

**THE ANALYSIS OF BANK ACCOUNT
STATEMENTS TO ESTABLISH EVIDENCE OF
ILLICIT FINANCIAL ACTIVITY**

by

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ABSTRACT

The analysis of bank account statements to establish evidence of illicit financial activity is an established financial investigation methodology in countries such as the United States and the United Kingdom, but it is still in its infancy in South Africa. This is further highlighted by virtue of the fact that no uniform analysis methodology is used in South Africa for the analysis of bank account statements. The purpose of the research was to explore the role of such analysis, and the current practises in South Africa and New Jersey in the United States. This was to determine a practical model for the analysis of bank account statements in the South African context. Empirical research led to a proposed process model for such analysis, which was synthesised from current practises in South Africa and New Jersey in the United States. This model is proposed as the basis for the development of a uniform analysis methodology for the examination of bank account statements.

Die analise van bankrekeningstate om bewys van onwettige finansiële aktiwiteite te bepaal is 'n vasgestelde finansiële ondersoek metode in lande soos die Verenigde State en die Verenigde Koningryk, maar in Suid-Afrika is dit steeds in die begin stadium. Dit is verder beklemtoon deur die feit dat daar geen eenvormige analise metode in Suid-Afrika in gebruik is vir die analise van bankrekeningstate. Die doel van die navorsing was om die rol van hierdie tipe analise, en die huidige praktyk in Suid-Afrika en New Jersey in die Verenigde State te bepaal. Dit was om 'n praktiese model vir die analise van bankrekeningstate in Suid-Afrika te bepaal. Empiriese navorsing het gelui tot 'n voorgestelde proses model vir hierdie tipe analise, wat 'n samesmelting van die huidige Suid-Afrikaanse en New Jersey in die Verenigde State praktyk is. Hierdie model word voorgestel as die beginpunt vir die ontwikkeling van 'n eenvormige analise metode vir die ondersoek van bankrekening state.

DECLARATION

I declare that this research dissertation is my own, unaided work. It is submitted in partial fulfilment of the requirements of the degree of Magister Technologiae in the subject Forensic Investigation for the School of Criminal Justice, University of South Africa. It has not been submitted before for any degree or examination at any other university.

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TABLE OF CONTENTS

	Page
ABSTRACT	i
DECLARATION	ii
ACKNOWLEDGEMENTS	iii
CHAPTER ONE – GENERAL ORIENTATION	1
1.1. Introduction	1
1.2. Problem Statement	1
1.3. The Aim of the Research	2
1.4. The Purpose of the Research	2
1.5. Research Questions	3
1.6. Key Theoretical Concepts	4
1.6.1. Bank Account Statement	4
1.6.2. Evidence	4
1.6.3. Illicit Financial Activity	4
1.7. Research Design	4
1.8. Research Approach	5
1.9. Data Collection	5
1.9.1. Literature Study	6
1.9.2. Structured Interviews	7
1.9.3. Interviews with Experts	7
1.10. Population and Sampling	8
1.11. Data Analysis	11
1.12. Reliability	12
1.13. Validity	13
1.14. Ethical Considerations	14
1.15. Chapter Outlay	14

CHAPTER TWO – THE ROLE PLAYED BY BANK ACCOUNT STATEMENT ANALYSIS IN INVESTIGATIONS	15
2.1. Introduction	15
2.2. The Role of Bank Account Statements in Banking	15
2.3. Bank Account Statement Analysis as an Investigative Discipline	16
2.3.1. Criminal Investigation	16
2.3.2. Financial Investigation	17
2.3.3. Bank Account Statement Analysis	21
2.4. Law of Evidence and Bank Account Statement Analysis	23
2.4.1. Bank Account Statements as Evidence	24
2.4.2. Relevance of Bank Account Statements as Evidence in Matters Alleging Illicit Financial Activity	25
2.4.3. Bank Account Statement Analysis as Circumstantial Evidence in Matters Alleging Illicit Financial Activity	26
2.5. Conclusion	29
CHAPTER THREE – THE ANALYSIS OF BANK ACCOUNT STATEMENTS	31
3.1. Introduction	31
3.1.1. The Anatomy of a Bank Account Statement	31
3.2. Understanding the Analysis Process	33
3.3. Bank Account Statement Analysis Model	35
3.3.1. Collating the Data	36
3.3.1.1. Spreadsheets and Databases	36
3.3.1.2. Data Fields	38
3.3.1.3. Data Accuracy	40
3.3.2. Identifying Significant Payees and Depositors	40
3.3.2.1. Determining and Listing Primary Payees	41
3.3.2.2. Determining and Listing Deposits to Account by Source	43
3.3.3. Bank Account Statement Summary	45
3.3.4. Time Series Analysis	48
3.3.5. Charting as a Form of Analysis	49
3.3.6. Determining Patterns and Unusual Activity	52

3.3.7. Documenting the Findings	55
3.4. Conclusion	56
CHAPTER FOUR – FINDINGS AND RECOMMENDATIONS	57
4.1. Introduction	57
4.2. Primary Findings	57
4.2.1. The Role Played by Bank Account Statement Analysis in Investigations	57
4.2.2. The Analysis of Bank Account Statements	58
4.3. Secondary Findings	58
4.3.1. Understanding the Concept of Financial Investigation	58
4.3.2. Training in Financial Investigation Methods and Techniques	58
4.3.3. The Analysis of Bank Account Statements by South African Investigators	59
4.4. Recommendations	59
4.4.1. The Application of a Uniform Analysis Methodology in Relation to the Examination of Bank Account Statements	59
4.4.2. General Education	60
4.4.3. Additional Research	60
4.5. Conclusion	60
LIST OF REFERENCES	62
ANNEXURE A – INTERVIEW SCHEDULE	I

CHAPTER ONE

GENERAL ORIENTATION

1.1. INTRODUCTION

According to Robinson (2001:19), most crimes, with the possible exceptions of domestic violence, crimes of passion, rape and driving under the influence, are only about money. Similar to most hard-working members of society, criminals often engage in crimes to make ends meet, even if those ends exceed their legitimate means.

Bank accounts are a fundamental aspect of a banking system, and an instrument that allows citizens to interact with the financial system that has become one of the cornerstones of society. As such, investigators are likely to encounter bank accounts in any investigation where there has been some type of financial profit from a criminal activity, and even in crimes where the bank account is either the target of a crime, or the instrument of a crime.

To effectively make use of the valuable evidential information that is often found in bank account statements, an investigator should be able to identify the relevant evidential information through a process of analysis, and by so doing discover any illicit financial activity in relation to the account.

1.2. PROBLEM STATEMENT

After sixteen years of practical investigation experience, specifically in the financial investigation and white-collar crime field, It has been the experience of the researcher that very few investigators are familiar with the use of bank account statements as an aid in investigation, or how they can aid in an investigation. Even among those who make use of these records, there is no standard method employed to ensure consistency of findings.

Willemse (2003), Head of Investigation for the Asset Forfeiture Unit, and Tuffey (2002), former Head of the London Metropolitan Police Financial Investigation Unit, identified a significant problem regarding bank account statements.

Willemse (2003) and Tuffey (2002) are of the opinion that most investigators do not often fully utilise all the information available from bank account statements to maximum effectiveness.

This problem is made manifest in that many investigators do not know what to look for in bank statements, how to structure the data contained therein, how to analyse the data, or how to effectively present the findings of the data analysis so that it can be effectively used in court (Willemse, 2003).

This problem was highlighted in 2004 during the Financial Intelligence Centre's Financial Investigation Training Program. During 2004, 66 law enforcement officers were trained from 10 South African law enforcement agencies. It was clear during the practical assignments on the course that the statements made by Tuffey (2002) and Willemse (2003) were not unfounded.

One possible reason for this problem is that financial investigation techniques may appear somewhat intimidating to investigators unfamiliar with accounting and financial systems, although financial investigation and analysis are nothing more than a combination of traditional investigative and auditing techniques. According to Madinger and Zalopany (1999:121), while an investigator may be intimidated by them, the techniques used by investigators and auditors is remarkable similar. All that is needed to make it easy for investigators is to familiarise them with the financial environment and help them identify what to look for and how to look for it (Tuffey, 2002).

1.3. THE AIM OF THE RESEARCH

The aim of the research is to determine how to effectively analyse bank account statements so as to be able to establish evidence of illicit financial activity.

1.4. THE PURPOSE OF THE RESEARCH

The purpose of the research indicates the reason for the research (Denscombe, 2002:25). Based on the problem statement, the researcher identifies the following as the purpose for this research:

- **Evaluation Research**

The researcher wants to critically evaluate the existing practices to determine strengths and weaknesses in order to consider how the practice might be improved (Denscombe, 2002:25).

- **Exploratory Research**

As the problem statement points out, there is a need for improvement. The researcher therefore needs to explore (Denscombe, 2002:27) what is stated in literature by national and international authors and experienced national and international experts in the field of financial investigation, to establish how the analysis of bank statements to find evidence of illicit financial activity should be done.

- **Applied Research**

From the problem statement it is clear that there is a need for good practice and improvement of practice (Denscombe, 2002:27). The researcher therefore aims to arrive at recommendations for good practice that will enhance the performance of investigators.

- **Empowerment**

The researcher also wants to empower investigators and their supervisors by using the outcomes of this research to write an article and conduct lectures (Denscombe, 2002:27).

1.5. RESEARCH QUESTIONS

The research questions specify exactly what is to be investigated by the research (Denscombe, 2002:31). In addressing the research problem, two primary research questions will have to be addressed. These are:

- What is the role played by bank account statement analysis in investigations?
- How should bank account statements be analysed to establish evidence of illicit financial activity?

1.6. KEY THEORETICAL CONCEPTS

There are a number of concepts that need to be clarified:

1.6.1. Bank Account Statement

According to Deloitte (2002:52), a bank account statement is a detailed documentary account of all financial activities, both debits and credits, for a period of time for a bank account.

1.6.2. Evidence

Evidence is defined as the means of proving or disproving facts in dispute. It comprises all the information and material submitted to a court by the parties concerned, to enable the presiding officer to judge and settle a dispute. Evidence consists of oral statements, written statements, documents and objects that are produced and received in court (Joubert, 2001:331-332).

1.6.3. Illicit Financial Activity

Willemse (2004) defines illicit financial activity as conducting any financial transaction, whether formally or informally, which, if done during the normal course of business, could be prosecuted under the laws of the land.

1.7. RESEARCH DESIGN

The design for the research is empirical. Empirical research is the production of knowledge based on experience or observation (Maxfield & Babbie, 1995:4). Empirical research involves the idea of going into the field and purposefully seeking the necessary information (Denscombe, 1998:6). To address the lack of knowledge illustrated in the problem statement, the researcher needs to produce new knowledge, which is based on experience. For this reason the researcher considers the empirical design as suitable for the research.

1.8. RESEARCH APPROACH

Schloss and Smith (1999:86) are of the view that a qualitative research approach is best suited for trying to better understand complex and interactive phenomena, and because these phenomena are often unique, qualitative research does not seek to generalise findings.

There is no doubt that investigations, especially those involving financial aspects, are often complex problems, and no two investigations are ever the same, due to the number of variables that come into play. Taking these factors into account, a qualitative research approach was selected for the research.

The main strength in this approach is that it leads to an in-depth insight into the research topic (Mouton, 2001:150), which is important for developing understanding of the investigative discipline explored in the research. A qualitative approach is also multi-method in focus (Creswell, 1998:15), which will assist the researcher to arrive at the best results.

1.9. DATA COLLECTION

In collecting data as part of the research process, a number of data collection techniques were used. Such a triangulation approach, using more than one technique, will enhance the validity of the research (Mason, 1998:148). These included a literature study, structured interviews from the sample of the target population, and interviews with experts in the relevant fields, including financial investigation and accounting.

Consideration was given by the researcher to the use of case studies, yet an extensive search of South African criminal and civil case judgements to identify relevant court cases revealed no significant cases, which could have aided in the research.

1.9.1. Literature Study

According to Schloss and Smith (1999:40) the collection of information from literature sources can prove valuable in defining the variables and concepts in research, and it allows for content analysis to be conducted (Schloss & Smith, 1999:90).

In seeking relevant literature, extensive use was made of libraries and the Internet in an attempt to identify any literature specifically relating to the research topic. Areas that were explored included policing and law enforcement, law, and accounting and auditing. The researcher could only identify one published literature resource specifically dealing with the topic as set out (Peterson, 2002). This monograph was not an extensive academic study but a collection of the author's practical experience.

Statutory legislation that had relevance to financial activities that arise from, or support or facilitates other crimes was also studied. These included the Prevention of Organised Crime Act 121 of 1998, the Financial Intelligence Centre Act 38 of 2001, the Prevention and Combating of Corrupt Activities Act 12 of 2004, and the Protection of Constitutional Democracy against Terrorist and Related Activities Act 33 of 2004.

To expand the literature study, the research topic was then broken down into concepts and subject areas, including law of evidence (documents), banking, criminal law (proceeds of crime), additional South African statutory legislation, money laundering, fraud examination, intelligence analysis, forensic auditing, and financial data mining. This led to a number of published literature sources, as well as law enforcement agency training manuals used to train law enforcement investigators in financial analysis, such as the New Jersey Division of Criminal Justice course in Financial Analysis (2001), which could benefit the research process. The researcher used the literature to get a better understanding of how bank account statements are analysed internationally.

1.9.2. Structured Interviews

Interviews are an effective and accepted data collection method (Mouton 2001:105). Welman and Kruger (1999:166) and Schloss and Smith (1999:66) support this view. The advantage of using a standard schedule in conducting the interviews is that it minimises variability from one interviewee to another, and the data collected can be more easily compared (Robson, 2000:91).

The interviews consisted of a number of predetermined open-ended questions, which explore various areas of the research topic. The questions were formulated by the researcher, based upon the areas to be addressed by the research questions. The interviews were on a one-on-one basis between the researcher and the subject being interviewed. The interviews were conducted in private. Making use of a standard question schedule, the subjects were asked a series of questions, the answers to which were written down by the researcher, and confirmed with the subject at the end of the interview.

