

Data analytics

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The role of data analytics in fraud prevention

Background

Business data is increasingly being managed and stored by IT systems. The pressure to improve efficiencies and integrate supply chains has meant that many organisations are now heavily reliant on IT systems to support business processes. Such systems have also reduced the level of human intervention required, which traditionally acted as a fraud control. As a result, organisations are placing more reliance on automated controls to both prevent and detect fraud.

Additionally, fraudsters are becoming more 'IT-

savvy' and our experience indicates that they are increasingly exploiting weaknesses in IT related controls to perpetrate fraud. When the fraud is hidden in large data volumes, manual checks for fraud are simply insufficient.

Analytics for fraud monitoring

While the technology enablement of processes has meant that the data is now available in a structured form for further analysis, the Ernst & Young fraud risk management survey found that many organisations are not capitalising on this development and are not performing

proactive monitoring of business data for potential fraud indicators. Organisations commonly limit their fraud data analysis to quantification of the financial impact when fraud is detected by some other means.

However, data analytics techniques can also have a significant role to play in the early-warning, detection and monitoring of fraud. These techniques can allow your organisation to extract, analyse, interpret and transform your business data to help detect potential instances of fraud and implement effective fraud monitoring programmes.

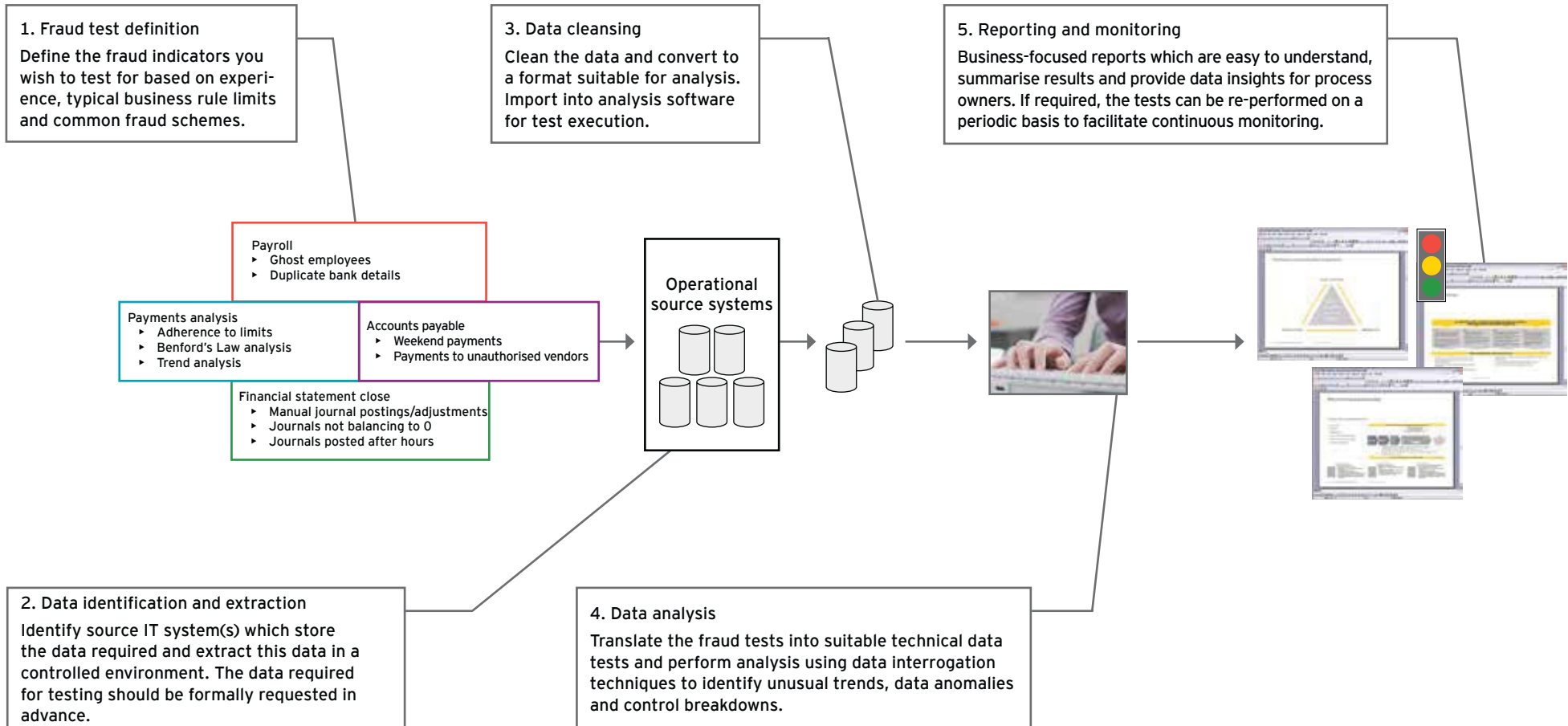
“With increased accessibility of business data from internal and external sources, organisations now have the opportunity more than ever to benefit from using analytics in their fraud prevention programmes.”

