

technology
SOX COMPLIANCE



Let your TMS take the strain

THE STRICT REQUIREMENTS OF SARBANES-OXLEY LEAVE TREASURERS WITH NO OPTION BUT TO ENSURE THAT THEIR OPERATIONS ARE FULLY COMPLIANT. CAN TECHNOLOGY HELP THEM ACHIEVE THIS MAMMOTH TASK? KELVIN WALTON REPORTS.

When the stringent compliance requirements of the Sarbanes-Oxley Act (SOX) were first published, European treasurers contemplated the massive new administrative burden which was about to fall on the shoulders of their American counterparts. Today, a more sober view is needed. The EU is drafting legislation similar to SOX; companies with listings on US stock exchanges need to be SOX compliant; and, in the light of recent corporate scandals, shareholders are demanding that companies are managed to the highest standards of control, prudence and transparency. This requires the adoption of SOX-compliant corporate treasury operations.

The current perceived wisdom among specialist treasury consultants and analysts is that a SOX-compliant treasury function is virtually impossible without the support of a contemporary treasury management system (TMS). This view is clearly reflected in the treasury technology marketplace, where the urgency of attaining SOX compliance is one of the prime justifications treasurers are using to secure budgetary approval for technology replacement and enhancement projects. Some companies are entering the marketplace for the first time, while others are reviewing their older technology solutions to see if they can be reasonably upgraded to SOX-compliant level, or whether a replacement project is the better alternative. Doing nothing is not a reasonable or even sensible option today.

Interestingly, more medium-to-large sized companies (annual turnover of £500m-£1bn) can now justify investing in a TMS. This is due to widening acceptance that spreadsheet solutions will not be able to cope in treasuries which turn over millions of pounds daily in hedges and money market operations.

There are very few arrangements involving spreadsheets that can pass the necessary quality tests of control, security, transparency and robustness that must now be met or exceeded.

Executive summary

- **Treasury consultants and analysts believe that SOX compliance in most treasury departments is almost impossible to achieve without the support of a contemporary TMS.**
- **Companies are either purchasing a solution for the first time or upgrading their current technology solutions to make sure they are SOX compliant.**
- **Core SOX compliance necessitates that companies' treasury processes are structured, transparent and supported by a full audit process.**
- **The company-specific elements of SOX compliance mean a solution has to be analysed, designed, configured, tested and delivered as a distinct project.**
- **Pressure is on the technology industry to provide solutions that offer the levels of compliance that suit each company's specifications.**
- **Aided by vendors, senior managers have the final say on compliance in their organisation. They authorise procedures, sign the financial reports and face prosecution if SOX is breached.**

A number of issues prevail, such as:

- Where is the system documentation?
- Are the revaluation formulae rigorous?
- How do we amend the system to help with compliance?

These almost certainly cannot be surmounted without radical change and investment in treasury technology. There will always be a valuable place for spreadsheets as adjuncts of treasury operations – for example, forecasting and some kinds of reporting. However, as off-the-shelf tools, they are not secure enough to fulfil contemporary compliance demands, no matter how creatively programmed they are.

Users of older TMS solutions and systems that were built in-house, may find their present solutions suffer from shortcomings of a similar kind. These solutions were often built in a mission-specific way to avoid the significant costs often associated with high levels of flexibility and generality. They were not built for straightforward enhancement and users faced difficulties in finding qualified developers with experience of archaic languages.

There will also always be company-specific elements in the composition of a SOX-

compliant solution. A truly compliant solution must be analysed, designed, configured, tested and delivered as a distinct project or project phase. The role of the treasury technology industry is to design and create the necessary tools and implement the required solution, according to an organisation's specifications. It is the company's senior management (with the support of auditors and consultants) who will ultimately decide on the minutiae of compliance in their organisation. It is they who authorise treasury procedures, sign the corporation's financial reports and who risk criminal prosecution if SOX is breached.

SECTION 302 COMPLIANCE: SOX Section 302 (s302) requires FDs and CFOs to certify the accuracy of the company's financial statements.

