INTERNAL AUDIT AS A TOOL OF FRAUD MANAGEMENT

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Abstract: Internal audit supports the process of organisation management and contributes to its increased effectiveness. One of its principal goals is detection of errors, including fraud which research shows to be a grave problem to enterprises due to both its rising numbers and value of losses it generates. Internal audit may be a protection against the risk of fraud by examining risks present in an enterprise as well as by evaluating correctness and efficiency of an internal control system. Research demonstrates it is a major source of fraud detection in enterprises analysed in respect of both global regions and company size.

Keywords: internal audit, frauds, management.

Introduction

Control mechanisms, including internal audit, are applied due to occurrence of various irregularities, both premeditated, understood as fraud, and unintended – errors, elements of operational risk in any business. Research proves they are a major issue to all businesses, therefore, internal audit may substantially contribute to improvement of the enterprise management system and effectiveness of business decisions made.

The goal of this paper is to analyse functions of internal audit as a tool of fraud detection. Consequently, the global scale of fraud in 2006-2014 is identified and evaluated and the importance of internal audit in the process of disclosure is analysed with reference to both world's regions and business size.

1. Functions and task of internal audit

The scope and functions of internal audit have evolved over the years. Table 1 illustrates the process on the basis of specialist literature.

Table1 Concept and functions of internal audit

Year	Author	Concept and functions of internal audit
1945	R.B. Milne	A complete financial and operational review as part of a given organisation.
1957	V.Z.Brink, L.B. Sawyer	Internal audit applies mainly to finance and accounting, though also to operations.
1964	R.K. Mautz	Careful selection and presentation of selected interpreted business facts for management to track these facts.
1978	Institute of Internal Auditors	Internal audit is an independent evaluation exercise to assist organisation members with effective discharge of their duties. Its objectives encompass promotion of effective control mechanisms at a reasonable cost.
1998	O.R. Whittington, K. Pany	Supply of reliable operational reports containing other than financial data.
1999	R. Moeller R., H.N. Witt	Checking of arithmetic calculations or existence of appropriate book records, that is, verification of goals achieved.
2000	W. Lück	An independent activity checking and assessing structures and actions inside an enterprise. It audits and supplies analysis, evaluations, recommendations, and information about the structures and actions checked.
2002	R.L. Ratliff, K.F. Reding	Auditors must be prepared to audit anything – operations (including control systems), performance, information and information systems, compliance with law, financial reports, fraud, reporting, environment protection and quality performance.
2003	Z. Rola	Audit is an evaluation of an internal control system and, by comparing the actual to the desirable situation, establishing whether existing procedures are effective, conforming to standards and followed, as well as indications of areas to be improved and suggestions of appropriate actions.
2003	E.J. Saunders	Professional assurance activities, an effective instrument for an organisation's authorities which evaluates effectiveness of the internal control system, risk management processes, correctness of an entity's operations and activities, their correct and standardised processing, accounting and reporting in a pro-active, independent, professional and objective way, generating value by improving quality and efficiency of work. Beside providing such an assurance, internal audit also supplies advice to an organisation.
2003	L.B. Sawyer	Internal audit systematically and objectively assesses activities of internal auditors. It concerns specific operations and control in an organisation which aim to determine whether a risk is identified and minimised, operational and financial information is accurate and true, if external regulations and internal policies are followed, to satisfactorily define operational criteria, effectively attain strategic objectives, and to use resources in a productive, effective and economical manner.
2007	K. Winiarska	Internal audit comprises an examination of activities of both an organisation and its management.
2008	Institute of Internal Auditors	Internal audit is an independent, objectively assuring and advisory exercise undertaken to add value to an organisation and to streamline its activities, support an organisation with attainment of its goals by means of a systematic and disciplined approach to evaluation and improvement of effectiveness of risk management, control and corporate supervision processes.
2012	T. Kiziukiewicz	Internal audit is an instrument that assesses effectiveness of the internal control system and risk management processes, assures effective conduct of any operations and activities, generates benefits by disclosing gaps and weaknesses and by indicating methods for improvement of work quality and productivity in an active, independent and objective way.

Source: The author's own research.