1.9.3. Interviews with Experts

The Concise Oxford English Dictionary (Pearsall, 2002:501) defines an expert as a person who is very knowledgeable about or skilful in a particular area. Due to the multidisciplinary nature of the research, the researcher was of the opinion that the results of the research could be enhanced through the interviewing of experts in their respective fields.

The selection of the experts was done purposefully (Schloss & Smith, 1999:104) by the researcher, based on the researcher's knowledge and that of professional associates of the researcher. The experts were selected from the fields of accounting and financial investigation and all gave their consent to be interviewed for the research. The experts were as follows:

- J P Willemse: Head of Investigations for the South African Asset Forfeiture Unit. Prior to this he was a Detective Captain in the South African Police Service where he headed the Financial Investigation Unit in Durban before moving to Gobodo Forensic and Investigative Accounting as a manager. He was the first specialist financial investigator appointed

to the Asset Forfeiture Unit. He has conducted several best practices visits to the Federal Bureau of Investigation and the US Department of Justice in the United States, and the Metropolitan Police and Asset Recovery Agency in the United Kingdom. He is also co-developer of the South African National Financial Investigation Training Program. He has more than 13 years' practical financial investigation experience.

- D Tuffey: former Head of the Financial Investigation Unit of the London Metropolitan Police, and currently a consultant for the British Foreign and Commonwealth Office dealing with the development of financial investigation capacity in various Commonwealth countries including South Africa. He has been responsible for training financial investigators throughout the Commonwealth and the European Union.
- B Olander: Assistant Manager: Forensic Accounting at the Special Investigating Unit and a Certified Public Accountant. He has extensive experience in forensic accounting in both law enforcement and the private sector. He was not part of the sample group.

1.10. POPULATION AND SAMPLING

A population encompasses the entire collection of units about which a researcher wishes to make conclusions (Welman & Kruger, 1999:18), which in this research are all investigators in South Africa. It was impossible for the researcher to use the total population as a sample in this research, simply because of time and cost constraints. The researcher therefore decided to make use of a target population representative of the total population.

The target population of the study consists of all members of the Special Investigating Unit in the whole of South Africa, involved in conducting investigations. This consisted of 87 individuals at the time the research was conducted. The target population is representative of the total population by virtue of the fact that the members of the Special Investigating Unit are made up predominantly of former members of all of the major South African investigative agencies (South African Police Service, Directorate of Special Operations, Military Police Special Investigation Branch, and the Auditor-General) and private sector forensic auditing firms (KPMG, Gobodo Forensic Accounting and PricewaterhouseCoopers).

From the target population of 87 investigators throughout South Africa, a sample was drawn of 20 individuals to participate in the research. A sample is a selection of elements from a population and is used to make statements about the whole population (Blaickie, 2003:161). Permission to interview the sample was given by Mr. Faiek Davids, Deputy Head of the Special Investigating Unit (12 March 2005).

The sample was selected randomly, as discussed by Schloss and Smith (1999:99) and Welman and Kruger (1999:52). In selecting a sample at random, each element has an equal chance of selection independent of any other event in the selection process (Maxfield & Babbie, 1995:221).

In drawing the sample, the simple random sampling technique was used. Simple random sampling involves a selection process that gives every possible sample of a particular size the same chance of selection (Blaickie, 2003:168). The researcher put all the names of the members of the target population into a Microsoft Access database, and wrote a computer program query, which uses random number generation to randomly select 20 members from the database. Thus, the determination of the sample was made randomly by computer, with no human intervention.

The researcher considers the sample as representative of the population because they are all involved in the investigation of matters falling under the definition of illicit financial activity; they are all working under the same conditions and administer the same laws. The profile of the sample as reflected in Figures 1 through 5 below also supports the position of the researcher that the sample is representative of the population.

Figure 1 shows the percentage breakdown of the number of years of previous financial related investigation experience of the members of the sample. Figure 2 shows the percentage breakdown of the seniority of the members of the sample within the Special Investigating Unit. Figure 3 shows the percentage breakdown of education levels of the members of the sample. Figure 4 shows the various previous agencies or entities where the members of the sample worked before joining the Special Investigating Unit. In certain instances, members of the sample previously worked at more than one of these agencies or entities.

Figure 1 - Years Financial Related Investigation Experience

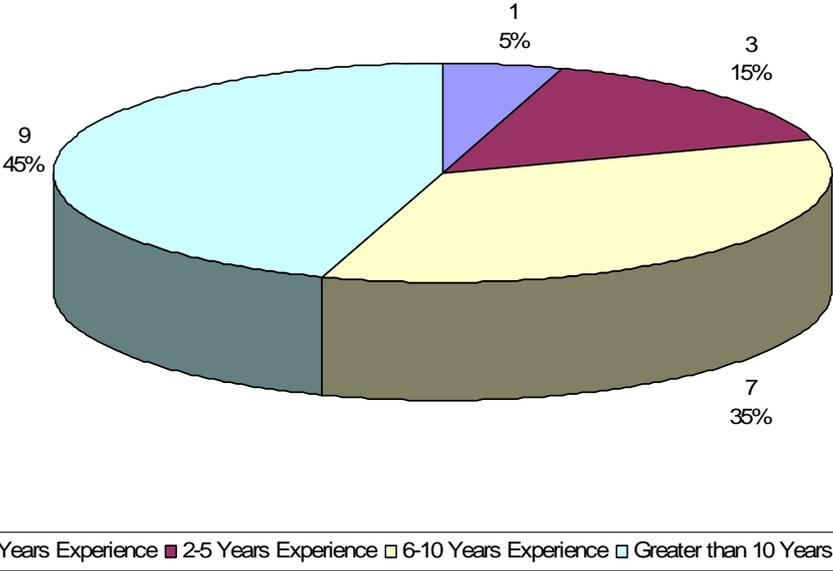
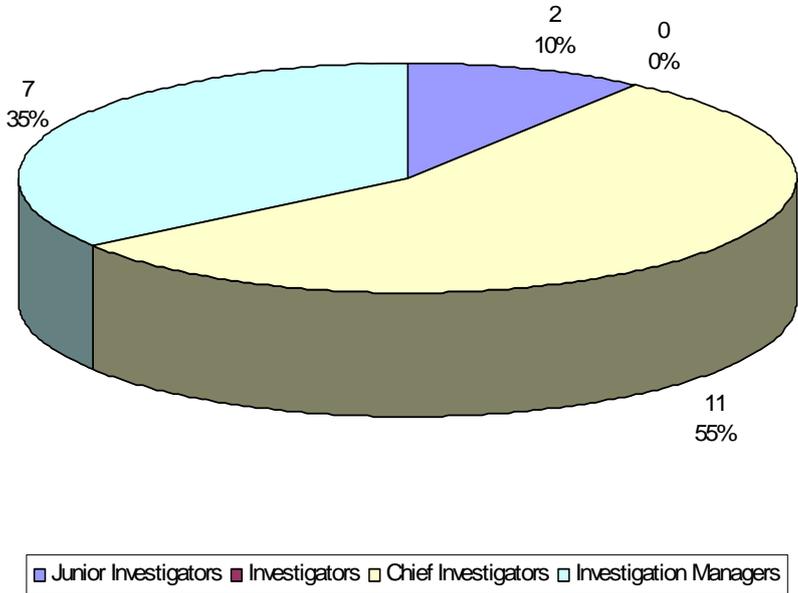
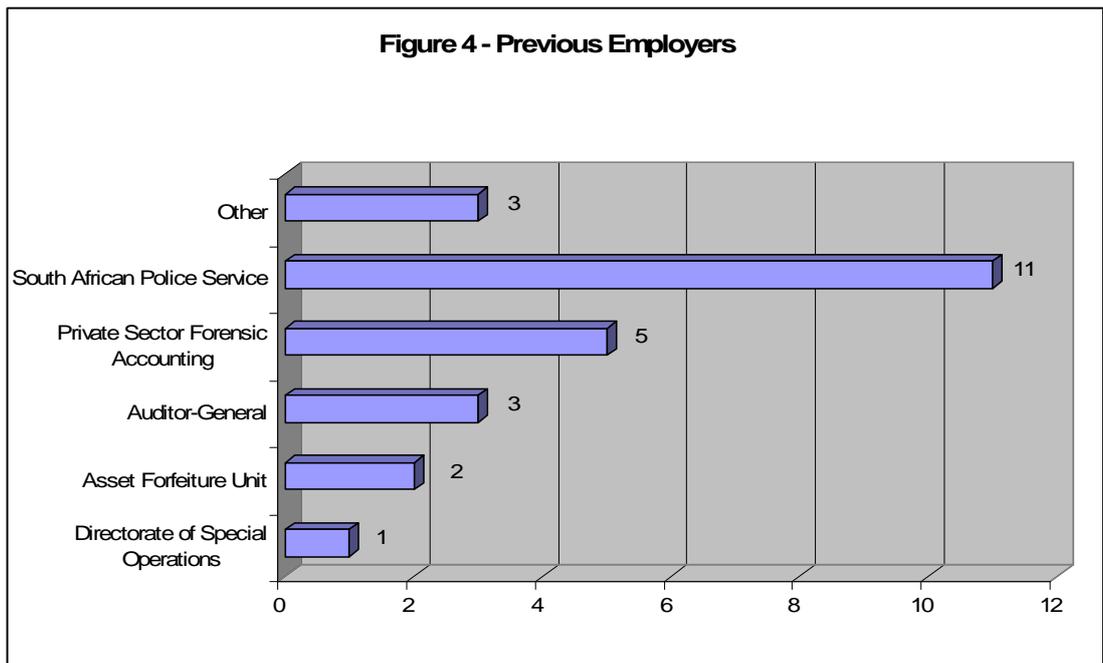
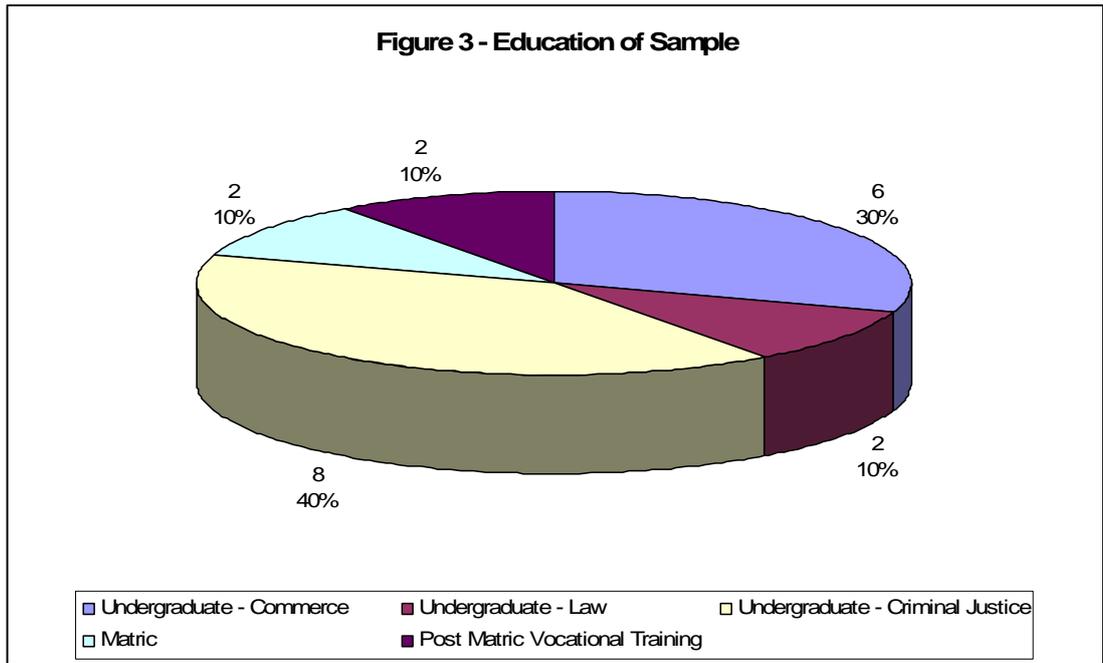


Figure 2 - Seniority of Sample





1.11. DATA ANALYSIS

The purpose of analysis of the data is to understand the various elements of the data collected, to see whether there are patterns or trends that can be identified, or to establish themes in the data (Mouton, 2001:108).

The analysis process used to support this was Tesch's eight-step process for data analysis (Tesch, 1990:142-145). In analysing the data, the researcher followed the eight-step process formulated by Tesch, applying it to the textual data arising from the structured interviews, as well as the textual information obtained from literature sources used in the research.

This was done by the researcher examining all the data collected and obtaining a sense of the whole. This allowed the researcher to identify the underlying meaning of the data, which lead to topics being identified which emerged from the data. The topics were then clustered together with similar concepts. The topics were then assigned codes, and the data re-examined and the codes written alongside appropriate segments of the data.

The topics were then sorted into categories, and interrelationships between the various categories of data determined. All the data from each category was then examined in the context of all the other data for the category, and a preliminary analysis performed.

The analysis process generated concepts and categories from the collected data, allowing the relationships between the various concepts and categories to be explored, thereby allowing a theoretical framework, grounded in practice, to be developed showing how bank account statement analysis can be effectively conducted.

1.12. RELIABILITY

According to Schloss and Smith (1999:93) and Welman and Kruger (1999:143), reliability in the research process is the consistency of measurement and the extent to which the observations made by the researcher could be replicated by another independent researcher.

The literature relates to the topics being researched, and is thus reliable. The literature is also considered reliable by virtue of the fact that the South African literature used is prescribed reading for various tertiary academic institutions in South Africa.

The literature from the United States and the United Kingdom is considered reliable by virtue of the fact that it is recommended reading by professional associations such as the International Association of Law Enforcement Analysts, the Association of Certified Fraud Examiners, as well as some being used as academic texts in various tertiary education programmes overseas.

The sample is considered to be reliable by virtue of the fact that the members thereof have relevant investigation experience and, as a result of previous employment, represent the majority of South African investigating agencies. The use of simple random sampling also contributes to reliability. Reliability is also addressed through the use of a uniform structured interview schedule for all interviews conducted with the sample. The inputs from the experts consulted by the researcher are considered reliable, as their inputs and experience are relevant to the topics being researched.

