

**ACCOUNTING FOR THE FINANCIAL INSTRUMENTS LISTED  
ON THE SOUTH AFRICAN FUTURES EXCHANGE IN THE  
CONTEXT OF THE INTERNATIONAL ACCOUNTING  
STANDARDS COMMITTEE CONCEPTUAL FRAMEWORK**

A dissertation  
in fulfilment of the requirements  
for a Master's Degree in Commerce

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7 December 1997

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**DECLARATION**

I hereby declare that this thesis is my own original work and that I have not previously submitted any part for a degree at any university.

7 December 1995

S B BAKER

Signed by candidate



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## ACKNOWLEDGEMENTS

I am deeply indebted to a number of people who provided critical and meaningful insight during this project. In particular I express my appreciation to Professor Geoff Everingham of the Department of Accounting at the University of Cape Town for his guidance and constant motivation.

I would like to express my gratitude to the Centre for Science Development (CSD) for the financial assistance provided by them.

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## ABSTRACT

The objective of this study was to evaluate the views of both preparers and users of financial statements on a number of issues related to South African Futures Exchange (SAFEX) financial instruments. These issues related to the perceptions of the SAFEX market price as a measure of fair value for financial reporting purposes, as well as perceptions of the International Accounting Standards Committee (IASC) asset and liability definition. These were formulated into the hypotheses set out in chapter 1.

The objectives of the study were achieved by a literature search related to financial instruments and SAFEX, as well as empirical data collection through the use of postal questionnaires and the evaluation thereof. The questionnaires were mailed to financial enterprises as well as the analysts ranked by the annual Financial Mail investment analysts survey. The response rates to the questionnaires were 40.9 percent (of which 13.9 percent were useable responses) for preparers of financial statements and 12.0 percent from the investment analysts.

Evaluation of the surveys indicate that it could not be concluded that users of financial statements consider the SAFEX mark-to-market price to be a reliable measure of the fair value of futures and options. In addition there were a number of adjustments users wished to be made to the mark-to-market price. The results also indicated that users of financial statements consider the gains and losses on fair valuation of speculative SAFEX financial instruments to be income. However for SAFEX financial instruments designated as hedges the results indicated that users want the gains and losses on fair valuation to be treated in the same way as the gains and losses on the item being hedged.

In relation to preparers of financial statements the responses indicated that the SAFEX mark-to-market price was considered to be the most preferred method of determining the fair value for financial reporting purposes for both futures and options. However preparers of financial statements also wanted to make adjustments to the mark-to-market price for transaction costs and liquidity risk. The results also indicated that preparers of

financial statements consider the gains and losses of fair valuation of speculative SAFEX financial instruments to be income, and that for SAFEX financial instruments designated as hedges the gains and losses on fair valuation be treated in the same way as the gains and losses on the item being hedged.

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## CHAPTER 1 : INTRODUCTION

### 1.1 BACKGROUND

The historic cost accounting model was developed during a period in which there was relative stability in the value of assets and liabilities. Increased volatility in foreign exchange, interest rate and other markets has fuelled rapid growth in the use of financial instruments as a means for enterprises to manage the increased risks to which they are exposed. Although financial enterprises have traditionally used such instruments their use by both financial and non financial enterprises has increased markedly (Bodnar et al : 1995 : 104).

The pricing of non-traditional financial instruments is often based on specifically identifiable risks and, as a result, their values are often more volatile than traditional financial instruments. The uses of these instruments can broadly be categorised into speculation, hedging and arbitrage.

Speculators assume the risk inherent in financial instruments in an effort to raise their returns by profiting from favourable price fluctuations. Hedgers seek to minimise the risks to which they are exposed by utilising financial instruments to minimise the impact caused by the risks being hedged, while arbitrageurs seek to profit from mispricing in markets.

The current historic cost accounting model does not, necessarily, provide the most useful information relating to financial instruments to users of financial statements. In particular users of financial statements have not been able to adequately assess the risks assumed or transferred by an enterprise. Accounting standard setting bodies around the world have responded to the need for comprehensive guidance relating to the recognition, measurement and disclosure of financial instruments, by undertaking projects dealing with the accounting and disclosure issues posed by these instruments.

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## **1.2 STATEMENT OF THE PROBLEM**

### **1.2.1 The research problem to be investigated**

The economic nature of futures and options and the uses to which they are put has raised complex accounting issues. The accounting paradigm in use at present has not been able to resolve these issues. The International Accounting Standards Committee (IASC) is developing accounting standards which will cover South African Futures Exchange (SAFEX) listed financial instruments. This is being done within the constraints of its conceptual framework. It is however unclear as to what users and preparers of financial statements feel about the proposed guidance.

### **1.2.2 Caveats to the study**

The IASC definition of a financial instrument includes a vast array of instruments. As no research of this nature could hope to address every aspect of accounting for all financial instruments there are a number of caveats to the research which are stated below:

- This study deals only with financial instruments listed on SAFEX.
- The accounting issues related to agricultural enterprises are not dealt with in this study due to the specialist accounting treatment needed for such enterprises.

## **1.3 RESEARCH OBJECTIVES**

The objectives of the research study are to:

- 1) Obtain the views of both preparers of financial statements and users thereof related to the hypotheses dealt with in section 1.3.1 below.
- 2) Undertake a literature search in order to;
  - determine the nature of the instruments traded on SAFEX
  - determine the economic characteristics of futures and options
  - describe the risks associated with financial instruments and the portrayal thereof in financial statements
  - review the literature dealing with executory contracts.
- 3) Undertake an evaluation of the IASC proposals for accounting for futures and options in terms of its conceptual framework.

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### 1.3.1 Research hypotheses

The research hypotheses of this study are as follows.

### 1.3.2 Preparers of financial statements

- H1** Preparers consider the cumulative SAFEX mark-to-market adjustments to be a reliable measure of the fair value for futures.
- H2** Preparers consider the SAFEX mark-to-market price to be a reliable measure of the fair value for options.
- H3** Preparers consider gains and losses from the fair valuation of speculative SAFEX financial instruments to be income.
- H4** Preparers do not consider gains and losses from the fair valuation of SAFEX financial instruments designated as hedges to be income.

### 1.3.3 Users of financial statements

- H1** Users consider the SAFEX mark-to-market price to be a reliable measure of the fair value for futures.
- H2** Users consider the SAFEX mark-to-market price to be a reliable measure of the fair value for options.
- H3** Users consider gains and losses from the fair valuation of speculative SAFEX financial instruments to be income.
- H4** Users do not consider gains and losses from the fair valuation of SAFEX financial instruments designated as hedges to be income.

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## **1.4 REPORT STRUCTURE**

The report is contained in the next eleven chapters.

Chapter two introduces the definition of a financial instrument and discusses the meaning of the term 'hedging'. Chapters three to six set out the results of the literature search. Chapter seven presents an evaluation of the IASC conceptual framework. Chapter eight builds on this foundation and evaluates the proposals of the IASC related to accounting for futures and options. Chapter nine sets out the research methodology, while chapters ten and 11 analyse the responses to the preparers' and users' questionnaires respectively. Finally chapter 12 concludes the study.

## **1.5 CONCLUSION**

This chapter set out the statement of the problem as well as the objectives of the research study. The principle objective of the study being to obtain the views of both preparers and users of financial statements related to various aspects of the accounting for the financial instruments listed on SAFEX.

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**CHAPTER 2 : THE DEFINITION OF FINANCIAL INSTRUMENTS AND HEDGING****2.1 INTRODUCTION**

Accounting standard setting bodies have sought a definition for financial instruments which is all encompassing. This is in order to ensure that all financial instruments currently in use and those that have yet to be created fall within the definition. The foundation of the definition has been the premise that there is a limited number of 'fundamental financial instruments'<sup>1</sup>. These fundamental instruments have characteristics that if identified will allow financial statement preparers to differentiate between those instruments that are financial, and those that are not. This chapter briefly reviews the definitions used by standard setting bodies. In addition it briefly examines the meaning of the term 'hedging'.

**2.2 DEFINITIONS OF FINANCIAL INSTRUMENTS****2.2.1 The United States**

The Financial Accounting Standards Board (FASB) (FASB : 1991b : Paragraph 3) defines a financial instrument as "cash, evidence of an ownership interest in an entity, or a contract that both:

- a. Imposes on one entity a contractual obligation (1) to deliver cash or another financial instrument to a second entity or (2) to exchange other financial instruments on potentially unfavourable terms with the second entity
- b. Conveys to that second entity a contractual right (1) to receive cash or another financial instrument from the first entity or (2) to exchange other financial instruments on potentially favourable terms with the first entity."

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<sup>1</sup> See FASB (1991a : xi) for a discussion of the fundamental financial instruments approach.

### 2.2.2 The IASC

The IASC uses the following definition of financial instruments in IAS 32 'Financial Instruments : Disclosure and Presentation':

“any contract that gives rise to both a financial asset of one enterprise and a financial liability or equity instrument of another enterprise.

A financial asset is any asset that is:

- (a) cash;
- (b) a contractual right to receive cash or another financial asset from another enterprise;
- (c) a contractual right to exchange financial instruments with another enterprise under conditions that are potentially favourable; or
- (d) an equity instrument of another enterprise.

A financial liability is any liability that is a contractual obligation:

- (a) to deliver cash or another financial asset to another enterprise; or
- (b) to exchange financial instruments with another enterprise under conditions that are potentially unfavourable.

An equity instrument is any contract that evidences a residual interest in the assets of an enterprise after deducting all of its liabilities” (IASC : 1995 : Paragraph 5).

The FASB and IASC definitions are therefore in substance the same.

From the above definition it can be seen that in assessing whether an instrument is a financial instrument in terms of the IASC definition, the following four criteria must be considered:

- 1) There must be a contract.
- 2) There must be two parties to the transaction.
- 3) The instrument must give rise to an asset in one enterprise and a liability or equity instrument in another, and

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4) the asset and liability (if it arises) must be financial.

### **2.2.3 New Zealand and Canada**

The Canadian Institute of Chartered Accountants (CICA) is conducting its financial instruments project in conjunction with the IASC and therefore uses a definition consistent with that of the IASC<sup>2</sup>. The New Zealand Society of Accountants also uses the same definition in its document 'Disclosure of Information about Financial Instruments' (NZSA : 1993 : Paragraph 4.3).

## **2.3 ANALYSIS OF THE IASC DEFINITION**

It is pertinent to consider the following aspects of the definition.

### **2.3.1 Circularity**

The IASC deals with the issue of circularity. It points out that although the terms financial instrument, financial asset and financial liability are used in the definitions of financial instrument, financial asset and financial liability the definitions are not circular. Rather they are recursive, because "a chain of contractual rights or obligations may be established but it ultimately leads to the receipt or payment of cash or to the acquisition or issuance of an equity instrument" (IASC : 1994 : Paragraph 7).

### **2.3.2 Scope of the definition**

It is important to note that the definition refers to "any contract". The IASC defines "contract" in E48 as "an agreement between two or more parties that has clear and unavoidable economic consequences, usually because the agreement is enforceable at law." (IASC : 1994 : Paragraph 6). Therefore there must be a contract in order to have a financial instrument as defined. For example E 48 points out that an income tax liability is not a financial instrument as there is no contract between the enterprise and the state (IASC : 1994 : Appendix : Paragraph 8). This view is based on the fact that income taxes payable by an enterprise are determined in terms of statute and not a specific agreement between the enterprise and the state.

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<sup>2</sup> For an example of the CICA definition refer to paragraph .006 of the CICA exposure draft 'Financial Instruments' (CICA : 1994 : Paragraph .006).

A contract that requires the exchange of physical assets or services for cash does not meet the definition of a financial instrument because no financial asset or financial liability arises for one of the parties. For example a contract which requires delivery of gold bullion at a fixed price in the future is not a financial instrument. This is because the one party must deliver neither cash nor a financial instrument but rather the physical gold. The IASC is however proposing that the scope of the financial instrument definition be expanded to include “commodity-based contracts that provide for settlement by physical delivery but that can be settled also by cash or other financial instrument, with the exception of commodity contracts entered into for the purpose of physical delivery to meet the enterprise’s normal inventory purchase and sale requirements” (IASB : 1997 : 19).

## 2.4 A DEFINITION OF HEDGING

The FASB (1991a : Paragraph 7.2) points out that “what constitutes a hedging relationship between financial instruments is not well-defined.” They therefore do not seek to define hedging but rather to describe it. The AICPA (1994 : 14) is of the view that “*hedging* connotes a risk alteration activity to protect against the risk of adverse or interest-rate movements on certain of an end user’s assets, liabilities, or anticipated transactions.”