Evolution of internal audit can be divided into five generations [Herban, Stuss, Krasodomska 2009]**:**

1. First generation – before 1980; the audit focused on the internal control system and verification of process conformity with the state documented in procedures,
2. Second generation - 1980 - 1989; the financial risk and areas essential to functioning of an organisation began to be identified and internal control processes were evaluated,
3. Third generation - 1990 - 1998; risk identification was expanded from finances to operations,
4. Fourth generation - 1999 - 2008; active risk management policies, effective auditing; timely recommendations for improvements to risk management processes and internal control system,
5. Fifth generation – after 2009; internal audit as an instrument of improving institutions; control and advisory functions of internal audit; auditing covers all operations of an institution; building of a value system that would concentrate all authorities, functions and staff around it; regarding audit as a management tool with the fundamental objective of improving an institution and its constituent parts at stages of establishment and functioning in its operational and strategic dimensions.

This analysis of the development of internal audit's functions demonstrates it is currently not only a tool of goal verification but also, by evaluating principles of risk management, system of internal control and reliability of financial reporting, it contributes to more effective organisation management, whereby it may become a tool in developing its business performance. As a consequence, may affect the growth of the competitiveness of the company in the market [Wolak-Tuzimek, 2010, pp.93-100; Wolak-Tuzimek, 2006, p.61]. Prevention of broadly-defined errors, including fraud, is an important task of internal audit. It was present both at initial stages of internal audit, when it was expected to verify achieved goals, and at present, when it affects business performance of an enterprise. This is the fundamental objective of internal audit, improved in particular phases of its operation.

2. Characteristic of fraud

Measuring costs of fraud is important yet very difficult. True costs are incalculable as they comprise not only monetary but also social dimensions (loss of jobs, loss of public trust). In many cases, losses are never disclosed in full. Not all fraud is detected and thus reported. As a result, costs of fraud are measured on the basis of estimates only.

Results of a global survey conducted by the Association of Certified Fraud Examiners (ACFE) in 2006-2014 are used here. The *g*eographical distribution of organisations experiencing losses caused by fraud is presented in Table 2.

Table 2 Geographical Location of Victim Organizations

Region	Number of Cases	Percent of Cases	Median Loss (in $)
United States	646	48.0	100 000
Sub-Saharan Africa	173	12.8	120 000
Asia-Pacific	129	9.6	240 000
Western Europe	98	7.3	200 000
Eastern Europe and Western/Central Asia	78	5.8	383 000
Canada	58	4.3	250 000
Latin America and the Caribbean	57	4.2	200 000
Southern Asia	55	4.1	56 000
Middle East and North Africa	53	3.9	248 000

Source: [ACFE 2014].

The data in Table 2 imply the maximum median loss, $ 383 000, was incurred in East Europe and Asia, a result of the specific nature of the economic systems there, as well as principles of enterprise organisation and absence of control mechanisms to monitor activities and adequately manage risks.

Distribution of losses caused by fraud is shown in Tables 3 and 4. They cannot be summarised in a single table since loss classification was changed in 2010.

Table 3 Distribution of Dollar Losses in 2006-2010 (in %)

Losses in the range ($)	2006	2008	2010
Less than 1 000	1.2	1.9	2.4
1 000 – 9 999	9.1	7.0	7.2
10 000 – 49 999	15.8	16.8	18.4
50 000 – 99 999	11.6	11.2	10.6
100 000 – 499 999	29.1	28.2	29.3
500 000 – 999 999	8.8	9.6	8.4
1 mln and up	24.4	25.3	23.7

Source: The author's own compilation on the basis of [ACFE 2006, 2008, 2010].

Table 4 Distribution of Dollar Losses in 2010-2014 (%)

Losses in the range ($)	2010	2012	2014
Less than 200 000	51.9	56.5	54.4
200 000 – 399 999	12.7	12.8	11.8
400 000 – 599 999	6.9	5.7	6.6
600 000 – 799 999	2.9	3.5	3.4
800 000 – 999 999	1.9	0.7	1.9
1 mln and up	23.7	20.8	21.9

Source: The author's own compilation on the basis of [ACFE 2010, 2012, 2014].

The figures in Tables 3 and 4 indicate losses below $ 200 000 account for more than 50% of all losses, though a more detailed analysis would be more interesting, as shown in Table 3, where losses in the range $ 10 000 – 49 999 can be seen to prevail. A significant share of losses above $ 1m, more than 20% of all losses, can be noted in the entire period under analysis, confirming that examining the risk of fraud is reasonable.
Major types of fraud and their percentage share in the overall amount of losses can be analysed on the basis of the information in Table 5.