1.13. VALIDITY

The validity of the research is addressed in both the population and the measuring instruments used. Population validity is the extent to which the sample used in the study represents the population (Schloss & Smith, 1999:99). As stated earlier, the target population is representative of the total population, and thus the sample is considered valid. The interview schedules for the sample ensured validity, as the questions posed to the respondents were relevant to the research questions. The literature is also considered valid, as it is relevant to the research questions posed.

Schloss and Smith (1999:112) and Welman and Kruger (1999:138) are of the view that validity is also addressed through the measuring instruments, by means of content validity (also known as construct validity), which ensures that the items used match the construct being evaluated. The data used by the researcher from the various data collection sources is considered valid as only data relevant to the research topics has been extracted and used in the analysis. This, combined with an analysis methodology, which is an established research process, ensures that the research results are valid.

1.14. ETHICAL CONSIDERATIONS

Ethical consideration in the research was addressed by following the research ethics guidelines of Mouton (2001:238-246). This was achieved by maintaining a high standard of objectivity and integrity in the research process, obtaining consent and approval for the research from the Special Investigating Unit, ensuring the members of the sample were notified of their rights to privacy and their right to full disclosure about the research, acknowledging and referencing all sources of information and data used in the research, and ensuring that no harm was done during the research process.

The research commenced prior to the merger between Technikon SA and the University of South Africa, and, as such, the researcher complied with the research code of ethics applicable to him at that time (Technikon SA, 2002: 125-137).

1.15. CHAPTER OUTLAY

Chapter One details the research methodology used in conducting this research.

Chapter Two details the role that the analysis of bank account statements can have in investigations conducted by an investigator.

Chapter Three details how an investigator should analyse bank account statements to obtain the most effective evidential results.

Chapter Four provides the findings and conclusions reached by the research, as well as recommendations for further actions that arise from the research.

CHAPTER TWO

THE ROLE PLAYED BY BANK ACCOUNT STATEMENT ANALYSIS IN INVESTIGATIONS

2.1. INTRODUCTION

In today's environment, crimes generate huge profits, and one strategy that has been adopted to combat criminal activity is to eliminate the profits. However, to do that, investigators should be able to not only locate these profits, but also show that they are the possible proceeds of criminal activity (Peterson, 1999:18). If the criminals go where the money is, so too should investigators (Robinson, 2001:19). Crime is big business around the globe. All this money has to go somewhere. The value of an investigative approach to the proceeds of crime is supported by Coles (2001:15), where the prospect is raised that long-running criminal organisations are being financially undermined in the United Kingdom by addressing the profits of crime, no matter where or with whom these profits are found.

The International Association of Law Enforcement Intelligence Analysts (1998:9) identifies several financial investigation analytical techniques, which include bank account statement analysis, corporate record analysis, net worth analysis, and source and application of funds analysis.

In this chapter the researcher will elaborate on the role played by bank account statement analysis in investigations, with a particular focus on investigations addressing illicit financial activity.

2.2. THE ROLE OF BANK ACCOUNT STATEMENTS IN BANKING

According to Goosen, Pampallis, Van der Merwe and Mdluli (1999:221), a bank owes a duty to its customers to keep accurate records of all the transactions effected against the account in question. Thus, a bank statement serves a vital role in meeting the bank's accountability to its clients, and is a fundamental aspect of modern banking.

Goosen et al. (1999:221) state that the role of a bank account statement, which is of the utmost importance to a bank, is that it serves as an audit trail showing in detail the various transactions effected against the account. The bank statement is a form of accounting record.

This view is reflected in the total sample, which views a bank account statement as a detailed record of all transactions in a bank account. These transactions reflect money going into an account (credit transaction) or out of an account (debit transaction).

In effect, a bank statement serves as evidence of the transactions against a bank account, a fact that is addressed by Section 236 of the Criminal Procedure Act 51 of 1977, which deals with the proof of entries in bankers' books. Section 236 of Act 51 of 1977 allows the production of a bank statement to be *prima facie* proof of the transactions reflected therein. Section 28 of the Civil Proceedings Evidence Act 25 of 1965 contains similar provisions relating to civil legal proceedings.

2.3. BANK ACCOUNT STATEMENT ANALYSIS AS AN INVESTIGATIVE DISCIPLINE

In identifying the role that the analysis of bank account statements plays in investigations, it is important to explore the relation between this technique and others in the investigation common body of knowledge.

2.3.1. Criminal Investigation

Du Preez (1993:1) defines criminal investigation as a systematic search for the truth with the primary purpose of finding a positive solution to an unlawful activity. Osterburg and Ward (2000:5) define criminal investigation as the collection of information and evidence for identifying, apprehending and convicting suspected offenders. Axelrod and Antinozzi (2003:8) define criminal investigation as the process of discovering, collecting, identifying, preparing, analysing and preserving evidence to prove the truth or falsity of an issue of law.

Prinsloo (1993:17) states that criminal investigation includes the identification of a crime situation through three components, namely:

- The people involved either directly or indirectly in the identification of the victim, perpetrator or witness.
- The nature of the deed and the way in which it had been executed.
- The unlawful character of the deed.

According to Osterburg and Ward (2000:5-11), supported by Axelrod and Antinozzi (2003:12), the objectives of a criminal investigation are to:

- Determine whether or not a crime has actually been committed.
- Discover all facts pertaining to the crime by gathering and preserving evidence, as well as developing and following up on clues.
- Identify the perpetrator or eliminate a suspect as the perpetrator.
- Locate the suspect so that he or she can be brought before court to face charges.
- Recover assets acquired by the perpetrator in the commission of the offence.
- Aid in the prosecution of the perpetrator by providing evidence of guilt, which is admissible in court.

Criminal investigation forms the broad body of knowledge in addressing and proving incidents of criminal activities. Criminal investigation consists of a number of investigative methods which collectively make up the broad body of knowledge that is criminal investigation. These include using informants, making use of undercover agents, conducting forensic analysis of physical evidence, surveillance, interviews and interrogations, legal interception of communications, and financial investigation (Nossen, 1975:1).

2.3.2. Financial Investigation

Pheijffer (1998:34) defines financial investigation as investigations in which, on behalf of law enforcement, financial expertise is used in order to gather, check, refine, process and analyse financial information.

According to Tuffey (2002), financial investigation is the investigation of an individual or corporation through their financial affairs. Willemse (2004) is of the view that financial investigation is the identification and documentation of the movement of money during the course of and after a crime. It establishes the link between where the money comes from, who gets it, when it was received, and where it was stored or deposited. This can provide proof of unlawful activity such as money laundering, racketeering, corruption and terrorist financing, as well as identify and trace assets for asset forfeiture purposes, in effect addressing the proceeds of unlawful activity.

Section 1 of the Prevention of Organised Crime Act 121 of 1998 defines the proceeds of unlawful activity as any property or any service, advantage, benefit or reward which was derived, received or retained, directly or indirectly, in the Republic of South Africa or elsewhere, at any time before or after the commencement of this Act, in connection with or as a result of any unlawful activity carried out by any person, and includes any property representing property so derived. Section 1 of the Prevention of Organised Crime Act 121 of 1998 defines property as money or any other movable, immovable, corporeal or incorporeal thing and includes any rights, privileges, claims and securities and any interest therein and all proceeds thereof. Section 1 of the Prevention of Organised Crime Act 121 of 1998 defines unlawful activity as any conduct which constitutes a crime or which contravenes any law, whether such conduct occurred before or after the commencement of this Act and whether such conduct occurred in the Republic or elsewhere.

The 100% of the sample (20 of 20) views financial investigation as a specific investigation method which concentrates on financial issues. Of note, however, was the view held by 85% of the sample (17 of 20), that financial investigation is the domain of accountants or investigators knowledgeable in accounting, due to the financial nature of the evidence, while the rest (3 of 20) felt that financial investigation could be done by any investigator with basic financial knowledge. The researcher is of the opinion that this difference is attributed to levels of training and experience, financial knowledge and accounting knowledge possessed by members of the sample.

Those who felt that financial investigation was the realm of the accountant were those with no training in financial investigation or accounting, while those who felt all investigators could conduct financial investigations, had prior financial investigation or accounting training. In fact, only 5% of the sample (1 of 20) had received formal training in financial investigation.

A financial investigation is a combination of traditional investigative techniques coupled with those used by auditors and accountants (Madinger & Zalopany, 1999:121). It may be asked what the difference is between financial investigation and the work done by auditors and accountants; realistically, the answer would have to be 'not much'. Financial investigation, like auditing, relies on a paper trail, and the whole point of a paper trail is to enable someone to be able to reconstruct what happened, to whom, and when. In this respect the operational environment and methodologies of the financial investigator and the auditor overlap (Madinger & Zalopany, 1999:121).

Financial investigations have a number of defined objectives according to Pheijffer (1998:34). These are:

- The generation of tactical information for investigations. In the most ideal form this information would constitute evidence; however, the information can also be the key to obtaining the necessary evidence.
- Determining the volume of the unlawfully obtained property.
- Tracing property of criminals and/or criminal organisations.
- Confiscating the proceeds of unlawful activity.

In financial investigation, the most common questions that an investigator seeks answers to, according to Madinger and Zalopany (1999:126), include:

- Where did the subject under investigation get the property?
- How much property did the subject receive?
- Where is the property going?
- How is the property being moved?
- Is the subject keeping the property, or is the subject merely a conduit to someone else?

Financial investigation requires a number of skills and abilities in order to be successful (Internal Revenue Service, 1993:25). These include:

- Understanding the laws relating to the unlawful activity under investigation.
- Knowing the proper way to handle evidence.
- Employing conventional investigation techniques, including surveillance, undercover operations and interviewing.
- Locating and obtaining all relevant financial records.
- Using auditing, accounting and analytical techniques to review the financial records.
- Linking the financial data to other case information to prove the unlawful activity in question.

One of the key features of financial investigation is the use of financial and other documentary records to develop evidence of illicit financial activity. This view is supported by Swanepoel (1998:29) who states that one of the crucial needs of investigators investigating illicit financial activity is proper, complete and legible records of financial transactions, which are supplied within a reasonable time and in a format that is admissible in a court of law.

Osterburg and Ward (2000:173) and Axelrod and Antinozzi (2003:178) state that it is hardly possible for people to move in modern society and not leave a paper trail or an electronic trail of some type. During adult life, most of these paper and electronic trails relate to the person's personal or business dealings. Using these documentary trails, the patterns of human activity can be reconstructed through diligent and informed effort on the part of an investigator.

This is supported by the Locard Principle, which states that a criminal will always take something away from the scene of his crime, and leave something behind (Lane, 1992:622). These paper and electronic records in bank accounts are trace evidence, which shows the interactions of a particular person against a particular bank account.

Osterburg and Ward (2000:173-174) are of the view that documentary records can provide the following information to an investigator:

- Link a person to an object through purchase or ownership.
- Link one person to another, showing an association.
- Link a person to a place or a time period.
- Discover something about an individual's lifestyle, personal behaviour or movements.

Osterburg and Ward (2000:174) go on further to discuss how an investigator may use documentary records. These are:

- Follow up on or provide additional investigative leads.
- Identify the perpetrator of an unlawful activity.
- Trace and locate a suspect or witness.
- Recover the proceeds of unlawful activity.
- Determine facts relating to physical evidence, such as its source of ownership.

Financial investigation can thus be viewed as the utilisation of various techniques and skills to investigate the financial affairs and position of a subject, with a particular emphasis on the use of financial or other documentary records. One such technique is the analysis of bank account statements.

The sample of the research supports the view that financial investigation is a defined sub-discipline of criminal investigation, which relies on the interpretation of financial information (100%).

2.3.3. Bank Account Statement Analysis

Peterson (1998:269) defines bank account statement analysis as the compilation, review and analysis of information from a bank statement to determine the flow of currency in and out of the account, establishing the origin and destination of each transaction so as to determine its potential connection to criminal activity.

According to Tuffey (2002) and Willemse (2003), the analysis of bank account statements is a common investigative methodology in financial investigation, particularly in those investigations addressing the proceeds of unlawful activity. This is supported by Beasley (1993:7) who states that the analysis of bank statements is often crucial in detecting crimes where an element, which must be proved, is the proceeds of unlawful activity, and Fann, Gordon and Leach (1993:9) who state that bank statements are vital in linking the proceeds of unlawful activity to forfeitable property.

According to Deloitte (2002:45), bank account records, such as statements, are extremely important to any investigation involving illicit financial activity, as they provide information regarding the source of the funds, the destination of funds, details of transactions and the value of transactions.

All members of the sample are of the opinion that the examination and analysis of bank account statements is a necessary step to follow in any investigation involving illicit financial activity.

A number of uses for bank account statement analysis in addressing illicit financial activity, have been identified in the sample of the research, as follows:

- Determine the details of the source and destination of all transactions (100%). This includes not only account details and transaction details, but also identifying physical locations where transactions took place, such as at an automated teller machine (ATM) where a deposit was made. It also aids in tracing the proceeds of unlawful activity to its destination, or to identify property purchased with these proceeds.
- Determine the financial gain of a subject (85%) (17 of 20). This can aid in determining the amount of proceeds of unlawful activity.
- Identify suspects (100%). By identifying the accounts involved, additional suspects can be identified.

These views are supported by the New Jersey Division of Criminal Justice (2001:24), which goes further to state that the analysis of bank account statements serves as a valuable method to determine criminal *modus operandi*, as it relates to their illicit financial activity.

Willemse (2004) is of the view that the analysis of bank account statements forms part of the chain which establishes a causal link between a crime, the profits there from and the benefit obtained as a result of these profits.

The sample is unanimous in its view that the analysis of bank account statements is a step in identifying evidence of illicit financial activity; however, the methods of analysing the bank statements vary widely, as discussed in Chapter Three.

Bank account statement analysis can thus be seen as an important financial investigative methodology to establish evidence of illicit financial activity.

2.4. LAW OF EVIDENCE AND BANK ACCOUNT STATEMENT ANALYSIS

The view that bank account statement analysis is important in identifying evidence of illicit financial activity has been established. It is however important to explore the legal issues relating to the evidence identified by the analysis of bank account statements, namely, the bank account statement itself and the transactions reflected therein.