Typically one of the objectives which identifies a position as a hedge is that it seeks to “mitigate the risks inherent in an instrument or position” (FASB : 1991a : Paragraph 7.4). In this context “*risk* is the possibility that adverse consequences might occur. ... However, different enterprises have different interpretations of the adverse consequences. Some consider losses ... to be an adverse consequence. Others consider variability in outcomes, that is, a fluctuation in price or cash flow (up or down), to be an adverse consequence” (FASB : 1995 :1).

“All hedges consist of two parts. One is the object of the hedging activity, known as the **hedged item**, exposure, or position; the risks inherent in this instrument or combination of instruments are the target of the entity’s risk-mitigating activity. The other is the **hedging instrument** or hedging security, the instrument entered into for

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the purpose of counter-balancing changes in value of the first instrument” (FASB: 1991a : Paragraph 7.5).

## **2.5 THE RISKS WHICH CAN BE HEDGED**

Enterprises need to “cope with ... market volatility in foreign exchange rates, interest rates, and other market prices; deregulation; tax law changes; and other broad economic or business factors. An end user may attempt to alter such risks (1) at a general level, (2) at the level of specific portfolios of assets or liabilities, or (3) narrowly to a specific asset, liability, or anticipated transaction” (AICPA : 1994 : 13).

Therefore there is usually a risk related to a fall in market values of assets which enterprises seek to hedge. However there are many other ‘risks’ which an enterprise may seek to limit, for example volatility in the enterprises’ cash flows or accounting earnings<sup>3</sup>. Therefore, because of the lack of a clear definition of ‘risk’ other exposures may also be considered candidates for hedging. For example Redhead and Hughes (1988 : 5) include translation exposure in relation to the assets and liabilities of a foreign subsidiary as a risk.

## **2.6 METHODS OF HEDGING THE RISKS**

Enterprises use a variety of methods to mitigate the risks to which they are exposed. The methods employed are highly specific and may consist of a large number of contracts which, when treated as a single unit, give the desired hedging characteristics. It is not the purpose of this paper to deal with these complex arrangements.

The AICPA (1994 : 14) point out that “the use of various financial instruments to reduce certain risks results in the hedger’s assuming a different set of risks.” The methods employed by enterprises to mitigate the risks to which they are exposed include diversification, risk pooling and entering into offsetting contracts where the change in value of the contract, or combination of contracts, is expected to be negatively correlated with changes in the value of the position being hedged. It is important to note that “different entities often have different motivations for their

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<sup>3</sup> Refer to Bodnar et al (1995 : 108) for a break down of the most important objectives for U.S. firms that hedge.

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hedging activity and are willing to accept different levels of risk protection - that is, to remain exposed to different degrees of financial risk” (FASB : 1991a : Paragraph 7.4). Therefore “even when possible, perfectly symmetrical positions may not be desired since they eliminate any opportunity for additional profit” (FASB : 1991a : Paragraph 7.8). Therefore some enterprises may wish to reduce one risk exposure even if it increases the exposure to another risk.

The view of hedging where changes in the market value of the hedging instrument and the hedged position are negatively correlated is limited in scope. This is because enterprises may seek to hedge other risks such as volatility in their cash flows, and the FASB (1995 : viii) observes that such strategies often increase an entity’s exposure to loss in market values rather than reduce them. The FASB (1995 : 7) also notes that many enterprises feel that limiting the definition of a hedge to strategies reducing risk of market value losses is too restrictive. This has been recognised by the FASB (1996 : 11) in its exposure draft ‘Accounting for Derivative and Similar Financial Instruments and for Hedging Activities’, which makes provision for “fair value” and “cash flow” hedges.

## **2.7 CONCLUSION**

The definitions used by the standard setting bodies for financial instruments are deliberately broad and based on the premise that there are a limited number of ‘fundamental financial instruments’. The definitions have also sought to include any financial instruments, which have yet to be designed, within their scope. This is to cater for the large number of innovative financial instruments which have yet to be designed, thereby avoiding the situation of standard setters continually having to update the definitions in their standards. Analysis of the term ‘hedging’ indicates that it is used to connote many situations where a change in the hedged position is offset by an opposite change in the hedging item. It is therefore also a very broad concept which is interpreted as such by management. It is also clear that the critical feature of a position seeking to be classified as a hedge is that it mitigates a risk to which the entity is exposed.

## CHAPTER 3 : THE ECONOMIC CHARACTERISTICS OF FORWARD AND FUTURES CONTRACTS

### 3.1 INTRODUCTION

This chapter analyses the economic characteristics of forward and futures contracts. The economic characteristics are considered to be the factors that determine the value of the instrument and how that value changes. This is necessary because the IASC conceptual framework requires that in order to faithfully represent transactions, “it is necessary that they are accounted for and presented in accordance with their substance and economic reality and not merely their legal form” (IASB : 1988 : Paragraph 35). This chapter also details the instruments listed by, and the mechanisms of trade on SAFEX which have a bearing on this study.

### 3.2 DEFINITIONS

There are a large number of jargon terms related to futures. Table 1 below sets out only the terminology used in this chapter.

Term	Meaning
Long	The purchase of a financial instrument
Short	The sale of a financial instrument
Cost-of -carry	The cost of financing the purchase of the instrument underlying the future.

**Table 1 : Futures terminology**

### 3.3 FORWARDS AND FUTURES

A forward contract is “an agreement between two counterparties that fixes the terms of an exchange that will take place between them at some future date” (Blake : 1990 : 158). Both parties are legally obligated to perform under the contract. A future is a standardised forward contract which is traded on an exchange. Futures and forwards have similar underlying economic characteristics. This is a view supported by Hull (1997 : 45). Therefore the economic characteristics of forward contracts will be analysed, and the modification of these characteristics by SAFEX contractual terms will be dealt with separately.

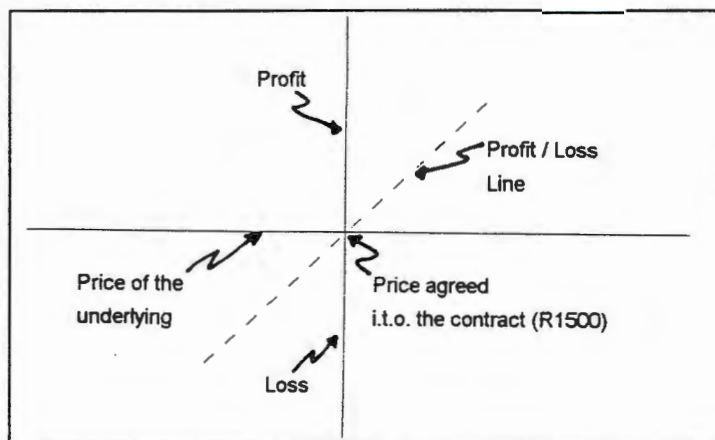
### 3.4 ECONOMIC CHARACTERISTICS OF FORWARD CONTRACTS

Purchasing a forward (called a long position) gives the holder the obligation to purchase the underlying instrument at a fixed price, time and date in the future. Therefore if there is a change in the spot price of the instrument underlying the forward contract the value of the forward contract can be expected to change.

This is best illustrated by means of an example.

Assume an enterprise buys a forward obligating it to purchase a Krugerrand for R1 500 on 31 December. Assume also that the Krugerrand is currently trading in the spot market at R1 500. If the spot price at 31 December is R1 600, the enterprise can sell the Krugerrand in the spot market for this price and realise a R100 profit.

Alternatively if the spot price falls to R1 400, the enterprise will be obligated to purchase the Krugerrand for R1 500 but will only be able to realise R1 400. It thereby incurs a R100 loss. This is illustrated graphically in figure 1.



**Figure 1 : Profit / loss for a long future**

The counterparty to the contract discussed above must have sold a forward (called a short position). The position of this party is necessarily equal and opposite to that of the party holding the long position.

### 3.4.1 Determining the price of forward contracts

The fair price of a forward or future is equal to the spot price of the underlying instrument plus the cost-of-carry, and the difference between money market rates and the income on the underlying instrument. Blake (1990 : 176 ) shows that in a world of uncertainty with rational expectations, the return of holding a forward must, at least, be the risk free rate. The rate of return will in practice be higher than the risk free rate in order to compensate speculators for assuming risk.

Market forces determine the level of the price used in the forward contract. Blake (1990 : 175) deals with futures pricing based on the rational expectations hypothesis. Under this view, the “current futures price will equal the market average expectation of the future spot price; i.e.,

$$P^f = E(P_T^s)$$

where  $P^f$  = current price of futures contract with delivery in year T.

- $P_T^s$  = spot price in year T.

$E( )$  = market average expectations operator based on all current information.”

Therefore the change in the futures price may not be related to changes in the price of the underlying instrument in the short term. The fair value of a forward contract may fluctuate without a change in the spot price of the underlying instrument, because of changes in the expected cost-of-carry, money market rates or income on the underlying instrument. At the settlement of the futures contract the spot futures price and the spot price of the underlying financial instrument or commodity should be the same. If this is not the case arbitrage will ensure that the spot price and the spot futures price adjust until they are the same.

Hull (1997 : 55) provides a proof that when the risk free interest rate is constant and the same for all maturities, the forward price and futures price for contracts with the same delivery dates are the same. However when interest rates vary unpredictably, forward and futures prices in theory are not the same. However Hull (1997 : 56) concludes that the theoretical differences between forward and futures prices for contracts that last only a few months are in most circumstances sufficiently small to be ignored (assuming factors such as taxation and transaction costs are the same).

This conclusion may therefore be applied to SAFEX futures as they have less than twelve months to expiration.

### 3.5 FUTURES

All futures contracts are standardised in terms of:

- quantity.
- quality, and
- delivery dates.

Only the price remains to be decided by the buyers and sellers. The price is determined in the market and is then fixed in the terms of the contract.

### 3.6 THE NATURE OF THE CONTRACTS LISTED ON SAFEX

#### 3.6.1 The financial division

The futures listed by the financial division of SAFEX can be characterised into five broad categories. These are share index, bond, Krugerrand, short-term interest rate and foreign currency futures. The following instruments underlie the contracts within each category.

##### 3.6.1.1 Share index futures

Futures Contract	All share index	All gold index	Industrial index	Financial industrial index
Code	ALSI	GLDI	INDI	FNDI
Underlying Instrument	JSE Actuaries Top 40 Companies All Share Index	JSE Actuaries Top 10 Companies Gold Index	JSE Actuaries Top 25 Companies Industrial Index	JSE Actuaries Top 30 Companies Financial and Industrial Index

**Table 2: Share index futures listed by SAFEX**

### 3.6.1.2 Bond futures

Futures Contract	Long bond	Long bond	Long bond	Long bond
Code	R162	R157	R153	R150
Underlying Instrument	RSA R162 Government stock 12.5% 2002	RSA R157 Government stock 13.5% 2015	RSA R153 Government stock 12% 2010	RSA R150 Government stock 12% 2005

**Table 3 : Bond based futures listed by SAFEX**

### 3.6.1.3 Other futures

Futures Contract	Krugerrand	Short-term interest rate	Rand Dollar
Code	KRND	BBF3	RNDD
Underlying Instrument	10 Krugerrand coins	91 day bank acceptance rate	The rate of exchange between South African rand and US dollars

**Table 4 : Other futures listed by SAFEX**

All the futures contracts are cash settled except for the Krugerrand and long bond futures which result in physical delivery upon expiry.

### 3.6.2 The agricultural markets division (AMD)

The AMD lists the following futures contracts.

Futures contract	Underlying commodity / instrument
Physically settled beef future	10 Chilled beef carcasses
Cash settled beef future	National Average Beef Index
Potato future	National Average Potato Price Index
White maize future	100 metric tons of white maize
Yellow maize future	100 metric tons of yellow maize

**Table 5 : Agricultural futures listed by SAFEX**

Any physically settled beef, white or yellow maize futures contracts which are still open at settlement result in physical delivery. However the potato and cash settled beef futures contracts are cash settled and no physical delivery takes place.

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Grain and oilseed forward contracts are also listed. The underlying instrument which is delivered to the purchaser of these forwards is a commodity warrant or document of title to the grain or oil seed. Physical delivery of the commodity is arranged independently between the holder of the commodity warrant and the silo owner or issuer of the warrant.

