level view of the types of accounts you are working with and the data you will need to organize to streamline your analysis.

Finally, make a list of all of the accounts that require analysis. Consider including the following data fields for each account:

- Legal Entity
- Financial Institution
- Currency
- Account Number
- Account Name
- Account Type
- Description

STEP 3: Load and Extract Data

After your documents are reviewed, organized into files, and accounts are listed, you are ready to begin to load or extract data into a database. The following best practices are designed to help ensure the resulting data is completely accurate before you begin your analysis.

A. BANK STATEMENTS

Many tools exist to help professionals extract transaction data from PDF or other image type statement files using specialized OCR technology. All tools tend to work well with native PDF files; it's the non-native PDF file types that sometimes wreak havoc, resulting in even more work than simply manually transcribing data. For small projects, these may only be minor annoyances, but as you get into engagements that require analysis of dozens of accounts, multiple legal entities, and a variety of document types and data sources, the work can become insurmountable without the right software tools.



Pitfall #1

Using OCR solutions that require users to define a template per statement format. Templates are more prone to error and require more set up work. Statement formats for institutions change over time and may be different from branch to branch, each requiring a different template.



Best Practice #1

Modern solutions that use AI to recognize text strings extracted by OCR technology eliminate the need to develop templates for each statement format. Also, they simplify large single files that contain dozens of accounts and hundreds of periods by identifying the individual account periods and additional fields like balances and period dates.



Pitfall #2

Most OCR solutions are "pass through" which means that they essentially act as intermediary tools that convert scanned documents or image-based files into text-based documents. The catch? The user is responsible for clean-up and integration into some other master data set, which can require a significant amount of time and effort.



Best Practice #2

Seek out more advanced software that goes beyond being just a pass-through and helps streamline the process of extracting text from scanned documents or image-based files and integrating it seamlessly into a centralized database or master data set.

B. BROKERAGE STATEMENTS

In many cases, analysis includes brokerage accounts which can make data extraction especially complicated. Most specialized OCR tools for statements do not support brokerage accounts as they focus on banking and credit card statements. The most advanced solutions will support brokerage statements by extracting only cash in and cash out transactions. Without this functionality, professionals are often left to manual transcription.



Pitfall

Relying solely on OCR tools that lack support for brokerage account statements may result in incomplete data extraction and analysis. This can lead to oversight of crucial financial transactions and compromise the accuracy and comprehensiveness of the investigative process.



Best Practice

Implement a strategy that combines manual verification and transcription with advanced OCR tools that support brokerage account statements, particularly those capable of extracting cash in and cash out transactions. Conduct regular manual checks to ensure the accuracy and completeness of extracted data.

C. CHECK AND DEPOSIT SLIP IMAGES

If required, subpoena wire transaction details, and/or check and deposit slip images from each financial institution. Wire details are likely to be provided via a CSV or text file. If not already included on the statement, check and deposit slips will likely come via a multi-page TIFF or PDF file. There are two key capabilities required to integrate these important details with ease:

1. The ability to extract transaction information from both printed and handwritten check and deposit slip images

2. The ability to integrate details from the extracted check or deposit slip images and wire transaction details with the appropriate bank statement transactions

Often, this is the most difficult and the most crucial step as wire details and checks contain information about where the money went and where it came from.

**Pitfall**

Recognizing late in an engagement that check, deposit slip, and wire details are required for analysis. These details can be the most difficult and time-consuming aspect of any engagement resulting in missed deadlines and additional costs.

**Best Practice**

Use software solutions that can extract data not only from statements but from printed as well as handwritten check and deposit slip images. These software solutions will match the check items and wire details back to the banking transactions so they can be appended with the additional information.

STEP 4: Reconcile Data

Reconciling data involves comparing and aligning different sets of data to ensure accuracy, consistency, and integrity. This process is essential for identifying discrepancies, errors, or anomalies within the extracted data and resolving any inconsistencies before proceeding with further analysis or investigation.

A. IDENTIFY ACCOUNT PERIODS

The only way to do this is to compare the extracted transactions with account period dates and balances. As you can imagine, trying to do this in Excel for a project with hundreds, or even thousands of account periods is daunting.

**Pitfall**

Extracting transaction data without account period dates and balances poses significant risks to the accuracy, reliability, and interpretability of analyses. Without complete and contextually relevant data to effectively conduct investigations, the ability to provide accurate findings and recommendations decreases.

**Best Practice**

Use software solutions that identify individual account periods in PDF/image files and extract period balances and dates in addition to transactions. The right software solution can also check to make sure that the beginning balance (plus inflows minus outflows) equals ending balance for each account period.