Table 5 Occupational Frauds by Category in 2006-2014 (% cases)

Frauds category	2006	2008	2010	2012	2014
Asset Misappropriation	91.5	88.7	86.3	86.7	85.4
Corruption	30.8	26.9	32.8	33.4	36.8
Financial Statement Fraud	10.6	10.3	4.8	7.6	9.0

Source: The author's own compilation on the basis of [ACFE 2006, 2008, 2010, 2012, 2014].

Asset misappropriation is the most common, though its cost is relatively low compared to the total sum of losses. The share of this fraud was 91.5% in 2006 and diminished to 85.4% in 2014. The losses it generates are estimated at $ 135000 in 2010 and $130 000 in 2014. Fraudulent reporting is the rarest, though it causes maximum financial loses. Its relatively narrow share ranges from 10.6% in 2006 to 9% in 2010. However, the losses it generates are estimated at the sum of $ 4 100 000 in 2010 and $1 000 000 in 2014. A declining frequency of the financial statement fraud can be noted, though, between 2006 and 2010 (from above 10% to below 5%), to rise substantially after 2012 (from 7.6% to 9.0%). With regard to value of losses it causes, it can be said that financial statements forged in 2010 were fewer yet involved considerably greater sums. Both the incidence and value of losses decline afterwards, with the latter dwindling far more. In this context, corruption is of a medium incidence (around 30%) and brings distinctly lowest losses (the average estimated loss is $250 000 in 2010 and $ 200 000 in 2014).

3. International audit as a method of detecting business fraud

In accordance with International Standards for the Professional Practice of Internal Auditing, internal auditing should support a business by recognising and assessment of significant risks and contribute to improvement of risk management and control systems.
As early detection as possible is a key element of preventing fraud regardless of the latter's type. ACFE survey suggests tipping is the most common method of detection. It helps to capture fraud in more than 40% cases. Management review and internal audit come second and third as forms of fraud detection, 16% and 14.1% cases, respectively. A strong system of internal control is thus perceived as the most effective tool against fraud. Methods of fraud detection are shown in Table 6.

Table 6 Detection Method of Occupational Frauds in 2006-2014 (%)

Detection Method of Occupational Frauds	2006	2008	2010	2012	2014
Tip	34.2	46.2	40.2	42.3	42.2
Management Review	-	-	15.4	14.6	16.0
Internal Audit	20.2	19.4	13.9	14.4	14.1
By Accident	25.4	20.0	8.3	7.0	6.8
Account Reconciliation	-	-	6.1	4.8	6.6
Document Examination	-	-	5.2	4.1	4.2
External Audit	12.0	9.1	4.6	2.3	3.0
Surveillance/Monitoring	-	-	2.6	1.8	2.6
Notified by Law Enforcement	3.8	3.2	1.8	3.0	2.2
Confession	-	-	1.0	1.5	0.9
IT Controls	-	-	0.9	1.1	1.1

Source: The author's own compilation on the basis of [ACFE 2006, 2008, 2010, 2012, 2014].

These details imply internal audit is a major method of detecting economic crime, though its contribution to fraud detection declines, possibly owing to emergence of new methods (e.g. IT control, supervision), growing importance of the existing ways (e.g. tip), as well as increasing numbers and shifting structure of economic crime that contribute to rising significance of other, more adequate methods.

Rationality of applying specific fraud detection methods can be determined on the basis of values of losses discovered by means of individual methods as well as average times of detection. These are illustrated in Table 7.

Table 7 Median Loss and Median Duration by Detection Method

Detection Method of Occupational Frauds	Median Loss (in $)	Median Duration (in months)
Tip	149 000	18
Management Review	125 000	18
Internal Audit	100 000	18
By Accident	325 000	32
Account Reconciliation	75 000	11
Document Examination	220 000	21
External Audit	360 000	30
Surveillance/Monitoring	49 000	8
Notified by Law Enforcement	1 250 000	30
Confession	220 000	21
IT Controls	70 000	11

Source: [ACFE 2014].

Table 7 shows there are more effective ways of fraud detection than internal audit, in respect of both average value of losses detected and average times of detection. Research suggests these comprise: notification by law enforcement for its highest value of detected losses and surveillance/ monitoring, account reconciliation and IT controls for the fastest loss detection. Internal audit is a major, yet not the most effective method that requires continuing improvement.