### **3.7 APPLICATION OF THE IASC DEFINITION OF FINANCIAL INSTRUMENTS TO THE SAFEX FUTURES CONTRACTS**

In assessing whether the futures contracts are financial instruments as defined by the IASC, the four criteria listed in section 2.2.2 must be considered.

SAFEX futures are clearly contracts to which two enterprises are party. An asset may arise for both parties as they have a contractual obligation to exchange instruments under conditions that are potentially favourable. This would occur for the purchaser of a futures contract if the agreed price in terms of the contract is below the spot price on settlement of the future. Similarly a liability may arise for both parties as they are contractually obligated to exchange instruments under conditions that are potentially unfavourable.

In terms of the IASC definition of a financial instrument, contracts that result in physical delivery of a non financial instrument only, with no cash settlement option are not financial instruments. Therefore the SAFEX futures which only allow for such delivery fall outside the scope of the IASC definition and of this study.

### **3.8 THE MECHANICS OF SAFEX FUTURES TRADING**

When a futures contract is entered into, the clearing house requires that both counterparties make a margin payment (SAFEX : 1997a : Rule 8.6.1). This is because both parties may face unfavourable movements in the value of the future. This margin payment is not a cost, but rather a deposit which can be used by the clearing house to meet the parties' obligations in terms of the contract. The clearing house becomes the counterparty to every futures transaction (SAFEX : 1997a : Rule 8.3.2) and thereby guarantees performance under the contract. The clearing house does not guarantee performance for the grain and oil seed forward contracts, although SAFEX

does collect a deposit which it holds in trust for the counterparty as security against non-performance. The fact that the clearing house becomes the counterparty to the transaction allows the long and short legs of the future to be split, thereby making each completely negotiable. This is not the case for the grain and oil seed forward contracts where the clearing house does not become counterparty to the transactions.

SAFEX requires that the futures contracts be marked-to-market at the end of each day (SAFEX : 1997a : Rule 8.5.1), with any profit or loss being adjusted to the client's margin account (SAFEX : 1997a : Rule 8.6.2). This results in the entity receiving its profit or paying its loss at the end of each day instead of at expiration of the contract. The enterprise will receive any excess over the required minimum margin if the movement has been favourable. If the movement has been unfavourable, the enterprise will have to make a payment to restore the margin account to its required minimum level. This requirement necessitates that the entity have the necessary cash resources to meet any margin payments that may be required. The grain and oilseed forward contracts are not marked to market and therefore the profit or loss is not received or paid each day.

### **3.8.1 Effect of the clearing house on the risks inherent in the financial instruments**

By the clearing house guaranteeing performance under the futures contracts, the credit risk (refer to section 5.2 for a discussion of credit risk) associated with the futures contracts shifts from the original counterparty to the clearing house. The clearing house reduces its credit risk exposure by requiring both counterparties to make margin payments. In addition clearing members are required to deposit unencumbered assets of R10 million each with the exchange. These deposits can also be used to fulfil the performance of parties who have defaulted. The clearing house also places a limit on the risk of loss of the participants of the exchange, by setting trading and position limits in terms of section ten of the SAFEX rules. The credit risk related to the clearing house is however not completely eliminated although it is greatly reduced by these measures.

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As the clearing house does not guarantee performance under the grain and oil seed forwards, the parties to these contracts bear the full credit risk associated with the counterparty. Part of this risk is eliminated by the deposit SAFEX keeps in trust although this may not be sufficient to eliminate the full credit risk.

### 3.9 CONCLUSION

This chapter briefly set out the nature of the futures contracts listed by SAFEX which include JSE share index, long and short-term interest rate, Rand / Dollar and Krugerrand based futures, as well as futures based on agricultural products. Not all of these contracts fall within the IASC's definition of financial instruments. In addition the economic characteristics of forward and futures contracts, as well as the impact SAFEX has on the economic characteristics and risks associated with the futures contracts listed by it were dealt with. The economic effect of a future is dependent on the price of the future as determined by the market. The fluctuations in this price are determined by various factors and may not correlate with changes in the price of the underlying instrument in the short term. However, on expiry of the futures contract the futures price and the spot price of the underlying instrument will be the same. SAFEX futures contracts result in the counterparties to the contract having equal and opposite economic effects (i.e. one party's gain is the counterparty's loss). The effect of the SAFEX requirements is to greatly increase tradability of listed contracts as the clearinghouse becomes counterparty to all contracts, and to substantially reduce the credit risk associated with trading the contracts listed on the exchange as a result of the margin requirements of SAFEX.

## CHAPTER 4 : THE ECONOMIC CHARACTERISTICS OF OPTIONS

### 4.1 INTRODUCTION

This chapter introduces the terminology which applies to options. It then provides an analysis of the economic characteristics of options.

### 4.2 TERMINOLOGY

There are a great number of terms relating to options. This chapter deals only with the terminology necessary for understanding the economic characteristics of options.

Term	Meaning
American style option	An option which may be exercised at any time up to and including the expiration date.
American style options on futures	An option which may be exercised at any time up to and including the expiration date giving the holder the right to buy/sell the underlying future at an agreed price.
European option	An option which may be exercised only on expiration date.
Call option	An option that gives the holder the right (but not the obligation) to buy the underlying financial instrument or commodity at an agreed price.
Put option	An option that gives the holder the right (but not the obligation) to sell the underlying financial instrument to the writer at the exercise price.
Out-of-the-money	An option is out of the money when there is no benefit to be derived from exercising the option immediately.
At-the money	An option is at-the-money when the price of the underlying instrument is equal to the option's exercise price.
In-the-money	Option contracts are in the money when there is a net benefit to be derived from exercising the option immediately.
Exercise	Notification by the option holder to the option writer in accordance with the terms of the option contract of the intention to take-up the right embodied in the option contract.
Exercise price	The price at which the option holder may purchase or sell the underlying financial instrument or commodity.
Expiration date	The last day on which the option is exercisable.
Intrinsic value	The net benefit the option holder would recover if he/she exercised the option immediately. The net benefit is derived from the difference between the spot price of the underlying financial instrument or commodity and the exercise price. Intrinsic value is always positive or zero.
Time value	The amount by which the option premium exceeds its intrinsic value. The time value decays to zero as the expiration date approaches.
Premium	The amount paid by the option holder to obtain the option.
Volatility	A measure of the variability in the price, or yield of the underlying instrument.
Writer	The seller of an option.

**Table 6 : Options terminology**

### 4.3 OPTIONS TRADED ON SAFEX

SAFEX offers American style options on futures (this includes currency and bond options on futures). In addition SAFEX offers physically settled American style options on five individual equities listed on the Johannesburg Stock Exchange. An American style financial option is a contract between a holder and a writer giving the holder of the option the right, but not the obligation, to buy (sell) an agreed nominal value of an underlying financial instrument from (to) the writer during an agreed period at a predetermined exercise price.

In the case of the options traded on SAFEX, the underlying instrument is the futures contract<sup>4</sup> or the relevant share as applicable. That is, the option holder has the right to buy or sell the underlying futures contract (or share) at any time up to the exercise date. The underlying futures contract then gives the holder of the future the obligation to purchase or sell the instrument underlying the futures contract.

If the requirements discussed in section 2.2.2 for determining whether an instrument is a financial instrument in terms of the IASC definition are applied to the SAFEX options then the following is evident. SAFEX options are contracts with two counterparties. In addition they give rise to an asset of the option holder, as the option holder has a contractual right to exchange instruments with the option writer under conditions that are potentially favourable. This would occur if the option had intrinsic value. The option writer has a liability because there is a contractual obligation to exchange instruments with the option holder under conditions that are potentially unfavourable. The option writer has to deliver the instrument if the option holder exercises the option. Because the option holder would generally exercise the option if it is favourable to him or her, the option writer would have no alternative but to exchange on the unfavourable terms. SAFEX rule 8.4.6 (SAFEX : 1997a) ensures that all in the money SAFEX options which have not been exercised prior to expiry, are deemed to have been exercised on the expiry date.

As discussed in chapter two, if the instrument required to be delivered is not financial then the instrument is not a financial instrument in terms of the IASC definition.

Therefore the futures contracts which are not financial instruments will result in the options thereon also not meeting the IASC definition of a financial instrument.

#### 4.4 THE ECONOMIC CHARACTERISTICS OF OPTIONS

##### 4.4.1 Components of option value

There are different approaches to analysing the constituents of an option's value. The FASB (1991a : Appendix A) as part of its project on the recognition and measurement of financial instruments deals with the components of option value in its discussion memorandum 'Recognition and Measurement of Financial Instruments.' This analysis splits the option value into the following three components:

1. Intrinsic value.
  2. Effect of discounting, and
  3. volatility value.
- } When grouped together these are called the time value of an option.

Options invariably trade at a value greater than the intrinsic value. The traditional approach to option valuation, splits the total value of the option into only two components, namely intrinsic value and time value.

##### 4.4.2 Determinants of the value of each of the components

The analysis of option values presented in this chapter deals with the principles of option valuation and does not deal with the complex mathematics of determining the fair price of an option. The following six factors are constituents of the mathematical models used to derive option values:

1. The spot price of the underlying instrument.
2. The exercise price specified in the contract.
3. The risk-free interest rate.
4. The volatility of the underlying instrument.
5. The time left to the expiry date, and

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<sup>4</sup> SAFEX does not list options on the agricultural futures and forwards.

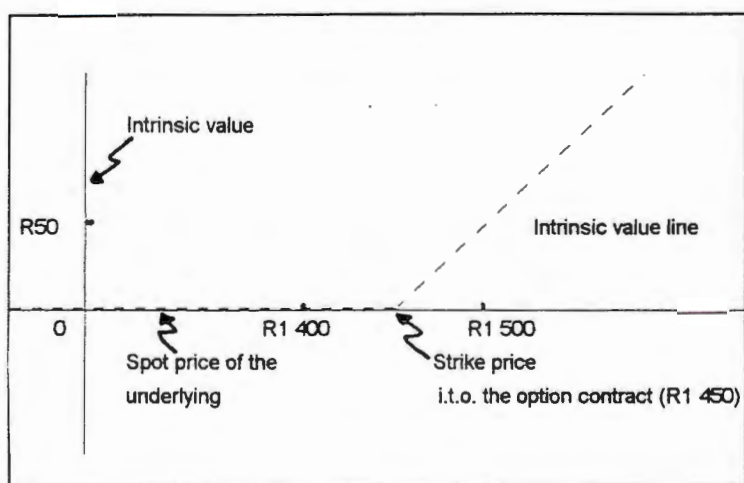
6. the income to be earned on the underlying instrument expected during the life of the option (Hull : 1997 : 156).

In addition there is always a probability that an option will not be exercised as it is not favourable for the holder to do so. This uncertainty is also taken into account when valuing an option.

The following analysis can be performed for both call and put options. The principles are identical and therefore only the call option will be analysed.

#### 4.4.3 Intrinsic value

An option derives value from the difference between the spot price of the underlying instrument and the exercise price. The intrinsic value is determined from the perspective of the option holder, and can only be zero or positive. Generally an option will have a value at least equal to the intrinsic value. Figure 2 illustrates the intrinsic value for the holder of a call option.



**Figure 2 : Intrinsic value of a call option**

An example best illustrates how the intrinsic value of a call option changes.

Assume the option holder has a call option to buy 100 Krugerrands for R1 450 each, and that the current spot price is R1 450. The option therefore has no intrinsic value because there is no net benefit to be derived by exercising the option immediately.

If the spot share price fell to R1 400 the intrinsic value would remain at zero because the option holder still derives no net benefit by immediate exercise. The option holder, would in this case, if he or she is rational not exercise the option, because it would be cheaper to buy the Krugerrands at the spot price.