There are many ways in which modern treasury management systems can support this onerous requirement:

- It is a crucial requirement for s302 compliance that only accurate deals (plus accurate standing data, market rates, cash forecasts and so forth) are settled and reported. Errors need to be detected, intercepted and corrected at or close to the origination point. Of course, technology is well suited to imposing the rigid, closed-end program processes and controls that help to assure such accuracy. These logical components include data validation tests and verification and authorisation workflow checkpoints. The control environment should extend not only to original transaction entry and workflow, but to the electronic import of externally-sourced information such as bank statements. The end result of using technology to exert strong data entry controls is that most or all errors should be trapped and managed and not

'THE URGENCY OF ATTAINING SOX COMPLIANCE IS A PRIME REASON FOR SECURING BUDGETARY APPROVAL FOR TECHNOLOGY REPLACEMENT'

propagated into forecasts, risk positions and reports where they might do serious damage.

- SOX-compliant solutions should eliminate any re-inputting operations within a treasury – and preferably beyond. Having to re-input data wastes valuable human resources and invites errors. The answer here is for solutions to be internally integrated. They should also integrate efficiently, effectively and cheaply with external systems. The state-of-the-art solution to secure external integration – with banks and Enterprise Resource Planning (ERP) systems, for example – is the direct, automatic and secure mutual updating of integration tables within different organisations' systems. Typically, from the perspective of the TMS, these integrations would involve the transfer of payment messages to banks, and of balanced journals to ERP systems, and also the receipt of account statements from banks, and of accounts payable and receivable information from ERPs. The treasury systems supplier and the bank or ERP company may formally certify such integrations – top-class, SOX-compliance behaviour. High-tech data exchange integrations eliminate the inefficiencies and operational risks of file transfers, and hence represent high-quality SOX compliance tools. In old technology solutions, import/export mechanisms tend to be insecure, unstable and onerous in comparison.

SOX solutions – finding shelter from the storm

The stringent requirements that SOX Section 404 (s404) places on internal controls used for financial reporting require UK companies with a US listing to be compliant for financial year-end, July 2005 (see *No shelter from the storm*, page 16, *The Treasurer*, October).

But compliance does not come cheap. In the US, the cost of s404 compliance has rocketed with companies now paying, on average, US\$3.14m to comply.

It will be up to treasurers of UK companies with a US listing to ensure the effectiveness of internal controls in their 'departments.' They must focus on key controls and collate adequate evidence over a sufficient period of time. The testing of internal controls is a

major hurdle and will account for about 40% of an s404 project, while a full audit of controls will need to be carried out at least annually.

IT systems that provide s404 compliance, while still in the embryonic stages of development, may help treasurers achieve the level of compliance they need.

S404 TECHNOLOGY REQUIREMENTS:

Compliance with s404 is where spreadsheet and other technology solutions break down. It is a case of compliance not only being done, but also being seen to be done. The core SOX compliance requirement is that treasury processes must be structured, transparent and supported by a full audit process.

Some of the key components of a SOX-compliant solution are:

- Full audit capabilities – the core requirement of s404 compliance can be met through the provision of a complete, structured audit trail. Compliant audit functionality records every event in a transaction's history; it also tracks static

data history to the same level of detail for completeness. Each event is date and time-stamped at the very moment it is stored on the TMS database, and the identification of the user who performed the action is also captured. The audit data may be viewed and reported by authorised personnel. The system should be delivered with a full set of standard audit reports and processes such as drill-downs and enquiries. Audit reporting should clearly show the data before and after the change, plus details of the change itself. Files should be attachable to the audit trail. At the instant of attachment, the files should be copied and 'frozen' so that they cannot be subsequently altered in any way, to preserve audit trail integrity. This facility may be used to document the underlying reason for, or the authorisation, of a given transaction, which supports SOX compliance.

