



THE FUTURE OF AUDITS

The power of information technology is threatening the audit function.

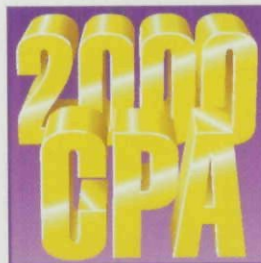
by Robert K. Elliott

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uditing creates tremendous economic value. Companies benefit from a reduced cost of raising capital; if their financial statements were unaudited, they would have to pay more. That is, for debt, they would pay higher interest rates; for equity, they would have to offer their shares at lower prices. If a company with \$10 million in total capitalization (debt plus equity) had to pay 1% to 3% more for capital without an audit, having an audit would save between \$100,000 and \$300,000. For a company with \$10 billion in capital, the comparable annual savings would be \$100 million to \$300 million!

Despite this past and present value, we must be concerned about future value, especially because information technology—increasingly a staple in the financial community—causes great change. Information technology provides alternative information sources to those who traditionally have relied on financial statements and dramatically changes all aspects of preparing, auditing and using financial statements. Although these changes pose serious threats to the economic viability

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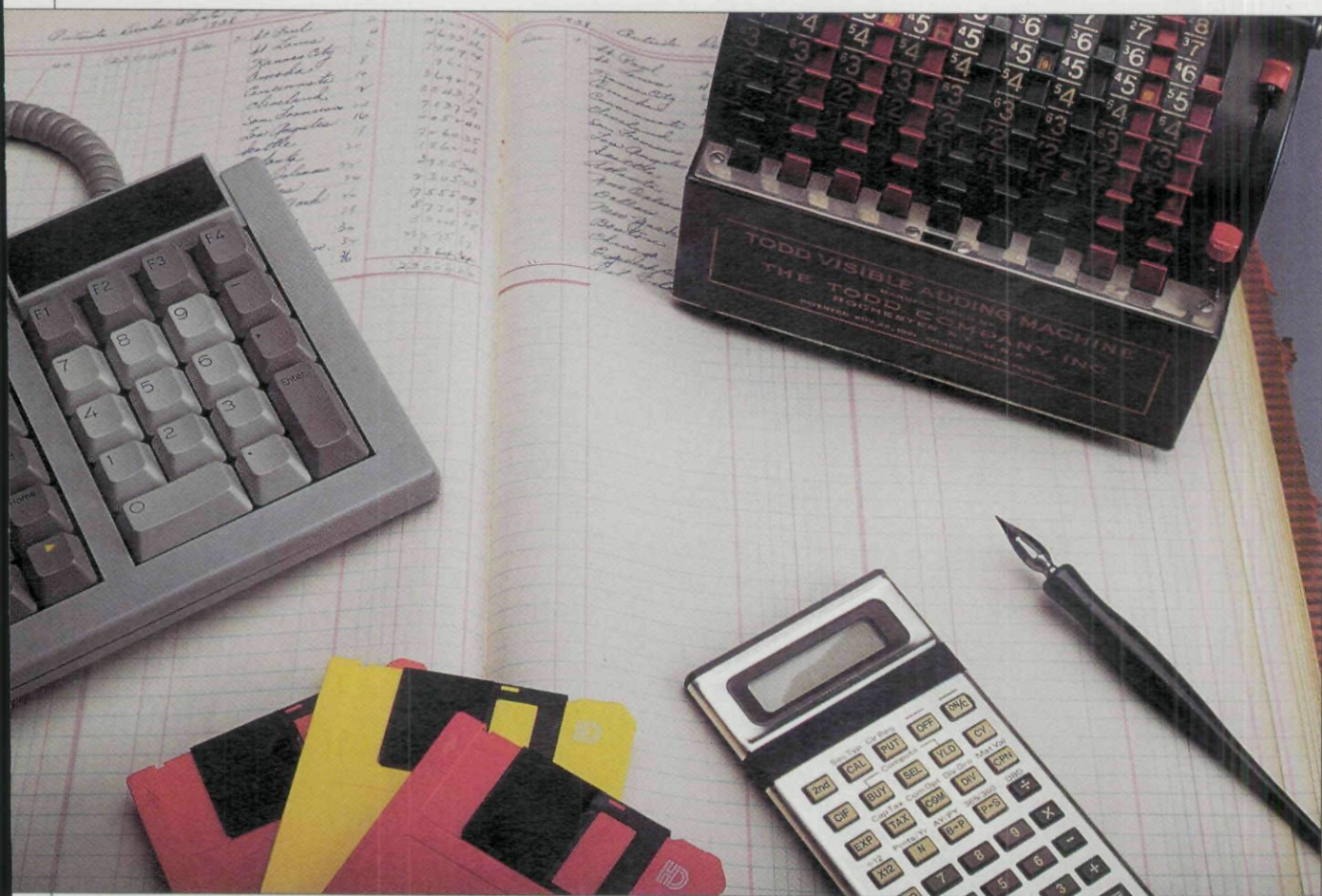


WHAT'S AHEAD IN THE ASSURANCE FUNCTION

of auditing, they also offer CPAs extraordinary opportunities to strengthen the audit function. This article outlines the possibilities.