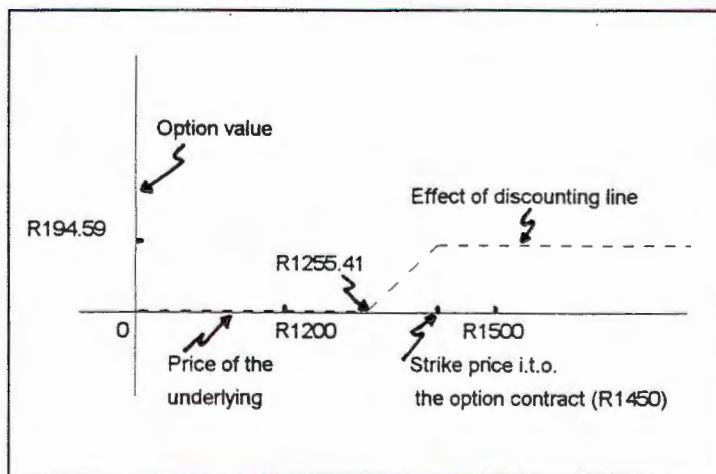
If the spot share price rose to R1 500, then the option would have an intrinsic value because there would be a net benefit to be derived by immediate exercise of the option. The intrinsic value would be R5 000 as the option holder would pay R145 000 for the Krugerrands that have a market value of R150 000.

From this example it can be seen that if the spot price of the underlying instrument is below or equal to the exercise price, the intrinsic value of a call option is zero. If the spot price is above the exercise price the call option has intrinsic value.

#### 4.4.4 The effect of discounting

The effect of discounting arises because the exercise price does not have to be paid until the option is exercised. This would generally be just before the option expires because the option holder could capture the extra value relating to the effect of discounting and volatility by selling, rather than exercising the option if the exercise date is not near. To compare the exercise price in terms of the contract with the current spot price would therefore be incorrect. The exercise price must be discounted to enable comparison with the current spot price.

The effect of discounting is illustrated graphically in figure 3.



**Figure 3 : The effect of discounting for the holder of a call option**

The effect of discounting is zero until the spot price of the underlying instrument reaches the amount equal to the exercise price discounted at the risk free interest rate. This is because the option only derives value from the effect of discounting when the spot price exceeds the present value of the exercise price. The effect of discounting then increases as the spot price rises until the spot price reaches the undiscounted exercise price, after which it remains constant. This is because the maximum value that can be derived due to the effect of discounting is limited to the difference between the exercise price and the discounted exercise price.

An example illustrates the point. Assume the option holder has a call option to purchase 1 000 Krugerrands for R1 450 each in 365 days time and that the risk free rate of interest is 15.5 percent per annum.

Assume the current spot price is R1 200 per Krugerrand. Therefore to compare the current spot price and the exercise price one must discount the exercise price. The discounted exercise price is R1 255.41 per Krugerrand ( $R1\ 450 \div 1.155$ ). There is therefore no value attributable to the effect of discounting because the option holder would not pay R1 255.41 per Krugerrand in today's money when he or she could pay R1 200 per coin in the spot market.

If the current spot price is R1 500 per Krugerrand, then the value attributable to the effect of discounting is R194.59 per coin. This is because the option holder would be paying R1 255.41 in today's money for something worth R1 500. The effect of discounting is clearly limited to R194.59 per share with the difference between the R1 500 and R1 450 being intrinsic value.

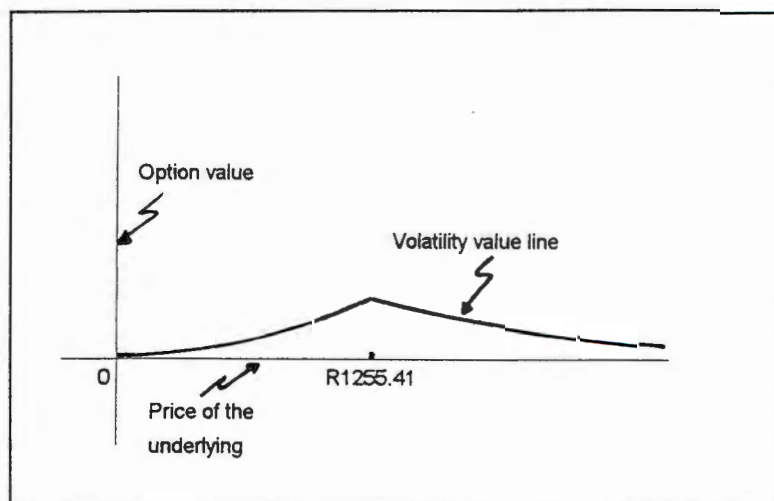
The value derived from the effect of discounting will decline as the expiry date approaches. The value of the option will therefore approach the intrinsic value of the option as this date nears.

From this analysis it can also be seen that if interest rates rise then the effect of discounting will be larger and the value of a call option will rise.

#### 4.4.5 Volatility value

This component is derived from the volatility of the underlying financial instrument or commodity. There is always a chance that the underlying instruments' spot price will change so as to give the option intrinsic value. Therefore a call option that is deeply out of the money will still have some value attributable to it because the spot price of the underlying instrument may increase to such an extent as to give the option intrinsic value, although this may be remote.

The more volatile the underlying instrument, the higher the volatility value attributable to the option. The longer the period to the exercise date the more likely it is that the price of the underlying instrument will rise above the exercise price. Therefore the longer the period to exercise the higher the volatility value.

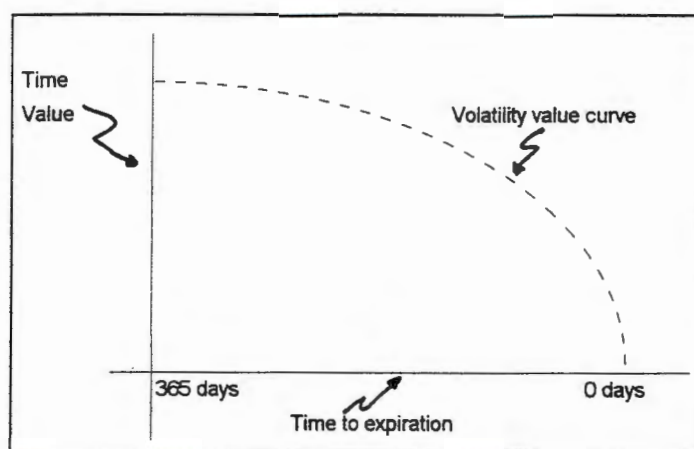


**Figure 4 : Volatility value of an option**

It must be noted that the volatility value peaks at the same price for the underlying instrument where the effect of discounting equals zero i.e. R1 255.41 in the example above. This is because the option holder places the most value on the option when it is most likely that the price of the underlying instrument will rise above the exercise price in current money terms. When the option is deeply out of the money the holder will place little value on the volatility because it is highly unlikely that the price of the underlying instrument will rise above the strike price. When the option is deeply in the money the value attributed to the volatility will also approach zero, partly because a change in the value of the underlying instrument leads to a relatively small change as a percentage in the value of the option. The option holder is therefore less willing

to pay for this potential change. The option holder also stands to lose more from an unfavourable movement when the option is deeply in the money, and is therefore not willing to pay as much for the volatility component.

The volatility value will change if the volatility of the underlying instrument changes. The volatility value also declines at an exponential rate as the exercise date nears. This is because the probability of a change in value of the underlying instrument declines at an exponential rate as the expiration date nears. The change in volatility value is depicted graphically in figure 5.

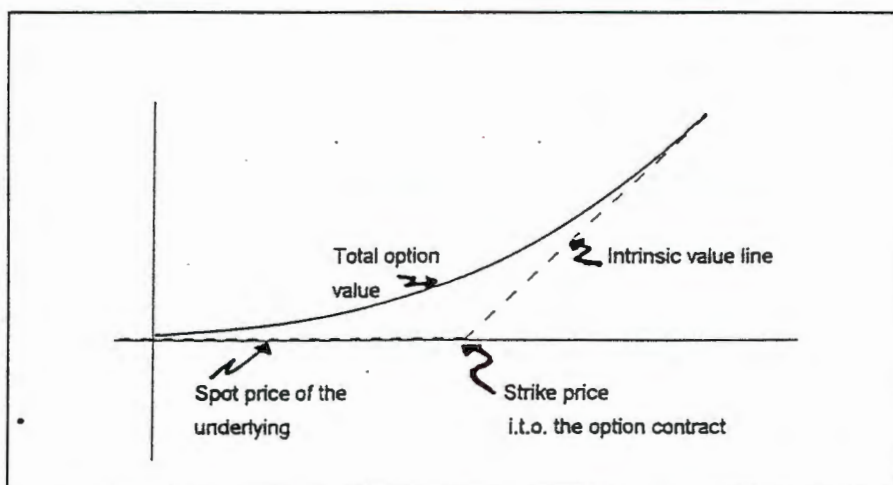


**Figure 5 : Change in volatility value of an option relative to time**

#### 4.4.6 Time value

The time value of an option is simply the aggregation of the values due to the effect of discounting and volatility.

The time value and the intrinsic value give the current value of the option. This is depicted graphically in figure 6.



**Figure 6 : Total value of a call option**

Figure 6 also shows the intrinsic value line. This represents the value of the option on its expiration date. In other words it is the value if the option is held to maturity. The curved line which includes the time value represents the short run value of the option. Because this value is higher than the intrinsic value it is beneficial for the holder to sell the option rather than exercise it. Because the time value wastes with the passage of time the curved line will move towards the intrinsic value line until they are the same line on the exercise date.

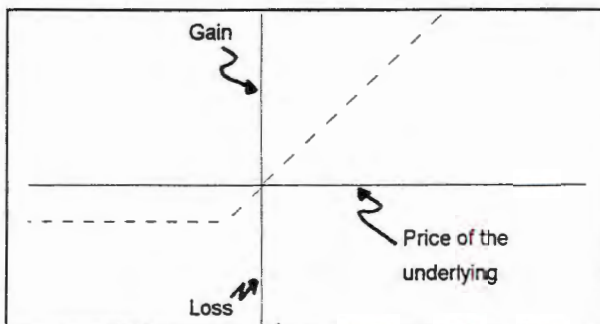
The analysis of option value presented presumes that the underlying instrument does not produce any income. For instance dividends may be paid on shares or interest may accrue on bonds. The present value of these expected cash flows to be received by the owner of the underlying instrument will be taken into account when valuing the option. The present value of the expected income will reduce the effect of the discounting component of the option value.

## 4.5 THE RISKS AND REWARDS OF OPTIONS

The potential gains and losses differ for put and call options and option holders and writers. The following section illustrates these potential gains and losses. The analysis incorporates the premium paid for the option by the holder to the writer.

### 4.5.1 Call option

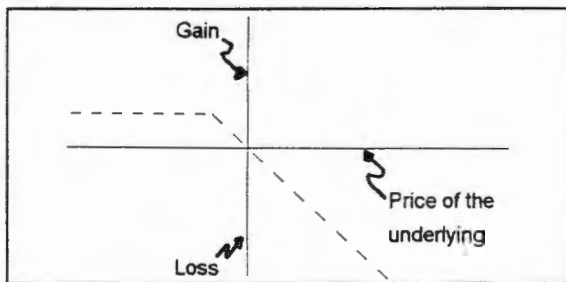
#### 4.5.1.1 The option holder



**Figure 7 : Risks and rewards : the call option holder**

- The maximum the option holder stands to lose is the premium paid for the option.
- The potential gain is unlimited.

#### 4.5.1.2 The option writer

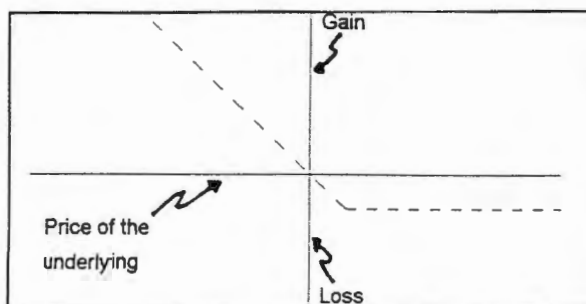


**Figure 8 : Risks and rewards : the call option writer**

- The option writer's maximum gain is the premium received.
- The potential loss is unlimited.

## 4.5.2 Put option

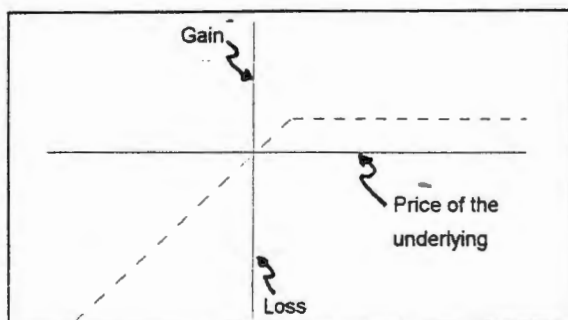
### 4.5.2.1 Option holder



**Figure 9 : Risks and rewards : the put option holder**

- The maximum potential gain is limited to the exercise price multiplied by the number of underlying instruments to be purchased. For example if the enterprise holds put option to sell 100 Krugerrands at R1 450 each, then the maximum gain is R145 000 ( $R1\ 450 \times 100$ ) if the coins become worthless.
- The potential loss is limited to the premium.

