



A Global Look at IT Audit Best Practices

There is no disputing technology's role in business today as an enabler of virtually every process and function. With this enablement and the advantages IT brings also come global risks – security, cyberattacks, privacy issues, data breaches, governance, asset management and much more. The critical question we ask is: Are IT audit practices keeping pace in order to assess, monitor and mitigate critical risks coupled to a technology-enabled business? This is what ISACA and Protiviti set out to determine in conducting the fourth annual **IT Audit Benchmarking Survey**.





EXECUTIVE SUMMARY

There is no disputing technology's role in business today as an enabler of virtually every process and function. With this enablement and the advantages IT brings also come global risks – security, cyberattacks, privacy issues, data breaches, governance, asset management and much more.

We know companies around the world, from multinational conglomerates to smaller national organizations, now leverage technology tools and processes to the fullest extent possible. The critical question we ask is: Are IT audit practices keeping pace in order to assess, monitor and mitigate critical risks coupled to a technology-enabled business?

This is what ISACA and Protiviti set out to determine in conducting the fourth annual **IT Audit Benchmarking Survey**. So are companies keeping pace? The answers vary – organizations have made notable strides in establishing IT audit best practices and bringing these efforts more to the forefront for boards of directors and executive management. Yet there are significant gaps and areas for growth.

Our 5 key findings from this year's study:

- 1. Cybersecurity and privacy are primary concerns** – This area is rated as the top technology challenge and also may be driving trends such as increasing involvement from audit committees in IT auditing activities.
- 2. Companies face significant IT audit staffing and resource challenges** – Not only is this issue ranked among the top technology challenges, but it is an undercurrent in many of the survey findings, including the use of external resources to support IT auditing efforts.
- 3. Audit committees, as well as organizations in general, are becoming more engaged in IT audit** – More organizations have a designated IT audit leader, and over the past three years, the percentage of IT audit leaders that regularly attend audit committee meetings has doubled.
- 4. IT audit risk assessments are not being conducted, or updated, frequently enough** – Given the dynamic nature of technology change and risk, it is surprising to find that some companies still do not conduct IT audit risk assessments. Not only must IT audit risk assessments be performed, but they also should be reviewed and, if necessary, updated on a quarterly basis or more frequently. However, a majority of companies are conducting these reviews annually or even less frequently.
- 5. Room for growth in IT audit reports and reporting structures** – A majority of companies do not issue enough IT audit reports, and many still have the IT audit leader in a less-than-ideal reporting structure.

Note: We had more than 1,300 respondents from around the world participate in this year's study. As a result, we are pleased to present detailed findings not only by company size but also by region. For the latter, however, year-over-year (YOY) data comparisons are not available.



METHODOLOGY

ISACA and Protiviti partnered to conduct the fourth annual IT Audit Benchmarking Survey in the third quarter of 2014. This global survey, conducted online, consisted of a series of questions grouped into five categories:

- Today's Top Technology Challenges
- IT Audit in Relation to the Internal Audit Department
- Assessing IT Risks
- Audit Plan
- Skills and Capabilities

More than 1,300 (n = 1,330) executives and professionals, including chief audit executives as well as IT audit vice presidents and directors, completed our online questionnaire. One in three participants are from organizations with US\$5 billion or more in annual revenue, and more than half of all respondents come from organizations with greater than US\$1 billion in annual revenue. Additional respondent demographics can be found on pages 39-40.

Since completion of the survey was voluntary, there is some potential for bias if those choosing to respond have significantly different views on matters covered by the survey from those who did not respond. Therefore, our study's results may be limited to the extent that such a possibility exists. In addition, some respondents answered certain questions while not answering others. Despite these inherent limitations, we believe the survey results provide valuable insights regarding IT audit practices in organizations today.



RESULTS AND ANALYSIS

Today's Top Technology Challenges

We asked our respondents, in a verbatim question, to list what they view to be the **top five** technology challenges facing their organizations this year. Their responses indicate a focus on many of the areas that are much-discussed concerns for IT organizations and audit functions today – IT security and privacy, cybersecurity, and regulatory compliance among them. There also is a notable focus on resource and staffing challenges as well as on budgets and controlling costs.

2014	YOY Trend*	2013	2012
IT security and privacy/ cybersecurity	↔	IT security: data security, cybersecurity and mobile security	Information security (including data privacy, storage and management)
Resource/staffing/skills challenges	↑	IT governance	Cloud computing
Emerging technology and infra- structure changes: transforma- tion, innovation, disruption	↔	Lack of successful ERP implementations, development and knowledge	Social media
Regulatory compliance	↑	Social media	Risk management and governance
Budgets and controlling costs	↑	Vendor management	Regulatory compliance
IT governance and risk management	↔	Cloud computing	Technology upgrade and integration
Big data and analytics	↑	Emerging technology and infrastructure changes	Resource management
Vendor, third-party and outsourcing risks	↔	Big data and analytics	Infrastructure management
Cloud computing/virtualization	↔	PCI compliance	Fraud monitoring
Bridging IT and the business	↑		Business continuity/disaster recovery

* Indicates trend change from 2013 results.

Commentary

These results are consistent with other studies from Protiviti and ISACA. Specifically, in Protiviti's 2014 IT Priorities Survey, developing and maintaining security and privacy standards, monitoring security events, and integrating and aligning IT planning and business strategy rank among the top priorities for CIOs and IT professionals to address.¹ The study also revealed that nearly two out of three organizations are undergoing a major IT transformation, which undoubtedly creates challenges in numerous areas, including but not limited to those listed above.

FACTOIDS

- Two out of three organizations today are undergoing a major IT transformation (Source: Protiviti 2014 IT Priorities Survey)
- One in three companies do not have a written information security policy, and more than 40 percent lack a data encryption policy (Source: Protiviti 2014 IT Security and Privacy Survey)

From an IT audit perspective, an underlying theme emerging from these challenges is that technology is always changing and thus it is difficult to maintain a handle on it. High-profile data breaches in many well-known organizations are keeping IT security top-of-mind and heightening expectations – from the board, executives and other stakeholders – for sound security measures that involve the IT audit function. The development of a comprehensive cybersecurity framework should be driving compliance activities.

Bottom line, it is imperative for IT auditors to keep their skills current in areas including, but not limited to, IT security, cloud computing and storage, outsourcing and vendor assurance, data analytics, computer-assisted auditing tools, and more.² Clearly, there is a trend toward a greater need for enhanced skills and resources around these technologies and areas, much more so than in the past.

According to results from ISACA's 2013 IT Risk/Reward Barometer Survey:³

- 38 percent of respondents saw increased security threats and 28 percent saw data privacy as the biggest governance issues regarding IT.
- 45 percent of respondents saw the risks outweighing the benefits of using bring-your-own-device (BYOD) in their organization, 27 percent saw the benefits outweighing the risks, and 28 percent saw the risks and benefits as being equal. For those that do not allow BYOD, the concern about employees handling highly sensitive data was held by 39 percent, followed by 33 percent concerned about the fear of losing control of data.
- 35 percent of respondents viewed big data as having the potential to add significant value to their enterprise, while 20 percent believed it too early to determine the value.

¹ For more information, visit www.protiviti.com/ITpriorities.

² For additional information, read Protiviti's *Assessing the Top Priorities for Internal Audit Functions*, available at www.protiviti.com/IASurvey.

³ For additional information and to view the results of this survey, visit www.isaca.org/pages/2013-risk-reward-barometer.aspx.

IT Audit in Relation to the Internal Audit Department

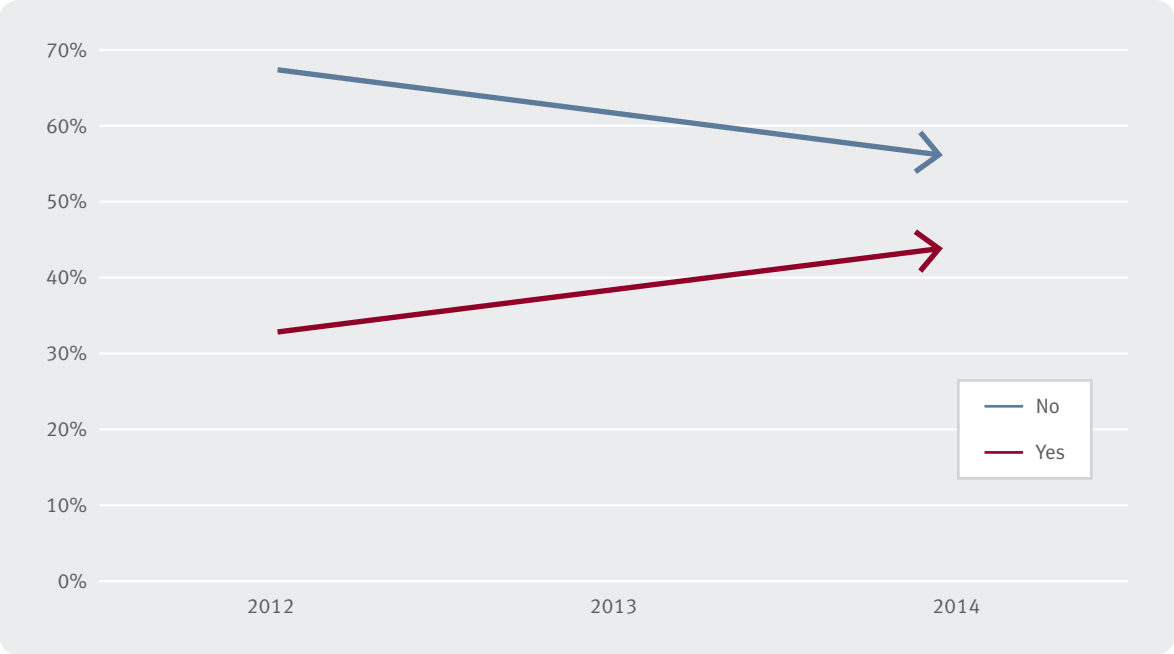
ABOUT THE IT AUDIT LEADER

Do you have a designated IT audit director (or equivalent position)? (“Yes” responses shown)



50% have an IT audit director or equivalent position.

Overall

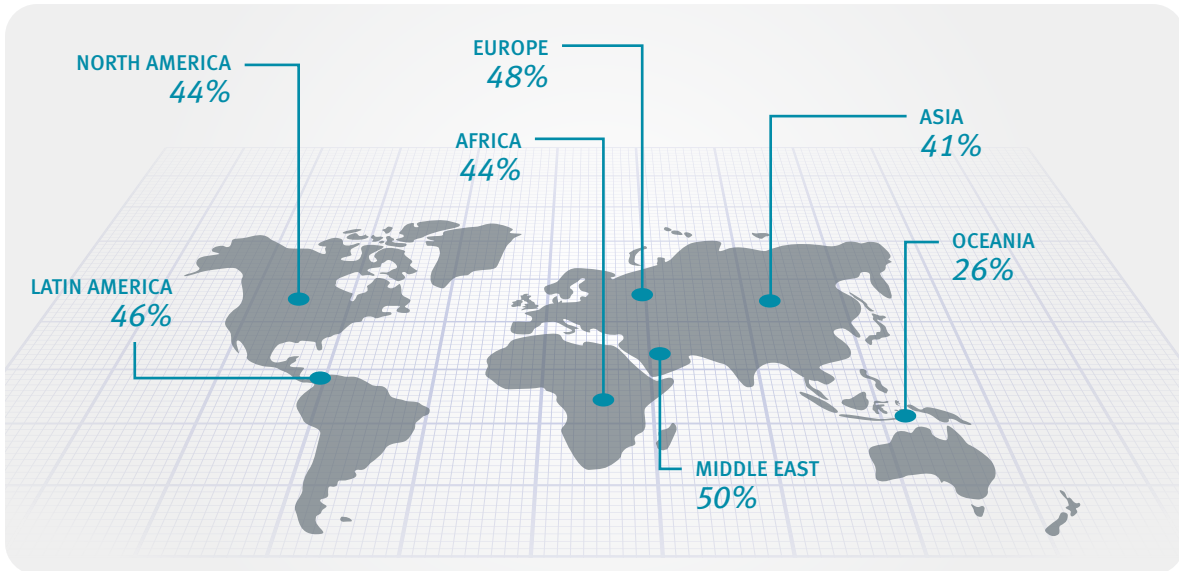


Company Size (Annual Revenue)

	2014	2013	2012
Greater than US\$5 billion	59%	52%	56%
US\$1 billion - US\$4.99 billion	37%	36%	25%
US\$100 million - US\$999.99 million	39%	32%	23%
Less than US\$100 million	37%	27%	31%

Do you have a designated IT audit director (or equivalent position)?