One of the aims of an investigator is to present the best reliable and admissible evidence, whether it is oral, real or documentary, to a court, so that the court can reach an accurate decision with all the available facts at its disposal (Joubert, 2001:329). The ways in which facts are proved in a court of law are regulated by the law of evidence (Joubert, 2001:329). The law of evidence is the body of legal rules and regulations that regulates the proof of facts in a court of law (Schmidt & Rademeyer, 2000:1).

Schwikkard and Van der Merwe (2002:2) state that the scope of the law of evidence can be determined by way of its specific functions, namely, what facts are legally receivable or admissible to prove the facts in issue before a court, determining the manner in which evidence may be adduced, what evidence may be lawfully withheld from a court, what rules should be taken into account in assessing the weight of the evidence, and what the standard of proof is.

The law of evidence, in essence, determines which evidence may be submitted before a court of law, how that evidence may or should be presented before a court of law, and who may submit or present that evidence before a court of law (Joubert, 2001:330).

2.4.1. Bank Account Statements as Evidence

In *R v Daye* 1908 (2) KB 330 a document was defined as any written thing capable of being evidence. In *Secombe and Others v Attorney-General and Others* 1919 TPD 270 a document is defined as anything that is written proof of something, whether in images or writing, while *S v Mpumlo and Others* 1986 (3) SA 485 (E) goes further to say that the writing or images must be visible and capable of being read or interpreted by one's eyes, and the document must be on paper or similar material. In terms of Section 33 of the Civil Proceedings Evidence Act 25 of 1965 a document is defined as any book, map, plan, drawing or photograph. Section 221 of the Criminal Procedure Act 51 of 1977 defines a document as any device by which information is stored or recorded, while in terms of Section 246 and 247 of the Criminal Procedure Act 51 of 1977, a document includes any book, pamphlet, letter, circular letter, list, record, placard or poster.

It is thus clear, when considering the definition of bank account statement, provided in Chapter One, that a bank account statement meets the legal definition of a document as established both by statutory law relating to evidence in criminal and civil proceedings, and by relevant case law, and as such is considered capable of being documentary evidence.

Bank account statements themselves can be used as evidence in both criminal and civil courts. Section 236 of the Criminal Procedure Act 51 of 1977 states that the entries in the accounting records of a bank, which include bank account statements, shall on production thereof be considered prima facie proof of the transactions recorded therein, provided that the bank account statements are accompanied by an affidavit from an employee of the bank in question, certifying that the accounting records were or are the ordinary books of the bank, that the entries made therein were made during the normal course of business, and that the records have been in the custody or control of the bank.

Similar provisions are made in Section 28 of the Civil Proceedings Evidence Act 25 of 1965, which allows for the entries in the accounting records of a bank, which include bank account statements, to be prima facie proof of the transactions recorded therein on production thereof in a civil legal proceeding.

Traditionally, bank account statements have been physical documents. It is becoming increasingly common, however, for bank account statements to be in a non-physical, digital format. In this regard, the provisions of the Electronic Communications and Transactions Act 25 of 2002 would apply. In terms of Section 15(1) of the Electronic Communications and Transactions Act 25 of 2002, a bank account statement in a digital form could not be deemed inadmissible in subsequent court proceedings simply because it was in a digital format.

Bank account statements have been used as evidence by the sample (100%) to show the dates and types of transactions in bank accounts, the values of transactions, and the source and destination of transactions.

The fact that bank account statements are specifically given evidential weight in both criminal and civil matters is of importance in the investigation of illicit financial activity, as it can be addressed through both the criminal and civil courts (Willemse, 2004).

2.4.2. Relevance of Bank Account Statements as Evidence in Matters Alleging Illicit Financial Activity

Van der Westhuizen (1993:282) is of the view that evidence must be relevant to the matter being investigated, to have value. It must have a direct bearing on the perpetrated crime, and a logical connection is presumed between the evidence discovered and the actual facts of the matter. This view is supported by Schwikkard and Van der Merwe (2002:46-47) and Hoffmann and Zeffertt (1996:21-27). Evidence should prove or disprove the facts at issue (Schwikkard & Van der Merwe, 2002:17).

According to Schwikkard and Van der Merwe (2002:17) the facts at issue (*facta probanda*) are those facts which a party must prove in court in order to succeed, while the facts relevant (*facta probantia*) to the facts in issue are those which tend to prove or disprove the fact at issue. The facts at issue are those allegations made in a charge sheet in criminal matters or founding affidavit in civil matters, which must be proved to ensure successful prosecution or litigation (Joubert, 2001:332). In matters involving illicit financial activity, the *facta probanda* according to the entire sample is the issue of whether or not the transactions reflected through a bank account constitute illicit financial activity.

There are numerous *facta probantia* which can aid in proving or disproving the facts at issue. The one *facta probans* (sing. of *facta probantia*) as it relates to illicit financial activity, which the entire sample agrees with, is the necessity to link suspect transactions to certain bank accounts and, by extension, to the individuals or entities that own, operate, or entered into a transaction with the bank account in question. Eighty-five per cent of the sample (17 of 20) provided an additional *facta probans* as it relates to illicit financial activity. This is that the transactional data and values thereof reflected in bank account statements aid in determining the financial gain of the subject of an investigation, which is a vital aspect in civil law asset forfeiture proceedings in terms of Chapters 5 and 6 of the Prevention of Organised Crime Act 121 of 1998.

Thus, the bank account statements will be considered relevant evidence if they reflect transactions identified as illicit financial activity as defined in Chapter One, or aid in proving that illicit financial activity has taken place.

It is therefore clear that in general, bank account statements, whether physical or digital, and the information contained therein, are relevant when addressing issues of illicit financial activity before a South African court of law.

2.4.3. Bank Account Statement Analysis as Circumstantial Evidence in Matters Alleging Illicit Financial Activity

Osterburg and Ward (2000:694) state that evidence is also classified as either direct or circumstantial evidence.

Direct evidence is evidence of a fact that is perceived by a witness with his or her own senses (Hoffmann & Zeffertt, 1996:588) - in other words, the proverbial eyewitness. It is evidence about the observation of a fact at issue (Schmidt & Rademeyer, 2000:4). For example, if a witness observes a person making a withdrawal in cash at a bank, then the witness's oral submission would be direct evidence of the withdrawal.

Circumstantial evidence is indirect proof from which the facts in dispute may be inferred (Hoffmann & Zeffertt, 1996:588). It is evidence about a fact from which a court of law can draw an inference regarding a fact at issue (Schmidt & Rademeyer, 2000:4). For example, a bank account statement would show a transaction where a withdrawal in cash took place, together with the amount of the transaction; the bank account statement as documentary evidence would then be indirect evidence of the withdrawal.

A bank account statement is a record of a transaction against a particular bank account, which has been reduced in writing and recorded, and as such cannot be considered direct evidence, as the bank account statement could not have 'observed' the transaction. As such, bank account statements cannot be used as direct evidence of a fact. They do however offer indirect proof as illustrated in the example above, and can thus be considered circumstantial evidence, which indirectly can be used to prove a fact.

Osterburg and Ward (2000:694) dispel the popular misconception that circumstantial evidence should at worst not be believed, and at best is a weak form of evidence. They state that the courts can insist on proper safeguards and procedures so that circumstantial evidence can be found to be sound, logical, convincing and related to the issue being contested in court. Circumstantial evidence can be, and in many cases is, a very persuasive type of proof. This view is supported by Schwikkard and Van der Merwe (2002:504), who state that circumstantial evidence is not necessarily weaker than direct evidence. In *S v Shabalala* 1966 (2) SA 297 (A) 299 it was stated that in some instances circumstantial evidence may even be of more value than direct evidence. This is supported by Hoffmann and Zeffertt (1996:589).

Circumstantial evidence often forms an important part of the information placed before a court, and from it the court is required to draw inferences, because the witness presenting the evidence cannot make direct assertions with regard to the fact at issue (Schwikkard & Van der Merwe, 2002:21). It furnishes indirect proof. It can thus be said that even though bank account statements would be circumstantial evidence regarding the transactions they reflect, it does not mean that they are a weak source of evidence.

The analysis of bank account statements allows inferences to be developed. In terms of legal principles, an inference for court purposes is made from only the information and facts under examination (New Jersey Division of Criminal Justice, 2001:242). These deductive inferences arising from bank account statement analysis do not provide new information as such, but do display available information in such a manner that it is more easily understandable, for example, by summarising and charting the information, or re-stating it. It is in the area of deductive inferences that the result of the bank account statement analysis will be most used in court to help prove evidence of illicit financial activity (New Jersey Division of Criminal Justice, 2001:244). The researcher has found no established legal position in this regard in South African case law, and it is postulated that this is as a result of the legislation addressing illicit financial activity as defined in Chapter One still being relatively recent legislation.

South African courts also make use of inferences when evaluating circumstantial evidence (Hoffmann & Zeffertt, 1996:589-593), such as bank account statements and the analysis thereof, and various legal rules are applied. These are applied differently in both criminal and civil legal proceedings (Hoffmann & Zeffertt, 1996:589-593).

Illicit financial activity is addressed in South African courts through both criminal and civil law (Willemse, 2004). As such it is necessary for an investigator conducting investigations into illicit financial activity, especially where the examination and analysis of bank account statements is involved, to understand the rules applied by the court in evaluating circumstantial evidence.

In criminal proceedings, two rules are applied to circumstantial evidence as set out in Schwikkard and Van der Merwe (2002:505). The first rule is that the inference must be consistent with all the proved facts. The second rule is that the proved facts should be such that they exclude every reasonable inference from them except the one made. The rules were established in *R v Blom* 1939 AD 188.

Thus, for any inferences from the analysis of bank account statements to be accepted as circumstantial evidence by the court in the prosecution of a criminal offence relating to illicit financial activity, the court will have to comply with these two rules when considering the evidence and making their decision thereon.

In civil proceedings, only one rule is applied to circumstantial evidence as set out in Schwikkard and Van der Merwe (2002:505). This rule is that the inference drawn must be consistent with all the proven facts, but it does not need to be the only reasonable inference, merely the most probable. This rule was established in *Govan v Skidmore* 1952 (1) SA 732 (N) 734 and *MacLeod v Rens* 1997 (3) SA 1039 (E). Thus, for any inferences from the analysis of bank account statements to be accepted as circumstantial evidence by the court in the forfeiture or confiscation of the alleged proceeds of unlawful activity, the court will have to comply with this rule when considering the evidence and making their decision thereon.

2.5. CONCLUSION

Bank account statements are a vital part of modern banking and a crucial part of a bank's account keeping processes. As a result, the entries in banking accounting records, such as bank account statements, have been addressed from an evidential point of view by legislation. They are a valuable and relevant source of circumstantial evidence in both criminal and civil law.

The analysis of bank account statements plays an important role when conducting financial investigations, particularly those investigations addressing illicit financial activity, and as such has a role to play in the broader field of criminal investigation as well.

It specifically plays a role in proving or assisting to prove illicit financial activity, through linking suspect transactions to certain bank accounts and by extension to the individuals or entities that own, operate, or entered into a transaction with, with the bank account in question.

It also plays a role in proving or assisting to prove the transactional data and values thereof reflected in bank account statements, which aids in determining the financial gain of the subject of an investigation, which is necessary for asset forfeiture proceedings.

CHAPTER THREE

THE ANALYSIS OF BANK ACCOUNT STATEMENTS

3.1. INTRODUCTION

The analysis of bank account statements is a fundamental step in using the information contained in a bank account statement to establish evidence of illicit financial activity.

In this chapter, the researcher will examine the information contained in a bank account statement as it relates to individual transactions, explore an overview of the bank account statement analysis process, and finally elaborate on a detailed bank account statement analysis model.

3.1.1. The Anatomy of a Bank Account Statement

The definition of a bank account statement in Chapter One provides an overview of the purpose of a bank account statement, which is primarily to document all transactions against the account in question. Although all banks have their own formats for displaying the data contained in a bank account statement, they all contain certain fundamental information, namely, the date of the transaction, a description of the transaction, the bank charges associated with the transaction, the value of the transaction, and the balance in the account after the transaction has taken place (Willemse, 2005).

Each line on a bank account statement represents an individual transaction against the account. Transactions are reflected as either debits or credits to the account. A debit is any withdrawal or movement of funds out of the account, while a credit indicates a deposit or movement of funds into the account (Madinger & Zalopany, 1999:199). For the purpose of the research, the person or entity that credits an account is referred to as a depositor, while the person or entity that debits an account is referred to as a payee.

The information contained in a bank account statement is reflected in Figure 5 below.

**FIGURE 5 – INFORMATION ON A TYPICAL BANK ACCOUNT STATEMENT
(Special Investigating Unit, 2005)**

DATE	DESCRIPTION	Fees	Debits	Credits	Balance
01-Dec-04	OPENING BALANCE				-12,882.53
01-Dec-04	ACB DEBIT: External: ABSA: GENSEC	24.00	6,500.00		-19,382.53
01-Dec-04	ACB DEBIT: External: FNB: Outsurance	24.00	577.98		-19,960.51
01-Dec-04	ATM WITHDRAWAL: ABSA Vincent Park	2.90	1,000.00		-20,960.51
01-Dec-04	Overdraft Usage Fee	18.00			-20,960.51
01-Dec-04	Monthly Service Fee	30.00			-20,960.51
01-Dec-04	BANK CHARGES		155.95		-21,116.46
02-Dec-04	ATM WITHDRAWAL: ABSA Vincent Park	2.90	1,000.00		-22,116.46
03-Dec-04	ATM WITHDRAWAL: ABSA Vincent Park	2.90	1,000.00		-23,116.46
04-Dec-04	ATM WITHDRAWAL: ABSA BB Retail Park	2.90	1,000.00		-24,116.46
05-Dec-04	ATM WITHDRAWAL: ABSA BB Retail Park	2.90	1,000.00		-25,116.46
07-Dec-04	Cheque 52: FNB: Buff. City. Munic.	7.50	325.80		-25,442.26
07-Dec-04	ATM WITHDRAWAL: ABSA Vincent Park	2.90	1,000.00		-26,442.26
08-Dec-04	ATM WITHDRAWAL: ABSA Vincent Park	2.90	1,000.00		-27,442.26
09-Dec-04	ATM WITHDRAWAL: ABSA Vincent Park	2.90	1,000.00		-28,442.26
10-Dec-04	ATM WITHDRAWAL: ABSA Vincent Park	2.90	1,000.00		-29,442.26
11-Dec-04	ATM WITHDRAWAL: ABSA BB Retail Park	2.90	1,000.00		-30,442.26
12-Dec-04	ATM WITHDRAWAL: ABSA BB Retail Park	2.90	1,000.00		-31,442.26
13-Dec-04	Deposit: ABSA Frere Sq.	360.00		35,999.99	4,557.73
14-Dec-04	Cheque 53: ABSA Pretoria: Telkom	7.50	446.72		4,111.01
14-Dec-04	ATM WITHDRAWAL: ABSA Vincent Park	2.90	1,000.00		3,111.01
15-Dec-04	ATM WITHDRAWAL: ABSA Vincent Park	2.90	1,000.00		2,111.01
17-Dec-04	Cash Withdrawal : ABSA Frere Sq.	50.00	10,000.00		-7,888.99
20-Dec-04	ATM WITHDRAWAL: ABSA Vincent Park	2.90	1,000.00		-8,888.99

Figure 5 reflects the type of information that can be found in a bank account statement. Each row of the bank account statement reflects a particular transaction. The date column reflects the date of the transaction. The description column reflects the transaction information. The fees column reflects the bank fee for the transaction. The debit or credit column lists the value of the transaction and whether it is a debit or credit transaction. Finally, the balance column reflects the balance on the account following the transaction in question.

