

A procurement fraud risk management model

AC Venter

Department of Auditing
University of Pretoria

Abstract

The high occurrence of procurement fraud requires the management of an enterprise, the risk manager of the enterprise and the internal auditor to address procurement fraud risks effectively within the enterprise risk management concept. The purpose of the article is to explain a procurement fraud risk management process which will serve as a comprehensive framework for enterprise risk managers and for internal auditors to limit the enterprise's exposure to procurement fraud as far as possible. The study by Venter (2005) on which the article is based proposes a procurement fraud risk matrix which can be used to manage fraud risks within the procurement function efficiently. This matrix is based on the Committee of Supporting Organizations of the Treadway Commission's (COSO's) *Enterprise Risk Management – Integrated Framework* which is specifically applied to address the procurement fraud risk problem.

Key words

Enterprise risk management
Enterprise Risk Management – Integrated Framework
Internal auditor
Fraud
Procurement
Procurement fraud
Procurement function
Risk
Risk management
Risk manager

1 Introduction

The risk of fraud is inherent to any enterprise. A 2005 fraud survey conducted by KPMG in Africa indicates that the incidence of fraud occurrences in South African enterprises is extremely high. This survey indicates that 76% of the participating enterprises have reason to believe that their employees (excluding management) are involved in fraud, while 32% believe that management is also involved (KPMG 2005:70). From this, it seems evident

that the occurrence of fraud continues to be rife in many organisations, despite multiple measures to prevent it. According to Kramer (2003:54), research indicates that the most significant fraud schemes occur in, or as part of, the procurement process. This includes millions of rands of commercial bribery, kickbacks and other fraud arising from it. This article is based on a study by Venter (2005) and represents a procurement risk management model with an explanatory fraud risk matrix that can be used to detect, prevent and manage fraud risks in the procurement function effectively and efficiently. The study was limited to and focused on fraud and its various facets as it occurs in the procurement function of the enterprise, and therefore the article also focuses only on the role played by the procurement manager in the procurement fraud risk management process. Due to the limited scope of an article, the functions of other role players, such as internal auditors, management in general, and enterprise risk managers are not addressed in the article. The proposed procurement fraud risk matrix is principally founded and aligned with the *Enterprise Risk Management – Integrated Framework* of the Committee of Supporting Organizations of the Treadway Commission (COSO), which is specifically applied to address the procurement fraud dilemma. Section 2 of the article provides background information, based on the literature study, on the need to develop a procurement fraud risk management model. Section 3 focuses on leading risk management approaches and several perspectives and studies on procurement. In Sections 4 and 5, the procurement fraud risk model is explained and applied in terms of a purposely developed fraud risk matrix. The final section addresses the conceptual application of the horizontal components of the fraud risk matrix.

2 Background to the development of a procurement fraud risk management model

2.1 *The need for a procurement risk management model*

Hugo, Badenhorst-Weiss and Van Rooyen (2002:15) point out that there is less research on procurement from a risk management perspective than on other business functions; there are fewer publications on it and there is less training in this field.

According to the Australian Capital Territory Government Procurement Board (ACT Government Procurement Board 2003:1), a risk management process should be applied in all procurement functions. The *King Report on Corporate Governance for South Africa – 2002* (Institute of Directors in Southern Africa, 2002:73), also known as the *King II Report*, highlights the importance of knowledge about risks in the enterprise as a whole by stating:

A thorough understanding of the risks accepted by a company in the pursuance of its objectives, together with the strategies employed to mitigate those risks, is thus essential for a proper appreciation of the company's affairs by the board and stakeholders.

According to the *King II Report* (Institute of Directors in Southern Africa 2002:74), risk management should be exercised by all the personnel of the enterprise in their day-to-day activities. The report strongly stresses the importance of effective risk management that is applied to the enterprise in its entirety, across all levels, functions and activities, including the procurement function. The ACT Government Procurement Board (2003:2) expands on the above ideas by stating that the person who is tasked to buy or acquire goods and services carries the responsibility to ensure that all risks in each phase of the procurement process receives due consideration. The *King II Report* (Institute of Directors in Southern

Africa 2002:75) states clearly that the directors of the enterprise are responsible for implementing an effective and ongoing process of risk assessment and for measuring the potential impact of risk on the enterprise.

2.2 *Fraud in the context of the global enterprise*

According to Helsby and Kaizer (2003:12), in an economic crime survey conducted in Europe during 2001, in most cases fraud in enterprises is discovered by chance. They also mention that although enterprises appear to have control systems in place, in many cases, these are ineffective, primarily due to the fact that management either overlooks controls, or colludes in circumventing them.