- Another highly desirable feature is the segregation of duties in all key processes, at the level of individual users, or groups of users. This function should be implemented

in a client-specific way, to achieve the required solution in terms of the client's own treasury procedures. As an example, the system may be configured so that users who are permitted to originate or authorise market deals are mutually exclusive from those who are authorised to add, amend or override standard settlement instructions. Many advanced treasuries use such arrangements to ensure that the origination, execution and management functions are kept fully and transparently separate, to fulfil s404 compliance requirements.

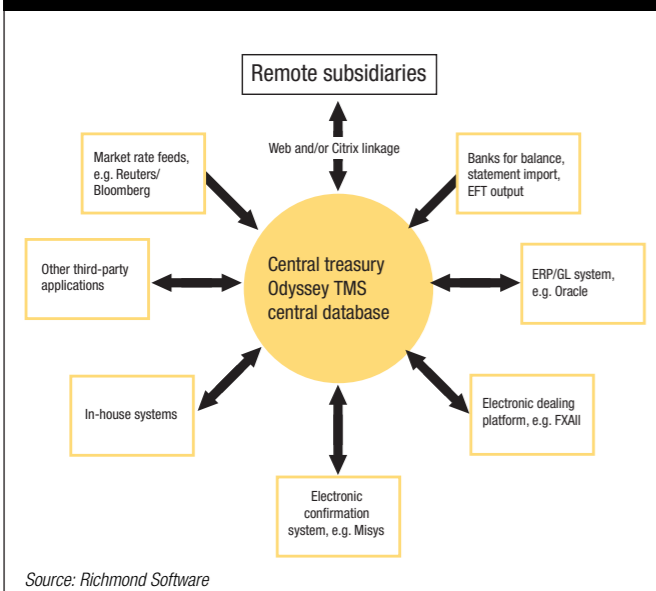
- Further information stored in the database may be coded so that access rights are restricted to certain user groups if the client corporation requires such a degree of confidentiality.
- Transparency of all automated treasury processes is one of the most important characteristics of best practice, and therefore of SOX compliance. This kind of transparency is very often lacking in older systems, in part because of the nature of many computer programmers. It is, of

course, unfair to criticise an industry so generally; but many developers have a natural tendency to wrestle with a problem, see the solution and then hard code it elegantly, but in a black box. The process may (or may not) work, but it is basically invisible to the user (which is frustrating) and very difficult to test or audit – which may now be fatal for SOX compliance. One example here is an outmoded bank statement retrieval and reconciliation process in which the workstation appears to be doing nothing for a while – and then comes back to life again having jumped along the workflow. The user must run reports to try and discern whether import and reconciliation have actually worked. Changes to bank account access information may have to be hard coded, involving development expense, plus the risk of error. A properly compliant solution will be fully transparent and automated, allowing users to monitor the bank accounts being processed to be alerted of any errors, and to be able to change account access

information and reconciliation criteria through standard parameter changes, not through programming. Another example is a hard coded accounting interface, in which the journal entries are not made available to the user for checking, and in which there is no documented control between the data exported and that which is imported by the accounting system. The compliant solution documents the journals for export in a way in which they can be understood, with the possibility of drill-down to research the source transaction and the ability to modify the process without recourse to programmers.

- Finally, all systems are now protected by increasingly elaborate password systems, supported by workstation timeout functions and dual system administration of security set-up changes. Some advanced systems now offer biological recognition functions that use fingerprints, for example. It will not be long before DNA recognition becomes a must-have security standard.