One issue which Madinger and Zalopany (1999:199) raise which is of importance to an investigator analysing bank account statements, is that they are designed for a lay person to read and understand, and much of the detail of interest to an investigator such as location of transaction, cheque beneficiaries, destination account numbers and so forth, is not necessarily reflected in the bank account statement. To get this information, the investigator may need to contact an official from the bank concerned to obtain it. This view is supported by Willemse (2003), who also states that other bank account documents, such as deposit slips, issued cheques and other bank accounting documents can be used to supplement the information contained in the bank account statement.

3.2. UNDERSTANDING THE ANALYSIS PROCESS

The components of the analysis are driven by the goal, which is usually to identify illicit financial activity through the account, but, in general, a bank account statement analysis can include summary statements, frequency distributions and the identification of income and payment patterns (Peterson, 2002:43). Analytical methods and techniques are those methodologies that are applied to the collated transaction data to make it easier to establish evidence of illicit financial activity in the accounts under examination.

An extensive literature review by the researcher revealed no established process that is used by South African law enforcement agencies to examine and analyse bank account statements.

Auditors make use of bank account statements as part of their routine audit work, but they use the bank account statements to verify that transactions

have taken place and that transactions reflected on the bank account statement match to source documentation (Puttick & Van Esch, 2001:288-296). Arens, Elder and Beasley (2005:683-688) support this.

Forty-five per cent of the sample (9 of 20) did not make use of a uniform process which they followed when analysing bank account records. These individuals simply examined the bank statements visually to try and identify transactions that they felt were relevant to an investigation. This is supported by Willemse (2004), who has observed in the Asset Forfeiture Unit that there is no single standard process used in conducting a financial investigation which involves the analysis of bank account statements, and even less of a standard process in the actual analysis process itself. The process followed by the 45% of the sample is in principle the same method used by auditors when examining bank account statements (Puttick & Van Esch, 2001:288-296). This is supported by Arens, Eldar & Beasley (2005:683-688).

The remaining 55% of the sample (11 of 20) followed more or less standard processes in analysing bank account statements in their operational environment. Activities conducted included:

- Capturing the data from the bank account statements in an electronic format.
- Removing irrelevant data such as bank charges.
- Examining the data to identify transactions relevant to the investigation, or to determine patterns of activity in the account that differed from the norm.
- Reporting on the information identified, either through a forensic report or in an investigator's affidavit.

The New Jersey Division of Criminal Justice (2001:61) defines a number of steps to be undertaken when doing a bank account statement analysis as part of an investigation. These steps include:

- Develop a database or spreadsheet to contain the data obtained from the financial institutions in a convenient electronic format; then capture the data obtained from the financial institution in the database or spreadsheet.

- Review the records obtained from the financial institution for any leads that may aid in the investigation.
- Analyse the data using various methods, including sorting transactions by date, by payee, by deposits, or in various combinations.
- Analyse the flow among multiple accounts and draw transaction flows charts as necessary.
- Review the transactions for any patterns and unusual deposits or payments.
- Prepare a summary of the financial activities.
- Develop conclusions from the transactions and make any recommendations based on the transactions and the results of the analysis.
- Present the findings of the bank account statement analysis.

The difference between the current practice in bank account statement analysis in law enforcement in New Jersey in the United States compared to South Africa, is that the New Jersey model is an established and systematic practice which produces more detailed and uniform analysis, whereas the current situation in South Africa is haphazard at best, dependent on the individual knowledge of the investigators examining the bank account statements.

3.3. BANK ACCOUNT STATEMENT ANALYSIS MODEL

When the processes used by the sample are compared to the processes used by the New Jersey Division of Criminal Justice, it is clear that there are certain fundamental processes which are common to both the sample and the New Jersey Division of Criminal Justice model, each of which can comprise a number of activities.

The researcher, with the goal of refining a conceptual model for the analysis of bank account statements, is of the opinion that a standard bank account statement analysis model consists of the following processes which have been distilled from the New Jersey model and the practices of the sample. These processes are:

- Collating the Data.
- Identifying Significant Payees and Depositors.
- Bank Account Statement Summary.
- Time Series Analysis.
- Charting.
- Identifying Patterns and Unusual Activity.
- Documenting the Findings.

Although this model has not been tested to determine its effectiveness, it is essentially an amalgamation and simplification of established practice from the New Jersey Division of Criminal Justice, and operational practice in South Africa, and as such the individual components have been tested in practice.

3.3.1. Collating the Data

Collation is a process whereby data is organised, using either a manual or computerised method, into a format from which the data can be retrieved and analysed (Peterson, 1998:270). Collation can be viewed as the sifting out of useless, non-relevant information and the orderly arrangement of the remaining information (California Department of Justice, 1993:8).

Only 55% of the sample (11 of 20) collated the data from bank account statements, and they did this by capturing the data in electronic format onto a spreadsheet.

3.3.1.1. Spreadsheets and Databases

The Concise Oxford English Dictionary (2002:1390) defines a spreadsheet as a computer program, used chiefly for accounting, in which figures arranged in a grid can be manipulated and used in calculations.

Spreadsheets commonly used by the sample are Microsoft Excel. Within the 55% (11 of 20) of the sample, 45% (9 of 20) captured all the data as it appeared on the bank account statements. The other 10% (2 of 20) did not capture the data relating to bank charges as they felt it was irrelevant.

The remaining 45% of the sample (9 of 20) did not collate the data contained in the bank account statements in any way, as they felt that simply examining the bank account statements in their paper format would be sufficient. A possible reason for the difference between those who collated the data and those who did not, is that most collation methods involve the use of computers, and that those that collated the data had, on average, higher levels of computer literacy than those who did not.

It is also possible to collate the data using a database that can share similar features with a spreadsheet. The Concise Oxford English Dictionary (2002:365) defines a database as a structured set of data held in a computer. Peterson (1998:271) defines a database as a computerised set of files, called records, which are broken down into columns, or fields, which allows the data to be retrieved, manipulated and analysed. The purpose of a database or spreadsheet in bank account statement analysis is to collect all material and data that may assist in the investigation, in a structured format, which allows for the accounting aspect of the investigation, as well as enabling links or events, which have occurred to be shown (New Jersey Division of Criminal Justice, 2001:66).

Peterson (2002:31) states that using databases or spreadsheets as the repository of the account information, offers three main benefits. The first is that data can be searched, sorted, totalled and reported on in a consistent manner. The second is that it allows large quantities and more complex financial data to be analysed. Thirdly, it reduces the time needed to conduct the analysis of the records in question. The use of database software or spreadsheet software is a matter of personal habit and preference. Those with a background in accounting mostly prefer spreadsheets. Spreadsheets are excellent for any form of analysis, which requires significant computation or computation-derived fields (Peterson, 2002:31). Databases allow the order of fields to be changed easily without altering the relationship between the fields. Database software is best in manipulating data, while spreadsheets are best in computing data (Peterson, 2002:31).

3.3.1.2.Data Fields

Before the data from the various documents for the bank account under examination can be captured in an electronic format in either a database or spreadsheet, it is necessary to designate the data fields to be used in the database or spreadsheet.

The fields used by Peterson (2002:32-33) for the collation of data from bank records includes:

- Date of transaction.
- Transaction reference number, for example the cheque number in a cheque transaction.
- Amount of the transaction.
- Transaction type, for example, deposit, withdrawal, cheque payment, telegraphic transfer, debit order and so forth.
- Identity of the origin of the transaction; for example, who initiated the transaction? This is used only for those transactions where money moves into the account under examination.
- Account details of originating transaction, if relevant.
- Identity of the destination of the transaction; for example, who received the payment made from the account? This is used only for transactions where money moves out from the account under examination.
- Destination account details if relevant.
- Location of the transaction.
- Time of the transaction.
- Comments.

The above format is overly detailed when compared to the typical fields used by the members of the sample (11 of 20) who made use of computers in collating the data. The fields used by them are:

- Transaction Date.
- Transaction Type.
- Transaction Description.
- Debit Amount.
- Credit Amount.

The transaction date is the date that the transaction took place, as indicated on the bank account statement, which is common accounting practice (Olander, 2005). Due to the nature of the sorting functions in spreadsheets and databases, it is important that a uniform date format be used when capturing the data (Olander, 2003).

The transaction type describes the transaction, which will aid when sorting data. In effect, it is a keyword which is applied to all transactions of a particular type. Transaction types used by the members of the sample who collated data include, but are not limited to:

- Cash Deposit.
- Cheque Deposit.
- ATM Withdrawal.
- Cash Withdrawal – In Bank.
- Cheque Payment.
- Purchase (particularly with regard to credit cards).
- Debit Order.
- Electronic Payment (into account).
- Electronic Payment (out of account).
- Transfer (into account).
- Transfer (out of account).

The transaction description describes the transaction in such a way that reading it would describe the pertinent information about the transaction. What is important is that the method used to describe the transaction is consistent. With movement of funds into the account, the description field should include the source of the transaction (Willemse, 2004). Examples include salary payments, the account number and bank of transfers into the account, or the identity of persons making deposits into the account along with the locations where the deposits were made (Willemse, 2004). With the movement of funds out of the account, the description field should include details regarding the destination of the funds. Examples include cheque numbers (where cheque payments are made), the account number and bank to which funds are transferred, and information on what was purchased, or the location where a bank or ATM withdrawal was made (Willemse, 2004).

There should also be two fields where debit and credit amounts against the particular account are recorded. When money moves into the account, the value of the transaction is recorded in the credit field, and when money moves out of the account, the value of the transaction is recorded in the debit field (Olander, 2005).

When analysing multiple bank accounts, the details of each account should be captured on a separate worksheet or data table which is identified by the account number and details of the account in question (Olander, 2005). Once the investigator has determined the data fields of the spreadsheet or database, the data must be captured from the bank account statements provided by the bank, and entered into the spreadsheet or database to complete the process of collating the data (Olander, 2005).

3.3.1.3.Data Accuracy

Because computers are unforgiving about errors in data entered into them, care should be taken when collating the data, that it is accurate and the formats used are consistent (Peterson, 2002:31). Regardless of whether a spreadsheet or a database is used, the key to effective collation of the data is accuracy and retrievability (Peterson, 2002:34). Olander (2003) states that one method of ensuring accuracy in the data capturing process is to use a double review system in which the person who captures the data reviews it for errors, and then another person, along with the data capturer, reviews it a second time for any errors that may have slipped through the first review. Once the data has been collated, the next process in the model can be undertaken.

3.3.2. Identifying Significant Payees and Depositors

The entire sample examined bank account statements to identify transactions that they were aware were linked to an investigation, as a result of information from other sources such as witnesses. In other words, they attempted to identify what they felt were significant transactions in the bank statements from a visual inspection of the documents, based on specific case information at their disposal.

For example, if it was suspected that an individual had received a payment of R10 000.00 from another source during the month of March 2005, then they would examine the bank statements to determine if such a payment had in fact been made.

Forty per cent of the sample (8 of 20) attempted to identify all significant payees and depositors relevant to the account, while the remaining 60% (12 of 20) only identified transactions based on information already in their possession from other sources. In other words, these individuals merely identified transactions confirming other information already in their possession.

Only 25% of the sample (5 of 20) even attempted to sort the data into groups for payees and depositors, and this was only done by using the built-in sorting functions of computer spreadsheet software. The remaining 75% (15 of 20) did not sort these transactions into groups.

What was apparent was that none of the sample made use of any scientific process to identify significant payees or depositors, whereas it was clear that investigators in countries such as the United States employ a far more scientific and objective process, which produces consistent results (International Association of Law Enforcement Intelligence Analysts, 2004:26). The principal reason for this situation in South Africa appears to be the lack of knowledge about the methods used to do so.

The New Jersey Division of Criminal Justice makes use of a documented scientific process to determine significant payees or depositors. These documented scientific methods are detailed below.

3.3.2.1.Determining and Listing Primary Payees

One of the analysis techniques used when evaluating the data obtained from the bank account statement is the identification and listing of the primary payees for the accounts under examination (New Jersey Division of Criminal Justice, 2001:213).

According to the New Jersey Division of Criminal Justice (2001:213), there are two primary methods to determine the primary payees for an account.

The first method involves identifying primary payees by means of identifying larger than average payments for the account, and the second involves identifying primary payees through more numerous than average payments for the account. These are detailed below:

- **Determining Primary Payees Using the Larger than Average Payments Method**

The formula for determining primary payees using the larger than average payments method is as follows (New Jersey Division of Criminal Justice, 2001:213):

$$T / N = P$$

T is the total amount paid from the account under the period in review. N is the number of payees for the account. P is the average payment for the account.

A primary payee is determined by the formula $(P \times 2) + 1$.