B. FIND AND FIX INCORRECT OR DUPLICATE BANK STATEMENT DATA

No matter how data gets extracted from documents, errors are likely. Professionals can burn too much time chasing, updating, and verifying corrections.



Pitfall

Adding new data to your master database or file without first reconciling it for accuracy and checking for duplicates can lead to complications. Disputes and investigations involve collecting data from various sources over time. Incorporating incorrect or duplicate data into your master file introduces complexity, errors, and requires additional cleanup efforts.



Best Practice

Before integrating new data into an existing master file or database, be sure to address all extraction errors and check for duplicate statement files and account periods. This proactive approach helps maintain the accuracy and integrity of your data repository, minimizing errors and streamlining future analysis processes.

C. LOAD OR INTEGRATE DATA WITH MASTER COPY

After extracted data is confirmed as 100% accurate with no duplicate transactions, load the data into the master database or integrate with the master file. This is also the time to match check and deposit slip images to relevant bank statement transactions

D. IDENTIFY MISSING DATA (AND REPEAT)

Examine all data and accounts thoroughly to determine the existing data timeline. This is the time to look for continuity between all account periods, ensuring that the prior account period's ending date matches the current account period's beginning date. It's also important to identify any inconsistencies or gaps that may indicate missing data.



Pitfall

One common pitfall in identifying missing data is relying solely on maintaining an inventory in Excel. This cumbersome approach involves updating the inventory each time the data set changes and then reporting back to your team on the status of the data set.



Best Practice

Use software to map out each account period in a visual timeline that is updated in real time as data is added. This way, all users can visually identify gaps and check data set status in real time.

STEP 5: Primary Analysis

At this point, the transaction database is a clean foundation or starting point. Keep in mind, more work may be required before analysis can start, especially if wires, checks, or deposit slips were used to initiate banking transactions. In these cases, the transactions on the bank statements will not contain the right information for proper analysis, so you need to do the necessary prep work.

A. CATEGORIZE AND GROUP TRANSACTIONS

Categories and groups of transactions allow simple summary tables and easy interpretation. Several factors can make this difficult. Each engagement is different and requires different categories. The amount of transactions can be vast. Reading and categorizing each one can take a long time.



Pitfall #1

Updating categories in a spreadsheet. In many cases, documents are processed or extracted at different times during an engagement. Spending time defining and updating transaction categories can create complexity with trying to integrate new data from new documents.



Pitfall #2

Relying on a proprietary database user interface. Some databases allow the creation of custom fields and categories. This approach typically allows easy integration of additional data but can be less efficient when updating categories for many transactions, particularly if there are hundreds of different categories to apply.



Best Practice

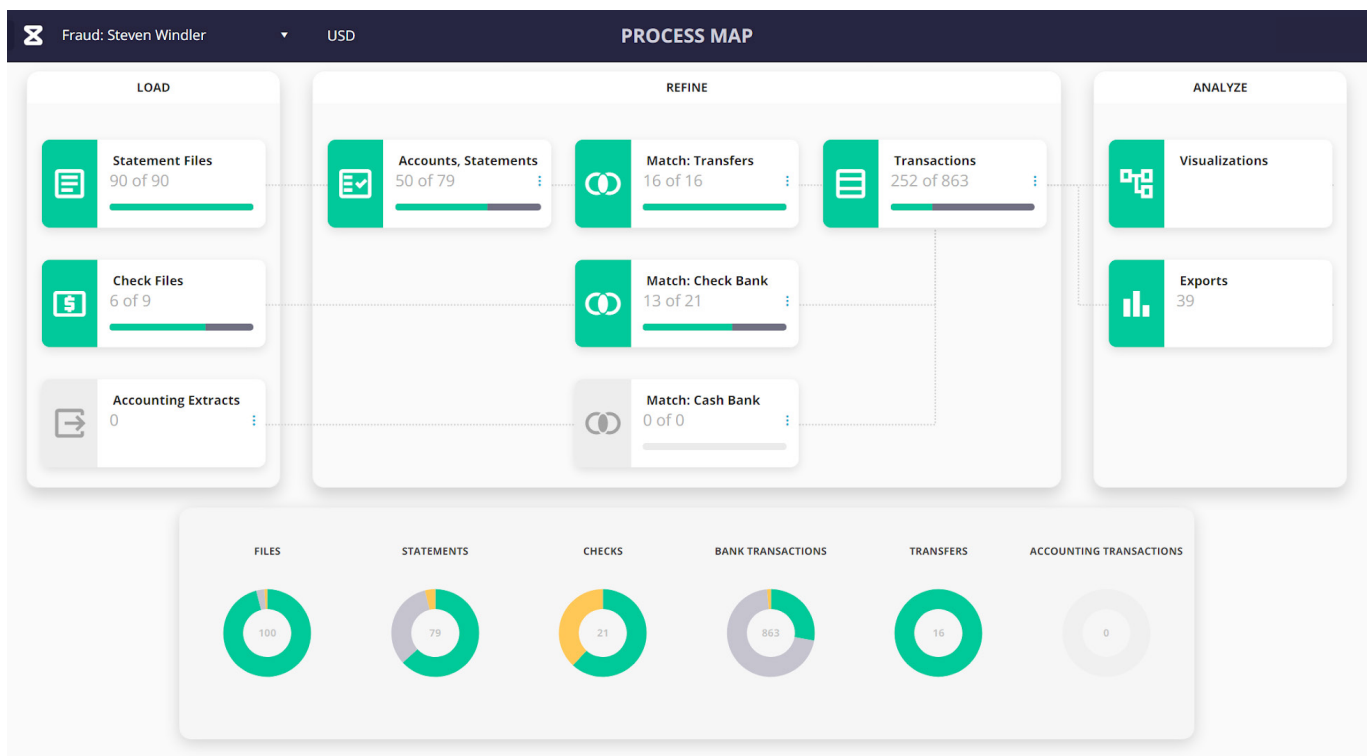
A hybrid approach where a master database is integrated with spreadsheet software provides the best of both worlds. Users can leverage the efficiency of data input via a spreadsheet while maintaining a single, version-controlled master database. Look for solutions that have tight integration with spreadsheet products.

