



INFORMATION, COMMUNICATIONS & ENTERTAINMENT

## Revenue Assurance in Telecommunications - Progressing or Preserving

Global Revenue Assurance Survey 2009 Results

KPMG INTERNATIONAL



# Foreword



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KPMG is pleased to publish the results of Global Revenue Assurance Survey 2009 – ‘Revenue Assurance in Telecommunications – Progressing or Preserving’. The survey examines the state of Revenue Assurance functions today as well as their transformation in the future.

With changing economic conditions worldwide and an evolving technological environment, the complexity of the telecommunications industry and challenges for growth are under scrutiny. The industry is witnessing changing business models, dynamic growth strategies, and continuous innovation in products and services. As a result, various functions within organizations are changing their objectives and operations, and Revenue Assurance is one of them.

Historically seen as a way to add to both the top and bottom-line of a company by plugging revenue leaks and identifying quick wins (enhancement and savings), Revenue Assurance has often been considered as merely a tactical response. Now, telecom executives and shareholders are taking a closer look at how this function should be playing a more strategic role.

In order to evaluate the evolving role of Revenue Assurance, KPMG conducted an online global survey covering 74 operators in 46 countries. This survey takes an in-depth look at how Revenue Assurance is positioned in telecom operators worldwide and assesses their concerns and expectations for the future. Survey respondents included members of senior management (C-level executives) and heads of Revenue Assurance functions.

This report combines an analysis of insights and trends from these operators with our experience in Revenue Assurance. We hope it provides valuable food for thought to the survey participants and other readers.

Special thanks to all the participants who contributed their time and experience to this report.



## Table of Contents

1	Revenue Leakage – A continued bane	05
2	Skill sets, tools and methodology – tying the loose ends	11
3	Empowerment and widened orientation – some more miles to go	22
4	Key Insights	28
5	Appendices	36
6	Glossary	39



# Executive Summary



Today, challenges facing the telecom sector are as fascinating as they are wide-ranging. Operators continue to struggle with a variety of issues—from expanding their subscriber base in saturated markets to managing stupendous subscriber growth in markets still developing.

In markets with wireless market saturation, revenue growth will be largely driven by consistent service innovation, by data and other upstream services; whereas in developing economies with low saturation, effective management of subscriber growth is critical. In markets with multiple players, competition is often intense and telecom operators will likely need to concurrently manage fast-paced growth as well as innovation.

The common thread for all telcos—whether they are faced by the challenges of sustenance, scalability, or both—is the potential impact on revenue. In any of these scenarios, telcos may be vulnerable to revenue leakage or revenue stagnation.

As a result, Revenue Assurance (RA) is of paramount importance for telcos and executives are carefully considering the following questions:

- How beneficial is RA to the business?
- Has RA evolved to suit changing business needs?
- Is RA redundant in mature markets with low risk of leakages?
- Does RA include revenue enhancement and cost savings?
- How is RA tackling challenges of growth and innovation?



## Key insights

### • Top three sources of leakages are:

- Configuration changes in any of the network elements
- New product development and tariff configuration
- Poor system integration from MSC-IN-Mediation-Billing Systems (CDR processing cycle)

### • Top three challenges faced by RA are:

- Lack of accurate and timely information from business/operations
- Absence of automated tools to support RA processes
- Lack of proper authorization and influencing power of RA function

### • Others:

- Prepaid is the largest—and most vulnerable—revenue stream for a majority of operators
- Operators are willing to explore RA outsourcing—mainly to access required skills
- Vendor-related activities are yet to come under the purview of RA reviews

## Highlights of the Survey:

### Revenue leakage – A continued bane....

- Majority of operators indicated leakages (excluding bad debt) of greater than 1 percent
- Majority of operators indicated that RA achieved moderate levels of identification and subsequent recovery of leakages
- Most operators did not have sufficient data and/or ability to determine the extent of leakages (fraud or revenue)
- More than 50 percent of operators stated they are still not in a self-funding stage

### Skill sets, tools and methodology – tying the loose ends...

- Majority of operators said they owned some requisite skills, with 'Network and Technical' skills most lacking
- Cross functional representation within RA teams is not yet formalized for most operators
- Varied RA tools are extensively used by operators across the regions, although a majority of respondents are dissatisfied with existing tools
- An RA tool is considered a critical requirement for future RA transformation
- Issue quantification for identified RA issues is not a prevalent practice
- Performance of revenue risk assessments to determine annual RA scope and plan is seen as an upcoming trend

### Empowerment and widened orientation – some more miles to go...

- About one-fifth of operators worldwide do not have a formalized RA organization structure
- In developing markets RA was given more strategic importance than in developed markets (i.e. visibility to Board of Directors and Audit Committees indicating larger business mandates)
- Identification of revenue leakage continues to be the top priority of RA functions across regions
- Intention to move to cost reduction and revenue enhancement does exist across a majority of operators

**RA functions across the globe are willing to gear up to new challenges and there is confidence that they will be able to manage increased leakage scenarios.**

**While it is critical to increase scope of RA objectives to include revenue enhancement and cost savings, it is equally critical to have a stronger grasp of leakage identification and recovery.**

**RA function needs to invest in right skill sets, right tools and methodology, and must be empowered within the organization to build its brand and gain visibility.**

Overall, the survey revealed that RA functions in the telecommunications industry across the globe are willing to gear up to new challenges and there is confidence that they will be able to manage increased leakage scenarios. It all begins with proper strategic attention towards the function i.e. growing visibility with top management, Audit Committee and Board of Directors. The use of revenue risk assessments and RA tools can be highlighted as stepping-stones to RA transformation in the future.

But while it is critical to increase the scope of RA objectives to include revenue enhancement and cost savings, it is equally critical to have a stronger grasp of leakage identification and recovery. As the survey revealed that unavailability of information with respect to revenue leakages, analysis of a smaller sample of chargeable events and non-quantification of all RA observations clearly highlight that the actual quantum of leakage may be much higher than estimated by respondents in this survey.

As a result, the RA function needs to invest in the right skill sets (internally or externally), the right tools and methodology, and must be empowered within the organization to build its brand and gain visibility. It is critical to realize the value-add that RA can provide, especially in the current turbulent economy where RA may be the easiest way to drive revenue levels upwards.

Progress and profitability must also be backed by a strong integrated plan between business and RA. Unique, siloed initiatives may lead to RA being deemed a 'tactical' function only.

In summary, the survey indicates that despite all odds, the journey to evolve RA to the next level by operators has already begun and is expected to continue.

# 1

## Revenue Leakage – A continued bane...



**54 percent of RA Heads indicated that revenue leakage was greater than 1% of total revenues (excluding fraud)**

## Leakage – Estimated, Identified and Recovered

Revenue leakage (including fraud-related) across the revenue chain remains a challenge for operators. While operators in developing markets face a wide range of issues including the upfront challenge of high revenue leakages, operators in developed markets are faced with insufficient data to accurately identify and recover most of the estimated leakages.

When asked about estimated revenue leakage in their operations, 54 percent of RA Heads indicated that revenue leakage was greater than 1 percent of total revenue (excluding fraud), and 15 percent indicated revenue leakage of greater than 3 percent. Some respondents in Africa acknowledged revenue leakage greater than 10 percent. (Figure 1 - Regional breakdown of fraud and revenue related leakages)

These survey findings are skewed because 18 percent of respondents had no information on revenue leakages and 37 percent had no information on fraud leakages. Availability of information was a greater challenge for operators in the Asia-Pacific region than other regions. (Figure 2 – Percent of respondents with no information on leakages)

Figure 1: % of respondents with revenue and fraud leakage greater than 1%

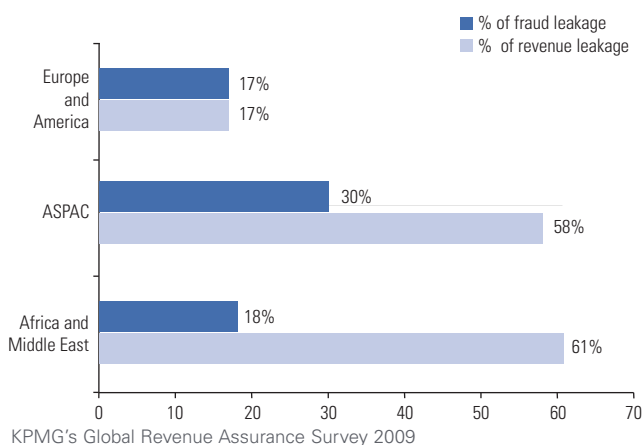
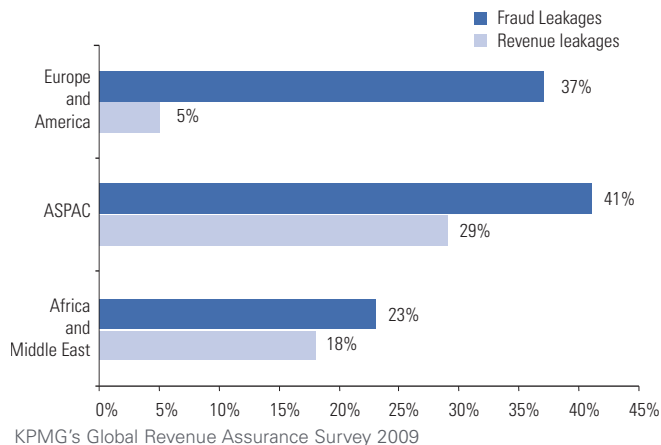


Figure 2: % of respondents with no information on leakage estimation



**A very thin line exists between 'leakages as an inherent risk' and 'leakages as a business challenge'. Identification and recovery of such leakages from the subscribers or partners is the delta between these two forms**

Hence, actual leakages across the industry may be higher than what is estimated above. Further, this estimation is based on restricted knowledge of source of revenue leakages as indicated by other findings of the survey (absence of requisite network/ system skills and lower sample coverage in RA reviews - subsequently discussed in the report). Leakage estimates by senior management were higher than the estimates provided by RA function heads.