Region (“Yes” responses)



Commentary

It is positive to see rising percentages of organizations that have a designated IT audit director or equivalent position, particularly among smaller companies. This is an indicator that executive management increasingly recognizes that IT security, governance, outsourcing, the cloud and the threat environment are among numerous critical IT issues that need to be assessed and addressed as part of broader risk assessment and risk management efforts. Over time, we expect to see these percentages continue to rise as more organizations designate an IT audit director.

This said, none of the percentages in the tables and charts above is exceptionally high. Many companies still lack this role – this could be interpreted as somewhat surprising, particularly for large companies (those with US\$5 billion or greater in annual revenue). But it’s also important to note that many of these companies may have IT audit functions and resources, even if they do not have a specific IT audit director in place. In these cases, IT audit staff members may report directly to the CAE.

FACTOID

59

Percentage of large public companies that have an IT audit director or equivalent position.

To whom within the organization does your IT audit director report?*

Region

	Africa	Asia	Europe	Latin America	Middle East	North America	Oceania
CAE	64%	51%	70%	55%	65%	65%	70%
A director under CAE	18%	7%	8%	21%	6%	10%	10%
CIO	0%	11%	3%	10%	18%	7%	10%
Report through some other compliance function	18%	31%	19%	14%	11%	18%	10%

* Respondents are those organizations that have a designated IT audit director (or equivalent position).

Commentary

The IT audit director should report to the CAE or a director under the CAE. It is not advisable for this role to report to the CIO because the IT audit director role and responsibilities will lack independence and objectivity. IT internal audit should not be operating as the first or second line of defense. As the most prevalent technology risks continue to permeate the organization and become more central to daily business and more complex and challenging, it is increasingly important to have independent assurance from someone external to the CIO's organization, while still supporting the organization's end goals and objectives.



In addition, given the internal audit function's focus on managing and monitoring risks and controls, the IT audit director ideally should not report through some other compliance function, as the role likely will be limited in scope.

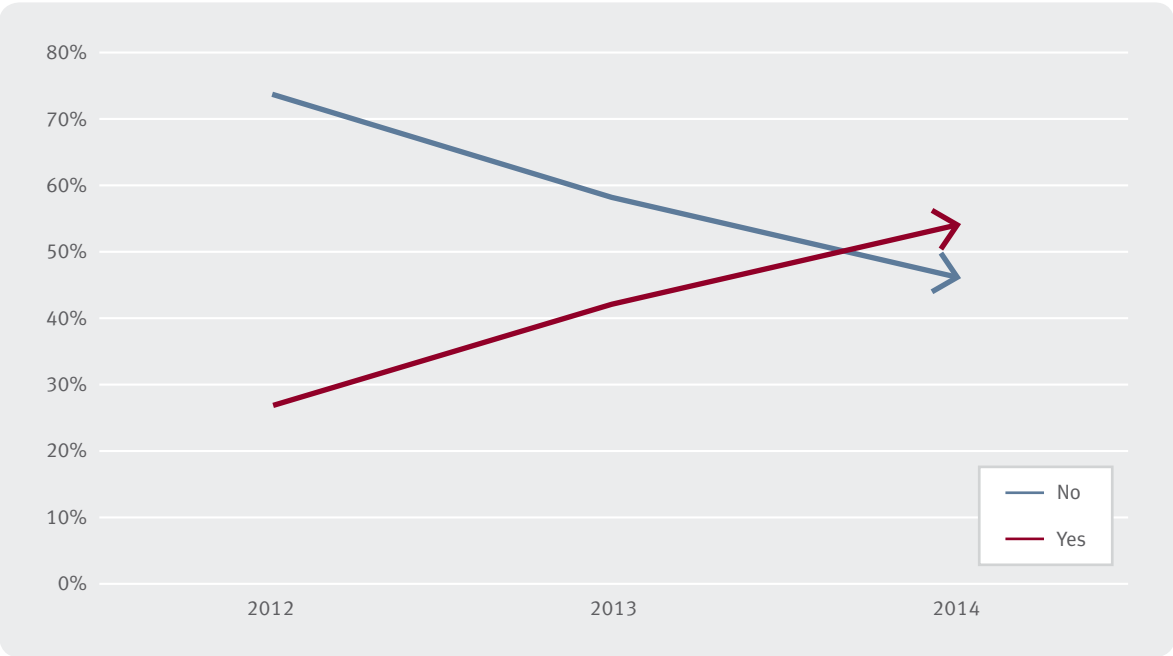
The results by company size (not shown) were relatively consistent, as were the year-over-year results for this breakdown, with a strong majority reporting that the IT audit director reports to the CAE or a director under the CAE.

“THE BIG CHALLENGE FOR THE IT AUDIT FUNCTION IS GETTING THE RIGHT PEOPLE WITH THE RIGHT LEVEL OF SKILLS. [ACHIEVING] THE BALANCE BETWEEN IT AND BUSINESS KNOWLEDGE IS CRUCIAL.”

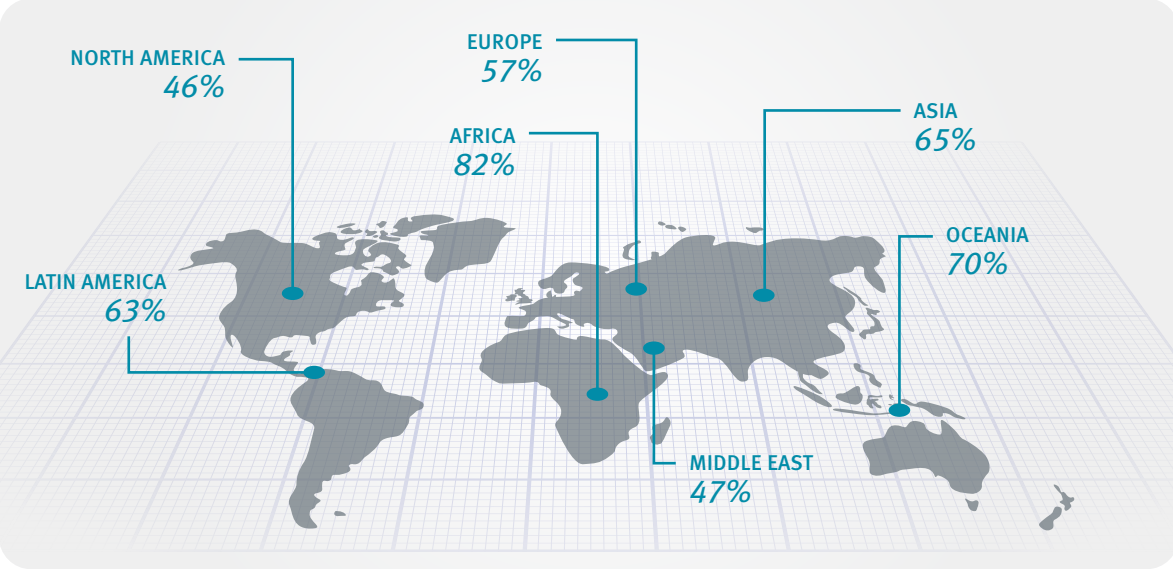
– IT audit director, large energy company, Europe

Does the IT audit director (or equivalent position) regularly attend audit committee meetings?

Overall



Region (“Yes” responses)



Commentary

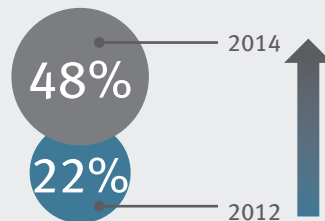
It is positive to see significant growth over the past three years in the IT audit director's participation in audit committee meetings, and a 12 percent jump this year. This links closely to today's technology challenges identified by our respondents. With cybersecurity, innovation and regulatory compliance concerns among the top challenges for organizations and their IT auditors, it is understandable to find growing interest from audit committee members, who want to understand how these risks are being assessed and managed. Audit committees are likely asking more and more questions regarding privacy breaches, security incidents and other events – particularly within public companies, where disclosure is a regulatory requirement. It is likely the CAE is finding it beneficial to have the IT audit leader at these meetings to go over these matters in detail with the audit committee.



In 82% of organizations, the IT audit director regularly attends audit committee meetings.

FACTOID

Number of large companies in which the IT audit director regularly attends audit committee meetings.



“THE KNOWLEDGE OF IT RISKS AND BUSINESS KNOWLEDGE IS CRUCIAL AS A REQUIREMENT FOR THE IT AUDITOR OF THE FUTURE. INFORMATION SECURITY, CYBER AND DATA PRIVACY ARE ALSO AREAS WHERE AUDITORS NEED TO DEMONSTRATE EXPERIENCE.”

– IT audit director, large energy company, Europe

IT AUDIT RESOURCES

How are IT audit resources are organized within your organization?

Company Size (Annual Revenue)

	Greater than US\$5 billion			US\$1 billion - US\$4.99 billion			US\$100 million - US\$999.99 million			Less than US\$100 million		
	2014	2013	2012	2014	2013	2012	2014	2013	2012	2014	2013	2012
Part of the internal audit department, not a separate function	55%	53%	56%	59%	63%	62%	59%	62%	61%	36%	34%	42%
Part of the internal audit department, but considered to be a separate function	35%	37%	30%	27%	21%	20%	23%	13%	17%	23%	22%	35%
Embedded in the organization as a separate audit function, e.g., line-of-business teams, process teams, etc.	8%	5%	8%	8%	3%	2%	12%	3%	8%	30%	6%	0%
No IT audit resources are available within the organization	2%	5%	6%	6%	13%	16%	6%	22%	14%	11%	38%	23%

Region

	Africa	Asia	Europe	Latin America	Middle East	North America	Oceania
Part of the internal audit department, not a separate function	52%	46%	48%	35%	38%	62%	52%
Part of the internal audit department, but considered to be a separate function	32%	31%	32%	41%	44%	22%	21%
Embedded in the organization as a separate audit function, e.g., line-of-business teams, process teams, etc.	14%	16%	16%	18%	15%	10%	7%
No IT audit resources are available within the organization	2%	7%	4%	6%	3%	6%	20%

Commentary

Though still a relatively low percentage, there is a notable year-over-year jump in the number of organizations in which IT audit resources are embedded as a separate audit function within different departments and lines of business. Depending on the role IT audit plays within the department, there is a natural evolution to bring portions of the function closer to the business. For example, it is common to embed IT auditors into integrated teams to perform applications controls testing or user security testing around a business process. It is also common for IT auditors to take on the role of performing data analytics for the department, which naturally requires tighter integration with the process teams.