### 4.5.2.2 Option writer



**Figure 10 : Risks and rewards : the put option writer**

- The maximum gain is the premium received.
- The potential loss is limited to the exercise price multiplied by the number of instruments to be sold.

It can therefore be seen that the risk of loss is far greater for the option writer, for both a put and a call option, than the option holder.

#### 4.6 THE EFFECT OF THE SAFEX CLEARING HOUSE ON OPTIONS

All options contracts entered into on SAFEX must be processed through the clearing house. As with futures contracts, the clearing house automatically becomes a counterparty to each transaction and guarantees performance under the contract (SAFEX : 1997a : Rule 8.3.2). The fact that the clearing house becomes the counterparty for both the option holder and writer enables both sides of the contract to be split. In other words the option holder can sell the option to another entity without authorising the transaction with the original writer of the option. Similarly the option writer can dispose of the contract if necessary. Both legs of the transaction are therefore completely negotiable. This offers greater flexibility than non-exchange traded options where the counterparties cannot simply dispose of their contracts.

The guarantee of performance by the clearing house results in the credit risk associated with the counterparty to the option being assumed by the clearing house. SAFEX requires that both counterparties to the option deposit margin with the clearing house. This margin is adjusted daily by the mark to market process as with futures. The clearing house uses the margin to reduce the credit risk it has assumed by guaranteeing performance under the contract.

#### 4.7 CONCLUSION

This chapter dealt briefly the economic characteristics of options and the effect SAFEX has on the options which are traded on that market. SAFEX lists American style options on futures. In addition, SAFEX has American style options on five individual equities listed on the Johannesburg Stock Exchange. The economic characteristics of options are determined by the factors which influence the value of the option i.e. (i) the spot price of the underlying instrument (ii) the exercise price specified in the contract (iii) the risk free interest rate (iv) the volatility of the underlying instrument (v) the time left to expiry of the option, and (vi) the expected income to be earned on the underlying instrument during the life of the option. The holder of an option stands only to lose the option premium paid and has unlimited upside. The option writer stands only to gain the option premium received. As with futures SAFEX increases the marketability of the options by becoming counterparty to each contract and reduces the credit risk associated with the options through margin requirements and the clearinghouse. Despite the fact that the SAFEX listed options

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relate to SAFEX traded futures contracts, they behave like other options, which enables their value to be analysed in the traditional ways.

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## CHAPTER 5: THE RISKS ASSOCIATED WITH FINANCIAL INSTRUMENTS

### 5.1 INTRODUCTION

Having dealt with the specifics related to futures and options this chapter deals with the risks associated with financial instruments in general. There are many ways of defining the risks associated with financial instruments. This chapter briefly describes the principal risks associated with financial instruments. It also briefly discusses how risk is represented in the financial statements, as well as the use of financial statements to determine the risk associated with an enterprise.

### 5.2 THE PRINCIPAL RISKS

IAS 32 'Financial Instruments: Disclosure and Presentation' (IASC : 1995 : Paragraph 43) gives a detailed breakdown of the financial risks an entity may be assuming or transferring. These are as follows;

- **Price risk** - Price risk relates to changes in the level of prices. There are three types of price risk:
  - 1) **Currency risk** is the risk that the value of the financial instrument will fluctuate due to changes in foreign exchange rates.
  - 2) **Interest rate risk** is the risk that the value of a financial instrument will fluctuate due to changes in market interest rates.
  - 3) **Market risk** is the risk that the value of a financial instrument will fluctuate as a result of changes in market prices whether those are caused by factors specific to the individual security or its issuer or factors affecting all securities traded in the market.
- **Credit risk** - credit risk is the risk that one party to a financial instrument will fail to discharge an obligation and cause the other party to incur a financial loss.

- **Liquidity risk** - Liquidity risk, also referred to as funding risk, is the risk that an enterprise will encounter difficulty in raising funds to meet commitments associated with financial instruments. Liquidity risk may result from an inability to sell a financial asset quickly at close to its fair value.
- **Cash flow risk** - cash flow risk is the risk that future cash flows associated with a monetary financial instrument will fluctuate in amount.

The AICPA (1994:5) list the following additional risks as being inherent to derivatives<sup>5</sup>;

- **Legal risk** - The risk that losses will be suffered due to legal or regulatory changes that invalidates or precludes performance by either party to the contract or related netting agreements.
- **Control risk** - This risk relates to losses that result from the failure (or absence) of internal controls to prevent or detect problems (such as human error, fraud, or system failure) that hinder an end user from achieving its operational, financial reporting, or compliance objectives.

As already discussed in chapters three and four the SAFEX clearinghouse limits the credit risk associated with SAFEX financial instruments. Credit risk is therefore dealt with in more detail in section 5.2.1 below to enable an assessment of the impact on the risks associated with SAFEX financial instruments.

### 5.2.1 Credit risk

AICPA (1994:5) point out that there is a fundamental difference between the credit risk associated with on-balance-sheet financial assets (such as notes receivable or debt securities) and that associated with derivatives, because the amount of credit exposure in a derivative is volatile, as it will vary with changes in the derivative's market value. Generally, a derivative only has credit risk exposure when the derivative has positive market value. That value represents an obligation of the counterparty, and therefore an economic benefit that can be lost if the counterparty fails to fulfil its obligation.

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<sup>5</sup> The term 'derivatives' is defined for the purposes of the AICPA report as "futures, forward, swap, or option contracts or other financial contracts with similar characteristics."

Furthermore, the market value of a derivative may fluctuate quickly, alternating between positive and negative values, which is generally not the case with traditional on-balance-sheet financial assets and liabilities.

### 5.3 ACCOUNTING FOR RISK IN FINANCIAL STATEMENTS

Farrelly et al. (1985 : 279) note that “there appears to be agreement in the financial community that risk is important and that investors are averse to risk; beyond this, however there is little consensus on the topic.”

For instance there is no consensus as to what constitutes risk. “This dilemma is partly solved by the fact that although there is no specific definition of risk which is totally acceptable to the financial community, there is, as Lorie and Hamilton (1973, p. 114) point out, general agreement that risk is associated with the degree of unpredictability of future returns” (Farrelly et al. : 1985 : 279). Therefore although there is no definition of risk, financial reporting should assist investors by providing data useful in assessing the predictability of future returns. This supports the view that as investors build assessments of risk into their investment decisions, financial information provided in financial statements should allow investors to assess risk and return in order to be useful.

Howieson and Hancock (1995 : 26) observe that accountants have long sought methods by which the concept of risk can be communicated through financial statements. Traditionally, certain financial ratios such as the current ratio and leverage ratios have been used for this purpose. Other information cues such as the variability of accounting earnings and asset size have also been employed as proxies for an entity’s riskiness.

However Farrelly et al. (1985 : 279) note that “Ronen and Sorter (1972), for example, criticize accounting information by suggesting that it does not *explicitly* deal with considerations of risk. Ronen (1977, p. 14) observes that this lack of attention is unfortunate, because:

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the entire burden of assessing uncertain prospects falls on the user. But companies and management are the very ones - sometimes the only ones - who can make proper assessments of uncertainties relevant to their own future prospects.”

Although accounting information does not explicitly deal with risk, it may supply such information in an implicit fashion. Research by Beaver, Kettler and Scholes (1970 : 679) found that “a strategy of selecting and ranking portfolios according to the accounting risk measures is essentially equivalent to a strategy of ranking those same portfolios according to the market determined risk measure”, while Eskew (1979 : 107) indicated that forecasts of market risk produced by models based on accounting data forecast levels of market risk marginally better than models based on past market risk information alone. Elgers (1980 : 389) found that accounting risk measures do not improve upon market-based systematic risk predictions. All these studies found a high correlation between the variability of accounting earnings and the beta of the share. Farrelly, Ferris and Reichenstein (1985 : 278) found that 79 percent of the variation in the average risk perceptions of financial analysts surveyed was “explained” by accounting risk measures. Support was also obtained for the use of the analysts’ risk perception measure as a proxy for a share’s “true” market risk (Farrelly, Ferris and Reichenstein : 1985 : 278). These studies therefore provide evidence that accounting information and particularly changes in accounting earnings provide information on risk.

#### **5.4 RISK RELATING TO FINANCIAL INSTRUMENTS AND FINANCIAL STATEMENTS**

Howieson and Hancock (1995 : 29) point out that “most financial instruments contain contractual rights and obligations which impact on the risks confronting an entity. Conventional accounting practice does not normally recognise these risks and obligations on the balance sheet and this impairs the ability of the user to assess risk levels for the entity. Therefore, any move by standard - setters to require entities to recognise the financial assets and liabilities associated with these rights and obligations will assist risk assessment to the extent such information was previously unavailable to users.” Current accounting pronouncements require disclosure of

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financial instrument information in the notes to the financial statements. For example IAS 32 'Financial Instruments: Disclosure and Presentation' has as its objective for disclosures relating to financial instruments to "enhance understanding of the significance of on-balance-sheet and off-balance-sheet financial instruments to the enterprise's financial position, performance and cash flows and assist in assessing the amounts, timing and certainty of future cash flows associated with those instruments" (IASB : 1995 : paragraph 42). Implicit in the assessment of the amount, timing and certainty of cash flows is the assessment of risk. Furthermore paragraph 42 of IAS 32 (IASB : 1995) encourages the disclosure of specific information to "provide a discussion of the extent to which financial instruments are used, the associated risks and the business purposes served."

## 5.5 CONCLUSION

Financial instruments have a number of risks associated with them and it is this very fact which enables enterprises to mitigate risks to which they are exposed or speculate with such ease. Research by inter alia Farrelly, Ferris and Reichenstein (1985) and Eskew (1979) indicates that accounting risk measures provide information on the risk associated with an enterprise. However despite the complex risks associated with financial instruments, and the evidence that users assess risks using accounting information, financial statements at present do not represent these risks adequately. In order to enable users of financial statements to assess these risks they need to be able to assess the amount, timing and certainty of future cash flows associated with a financial instrument, as well as being able to build the risks with an instrument into the traditional risk measures they use.

## CHAPTER 6: EXECUTORY CONTRACTS AND FUTURES

### 6.1 INTRODUCTION

This chapter outlines the views on accounting for executory contracts and how this has influenced accounting for futures contracts.

### 6.2 EXECUTORY CONTRACTS

There are a number of definitions of the term 'executory contract' which differ in key respects (see Henderson and Peirson (1983 : 96) for a discussion of some of the definitions of executory contracts). One definition is that of Birnberg (1965 : 814) which defines an executory contract as "an agreement between two or more parties in which no party has yet performed any of the acts required of him by the agreement." This is commonly called an equally proportionately unperformed contract, which does not result in assets or liabilities being recognised by the current accounting system (Henderson and Peirson (1983 : 98)). All other contracts, which have been partially performed (but not equally by each party thereto) should result in assets and liabilities being recognised. This view is consistent with the view of AICPA (1965) in Wojdak (1969 : 562) which states that "the rights and obligations related to unperformed portions of executory contracts are not recognised as assets and liabilities in financial statements as presently understood."

This is despite the fact that as Wojdak (1969 : 565) states "every contract changes the total economic rights acquired by the enterprise and changes the total economic obligations assumed by the enterprise." The reason for this is that "most writers would not consider that entering into an executory contract constitutes an accounting transaction" (Wojdak : 1969 : 563). They would therefore not consider that a past event in terms of the IASC asset definition to have taken place. In other words the view is that the IASC asset and liability definitions have not been met.

Therefore Ijiri (1975 : 129) states that "under present accounting practice the only forecasted resource changes that are recognised are those whose counterpart in the exchange has already been received or delivered by the entity."

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There is an exception to this general observation of Ijiri which relates to finance leases where although the lessor has supplied the asset and the lessee is paying for the use thereof, each party has equally proportionately unperformed their obligations under the contract (i.e use of the asset will be withdrawn by the lessor if payment is not received and vice versa). Despite this these executory contracts result in the recognition of assets and liabilities in the financial statements.