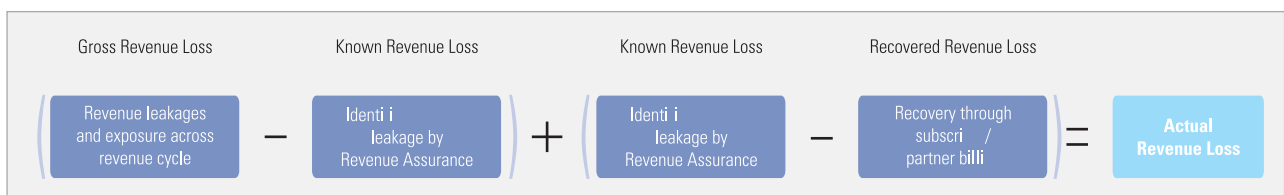
### KPMG Viewpoint

A common perception across the industry is that developing markets face higher revenue leakage than developed markets due to rapid growth and technological changes. The survey substantiated this perception to a significant extent although it did highlight the fact that data availability challenges exist across regions. These challenges were found to be as significant in developed markets as in developing markets.

Data unavailability of any form is a concern. Information is critical for decision-making. Operators that do not know what is at stake are more likely to be comfortable with the current state and not evolve.

In fraud-related leakages, data unavailability was a bigger concern with close to 37 percent of respondents unable to obtain the required information. Tracking fraud is critical—the telecom value chain has numerous fraud vulnerabilities, both internal and external. With increasing dependency on third parties for core operations, it is of even greater significance. Operators worldwide need to evaluate their current tools and MIS and data-gathering processes since a lack of reliable and comprehensive data distorts the degree of assurance provided by the RA function.

Revenue leakage is an inherent risk in the telecom revenue cycle regardless of the scale and region of operations. A very thin line exists between 'leakages as an inherent risk' and 'leakages as a business challenge'. Identification and recovery from the subscribers or partners is the delta between these two forms: The stronger the delta, the larger the gap.



Survey findings yielded the following:

- Forty percent of respondents estimated that less than half of the total leakage is identified by the RA function.
- Sixty percent of respondents estimated that less than half of identified leakage is recovered from subscriber or partner billing.
- More than one-quarter of respondents did not have information to estimate the percentage of actual leakages identified.
- Leakage identification seemed a bigger challenge in developing markets where large numbers of respondents from Africa, the Middle East, and the Asia-Pacific region indicated identification of less than 10 percent of estimated leakages. But while identification of leakages is a hurdle for a handful of operators, recovery of leakages is a challenge across all regions. (Figure 3 - Regional breakdown of revenue leakage identified and Figure 4 - Regional breakdown of revenue leakage recovered).

Figure 3: Regional breakdown of revenue leakage identified

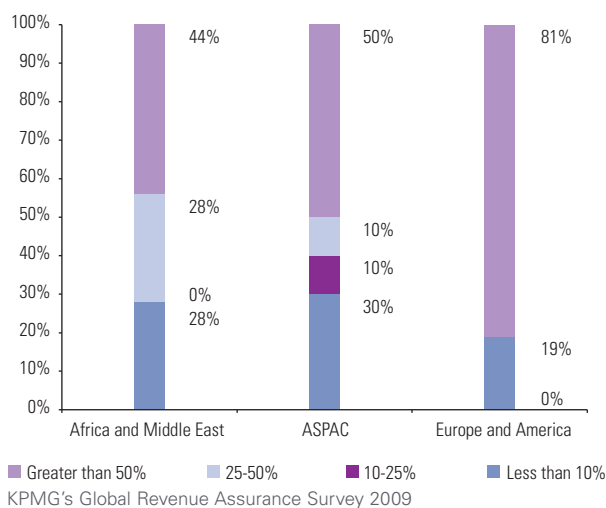
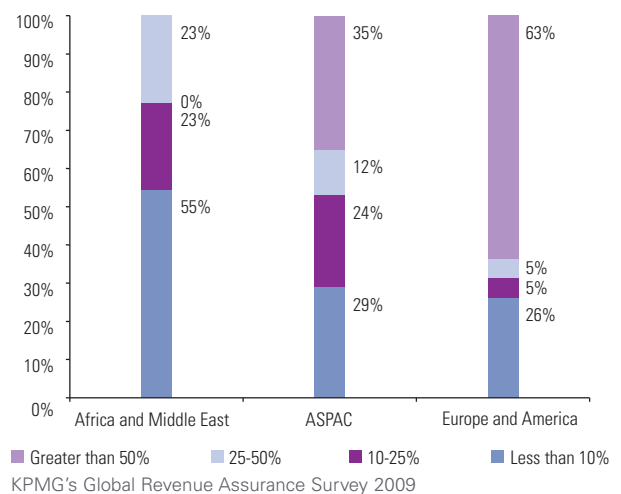


Figure 4: Regional breakdown of revenue leakage recovered

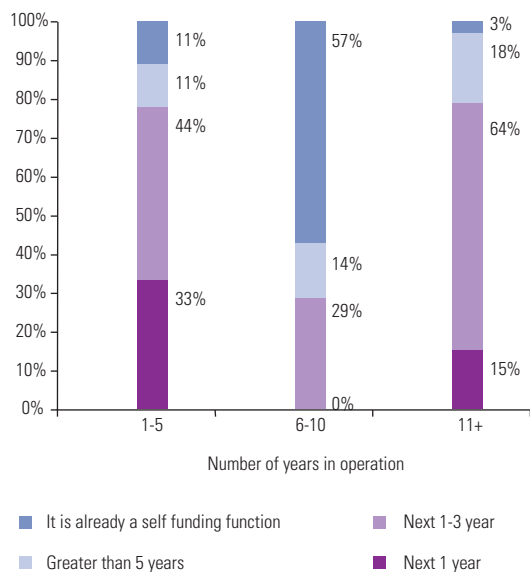


## KPMG Viewpoint

For the majority of operators, recovery of leakages ranged from 2.5 percent up to 37.5 percent of the total estimated revenue leakage. This indicates that a large portion of revenue leakage remains un-recovered. Although revenue leakage worldwide was generally 1-3 percent of revenues, the quantum of this loss even at this miniscule percentage is significant.

It is imperative for operators to assess the complete life cycle of capturing leakage data, identifying the leakages and recovering them. Timeliness is also critical since leakages recovered over an extended period of time are less likely to realize the potential value. As the time between the leakage and recovery increases, the probability and size of the recovery may decline.

Figure 5: Self funding RA function vis-à-vis length of operation



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## Revenue Assurance – A self-funding function?

The higher the leakage recovery levels, the higher the potential for RA to become 'self-funding'. A self-funding RA function is one where the total cost of operation is less than the savings and benefits derived from it. These savings may be in form of identification and recovery of actual leakages post-facto or proactive identification of revenue exposure prior to its conversion into actual leakage. Fifty-four percent of operators surveyed believe their RA function is not yet a self-funding function and only 13 percent of those expect to become self-funding in the next year.

Further, it is interesting to note that 97 percent of operators in business for more than 10 years still do not have self-funding RA functions. Younger operators seemed to indicate more efficient RA functions—with 33 percent stating they would be self-funding within the next year compared to only 15 percent of operators that have been in business for over 10 years. (Figure 5 – Self-funding RA function vis-à-vis length of operations)

## KPMG Viewpoint

The finding that most operators are not yet self-funding—despite the fact that the cost of RA is typically far less than 1 percent of revenues—is not surprising given the common challenges of data unavailability and low recovery percentages.

