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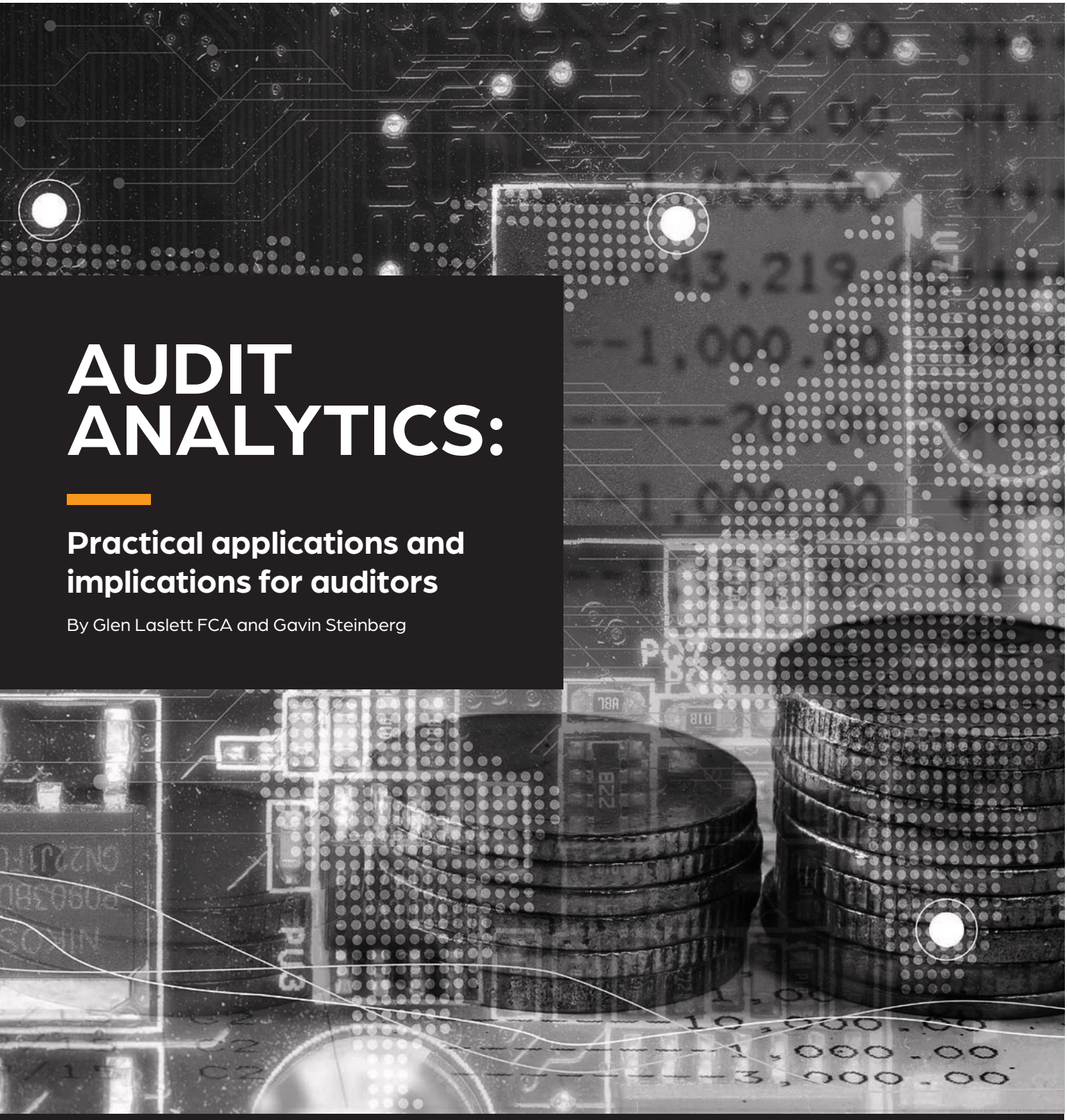

AUDIT ANALYTICS:

Practical applications and implications for auditors

By Glen Laslett FCA and Gavin Steinberg

Any financial audit is, at heart, the independent testing of a series of related financial assertions. Underlying these tests is the need to gather evidence from sources that are increasingly digital, growing in terms of volumes, velocities and variety and located in multiple and diverse systems.

More attention is being directed towards the value of data analytic technologies in improving audit decision-making. These technology-enabled tests ('audit analytics') can provide strong evidence regarding internal control effectiveness, transaction validity, master files integrity and account balances. Even a simple set of audit analytics can deliver major benefits.