THE THREAT TO AUDITORS

The increasingly pervasive use of information technology and its growing power threaten auditors in several ways. The first threat relates to the relative importance of financial statements to investors (see exhibit 1, page 76). Early in the century, financial statements represented a large part of the information available to an enterprise's debt and equity investors. As accounting principles improved, the value of financial statements also improved. But, facilitated by information technology, other sources of relevant information are increasingly available; for example, investors can get up-to-the-minute data about companies through public and proprietary databases without waiting for quarterly or annual reports. Moreover, information technology has created new ways for businesses to become more competitive (for example, continuous quality improvement, cycle-time reduction and enhanced vendor and customer relations), the effects of which are not reflected in financial statements. Thus, financial statements describe modern companies less well than they described industrial-era companies. Because the audit franchise is tied to financial statements, CPAs' "mar-



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ket share" for investor-relevant data has been declining.

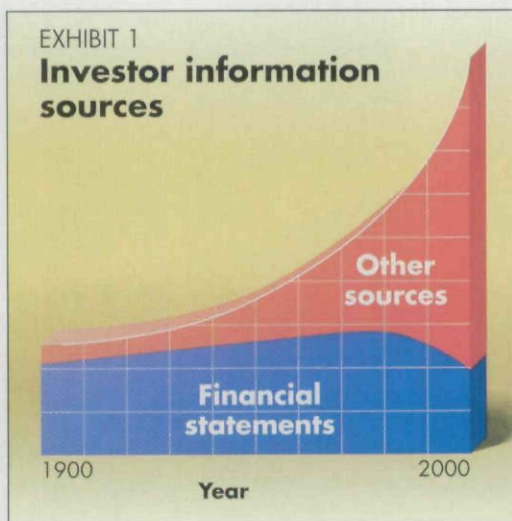
Another threat derives from the fact that financial statements are such a highly compressed version of what happened to an enterprise during the year. An analyst is presented with financial statements that contain, for a typical large company, on the order of 100,000 characters of information, whereas that company's operations database might have on the order of 100 billion characters. Figuratively, the analyst using financial statements as an information source is forced to look at a company through a keyhole that permits only a small part of available information to be seen. And this despite the fact that analysts have access to enormous and growing computing power—sufficient to analyze the vast corporate databases for themselves.

The American Institute of CPAs special committee on financial reporting found investors and creditors were dissatisfied with this impoverished view and were developing ways to circumvent the keyhole effect. Some analysts met with company officials to obtain additional information.

(The special committee's survey of public companies discovered many disclosed to at least some investors additional information, such as data on major investments, strategic information, operating information and financial forecasts.) From the auditor's perspective, these collateral information flows escape audit.

The audit also is threatened by the fact that annual printed financial statements may be destined for history's scrap heap because information technology permits far more frequent and timely reports. Moreover, the capacity to link capital suppliers to company databases is at hand.

Over the last few years, the concept of electronic data interchange (EDI) between suppliers and customers has become a reality (see exhibit 2, page 78). Initially, EDI was intended to save time and money by permitting companies to do business without paper documents. However, EDI also permits companies to wring physical slack out of the supply chain. EDI-linked companies are far better able to anticipate physical flows of products and services. They can produce and ship "just in time," elimi-



nating “just in case” inventory, with the latter’s attendant holding costs and obsolescence risk.

Capital suppliers (banks and investors) are just another class of supplier. They, too, can be linked by EDI. In this way, capital suppliers can anticipate cash needs and assess ability to repay. Such an arrangement can wring slack (manifested as idle cash) out of the capital chain. Both capital costs and liquidity risks can be minimized.

Some observers doubt companies will allow capital suppliers to look into their databases. However, 10 years ago, the same skepticism was voiced about companies’ willingness to permit suppliers to look at production databases—and today many companies refuse to do business with suppliers that cannot link with their databases. The same undoubtedly will be true in the future as companies discover the cost savings of linking with capital suppliers.