A self-funding function has to also be very agile in a dynamic environment. Ongoing investment in new tools, skill sets, processes, and technology may be required to keep up with improvements in telecom technology, and the increasing complexity of revenue leakage sources, including fraud. Self-funding is a continuously evolving process rather than a static state. With annually growing revenues and volumes, the investment required to sustain a 'self-funding' status also increases continuously.

Drivers for a self-funding function may also vary based on the degree of maturity of the RA program. Early stages of RA maturity mandate a focus on leakages to allow the function to move to a self-funding stage. More mature RA functions instill benefits in the form of margin enhancement (revenue enhancement and cost savings) to sustain the self-funding status.



# 2

Skill sets, tools and methodology – tying the loose ends...



Majority of the respondents highlighted that technical skills i.e. knowledge of network elements and other systems involved are the most significant missing skill set in their function

Effective achievement of RA objectives mandate:

- A robust team with diverse skills to understand the various aspects of the telecom revenue chain—skills range from technical to financial to process control.
- Automated and advanced RA and data analytics tools to efficiently capture and analyze large volumes of data.
- Customized RA methodology based on contemporary business needs and ensuring prioritized coverage of areas.

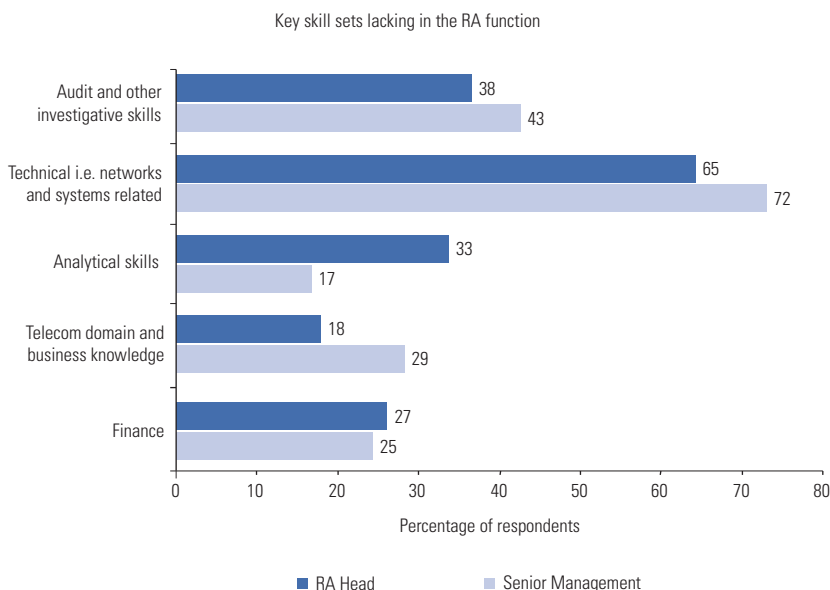
A combination of all three is critical for an operator to leverage the complete benefits of the RA function.

### Skill set availability

When polled on availability of skill sets within the RA function, 62 percent of senior management and 57 percent of RA heads indicated that RA functions either possess partial or incomplete skills required to be effective. This was consistent across regions irrespective of maturity of the markets involved.

A majority of respondents felt that technical skills (i.e. knowledge of network elements and other systems) are the most significant missing skill set. Second to technical skills, audit and investigative skills were indicated to be deficient.

Figure 6: Deficient skill sets within the RA function



It is interesting to note that 59 percent of senior management in Africa and the Middle East believed that finance knowledge was lacking indicating an older school of thought—that RA is a finance and accounting oriented function. However, in developed markets such as Europe and America, technical and audit skills were the key areas identified as lacking. (Figure 6 - Deficient skill sets within the RA function)

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The establishment of cross-functional teams with liaisons to other departments can be the key to developing the required diverse skill set within RA. By identifying liaisons across different functions such as Networks, Sales, Finance or IT, people who have more specialized skills from these areas can be leveraged to help RA meet its diverse requirements. Of the RA functions surveyed, more than 50 percent were found to have partial or no cross-functional representation. Approximately 35 percent in Europe and America, and about 67 percent in the Asia-Pacific region stated they do not have cross-functional teams at all.

As seen in the figure below, revenue leakage can happen anywhere across the revenue cycle. A cross-functional skill set within the RA team is necessary to be effective. Further, in addition to operational knowledge, it is critical for RA personnel to possess sound business and market knowledge.

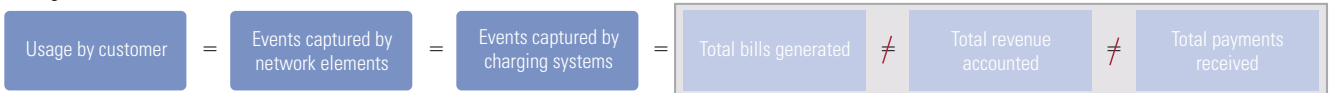
Ideal Revenue Cycle with no revenue leakages



Leakage due to configurations



Leakage due to bad debts



Incorrect revenue reporting



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Another trend indicates that on the job training is the most popular training method adopted by operators (92 percent), followed by self-study. Only one-third of operators organize specific training to develop specialized technical knowledge of networks and analytics, etc. Investment in classroom induction sessions and self-study programs was also minimal.

## Leading Practice

Training for RA professionals can be provided through focused workshops where RA experts are brought in to apprise the RA team of the latest trends in telecom revenue leakage and the current techniques that can counter them. RA experts can be contracted for periods of three to six months, and their continuous exposure to RA functions worldwide would give them invaluable perspectives to share. The training periods would also present the opportunity for the RA teams to tap into the experience of these specialists to help them resolve the specific problems and situations that they may face.

## KPMG viewpoint

Leakages can occur anywhere across the revenue cycle—sales, activation, network configuration, CDR processing, rating and billing, credits and commissions, among others. It is therefore critical for RA personnel to understand various aspects of the revenue cycle – technical, commercial, and financial. Knowledge and understanding ensures that leakages of all forms are identified and subsequently recovered. However, technical areas such as networks or rating and billing have been highlighted as the most vulnerable. The development of skills in these complex areas is a priority.

This need is subsequently underlined by the complexity of evolving technologies and innovative products in the market. As competition increases or as markets mature, operators often engage in product innovation that generally involves complex network architecture and billing logic. Technical skills gain greater importance as leakages can be identified only if RA personnel can talk the same language as the business operational functions. Therefore, involvement in logic building and configuration checks is as critical as after fact reconciliations.

Despite such pressing needs, the factors mentioned below indicate that in-house recruitment and retention of such skills may not be as easy across all operators:

- Most RA functions are not self-funding. RA is perceived as a support function and hence business is reluctant to allow significant investment without realizing tangible benefits.
- Based on our experience some operators in developing countries have significant difficulty recruiting the right people and retaining them long-term.

As a result, the existence of cross-functional teams becomes particularly important to combat the challenge of missing skills. Once the skill sets are developed within RA, the involvement of other functions can be reduced over time. However, active involvement of cross functional representatives in resolution of RA issues would continue.

The different perspectives and skill sets of a cross-functional team facilitate a holistic view of the revenue cycle within the RA team rather than a siloed view focused only on billing errors and revenue recognition.

Identification of specific required skill sets and investment in developing those skill sets is important. When the business function and RA realize their skills are complementary and not competitive, the RA skill-set challenge may be more easily overcome.

## Leading Practice

Recruiting from internal functions such as Finance, Networks, and IT for a fixed period under an “exchange program” can help ensure a genuinely cross-functional RA team that thoroughly understands the business dynamics, leading to more efficient and effective performance. The RA head can be responsible for the employees’ appraisal on the job to avoid confusion regarding the reporting structure. This procedure also benefits employees by expanding their horizons and providing them with varied perspectives of the business. In many organizations, such a rotational assignment is considered an important leadership development activity. Some telecom operators even recruit from a pool of retired policemen and detectives to bring in their investigative knowledge and expertise.

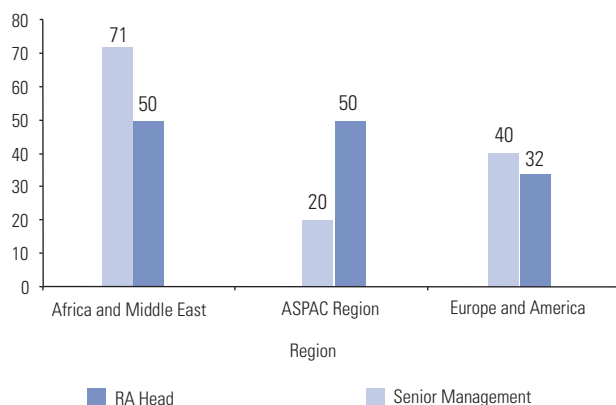
Another leading practice is the establishment of an Operational RA Steering Committee comprised of the heads of various departments across functions. Such a committee can help the RA function escalate any identified issues, data inadequacy, or exceptions, to the relevant departments directly to help expedite resolution.