To illustrate the use of this formula, the following example is used. If R150000.00 is paid to 23 payees then $P = R150000.00/23 = R6521.74$. Thus a primary payee is $(R6521.74 \times 2) + 1 = R13044.48$. Thus any payment of R13044.48 or greater is considered a primary payee for the account.

- **Determining the Primary Payee Using the More Frequent than Average Payments Method**

The formula for determining primary payees using the more frequent than average payments method is as follows (New Jersey Division of Criminal Justice, 2001:213):

$$T / P = N$$

T is the total number of payments made from the account. P is the total number of payees for the account. N is the average frequency of payments for a debit.

A primary payee is determined by the formula $(N \times 2) + 1$. The answer should always be rounded up.

To illustrate the use of this formula, the following example is used. If 1234 payments are made to 987 payees the $N = 1234/987 = 1.25$. Thus a primary payee is $(1.25 \times 2) + 1 = 3.5$. The result is rounded up to 4, thus a primary payee is any payee that has received 4 or more payments during the period under examination.

Having identified the primary payees for an account, the data must be compiled for use. A list should be drawn up containing the name of the payee, how many payments they received, the date span over which they received the payments and the total amount of payments received. The list should also indicate the total amounts paid to all the primary payees (New Jersey Division of Criminal Justice, 2001:213).

It is, in addition, recommended that a summary also be included for the primary payee for the account, which should indicate the total amount paid from the account, the total amount paid to primary payees, and the percentage that the payments to primary payees represents of the total payments (New Jersey Division of Criminal Justice, 2001:213).

3.3.2.2.Determining and Listing Deposits to Account by Source

Determining the primary depositors of deposits into an account is a critical component of the analysis process in bank account transaction record analysis. There are two formally used methods used to analyse the deposits to account by source (New Jersey Division of Criminal Justice, 2001:219).

The first method involves identifying primary depositors by means of identifying larger than average payments for the account, and the second involves identifying primary depositors through more numerous than average deposits into the account. These are detailed below:

- **Determining Primary Depositors Using the Larger than Average Deposits Method**

The formula for determining primary depositors, using the larger than average deposits method, is as follows (New Jersey Division of Criminal Justice, 2001:219):

$$T / N = D$$

T is the total amount paid into the account under the period in review. N is the number of deposits for the account. D is the average deposit into the account.

A primary depositor is determined by the formula $(D \times 2) + 1$.

To illustrate the use of this formula, the following example is used. If R150000.00 is paid into the account by 23 deposits then $D = R150000.00/23 = R6521.74$. Thus a primary source is $(R6521.74 \times 2) + 1 = R13044.48$. Thus any deposit of R13044.48 or greater is considered a primary deposit for the account.

- **Determining the Primary Depositors Using the More Frequent than Average Deposits Method**

The formula for determining primary depositors using the more frequent than average deposits method is as follows (New Jersey Division of Criminal Justice, 2001:219):

$$T / P = N$$

T is the total number of deposits made into the account. D is the total number of deposits into the account. N is the average frequency of deposits for a depositor.

A primary depositor is determined by the formula $(N \times 2) + 1$. The answer should always be rounded up.

To illustrate the use of this formula, the following example is used. If 1234 deposits are made from 987 sources then $N = 1234/987 = 1.25$. Thus a primary source is $(1.25 \times 2) + 1 = 3.5$. The result is rounded up to 4, thus a primary depositor is any source that has made 4 or more deposits during the period under examination.

Having identified the primary sources of income for an account, the data must be compiled for use. A list should be drawn up containing the name of the source, how many deposits they made into the account, the date span over which they made the deposits and the total amount of deposits made. The list should also indicate the total amounts deposited by all the primary sources (New Jersey Division of Criminal Justice, 2001:219).

It is, in addition, recommended that a summary also be included for the primary sources for the account, which should indicate the total amount paid into the account, the total amount deposited by primary sources, and the percentage that the deposits by primary sources represents of the total deposits into the account (New Jersey Division of Criminal Justice, 2001:219).

3.3.3. Bank Account Statement Summary

A summary is a short and concise written summary of particular data, which makes the underlying data easier to utilise (Peterson, 1998:54). A bank account statement summary is a written summary that provides an overview of the activity in a bank account (Peterson, 1998:54). Nossen and Norvelle (1992:49-50) begin this with a bank statement activity summary schedule, which includes a statement ending date, a beginning balance, the total of deposits and transfers, the total of cheques and other withdrawals, and the ending balance. This should be done by month. It is also recommended that an annual summary be prepared as well (Nossen & Norvelle, 1992:50).

Only 40% of the sample (8 of 20) attempted to summarise the financial information contained in the bank account statements. The remaining members of the sample did not make use of summaries with regard the financial information in bank account statements as indicated in paragraph 3.2. An interesting observation is that the 40% of the sample that summarised the financial information in bank account statements came from the 55% of the sample that followed a more or less standard process in analysing bank account statements as indicated in 3.2. The principle reason for those members summarising the financial information found in bank account statements was to make the information, especially on lengthy bank account statements, easier to understand. This view is supported by Peterson (1998:54).

Those 40% of the sample (8 of 20) who produced summary statements for the bank account statements, produced various summaries as follows:

- Beginning and ending balances for the accounts being examined.
- Total number of transactions into and out of the account being examined.
- Total value of transactions into and out of the account being examined.
- Lists of transactions sorted by date.
- Lists of transactions sorted by payee.
- Lists of transactions sorted by deposit source.

A key observation is that when drawing up their summary statements, those members of the sample who did so produced summary statements covering the entire chronological period of the account being examined, and, if they felt it necessary, summaries for each individual calendar month as well.

The members of the sample (8 of 20) who produced summary statements were questioned as to the processes they used in producing their summary statements. The following processes were identified that were utilised in drawing up the identified summaries:

- The beginning and ending balances for the account, the total transactions into and out of the account, and the total value of transactions into and out of the account can all be determined by making use of the built-in functions of spreadsheet or database software.
- Listing the transactions by date entails grouping all the same dates together, making use of the built-in sorting functions of the spreadsheet used to collate the transaction data. In sorting the transaction records by date, the fields of the data in the spreadsheet should be sorted so that the date field is the first one, followed by the amount of the transaction. Subtotals can be calculated for each transaction type per each date, as well as for each date as a whole.
- Listing the transactions by payee entails grouping all the same payees together, making use of the built-in sorting functions of the spreadsheet used to collate the transaction data. In sorting the transaction records by payee, the fields of data in the spreadsheet should be sorted so that the payee field is the first one, with the amount next, followed by the dates of the transactions, usually in ascending order. In addition, the fields for the destination account and bank should be included. Subtotals can be calculated for each payee.
- Listing the transactions by deposit source entails grouping all the same deposit sources together, making use of the built-in sorting functions of the spreadsheet used to collate the transaction data. In sorting the transaction records by deposit source, the fields of data in the spreadsheet should be sorted so that so that the deposit source is the first field, the amount next and then the dates of the transactions, usually in ascending order. Subtotals can be calculated for each deposit source.

According to Peterson (2002:48), the sources of deposits is a critical information source because normal and usual sources can be determined, making it easier to determine unusual sources which may need further explanation or investigation. In cases of illicit financial activity, the source of transactions, particularly deposits, is one of the elements necessary to show that the transaction is the proceeds of crime (Willemse, 2004). They also provide the evidence of money going into the account under examination,

documenting the paper trail, which is often a critical proof needed in any investigation into illicit financial activity.

Olander (2003) states that an advantage of using a spreadsheet or database to collate all the account's transaction data is that the data can be viewed in a number of ways, allowing various summary statements to be compiled. Any field within the spreadsheet or database can be used as the basis for a summary statement. For example, a summary statement could be done grouping the various transaction types together. Only the types and number of fields in the database or spreadsheet limit the various summary statements that can be compiled.

3.3.4. Time Series Analysis

Time series analysis involves examining the financial records over the time period under review, and it allows one to see trends in the financial data relating to payments or transfers from the account, and deposits and transfers into the account (New Jersey Division of Criminal Justice, 2001:226). No member of the sample made use of any time series analysis methodology, as they were not aware of the technique. However, similar analysis has been used in other white-collar crime investigations where forensic auditing has been a factor (Olander, 2003).

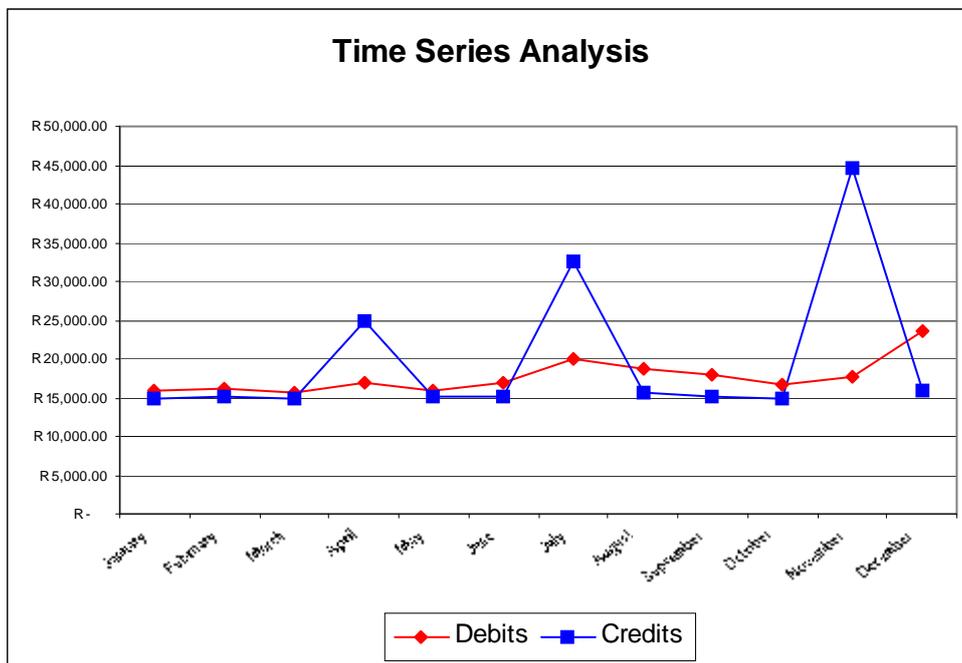
One method of conducting a time series analysis is to plot the values of money coming into and out of an account by specific time units (New Jersey Division of Criminal Justice, 2001:227). In general, the smallest time unit used is per week, although in investigations where the bank account statements span a year or more, a month is the time unit usually used (New Jersey Division of Criminal Justice, 2001:227).

To conduct the time series analysis, sort all money coming into the account and all money going out of the account into the time unit to be used in the examination, for example by week or month. For the money going into and out of the account, determine the total amount per time unit (New Jersey Division of Criminal Justice, 2001:227). These amounts are then plotted as a line graph for all the time units for the period under review. The time periods will be along the x-axis of the graph and the amounts on the y-axis of the

graph. The graph will thus consist of two lines, one for money coming into the account, and one for money going out of the account (New Jersey Division of Criminal Justice, 2001:227; Peterson, 2002: 43). The resulting graph can then be studied to determine any trends in the account as well as to establish the normal pattern for the account, as well as any abnormal patterns (New Jersey Division of Criminal Justice, 2001:227).

Figure 6 shows an example of a time series chart. From this chart it is easy to see that in general the amount of money leaving the account is higher, on a monthly basis, than the amount of money coming into the account, with the exception of three months during which the account receives substantially more than normal. The value of money coming into the account in these three particular months increases from instance to instance. Also, it is clear that the value of money leaving the account is gradually increasing over the period in question.

FIGURE 6 – EXAMPLE OF A TIME SERIES ANALYSIS CHART (Special Investigating Unit, 2005)



3.3.5. Charting as a Form of Analysis

Charts are often used to visually display information to make it easier to understand or interpret. There is ample scope for the use of charting when conducted a bank account statement analysis.

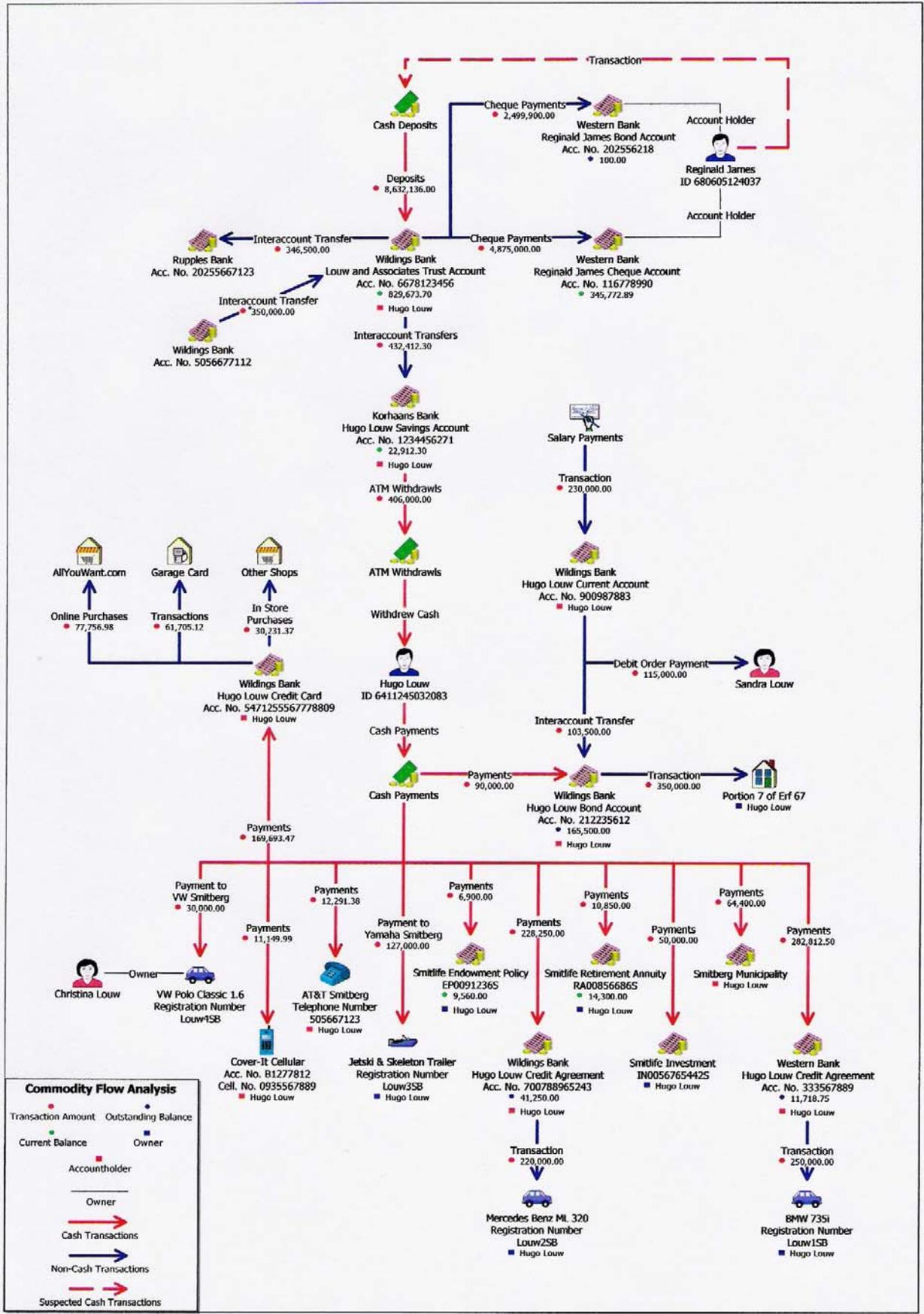
The Concise English Dictionary (2002:238) defines a chart as information in the form of a table, graph or diagram. Peterson (1998:36) states that a chart is a graphic depiction of data, which may include numerical data, name data, event data or other synopsis information. Charts are used in most types of analytical methodologies as they show an activity or relationship in a simple manner and augment the presentation of data.