Access to a company’s databases will not be unrestricted. Database technology

permits a company to define “views” into its databases that mask all irrelevant information from those with access to the database. For example, within a company, the credit manager has a credit view that permits him or her to see everything relevant to the credit function but nothing else. Similarly, a company could define a banker’s view, a sell-side analyst’s view or a buy-side analyst’s view. (Sell-side analysts work for brokerages; buy-side analysts work for investment companies.) Such views might well be more extensive for parties that have executed nondisclosure agreements with an enterprise, shielding potentially sensitive information from competitors.

Once capital suppliers have real-time access to an enterprise’s databases, they will have little interest in annual financial statements—and, by extension, auditors’ opinions on them—issued well after the entity’s fiscal yearend. What they might be far more interested in is real-time assurance from the auditor that either the information in the enterprise’s databases is reliable or the system itself is highly likely to produce reliable data.

OPPORTUNITIES

The role of information technology, fortunately, is two-edged. Not only does it present threats to traditional audits and auditors but it also creates opportunities.

Information technology has been used by many businesses to get closer to their customers—to provide products and services cheaper, better and faster. Consider a CPA’s customers: information users, people who make business decisions, debt and equity investors and business managers. If the information they use to make decisions is deficient—unreliable, irrele-

EXECUTIVE SUMMARY

■ INFORMATION TECHNOLOGY IS dramatically changing the way financial statements are prepared, audited and used. Alternative information now is available to those who traditionally relied on financial statements. While these changes pose serious threats to the economic viability of auditing, they also create new opportunities for CPAs to pursue.

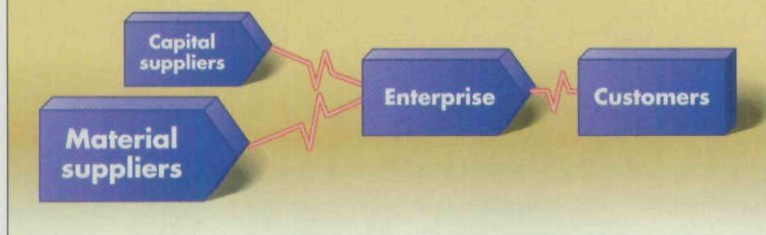
■ FINANCIAL STATEMENTS ARE NOT as important to investors as they once were. As technology changes the way companies create value, financial statements describe

modern companies less well than they described industrial-era companies. Because the audit function is tied to financial statements, CPAs’ role in providing investor-relevant data has declined.

■ THE DIMINISHING ROLE OF THE auditor creates a need to redesign and refresh the audit product. The American Institute of CPAs has appointed a special committee on assurance services to see what new services auditors may be able to provide to better serve the information needs of financial statement users.

EXHIBIT 2

Integration of physical and capital supply chains



vant or out-of-date—decisions based on it may not be optimal. High-quality information is

- **Reliable** → representationally faithful, precise, complete and unbiased.
- **Relevant** → able to make a difference in decisions.
- **Credible** → believable to users.
- **Timely** → current enough to be useful (often meaning continuous).

The traditional audit function focuses on reliability. Together with the auditor's independence and competence, it provides credibility. But customers also could benefit from relevance and timeliness, which represent additional dimensions of service auditors, empowered by information technology, might provide.

The capacity of information technology to assure timeliness is obvious. But relevance merits explanation. Decision makers are increasingly connected to on-line information sources that drown them in data. It is difficult to sort out which data are relevant and to be certain the most relevant data have been obtained. CPAs have a nat-

ural advantage in helping business decision makers navigate these seas of data and gather what will best support their decision needs. CPAs also can help interpret information and even supply some relevant information themselves.

As in other economic sectors, a penetrating analysis of customer needs can help in redesigning and refreshing the audit product. But who should undertake this redesign? In most businesses, it is the individual enterprise's job. Some years ago, Ford Motor Co. executives noticed that while the Fords in the showrooms were covered with cobwebs, there were lines waiting to get into Honda showrooms. They summoned their designers and ordered them to redesign the products to better appeal to customers—with spectacular results.

But in the CPA profession, a firm cannot compete by offering clients financial statements prepared according to a better set of accounting principles or an audit prepared in accordance with a better set of auditing standards. These standards are set at the institution level and individual CPAs are prohibited from deviating from them. Thus only the Financial Accounting Standards Board and the American Institute of CPAs can redesign and revitalize the audit product. Fortunately, the FASB, in conjunction with the AICPA special committee on financial reporting, is looking anew at accounting standards. Soon, the AICPA will take a fresh look at auditing standards.