B. IDENTIFY TRANSFERS

Using spreadsheets to find transfers between accounts and legal entities is complicated at best. Considering date ranges and same day, same dollar amount scenarios, it can be almost impossible to get a comprehensive view of all transfers. Software solutions that identify and match transfers and allow users to confirm or reject matched pairs is more effective and efficient than using a spreadsheet. A comprehensive solution should include the following capabilities to identify transfers accurately and efficiently between accounts and entities:

1. Manual match
2. Reject match
3. Confirm match
4. Auto-confirm match
5. Reset all matches
6. Do not match rejected pairs
7. Match given date range

Below is an example of a transfer match engine user interface.



Pitfall

Using manual techniques or spreadsheet functions like VLOOKUP (vertical lookups) in spreadsheets to identify transfers between accounts and entities.



Best Practice

Leverage software solutions that can identify matches and allow users to provide manual dispositions on each. Having the ability to confirm or reject a match between transactions provides professionals with the flexibility to get everything exactly right.

C. IDENTIFY UNDISCLOSED ACCOUNTS (AND REPEAT)

Undisclosed accounts are easily identified if all transfers have been properly categorized and each transfer between accounts has been identified (meaning, you have associated the outflow from one account to a corresponding inflow from another account). Performing a simple search on all transfers not included in the set of matched inflow or outflow pairs indicates a transfer out of the data set and something that may need to be investigated.