2.3 *Fraud in the procurement function*

According to a report by KPMG's forensic division, the procurement function of an enterprise is the area that is targeted second most by fraudsters (Plavsic 2004:1). The national head of the forensic department of KPMG in the United Kingdom stated that the procurement function always faces a higher possibility of fraud, as this is the way in which many enterprises spend money (Plavsic 2004:1). David Sherwin, an Ernst & Young partner, concurs with the previous statement and adds that collusion between the procurement function of the enterprise and suppliers is the most common form of corporate fraud of all (Tyler 1997:18). It appears that procurement functions are globally targeted by the perpetrators of fraud and that this occurrence may cause financial and other economic damage estimated at millions of rands.

2.4 *The need for a procurement risk management model to address fraud*

Helsby and Kaizer (2003:12) argue that enterprises should do more to prevent fraud by actively evaluating and estimating their risk exposure and their vulnerability to fraud, and that these measures should be closely supported by the ongoing monitoring of these risks. Current studies and research (ACT Government Procurement Board 2003; *Managing the risk of fraud* 2003) seem to indicate that although several risk management models are available, none are specifically designed and aimed at reducing and/or limiting the occurrence of fraud and its related risks in the enterprise. Consequently, one may conclude that a risk management model specifically aimed at procurement fraud risk does not exist. Exploring the possibility of such a model consequently became the focus of this study.

3 *Leading risk management approaches relevant to procurement*

Enterprise risk management is an approach to risk management that focuses, *inter alia*, on key business processes and their associated sub-processes in carrying out the strategy and the objectives of the enterprise. Valsamakis, Vivian and Du Toit (2005:81) point out that the enterprise risk management approach promotes the relevant process steps, reporting channels, methodologies and data collection as an integrated whole.

3.1 Procurement risk management – different perspectives and studies

□ *The perspective of the King II Report*

The King II Report (Institute of Directors in Southern Africa 2002:77) indicates that it is the responsibility of the directors to provide assurance to all stakeholders of the systematic and documented assessment of key risks and how these risks are managed to promote the accomplishment of enterprise objectives. Several of these significant risks are present in the procurement function and applying risk management within this functional area forms an integral part of enterprise risk management.

□ *The Sarbanes-Oxley Act perspective*

Wilson (2003:1) indicates that Section 404 of the Sarbanes-Oxley Act of the United States of America is a regulation that has a direct impact on the procurement function of enterprises. This regulation requires that an effective system of control be implemented, evaluated and monitored throughout the enterprise. Risk management and its components form an integral part of an effective system of control.

□ *Other studies and points of view*

Valuable information about risk management in the procurement environment has been collected by means of several research articles and case studies. The conclusions and commonalities of the following two studies are particularly relevant:

Study A

In a study by Zsidisin, Panelli and Upton (2000:187-197), the procedures which companies have in place to identify suppliers' risk were identified, as well as systematic ways to quantify, arrange and prioritize risks. The detailed analysis of information provided by the sample of nine companies (anonymous) has contributed, *inter alia*, the following important findings:

- enterprises need to expand risk assessment, continuity plans and procurement risk management.
- top management should play a leading role and be the driver behind enterprise risk management – personnel should be adequately trained and equipped to apply risk management and its principles in all aspects of the business concerned.

Study B

Smeltzer and Siferd's (1998) study entitled 'Proactive supply management: the management of risk, is based on conclusions from case studies done on 24 American companies in various industries. According to the study, there is evidence to show that risk management creates a suitable framework for applying pro-active procurement management. The study provided, *inter alia*, the following interesting results:

- pro-active procurement management is, in principle, based on risk management; and
- it appears that buyers that do not have a pro-active procurement management programme fail to add value to the enterprise and lack credibility and respect within the enterprise.

The valuable information that emanates from these two studies and similar studies has contributed to the development of a more risk-conscious and improved procurement management process. This is complemented by various statements worldwide, such as Smith's (2004:1) view that '[c]ertainly, perfect procurement should already be closely involved in the risk-management activity, both at the contracting stage and through into the operational management'.

4 Background to the development of the procurement fraud risk matrix

The development of the procurement fraud risk matrix included a thorough examination of various sources of information and an extensive literature study on risk management and fraud. Key fundamental aspects were identified and analysed in more detail. The first of these aspects is concerned with the correct classification of procurement fraud, namely, as an event risk which is generally of an operational nature. The importance and value of the correct classification of risks are obvious from the fact that applicable and already proven management mechanisms exist for the various risk categories.