Accordingly, it might be helpful to think about the economic space in which auditors operate to see where opportunities may exist. Exhibit 3, at left, illustrates this. The green cubes depict fundamental business activities. At left, real-world transactions are effected. Enterprises that execute the transactions process information about them and prepare financial statements. These are analyzed to develop investment advice, and investors make decisions about whether to commit, or continue to commit, funds to the enterprise.

The pink-shaded bands below these activities depict the roles of three important parties: the company, financial analysts and investors. The light blue box above the activities depicts the CPA's relative space. CPAs come in near the end of the financial statement preparation cycle and express an opinion on the statements—the end of their involvement.

The darker blue shaded areas adjacent to the CPA box represent possible changes

EXHIBIT 3

Opportunities to expand the assurance function

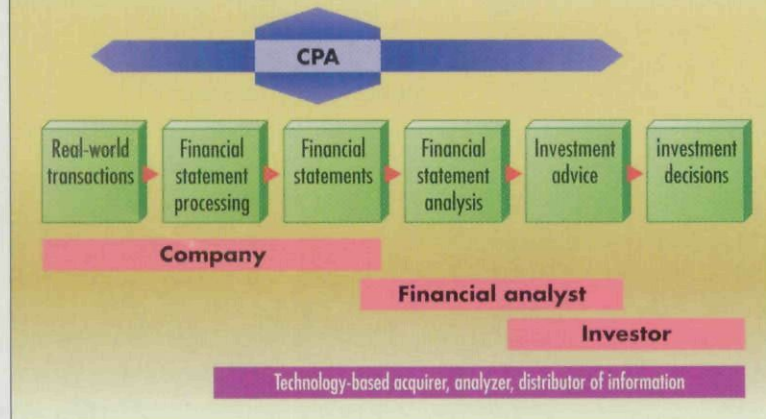
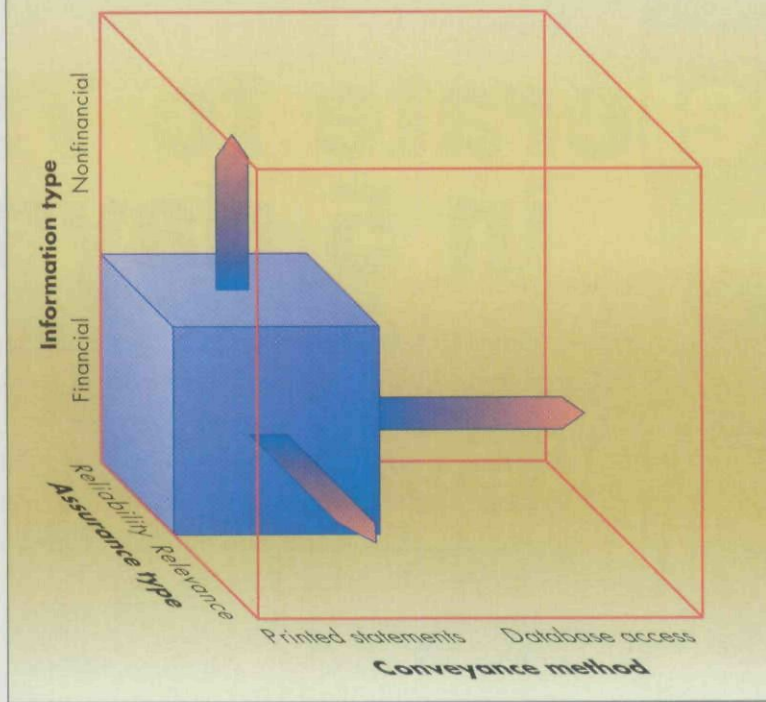


EXHIBIT 4

Assurance function opportunities



in the CPA's space. The vertical extensions represent application of the attest function to an array of information broader than just financial information. For example, the special committee on financial reporting plans to recommend that enterprises increase their disclosures of nonfinancial information; these new types of information could be audited.

The horizontal extension to the left depicts an extended role wherein CPAs might—through the use of information technology—assume responsibility for creating or summarizing information at a much earlier point in the information stream. Such a change would put CPAs in competition with their clients for the information-processing function.

The horizontal extension to the right in exhibit 3 depicts an extended role wherein CPAs might interpret financial statements and add qualitative information about an enterprise and its prospects. Such a change would put CPAs in competition with financial analysts for interpreting information.

The purple-shaded bar at the bottom of the exhibit depicts the emergence of a new player—a capital-intensive information intermediary that, enabled by information technology, can perform a number of the functions and compete with the company,

the CPA, the analyst or all three. If CPAs perform all these roles, the new player's role will be diminished. If CPAs perform these roles well, a new player may not emerge at all.