However, even when such models are deployed, it is still important to have a team of people within the department that have the skills and capabilities to audit the infrastructure provided by the IT department. In addition, any IT audit function that is embedded in other parts of the organization should raise concerns with regard to independence. And with regard to such IT audit functions, a key point to address is how they ensure synchronization and alignment of risk assessment and scope coverage.

Of note, The IIA's International Standards for the Professional Practice of Internal Auditing mandate that internal audit assess technology governance. This underscores the need for IT audit to be part of the internal audit function.

“[OUR] IT AUDIT ORGANIZATIONAL STRUCTURE COMPRISES EXPERTS AND CONSULTANTS AS WELL AS PURE AUDITORS ... FOR QUALITY IT AUDITS, WE SHOULD HAVE AN IT SECURITY EXPERT, IT GOVERNANCE EXPERT, IT RISK EXPERT AND IT AUDITORS. THE PERCENTAGE OF AUDITORS SHOULD BE AROUND TWO-THIRDS OF OVERALL PERSONNEL ALLOCATED TO THE IT AUDIT.”

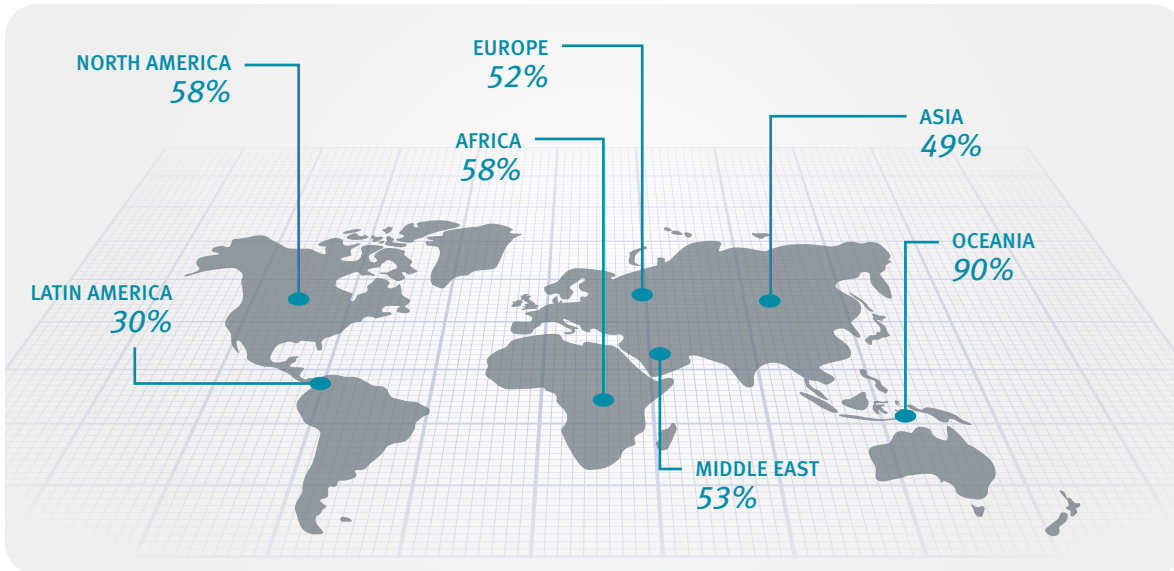
– Chief audit executive, small financial services organization, Europe

**Do you use outside resources to augment/provide your IT audit skill set?
(Multiple responses permitted)**

Company Size (Annual Revenue)

	Yes, we use guest auditors			Yes, we outsource the IT audit function			Yes, we use co-source providers			Do not use outside resources		
	2014	2013	2012	2014	2013	2012	2014	2013	2012	2014	2013	2012
Greater than US\$5 billion	21%	23%	30%	4%	7%	3%	35%	46%	38%	40%	37%	42%
US\$1 billion - US\$4.99 billion	17%	15%	13%	5%	12%	8%	34%	44%	45%	44%	36%	43%
US\$100 million - US\$999.99 million	21%	23%	19%	7%	20%	13%	25%	35%	38%	47%	31%	34%
Less than US\$100 million	18%	19%	12%	10%	22%	24%	17%	19%	20%	55%	47%	48%

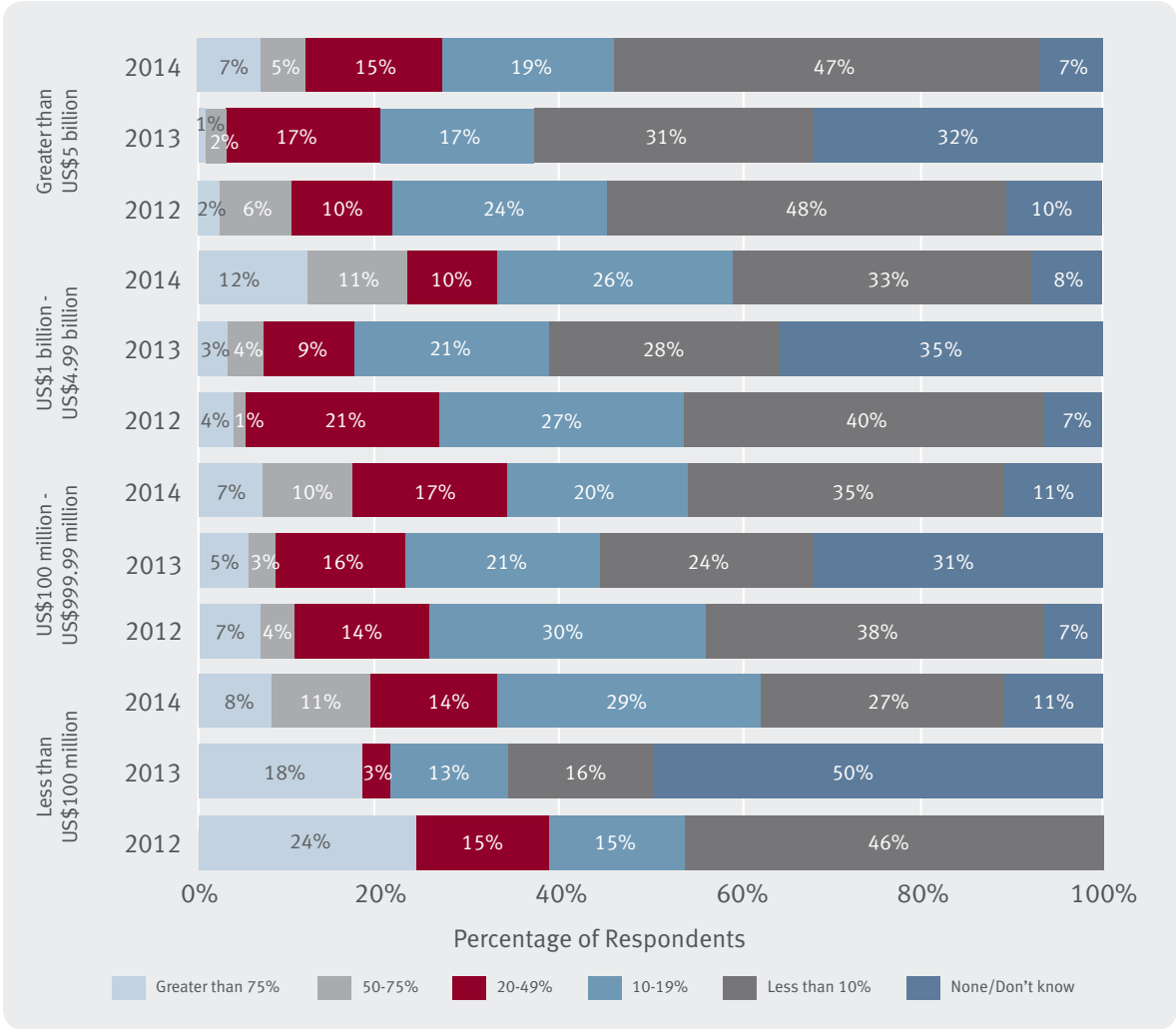
Region (“Yes” responses)



Commentary

Interestingly, there is an increase in the number of smaller companies that are not using outside resources to supplement their IT audit skill set. Regionally, there is a wide variation, with the majority of Oceania-based organizations using outside resources in some manner for IT audit, while less than one in three organizations in Latin America rely on resources outside the company. One possibility for the latter results may be reduced availability of skills and qualified resources in the region.

What is the percentage of outside IT audit resource hours used compared to total audit hours?



Commentary

Among larger organizations, there are notable year-over-year increases in the percentages of outside audit resource hours used compared to total audit hours. For example, in last year’s survey, among 3 percent of large companies (greater than US\$5 billion in annual revenue), half or more of the total audit hours included hours put in by outside IT audit resources. This year’s results show this rate has jumped to 12 percent. With the plethora of recent high-profile data breaches as well as the limited availability of resources in the marketplace, this increase makes sense. Board members and executive management are becoming more involved in providing IT strategic direction and ensuring IT-related risks are managed appropriately. Involving IT audit resources in this effort is best practice.

In smaller companies, outside resources spend less time on IT audit efforts, which could be related to staffing and resource challenges required to organize these activities. This, too, is understandable. IT audit resources are limited and smaller companies may have less access to these resources at the moment due to current market demands. While this is understandable, failing to audit an area of the business is not the best approach – these organizations should consider solutions that would enable a more effective IT audit process.

Please indicate the primary reason your company uses outside resources to augment IT audit skills.

Company Size (Annual Revenue)

	Greater than US\$5 billion	US\$1 billion - US\$4.99 billion	US\$100 million - US\$999.99 million	Less than US\$100 million
In-house internal audit department lacks specific skill sets	20%	18%	23%	16%
Variable resource modeling	12%	13%	8%	19%
Different/outside perspectives	16%	20%	18%	19%
Lack of resources	27%	28%	26%	23%
Provides the opportunity for people to learn from the experiences of outside resources (e.g., knowledge transfer, etc.)	25%	21%	25%	23%

Region

	Africa	Asia	Europe	Latin America	Middle East	North America	Oceania
In-house internal audit department lacks specific skill sets	24%	22%	21%	13%	20%	19%	18%
Variable resource modeling	12%	10%	11%	17%	8%	12%	19%
Different/outside perspectives	12%	21%	17%	15%	16%	19%	21%
Lack of resources	24%	25%	26%	27%	28%	28%	22%
Provides the opportunity for people to learn from the experiences of outside resources (e.g., knowledge transfer, etc.)	28%	22%	25%	28%	28%	22%	20%