Figure 1. Generalised treasury technology topology



Source: Richmond Software

'A THIRD CLASS OF INTEGRATION ISSUE IS THE IMPORT OF MARKET RATES AND PRICES FOR VALUATION AND ACCOUNTING PURPOSES'

- Another kind of integration can be achieved between a TMS and the electronic dealing platform and confirmation system, such as FXAll and FXMatch. In the first case, the TMS processes and reports transactions that have already been validated within the dealing platform. In the second, there is a benefit beyond the independent hands-free matching of confirmations: automatic settlement processes may be made dependent on successful confirmation matching, so that money does not flow out of the treasury's bank accounts unless this event has occurred. SOX compliance is enhanced because of the radical increase of hands-free Straight-through Processing (STP) in key treasury processes. The company's financial executives should enjoy a high degree of confidence in the control and accuracy of the transactions and information flowing through treasury as a result of the systematic elimination of potential opportunities for human error by this kind of deal workflow integration.
- A third class of integration issue is the import of market rates and prices for valuation and accounting purposes. For optimum SOX compliance, the entry of this critical data should be highly automated and scheduled for operation at a frequency that corresponds with the particular treasury's risk profile. For some, twice daily is sufficient while others require this information to be automatically pulled into the TMS or pushed out of the rate source in real time.
- The accuracy of financial statements ultimately depends on the formulae that calculate the values of transactions, accounting journals, positions and portfolios. In established TMS solutions, the underlying calculations are tried and tested against industry standards. A system that periodically delivers gross miscalculations

will not survive in today's marketplace. Some of the mathematics needed for treasury calculations is complex and computationally demanding. This is the case in areas such as option pricing, hedge effectiveness testing and especially in the full valuation derivation method for Value at Risk (VaR). Today's treasury systems run on Pentium IV processors with cycle speeds in excess of 3GHz. These can comfortably accommodate fast and precise calculations. But despite the high level of contractual quality assurance with which modern systems are delivered, prudent treasurers are advised to test and verify all calculations rigorously, (including calculations in reports), prior to making a new system – or a new release – operational. Additionally, some solutions offer control functions to confirm the preservation of data, calculation and reporting integrity to give an added layer of quality assurance. Overall, a strong TMS will offer financial executives a reassuringly high comfort level over the accuracy of the financial statements which they must certify.

SECTION 409 COMPLIANCE TOOLS: Compliance with SOX Section 409 (s409) depends primarily on an organisation's definition of 'material change' with respect to the treasury environment. The details of a large corporation's practices in cash forecasting, accounting and financial risk management tend to have unique or specific features. These reflect the underlying commercial business, corporate structure and management policies of the organisation. The forecasting requirements and cashflow patterns within industry groups such as advertising agencies and industrial exporters may be similar, but each company within a group will have different subsidiary and affiliate structures, risk sector exposures, management policies and so forth. So the nature of material changes is likely to be company specific in terms of the detailed definition that is applied.

Compliance with s409 requires forward-looking solutions, operating in as close to real time as possible, that check for specific material change events and alert nominated individuals when these events occur or threaten to occur. A s409-compliant solution must be able to define material events and check the condition of the global treasury portfolio for their approach or occurrence at a pre-defined frequency. The solution must empower users to monitor and manage material change events and, perhaps, avoid them if they are adverse to corporate interest.

As we have noted, the implemented solutions will generally vary from organisation to organisation. For example:

- Exposure/hedge relationships approaching or breaching FAS 133 and/or IAS 39 effectiveness test boundaries;
- portfolio valuation approaching or hitting user-defined stop loss or take profit limits; and
- aggregated cash forecasts moving outside the boundaries of the budget.

Essentially, cash, treasury and risk management system functionality needs to be flexibly configured and deployed to monitor and manage material change in and beyond the treasury department. This allows the change to be reported in compliance with s409.

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In harmony with SOX

AS A US-LISTED COMPANY, HARMAN INTERNATIONAL MUST MEET THE STRINGENT REQUIREMENTS OF SARBANES-OXLEY. TO ACHIEVE THIS, THE ELECTRONICS/AUDIO MANUFACTURER DECIDED TO LET ITS TMS TAKE THE STRAIN. BY KELVIN WALTON.

Harman International is a worldwide leader in the manufacture of high quality, high-fidelity audio and electronic systems for consumer and professional use with renowned brand names such as JBL, Infinity, Harman/Kardon, Mark Levinson and Becker. It is a global company, with its principal headquarters and group treasury located in Washington D.C. and treasury centres in London and Stuttgart; the treasury back office is located in Paris.

