Sarbanes-Oxley internal control requirements are creating a golden opportunity at many organizations, according to new research.

the good news about compliance

Numerous studies have examined the impact of the U.S. Sarbanes-Oxley Act of 2002 — particularly the act’s Section 404 internal control provisions. To date, most of the research has focused on the magnitude of certification and attestation expenditures, often concluding that costs have been much higher than anticipated.
Very little research, by comparison, has looked systematically at the benefits derived from Sarbanes-Oxley compliance efforts. To address this deficiency, we recently collaborated with The IIA Research Foundation to examine specific control improvements attributable to the control evaluation work required by Section 404. We surveyed chief audit executives, internal audit managers, and outside service providers from The IIA’s Global Auditing Information Network (GAIN) database and asked participants to identify control improvements resulting directly from their companies’ Section 404 compliance efforts. Nearly 175 of GAIN’s approximately 700 members participated in the survey, yielding a response rate of 25 percent. All of the respondents came from U.S. corporations where the internal auditors had first-hand experience in identifying and evaluating controls to meet Sarbanes-Oxley reporting requirements.

Specific benefits identified by the participants covered a broad spectrum of control-related areas, ranging from improvements in the overall control environment to basic accounting control enhancements. The overall survey findings are informative for auditors involved in Section 404 compliance projects, as well as anyone looking to help their organization improve the efficiency and effectiveness of control evaluations. A more complete description of the research can be found in the IIA Research Foundation publication, Sarbanes-Oxley Section 404 Work: Looking at the Benefits.

CONTROL IMPROVEMENTS
The first portion of the survey questionnaire presented a list of control activities we had identified as important based on a literature review and preliminary discussions with audit practitioners. Using a five-point scale, participants were asked to rate the degree to which each area had improved as a direct result of their organization’s Section 404 work. Their responses can be grouped into five categories (see “Control Improvements” below for a summary of the results):

- The control environment.
- Controls addressing high-risk accounting areas.
- Routine accounting controls.
- Anti-fraud processes.
- Compensation schemes.

The company’s control environment and anti-fraud activities were the two largest areas of improvement noted. More than 60 percent of the respondents said they either “agree” or “strongly agree” that improvements have been made to their organization’s internal control environment and anti-fraud processes. More importantly, the respondents also noted that these improvements would not have occurred without the Sarbanes-Oxley requirements.

IMPROVEMENTS IN THE OVERALL CONTROL ENVIRONMENT The survey examined six internal control activities generally recognized as part of the control environment: audit committee involvement and knowledge, monitoring controls, board knowledge and oversight of controls, tone at the top, internal auditing, and codes of conduct (see “Overall Control Environment,” page 58). Survey participants were asked to rate each of these components according to specific improvements observed at their company.

Control environment benefits observed at respondents’ firms suggest the influence of Sarbanes-Oxley governance requirements. The act mandates a structure aimed at increasing audit committee effectiveness and has prompted many committees to expand the scope of their charters. In the survey, more than 70 percent of respondents noted significant improvements in audit committee knowledge and involvement in governance initiatives. Moreover, respondents consistently cited the increased robustness of audit committees as one of the five major benefits associated with Section 404.

Improvements in the control environment were not limited to progress made by audit committees, however. The majority of respondents indicated that the full board of directors has developed greater awareness and responsibility for controls over financial reporting. Nearly two-thirds also noted that internal audit activities have improved as a result of Section 404, and more than half cited improvements in the degree to which codes of conduct have been accepted at their organization.

We were not surprised that participants observed improvements within their organizations’ control environments, as control-environment weaknesses have often been associated with business failure and financial frauds. Given that most of the survey participants work in large organizations that would traditionally have more
comprehensive control systems, however, we did not expect to see the magnitude of responses indicating that these improvements had been made.

**CONTROLS OVER HIGH-RISK ACCOUNTING AREAS** Even before Sarbanes-Oxley, many controllers and internal auditors had turned their attention to areas often associated with financial frauds, including revenue recognition, accounting estimates, and unsupported journal entries. These areas are particularly vulnerable to fraud because of the complexity of the processes involved and the degree of subjectivity required in performing estimates, and they have received greater attention in light of recent corporate failures. We sought to understand whether control deficiencies were widespread or if they were isolated to high-profile financial frauds (see “Controls Over High-risk Accounting Areas,” page 58, for an overview of findings).

In the survey, nearly a third of the respondents reported significant improvements in revenue controls stemming directly from their company’s Section 404 compliance efforts. In light of the attention given to revenue recognition controls before Sarbanes-Oxley, we were surprised by the magnitude of control improvements noted in this area.