Commentary

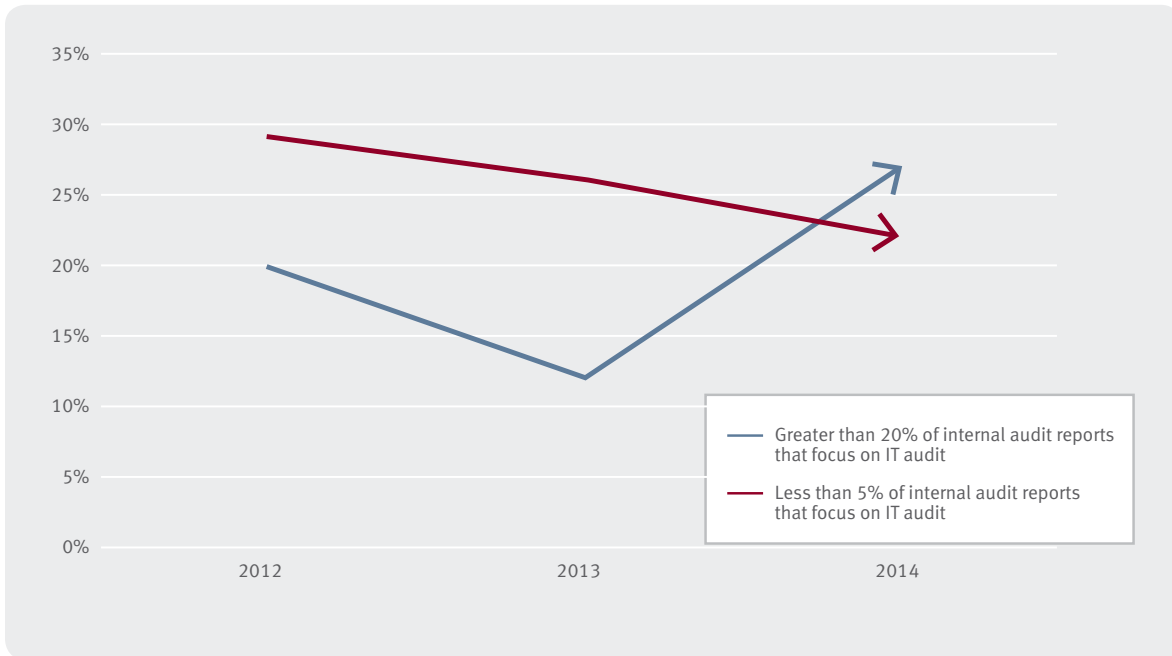
Across every region and company size, lack of resources ranks as the top reason why organizations are using outside resources to augment their IT audit skills – and in fact, the percentages are very consistent. These findings are in line with the top technology challenges we reported earlier in our report – resource challenges and finding IT talent rank as key concerns for organizations.

Leveraging the right skills and IT audit specialists is imperative to ensure a truly risk-based approach that is relevant to the IT challenges facing the organization today. The lack of necessary skills can often predispose internal audit functions to focus on traditional areas where they have the capability to deliver, rather than the most critical and important value-adding areas.

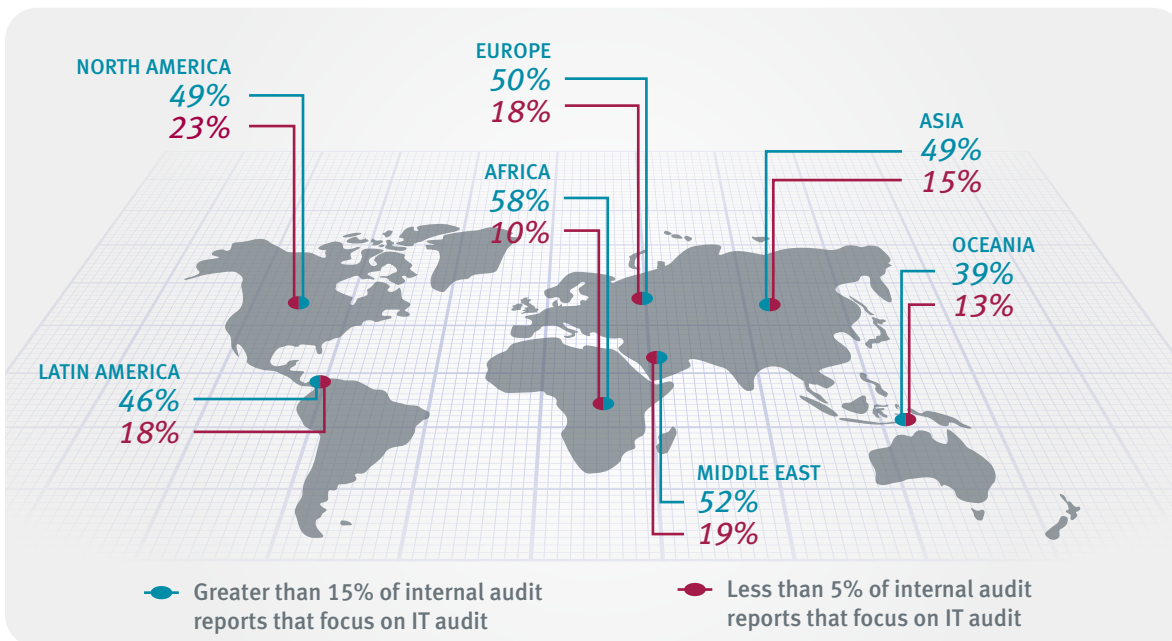
REPORTING

Please indicate the number of IT audit reports issued as a percentage of the total reports issued by the internal audit department.

Overall



Region



Please indicate the number of IT audit reports issued as a percentage of the total reports issued by the internal audit department.

Company Size (Annual Revenue)

	Greater Than 20%	YOY Trend	15-20%	YOY Trend
Greater than US\$5 billion	25%	↑	24%	↓
US\$1 billion - US\$4.99 billion	28%	↑	23%	↑
US\$100 million - US\$999.99 million	29%	↑	21%	↔
Less than US\$100 million	26%	↑	19%	↑

Commentary

The trends are positive in that more organizations are issuing a higher percentage of IT audit reports relative to their total population of audit reports. In many ways, this is a recognition among organizations of the key technology challenges cited earlier and the need to monitor and manage IT risks effectively.



In 37% of organizations, greater than 20% of internal audit reports focus on IT audit.

However, many organizations aren't where they need to be – there remains significant room for improvement. In today's dynamic business environment and considering the rapid pace of IT change and transformation, the ideal percentage of IT audit reports is 20 percent or greater. Across all segments of companies (organization size, location), a majority of organizations have not reached this key benchmark.

Moreover, there are a significant number of companies that are issuing a surprisingly low percentage of IT audit reports. For example, in nearly one in four North America-based companies, less than 5 percent of their audit reports focus on IT audits. The same holds true for close to one in five organizations in Europe, Latin America and the Middle East.

With technology risks permeating all aspects of an organization today, it is surprising to see the relatively high percentage of audit reports that do not have some type of IT audit component.

FACTOID



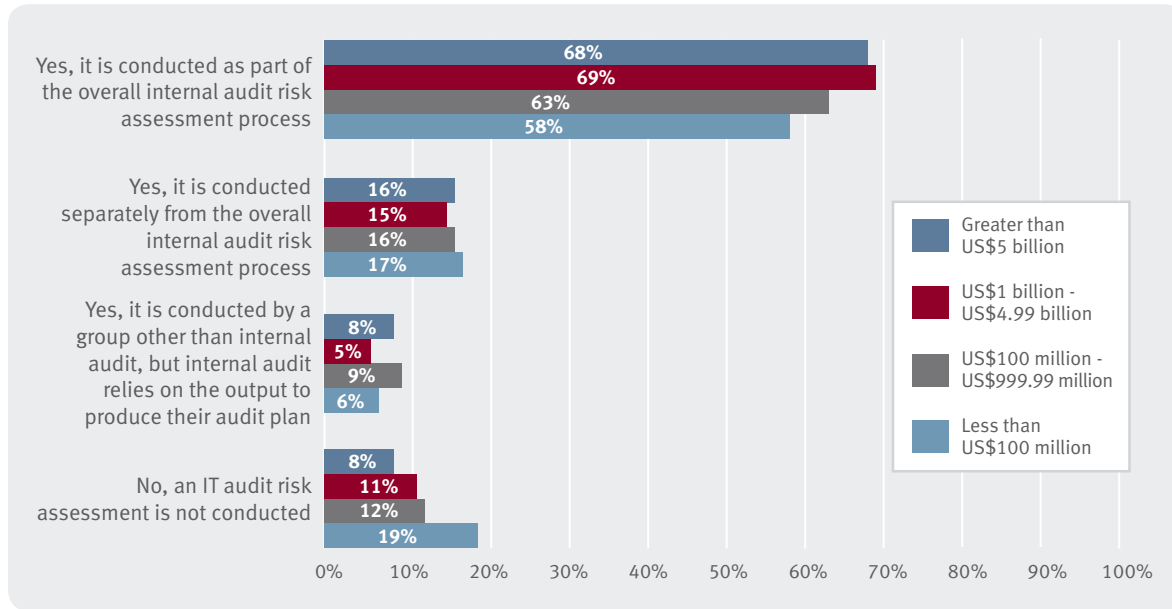
Ideal percentage (or greater) of IT audit reports that are issued relative to the total number of audit reports.

Assessing IT Risks

CONDUCTING AN IT AUDIT RISK ASSESSMENT

Does your organization conduct an IT audit risk assessment?

Company Size (Annual Revenue)



Commentary

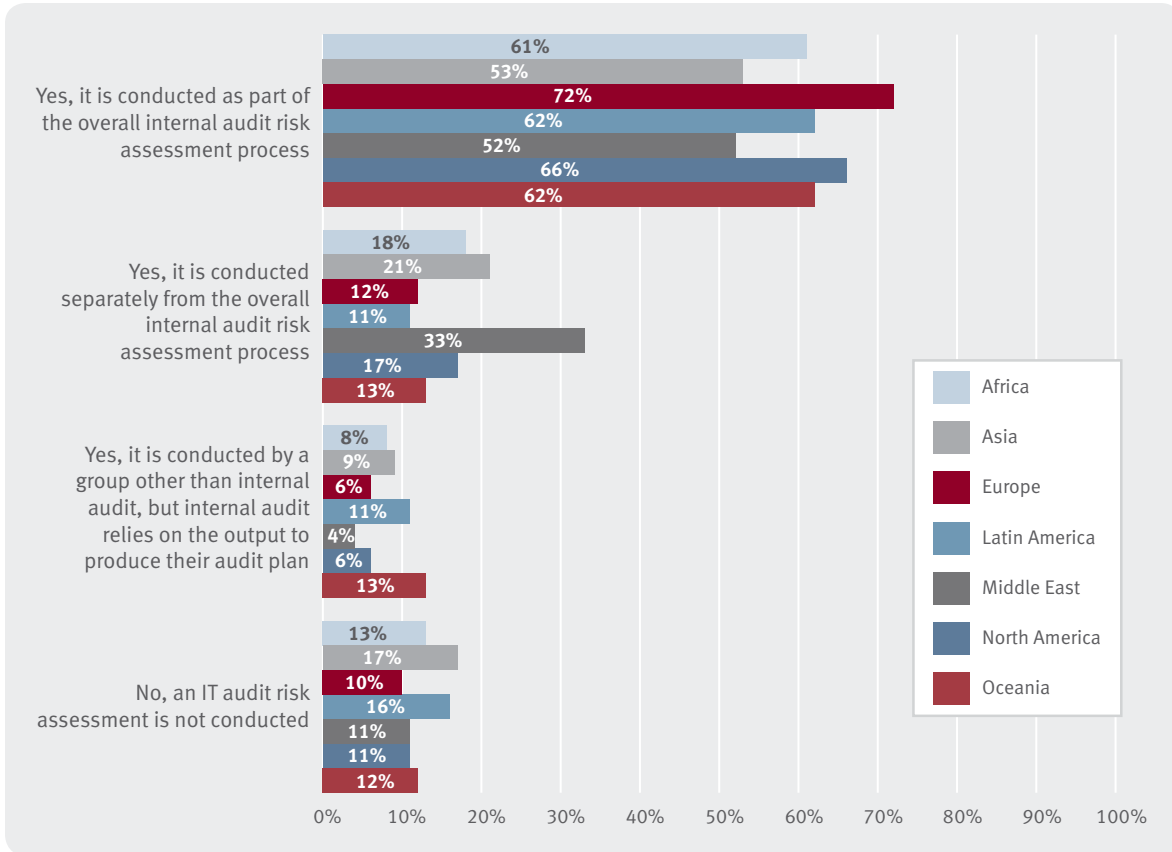
In today’s dynamic technology environment, and considering the integration of IT with virtually all organizational processes and systems, no organization should fail to conduct an IT audit risk assessment. While the percentages for this response are relatively low, they are still a concern, regardless of company size. Many companies are still not conducting any type of IT audit risk assessment, thus they very likely are not auditing key IT risks as part of their audit plans, nor are they positioning themselves to address the critical technology challenges cited earlier.