It appears importance of detection methods varies depending on business size measured by number of employees and depending on a region of an enterprise's operation. These results are summarised in Tables 8, 9 and 10.

Table 8 Detection Method by Size of Victim Organisation (in %)

Detection Method of Occupational Frauds	<100 Employees	+100 Employees
Tip	34.2	45.1
Management Review	18.8	15.3
Internal Audit	9.8	16.5
By Accident	8.4	6.2
Account Reconciliation	8.2	5.8
Document Examination	7.3	2.4
External Audit	5.4	1.9
Notified by Law Enforcement	2.4	1.9
Surveillance/Monitoring	1.9	2.3
IT Controls	1.6	0.9
Confession	1.1	0.6
Other	0.8	0.4

Source: [ACFE 2014].

Table 8 indicates both organisations employing more than 100 and fewer than 100 workers see the following as key methods of fraud detection: tip, management review and internal audit. Differences relate to effectiveness of these methods, naturally greater in larger organisations, doubtless due to higher numbers of control tools and more formalised and expanded control systems.

Table 9 Detection Method by Region – Europe and Asia (%)

Detection Method of Occupational Frauds	Western Europe	Eastern Europe and Western and Central Asia	Asia Pacific
Tip	39.8	53.8	53.9
Management Review	16.3	10.3	11.7
Internal Audit	12.2	16.7	10.9
By Accident	10.2	5.1	3.1
Account Reconciliation	7.1	3.8	6.3
Document Examination	2.0	1.3	1.6
External Audit	2.0	2.6	3.1
Notified by Law Enforcement	6.1	2.6	2.3
Surveillance/Monitoring	3.1	1.3	2.3
IT Controls	0.0	1.3	1.6
Confession	1.0	1.3	1.6
Other	0.0	0.0	1.6

Source: [ACFE 2014].

Table 10 Detection Method by Region – America and Africa (%)

Detection Method of Occupational Frauds	Canada	USA	Latin America and the Caribbean	Middle East and North Africa
Tip	43.9	38.4	36.8	35.3
Management Review	19.3	18.4	14.0	15.7
Internal Audit	3.5	13.1	22.8	33.3
By Accident	8.8	8.2	7.0	5.9
Account Reconciliation	8.8	5.3	7.0	3.9
Document Examination	5.3	5.9	3.5	0.0
External Audit	3.5	4.0	1.8	0.0
Notified by Law Enforcement	1.8	2.0	3.5	0.0
Surveillance/Monitoring	5.3	2.5	1.8	2.0
IT Controls	0.0	1.1	0.0	3.9
Confession	0.0	0.6	1.8	0.0
Other	0.0	0.5	0.0	0.0

Source: [ACFE 2014].

The results in Table 9 and 10 imply three methods of fraud detection are prevalent in virtually all regions. These are: tip, management review and internal audit. Like in respect of impact of organisation size on methods of fraud detection in place, their effectiveness also varies depending on degrees of their development and methods of application employed. Internal audit is of maximum significance in the Middle East and North Africa – 33.3% of fraud detected, Latin America and the Caribbean – 22.8%, and Eastern Europe and Western and Central Asia – 16.7% of detected economic abuse.

Conclusion

Internal audit has evolved over the years and is currently a tool of managing economic performance of an organisation. This is made possible by evaluating business effects of its operation, i.e. costs and benefits and their effect on the environment, as well as by using internal audit as a method of fraud detection.

Internal audit is currently exercised as a method of fraud detection – of approximately 14% of all fraud. Tipping (more than 40%) and management review (around 15%) were seen as more effective ways of detecting fraud.

Research suggests internal audit is not the most effective method of fraud detection - notification by law enforcement is found more effective for the value of losses discovered and surveillance/ monitoring, account reconciliation and IT controls for the shortest durations of fraud detection.

The research undertaken shows selection of fraud detection methods is not determined by a region of an organisation's operations. Area of operation (region) influences effectiveness of fraud detection methods applied, on the other hand. Internal audit is of key importance in the Middle East and North Africa (33.3% of fraud detected), Latin America and the Caribbean (22.8%), and Eastern Europe and Western and Central Asia (16.7% of detected abuses).

The research demonstrates effectiveness of fraud detection methods in place is determined by business size. It is greater in larger enterprises which employ more than 100 people than in organisations of fewer than 100 employees. This is doubtless due to higher numbers of control tools and more formalised and expanded control systems in place there. Company size does not affect the range of fraud detection methods in use, though.