Julie Fenton, Partner



Building a better
working world

Data analytics process



Developing analytics tests

Why use data analytics?

- ▶ **Improved efficiency** - Automated method for detecting and monitoring potentially fraudulent behaviour.
- ▶ **Repeatable tests** - Repeatable fraud tests that can be run on your data at any time.
- ▶ **Wider coverage** - Full coverage of testing population rather than 'spot checks' on transactions - better chance of finding exceptional items.
- ▶ **Early warning system** - Analytics solutions can help you to quickly identify potentially fraudulent behaviour before the fraud becomes material.

Standard tests

Based on previous experience of fraud in your organisation and your knowledge of common fraud indicators, you can translate this knowledge and experience into analytics tests to help detect potential instances of fraud. This set of standard fraud analytics tests can then be run against your organisations business data on a periodic basis as part of a fraud monitoring programme. This can facilitate the automated analysis on data from a variety of business accounting cycles such as Accounts Payable, Accounts Receivable, Procurement Cards, Payroll, Expenses, General Ledger, and more, all designed to look for the red flags of fraud.

Customised solutions

It is also important to recognise that standard fraud tests may not be suitable in certain circumstances. In these cases, it is necessary to customise analytics tests specifically for the needs of your organisation, based on the known issues, key risk areas and data available. This can include consolidating and analysing data from multiple sources in order to provide the data insights required. Additionally, custom techniques are also necessary when you are required to "drill-down" into the source data and perform additional testing to investigate specific issues.

Data analytics challenges

While data analytics offers many benefits as a fraud prevention measure, it is also important to recognise the challenges associating with performing these techniques:

- ▶ **Data quality** - The results from analytics tests are only as good as the input data. Before performing tests, it is important to assess the quality of data and perform validation/cleansing if required.
- ▶ **Data volumes** - There may be significant data volumes supporting certain business processes. Your data analytics testing infrastructure should be capable of handling these volumes.
- ▶ **Data security** - It is essential that appropriate security protocols are considered throughout the extraction and analysis to protect the confidentiality and integrity of source data.
- ▶ **Skillsets** - Data analytics requires a combination of business and technical skills to define the tests, perform the analysis and interpret the results in order to provide meaningful insights.

About us

EY fraud analytics services

EY's fraud investigation and technology specialists have developed a set of standard fraud analytics tests that can be tailored to meet your specific business requirements. These tests can be periodically run against your organisation's business data in order to detect or indicate the presence of fraud. These tests are based on our industry knowledge and fraud investigation experience.

However, at EY we also recognise that our standard fraud tests may not be suitable in certain circumstances.

In these cases, we create custom analytics tests specifically for your requirements.

Our team

Our dedicated global team of professionals specialise in delivering fraud data analytics solutions for a variety of clients across industry sectors.

This combination of business fraud investigation and technology skills provides an integrated approach to fraud investigation. Our specialists, who are part of a global analytics network, have significant experience in data extraction, data cleansing and sophisticated data analysis techniques.

Learn more

To learn more about how EY can assist you with your fraud data analytics solution needs, please contact:

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