The possible extensions of CPA services in exhibit 3 might be questioned on the grounds the new services would be inconsistent with existing rules and regulations. The question begs another: What is the ideal relationship between the prospect of new services and existing rules and regulations related to such services? The two must be considered together and, if necessary, rethought in accordance with the interests of the profession and the public.

A question also might be raised on the grounds of the CPA's competence. However, there is no reason CPA firms, convinced of the range of available opportunities, cannot and will not seek and employ the relevant portfolio of skills to fulfill such a broader role. If the opportunities are attractive, competence will be achieved. The public will be protected because no services could be performed within the scope of professional ethics without adequate competence and because standards, if they are developed, undoubtedly will cover technical proficiency.

CONCEPTUAL BASIS

At this time there is no set of professional standards or even an accepted conceptual framework for all of the extensions of CPA services in exhibit 3 (although existing attestation standards provide a basis for broadening the CPA's coverage to certain nonfinancial information). The issue remains to be addressed, but a start has been made.

In May 1993, a group met in Santa Fe under AICPA auspices to consider the issues discussed in this article. The group included CPAs from small and large firms in public practice, regulators and scholars. They concluded the profession should broaden the current attest function to take advantage of the opportunities (and avoid the threats) described above.

Under the current definition, an attest service involves the expression of a written conclusion (a report on an examination or review) on an assertion (typically the financial statements) of another party (the client). In keeping with the expanded definition of information quality above, the Santa Fe group proposed a broader definition. Since it goes beyond attestation, the group proposed it be named the *assurance function* (whereby CPAs provide assur-

ance on the quality of decision-making information). As noted above, quality includes not only reliability but also relevance. As also noted above, information may come from paper statements or directly from databases. Thus, the group proposed the following definition of the assurance function: "An assurance service involves the expression of a written *or oral* conclusion on the reliability *and/or relevance* of information *and/or information systems*" (new elements are italicized).

Graphically, the opportunities in the existing audit function are depicted in the small blue cube in exhibit 4, page 80. The three dimensions of the cube depict the key aspects of the current function: the type of information that is subject to audit (financial information), the method by which the information is conveyed (printed financial

statements) and the type of assurance provided (assurance on reliability).

The existing attest function permits an extension along the information-type axis because it encompasses attesting to nonfinancial data. However, the extent of such reports is modest, limited partly by litigation concerns. (For more on litigation threats, see the sidebar on this page.)

The proposed assurance function, together with the existing attest function, would permit expansion along each of the cube's three dimensions. In addition to reporting on nonfinancial information, CPAs also could offer assurances on the contents of databases (or the systems that produce the data) and on the information's relevance. As the larger cube in exhibit 4 shows, the extensions along all three dimensions offer many opportunities to create more value for decision makers. Extensions of the application of CPAs' existing skills offer the profession real growth opportunities, despite the saturation of the U.S. market for audits of financial statements.

It is not clear whether there is, or will be, a market demand for these new services or, if there is, whether such services in some way will undercut the economic value of the current audit function. The AICPA, following up on the conclusions of the Santa Fe group, appointed a special committee on assurance services to address these issues—to lay out a future framework for the attestation-assurance function and prepare the profession to seize its opportunities to serve the public better. The committee is expected to issue its report in 1996.

One attractive aspect of an expanded attest function is it could refresh the service offerings of all CPAs in public practice, not just the ever-shrinking list of firms offering audits of financial statements due to litigation concerns. Every CPA's clients have a need for better decision-making information.

SERIOUS THREAT— EXCITING OPPORTUNITY

Information technology presents serious threats to the audit function but also offers CPAs exciting opportunities to develop valuable new services. These opportunities can be realized only by institutional change, and the central institution—the AICPA—has recognized the threats and opportunities and initiated a process to identify more clearly, and to evaluate, the options that lie ahead. ■

THE LITIGATION PROBLEM

The threat of litigation has frightened many CPAs away from opportunities to expand the attest function. Performing some of the services proposed in this article could lead to even more litigation than the accounting profession currently faces. Yet there are three reasons to proceed with the development of these opportunities:

1. The profession is making concerted efforts to achieve a reasonable liability standard for attest work, and improvements are likely.
2. Developing these opportunities will take time—time during which technology-based competitors may emerge.
3. The proposed services should minimize litigation, much of which reflects the disappointment of investors who lost money on investments because they had insufficient warning of risks. The proposed services would help arm investors with more relevant and timely information to minimize unexpected losses and thus have a salutary effect on litigation.

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