The second fundamental aspect revolves around the principle of integrated enterprise risk management, as promoted by the COSO framework. It must be reiterated that this article, which reports on only part of a more comprehensive study by Venter (2005), is limited in its scope, and presents a procurement fraud risk model that should, in its most effective form, be part of the much bigger and holistically integrated enterprise risk management process of the enterprise as a whole. The risk profile of the procurement function would therefore definitely cover a wider spectrum and would include more risks than only procurement fraud. In line with an integrated enterprise risk management approach, the model provides and promotes the identification of procurement fraud, the identification of the main causes thereof and the communication and management of the risks on an enterprise basis.

The third fundamental aspect revolves around the concept of integrating risk management into the day-to-day business activities of the enterprise. The steps for carrying out an integrated enterprise risk management process and the techniques that could be applied were analysed and documented. Recent guidelines and legislation such as the *King II Report* and the Sarbanes-Oxley Act were studied (see Section 3.1). Both guidelines indicate that enterprise risk management should form part of and be integrated into daily activities, such as procurement. Information about the procurement process, the possible fraud risks that may arise in the process, and information about enterprise risk management were combined in order to create an efficient procurement fraud risk management model that would enable the implementer eventually to decrease the number of, and manage, cases of fraud. A three-dimensional procurement fraud risk matrix was compiled to serve as a visual aid and a step-by-step introduction to the following:

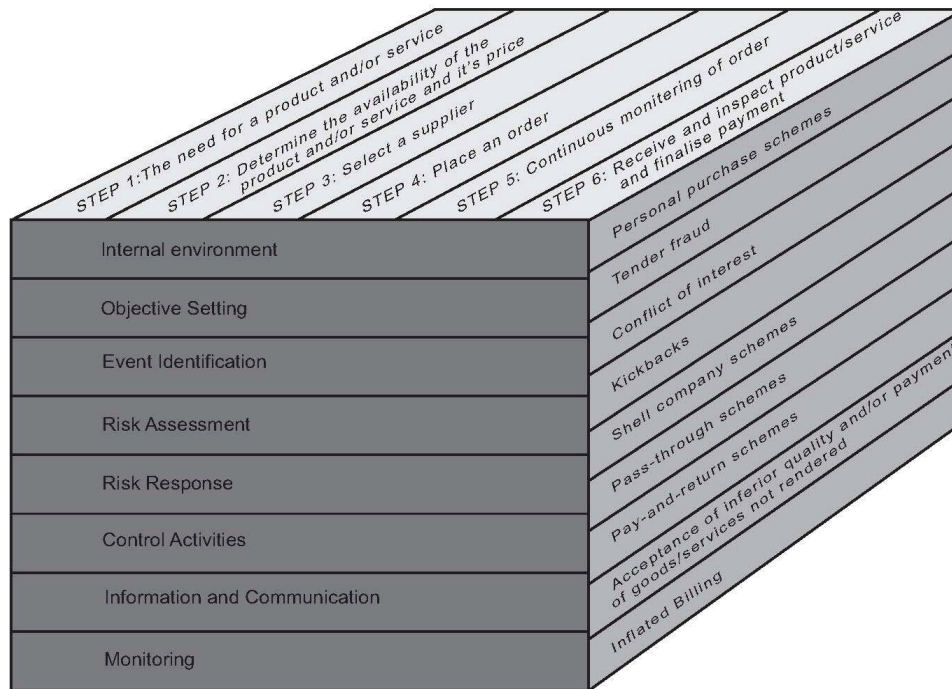
- a generic integrated risk management approach;
- a generic procurement process; and
- potential procurement fraud risks at a functional level.

This remainder of this article elaborates on and explains the horizontal dimension of the procurement fraud risk matrix in more detail.

5 An overview - procurement fraud risk matrix

The procurement fraud risk matrix as deduced from the enterprise risk management model is illustrated in Figure 1.

Figure 1 The procurement fraud risk matrix



Source: Adapted from COSO (2004:7)

The three-dimensional procurement fraud risk matrix as illustrated in Figure 1 consists of the following elements:

- horizontally – the eight components of enterprise risk management (COSO 2004:7);
- vertically – the six steps in the procurement process; and
- three-dimensionally – the types of procurement fraud that can be identified in a procurement process.

In Section 6, the eight components of the horizontal level of the procurement fraud risk matrix are described. Ways of applying the components practically, with the objective of identifying fraud risks in the procurement function, are also examined.

6 Discussion of the procurement fraud risk matrix – horizontal level

6.1 Internal environment component

The internal environment component forms a very important prerequisite for the efficient application of all the other components of the procurement fraud matrix, as it represents the context within which all the other components are applied. COSO (2004:27-34) points to the following important elements of the internal environment:

- the risk management philosophy of the enterprise;
- the risk appetite of the enterprise;
- the effectivity and points of view of the directors;
- the integrity and ethical values at all levels within the enterprise or organisational structure;
- the allocation of authority and responsibility; and
- human resources standards and commitment to competency.