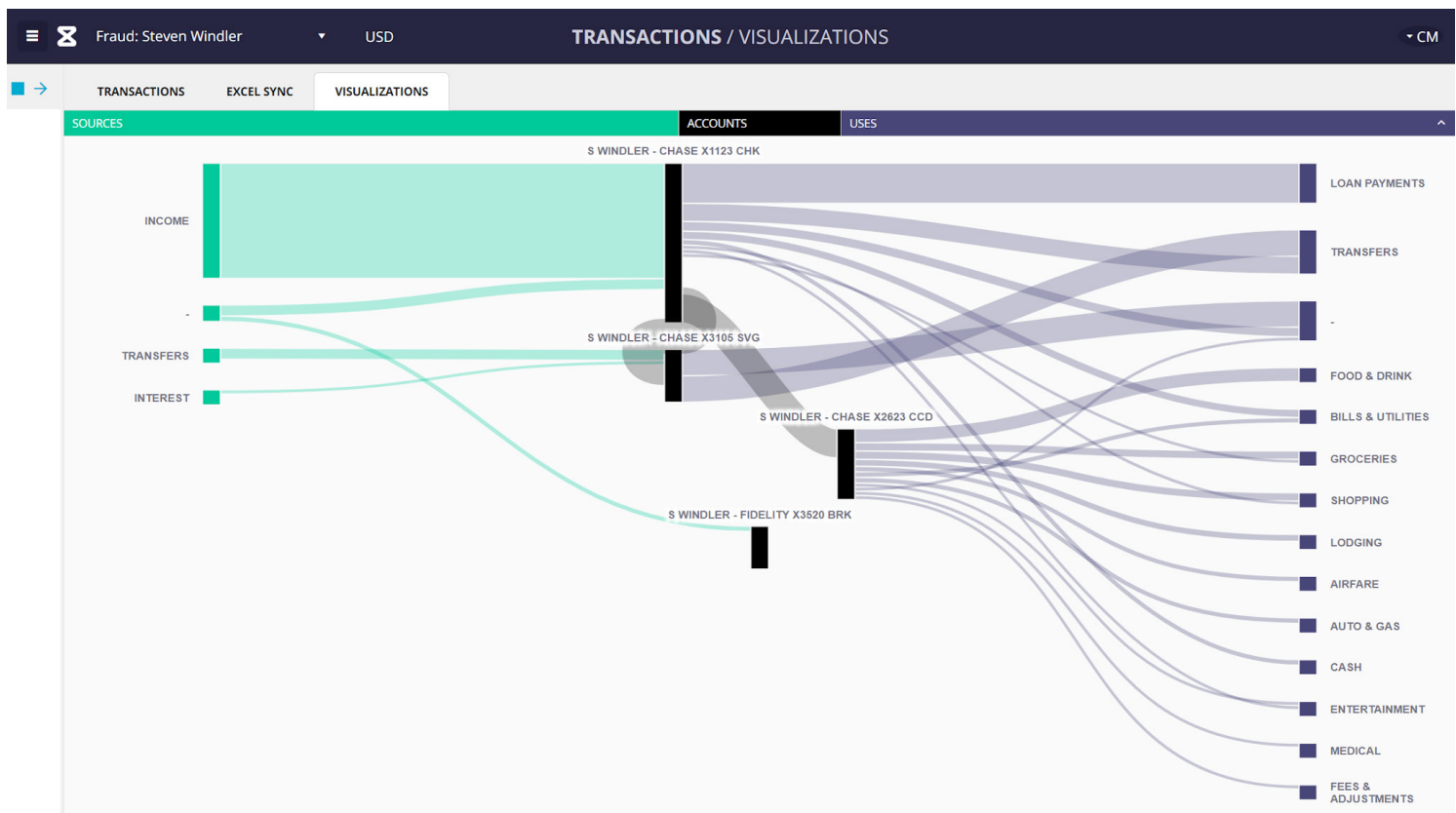
Pitfall

Integrating various spreadsheets and using VLOOKUPS can be complicated and cumbersome. Results can be difficult to understand, especially if used as a court exhibit.



Best Practice

Data visualizations simplify and accelerate the process. **See the screen shot example below** where transfers out of the dataset are clearly identified.



STEP 6: Additional Analytics

Data preparation is the tough part, while analysis is where professional firms stand out. The trick is to finish data prep quickly so there's more time for analysis. Since every case is unique with its own needs, it's important to adapt accordingly. In this section, we'll cover some common types of analysis used for disputes and investigations.

A. THRESHOLD ANALYSIS

If the client is cautious about spending or uncertain about the need for a detailed investigation, a threshold analysis can be helpful. This involves creating a table that categorizes transactions based on their amounts and counts. For instance, clients can assist in streamlining the workload by focusing only on transactions above a certain value threshold, making the task more manageable.

Depending on the scope of the engagement, or the related budget and timing, a threshold analysis can be useful. Here's what that might look like:

1 Filtering out low dollar transactions

Also known as “de minimis transactions/values.” This is important so the focus can be on higher level cash flows in and out of the target accounts.

2 Labeling transactions as “< \$1,000”

Labeling and then filtering out those transactions can result in a substantial reduction in the amount of analysis to complete.

3 Identify the optimal net dollar threshold

For example, is it \$100? \$1,000? \$10,000? Take into account the total aggregate dollar amounts that those transaction thresholds represent.

B. EVEN \$ CHECK ANALYSIS

Even dollar amount transactions can be interesting to forensic accountants because they may indicate patterns or behaviors that warrant further investigation. Here are several reasons why such transactions might draw attention:

Unusual Patterns:

Transactions in even dollar amounts may stand out when compared to the typical transactions that involve cents. Forensic accountants often look for irregularities or patterns that deviate from the norm.

Manipulation or Round Figures:

Even dollar transactions could be a result of intentional manipulation to make accounting irregularities less noticeable. Perpetrators might round figures to simplify bookkeeping or hide fraudulent activity.

Concealing Fraudulent Activity:

Fraudsters might use round figures to mask their activities. For example, they may manipulate accounts or engage in fraudulent transactions to create a facade of normalcy.

Lack of Variation:

In legitimate financial transactions, amounts are often diverse and rarely rounded to even numbers. A lack of variation in transaction amounts could be a red flag for forensic accountants.