Almost two-thirds of respondents also cited improved controls over the closing process. Accountants and auditors have historically focused on controls over routine transaction processing, with much less emphasis on closing processes. Still, given the growing number and complexity of closing entries, we had expected that companies would already have made significant improvements to this area before Sarbanes-Oxley.

We were also surprised by the number of respondents that cited improvements in controls over accounting estimates. The practice of using so-called “cookie jar reserves” to manage earnings had already brought considerable attention to accounting estimates, and we had expected that many companies would have already addressed this area thoroughly from a control standpoint. Nonetheless, nearly half the respondents indicated they had made significant improvements to controls in this area.

**ROUTINE ACCOUNTING CONTROLS** Routine accounting controls are essential to an organization’s ability to conduct business. To operate effectively, companies must be able to track inventory, receivables, and fixed assets, as well as record basic transactions. For this reason, most companies have historically devoted significant attention to controls related to these areas.

Nonetheless, a considerable number of respondents noted improvements to routine accounting controls (see “Routine Accounting Controls” on page 58). The most significant portion of these improvements relates to improving “record retention/audit trail” processes, an area in which 61 percent of respondents indicated they “strongly agree” that control improvements have been made. Respondents reported significantly less improvement in asset safeguarding, property accounting, and expense classification, perhaps because most companies had already established adequate controls over these areas. However, the results still showed room for improvement in a significant minority of the participating firms.

**ANTI-FRAUD ACTIVITIES** Sarbanes-Oxley requires companies to establish effective anti-fraud controls. Not surprisingly, then, nearly half the survey participants reported that their firms

---

**Top 10 Overall Improvements**

Based on our assimilation of both open-ended survey responses and the participants’ stated level of agreement with specific, pre-identified areas of control improvement, we compiled the following “top 10” list of control improvements:

1. A more engaged control environment, with active participation by the board, the audit committee, and management.
2. More thoughtful analysis of monitoring controls, along with recognition that monitoring is an integral part of the control process.
3. More structure to the year-end closing process and recording of journal entries, with increased recognition of the growing complexity of these areas.
4. Implementation of anti-fraud activities, with defined processes in place including responsibility for follow-up by defined parties and resolution approaches.
5. Better understanding of the risks associated with general computer controls and the need to improve both control and audit procedures to gain assurance that risks associated with computer systems are mitigated.
6. Improved documentation of controls and control processes that can serve as a basis for training, practical day-to-day guidance, and management evaluation.
7. Improved definition of controls, and the relationship between controls and risk, across the organization.
8. Embedding of control concepts into the organization, with a broader understanding by operating personnel and management of their responsibility for controls.
9. Improvements in the adequacy of the audit trail as a basis to support both operations and audit assessment of control adequacy and financial reporting.
10. Re-implementation of basic controls — such as segregation of duties, periodic reconciliation of accounts, and authorization processes — that had been eroded as organizations downsized or consolidated operations.

A side benefit of Section 404 work has been the attention it’s directed toward the organization’s control infrastructure. Better-controlled companies are less likely to fail and less likely to suffer losses related to fraudulent financial reporting. The top 10 improvements represent a significant step toward embedding effective controls as a basic philosophy of organizations, not just a regulatory requirement.
made significant improvement in anti-fraud activities as a direct result of Section 404 work.

However, many of the respondents noted that their companies had not established specific anti-fraud control and reporting measures before Sarbanes-Oxley. Although this does not necessarily indicate that companies lacked anti-fraud controls altogether, many were missing key procedures, including a documented and effective whistle-blower process.

**REVISED COMPENSATION SCHEMES** Many financial frauds have involved perverse compensation schemes in which management incentives were neither consistent with organizational objectives nor conducive to good governance. Nonetheless, the surveyed companies do not appear to have made a connection between compensation schemes and controls over financial reporting (see “Compensation Schemes,” this page). Only 6 percent of the respondents noted improvement in this area, while a clear majority — 62 percent — specifically indicated that they believed no improvement had occurred.

**OTHER CONTROL IMPROVEMENTS IDENTIFIED** In addition to rating specific internal control areas, survey participants were asked to name the five most significant control improvements observed in their organization. This subjective, open-ended format was used to identify improvements that might not have been captured in earlier survey questions.

The improvements noted by respondents can be categorized into seven broad areas (see “Most Significant Control Improvements” on page 59 for a summary breakdown of responses):

- Controls or documentation processes.
- The control environment.
- Computerized controls.
- Risk management processes to analyze controls.
- Increased control awareness by the process owners.
- Management responsibility.
- “Other” — a wide variety of responses that were unique to each participant.

In addition to categorizing the responses, we also examined the first improvement listed by each participant (see “Most Significant Control Improvements [Analyzed by First Listing]” on page 59), believing the first improvement that came to mind may be the most noteworthy.