6.1.1 Risk management philosophy of the enterprise

Explanation

Drawing up and developing an enterprise's risk management philosophy is the responsibility of top management (Minehan 2004:2-3). The risk management philosophy is the umbrella 'framework' within which the managers manage risks in the enterprise on a daily basis.

Application in the procurement context

The procurement manager should determine what the risk management philosophy of the enterprise entails. If the information has not already been communicated to management and/or the employees, an enquiry should be directed to top management. It is important for the procurement manager to familiarise himself/herself with the organisation's risk management philosophy and to communicate this to the rest of the staff. The procurement manager should use the information as a framework to establish a risk culture in the procurement function that ensures the alignment of the function's risk culture with that of the enterprise.

6.1.2 Risk appetite of the enterprise and the procurement function

Explanation

The risk appetite of the enterprise determines the amount of risk which the enterprise is generally willing to accept in striving for value (PricewaterhouseCoopers 2004:1).

Application in the procurement context

The procurement manager's decisions on what the acceptable level of risk within the procurement function is should be based on the risk appetite of the enterprise. However, cognisance should be taken of the fact that the procurement activity has to take place in order to reach the objectives of the enterprise and should therefore strive to maintain a

balance with regard to risks other than fraud. Fraud always involves actions that are unacceptable and unethical and therefore an enterprise should not accept fraud risk appetite.

6.1.3 *Effectiveness and the points of view of the directors*

Explanation

Minehan (2004:1-3) points out that the directors of an enterprise play the most important possible role in the internal control environment, and that their behaviour influences all the other elements of the internal control environment.

Application in the procurement context

If the procurement manager does not have representation on the Board of Directors, he/she should take the necessary steps to ensure that reporting channels to communicate the interests and problems regarding procurement risks to the Board of Directors are established. Several methods can be employed to communicate fraud risk information to the Board regularly, including monthly risk management reports, formal presentations, meetings and e-mails. Such reporting provides the Board with sufficient information to determine whether functional sections such as the procurement function comply with the principles of the enterprise risk management philosophy and whether the risks that are encountered are acceptable and fall within the predefined risk appetite of the enterprise.

6.1.4 *Integrity and ethical values of the enterprise*

Explanation

The integrity and ethical values of the enterprise as a whole are influenced by each individual employee. The top management of an enterprise represents the proverbial 'tone at the top' and in this way influences other employees in the way they act and follow codes of ethical conduct (Sharman & Copnell 2002:3).

Application in the procurement context

If the procurement manager is dishonest it will have a detrimental effect on the integrity and values of the procurement function and its personnel. It is important that the procurement manager gather information on the views of the procurement personnel regarding the integrity and ethical values of their management and that of their colleagues. The procurement manager can use the following methods, *inter alia*, to determine the staff's views, as suggested by Verschoor (2004:53) and in *Managing the risk of fraud* (2003:27):

- place a fixed and locked 'ethical mailbox' in the function to serve as a means by which procurement personnel may express their grudges, suspicions, and views on the ethical values and integrity of management;
- consider the appointment of an independent person (an external consultant or staff member from Human Resources) to conduct interviews with the various members of the procurement staff and enquire about misconduct, unethical behaviour or concerns; and/or
- implement a 'whistle blowing system' to enable procurement personnel to anonymously bring fraud cases to management's attention.

6.1.5 Organisational structure

Explanation

The organisational structure of the enterprise provides the framework for the planning, carrying-out, and control of activities (COSO 2004:31).

Application in the procurement context

The procurement manager should develop and implement an organisational (functional) structure to contribute optimally to the accomplishment of the procurement function's objectives but also to seek to improve and promote effective risk management. The procurement manager may decide to form a procurement risk management committee. The members should function on a level just below that of the procurement manager and should include key individuals involved in the various activities of procurement, complemented by individuals that have a sound knowledge of risk management and financial matters. In this way, representation by all sections within procurement that actively communicate and participate in the decision-making and management of the procurement fraud risks can be ensured.

6.1.6 Allocation of authority and responsibility

Explanation

The allocation of authority and responsibility implies the degree to which individuals and teams are empowered and encouraged to use their own initiative to address problems, but also implies a restriction of authority (Sawyer, Dittenhofer & Scheiner 2003:1071-1073).

Application in the procurement context

The procurement manager should identify additional key persons with the necessary knowledge and authority to assist him/her in the identification, assessment and control of fraud risks in order to carry out the responsibility successfully.

6.1.7 Human resources standards

Explanation

The *King II Report* (Institute of Directors in Southern Africa 2002:118-120) points out that the human resources practices of an enterprise regarding the appointment, orientation, training, assessment, counselling, promotion, remuneration, and the taking of rectifying or disciplinary steps send an important message to employees about the enterprise's expected levels of integrity, ethical behaviour, and skills. The use of interviews is briefly discussed in the procurement context.