### **6.3 FUTURES CONTRACTS**

Futures contracts are equally proportionally unperformed contracts as both counterparties only deliver the resource they are obligated to deliver and receive the resource they are entitled to receive on the expiration date of the futures contract. This view is supported by the FASB which states that “the individual rights and obligations related to delivery under a futures contract are similar to those embodied in most other fully executory contracts, which normally are not recognized in financial statements” (FASB : 1984 : Appendix C : Paragraph 35). Therefore to be consistent with current practice the assets and liabilities which underlie the contract will not be recognised in the financial statements of the enterprise.

The fact that very few contracts actually result in physical delivery and that in many cases physical delivery is not possible adds further support to this view.

### **6.4 OPTIONS**

Options are not executory contracts as performance by both parties under the contract is not certain and will only become so if the holder of the option exercises it.

### **6.5 CONCLUSION**

The current accounting practice of not recognising the assets and liabilities underlying executory contracts, where both parties to the contract have equally proportionately unperformed obligations, in the financial statements has led to the same treatment for futures contracts. This has resulted in enterprises not recognising the underlying instrument and the consequent liability on their balance sheets. In addition the very

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nature of many futures contracts where the underlying instrument is not deliverable supports this view.

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## **CHAPTER 7 : INTERPRETING THE IASC CONCEPTUAL FRAMEWORK**

### **7.1 INTRODUCTION**

This chapter analyses the conceptual framework of the IASC in order to provide a point of reference for analysing the accounting issues related to the financial instruments covered by this study.

### **7.2 RATIONALE FOR THE CONCEPTUAL FRAMEWORK**

There has been a concerted effort by accounting bodies world-wide to produce a conceptual framework which would set out the principles of accounting. Solomons (1986 : 115) lists the following as benefits of a conceptual framework, (1) economy of effort, because elements common to issues will no longer have to be debated (2) gain in consistency, because proposed solutions are formulated with the framework as a common background (3) improved communication, because the parties have a better understanding of the issues involved and the meaning of terms used and (4) defence against politicisation, because the standard setting body can rely on the framework when formulating the standards. Nussbaumer (1992 : 236) includes as additional advantages, guidance for standard setting and broad prescriptive concepts, which will enable various circumstances to be dealt with over time.

The IASC issued its "Framework for the Preparation and Presentation of Financial Statements" in July 1988 which sets out the principles of accounting in an international context. This was adopted, without change, by the Accounting Practices Board of the South African Institute of Chartered Accountants (SAICA), and issued as AC 000 in November 1990. AC 000 will be referred to as the framework in this analysis.

### **7.3 APPLICABILITY OF THE FRAMEWORK**

The framework applies only to external financial reporting and thus the reporting needs of management fall outside its ambit. The framework is applicable to 'general purpose financial statements' including consolidated financial statements. These 'normally' include a balance sheet, an income statement, a statement of changes in

financial position, and those notes and other statements and explanatory material that are an integral part of the financial statements. In South Africa section 286(2) of the Companies Act includes the director's report and the auditor's report within the definition of a company's annual financial statements. These reports are excluded from the definition of financial statements by the paragraph .07 of the framework.

Paragraph .08 requires that the framework apply to the financial statements of "all commercial, industrial and business reporting enterprises, whether in the public or private sectors" (IASB : 1988). Reporting enterprises are further defined as enterprises "for which there are users who rely on the financial statements as their major source of financial information about the enterprise" (IASB : 1988 : Paragraph 8). This definition is not based on legal principles, but rather the purpose for which the financial statements are being prepared. Although section 286(1) of the Companies Act imposes the legal obligation on companies to report to their shareholders, it is the fact that these members often rely on these statements as their only source of information that results in the entity falling into the definition of a reporting enterprise.

As noted above, paragraph .06 of the framework states that it applies to 'general purpose financial statements'. The paragraph continues to explain that such financial statements "are directed toward the common information needs of a wide range of users" (IASB : 1988). Financial statements should therefore not be prepared with the objective of only meeting the needs of equity investors.

#### **7.4 USERS AND THEIR INFORMATION NEEDS**

No definition of 'wide range of users' is given although a list of users is given in paragraph .09 of the framework. The range of users listed is very broad, and includes "present and potential investors, employees, lenders, suppliers and other trade creditors, customers, governments and their agencies and the public" (IASB : 1988 : Paragraph 9). This list emphasises actual and potential stakeholders. In addition Page (1992 : 79) observes that the users identified seems to be based on " 'a right to know' which arises from a stakeholder relationship rather than general economic criteria."

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Page (1992 : 78) also notes that “a notable absence from the list is the user group of ‘competitors’.”

The importance of identifying the constituency of users of financial statements lies in the requirement to satisfy their information needs.

The user groups identified are external in that they do not have access to detailed financial information relating to the company. Paragraph .10 of the framework states that “as investors are providers of risk capital to the enterprise, the provision of financial statements that meet their needs will also meet most of the needs of other users that financial statements can satisfy.” Page (1992 : 79) notes that with the exception of investors, the conceptual framework “does not say explicitly what decisions most of the ‘user’ groups are interested in, but rather what users are trying to assess.”

#### **7.4.1 The information needs of investors**

Most (1982 : 162) notes that investors are not a homogenous group, rather they consist of sizeable subgroups of (a) sophisticated and unsophisticated investors, and (b) long-term and short-term investors. It is therefore likely that the information needs of investors may diverge markedly. Most (1982 : 147) also observes that financial statements provide information for unknown users having multiple decision objectives, rather than providing information for specific user groups having a known decision objective which would be covered by special purpose financial statements. Most (1982 : 160) also observes that “it is clear that the expectation is for financial statements to contain inputs into a specific decision model.”

The framework states that investors and their advisors “are concerned with the risk inherent in, and return provided by, their investments. They need information to help them determine whether they should buy, hold or sell. Shareholders are also interested in information which enables them to assess the ability of the enterprise to pay dividends”(IASB : 1988 : Paragraph 9). The need outlined above alludes to a critical facet of financial reporting, namely that it must enable the user to assess the quality and timing of future cash flows. Implicit in this is the assessment of risk.

Investors are not only concerned with expected dividends, but also seek information related to the variability and uncertainty of cash flows which will flow to the enterprise thereby influencing the value of their investment. In order to aid these investors to make the necessary decisions, the information must reduce the uncertainty related to the decision being taken.

## **7.5 THE OBJECTIVES OF FINANCIAL STATEMENTS**

Mathews and Perera (1991 : 73) point out that “strictly speaking financial statements cannot have objectives, only those individuals who cause the statements to be produced and who use them can have objectives. What are often referred to as the objectives of financial statements are really the functions of financial statements.”

### **7.5.1 Useful information**

The overall objective of financial statements in terms of paragraph .12 of the framework is to provide information on “the financial position, performance and changes in financial position of an enterprise that is useful to a wide range of users in making economic decisions” (IASC : 1988).

#### **7.5.1.1 Information**

Information can be defined as “evaluated data” (Most : 1982 : 160). Page (1992 : 81) notes that “users of accounts are expected to have their own forecasting models of variables of interest and the accounts provide the inputs to construct forecasts.” This is consistent with the view of Most (1982 : 147) who states that as the users are not specifically identified it implies that general purpose financial reporting contains data rather than information and this data is transformed into information by the user. “Confirmatory value is then useful as a check that the users’ models are accurate so that they can adjust them if they are not working well” (Page : 1992 :81).

The information to be presented in financial statements in terms of the framework is therefore presumed to be used by the user in his or her own decision model and may be termed ‘purpose orientated data’. It follows therefore that because the preparers of the financial statements do not know the exact constituency using their financial statements a wide range of ‘information’ must be provided. This includes both factual data and interpretative information to enable users to make their own decisions.

### 7.5.1.2 Usefulness

To be useful information must aid users in making their decisions. In order to do this it must have predictive and/or confirmatory value. The framework does not rank predictive value as being more important than confirmatory value.

The importance of the requirement that the information in financial statements be useful for decision making is that it enables possible accounting choices to be ranked. This view was expressed by the FASB (1980 : Paragraph 30) which states that “the central role assigned here to decision making leads straight to the overriding criterion by which all accounting choices must be judged. The better choice is the one that, subject to considerations of cost, produces from among the available alternatives information that is most useful for decision making.” This also applies to the IASC framework.

Wolk et al (1984 :191) reviewed a wide range of research that has examined the usefulness of accounting information to users. Information economics illustrates that accounting information has value in the decision making process at the individual level because the information “can cause a revision in the decision makers’ subjective probability estimation of each state’s occurring.”

Capital market research attempts to determine the responses of share prices to accounting information. The value of the accounting information is that it assists investors in assessing risk and return at the individual share and portfolio level. Wolk et al (1984 : 195) point out that “the link between risk and return assessments by individual decision makers and security prices is a ‘black box’. It remains unknown how subjective assessments are translated into market prices. What we do know, though, is that market prices represent consequences of individual investor assessments.” Ball and Brown (1968 : 170) found that the direction of unexpected changes in accounting income was positively correlated with the share price movement. It can therefore be deduced that investors find accounting income to be useful for making investment decisions. In addition as discussed in section 5.3 the findings of research studies indicate that volatility of earnings as well as other surrogates are used by investors to evaluate the risk associated with an enterprise.

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## **7.5.2 Approaches to calculating earnings**

There are a number of approaches to determining earnings for the period. These are the revenue and expense approach and the asset and liability approach used in articulated financial statements. There is also a view that earnings may be determined in financial statements that do not articulate. These views stem from the perception that users have different decision making models.

### **7.5.2.1 The revenue and expense approach**

The revenue and expense approach stems from the fact that “some people view earnings as a measure of the effectiveness of an enterprise in using its inputs to obtain and sell output at a profit. They define earnings primarily in terms of the difference between revenues and expenses for a period. Proponents contend that the concepts of revenue and expense can be defined more precisely than the concepts of asset and liability and in a way that more clearly suggests the appropriate accounting” (FASB : 1976 : Paragraph 38).

### **7.5.2.2 The asset and liability view**

This view stems from the fact that “some people view earnings as a measure of increase in net resources of a business enterprise during a period. Thus, they define earnings primarily in terms of increases and decreases in assets and liabilities. The positive element of earnings - revenues - is defined in terms of increases in assets and decreases in liabilities during the period; the negative element in earnings - expenses - is defined in terms of decreases in assets and increases in liabilities during the period” (FASB : 1976 : Paragraph 34).

The framework defines income and expenses in terms of increases and decreases in assets and liabilities.

### **7.5.2.3 The nonarticulated approach**

This approach involves the measurement of earnings independently of the measurement of assets and liabilities. The earnings are therefore not necessarily a

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change in net assets, and the balance sheet and income statement may not necessarily reconcile.

This view is not widely held, and therefore does not impact on the approach taken to financial statements. There is however a view that certain changes in the carrying value of assets or liabilities, should not be made through the income statement, but rather directly to equity. This is sanctioned by current generally accepted accounting practice, for example on the revaluation of property, plant and equipment in terms of AC 123.

### **7.5.3 Other objectives**

Traditionally the primary objective of financial statements has been to demonstrate that the resources placed under the stewardship of the entity have been utilised studiously. There has however been a movement towards the demonstration of other objectives such as demonstrating environmental accountability in financial statements. The stakeholders to which these objectives are to be demonstrated have also broadened. For instance the Corporate Report in the UK focused on a broad set of users which included actual and potential stakeholders. The framework does not deal with objectives of financial statements other than expressing the view that financial statements which are prepared to be useful to a wide range of users in making economic decisions will meet the common needs of most users (IASB : 1988 : Paragraph 12).

#### **7.5.3.1 Stewardship**

The demonstration of stewardship through the use of financial statements has been an objective since the “time of the manorial accounting period when stewards had to establish the credibility of their tenure to the often absent landlord” (Mathews and Perera : 1991 : 73). This objective still applies to enterprises where “for example, control of management depends on the reporting of what they did, and it is the knowledge that such reports will be made which prevents opportunistic behaviour” (Page : 1992 : 80).

Paragraph .14 of the framework states that “financial statements also show the results of the stewardship of management” (IASB : 1988), and that users assess the stewardship of management to make economic decisions. Because the framework seeks to have financial statements which are useful for making economic decisions the financial statements must enable users to assess the stewardship to enable them to make these decisions. Therefore even though the demonstration of stewardship is not expressly identified by the framework as an objective of financial statements, it is necessary to fulfil the requirement of providing information useful for making economic decisions.