"Harman's strategic treasury mission is to build an integrated, global operation that is proactive in identifying risks with adequate controls," explains Group Treasurer Greg Henry. "My goal is to reduce transaction costs, integrate our global operation and develop transparent Straight-through Processing (STP) workflows between our global banks and our treasury operations."

As Harman is listed on the New York stock exchange, it must comply with the strict control requirements of Sarbanes-Oxley (SOX) and this was a key criterion in its choice of a new TMS. It also wanted the new solution to run on an Application Services Provider (ASP) platform. This was critical in getting the solution up and running quickly, while making minimal demands on Harman's in-house IT resources.

Harman chose Richmond Software to be its systems vendor and the ASP solution's phased implementation is now in its final stages. Vic Cowley, Manager at International Treasury Operations, points out: "Choosing an ASP platform brings the added benefit of providing our four locations with access to a secure, single system, which enhances our SOX compliance. In effect, we operate a 'virtual centralised treasury' despite the physical separation of the three centres and the back office. The present-day availability of secure systems and web communications has helped us to make this a reality."

The solution has met all SOX security requirements. Harman's IT specialists performed rigorous security testing on the TMS, which involved attempts to penetrate the site. The testing took 16 man-hours and security was not compromised.

The new solution will perform a range of functions for Harman's treasury operation which is responsible for:

- Group financing through bond issuance and multi-currency revolving credit facilities;
- maintenance of bank relationships;
- the creation and management of cash pools for liquidity purposes;
- global netting, using CitiDirect; and
- foreign exchange (FX) and interest rate management.

Harman uses its TMS to download bank account information (from HSBC, JPMorgan and Hypo Vereinsbank), and to record investments, FX deals and interest rate swaps. The TMS also

controls the authorisation and verification of payments.

All FX dealing is executed through FXAll. Cowley says that this brings several SOX compliance benefits. "It enables us to demonstrate a high level of internal control. We must have five quotes from our relationship banks for each transaction and FXAll allows us to demonstrate this. It also facilitates the detection of bank errors which can occur, for example, when quotes for odd dates are required. Also, we have a high opinion of the FXAll settlements centre, which allows pre-formatting for regular payments, therefore increasing accuracy, security and control in the deal settlement process."

CONTROLLING PAYMENTS RISK. Harman considers payment processing to be a high-risk operation and has implemented a transparent and very secure process which demonstrates SOX compliance in this critical area. It is using the TMS to create a compliant framework for the definition and subsequent management of user profiles. Profiles can be set up so that users can either initiate deals/payments, or authorise/verify the release of payments. Hard-coded into the TMS is the rule that a given payment cannot be authorised and verified by the same person. Each individual is assigned pre-defined payment size limits and specific access rights to a set of bank accounts in his/her user profile. The system monitors and controls the payments process, and all events are logged and reported in the audit trail.

According to Cowley, the payments solution has the potential to develop into a payments factory facility. This will support the company's decentralised commercial operations by providing an enhanced environment for the management of bulk payments.

Web links to JPMorgan (EC Gateway) and HSBC (ABC Hexagon) are currently being tested. The banks accept the transmitted encrypted files which have been authorised and verified in the TMS and they return confirmations of receipt to the TMS to complete the control loop. Once operational, the user profiles will be locked down to ensure security. The implementation of secure web-based communications with the banks means that Harman does not need to host client-side bank software and this further enhances SOX compliance.

Process transparency is a key feature of SOX compliance, and the Harman treasury achieves this by capturing a complete set of documentation for each transaction. Many transactions involve third-party payments and this is where the high compliance standards require the whole process to be tracked and reviewed quickly and easily. Harman scans all the relevant documents, such as signed instructions from the originating unit. These are then saved as PDF files to the relevant deal in the TMS so that the back office and auditors can access the entire workflow when necessary. Harman also uses this facility to attach bank facility letters and account signature cards to the bank account records.