## Revenue Assurance Tool Application

RA functions utilize a variety of tools such as automated RA, analytics, data extraction, and dashboards that can perform periodic reconciliations and identify exceptions.

Survey respondents were found to use RA tools extensively. A majority stated that analytical, data extraction, test call generators, and automated RA tools are used individually or in combination. However, approximately 43 percent of RA heads and senior management indicated they were either only partially satisfied or were not satisfied with the application of RA tools (Figure 7: RA Tool Assessment response).

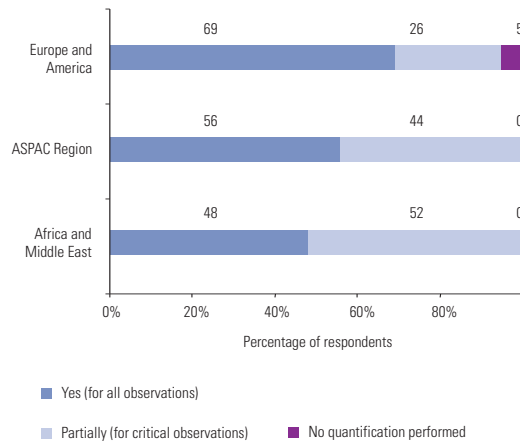
Figure 7: RA Tool Assessment response (% not satisfied)



The trend across regions indicated high levels of dissatisfaction with existing RA tools—most notably in Africa and the Middle East. It is evident also that operators, though aware of the benefits of RA tools, are not able to leverage the maximum output from them and as a result are not satisfied.

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Figure 8: Quantification of observations



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**More than one-third of operators analyse less than 5 percent of chargeable events and about 41% of respondents indicated that they quantify leakages only for critical issues**

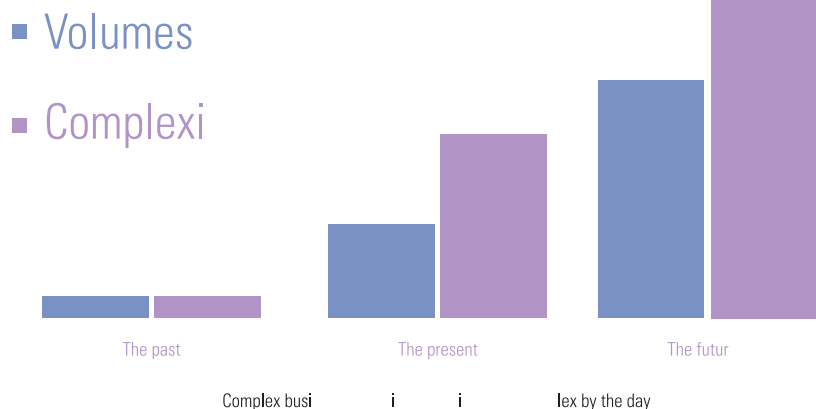
In order to further analyze the above findings it is critical to note responses for the following two key RA aspects as well:

- More than one-third of operators analyze less than 5 percent of chargeable events
- Forty-one percent of respondents quantify leakages only for critical issues. (Figure 8 – Quantification of observations).

This clearly indicates that while most operators have invested significantly in RA tools, the benefits derived in the form of covering a larger sample or determining overall leakage impact has been limited. Such tools and techniques require specific knowledge, technical skills, and trained resources to operate efficiently. As indicated earlier, most respondents felt that adequate technical and analytical skills are currently missing in their function. Because of the lack of skills to implement these tools or to apply analytical techniques over a large spread of data, the full potential of these tools is not being leveraged.

As the size and complexity of businesses grows, the use of advanced tools and analytics will be critical for the RA function to perform effectively.

Growth of information



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A majority of senior management and RA heads across regions indicated that defined RA procedures, along with RA tools, are critical to prevent leakages. Expectations from the RA tools are high with approximately 80 percent of respondents in all regions advocating the use of RA tools to combat revenue leakage.

## KPMG Viewpoint

The absence of issue quantification nullifies the benefits derived from the use of advanced tools or larger sample coverage, as the operators would not be able to prioritize the findings and determine the actual impact. This also proves to be a deterrent for RA gaining importance in the organization as there would be no visibility into the extent of savings from the RA function.

RA heads and senior management emphasized the need for automated RA tools to combat revenue leakages. Although RA tools can certainly be one of the most effective and convenient mechanisms to identify revenue leakage, RA tools alone are not the solution to most of the problems faced by the RA function.

Use of an advanced RA tool can be essential for the development and progress of the RA function. However operators will not be able to leverage a tool's benefits without the support of robust and comprehensive RA operational procedures and adequate skill sets. A strong team is needed to decipher the indicators highlighted by the tool, assign a criticality and determine what actions need to be taken. Further, RA tools are generally configured by technical vendor personnel independently and lack business support during the configuration stage. Involving business support early would ensure all business critical checks are configured as per requirements. For example, RA checks should not be restricted to the most popular rating and billing checks but should also include checks across other elements such as activations, balance forfeiture, sale of golden numbers, and manual credits.

The launch of new services, especially data related, require RA tools capable of understanding and analyzing information from new systems involved in service delivery. Very soon the focus of RA could move from CDRs (Call Data Records) to EDRs (Electronic Data Records) or IPDRs (Internet Protocol Data Records), and the tools being employed need to be robust and flexible enough to handle these shifts. The RA tools need to be supported by trained personnel who understand the new services to obtain the best results.

## Leading Practice

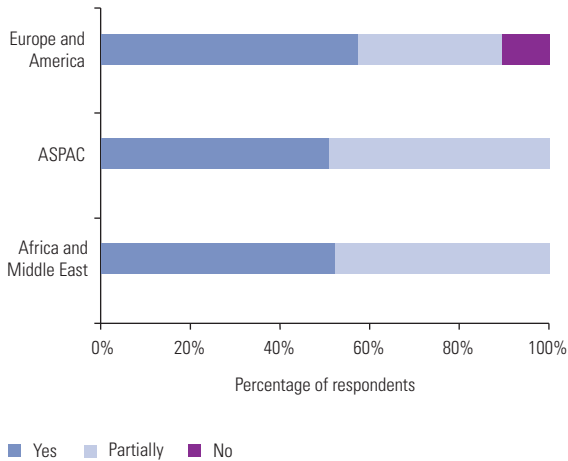
Prior to implementing an RA tool, a process should be established incorporating tool involvement and a detailed needs assessment to determine the required tool functionality. Customized tools are more effective than just plug-and-play solutions. Further, having separate tools for RA and fraud management can lead to more focused analysis in each area vis-à-vis a combined solution.

In case the scale of operations or budget constraints cannot afford the investment in an RA tool, automated RA activities using continuous monitoring (ACL, MS Access, etc.) can be used. This minimizes dependency on manual processes and ensures greater efficiency in reporting turnaround time and accuracy.



## Revenue Assurance Methodology and Coverage

Figure 9: RA Methodology Assessment



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RA methodology determines key activities undertaken to identify and resolve revenue leakage issues across an organization. It includes determining the nature, coverage, timing and frequency of reviews and the reporting of identified issues.

When asked to assess the RA function on coverage, methodology, and quality of work parameters, a majority of RA Heads indicated they were 'satisfied' or 'very satisfied'. However, 50 percent of RA heads in the Asia-Pacific region, 48 percent in Africa and the Middle East, and 32 percent in

Europe and America indicated that they are just partially satisfied with the existing RA methodology and its alignment with overall RA objectives (Refer Figure 9 – RA Methodology Assessment).

RA assessment on various parameters by senior management and RA heads:



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One of the upcoming trends highlighted by this survey has been application of annual risk assessments for determination of annual RA review plan and scope. About 38 percent of operators apply risk assessments for RA scoping

The survey indicates that the application of annual risk assessments to determine annual RA review plans and scope is likely to increase. About 38 percent of operators apply risk assessments for RA scoping—this includes 12 percent of operators who combine the results of assessments along with ad-hoc requests or defined activity calendars to perform various RA checks or reviews.

Annual risk assessments are prevalent in the Asia-Pacific region with 56 percent of operators responding they have completed such assessments. This is followed by Europe and America with 41 percent, and Africa and the Middle East with 21 percent acknowledging their completion. While revenue related risk assessments are increasing, many operators still perform RA reviews based on standard schedules and ad-hoc requests—specifically in Africa and the Middle East.