90% of organizations conduct IT audit risk assessments.

It’s also important to note that where the IT audit risk assessment is conducted by another function, the results may be questionable. Internal audit needs to be forming its own independent view of the IT risks facing the organization. This is required to ensure it focuses on the strategic and emerging risks associated with the use of technology. Internal audit should form this view independently to ensure it can bring the right knowledge and skills to bear during audits to provide adequate assurance over those risks.

Does your organization conduct an IT audit risk assessment?

Region



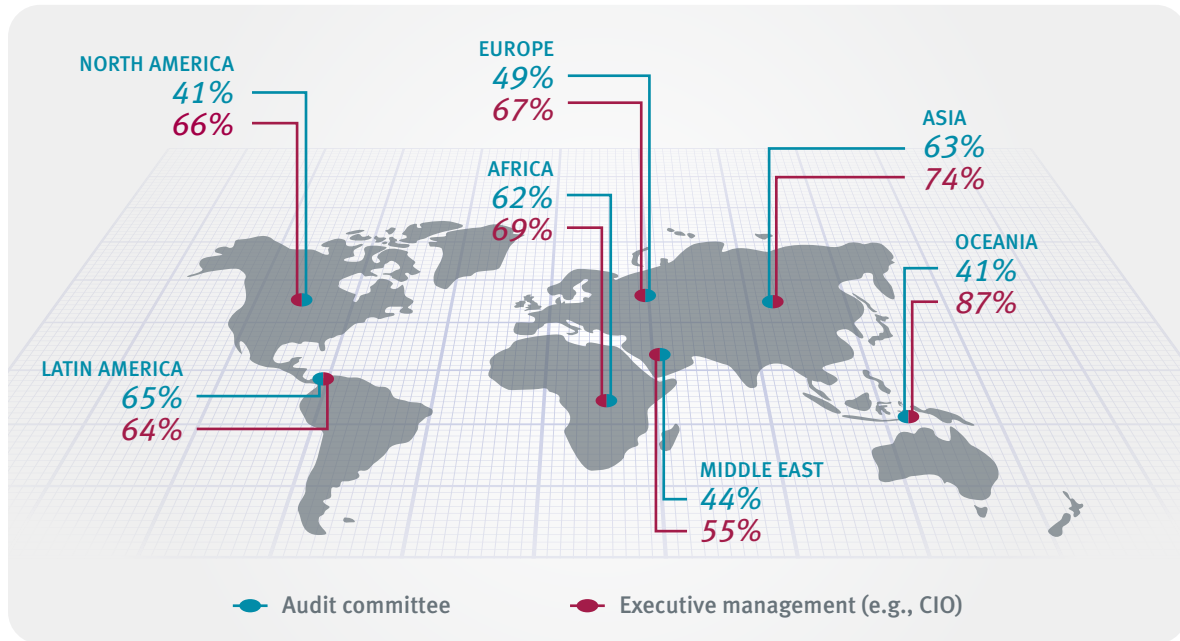
“THE IT AUDIT RISK ASSESSMENT IS BASED ON THE EVALUATION OF A SET OF RISK FACTORS – PART OF THEM ARE THE SAME AS THE AUDIT RISK ASSESSMENT, OTHERS ARE SPECIFIC TO THE IT AUDIT RISK ASSESSMENT. CURRENTLY ERM EVALUATIONS ARE USED IN THE IT AUDIT RISK ASSESSMENT; THE FEED FROM AUDIT TO ERM IS BEING IMPLEMENTED.”

– IT audit director, large manufacturing company, Europe

ORGANIZATIONAL ENGAGEMENT AND INVOLVEMENT

Indicate the level of involvement of each of the following individuals/groups in your organization's IT audit risk assessment process.

(Shown: Significant/moderate levels of involvement)



Commentary

Most, if not all, business transactions executed today touch the IT environment at some point in their lifecycle. As organizations plan for the next calendar year, it's logical to regard the IT audit risk assessment as a critical component to the organization's IT audit planning activities. It is best practice to design IT audit plans based on the assessment of IT risks and exposures.

Regardless of geographical region or organization size, the results indicate that the following groups and functions have significant or moderate involvement in the IT audit risk assessment process, with internal audit/IT audit leading the charge:

- Audit committees
- Executive management (e.g., CIO)
- Management and/or process owners
- Line-of-business executives
- IT organization representatives
- Internal audit/IT audit
- Risk management (separate from internal audit)

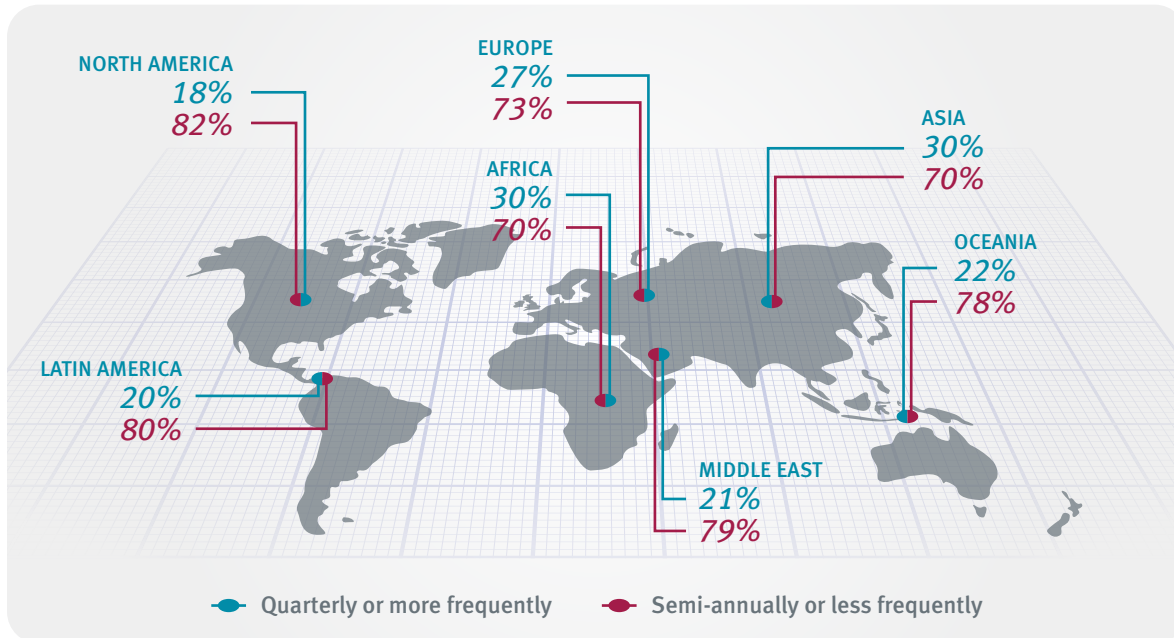
This represents an appropriate mix of strategic groups to involve in the IT audit risk assessment process. One interesting and positive note based on the overall results: Audit committees are increasing their involvement in the IT audit risk assessment process, with 20 percent reporting significant involvement this year compared to 14 percent in last year's study. On the other hand, the results (not shown) suggest that the level of involvement of third-party service providers is relatively low considering that some of these providers may be conducting critical IT services and activities.

Frequency with which the IT audit risk assessment is updated

Company Size (Annual Revenue)

	Greater than US\$5 billion	YOY Trend	US\$1 billion - US\$4.99 billion	YOY Trend	US\$100 million - US\$999.99 million	YOY Trend	Less than US\$100 million	
Continually	15%	↑	11%	↑	9%	↑	16%	↑
Monthly	1%	↔	0%	↓	0%	↓	1%	↑
Quarterly	10%	↓	5%	↓	13%	↑	11%	↓
Semi-annually	13%	↓	8%	↓	9%	↑	11%	↑
Annually	56%	↔	69%	↓	61%	↓	54%	↓
Less than annually	4%	↑	7%	↑	7%	↓	6%	↑
Never	1%	↑	0%	↓	1%	↓	1%	↓

Region



Commentary

These results have been relatively consistent over the past few years of our study. It is positive to see that an increasing number of organizations are updating their IT audit risk assessments more frequently, or even continually. But in the current IT environment in which change is the norm, there are still a large number of companies – in fact, a majority across company size and region – that still only update their IT audit risk assessments annually or even less frequently.



Ideally, organizations should seek to update their IT audit risk assessments on a quarterly basis or more frequently, which leading organizations are doing. It is somewhat surprising to see that the survey findings for quarterly updates have not risen more over the past few years.

One possibility is that many organizations still lack the appropriate tools to review and update their IT audit risk assessments on a regular basis. Another is that some organizations may perform a formal review and update of their IT audit risk assessments on an annual basis, but evaluate these risks more frequently throughout the year, even though they don't necessarily term these reviews as a formal assessment.

Bottom line, internal audit and IT audit leaders need to ask whether they have the ability to consider new IT risks that are emerging throughout the year if they are not reviewing and updating their IT audit risk assessments on at least a quarterly basis.

“IT AUDIT IS INTEGRATED INTO EVERY OPERATIONAL AND/OR FINANCIAL AUDIT PERFORMED. ADDITIONALLY, A FEW AUDITS (SUCH AS PCI COMPLIANCE OR INFRASTRUCTURE REDUNDANCY) ARE STRUCTURED PRIMARILY AS IT AUDITS, WITH A SMALL OPERATIONAL COMPONENT WHERE NECESSARY.”

– Audit manager, midsize professional services organization, North America

FRAMEWORKS

On which of the following accepted industry frameworks is the IT audit risk assessment based? (Multiple responses permitted)

	Africa	Asia	Europe	Latin America	Middle East	North America	Oceania
COBIT	83%	69%	72%	88%	82%	66%	66%
COSO	50%	47%	37%	43%	55%	50%	25%
ISO	33%	37%	33%	43%	50%	16%	22%
SOGP	2%	2%	0%	0%	0%	0%	0%

Commentary

In reality, an organization might rely upon a combination of frameworks to perform risk assessments, although these may not be followed verbatim. The key point is that IT audit risk assessments should have a recognized best practice framework as the basis for their analyses.

According to the ISACA 2014 Global COBIT 5 Governance Study, when asked how COBIT has helped their enterprise, 73 percent reported that COBIT helps their enterprise integrate business and IT, and 60 percent said COBIT helps to improve risk management.

Nearly all ISACA members surveyed (93 percent) would recommend COBIT 5 and 88 percent find COBIT 5 useful.⁴

“WE ADD VALUE TO THE BUSINESS BY WORKING EFFECTIVELY WITH OUR COLLEAGUES FROM THE BUSINESS WHEN WE REVIEW RISKS AND CONTROLS. ONLY WHEN MANUAL AND IT PROCESSES ARE ASSESSED TOGETHER ARE YOU ABLE TO IDENTIFY RELEVANT RISKS THREATENING BUSINESS PROCESSES.”