It can be concluded that internal audit is clearly an important method of fraud detection which requires improvements, particularly in small businesses, however.

Literature:

1. HERBAN A., STUSS M., KRASODOMSKA J.: *Audyt wewnętrzny jako narzędzie wspomagające efektywne nadzorowanie korporacji.* Kraków: Wydawnictwo Uniwersytetu Jagiellońskiego, 2009. 155 p. ISBN 978-83-233-2730-1.
2. KIZIUKIEWICZ T.: (ed.) *Zasady audytu wewnętrznego w sektorze finansów publicznych.* Warszawa: Difin. 2012. 478 p. ISBN 978-83-7641-568-0.
3. LISIŃSKI M.: *Audyt wewnętrzny w doskonaleniu instytucji.* Warszawa: Wydawnictwo Polskie Encyklopedyczne, 2011. 405 p. ISBN 978-83-208-19144.
4. LÜCK W.: Die *Zukunft der Interne Revision. Entwicklungstendenzen der Unternehmeninternen Uberwachung.* Berlin: Erich Schmidt Verlag, 2000. 107 p. ISBN 978-3-503-04892-2.
5. MAUTZ R.K.: *Fundamentals of Auditing.* New York: John Wiley&Sons Inc. 1964. 109 p. ISBN 978-047-157-78-50.
6. INTERNATIONAL STANDARDS OF PROFESSIONAL PRACTICE INTERNAL AUDIT. Altamonte Springs: The Institute of Internal Auditors, 2011.
7. MOELLER R., WITT H.N.: *Brink's Modern Internal Auditing.* New York: John Wiley&Sons Inc., 1999. 167 p. ISBN 3-9000-51-07-0.
8. RAMAMOORTI S.: *Internal Auditing: History, Evolution and Prospects*. In: Research Opportunities in Internal Auditing. Altamonte Springs: The Institute of Internal Auditors, 2003. 24 p. ISBN 0-89413-498-1.
9. RATLIFF R.L., REDING K.F.: *Introduction to Auditing: Logic, Principles and Techniques.* Altamonte Springs: The Institute of Internal Auditors, 2002.

10. ROLA Z.: *Kontrola wewnętrzna, kontrola finansowa i audyt w jednostkach sektora finansów publicznych.* Ostrołęka: ALPHApro, 2003.134 p. ISBN 839-197-610-6.
11. SAUNDERS E.J.: *Audyt i kontrola wewnętrzna w przedsiębiorstwach.* Częstochowa: PIKW S.A., Educator, 2003. 34 p. ISBN 978-839-223-97-27.
12. SAWYER L.B., DITTEHOFER M.A., SCHEINER J.H. :*Sawyer's Internal Auditing.* Altamonte Springs: The Institute of Internal Auditors, 2003.
13. WHITTINGTON O.R., PANY K.: *Principles of Auditing.* Boston: Irwin McGraw Hill, 1998.243 p. ISBN 0-256-16779-6.
14. WINIARSKA K.: *Internal audit w 2007 roku. Standardy międzynarodowe – Regulacje krajowe.* Warszawa: Difin, 2007. 266 p. ISBN 978-83-7251-722-7.
15. WOLAK-TUZIMEK A.: *Determinanty rozwoju małych i średnich przedsiębiorstw w Polsce*, PWN, Warszawa 2010. 93-100 p. ISBN 978-83-01-16332-7.
16. WOLAK-TUZIMEK A.: *Uwarunkowania rozwoju polskich przedsiębiorstw*, Politechnika Radomska, Radom 2006. 61p. ISSN 1642-5278.
17. *REPORT TO THE NATION ON OCCUPATIONAL FRAUD AND ABUSE*. Austin: Association of Certified Fraud Examiners, 2014.
18. *REPORT TO THE NATION ON OCCUPATIONAL FRAUD AND ABUSE.* Austin: Association of Certified Fraud Examiners, 2012.
19. *REPORT TO THE NATION ON OCCUPATIONAL FRAUD AND ABUSE.* Austin: Association of Certified Fraud Examiners. 2010.
20. *REPORT TO THE NATION ON OCCUPATIONAL FRAUD AND ABUSE*. Austin: Association of Certified Fraud Examiners. 2008.
21. *REPORT TO THE NATION ON OCCUPATIONAL FRAUD AND ABUSE*. Austin: Association of Certified Fraud Examiners. 2006.

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