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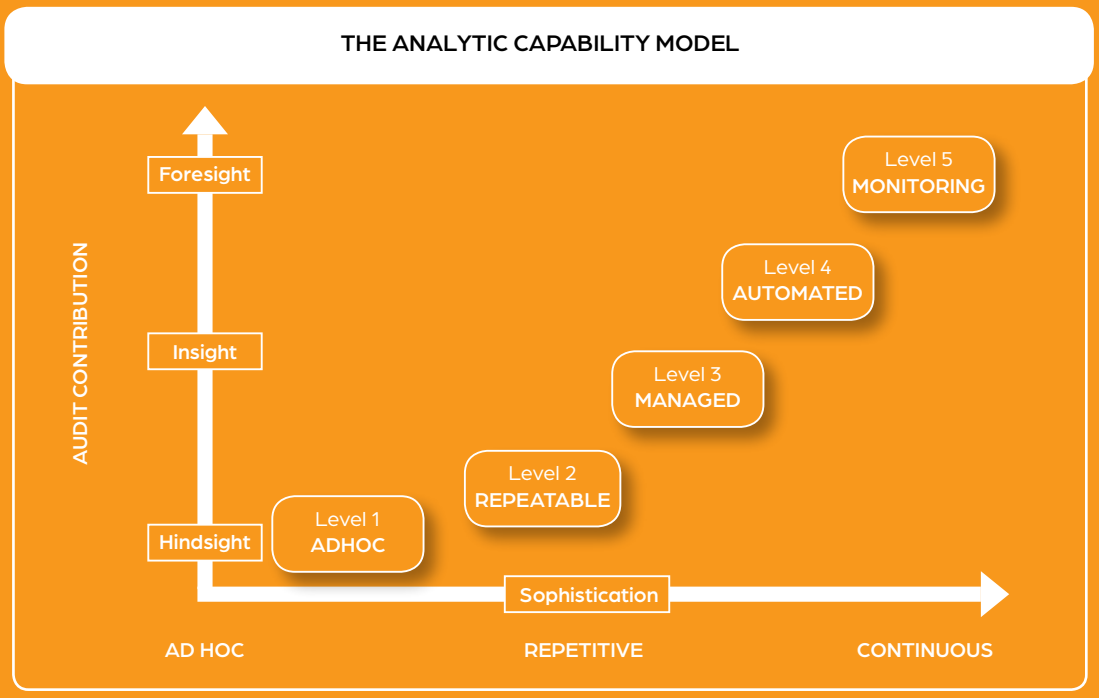
ANALYTIC-ENABLED AUDITS

Technology has delivered a range of analytical software tools that are highly cost-effective and able to cater for varying levels of auditor expertise. The cost of an analytic procedure has been reported as $0.01 compared to a cost of $4 for a "standard audit of the same information".



FAST FACT

The cost of an analytic procedure is estimated as $0.01 compared to a cost of $4 for a "standard audit of the same information"

Audit analytics in the broader context of a continuous auditing paradigm is changing the nature, timing and extent of 'traditional' audit testing. In a traditional audit, internal control and substantive testing are periodically performed to evaluate management assertions.

Prior to automation, audit clerks focused largely on substantive testing. The labour and time intensiveness of this approach was influential in adopting audit sampling and systems of controls reliance. This paradigm shift made the management of audit risk more challenging. The application of data analytic techniques to substantive testing enables the cost-effective review of entire data populations, as well as providing reliable information regarding key control effectiveness. We are no longer limited by the technology but rather by our ability to interpret, manage and understand the data before us.

RISK ASSESSMENT OF WHAT TO ANALYSE

Auditors should select the analytics target areas based on a risk assessment. The process of assessing risk for a financial audit is well known; however, the role that audit analytics could, and arguably should, assume in the selection of audit procedures in these areas is less well understood. Audit analytics can, if given a higher priority, deliver further reductions in audit risk. This strategy is not without its own challenges and requires additional planning to properly address such issues as data availability, completeness, data collection independence and the impact of these automated procedures on the overall audit strategy.

A RANGE OF POTENTIAL TESTS

Audit analytic tests should also include testing for fraud indicators and/or statutory non-compliance in order to deliver "value added" service work for clients, such as pointing out emerging trends and statistics. Audit analytics may also be used to directly test control effectiveness. However, tests can often produce "telephone book" outcomes with many "false positives" that make the results unusable for practical purposes. Auditors must understand the data, and the underlying business rules, so that they can manage the test output and adapt the analytics to eliminate these false positives.

Some may ask: "Why test the data when there are controls in place to prevent exceptions?" The point here is that controls tend to reduce the probability of adverse events; they do not guarantee that these events will not occur. Auditors have always understood that "the **truth** lies in the transaction, not just in the control".