– Senior IT audit manager, large financial services organization, Europe

⁴ For more information, read ISACA's 2014 Global COBIT 5 Governance Study, available at www.isaca.org/About-ISACA/Press-room/Documents/2014-Global-COBIT-Governance-Study-Data-Sheet_pre_Eng_0914.pdf.

Industry Frameworks

COBIT – COBIT 5 is the latest edition of ISACA's globally accepted framework, providing an end-to-end business view of the governance of enterprise IT that reflects the central role of information and technology in creating value for enterprises. The principles, practices, analytical tools and models found in COBIT 5 embody thought leadership and guidance from business, IT and governance experts around the world.

COSO Internal Control – Integrated Framework – This framework, produced as part of a landmark report from the Committee on Sponsoring Organizations of the Treadway Commission (COSO), establishes a common definition of internal control that serves the needs of different parties for assessing and improving their control systems. It provides principles-based guidance for designing and implementing effective internal controls. In 2013, COSO released its long-awaited update to its Internal Control – Integrated Framework. Developed over a two-and-a-half-year period, COSO's new framework and related illustrative documents are intended to help organizations in their efforts to adapt to the increasing complexity and pace of change, to mitigate risks to the achievement of objectives, and to provide reliable information to support sound decision-making.

ISO – The International Organization for Standardization is the world's largest developer of voluntary International Standards. International Standards give state-of-the-art specifications for products, services and good practice, helping to make industry more efficient and effective. Developed through global consensus, they help to break down barriers to international trade.

Standard of Good Practice (SOGP) for Information Security – From the Information Security Forum, this is a business-focused, practical and comprehensive guide for identifying and managing information security risks in an organization.

“IT AUDIT IS GROWING WITH GREATER FOCUS ON DATA LEAKAGE, CYBER RISK AND INFORMATION RISK. THIS ALSO IS HAVING A SIGNIFICANT IMPACT ON THE CONSIDERATION OF THIRD-PARTY RISK.”

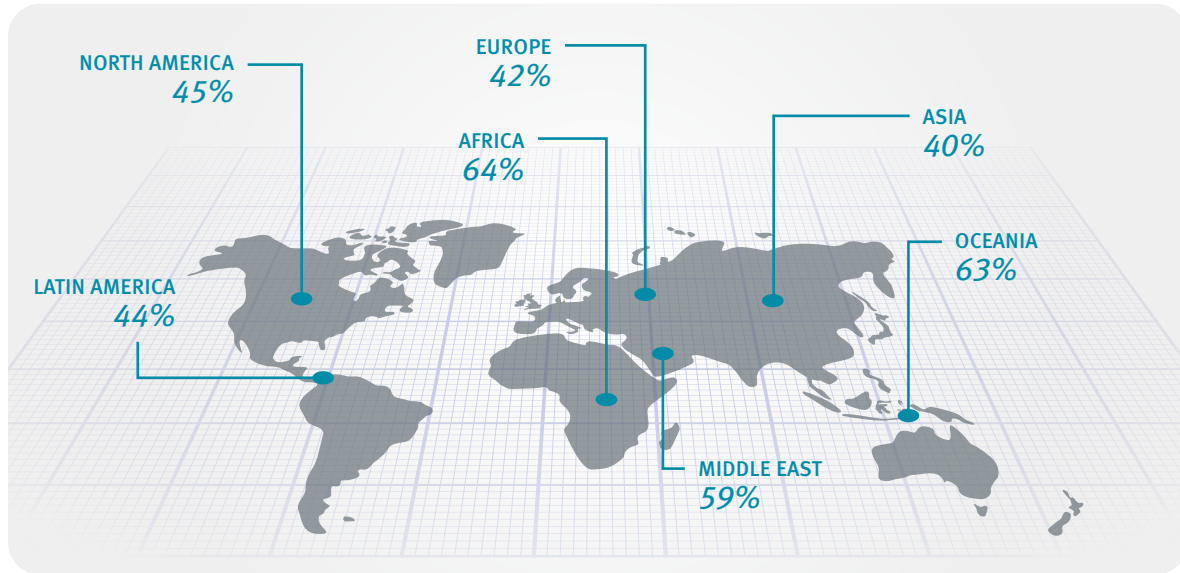
– Head of internal audit, large financial services company, Europe

If your company has an ERM program, does your IT audit risk framework link to the ERM catalog?

Company Size (Annual Revenue)


	Greater than US\$5 billion			US\$1 billion - US\$4.99 billion			US\$100 million - US\$999.99 million			Less than US\$100 million		
	2014	2013	2012	2014	2013	2012	2014	2013	2012	2014	2013	2012
Yes	50%	58%	54%	46%	43%	50%	40%	39%	47%	42%	33%	38%

Region (“Yes” responses)



Commentary

The relatively high number of organizations in which their IT audit risk framework does not link to their ERM catalog is a bit of a surprise, particularly in large companies. This presents significant risk, as IT auditors may not be prioritizing their efforts correctly if they are not in line with the ERM view of the organization.



64% of organizations link their IT audit risk framework to the ERM catalog.

“THE IT AUDIT RISK ASSESSMENT IS KEPT SEPARATE FROM ERM TO ENSURE INDEPENDENCE OF INTERNAL AUDIT; HOWEVER, WE DO COMPARE TO UNDERSTAND EACH OTHER’S VIEWS.”

– IT audit manager, large energy company, Europe

Audit Plan

IT AUDIT HOURS AND RESPONSIBILITIES

Which of the following activities is your IT audit function responsible for?
(Multiple responses permitted)

Region

Top 5							
	Africa	Asia	Europe	Latin America	Middle East	North America	Oceania
Conducting IT process audits, e.g., security, privacy, etc.	89%	83%	93%	86%	92%	89%	89%
Conducting IT general control audits	93%	86%	86%	84%	88%	89%	89%
Conducting application audits	95%	84%	84%	78%	88%	75%	89%
Conducting IT infrastructure audits	80%	68%	81%	72%	83%	73%	78%
Testing IT compliance	84%	72%	68%	69%	67%	78%	61%
Bottom 5							
Conducting social media audits	18%	18%	30%	21%	17%	31%	22%
Testing for IT Sarbanes-Oxley or other related country-specific compliance	27%	27%	32%	26%	13%	58%	6%
Conducting vendor audits	41%	25%	33%	29%	21%	28%	19%
Maintaining internal control framework documentation	36%	45%	22%	34%	33%	33%	11%
Performing continuous auditing	50%	35%	33%	33%	38%	29%	22%

Commentary

The top five areas of responsibility are not a surprise – they are in line with activities that IT auditors traditionally manage.

One key question to consider is why those activities that fall in the bottom tier of IT audit responsibilities are not more prevalent. The response related to IT SOX testing is understandable, as SOX is an area of greater focus in North America compared to elsewhere, and particularly for large U.S.-listed global companies.

However, vendor audits stand out, in particular – these should be a core component of IT audit’s responsibilities. Vendor-related risks rank as a top technology challenge in this year’s study, and did so last year, as well. However, with the exception of organizations in Africa, relatively few organizations have assigned responsibility to IT audit for auditing vendors. Furthermore, these results are comparable among responses from highly regulated industries such as financial services and healthcare.

Of the total number of IT audits conducted annually, what percentage of total IT audit hours are spent on the following areas?

Company Size (Annual Revenue) – Top 3 Audit Areas by Percentage (including ties)

	Greater than US\$5 billion	US\$1 billion - US\$4.99 billion	US\$100 million - US\$999.99 million	Less than US\$100 million
Conducting application audits	●	●	●	●
Collecting and analyzing data analytics			●	
Testing IT compliance			●	●
Conducting integrated audits			●	
Conducting IT infrastructure audits			●	
Conducting IT process audits, e.g., security, privacy, etc.	●	●	●	●
Testing for IT Sarbanes-Oxley or other related country-specific compliance	●	●	●	●
Conducting IT general control audits		●	●	●

Region – Top 3 Audit Areas by Percentage (including ties)

	Africa	Asia	Europe	Latin America	Middle East	North America	Oceania
Conducting application audits	●	●	●	●	●	●	●
Collecting and analyzing data analytics	●			●	●		●
Testing IT compliance		●		●			
Conducting IT infrastructure audits			●				
Conducting IT process audits, e.g., security, privacy, etc.		●		●	●	●	●
Testing for IT SOX or other related country-specific compliance						●	
Conducting IT general control audits	●	●	●	●	●	●	
Performing continuous auditing					●		

Commentary

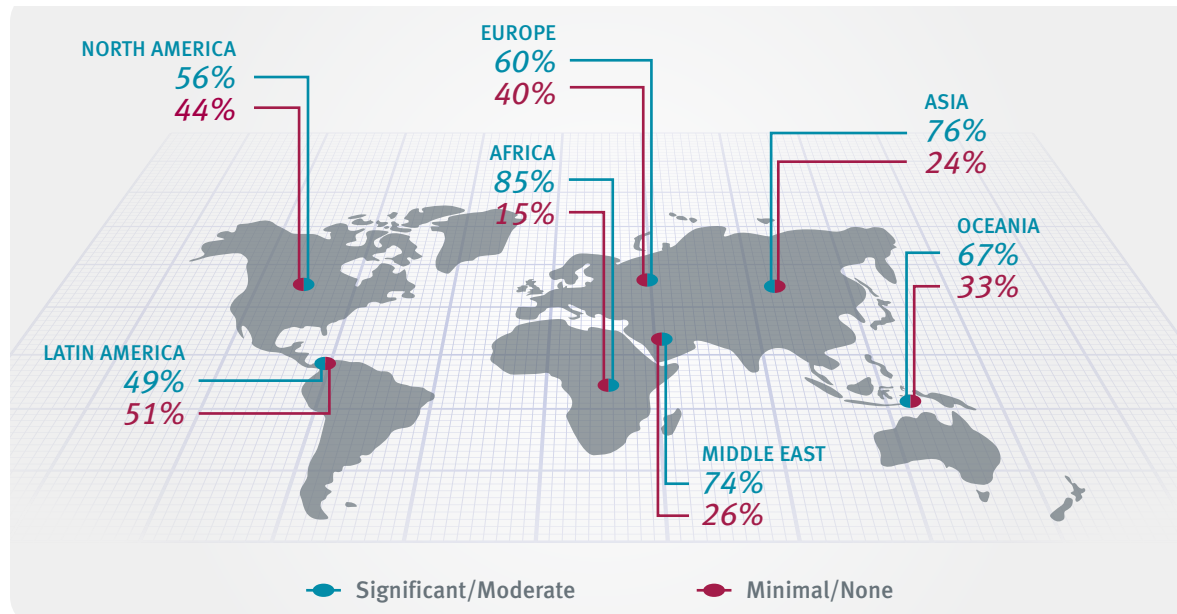
Our results show that, across region and company size, IT auditors are spending the largest portions of their time on conducting application audits, testing for IT SOX and other compliance requirements, and conducting IT process audits.

What level of involvement does IT audit have in significant technology projects?

Company Size (Annual Revenue)

	Significant		Moderate		Minimal		None	
	2014	2013	2014	2013	2014	2013	2014	2013
Greater than US\$5 billion	21%	22%	40%	46%	31%	25%	8%	7%
US\$1 billion - US\$4.99 billion	15%	12%	44%	45%	37%	31%	4%	12%
US\$100 million - US\$999.99 million	19%	9%	38%	35%	34%	43%	9%	13%
Less than US\$100 million	28%	7%	40%	30%	27%	41%	5%	22%

Region



Commentary

The results show significant changes among smaller companies (less than US\$1B in annual revenue), where the percentage of IT audit functions that have a significant or moderate level of involvement in major technology projects has increased dramatically. This likely is an indicator that these smaller organizations, similar to their larger counterparts, are now devoting more attention to risks and controls tied to significant technology initiatives.