Application in the procurement context

The procurement manager should be part of the panel that interviews candidates that apply for appointments in the procurement function. This gives the procurement manager an opportunity to ask the candidates some questions about their skills, values and the experience required. Interviewing also creates a forum to inform candidates that they are required to sign an ethical code, as well as a code of conduct, and it provides a platform to inform the candidate about disciplinary steps regarding transgressions pertaining to fraud.

6.1.8 *Commitment to competency*

Explanation

According to the *Quality Assurance Project's* (2005) Glossary, competence reflects the knowledge and skill needed to carry out tasks successfully.

Application in the procurement context

In addition to drawing up competency standards and frameworks, the procurement management team is also responsible for carrying out the procurement activities. This requires, *inter alia*, that employees in the procurement function have the proper experience and competencies to support the risk management process effectively.

6.2 *Setting objectives*

Explanation

Setting objectives is a pre-condition for risk identification, risk assessment and risk control, the subsequent components of the enterprise risk management model. Management first has to formulate objectives before it can determine which risks can influence the achievement of those objectives (Van Keer 2005:2).

Application in the procurement context

When setting the function's procurement objectives, the procurement manager should consider the effect which fraud risks may have on the strategies of the enterprise. The setting of the procurement function objectives leads to processes and systems carried out by personnel that may expose the enterprise to fraud risks. It is therefore important that fraud risks that may originate or flow from the design or objective-setting phase be identified and considered.

6.3 *The fraud risk management process in procurement*

Explanation

The fraud risk management process includes the elements of the identification of the occurrence of fraud risk, risk assessment, risk response, and control activities, as illustrated in the procurement fraud risk matrix in Figure 1, and it consists of the following steps:

- fraud risk identification (event identification);
- fraud risk assessment (risk assessment);
- fraud risk control (risk response); and
- fraud risk financing (control activities).

Application in the procurement context

The procurement manager is the person primarily held responsible and liable for the risk management process in the procurement function. It is the procurement manager's responsibility to ensure that fraud risks in the procurement function are identified, evaluated and managed. In the subsections below, each of the steps of the management process is discussed against the background of procurement fraud risks to provide practical guidelines for the prevention and reduction of such fraud.

6.3.1 *Fraud risk identification (event identification)*

Explanation

The types of fraud that generally occur in the procurement process (as indicated in the procurement fraud risk matrix in Figure 1) are the following: personal procurement schemes, tender fraud, conflicts of interest, kickbacks, the creation of shell companies, pass-through-schemes, pay-and-return schemes, acceptance of poor or inferior quality products or no products, and inflated invoices or billing. The Financial and Management Accounting Committee (1999:15-17), Cronjé *et al.* (2004:137-139) and CIMA (2001:7) list the following techniques or tools that can be used to identify risks: studying documentation, SWOT analysis, insurance analyses, interviews, workshops and brainstorming, questionnaires, root-cause analyses and specialist software. The risk workshop technique is briefly discussed and elaborated on below, due to its popularity amongst risk management practitioners.

Application in the procurement context

The procurement manager and individuals involved in all the steps in the procurement process should participate in risk workshops. The facilitator may either be the internal auditor or the enterprise risk manager, or a combined team. The identification of fraud risks during the procurement section's risk workshop normally forms part of the global risk identification process.

6.3.2 *Fraud risk assessment (risk assessment)*

During fraud risk assessment, the possibility is considered that a particular procurement fraud situation will occur, and the expected size and cost of the loss is estimated in order to determine the impact it will have on the enterprise (CIMA 2001:7). A number of elements need to be considered, as discussed below.

- Frequency

Application in the procurement context

The risk analyst can use the historical procurement fraud statistics of the enterprise as a basis for calculating the frequency of procurement fraud. When calculating the frequency of losses, the risk analyst should also take into account the degree to which the procurement section's internal environment component (as discussed in Section 6.1, above) has been addressed; for example, if the procurement management team appears not to be ethical or lacks integrity, and if risk management is not considered important by the procurement management team, the risk analyst may estimate the frequency of losses at a higher level.

- Severity

Application in the procurement context

The risk analyst should also determine the severity of the losses that the enterprise may incur if procurement fraud risks occur. The risk analyst can calculate the severity of such losses in accordance with the following terms: maximum sizes of losses, accumulation, and/or interruption of business.

- The combination of frequency and severity of losses to determine the risk impact

Explanation

After the risk analyst has calculated the frequency and severity of losses for the various procurement fraud risks, he/she can calculate the impact of the potential losses on the enterprise (Hugo, Badenhorst-Weiss & Van Biljon 2006).