Most operators indicated they use a combination of the following three approaches to conduct RA reviews:

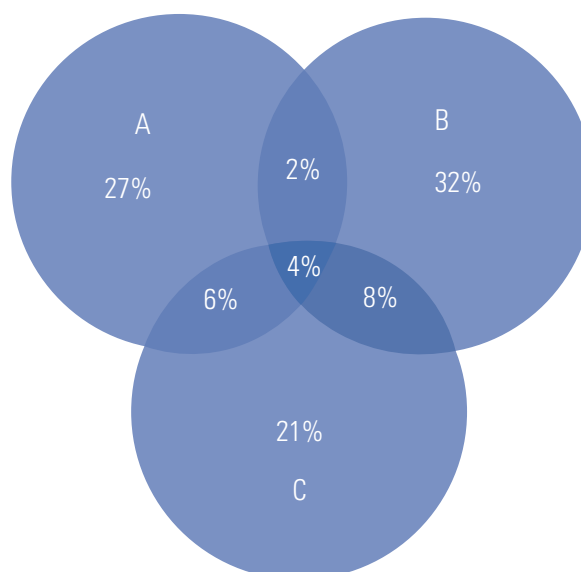
A - Conduct annual risk assessments

B - Have standard RA schedules defined

C - Conduct RA reviews on an ad-hoc basis

(Figure 10 – Varied RA approach application)

Figure 10: Varied RA approach application



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## KPMG viewpoint

Integration of the RA approach and methodology with business objectives requires the RA approach and plan to be based on current business needs and environment. RA needs to be formally integrated with other key assurance activities. This will ensure that the RA review schedule and plan mirrors current business needs and priorities; specifically when these are constantly changing as a result of change in revenue streams, technology and systems. Frequency of revenue risk assessments should also be determined based on business environment whereby mature markets may perform such assessments annually and growing markets may perform more than once in a year. RA should also proactively identify special RA projects that may be performed during the year.

A large number of operators are only partially satisfied with the current RA methodology due to a reliance on ad-hoc requests for involvement and out of date RA schedules.

Further, the differences in opinion while rating coverage of operations, knowledge and skill sets indicate a lack of communication between senior management and RA heads. This also highlights the need for RA to build its own brand within the organization. Doing so could help the RA function to increase visibility across the organization and establish RA as critical to all key decision-making.

## Leading Practice

To ensure sufficient coverage of operations, well-structured RA functions create detailed activity calendars that include milestones across the revenue chain. This calendar also includes a criticality matrix highlighting the most important activities and the frequency with which they are performed. A clear and exhaustive list assists the RA function in prioritizing milestones depending on availability of personnel and other resources. Activity calendars need to be supported with detailed desktop procedures indicating the methodology involved. This will reduce dependency on personnel and ensure continuity.

# 3

Empowerment and widened orientation – some more miles to go...

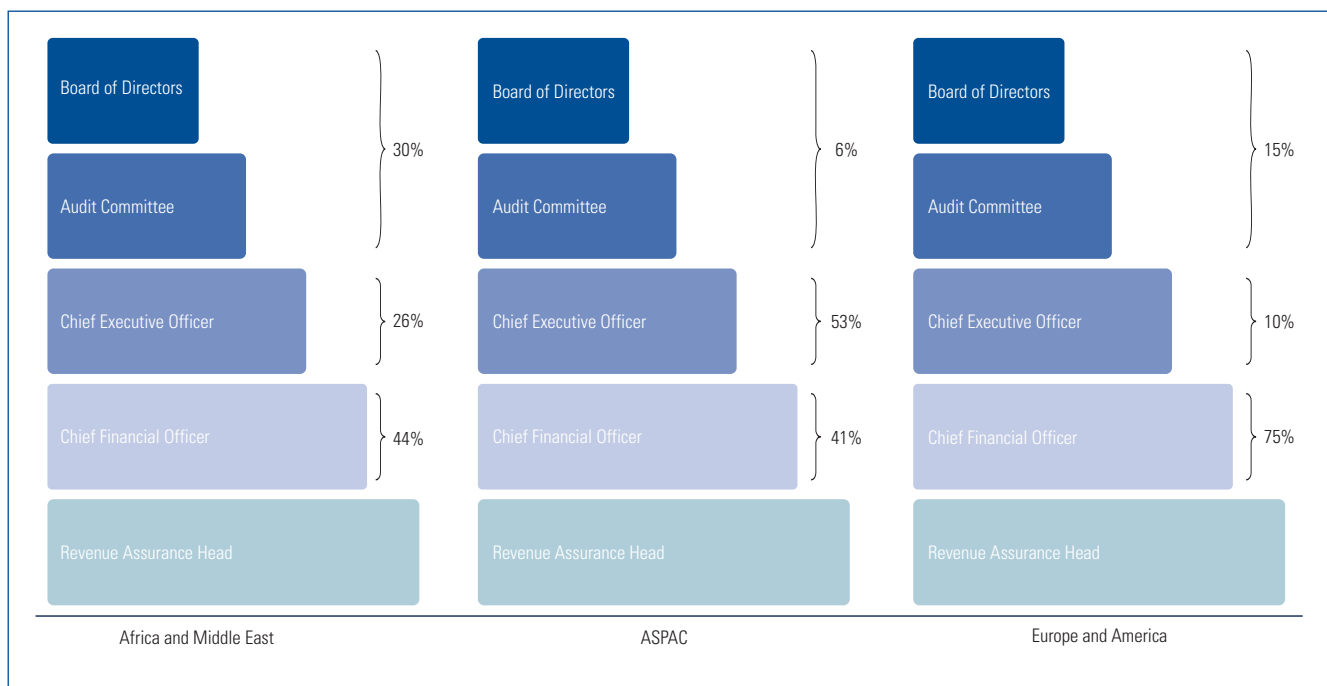


**It is encouraging to note that RA is being provided growing visibility and empowerment in some geographies. Survey indicated that developing markets have granted more strategic importance to RA than developed markets.**

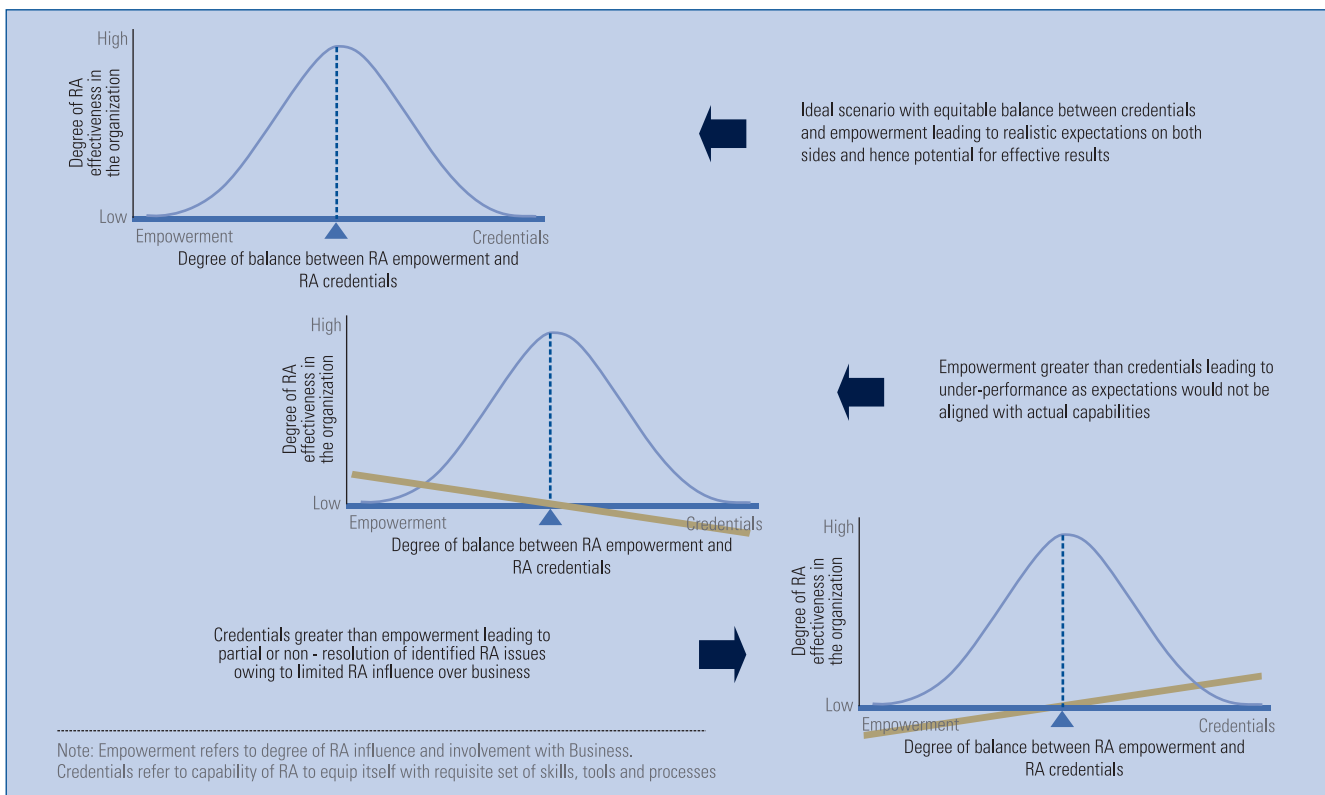
Even today, about one-fifth of operators worldwide do not have a formalized RA organization structure. Either internal audit groups or other functions perform RA activities, usually in a limited and reactive manner.