A SELECTION OF DATA ANALYTIC EXAMPLES

The following test examples could be used to test controls, master files and transactions. The list is not exhaustive. The design and selection of tests must be driven by the auditor's risk assessment on a case-by-case basis. The advantage of modern analytic software is that it is a "tool of the imagination" and lends itself to creative use in response to differing situations. Over time, the auditor can build up a library of standard test templates that can be re-used and adapted.

ACCOUNTS PAYABLE

Matches between employee and vendor master files: A common fraud is to establish a false vendor account and pay fraudulent invoices through it. A simple test is to look for matches between employee and vendors' addresses, bank account details and telephone numbers. Also compare next of kin details to find more potential matches.

Duplicate invoices/payments: This requires the testing of multiple combinations ie VendorID, date, invoice number and amount. Key challenges include avoiding "telephone book" reports. The auditor should not assume that system level controls would always detect duplicates. Often the applications are written so as to detect duplicates entered on the same day or if a default is set to "on". Invoice numbers can be altered to allow multiple processing where duplicate processing is controlled eg: 0001.A and 1.A

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PAYROLL

Payments to employees following termination: A common fraud is to reactivate the accounts of terminated employees and continue to pay them into a different bank account or to continue paying employees for a limited period after termination. The test should match the employee masterfile with the payment transaction file for payments after termination date.

Payments to fictitious employees: Another common fraud is creating a false employee record. This test looks for tell-tale duplicates in the employee master file regarding addresses, bank accounts and telephone numbers. Many exceptions will arise where a business employs husbands and wives or where there are undeclared associations.

Employee with unusual proportions of overtime: This test can detect manipulation of employee records. It may also highlight poor rostering practices as well as OHS exposures.

Employees with regular hours credited while on leave: This test requires accesses to the time capture system and employee master files. The test identifies ordinary time being credited to employee while on leave.

ACCOUNTS RECEIVABLE (AR)

Changed invoice dates: The valuation of debtors is affected by the age of invoices. A comparison of the AR files can identify changed invoice dates.

Matching of employee and customer details: A common fraud is to have ordered goods delivered to an employee address.

Multiple accounts for the same customer: In a disparate business, a customer may have more than one account allowing debtors to maximise their credit terms. Multiple accounts can be identified by matching details eg ABNs and street addresses.

GENERAL LEDGER

Ageing of items in clearing and suspense accounts: Unmatched or uncleared transactions can be analysed by age or value.

Manual journals affecting control accounts: Journals can be interrogated to look for entries to specific accounts and to summarise the related journal activity.

Suspicious Journal Entries: Journal entries made at suspicious times (weekends, late night), to accounts not often used or that should only be posted to via system interfaces.

Testing of cut-off violations: Identify journal entries to closed periods.

Manual Journals: Journals may be classified by users, by accounts affected and other analytical criteria.

CONFIGURATION TABLES

Periodic comparison of control configuration tables: Most accounting systems require that automated controls be parameterised during installation. These control parameters should be stable and only be changed with appropriate senior manager approval. Snapshots of these tables can be compared to identify changes in control operation.

Some tests should be very carefully considered before effort is expended on them.

IMPORTANT CONSIDERATIONS

The previous examples are not complete by any means. Before starting down the analytics route, there are some important caveats to note.

- Some tests should be very carefully considered before effort is expended on them. A good example is the recalculation of interest balances in financial institutions. The algorithms supporting these calculations are often very complex. Users of data analytics should set realistic targets for test development.
- The landscape is relatively straightforward for internal auditors; however, the varied client base facing external financial auditors means that a significant effort will be required to develop the capability to be able to develop and repeat tests for various clients using different systems. Smaller firms could consider outsourcing test development and maintenance to special lists.
- A key issue is the selection of a tool that is "fit for purpose". Auditors require technology that can analyse very large data volumes and manage diverse data formats. Such tool sets should already contain pre-written audit functionalities (eg duplicates testing) and be capable of providing log files that report the files tested. Finally, the tools should cater for the development and maintenance of a library of test templates.

IMPLICATIONS FOR AUDITORS

The intention of this article is not to diminish the role of control reliance in external audits. The targeted use of audit analytics in high risk business processes has the potential to deliver cost-effective reductions in audit risk. Firms should develop tests that can be adapted and expanded as required.

While it is still relatively 'early days' in terms of such audit innovations the availability of modern audit data interrogation tools and techniques is creating exciting and valuable opportunities for the auditing profession. Internal auditors are extending the audit analytics concept into a continuous ongoing process. There are opportunities for external auditors to work closely with such internal audit teams to leverage their ongoing "continuous controls monitoring" work and leverage technology to its maximum.

For more information on continuous controls monitoring, click here: https://blog.satorigroup.com.au to subscribe to our weekly insights.

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