- Assessment techniques

Application in the procurement context

Young (2001:129) states that most assessment techniques for operational risks (which include fraud risks) are by nature qualitative. They include self-assessment methods such as workshops, historical data and risk matrices (CIMA 2001:7; Young 2001:338).

6.3.3 Fraud risk control

Explanation

It is important that the procurement manager take the necessary steps to manage and control the various fraud risks. Valsamakis *et al.* (2005:16) and CIMA (2001:8) mention that there are five alternatives in managing risks, namely: avoidance, acceptance, elimination, reduction and transfer of risks. These approaches to the management and control of risks are relevant and should be applied to the management of procurement fraud risks ('acceptance' of the fraud risk after controls, not accepting the occurrence of fraud).

- Risk avoidance

Risk avoidance is the avoidance of the specific risk which was identified and evaluated (*Wikipedia* 2005). In the case of procurement fraud risk, it is almost impossible for management to avoid procurement fraud risks completely, unless the procurement function is outsourced or the enterprise does not procure any goods and or services. The approach is relevant and can be applied in conditions where the fraud risks have the magnitude (in terms of probability and severity) that could lead to the economic failure of the enterprise. In such extreme cases, the enterprise may decide to halt all those activities or part of those activities to prevent a future failure or collapse.

- Risk acceptance

Risk acceptance implies that management has made a deliberate decision not to put any control measures in place to decrease the risk (Hugo *et al.* 2006). If the procurement management team decides to accept the risk, it signifies that the team has made a deliberate decision not to put any control measures in place to decrease the procurement fraud risk. The team is therefore willing to carry the loss which may result from the specific procurement fraud risk in the event of its occurring. In the case of specific procurement fraud risks, management may feel that it is economically more acceptable to suffer the loss accompanying the risk than to implement additional risk control measures (management should beware of consequences that relate to ethics, regulations and reputation). Management usually only considers this risk control approach in cases where the possibility that the procurement fraud risk will occur is low, and the impact it could have on the enterprise is insignificant.

□ Risk elimination

Risk elimination can be defined as the introduction of standards, procedures and actions that are needed in order to eliminate risks. Consequently, risks are neutralised, so that there is no possibility that they will be realised. Valsamakis *et al.* (2005:171) claim that risk elimination has a result similar to that of risk avoidance, except that, in the case of risk elimination, the risk still exists, even though it is neutralised. It is impossible for the risk manager to completely eliminate procurement fraud as there will always be a possibility of fraud and its occurrence wherever external suppliers and people inside the procurement function are involved.

□ Risk reduction

Risk reduction implies limiting the possibility that procurement fraud will occur, and/or lessening the impact it will have on the enterprise. Reducing procurement fraud risk may be achieved by various methods and means such as physical measures, procedural measures, segregation of duties, training, performance indicators and high-level monitoring and legal procedures.

□ Risk transfer

Procurement fraud risk can be transferred to a third party (Matyjewicz & D’Arcangelo 2004:70). It is usually not feasible for a procurement manager to transfer the responsibility for procurement fraud risks to a third party, and therefore this risk control approach is not available to the procurement manager.

6.3.4 Fraud risk financing

Explanation

Fraud risk financing is the last step in the fraud risk management process. Young (2001:196) considers it important to consider the cost and advantages associated with managing risks. The costs of the control should not exceed the potential savings arising from it.