### **7.5.3.2 Separation of the factors affecting enterprise performance**

Financial statements reflect the composite effect of a large variety of factors affecting the entity. Therefore “financial statements usually cannot and do not separate management performance from enterprise performance. ... Management’s ability and performance are contributing factors, but so are events and circumstances that are often beyond the control of management such as general economic conditions, supply and demand characteristics of enterprise inputs and outputs, price changes, and fortuitous events and circumstances” (FASB : 1978 : Paragraph 53). It is not possible to assess management’s contribution to the results individually, furthermore the actions of past management will have an impact on the current results of the enterprise. It is also very difficult to judge whether the stewardship performance has been satisfactory because to do so requires explicit goals being set for management. This is not usually the case for large public enterprises and therefore the problem of assessing stewardship is complex and requires the exercise of judgement.

## **7.6 ECONOMIC DECISION MAKING**

### **7.6.1 The economic system and decision**

Economic decision making must be seen within the context of the economic system in which the decision maker operates. In order to make economic decisions, the makers thereof (as already noted) need information about the enterprise’s ability to generate cash and cash equivalents and the timing and certainty thereof. Paragraph 15 of the framework states that “users are better able to evaluate this ability to generate cash

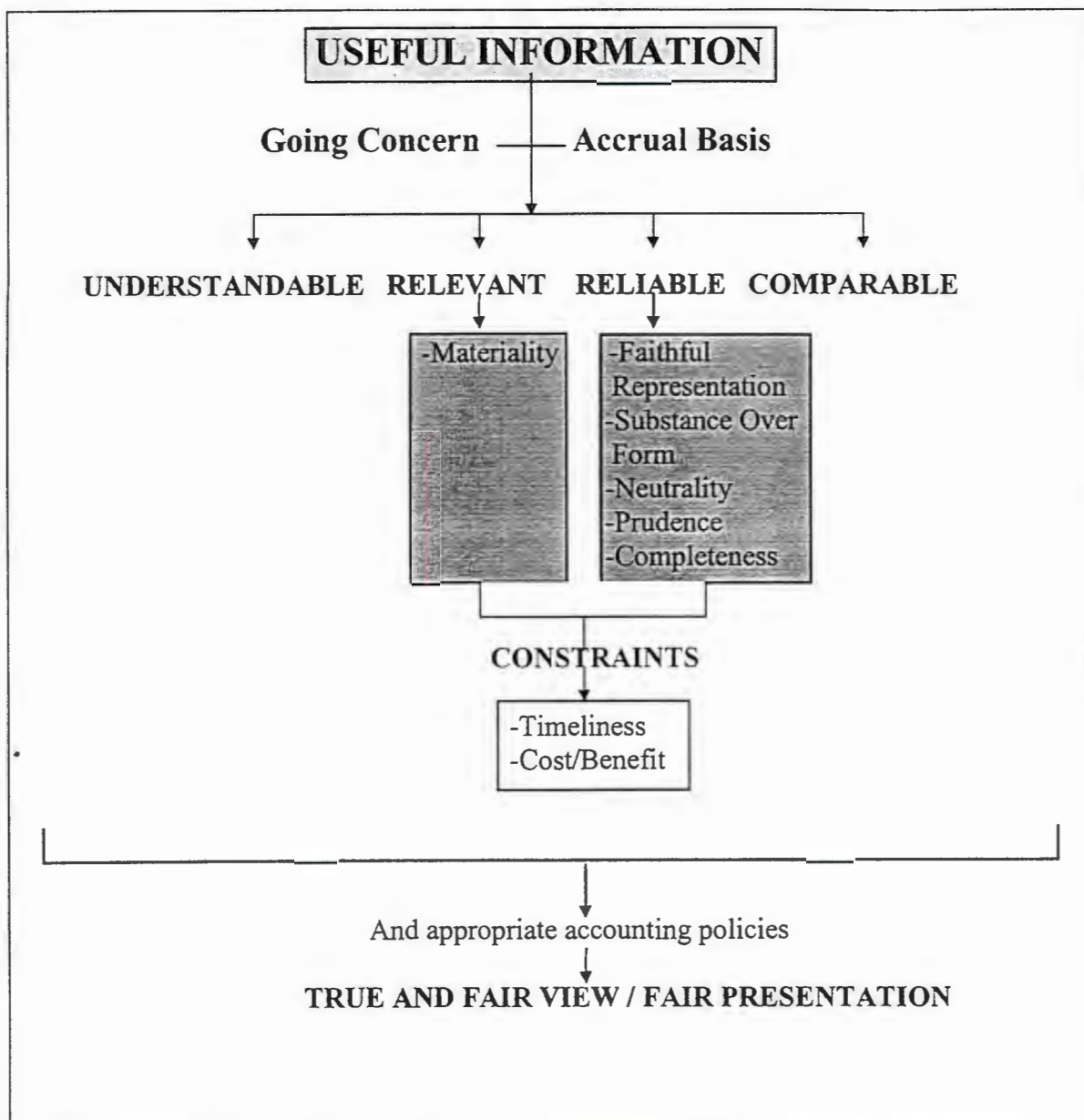
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and cash equivalents if they are provided with information that focuses on the financial position, performance and changes in financial position of an enterprise” (IASB : 1988). In other words a balance sheet, income statement and cash flow statement are needed as well as the related notes which enable a full understanding of the risks and uncertainties affecting the enterprise.

“Although economic decisions are made by many kinds of individuals and organizations, each decision is directed toward a goal. The goal of an unsophisticated occasional investor may be general: to increase his wealth. Others, making decisions within a formal plan, may have goals which specify intricate parameters for amount, timing, and risk” (AICPA : 1973 : 18). In order to make these decisions, the “economic decision-makers need both factual and interpretive information - identified separately to the extent possible - about transactions and other events in order to assess uncertainty. Factual information can be measured objectively. Interpretive information is largely subjective and frequently cannot be easily quantified” (AICPA : 1973 : 33). The interpretative information allows the factual information to be assessed by the users.

## **7.7 QUALITATIVE CHARACTERISTICS OF FINANCIAL STATEMENTS**

Paragraph .24 of the framework states that the “qualitative characteristics are the attributes that make the information provided in financial statements useful to the user” (IASB : 1988). The approach taken by the framework as to the qualitative characteristics which make financial information useful may be set out schematically as follows:



**Figure 11 : Qualitative characteristics of the conceptual framework**

The underlying assumptions for the preparation of all financial statements in terms of the framework are the accrual and going concern bases. This is reinforced by the United Kingdom ASB which is of the view that “the underlying assumptions are neither part of the objective of financial reporting nor of the qualitative characteristics of such information. They are measurement conventions and arise from the application of the qualitative characteristics in accomplishing the objective of financial reporting” (ICAEW : 1991 : Appendix to chapter 2 : paragraph 6).

### 7.7.1 The accrual basis

The FASB (1978 : Paragraph 44) provides an explanation of the accrual basis by pointing out that “information about enterprise earnings and its components measured by accrual accounting generally provides a better indication of enterprise performance than information about current cash receipts and payments ... Accrual accounting is concerned with the process by which cash expended on resources and activities is returned as more (or perhaps less) cash to the enterprise, not just with the beginning and end of that process ... The goal of accrual and deferral of benefits and sacrifices is to relate the accomplishments and the efforts so that reported earnings measures an enterprise’s performance during a period instead of merely listing its cash receipts and outlays.” AICPA (1973 : 23) point out that over the entire life of the entity the cash generated and accounting earnings will be exactly the same.

Accrual accounting achieves the goal of enabling users to assess the success of past actions of the entity which are part of a series of events intended to have future consequences by comparing the benefits received with the costs incurred.

The preparation of financial statements using the accrual basis greatly enhances the usefulness of the information presented for decision making. This is because “by accounting for non cash assets, liabilities, revenues, expenses, gains, and losses, accrual accounting links an entity’s operations and other transactions, events, and circumstances that affect it with its cash receipts and outlays. Accrual accounting thus provides information about an entity’s assets and liabilities and changes in them that cannot be obtained by accounting for only cash receipts and outlays” (FASB : 1985 : Paragraph 140).

## 7.8 THE PRINCIPAL QUALITATIVE CHARACTERISTICS

The framework makes it clear that the “qualitative characteristics are the attributes that make the information provided in financial statements useful to users” (IASB : 1988 : Paragraph 24).

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The qualitative characteristics are a necessary but not a sufficient condition for usefulness. The framework breaks the principal qualitative characteristics down into constituent components which must be met in order to achieve the principal characteristics. These are set out in the shaded boxes below the principal characteristics in figure 11.

### **7.8.1 Relevance**

Information is relevant to a decision if it helps the decision-maker evaluate an outcome of one or more of the alternative courses of action under consideration. The economic decisions undertaken by users do not only include undertaking a certain action, but also not undertaking an action. To be useful the information must be relevant because as AICPA (1973 : 57) points out “information that does not bear on the problems for which it is intended simply is not useful, regardless of its other qualities.”

- Timeliness is a constraint on relevance because if the information is not made available in a timely manner its relevance will be lost.

#### **7.8.1.1 Materiality**

The framework notes in paragraph .29 that “the relevance of information is affected by its nature and materiality” (IASB : 1988). Information would be considered material if its “omission or misstatement could influence the economic decisions of users” (IASB : 1988 : Paragraph 30). This view is the same as that of the Trueblood report which points out that if information is relevant to making economic decisions then it is material (AICPA : 1973 : 57).

The very nature of information may be sufficient to make it relevant. Information does not therefore have to have an amount to qualify as being relevant to the user, and the consideration of what is material necessarily involves judgement because it is not known with certainty what information users consider relevant.

## **7.8.2 Reliability**

The framework defines information as having the quality of reliability “when it is free from material error and bias and can be depended upon by users to represent faithfully that which it purports to represent or could reasonably be expected to represent” (IASB : 1988 : Paragraph 31).

Users must therefore have confidence in the information, thereby reducing the uncertainty associated with the economic decision. Reliability varies with the nature of the information. Some information can be precisely determined whereas other information can only be estimated with reasonable precision. This applies to both quantitative as well as qualitative information. Information does not have to be completely accurate to be reliable. The use of judgement is integral to the preparation of financial statements, and this results in information not being one hundred percent accurate.

The framework gives certain components which are needed to make information reliable. These components are faithful representation, substance over form, neutrality, prudence and completeness (IASB : 1988 : Paragraph 31). These will now be discussed.

### **7.8.2.1 Faithful representation**

Faithful representation is “the correspondence between a measure or description and the phenomenon it purports to represent” (Most : 1982 : 20).

### **7.8.2.2 Substance over form**

Substance over form is the requirement that information be presented in accordance with its substance and economic reality and not merely its legal form. It is therefore important that the economic characteristics of transactions first be analysed, and then to reason forward to formulate an appropriate accounting treatment. Despite the fact that the focus is on the economic substance, the legal characteristics must be considered.

### 7.8.2.3 Neutrality

Neutrality is the requirement that the information be free from bias. In other words it must not be prepared in such a manner as to influence the decisions of the user in order to achieve a predetermined result.

The notion of neutrality does not mean that the preparers of financial information ignore the potential consequences of their decisions, but that the decisions are not guided by a desire to achieve a particular consequence.

### 7.8.2.4 Prudence

“Prudence is the inclusion of a degree of caution in the exercise of the judgements needed in making the estimates required under conditions of uncertainty, such that assets or income are not overstated and liabilities or expenses are not understated” (IASB : 1988 : Paragraph 37).

Prudence relates to the fact that the preparation of financial information has to take into account the uncertainties that inevitably surround many events and circumstances. The exercise of prudence therefore relates to the events and circumstances, and not the measurement of transactions. The concept of prudence does not however condone being overly conservative which would result in the information not being neutral, and therefore not being reliable.

### 7.8.2.5 Completeness

Completeness is the inclusion of all information that is relevant to the user in the financial statements. The framework in paragraph .38 gives the limitations on completeness to be “materiality and cost” (IASB : 1988). That is if the information is not going to influence economic decisions, or if it is too costly then it can be omitted from the financial statements. It should be noted that the framework does not refer to cost in relation to the benefit. Presumably the use of the word cost requires that the potential benefits be taken into account before information is omitted from the financial statements.

### 7.8.3 Understandable

In order to be useful to users, the information must be readily understandable by them. “For this purpose, users are assumed to have a reasonable knowledge of business and economic activities and accounting and a willingness to study the information with reasonable diligence” (IASB : 1988 : Paragraph 25). Financial statements are therefore pitched at an informed user, at the same time the information must not be limited to the needs of the average user. Information on complex matters should not be excluded from the financial statements “merely on the grounds that it may be too difficult for certain users to understand” (IASB : 1988 : Paragraph 25). This avoids introducing a bias towards less sophisticated users.