The survey indicated that more than 53 percent of RA functions ultimately report to the Chief Financial Officer. However, further analysis indicates that operators in developing markets seem to have established more strategic importance to RA than those in the developed markets.

The following figure details the authority to which the RA function reports on a periodic basis



It is encouraging to note that RA is garnering greater visibility and empowerment in some geographies. At the same time operators must ensure that empowerment is equally balanced with requisite credentials supported by proper skill sets, tools and processes – it is a pre-requisite for RA to perform effectively.



**Prevention and detection of revenue leakage continues to be the primary objective of the RA function – for the present and for the future**

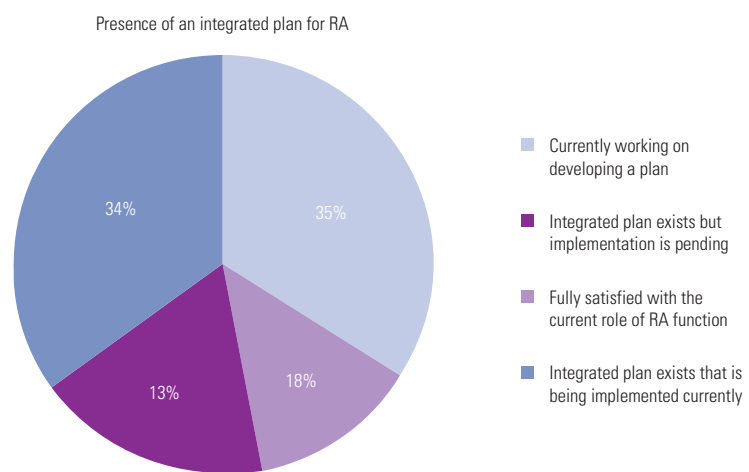
Interestingly, the survey suggested different perceptions of RA by senior management and RA heads.

In the future, revenue leakage will continue to be the primary objective for both groups. Senior management rated focus on revenue reporting as the succeeding objective, and RA heads comparatively selected involvement in revenue enhancement and cost savings.

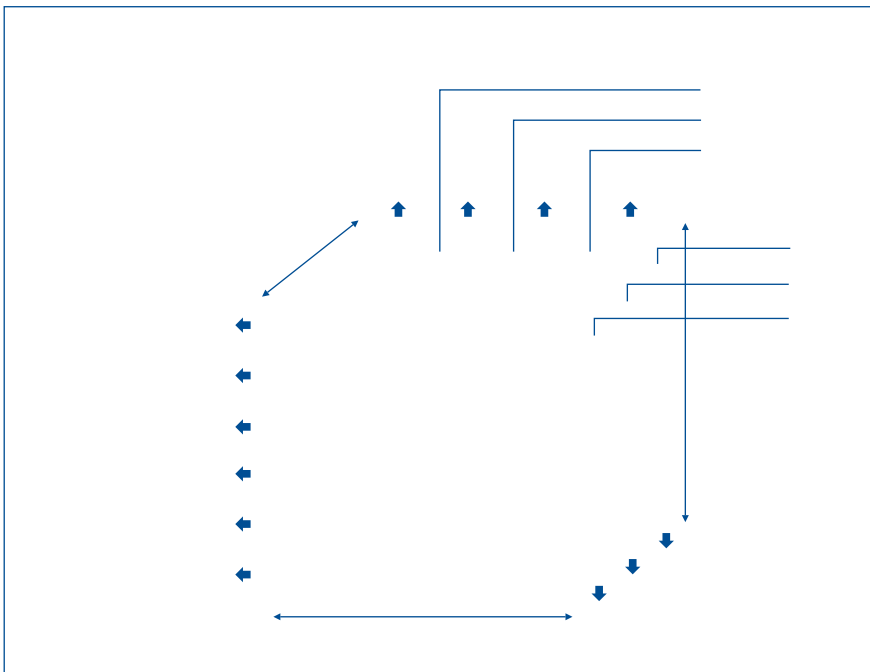
Prevention and detection of revenue leakage remains the primary objective of the RA function, with 79 percent of senior management and 87 percent of RA heads polled listing it as their highest priority. Assisting the business in managing leakage-oriented issues was the succeeding objective.

Operators are keen to transform the existing RA function to include newer responsibilities and avenues—only 16 percent of respondents are fully satisfied with the existing role of RA. However, the majority of the respondents who expressed their willingness to transform the function could not support their intentions with an integrated action plan. (Figure 11 – Presence of integrated action plan for RA transformation)

Figure 11: Presence of Integrated action plan for RA transformation



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When developing an integrated plan, it is critical to consider all three dimensions of a robust RA framework: RA orientation or key objectives; methodology (including governance model); and required enablers to put objectives and methodology in practice.

The need to transform the function is consistent with the view expressed by many RA heads that their function is only partially aligned to overall business objectives and growth strategies. This

number is particularly high in the Africa and Asia-Pacific regions (40 percent), and at smaller telcos with revenues under USD 500 million (75 percent).

However, most senior management respondents (71 percent) across all regions and scale of operations stated that they believed the RA function is in alignment with overall business objectives and growth strategies.

## KPMG Viewpoint

The global telecom industry has witnessed unprecedented levels of growth, opening of many new markets, rapidly changing technology, and ever-increasing pressure on margins. This has forced the Revenue Assurance function to move to a business advisor's role rather than continue in only a leakage prevention capacity.

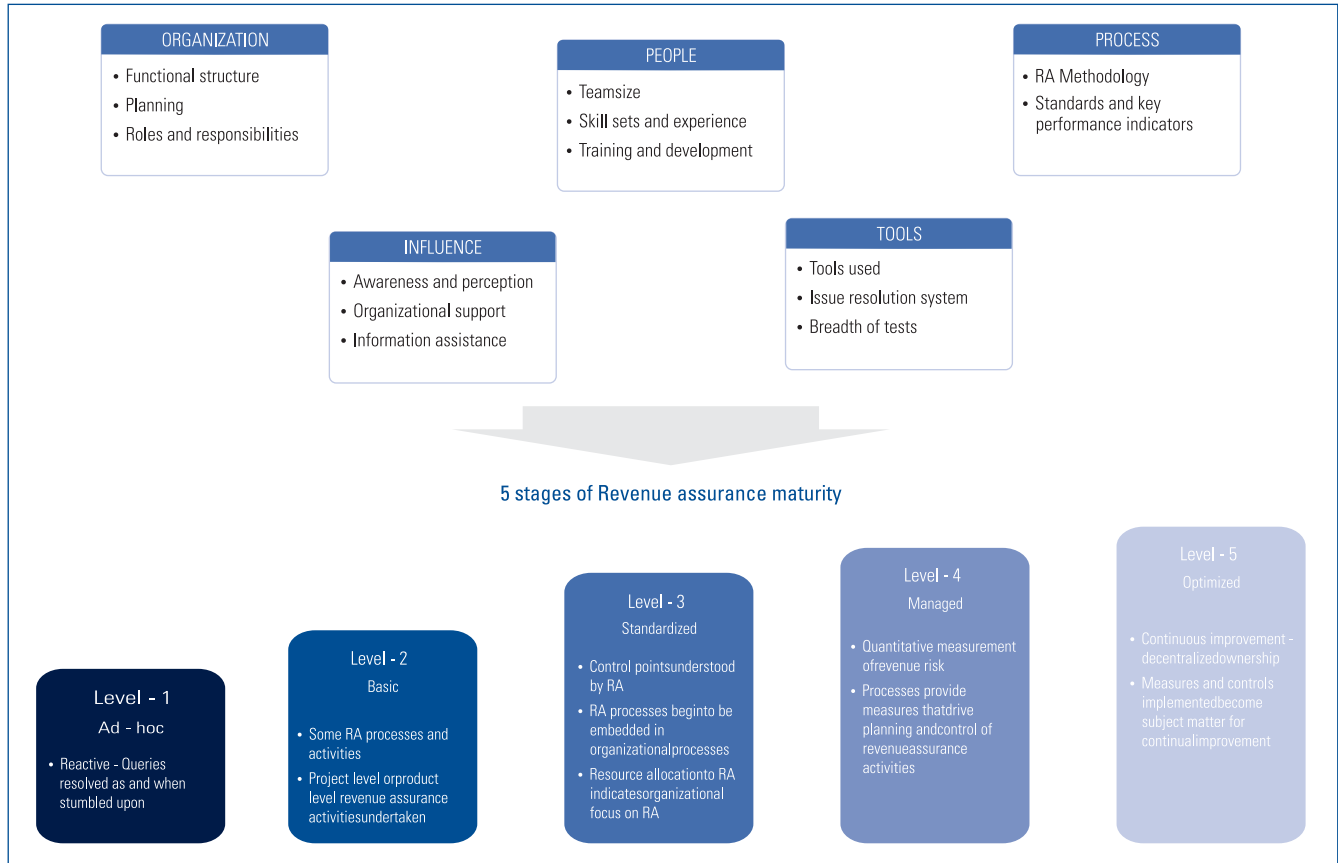
The absence of an integrated plan for the required RA transformation, despite clear intentions for the same, positions RA as a 'tactical' function rather than a well articulated long-term strategy and direction. This clearly indicates that RA is still considered a support function and not a strategic one.