Overall, the most significant improvements cited by participants relate largely to specific, easily identifiable controls that most companies would be expected to have

---

### Breakdown of Improvements

<table>
<thead>
<tr>
<th>AREAS OF IMPROVEMENT DUE TO SECTION 404 WORK</th>
<th>DISAGREE OR STRONGLY DISAGREE</th>
<th>NEUTRAL</th>
<th>AGREE OR STRONGLY AGREE</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>OVERALL CONTROL ENVIRONMENT</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Audit Committee Involvement and Knowledge</td>
<td>9%</td>
<td>20%</td>
<td>71%</td>
</tr>
<tr>
<td>Monitoring Controls</td>
<td>11%</td>
<td>18%</td>
<td>71%</td>
</tr>
<tr>
<td>Board Knowledge and Role in Controls</td>
<td>10%</td>
<td>24%</td>
<td>66%</td>
</tr>
<tr>
<td>Control Environment</td>
<td>16%</td>
<td>22%</td>
<td>62%</td>
</tr>
<tr>
<td>Internal Auditing</td>
<td>20%</td>
<td>21%</td>
<td>59%</td>
</tr>
<tr>
<td>Greater Acceptance of Codes of Conduct</td>
<td>18%</td>
<td>26%</td>
<td>56%</td>
</tr>
<tr>
<td>Mean Response</td>
<td>14%</td>
<td>22%</td>
<td>64%</td>
</tr>
<tr>
<td><strong>CONTROLS OVER HIGH-RISK ACCOUNTING AREAS</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Closing Process and Unusual Journal Entries</td>
<td>14%</td>
<td>24%</td>
<td>62%</td>
</tr>
<tr>
<td>Accounting Estimates</td>
<td>19%</td>
<td>35%</td>
<td>46%</td>
</tr>
<tr>
<td>Revenue Recognition</td>
<td>28%</td>
<td>42%</td>
<td>30%</td>
</tr>
<tr>
<td>Mean Response</td>
<td>20%</td>
<td>34%</td>
<td>46%</td>
</tr>
<tr>
<td><strong>ROUTINE ACCOUNTING CONTROLS</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Record Retention/Audit Trail</td>
<td>17%</td>
<td>22%</td>
<td>61%</td>
</tr>
<tr>
<td>Asset Safeguarding and Property Accounting</td>
<td>27%</td>
<td>39%</td>
<td>34%</td>
</tr>
<tr>
<td>Expense Classification and Accounting</td>
<td>30%</td>
<td>46%</td>
<td>24%</td>
</tr>
<tr>
<td>Mean Response</td>
<td>25%</td>
<td>35%</td>
<td>40%</td>
</tr>
<tr>
<td><strong>ANTI-FRAUD ACTIVITIES</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Anti-fraud Activities</td>
<td>19%</td>
<td>33%</td>
<td>48%</td>
</tr>
<tr>
<td><strong>COMPENSATION SCHEMES</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Revised Compensation Schemes</td>
<td>62%</td>
<td>32%</td>
<td>6%</td>
</tr>
</tbody>
</table>

---

58
implemented. The following is a brief analysis of the participants’ written comments.

**MANAGEMENT AWARENESS AND OWNERSHIP OF CONTROLS** Approximately half of the survey respondents indicated that their company has gained valuable awareness about internal controls. Comments emphasized that both management and staff now better understand the importance of controls to effective operations.

The same percentage of respondents described embedding internal control ownership into the culture of the organization as a major benefit of Section 404 work. However, two-thirds of participants indicated that control ownership related to Section 404 compliance efforts resides either with the controller or internal auditing, not management.

**IMPROVED DOCUMENTATION** Respondents cited two main components of improved documentation: process, workflow, and controls documentation and documentation of operational effectiveness. The surveyed firms have not only better captured process flows and related controls, they have also updated associated policies, procedures, handbooks, job descriptions, and other pertinent documents. Respondents indicated that the development of adequate documentation will pay future dividends in areas such as training new employees, enabling backfill and succession planning for key positions, and identifying process improvement opportunities.

Before Sarbanes-Oxley, most of the surveyed organizations had little documented evidence — outside the audit function — that existing controls were working. Since undertaking Section 404 work, respondents have observed improvements in the documentation of supervisory review and approval, management actions and decisions, and the investigation and resolution of unreconciled or outstanding items. Developing clear evidence of each key control’s operation has become a more common practice among the surveyed firms.

**STRONGER TONE AT THE TOP** Approximately 30 percent of respondents noted that the importance of tone at the top and other elements of the control environment are now better understood by both executives and employees. Their comments indicate that the board is more aware of its control responsibilities, and the audit committee has taken leadership in supporting improved controls. Moreover, the tone at the top has extended beyond management and into the governance process. Anti-fraud efforts — including the implementation of fraud and ethics hotlines — have been established or strengthened, and audit committees have become more involved in accounting policies, earnings releases, and oversight of processes leading to the evaluation of internal controls.