Automated Processes:

Sometimes, even dollar transactions may be indicative of automated processes or system-generated transactions. Forensic accountants need to investigate whether such processes are legitimate or if they are being exploited for fraudulent purposes.

Money Laundering:

Criminals involved in money laundering might use even dollar transactions to obscure the origin or destination of funds. These transactions may be part of a scheme to layer or disguise the illicit source of money.

Check Tampering:

In cases of check tampering or forged checks, fraudsters may alter the amounts to round figures to avoid suspicion.

Employee Theft:

Employees involved in theft or embezzlement may prefer even amounts to make it easier to manipulate records and cover their tracks.

In forensic accounting, the key is to identify anomalies or patterns that deviate from normal business practices. Even dollar amount transactions are just one of many potential indicators that forensic accountants consider during their investigations. Analyzing financial data in detail allows them to uncover discrepancies and potential fraudulent activities.

BENFORD'S LAW

Forensic accountants use Benford's Law as a tool to detect anomalies and potential irregularities in sets of numerical data, including financial data. Benford's Law, also known as the first-digit law, states that in many naturally occurring datasets, the leading digits are not uniformly distributed, but instead, smaller digits (1, 2, 3) appear more frequently as leading digits than larger digits (7, 8, 9). This law is based on mathematical principles and has been found to apply to various datasets, including financial transactions.

Here's how forensic accountants typically use Benford's Law in their analyses:

Expected Distribution:

Benford's Law provides an expected distribution of leading digits in a dataset. Forensic accountants calculate the expected frequency of each leading digit based on Benford's Law.

Comparison with Actual Data:

Forensic accountants then compare the distribution of leading digits in the actual financial data with the expected distribution from Benford's Law. Significant deviations may indicate the presence of irregularities.

Focus on Anomalies:

Large discrepancies between the expected and observed distributions may signal potential areas for further investigation. Forensic accountants may scrutinize transactions associated with these anomalies to identify potential errors, fraud, or manipulation.

Identification of Red Flags:

Benford's Law is often used as a red flag tool. It doesn't prove wrongdoing but highlights areas where additional scrutiny may be warranted. Forensic accountants can use it as an initial step to prioritize their efforts in a financial investigation.

Applicability to Various Data Sets:

Benford's Law can be applied to a wide range of financial data, including income, expenses, invoice amounts, and more. It is particularly useful when dealing with large datasets where manual examination of individual transactions is impractical.

It's important to note that while Benford's Law is a powerful tool, its application is not foolproof, and there can be legitimate reasons for deviations from the expected distribution. Therefore, forensic accountants use it as one part of a comprehensive toolkit for financial analysis and investigation, combining it with other techniques and methods to build a more accurate picture of the financial situation.

STEP 7: Reporting

Critical to the success in any engagement is the ability for professionals to create a compelling case narrative. The ability to report on the results and articulate what happened is the key factor for establishing a narrative. Reporting usually falls into one of two categories: preliminary assessments, conducted while the investigation is ongoing, and final exhibits, which serve to substantiate opinions or conclusions reached.

PRELIMINARY ASSESSMENT

Filtering, sorting, and organizing the data in real time is crucial for preliminary assessments. Interactive data visualizations are especially helpful in this scenario and can clarify what questions to ask next.

FINAL EXHIBITS

These often take a lot more time and thoughtfulness to develop. Whether using a spreadsheet, a proprietary software platform, or data visualization techniques, meeting the standard for courtroom-ready evidence while communicating a powerful narrative is the key to effectiveness.

A Roadmap to Resolution

From the initial step of determining the required software based on document types to the meticulous review and organization of all pertinent data, these 7 steps provide a comprehensive framework to navigate the complexities of financial investigations and dispute resolutions. One takeaway that we cannot emphasize enough is the importance of accuracy and thoroughness in every stage of the process, from identifying account periods and fixing extraction errors to categorizing transactions and identifying transfers. It is our hope that this information can help transform your process of managing disputes and investigations into one of efficiency, accuracy, and confidence, ultimately enabling you to craft compelling case narratives and achieve successful outcomes.



Valid8, the global leader in Verified Financial Intelligence (VFI) technology, was designed by forensic accountants to help professionals follow the money faster and more accurately, eliminating sample risk, addressing staffing challenges, and improving the speed and quality of rendering a professional opinion. Valid8 uses the latest in AI and automation technology to rapidly parse, categorize, match, and reconcile financial data from numerous sources. Hundreds of firms use Valid8's software on some of the world's most complex, high-profile cases.

www.valid8financial.com