However, despite the effectiveness of charting to convey information in the United Kingdom and United States (Tuffey, 2002), no member of the sample made use of any form of charting or graphical illustrations to supplement their findings. The most common reason for this was simply that they were not aware of the value of using charts to convey information of this nature.

There are two types of charts which can be used when conducting a bank account statement analysis (Peterson, 2002:60). The first is a commodity flow chart (also known as a transaction flow chart), which graphically illustrates the movement of funds into and out of the identified accounts by way of directional arrows, as well as linking these accounts to the purchases of various assets (Peterson, 2002:60). The second is an event flow chart, which shows the movement of funds into and out of the identified accounts, as well as the purchases of assets plotted against a timeline (Peterson, 2002:60). These charts are commonly produced with a specialised analytical charting software package by i2, known as Analysts Notebook (Tuffey, 2002).

Figure 7 below illustrates an example of a Commodity Flow Chart. This chart clearly shows the movement of funds into a bank account, and out of the account, ultimately linking the money moving through the account to people and assets, which in the example allows linking of particular assets to money coming from a particular point of origin.

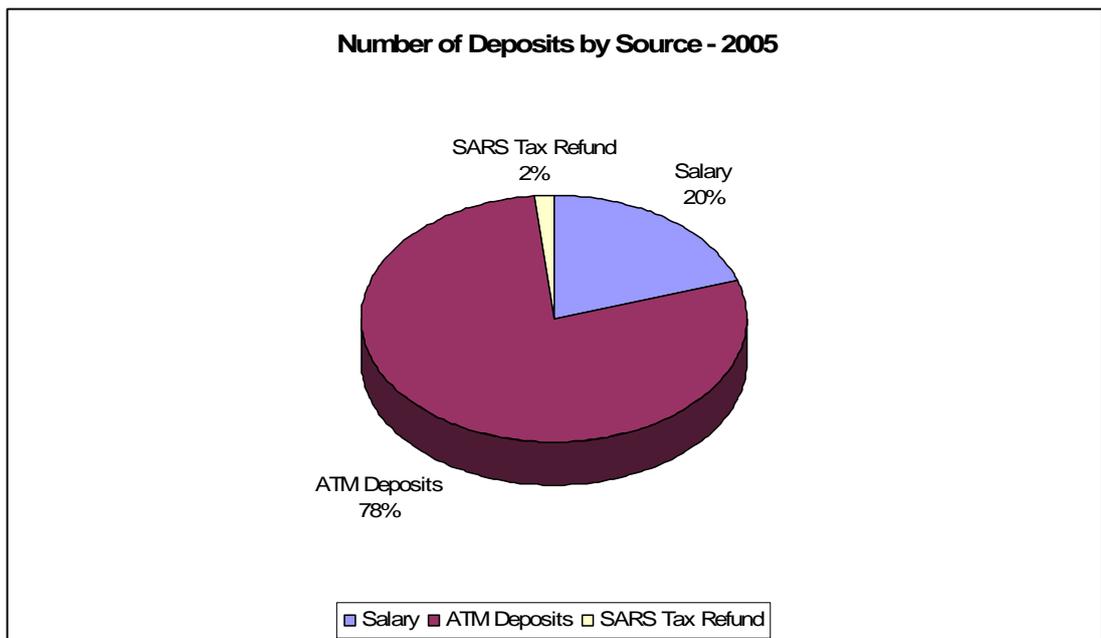
FIGURE 7 – AN EXAMPLE OF A COMMODITY FLOW CHART (Special Investigating Unit, 2005)



Charting the deposits to account by source can reveal the percentage makeup of deposits to the account. The most effective method of doing this is with the use of a pie chart where the total amount of deposits into the account per source is calculated and expressed as a percentage of the total amount deposited into the account from all sources for the period under review (New Jersey Division of Criminal Justice, 2001:217).

Figure 8 shows an example of this type of chart, illustrating that during 2005, 20% of the number of deposits into the account came from the subject's salary, 2% came from a tax refund, while 78% came from deposits made at an ATM. Therefore, 78% of the deposits made into the account in 2005 came from an unidentified source which would warrant further investigation.

**FIGURE 8 – AN EXAMPLE OF A PERCENTAGE DEPOSITS BY SOURCE CHART
(Special Investigating Unit, 2005)**



3.3.6. Determining Patterns and Unusual Activity

Both individuals and businesses have routine payments which are often paid from their bank accounts, either by means of a cheque, debit order, transfer, electronic payment, or simply by drawing the cash from their accounts (Peterson, 1998:54).

These payments usually result in patterns being created. Recognising what is a usual pattern for the account and what is not, may provide assistance in an investigation (Peterson, 1998:54).

The specific analytical methods detailed earlier in this chapter (3.3.1 to 3.3.5) can play a significant role in making it easier for an investigating officer to determine patterns of activity in the accounts in question, as well as to determine transactions which are inconsistent with that activity. When looking for patterns in the financial data, some of the most common methods include determining patterns of activity by date, by amount, and by the date of the month or day of a transaction (New Jersey Division of Criminal Justice, 2001:228).

Questioning the sample concerning what they considered routine and usual payments in either personal or business accounts, the following were identified by them as routine payments:

- Bond or rent payments.
- Motor vehicle finance payments.
- Insurance policy payments.
- Credit card and garage card payments.
- Food purchases.
- Debit card payments (Woolworths, Edgars, Truworths etc.).
- Investment payments (Unit Trusts, Endowment Policies etc.).
- Rates and taxes payments.
- Electricity and water payments.
- Telephone account payments.
- Cellphone account payments.
- Internet Service Provider payments.
- M-Net or DSTV payments.
- Loan repayments.
- Cash withdrawals.
- Equipment rentals.
- Staff payments.
- Tax payments.
- Payment for supplies.

Accounting principles also recognise the payments identified by the sample as routine payments, especially in so far as they relate to businesses that practise basic financial accounting in the business processes (Bosua & Schutte, 2002:3-4).

An analysis of these routine payments, particularly rates and taxes, property insurances, lights and water accounts or telephone accounts, could reveal hidden ownership of fixed property (Morley, 1989:47). Payments made to retail outlets can reflect travel by the subject, particularly in the case of credit card purchases (Morley, 1989:47). ATM withdrawals also reflect valuable location information which could indicate the whereabouts of the subject at a particular location and time (Willemse, 2004).

Not only do patterns emerge regarding to whom the payments are made, but also patterns by date of payment (Peterson, 2002:53). However, different people and businesses have their own unique payment patterns, and it would be necessary to review several months' worth of account transaction records in order to determine what the norm is for the account in question (Peterson, 2002:53). After the patterns of the account have been established, a comparison of pattern activity to non-pattern activity can be made (Peterson, 2002:55). The unusual patterns may be an indicator of illicit financial activity. Willemse (2004) and Tuffey (2002) support this view.

Questioning the sample showed a number of transactions which could be considered unusual in the context of most bank accounts. These unusual transactions include, but are not limited to:

- Deposits into the account from unknown sources.
- Deposits into the account from a non-relative of the accountholder or from a source that is not work related.
- Deposits into the account of large cash amounts.
- Frequent deposits into the account of government cheques (especially if fraud involving government departments is suspected).
- Regular or recurring deposits into the account that are not salary deposits.
- Deposits into the account of cash cheques or cashier cheques.

- Deposits in large even Rand amounts, for example R10000.00 or R2000.00, particularly if there is a regularity or pattern to the payments.
- Withdrawals from the account of large amounts in cash.
- Cheques made out to cash, or made payable to a particular beneficiary, and then signed over to another beneficiary after issue.
- Cheques made out to large amounts, as well as recurring cheque payments to individuals.
- Cheques cashed in other countries, especially those cashed in the common monetary area.
- Cheques cashed over the counter at other financial institutions, and not banked into a particular account.
- The frequent purchase of cashier's cheques.

Any transactions which the analysis has revealed as possibly unusual or out of context, can then be singled out for further in-depth investigation to determine their legitimacy or otherwise.

3.3.7. Documenting the Findings

The final stage of the analysis of bank account statements is to document the findings of the analysis. All the members of the sample documented the findings of their examination and analysis of bank account statements as part of their investigations. Sixty per cent of the sample (12 of 20) documented their findings only by way of a sworn affidavit with supporting annexures, while 20% of the sample (4 of 20) only documented their findings by way of written reports. The remaining 20% of the sample (4 of 20) stated that they would use either an affidavit or a report, depending on the intended use of the analysis. If the analysis had yielded information of an evidential nature, then they would use an affidavit as the method of choice, while if it was to develop investigative leads which would require further investigative work to follow up, then they would rather use a report, unless the findings of the analysis were to be used to justify a search warrant or other judicial process, such as a case in which they would testify - in which case they would also use an affidavit.

An interesting observation is that those members, who only made use of written reports, came from a non-law enforcement background, such as the Office of the Auditor-General, where the use of sworn affidavits is not common. Those that used sworn affidavits all came from either the South African Police Service or the Directorate of Special Operations, where it is common practice for investigators to make use of affidavits to document their investigative findings, as those affidavits are required for presenting the case in a court of law.

3.4. CONCLUSION

The analysis of bank account statements is an important step in any investigation into possible illicit financial activity, and comprises a number of distinct stages.

Although the research has shown that the current analysis methodologies as it pertains to bank account statements in South Africa are not as developed as those used in other jurisdictions, it is still possible to synthesise an analysis model which can be applied to bank account statements, by combining some of the South African approaches with those used in countries with a more developed analytical capacity in law enforcement.

CHAPTER FOUR

FINDINGS AND RECOMMENDATIONS

4.1. INTRODUCTION

The research addressed two primary research questions. The first: 'What is the role played by bank account statement analysis in investigations?', and second: 'How should bank account statements be analysed?' The findings relating to these research questions are addressed in the primary findings below. In addition to the primary findings, a number of secondary findings could also be made, which indirectly link to the primary research questions. These secondary findings are also addressed below.

Based on the primary and secondary findings of the research, a number of recommendations will also be made.

4.2. PRIMARY FINDINGS

4.2.1. The Role Played by Bank Account Statement Analysis in Investigations

Bank account statement analysis plays a role in investigations, especially those that relate to illicit financial activity. Bank account statements and the analysis thereof serve as legally relevant circumstantial evidence in cases involving illicit financial activity in both criminal and civil legal proceedings, where it is used to prove:

- The source and destination of all transactions within a particular bank account.
- The financial gain of a subject under investigation, thereby determining the value of any proceeds of crime.
- The identity of any additional suspects that may have interacted with the bank account.
- The causal link between a crime, the suspects and the profits from the crime that the suspect obtains, as well as any benefits which the suspect may have gained as a result of those proceeds.

4.2.2. The Analysis of Bank Account Statements

A synthesis of the processes used in South Africa and the United States reveals a seven-stage process, which can be used for the analysis of bank account statements. This analysis process is:

- Collation of the information contained in the bank account statements into an electronic format.
- Identification of significant payees and depositors.
- Compilation of summary statements which summarise the financial information in the bank statements.
- Examine the information contained in the bank account statements over a period of time to produce a time series analysis.
- Draw up various graphical charts to visually display the information contained in the bank account statements.
- Examine the bank account statements and the results of the previous stages of the analysis process to determine the patterns of activity with regard the accounts to determine any unusual activity.
- Report on the findings of the analysis of the bank account statements, either by way of an affidavit, if the analysis is going to be used as evidence, or by way of a report, if the analysis is going to be used for intelligence purposes.

4.3. SECONDARY FINDINGS

4.3.1. Understanding the Concept of Financial Investigation

While the sample generally understands financial investigation to include any investigation involving some type of financial element, the majority are of the view that it is a discipline requiring extensive knowledge of accounting. This is in contrast to the view in the United States and the United Kingdom.

4.3.2. Training in Financial Investigation Methods and Techniques

A general finding in the sample was that the majority had never received any training in financial investigation methods and techniques.

4.3.3. The Analysis of Bank Account Statements by South African Investigators

Based on the sample, as well as interviews with subject matter experts, it was clear that there was no uniform analysis methodology in use in South Africa. The analysis process used varied widely from cursory examination of the bank statements to more complex analysis. The findings made by one investigator may differ significantly from that of another investigator based on individual skill and experience. No member of the sample made use of a mathematical method to determine significant payees and depositors, conducted any time series analysis, or made use of any graphical charts to display pertinent information, which is in contrast to the practice in New Jersey where this is done. In general, financial investigation methodologies, especially as those relating to the analysis of bank account statements, is significantly less developed in South Africa than it is in other jurisdictions.