As the telecom industry grows it will be crucial for the RA function to evolve in order to better align itself with the changing business dynamics and objectives. This would require operators to assess the current requirements along with the external business scenario to evaluate the long-term role of RA. While detection and prevention of revenue leakage will remain the primary objective, a formal inclusion of revenue enhancement and cost savings should be evaluated.

Such a transformation requires more than just a functional overhauling. Currently, across regions and irrespective of the scale and maturity of the operators, motivation to assist RA to take on a greater role is limited. It is essential that organizations adopt a fresh mindset to allow for all business functions to accept Revenue Assurance's demanding role within the organization.

One encouraging trend that was revealed by the survey was RA reporting to the CEO in growing markets. This highlights the larger business mandate and perspective in which RA is being pictured.

Parameters and stages of RA Maturity Model



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### Leading Practice

While RA reporting to the CFO should happen on a monthly basis, it is recommended that a quarterly report also be presented to the Board of Directors and the Audit Committee. This report should clearly highlight the financial impact of issues identified by the RA function.

Representatives of the board may approve the composition of an RA Steering Committee and defined RA charter and targets. Such a structure will give RA the opportunity to have direct visibility to senior decision making authorities and highlight its importance to the rest of the organization.

In time, RA should be established as a key input, not just for key operational decisions such as vendor selection and procurement, but also for strategic decisions such as mergers and acquisitions or new product launches. The technical knowledge with a business background that RA provides can be valuable in decision-making.

Clearly defined performance evaluation against pre-established goals should be conducted on an on-going basis. Revenue leakage identification and recovery targets should be established to ensure quantification and increased recovery efforts. Also, a regular maturity assessment of RA should be conducted to constantly assess the needs of the RA function and communicate them to senior levels of management.

# 4

## Key Insights

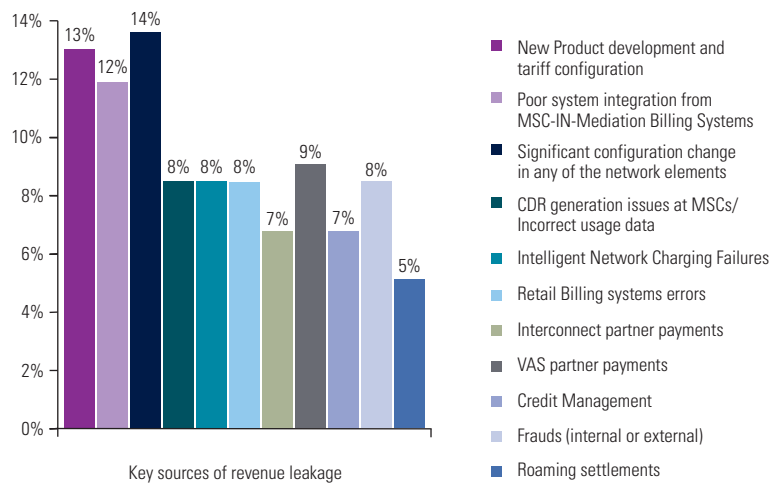


## Source of leakage

On a scale of 1 to 10 the following were rated as most vulnerable to revenue leakages:

- Significant configuration changes in any network element
- New product development and tariff configuration
- Poor system integration from MSC-IN-Mediation-Billing Systems (CDR processing cycle)

Figure 12: Source of revenue leakage



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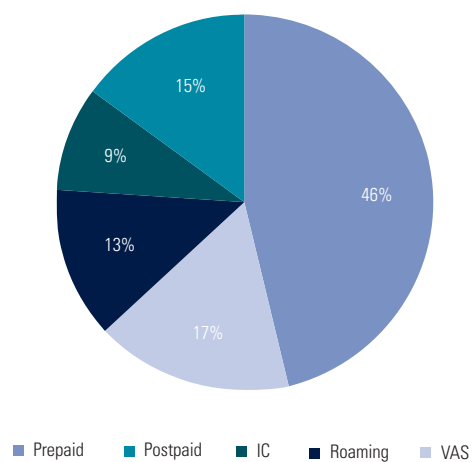
## KPMG Viewpoint

RA functions consider leakage sources that are network- or system- intensive to be most vulnerable. With the rapid introduction of new products and a very limited turnaround time, configuration changes and incomplete synchronization across multiple systems may lead to the override of a valid business rule in any one of the systems.

## Leading Practice

A major global Telecom follows a 'Risk Portfolio Model' approach for every new product launched. As part of the model, business, financial, and operational risks are assessed before a product is launched. This helps to ensure ensures that all risk angles are reviewed and quantified, and the appropriate responsibilities assigned. This approach also ensures that a conscious and studied decision is made regarding the feasibility and risks for the product being launched.

Figure 13: Revenue streams rated as most vulnerable



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## Revenue stream vulnerability

In regard to revenue stream vulnerability the survey revealed that:

- More than 45 percent of all respondents ranked 'Prepaid' as the most susceptible to revenue leakage (Figure 13)
- In Africa, the Middle East, and the Asia-Pacific region, a majority of respondents ranked 'Roaming' and 'Value Added Services (VAS)' as the second most vulnerable
- In Europe and America 'Postpaid' was ranked as the second most vulnerable.

It is notable that the largest revenue stream for most operators is also the most vulnerable.

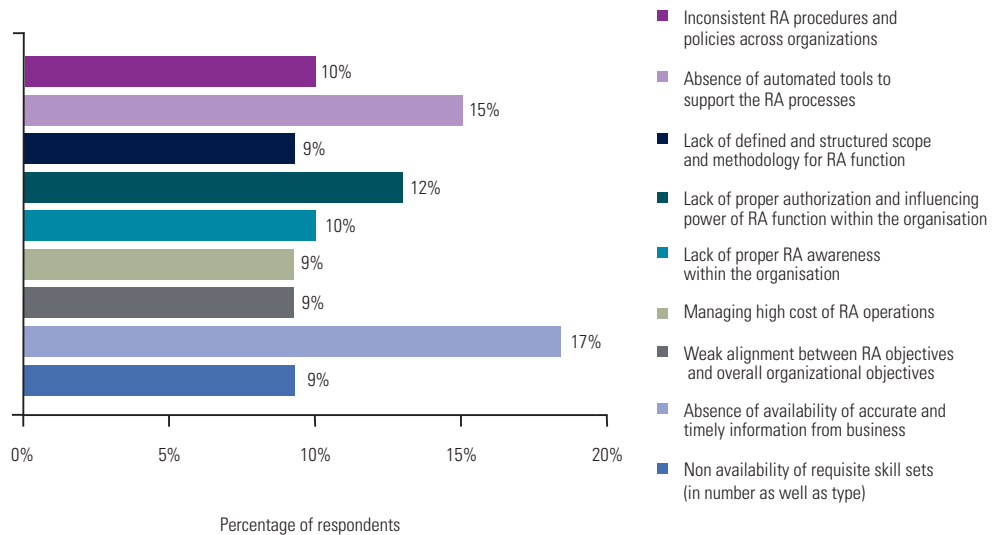
## Key Challenges faced by Revenue Assurance

A majority of respondents rated the following as the key challenges that prevent their organizations from leveraging maximum benefits out of the RA function:

- Lack of accurate and timely information from the business and/or operations
- Absence of automated tools to support RA processes
- Lack of proper authority and influence of the RA function within the organization.

(Figure 14 – Key Challenges faced by the Revenue Assurance function)

Figure 14: Key challenges faced by the Revenue Assurance function



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## KPMG Viewpoint

Lack of influence of the RA function impacts its ability to obtain required data, as other functions are less likely to act on RA requests promptly and efficiently. RA needs to establish its brand within the organization to be taken seriously. This can be driven through a mandate from the Board of Directors establishing a long-term goal for RA and a clear roadmap to get there.