In 85% of organizations, IT audit has a significant or moderate level of involvement in significant technology projects.

Also with regard to company size, there are (except for large companies) notable decreases in the responses for minimal or no involvement, which is another positive indicator of the maturity of IT audit processes within organizations. Still, the “minimal” response percentages remain relatively high – overall, one in three IT audit functions have minimal involvement in significant technology projects within their organizations.

In the regional results, organizations in Africa stand out as having IT audit involved to a high degree in significant technology projects. This is understandable given the rapid growth of technology in the region, together with dramatic increases in adoption of the COBIT framework.

When does IT audit become involved in significant technology projects?

Overall

	2014	2013	2012
Planning	30%	32%	31%
Design	18%	18%	20%
Testing	9%	10%	8%
Implementation	11%	8%	8%
Post-implementation	23%	18%	23%
No involvement	9%	14%	10%

Region

	Africa	Asia	Europe	Latin America	Middle East	North America	Oceania
Planning	38%	30%	27%	12%	16%	34%	27%
Design	21%	10%	20%	12%	5%	19%	23%
Testing	18%	13%	6%	12%	16%	8%	10%
Implementation	9%	17%	9%	17%	21%	10%	10%
Post-implementation	9%	23%	30%	33%	37%	20%	27%
No involvement	5%	7%	8%	14%	5%	9%	3%

Commentary

Again, it is positive to see a declining percentage of IT audit functions that have no involvement in significant technology projects.

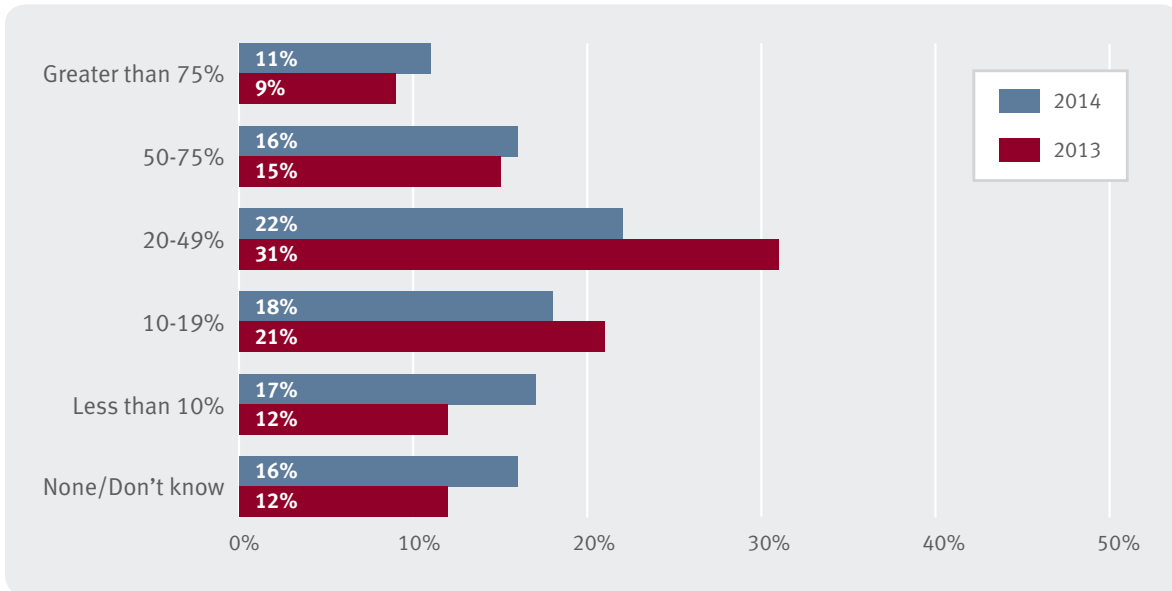
Looking at the regional data, IT audit functions in Africa are highly involved in IT projects, which could be a result of organizations on the continent having fewer IT resources. As a result, they rely on IT auditors to be involved early and often in any technology project.



In 77% of organizations, IT audit is involved in the planning, design and testing stages of significant technology projects.

In your most recently completed year of Sarbanes-Oxley compliance, what percentage of your organization's IT audit hours were associated with SOX-related activities?

Base: Respondents required to comply with the Sarbanes-Oxley Act



Commentary

Interestingly, IT audit functions appear to be spending more time on SOX compliance efforts, whereas the expectation would be fewer hours. However, given the significant focus of the Public Company Accounting Oversight Board (PCAOB) on general controls and data (report testing), it is not surprising that the number of hours has increased.

This trend is evident in the large company results as well (not shown), in which the experience and maturity of SOX compliance activities should be driving down IT audit hours.

Regardless of the maturity of SOX compliance processes in organizations, they are having to spend more time on SOX testing this year, primarily because of the PCAOB inspection reports received by the external auditors. Based on our analysis of these reports, we expect that management and internal audit will continue to experience adjustments to external audit's approach to their annual financial and internal control audits, including more detailed IT general controls testing, especially related to access and database reviews.

What percentage of time does the IT audit function spend on assurance, compliance and consulting activities?

Company Size (Annual Revenue)

	Greater than 75%	50-75%	25-49%	15-24%	1-14%	None/Don't Know
Greater than US\$5 billion						
Assurance	24%	34%	25%	8%	6%	3%
Compliance	7%	16%	29%	27%	17%	4%
Consulting	0%	5%	9%	27%	46%	13%
US\$1 billion - US\$4.99 billion						
Assurance	21%	32%	26%	10%	6%	5%
Compliance	11%	24%	24%	20%	18%	3%
Consulting	1%	1%	11%	21%	53%	13%
US\$100 million - US\$999.99 million						
Assurance	20%	36%	21%	13%	6%	4%
Compliance	7%	15%	28%	29%	16%	5%
Consulting	2%	7%	13%	23%	42%	13%
Less than US\$100 million						
Assurance	19%	28%	27%	14%	8%	4%
Compliance	12%	21%	31%	22%	9%	5%
Consulting	7%	7%	21%	19%	34%	12%

“GREATER THAN 20 PERCENT OF AUDIT REPORTS ARE IT AUDITS. HOWEVER, THERE ARE VERY FEW AUDITS WHICH DON’T HAVE SOME LEVEL OF TECHNICAL INVOLVEMENT FROM THE IT AUDIT TEAM.”

– Head of internal audit, large financial services company, Europe

What percentage of time does the IT audit function spend on assurance, compliance and consulting activities?

Region

	Greater than 75%	50-75%	25-49%	15-24%	1-14%	None/Don't Know
Africa						
Assurance	39%	42%	15%	0%	0%	4%
Compliance	9%	22%	28%	19%	16%	6%
Consulting	0%	9%	18%	24%	30%	19%
Asia						
Assurance	21%	33%	25%	13%	5%	3%
Compliance	5%	28%	28%	22%	15%	2%
Consulting	11%	11%	22%	15%	33%	8%
Europe						
Assurance	26%	37%	24%	7%	3%	3%
Compliance	4%	13%	27%	30%	20%	6%
Consulting	1%	3%	10%	22%	50%	14%
Latin America						
Assurance	14%	29%	24%	21%	10%	2%
Compliance	14%	19%	33%	24%	7%	3%
Consulting	0%	7%	22%	12%	44%	15%
Middle East						
Assurance	33%	50%	11%	6%	0%	0%
Compliance	12%	18%	24%	24%	22%	0%
Consulting	0%	0%	17%	39%	33%	11%
North America						
Assurance	15%	30%	27%	13%	9%	6%
Compliance	13%	20%	28%	24%	12%	3%
Consulting	1%	4%	10%	25%	47%	13%
Oceania						
Assurance	48%	28%	17%	3%	4%	0%
Compliance	0%	4%	21%	25%	46%	4%
Consulting	0%	0%	4%	39%	43%	14%

Commentary

Not surprisingly, there are notable variations by region with regard to time spent on assurance and consulting activities versus compliance efforts. For example, IT auditors in Oceania-based organizations spend significantly more time on assurance-related activities than do North American companies, which devote more time to compliance.

The results detailed above are relatively consistent with prior years' surveys. However, we expect that time spent on consulting activities will increase over the long term as CAEs and their internal audit and IT audit organizations work with executive leadership to understand the organization's business objectives and strategy, and identify risks that create barriers to the organization achieving its objectives and executing its strategy successfully.

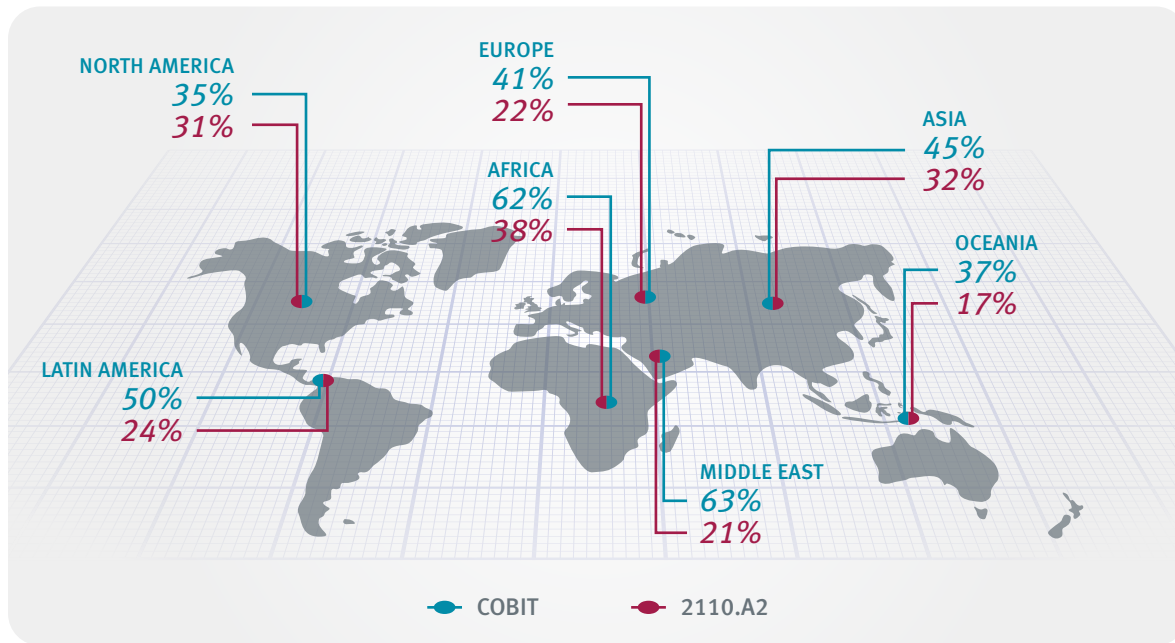
IT GOVERNANCE

Has your IT audit activity completed an evaluation and assessment of your organization’s IT governance process, in accordance with ISACA’s COBIT framework and IIA Standard 2110.A2? (“Yes” responses shown below)

Company Size (Annual Revenue)

	COBIT	2110.A2
Greater than US\$5 billion	41%	31%
US\$1 billion - US\$4.99 billion	34%	29%
US\$100 million - US\$999.99 million	43%	28%
Less than US\$100 million	43%	23%

Region



Commentary

According to the 2014 ISACA Global COBIT 5 Governance Study, the top three benefits enterprises can achieve with effective IT governance (e.g., through a framework such as COBIT) are integration of business and IT (75 percent), improved risk management (56 percent) and increased IT visibility with the board of directors (35 percent).