Application in the procurement context

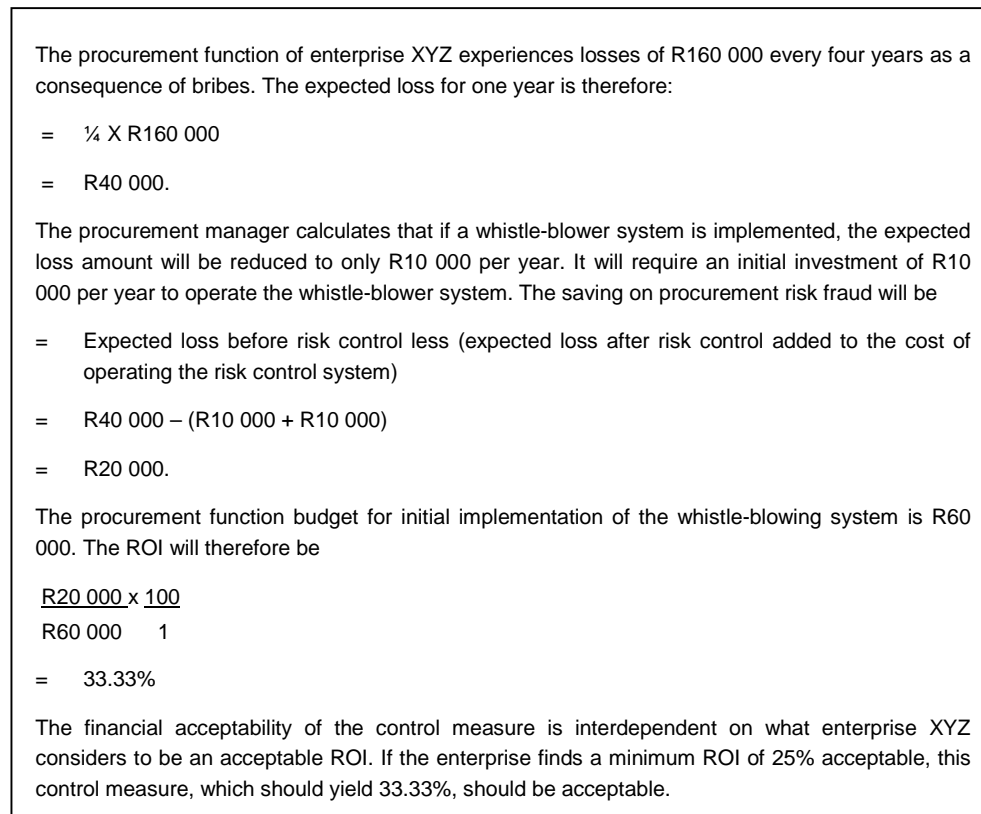
The procurement manager may use the return-on-investment (ROI) ratio to evaluate the financial acceptability of the control measures (Cronjé *et al.* 2004:161). This enables the procurement manager to determine whether the capital invested in managing procurement fraud will be cost beneficial to the enterprise or not. The ROI ratio for procurement fraud risk financing is explained in Figure 2.

Figure 2 Return-on-investment (ROI) ratio

$$\text{ROI} = \frac{\text{Procurement fraud risk saving}}{\text{Capital invested in order to achieve saving}} \times \frac{100}{1}$$

The example in Figure 3 indicates the method by which ROI may be applied to evaluate the financial acceptability of fraud risk control measures.

Figure 3 Example of how ROI can be applied to evaluate fraud risk control measures



6.4 Information and communication

Explanation

Information and communication form an important part of the fraud risk management process. No process can be carried out successfully unless the essential information is communicated to all relevant and important parties. The process needs to be constantly updated with the latest information (COSO 2004:67).

Application in the procurement context

It is essential for the procurement function to have an information and communication structure in place to ensure that all relevant information is accurately and timeously reported to top management, the enterprise risk manager and the relevant procurement personnel. The timeous communication of information enables all participants to carry out their risk management responsibilities.

6.5 *The implementation and monitoring of the fraud risk management process*

Explanation

If the implementation and operation of the risk management process is not successfully monitored, all preceding steps and effort may fail (Ernst & Young – Indonesia 2005:1). Monitoring is the last step in the risk management process, and it is extremely important that the efficiency and effectiveness of the process be evaluated.

Assessment in the procurement context

The procurement manager should monitor and/or implement monitoring mechanisms to ensure the effective implementation of approved strategies. He/she should decide to monitor the risk management process by means of either continuous or separate internal or external evaluations, or an appropriate combination (Chapman 2003:35).

7 Conclusion

It can be concluded that the enterprise risk management model of COSO can be successfully adapted for use in a functional area such as procurement and even in sub-areas of a functional section such as the management of procurement fraud risk. The procurement fraud risk matrix as part of the comprehensive model was developed to assist management in effectively applying enterprise risk management and its principles to identify and manage procurement fraud risks. Although this matrix may not always prevent and/or detect procurement fraud, it serves as a valuable companion to the manager on his/her lonely journey to eradicate the enterprise from the occurrence of procurement fraud.

Bibliography

- Australian Capital Territory (ACT) Government Procurement Board. 2003. Toolkit practical tips on risk management in procurement.
<http://www.basis.act.gov.au/basis/manactp.nsf/Procurement+Guidelines/CAA8C9894>. Accessed 23 February 2005.
- Chapman, C. 2003. Bringing ERM into focus. *The Internal Auditor*, June: 30-35.
- Chartered Institute of Management Accountants (CIMA). 2001. Fraud risk management – a guide to good practice.
<http://www.cimaglobal.com/downloads/FraudRiskManagement.pdf>. Accessed on 9 March 2005.
- Committee of Supporting Organizations of the Treadway Commission (COSO). 2004. Enterprise risk management - integrated framework: executive summary framework. [S.I]: COSO.
- Cronjé, J.J.L., De Swardt, C.J., Malobola, L., De Beer, J.S., Mutezo, A. & Botha, E. 2004. Ondernemingsrisikobestuur. Department of Business Management, UNISA.
- Ernst & Young – Indonesia. 2005. Enterprise risk management.
http://www.ey.com/global/content.nsf?Indonesia/services_-_Business_Risk_-_Enterprise_Risk_Management. Accessed on 4 August 2005.