## Leading Practice

To help ensure timely delivery of accurate data to RA, Service Level Agreements (SLAs) can be established between RA and other departments. The SLAs would support different circumstances of data requirements during the normal course of RA testing, or during special circumstances such as a new product launch. This practice can help to ensure a smoother and timely completion of RA activities.

## Third party dependency vis-à-vis Revenue Assurance

Sixty-eight percent of respondents indicated there were no formal evaluation mechanisms to review controls established by the vendors managing core operations. Specific RA reviews for vendors are rare and wherever such mechanisms do exist, operators are not satisfied with the results.

Approximately 61 percent of respondents stated they do not have a claw back clause in vendor agreements to recover any form of leakages due to negligence or non-compliance. Of the respondents that did have a claw back clause, only 23 percent stated that they had ever executed it. One reason for non-execution of such clauses could be a lack of formal vendor reviews for RA resulting in operators not obtaining sufficient information and facts to execute the clause.

With dependency on third parties and vendors involved in operations across the telecom revenue chain, it is critical to ensure that revenue impacting KPIs and SLAs are included in contracts. As this is rarely done at present, operators are exposed to significant risk.

## Revenue Assurance outsourcing

Operators are willing to explore RA outsourcing to a limited extent. The major driver for this is the non-availability of the necessary skill sets in-house, specifically with respect to network and system related skills and knowledge.

Although 85 percent of operators do not currently outsource the RA function, more than 50 percent of senior management and RA heads were not opposed to doing so. Networks followed by Rating and Billing were the key areas identified where external technical assistance would be most required, especially in Africa and the Middle East where RA functions were not as developed as in other markets.

### KPMG Viewpoint

Outsourcing is a key trend arising due to drivers such as cost, skill set, growth and consequently the need to focus on core operations. Even with dedicated teams, it may not be possible to have the necessary bandwidth across all operating units. Managing everything centrally requires significant investment in systems. As a result, RA outsourcing is an imminent trend. The business models may vary from limited outsourcing to complete outsourcing. While concerns like data integrity, confidentiality, and regulatory compliance may cloud such decisions, the benefits significantly outweigh the risks and challenges.

### Leading Practice

A large African telecom operator countered the inability to hire experienced RA professionals who were right for the job by outsourcing the RA function to a team of external specialists. This ensured that RA was equipped with the skill-sets and tools required to become an effective RA function. In addition, by including clearly defined KPIs in the agreement between the operator and the vendor, top management had control and visibility over the performance of the external specialist.

## Degree of centralization

The larger the operator scale, the more centralized the RA function is at the corporate level. Centralization may exist in two forms: Complete control or limited representation at operating units/circles. The survey indicated that complete control at corporate levels is the more popular industry practice.

While Africa and the Middle East both showed an even tendency between centralization and decentralization, Asia Pacific and Europe and America clearly indicated a preference for a centralized function with complete control at the corporate level.

### KPMG Viewpoint

Large operators tend to follow a centralized RA structure that provides them with better control over the function at the corporate level. This also allows for greater investment in RA as the function is catering to more than a single circle/country and hence must analyze and report on large volumes of data across operations with varying degrees of complexity.

## Fraud management

More than 60 percent of respondents across Asia Pacific, Africa, and the Middle East indicated fraud management was part of the RA function. However, 58 percent of operators with revenue greater than USD 500 million had an independent fraud management division.

### KPMG Viewpoint

While bigger telecom operators have an independent fraud management function, it is still a part of the RA function across medium and small-scale operators. The responsibility of identifying and addressing fraud lies with RA; hence the requisite tools and skill sets capable of identifying fraud leakages also need to be incorporated into the RA function.

## Leading Practice

Having dedicated resources for RA and fraud management ensures that both areas receive sufficient coverage as each requires a specialized skill set. Both functions can be structured within one department reporting to a single head. Such a structure encourages collaboration between the two functions and reduces the likelihood of duplication of effort. At the same time, the distinction also fosters creative competition.

## Forecasted leakages

While 90 percent of RA heads believe that future developments will increase revenue leakage, more than 50 percent were confident that the RA function would be able to identify the increased revenue leakage.

## KPMG Viewpoint

With agreement from most operators that new technology and increasing complexity will lead to increased revenue leakage exposure, it is essential that RA strengthens its skills and updates its tools to keep pace with the changing scenario. Focused training, inclusion of new tools and even outsourcing to specialists can help ensure this.

# 5

## Appendices

KPMG's Global Revenue Assurance survey was conducted during August 2009 – October 2009. It included an online questionnaire that was rolled out to senior management and heads of RA functions across new and established telecom operators. The questions were specific to the profile of the respondent with a specific focus on the role of RA in the organization.

The analysis and findings presented in this survey are based on information gathered from 86 respondents from 74 operators in 46 countries across Europe and America, Africa and the Middle East, and the Asia-Pacific region.

### Europe and America

Austria  
Belgium  
Bulgaria  
Cyprus  
Czech Republic  
Finland  
France  
Germany  
Greece  
Italy  
Netherlands  
Poland  
Romania  
Turkey  
United Kingdom  
United States of America

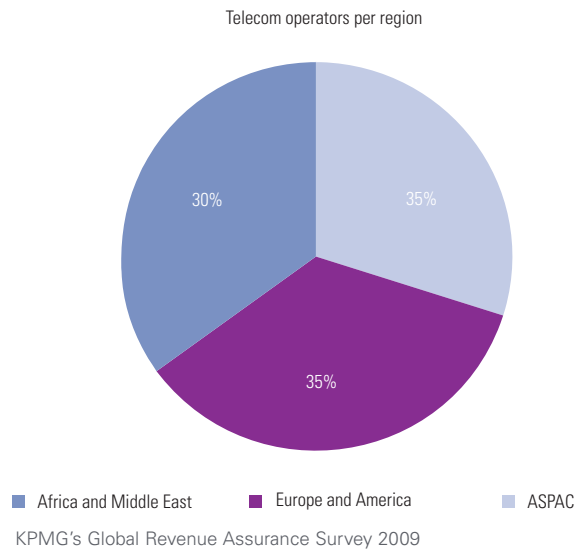
### Africa and the Middle East

Benin  
Cameroon  
Côte d'Ivoire  
Egypt  
Ghana  
Guinea Conakry  
Iran  
Kenya  
Kuwait  
Rwanda  
Saudi Arabia  
South Africa  
Swaziland  
Sudan  
Syria  
Uganda  
United Arab Emirates  
Yemen  
Zambia

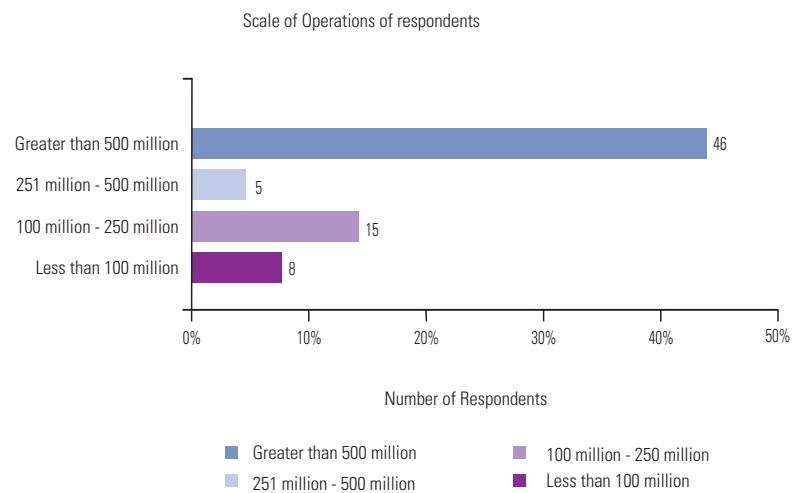
### Asia Pacific

Afghanistan  
China  
India  
Indonesia  
Japan  
Malaysia  
New Zealand  
Pakistan  
Philippines  
South Korea  
Thailand

## Respondent profile based on geography



## Respondent profile based on scale of operation



KPMG's Global Revenue Assurance Survey 2009

# 6

## Glossary

## Glossary

ACL	Audit Command Language
ASPAC	Asia Pacific
CDR	Call Data Record
CEO	Chief Executive Officer
CFO	Chief Financial Officer
EDR	Event Data Record
IC	Interconnect
IN	Intelligent Network
IPDR	Internet Protocol Data Records
IT	Information Technology
KPI	Key Performance Indicator
MIS	Management Information System
MS	Microsoft
MSC	Mobile Switching Center
RA	Revenue Assurance
SLA	Service Level Agreement
USD	United States Dollar
VAS	Value Added Service

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