In the same survey, respondents were asked, when they consider the technology and business landscape their enterprise has faced over the last 12 months, whether having an effective IT governance in place was more valued than it was in the past. More than three out of four participants (78 percent) reported that it was more valued, 17 percent felt that it was of equal value, and 5 percent felt that it was less valued than it was in the past.



63% of organizations have completed an evaluation and assessment of their IT governance process, in accordance with ISACA's COBIT framework.



38% of organizations have completed an evaluation and assessment of their IT governance process, in accordance with IIA Standard 2110.A2.

If you answered “no” to the previous question, indicate whether you intend to complete an evaluation and assessment of your organization’s IT governance process.

Company Size (Annual Revenue)

	Yes, within the next year		Yes, but not within the next year	
	COBIT	2110.A2	COBIT	2110.A2
Greater than US\$5 billion	32%	13%	28%	21%
US\$1 billion - US\$4.99 billion	26%	14%	36%	32%
US\$100 million - US\$999.99 million	25%	7%	38%	29%
Less than US\$100 million	26%	11%	40%	22%

Region

	Yes, within the next year		Yes, but not within the next year	
	COBIT	2110.A2	COBIT	2110.A2
Africa	47%	25%	35%	55%
Asia	30%	18%	37%	27%
Europe	26%	6%	36%	23%
Latin America	55%	7%	24%	23%
Middle East	46%	29%	38%	14%
North America	24%	12%	35%	28%
Oceania	17%	8%	30%	13%

Commentary

Organizations that have not conducted an evaluation and assessment of their IT governance processes should do so, ideally within the next year.

SKILLS AND CAPABILITIES

Please indicate the level of importance that you place on the following IT audit technical skills for your IT audit staff.

Overall

	Significant	Moderate	Minimal	None
Control analysis	66%	30%	4%	0%
Risk analysis	57%	37%	6%	0%
Process assessment	52%	41%	6%	1%
IT speak	38%	49%	12%	1%
Data analysis	36%	46%	16%	2%
Accounting/audit	33%	45%	20%	2%
Project management	28%	54%	16%	2%
Consulting	20%	50%	25%	5%

Please indicate the level of importance that you place on the following business and interpersonal skills for your IT audit staff.

Overall

	Significant	Moderate	Minimal	None
Relationship building	69%	27%	3%	1%
Report writing	63%	33%	4%	0%
Strategic thinking	49%	42%	8%	1%
Team building	47%	43%	9%	1%
Conflict management	44%	45%	10%	1%
Negotiation	42%	47%	10%	1%
Business speak	41%	48%	10%	1%
Leadership	35%	53%	11%	1%

Commentary

Organizations have long recognized the importance of IT auditors' technical skills. Regardless of organization size, control analysis was deemed to be the technical skill with the highest level of importance for IT auditors, followed by the ability to analyze risks. With the exception of Latin America, respondents by region reported these two technical skills as having the most significance.

These results are consistent with findings from Protiviti's latest Internal Audit Capabilities and Needs Survey, in which social media, cloud, data analytics, data security and the use of computer-assisted auditing tools were noted as priorities and key areas in need of improvement.⁵ In addition, as noted earlier, it is possible that if IT audit functions lack these skill sets, they will focus only on the areas where they currently have the skills/knowledge.

⁵ For additional information, read Protiviti's *Assessing the Top Priorities for Internal Audit Functions*, available at www.protiviti.com/IASurvey.

Relationship building is a vital interpersonal skill in any discipline, and especially for internal audit. All sizes of organizations noted that relationship building was the soft skill of greatest importance to IT auditors. Respondents from the Middle East, North America and Oceania mirror this finding. Deeper, more meaningful collaboration can help internal auditors address nearly every item on their lengthy priority list. Good things happen when strong alliances between the risk management and internal audit functions are formed – efficiencies, better decision-making and improved results.

Are IT audits conducted by individuals who are full-time internal audit professionals in the internal audit department and who focus on IT audit projects?

Company Size (Annual Revenue)

	2014		2013		2012	
	Yes	No	Yes	No	Yes	No
Greater than US\$5 billion	88%	12%	81%	19%	92%	8%
US\$1 billion - US\$4.99 billion	84%	16%	73%	27%	75%	25%
US\$100 million - US\$999.99 million	72%	28%	52%	48%	57%	43%
Less than US\$100 million	64%	36%	58%	42%	65%	35%

Are there specific areas of your current IT audit plan that you are not able to address sufficiently due to lack of resources/skills?

Company Size (Annual Revenue)

	2014		2013		2012	
	Yes	No	Yes	No	Yes	No
Greater than US\$5 billion	48%	52%	28%	72%	33%	67%
US\$1 billion - US\$4.99 billion	47%	53%	36%	64%	45%	55%
US\$100 million - US\$999.99 million	49%	51%	30%	70%	36%	64%
Less than US\$100 million	43%	57%	31%	69%	40%	60%

Commentary

Regardless of organization size, there is a positive trend in organizations reporting that IT audits are performed by full-time internal audit professionals in the internal audit department who focus on IT audit projects. However, these same organizations indicate that they could use more auditors with a technology focus. Across the board, more respondents this year indicated they are not able to address specific areas of the IT audit plan due to lack of resources/skills. Of note, 68 percent of respondents from the Middle East reported this was the case, compared to 38 percent from Europe. Still, we would expect more large companies (US\$1 billion or more in annual revenue) to have the necessary resources in place, either through their own internal audit department or through co-sourcing.

Are there specific areas of your current IT audit plan that you are not able to address sufficiently due to lack of software and other IT audit tools?

Company Size (Annual Revenue)

	2014		2013		2012	
	Yes	No	Yes	No	Yes	No
Greater than US\$5 billion	23%	77%	9%	91%	15%	85%
US\$1 billion - US\$4.99 billion	19%	81%	14%	86%	19%	81%
US\$100 million - US\$999.99 million	27%	73%	15%	85%	24%	76%
Less than US\$100 million	25%	75%	12%	88%	25%	75%

Commentary

On the one hand, it is encouraging to find that for a majority of organizations, a lack of software and other IT audit tools does not hinder them in addressing specific areas of their IT audit plans. This is true across the globe and organization size. However, year-over-year trends in the results show that for each company size category, the percentage of organizations that are not able to address certain areas of their IT audit plans due to lack of these tools and software is increasing.

Organizations are encouraged to leverage technology-enabled auditing to gain a broader picture of the organization's processes and controls, and identify opportunities to improve process effectiveness and efficiencies that can be gained solely through individual audits. By using technology, today's auditors are also able to devote more time and effort to building relationships with process and functional owners and providing expertise in high-impact areas.

“OCCASIONALLY WE USE CO-SOURCING DUE TO RESOURCING ISSUES, BUT IT'S MAINLY TRIGGERED BY THE FACT THAT WE NEED TO BRING IN A SUBJECT-MATTER EXPERT WITH THE RIGHT LEVEL OF EXPERTISE.”

– Group IT director, large financial services company, Europe

Does your organization require an IT auditor to acquire the Certified Information Systems Auditor (CISA) certification?

Region

	Africa	Asia	Europe	Latin America	Middle East	North America	Oceania
Yes	82%	59%	65%	59%	95%	58%	45%

What percentage of IT auditors within your organization have acquired, or are in the process of acquiring, their CISA certification?

Region

	Africa	Asia	Europe	Latin America	Middle East	North America	Oceania
Greater than 75%	35%	38%	58%	21%	58%	67%	59%
50-75%	21%	12%	12%	21%	11%	10%	10%
20-49%	15%	11%	10%	18%	0%	6%	7%
10-19%	6%	13%	4%	5%	16%	2%	0%
Less than 10%	12%	14%	7%	10%	15%	4%	3%
None/Don't know	11%	12%	9%	25%	0%	11%	21%

Commentary

Worldwide, IT auditors are in great demand. Organization executives understand the need for having a staff with strong IT audit skills and knowledge, along with the value of holding a CISA certification.

All geographical areas surveyed indicated a strong preference for requiring IT auditors to acquire a CISA certification. Leading the way were the Middle East (95 percent) and the African region (82 percent). In addition, respondents in almost all geographical areas indicated that at least half of their IT auditors have, or are in the process of achieving, a CISA certification. North America led the way with 77 percent demonstrating a strong preference for IT audit work to be conducted by CISAs. The CISA certification was initially released in 1978 and remains, with over 113,000 certified to date (and over 76,000 active certified), the gold standard for IT audit certification.

Finally, IT auditors are also earning other certifications in order to advance their skills and knowledge in the areas of internal audit, security, risk and governance.

What other certifications do people within your IT audit department hold? (Multiple responses permitted)

Region

	Africa	Asia	Europe	Latin America	Middle East	North America	Oceania
Certified in Risk and Information Systems Control (CRISC)	34%	10%	16%	36%	18%	18%	2%
Certified Information Security Manager (CISM)	32%	17%	18%	26%	25%	23%	4%
Certified Internal Auditor (CIA)	36%	25%	19%	17%	25%	34%	17%
Certified in the Governance of Enterprise IT (CGEIT)	15%	3%	6%	15%	5%	8%	0%
Certified Information Systems Security Professional (CISSP)	17%	20%	15%	17%	10%	23%	6%

SURVEY DEMOGRAPHICS

All demographic information was provided voluntarily by respondents and not all participants provided data for every demographic question.

Position

Chief Audit Executive (or equivalent)	11%
IT Audit Director	14%
Audit Director	4%
IT Audit Manager	31%
Audit Manager	4%
Audit Staff	21%
Other	15%

Industry

Financial Services	29%
Government/Education/Not-for-Profit	16%
Professional Services	8%
Insurance	7%
Manufacturing/Engineering	7%
Technology	6%
Retail	5%
Healthcare Provider	4%
Energy	3%
Distribution	3%
Telecommunications	3%
Utility	2%
Hospitality	2%
Real Estate	1%
Healthcare Payer	1%
Life Sciences/Biotechnology	1%
Media	1%
Other	1%

Size of Organization (by gross annual revenue in U.S. dollars)

\$20 billion or greater	13%
\$10 billion to \$19.99 billion	8%
\$5 billion to \$9.99 billion	11%
\$1 billion to \$4.99 billion	24%
\$500 million to \$999.99 million	11%
\$100 million to \$499.99 million	14%
Less than \$100 million	19%

Type of Organization

Publicly traded	38%
Not-for-profit	8%
Government	18%
Private	36%

Organization Headquarters

Africa	4%
Asia	11%
Europe	26%
Latin America	4%
Middle East	3%
North America	48%
Oceania	4%

IT Audit Department Headquarters

Africa	5%
Asia	11%
Europe	24%
Latin America	5%
Middle East	3%
North America	48%
Oceania	4%

About Protiviti

Protiviti (www.protiviti.com) is a global consulting firm that helps companies solve problems in finance, technology, operations, governance, risk and internal audit. Through our network of more than 70 offices in over 20 countries, we have served more than 40 percent of FORTUNE 1000® and FORTUNE Global 500® companies. We also work with smaller, growing companies, including those looking to go public, as well as with government agencies.

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About Our IT Internal Audit Services

Protiviti's IT internal audit services help organizations understand their key technology risks and how well they are mitigating and controlling those risks. We also provide insight into the threats inherent in today's highly complex technologies. Protiviti provides a wide range of services for IT internal audit outsourcing and co-sourcing. The Protiviti methodology, which is both COSO- and COBIT-based, facilitates an overall IT internal audit management team (either Protiviti-led, client-led, or in combination) with the execution of individual projects by subject-matter experts in each IT audit area.

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