- Financial and Management Accounting Committee. 1999. *Enhancing shareholders' wealth by better managing business risk*. PricewaterhouseCoopers, International Federation of Accountants.
- Helsby, R. & Kaizer, A. 2003. PricewaterhouseCoopers – Economic crime survey 2003. <http://www.pwc.com/crimesurvey>. Accessed on 11 March 2005.
- Hugo, W.M.J., Badenhorst-Weiss, J.A. & Van Rooyen, D.C. 2002. *Procurement and supply management*. 4th edition. Pretoria: Van Schaik.
- Hugo, W.M.J., Badenhorst-Weiss, J.A., & Van Biljon, E. 2006. *Procurement and supply management*. 5th edition. Pretoria: Van Schaik.
- Institute of Directors in Southern Africa. 2002. *King Report on Corporate Governance for South Africa 2002*. Parkland: Institute of Directors in Southern Africa.
- KPMG. 2005. *Africa Fraud and Misconduct Survey*. <http://www.kpmg.co.za/images/naledi/pdf%20documents/mc261%20fraud%20survey%2005.pdf>. Accessed on 29 August 2007.
- Kramer, W.T. 2003. The rules of fraud. *Risk Management*, 50(11):54.
- Managing the risk of fraud: a guide for managers*. 2003. http://www.hm-treasury.gov.uk/media/404f9/managing_the_risk_fraud.pdf Accessed on 17 May 2005.
- Matyjewicz, G. & D'Arcangelo, J.R. 2004. Beyond Sarbanes-Oxley. *Internal Auditor*, October: 67-72.
- Minehan, C.E. 2004. The enterprise risk management culture. http://www.boardmember.com/network/index.pl?section=1028&article_id=12007&show=article. Accessed on 9 September 2005.
- Plavsic, A. 2004. Procurement takes second place on fraudsters' hit list. <http://www.supplymanagement.co.uk/archiveitem.asp?id=10686>. Accessed on 8 April 2005.
- PricewaterhouseCoopers. 2004. The emerging role of internal audit in mitigating fraud and reputation risk. <http://www.utsystem.edu/aud/references/InternalAuditFraudWP.pdf> Accessed on 16 June 2005.
- Quality Assurance Project: Methods & Tools. 2005. <http://www.qaproject.org/methods/resglossary.html>. Accessed on 24 September 2005.
- Sawyer, L.B., Dittenhofer, M.A., & Scheiner, J.H. 2003. *Sawyer's internal auditing: the practice of modern internal auditing*. 5th edition. Altamonte Springs, Institute of Internal Auditors.
- Smeltzer, L.R. & Siferd, S.P. 1998. Proactive supply management: the management of risk. *International Journal of Procurement and Materials Management*, 34(1):38-46.
- Smith, P. 2004. A vision of procurement perfection. <http://proquest.umi.com/pqdweb?did=579204591&Fmt=4&clientId=27625&RQT=309&Vname=PQD>. Accessed on 16 May 2005.
- Tyler, G. 1997. Buy into fraud. *Supply Management*, 2(16):18.
- Valsamakis, A.C., Vivian, R.W., & Du Toit, G.S. 2005. *Risk management: managing enterprise risks*. 3rd edition. Sandton: Heinemann.

- Van Keer, S. 2005. Corporate governance: a call to action for our risk managers. What is on? 2(3):1-3. http://www.Aon.com/be/en/about/publications_pdf/WhatsOn3_En.pdf. Accessed on 24 September 2005.
- Venter, A.C. 2005. Aankooprisikobestuur met spesifieke fokus op die identifisering en voorkoming van bedrog: 'n raamwerk vir die risikobestuurder en interne ouditeur. MCom tesis, UNISA, Pretoria.
- Verschoor, C.C. 2004. The ethical climate barometer. *Internal Auditor*, October: 48-53.
- Wikipedia, the free encyclopedia. 2005. http://en.wikipedia.org/wiki/Organisational_structure. Accessed on 24 October 2005.
- Wilson, D. 2003. Life with Sarbanes-Oxley: the procurement perspective. <http://www.procurementautomation.com/articles/articles90.html>. Accessed on 23 February 2005.
- Young, J. 2001. A structured approach to operational risk management in a banking environment. DCom thesis, UNISA, Pretoria.
- Zsidisin, G.A., Panelli, A. & Upton, R. 2000. Procurement organization involvement in risk assessments, contingency plans, and risk management: an exploratory study. *Supply Chain Management: an International Journal*, 5(4):187-197