4.4. RECOMMENDATIONS

Based on the primary and secondary findings of the research, a number of recommendations can be made relating to the subject of the research.

4.4.1. The Application of a Uniform Analysis Methodology in Relation to the Examination of Bank Account Statements

The secondary findings of this research have shown that there is no consistent or uniform financial analysis methodology addressing bank account statements currently being employed in South Africa. They are not as scientific and objective as the methodologies used in other jurisdictions, and therefore findings and results differ from investigator to investigator.

It is recommended that the analysis process synthesised by this research as shown in 4.2.2 of the primary findings be made available to investigators in South Africa for use in analysing bank account statements as part of their investigations, especially with regard to investigations involving illicit financial activities. Also see 4.4.3.

4.4.2. General Education

It is recommended that training initiatives be developed and implemented in South Africa, which address the analysis of bank account statements to establish evidence of illicit financial activity. Due to the fact that many crimes are of an acquisitive nature, this training should be aimed not only at those investigators that specialise in the investigation of illicit financial activity as defined in the research, but at all investigators who may make use of the information contained in a bank account statement.

The content of these training initiatives can be developed with the assistance of this research by the various South African law enforcement agencies. It is with this end in mind that it is also recommended that this research be made available to the various agencies in South Africa that have a mandate to conduct investigations.

4.4.3. Additional Research

It is recommended that once a uniform model for the analysis of bank account statements, which is based on this research, has been adopted by a sufficient numbers of investigators in South Africa, and has been used by them for a period of time, that additional research be undertaken to evaluate the effectiveness of the model, and if necessary to refine it further.

Additional research should also be undertaken to determine whether or not the analysis of bank account statements can enhance investigations in general, not only those investigations of a financial nature.

4.5. CONCLUSION

The primary findings of this research have addressed the research questions and shown that there is a definite process which can be followed in the analysis of bank account statements, and that the analysis plays a valuable role in proving a case of a financial nature, in court.

The secondary findings reveal that the financial investigation discipline is still in its infancy in South Africa, especially as it relates to the understanding of financial investigation as a concept, training in financial investigation methods and techniques, and use of bank account statement analysis in these types of investigations.

Based on the findings of the research, a number of recommendations have been made, aimed at improving the analysis of bank account statements as a financial and general investigative method and technique.

LIST OF REFERENCES

LITERATURE

- Arens, A. A., Elder, R. J. & Beasley, M. S. 2005. *Auditing and Assurance Services – An Integrated Approach*. 10th Edition. Upper Saddle River: Pearson Education.
- Axelrod, A & Antinozzi, G. 2003. *The Complete Idiot's Guide to Criminal Investigation*. Indianapolis: Alpha.
- Beasley, K. A. 1993. Forensic Examination of Money Laundering Records. *FBI Law Enforcement Bulletin*. 62(3): 7-11.
- Blaickie, N. 2003. *Analysing Qualitative Data*. London: SAGE.
- Bosua, W. S. & Schutte, M. 2002. *Basic Financial Accounting*. 3rd edition. Cape Town: Juta.
- California Department of Justice. 1993. *The Bureau of Intelligence Operations Manual*. Sacramento CA: California Department of Justice.
- Coles, G. 2001. Chequemate. Financial Moves Against Criminals. *Nexus*. Issue 11, Autumn: 14-18.
- Creswell. J. W. 1998. *Qualitative Inquiry and Research Design – Choosing Among Five Traditions*. California: SAGE.
- Deloitte. 2002. *Introduction to the Tracing of Assets*. Deloitte Forensic and Dispute Services: Pretoria: Deloitte.
- Denscombe, M. 1998. *The Good Research Guide for Small-Scale Social Research Projects*. Philadelphia: Open University Press.
- Denscombe, M. 2002. *Ground Rules for Good Research: A 10 Point Guide for Social Researchers*. Philadelphia: Open University Press.
- Du Preez, G. 1993. Criminal Investigation. In Van der Westhuizen, J (Ed), *Forensic Criminalistics*. (1-12). Pietermaritzburg: Butterworths.
- Fann, L. E., Gordon, G. G. & Leach, A. W. 1993. *How to Present the Forfeiture Case to the Prosecutor*. Washington DC: Police Executive Research Forum.
- Goosen, W., Pampallis, A., Van Der Merwe, A. & Mdluli, L. 1999. *Banking in the New Millenium*. Eppindust: Juta & Co.
- Hoffmann, L. H. & Zeffertt, D. T. 1996. *South African Law of Evidence*. 4th edition. Durban: Butterworths.
- Internal Revenue Service. 1993. *Financial Investigations: A Financial Approach to Resolving Crimes*. Washington DC: Government Printing Office.

- International Association of Law Enforcement Intelligence Analysts. 1998. *Successful Law Enforcement Using Analytic Methods*. Lawrenceville: IALEIA.
- International Association of Law Enforcement Intelligence Analysts. 2004. *Law Enforcement Analytic Standards*. Richmond: IALEIA.
- Joubert, C. (ed.) 2001. *Applied Law for Police Officials*. 2nd edition. Cape Town: Juta Law.
- Lane, B. 1992. *The Encyclopaedia of Forensic Science*. London: Headline.
- Madinger, J. & Zalopany, S. A. 1999. *Money Laundering – A Guide for Criminal Investigations*. Boca Raton: CRC Press.
- Mason, J. 1998. *Qualitative Researching*. London: SAGE.
- Maxfield, M. G. & Babbie, E. 1995. *Research Methods for Criminal; Justice and Criminology*. Boston: Wadsworth.
- Morley, C. H. 1989. *Tracing Money Flows Through Financial Institutions*. Washington DC: Police Executive Research Forum.
- Mouton, J. 2001. *How to Succeed in Your Masters and Doctoral Studies*. Goodwood: Van Schaik.
- New Jersey Division of Criminal Justice. 2001. *Financial Analysis*. New Jersey: New Jersey Division of Criminal Justice.
- Nossen, R. A. 1975. *The Seventh Basic Investigative Technique*. Washington DC: United States Department of Justice.
- Nossen, R.A. & Norvelle, J. W. 1992. *The Detection, Investigation and Prosecution of Financial Crime*. Richmond: Thoth Books.
- Osterburg, J. W. & Ward, R. H. 2000. *Criminal Investigation 3rd Edition*. Cincinnati: Anderson.
- The Concise Oxford English Dictionary*. (10th ed.). (2002). Suffolk: Oxford University Press.
- Peterson, M. B. 1998. *Applications in Criminal Analysis*. Westport: Praeger.
- Peterson, M. B. 1999. Financial Analysis Training: Developing a New Model. *IALEIA Journal*. 12(1):18-26.
- Peterson, M. B. 2002. *A Guide to the Financial Analysis of Personal and Corporate Bank Records 3rd Edition*. Richmond: National White Collar Crime Center.
- Pheijffer, M. 1998. Financial Investigations and Criminal Money. *Journal of Money Laundering Control*. 2(1): 33-38.
- Prinsloo, J. 1993. The Scene of the Crime as a Source of Information. In J., Van der Westhuizen (Ed), *Forensic Criminalistics*. (13-30). Pietermaritzburg: Butterworths.

- Puttick, G & Van Esch, S. 2001. *The Principles and Practises of Auditing*. 7th Edition. Cape Town: Juta.
- Robinson, J. 2001. Following the Money. *Nexus*, Issue 10, Spring: 18-20.
- Robson, C. 2000. *Small-Scale Evaluation: Principles and Practise*. Trowbridge: SAGE Publications.
- Schloss, P. J. & Smith, M. A. 1999. *Conducting Research*. Upper Saddle River: Prentice Hall.
- Schmidt, C. W. H. & Rademeyer, H. 2000. *Bewysreg 4th Edition*. Durban: Butterworths.
- Schwikkard, P. J. & Van der Merwe, S. E. 2002. *Principles of Evidence 2nd Edition*. Paarl: Juta.
- South Africa. 1965. *Civil Proceedings Evidence Act 25 of 1965*. Pretoria: Government Printer.
- South Africa. 1977. *Criminal Procedure Act 51 of 1977*. Pretoria: Government Printer.
- South Africa. 1984. *Close Corporations Act 69 of 1984*. Pretoria: Government Printer.
- South Africa. 1998. *Prevention of Organised Crime Act 121 of 1998*. Pretoria: Government Printer.
- South Africa. 2001. *Financial Intelligence Centre Act 38 of 2001*. Pretoria: Government Printer.
- South Africa. 2004. *Prevention and Combating of Corrupt Activities Act 12 of 2004*. Pretoria: Government Printer.
- South Africa. 2002. *Electronic Communications and Transactions Act 25 of 2002*. Pretoria: Government Printer.
- South Africa. 2004. *Protection of Constitutional Democracy against Terrorist and Related Activities Act 33 of 2004*. Pretoria: Government Printer.
- Special Investigating Unit. 2005. *Trainee Investigator Program FI Worksheet*. East London: Special Investigating Unit.
- Swanepoel, J. A. 1998. An Investigator's Perspective on the Proposed Anti-Laundering Legislation. In L. De Kocker and J. J. Henning (Ed). *Money Laundering Control in South Africa*. (24-37). Bloemfontein: University of the Free State Centre for Business Law.
- Technikon SA. 2002. *Policies and Procedures for Postgraduate Study*. Florida: Technikon SA.
- Tesch, R. 1990. *Qualitative Research: Analysis Types and Software Tools*. Bristol PA: Falmer.

Van der Westhuizen, J. 1993. The Science of Crime Detection. In J, Van der Westhuizen (Ed). *Forensic Criminalistics*. (281-304). Pietermaritzburg: Butterworths.

Welman, J. C. & Kruger, S. J. 1999. *Research Methodology for the Business and Administrative Sciences*. Cape Town: Oxford University Press.

SOUTH AFRICAN CASE LAW

Govan v Skidmore 1952 1 SA 732 (N) 734.

MacLeod v Rens 1997 3 SA 1039 (E).

R v Blom 1939 AD 188 202-3.

R v Daye 1908 2 KB 330 340.

Secombe and Others v Attorney-General and Others 1919 TPD 270.

S v Mpumlo and Others 1986 (3) SA 485 (E).

S v Shabalala 1966 2 SA 297 (A) 299.

INTERVIEWS

Olander, B, Assistant Manager Forensic Accounting, Special Investigating Unit. 2003. *Statement to Author*. 4th November 2003. East London.

Olander, B, Assistant Manager Forensic Accounting, Special Investigating Unit. 2005. *Statement to Author*. 28th October 2005. East London.

Tuffey, D, Law Enforcement Advisor (Financial Investigation), British High Commission to South Africa. 2002. *Statement to Author*. 4th December 2002. Pretoria.

Willemse, J. P, Senior Special Investigator, Asset Forfeiture Unit. 2003. *Statement to Author*. 7th February 2003. Durban.

Willemse, J. P, Senior Special Investigator, Asset Forfeiture Unit. 2004. *Statement to Author*. 3rd March 2004. Durban.

Willemse, J. P, Senior Special Investigator, Asset Forfeiture Unit. 2005. *Statement to Author*. 15th November 2005. Pretoria.

ANNEXURE A

MTECH RESEARCH – INTERVIEW SCHEDULE
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Jason Jordaan – Student Number 3163-419-2 (UNISA)
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The Analysis of Bank Account Transaction Records to Identify Evidence of Illicit Financial Activity
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1. Background Questions

- 1.1. Full names
- 1.2. Position at the Special Investigating Unit
- 1.3. Educational qualifications
- 1.4. Total years investigation experience
- 1.5. Number of years investigation experience at the Special Investigating Unit
- 1.6. Details of investigation experience prior to joining the Special Investigating Unit
- 1.7. Have you previously examined bank statements as part of any investigation to prove any of the elements of the allegation under investigation
- 1.8. Have you previously received any formal training in the field of financial investigation, accounting or banking systems
- 1.9. If your answer in question 1.8 was yes, then provide details of the training

2. The Role Played by Bank Account Statement Analysis in Investigations

- 2.1. What is a bank account statement
- 2.2. Define financial investigation
- 2.3. Do you consider the field of financial investigation to be a sub-discipline of criminal investigation
- 2.4. Who should conduct financial investigations

- 2.5. Is the examination and analysis of bank account statements necessary to identify illicit financial activity
- 2.6. In addressing illicit financial activity in your investigations, how have you made use of the information you have observed from your examination and analysis of bank account statements
- 2.7. What are the facts that must be proven from a bank account statement when establishing evidence of illicit financial activity

3. The Analysis of Bank Account Statements

- 3.1. Do you use the same process each time you examine or analyse bank account statements
- 3.2. What process do you use to examine or analyse bank account statements
- 3.3. What activities do you do when examining or analysing bank account statements
- 3.4. When analysing the bank account statements, did you make use of any collation method, and can you explain how and why you did that
- 3.5. Do you make use of computers to collate the data
- 3.6. If you answered yes to 3.5 what software do you use, why do you use it
- 3.7. If you answered yes to 3.5 what fields do you make use of in categorising the data from the bank account statements, and explain the relevance of these fields and any conditions attached to their use
- 3.8. Do you use to identify significant payees and depositors
- 3.9. If you answered yes to 3.8 explain what processes you used to make the identification of significant payees and depositors
- 3.10. When analysing the bank account statements, did you make use of any summaries
- 3.11. If you answered yes to 3.10 explain why you made use of summaries, and what summaries you produced.
- 3.12. If you answered yes to 3.10 explain how you produced the summaries

- 3.13. Do you conduct any form of time series analysis from your analysis of bank account statements
- 3.14. If you answered yes to 3.13 explain why you did so
- 3.15. If you answered yes to 3.13 explain how you conducted the time series analysis
- 3.16. Do you make use of any charting techniques or methods to display information obtained as a result of the analysis of bank account statements
- 3.17. If you answered yes to 3.16 explain why you did so and what charts you produced
- 3.18. If you answered yes to 3.16 explain how you constructed the charts
- 3.19. What debits and credits to a bank account, both business and private, do you consider routine or usual
- 3.20. What debits and credits to a bank account, both business and private, do you consider unusual or suspicious
- 3.21. Detail how you report the findings of the analysis of bank account statements