**STRENGTHENED INFORMATION TECHNOLOGY (IT) CONTROLS** IT control represents a significant challenge to many organizations. Several adverse reports on the quality of internal control cite deficiencies over IT general controls, such as problems with segregation of duties or program change management. Survey respondents from our study have recognized the increased need to actively evaluate IT controls, and several noted that they are using IT auditors for this purpose.

The following responses comprise participants’ most frequently cited enhancements to IT controls:
- Improved information system security.
- Better understanding and improvement of segregation of duties.
- Improved access controls.
- Improved controls over program change management.
- Improved processes for documenting policies, procedures, and controls.

![Most Significant Control Improvements](image1.png)

![Most Significant Control Improvements](image2.png)
Many respondents noted that, as organizations grow and become more technologically dependent, there is an increased need to automate controls and build them into business processes. In light of this growing demand, the challenge for auditors will be to help their organization develop an information, communication, and monitoring system that will identify when built-in system controls are not working within their prescribed tolerances and then signal the need for corrective action.

STRENGTHENING OTHER CONTROLS The remaining control improvements identified varied according to the nature of the participant’s company and industry. Among these “other” improvements, the following five areas were cited most frequently:

- The reconciliation process — at all levels and throughout the overall financial reporting process.
- Specific accounting processes, most often payables and inventory.
- Journal entries and the closing process.

The survey data confirms that auditors are active participants in improving the quality of controls across organizations.

- Segregation of duties.
- Consistency in the definition and application of control adequacy across the organization.

Because each of the improvements relates to a basic accounting control, we were somewhat surprised that Section 404 efforts identified deficiencies in these areas. We suspect that, over time, a combination of decreased emphasis on infrastructure, cost reduction efforts aimed at non-customer-facing functions, and an innate belief that “problems do not happen here,” led to gradual deterioration in the quality of controls at many organizations.

ANALYSIS AND RECOMMENDATIONS

Overall, the survey data suggests that Section 404 work has refocused the audit profession on control procedures over financial reporting. Based on our review of the data, we offer the following recommendations in light of this apparent trend.

- The lack of attention given to compensation plans at participants’ organizations represents a serious oversight, as compensation has clearly proven to be a major motivator of performance. Recent problems in the public accounting profession demonstrate that a well-established ethical code is not sufficient to overcome dysfunctional compensation schemes. Given the clear linkage between fraud and management incentives, compensation plans should be a continuing focus of boards, management, regulators, and legislators. The changes must start at the top of the organization and be carried out consistently throughout the business. Compensation strategies should be reconsidered as organizations assess the design and effectiveness of internal controls over financial reporting for Section 404.

- Many participants indicated that embedding a “control culture” into the organization was the most important control-related area to address going forward. Although many audit committees are likely providing such direction, those responsible for tone at the top need to embrace controls as a key to operational effectiveness, rather than merely a requirement to be met. The Committee of Sponsoring Organizations of the Treadway Commission’s Internal Control—Integrated Framework and Enterprise Risk Management—Integrated Framework provide effective guidelines for management and audit committees interested in establishing a more robust culture of risk management and control.

- Given the nature of recent accounting failures, it is not surprising that some companies may have ignored basic internal controls. The number of respondents that found weaknesses in processes related to recurring journal entries, year-end accounting closing processes, or basic reconciliations highlights the breadth of control deterioration within many large organizations. As companies grow more complex, there is a need for timely, thorough reconciliations — between parent and subsidiary ledgers and between account balances and the supporting detail.

A BRIGHT OUTLOOK

It is too early to say for certain whether the massive effort to document, test, evaluate, and report on internal control is justified by the benefits received. Based on our observation, gleaned through open-ended comments from those on the front line, the process has led to both specific short-term control improvements and, perhaps more importantly, to systematic process changes that will result in long-term control improvements (see “Top 10 Overall Improvements” on page 57). Moreover, the survey results show that companies are already experiencing substantial benefits due to Section 404 internal control evaluation, testing, and assessment process requirements. The majority of respondents are optimistic that Section 404 assessments have helped integrate controls and risk management into the organizational culture and will result in increased effectiveness and efficiency in the future.

Internal auditing represents a fundamental building block of effective internal control processes, and the survey data confirms that auditors are active participants in improving the quality of internal controls across organizations. For companies that have already established a solid control foundation, the next challenge will be to embed control thinking into a process flow that allows internal auditors to work with management toward a philosophy of continuous improvement.

To comment on this article, e-mail the authors at lrittenberg@theilia.org.