The increasing complexity of business operations is leading to increasingly complex financial statements. To aid understandability the financial information must be simplified as much as possible, however AICPA (1973 : 60) points out that “increasingly understandability of financial information is not a matter of mere simplifying. Not all complexities can be made simple by describing them simply. Understandability requires that information be expressed as simply as permitted by the nature and circumstances of what is being communicated.”

### 7.8.4 Comparability

The essence of economic decisions is choice among possible courses of action. Therefore financial information should facilitate the comparisons needed to make investment and other decisions.

Comparability enables users to compare the financial statements of an enterprise through time, as well as to the financial statements of other enterprises. Comparability therefore necessitates that like transactions be reported in the same way, and unlike transactions be reported differently.

“The need for comparability should not be confused with mere uniformity and should not be allowed to become an impediment to the introduction of improved accounting standards” (IASB : 1988 : Paragraph 41). The framework states that it is not

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appropriate for an enterprise to keep using the same accounting policy, if the existing policy does not provide relevant and reliable information, or if a basis exists which provides more relevant and reliable information. It is therefore clear that the qualitative characteristics of relevance and reliability override the requirement for comparability.

## **7.9 TRADE-OFF BETWEEN THE QUALITATIVE CHARACTERISTICS**

The framework recognises that it may not be possible to satisfy all the qualitative characteristics fully, and a balance must therefore be struck. The framework states in paragraph .45 that the “relative importance of the characteristics in different cases is a matter of professional judgement” (IASB : 1988).

Milburn (1991 : 46) points out that the FASB framework does not recognise the competing interests that may determine what information is considered relevant to whom. This is also the case with the IASB framework. Milburn (1991 : 46) also observes that it is important to “understand the relative rights of different participant interests and their comparative advantages and power positions. It is these relative powers and rights that will dictate the trade-offs between ‘qualitative characteristics.’” A similar conclusion can also be drawn for the IASB framework.

### **7.9.1 Cost versus benefit**

The benefit of a financial statement must exceed the costs associated with it. The costs which are easiest to identify are those incurred by the enterprise in preparing the accounting information. There are also other costs imposed on preparers. Among them may be increases in the cost or decreases in the availability of capital, as well as adverse effects due to disclosure of information to competitors. The benefits are far more difficult to quantify than the costs. Brown (1990 : 91) points out that the incidence of economic benefits is “diffuse and they accrue broadly to users and preparers of external financial reports.” Benefits include the ability of users to make better decisions based on the information and incentives for management to improve efficiency because shareholders can make better evaluations of their actions. It is therefore clear that the total costs and benefits cannot be quantified.

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The framework in paragraph .44 states that “the balance between benefit and cost is a pervasive constraint rather than a qualitative characteristic” (IASB : 1988). It further states that “the benefits derived from information should exceed the cost of providing it” (IASB : 1988 : Paragraph 44). These statements do not clarify who is to receive the benefit, nor who is to bear the cost. Therefore the costs and benefits to be considered in terms of the framework are not only those to investors and the enterprise preparing the information but to society at large.

In setting accounting standards, the standard setting body trades off the costs imposed on preparers of financial statements with the benefits derived by society. In other words the balance between cost and benefit is determined by the relative strengths between the interest groups which will bear the costs and receive the benefits. Brown (1990 : 89) in dealing with the cost/benefit trade-off in the FASB conceptual framework points out that “in an operational sense, the Board cannot make cost/benefit determinations with any degree of precision.” This can also be assumed for the IASB framework.

The cost/benefit trade-off also leads to a trade-off between the information provided and its attestability. This is because the audit of complex information is costly. Therefore some information provided may not be audited in order to reduce the related costs.

## **7.10 FAIR PRESENTATION**

The framework states that “the application of the principal qualitative characteristics and of appropriate accounting standards normally results in financial statements that convey what is generally understood as a true and fair view of, or as presenting fairly such information” (IASB : 1988 : Paragraph 46). The framework therefore splits the qualitative characteristics and the appropriate accounting standard. In other words the application of the accounting standard alone is not sufficient to ensure that a “true and fair view” is achieved. This would apply where a particular accounting standard is not appropriate for a certain enterprise. In this situation the accounting standard should not be used, and the requirements of the framework would have to be applied.

The concept of what constitutes a “true and fair view” is “an abstraction or philosophical concept expressed in simple English” (Hoffman and Arden : 1983 : 155) A common feature of such concepts is “that there is seldom any difficulty in understanding what they mean but frequently controversy over their application to particular facts” (Hoffman and Arden : 1983 : 155). Different users may therefore have a different understanding of what constitutes a “true and fair view” even though it is easily understood what the concept entails.

## 7.11 THE ELEMENTS OF FINANCIAL STATEMENTS

The framework has identified the statement of financial position, financial performance and changes in financial position as the components of financial statements. The elements which are incorporated into each of these statements are split into broad categories, and defined by the framework. For the statement of financial position the elements are assets, liabilities and equity. Income and expenses are identified as the elements for the statement of financial performance. No unique elements are identified for the change in financial position statement. The element definitions do not deal with recognition, measurement or disclosure issues. They do however determine the content of financial statements, because they screen out items that lack the characteristics of assets, liabilities, equity, income or expenses.

“It should be noted that the definitions of assets and liabilities refer to real - world assets and liabilities that financial statements seek to model by means of recognition and measurement. Thus, it is useful to distinguish between *underlying assets and liabilities* and *recognised assets and liabilities*. All of the assets and liabilities that are recognised in an entity’s financial statements should reflect underlying assets and liabilities that exist; conversely, all of an entity’s underlying assets and liabilities should be reflected (but not necessarily recognised) in its financial statements, subject to materiality and cost - benefit considerations” (FASB : 1994 : 2).

Although the notes provided with financial statements are an integral part thereof, they are not an element of financial statements. They do however “serve different functions, including amplifying or complementing information about items in financial statements” (FASB : 1985 : Paragraph 5).

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## 7.12 ELEMENTS RELATED TO FINANCIAL POSITION

The framework defines each of the elements referred to above related to financial position.

### 7.12.1 Assets

An asset is defined as “a resource controlled by the enterprise as a result of past events and from which future economic benefits are expected to flow to the enterprise” (IASB : 1988 : Paragraph 49).

More detailed analysis of the key elements of the definition is pertinent.

#### 7.12.1.1 A resource controlled by the enterprise

The FASB (1985 : Paragraph 27) defines ‘economic resources’ as “the scarce means that are useful for carrying out economic activities, such as consumption, production, and exchange.” An asset must therefore be expected to produce positive cash flows in the future. It is not a requirement of the definition that an asset be tangible to be a resource to the enterprise.

The impact of the requirement that the entity must control the benefit is that “every asset is an asset of some entity; moreover, no asset can simultaneously be an asset of more than one entity, although a particular physical thing or other agent that provides future economic benefit may provide separate benefits to two or more entities at the same time. To have an asset, an entity must control a future economic benefit to the extent that it can benefit from the asset and generally can deny or regulate access to that benefit by others, for example, by permitting access only at a price” (FASB : 1985 : Paragraph 183). In addition “legal enforceability of a right is not an indispensable prerequisite for an entity to have an asset if the entity has the ability to obtain and control the benefit in some other way. Wolk et al. (1984 : 265) point out that the “emphasis is on control of assets rather than legal ownership”. This results in some elements of wealth, such as fresh air, being excluded from the definition of an asset because they cannot be owned or controlled by a particular entity.

### **7.12.1.2 As a result of past events**

Wojdak (1969 : 563) notes that “according to the traditional view a transaction might be defined as “a de facto exchange of value between the entity under observation and another party.” The requirement that there be a past event distinguishes between benefits that can presently be obtained and those which will become assets in the future, therefore “only present abilities to obtain future economic benefits are assets under the definition, and they become assets of particular entities as a result of transactions or other events or circumstances affecting the entity” (FASB : 1985 : Paragraph 190). Similarly future events do not remove (or add) assets from the financial statements, until they occur.

### **7.12.1.3 From which economic benefits are expected to flow to the enterprise**

The future economic benefit “embodied in an asset is the potential to contribute, directly or indirectly, to the flow of cash and cash equivalents to the enterprise” (IASB : 1988 : Paragraph 53).

The indirect flow of cash and cash equivalents would include, for example, expenditure to comply with environmental pressures which enable revenue to be maintained. It also includes the reduction of cash outflows. For many resources a direct linkage of the resource and the resulting cash flows may not be possible. This does not however preclude the resource from being an asset.

Costs incurred do not necessarily constitute assets, because they do not necessarily result in future economic benefits flowing to the enterprise. It may however be difficult in practice to distinguish between items which do give rise to future economic benefits and items which do not. The converse is also true, in other words the absence of expenditure does not preclude an item from meeting the definition of an asset.

The FASB (1985 : Paragraph 173) notes that “the most obvious evidence of future economic benefit is a market price. Anything that is commonly bought and sold has future economic benefit ... Similarly, anything that creditors or others commonly

accept in settlement of liabilities has future economic benefit, and anything that is commonly used to produce goods or services, whether tangible or intangible and whether or not it has a market price or is otherwise exchangeable, also has future economic benefit. Absence of a market price or exchangeability of an asset may create measurement and recognition problems, but in no way negates future economic benefits that can be obtained by use as well as by exchange.”

## **7.13 LIABILITIES**

The framework defines a liability as “present obligation of the enterprise arising from past events the settlement of which is expected to result in an outflow from the enterprise of resources embodying economic benefits” (IASB : 1988 : Paragraph 49).

### **7.13.1 Present obligation**

The entity must have a present obligation to transfer economic benefits to another entity. The framework states that “an obligation is a duty or responsibility to act or perform in a certain way” (IASB : 1988 : Paragraph 60).

The framework points out in paragraph .60 that obligations are normally enforceable as a consequence of a legally enforceable contract, although an obligation may also arise from “normal business practice, custom and a desire to maintain good business relations or act in an equitable manner” (IASB : 1988). The FASB’s Statement of Financial Accounting Concepts No. 6 calls these non contractual obligations constructive and equitable obligations. “A constructive obligation is created, inferred, or construed from the facts in a particular situation rather than contracted by agreement with another entity or imposed by government” (FASB : 1985 : Paragraph 40). It is therefore an obligation which is implied rather than expressly written. “An equitable obligation stems from ethical or moral constraints rather than rules of common or statute law, that is, from a duty to another entity to do what an ordinary conscience and sense of justice would deem fair, just, and right” (FASB : 1985 : Paragraph 40).

The liability definition therefore focuses on economic obligations and not legal debt. Economic obligations constitute the responsibility to transfer economic resources to other enterprises. The framework deals specifically with the distinction between a

present obligation and a future commitment. Future commitments are not liabilities. The IASC has revisited when a liability should be recognised in its Draft Statement of Principles 'Provisions and Contingencies'. The IASC notes in this document that "the key consideration in assessing whether an enterprise should recognise a provision is whether the enterprise has a present obligation such that it has no realistic alternative but to make the expenditure" (IASC : 1996 : Paragraph 27).

### **7.13.2 Arising from past events**

The issues are the same as those relating to assets, except that the past event will be when it is perceived that the obligation which will result in the outflow of economic resources arises.

### **7.13.3 The settlement of which is expected to result in an outflow from the enterprise of resources embodying economic benefits**

The issues are similar to those relating to assets, except that the economic resources will flow out of the enterprise.

## **7.14 EQUITY**

The framework defines equity as "the residual interest in the assets of the enterprise after deducting all its liabilities" (IASC : 1988 : Paragraph 49).

Wolk et al. (1984 : 280) point out that defining equity in this fashion is indicative of a "proprietary view of the firm in which owners' equity represents owners' residual interest in the net assets." The equity is therefore mathematically determined as the difference between the total assets and the total liabilities. As a result the amount to be shown as equity is dependent on the measurement of the assets and liabilities. The framework encourages the sub-classification of the equity because "such classifications can be relevant to the decision-making needs of the users of financial statements when they indicate legal or other restrictions on the ability of the enterprise to distribute or otherwise apply its equity" (IASC : 1988 : Paragraph 65).

## 7.15 THE OTHER ELEMENTS OF THE CONCEPTUAL FRAMEWORK

The framework also defines two elements related to the measurement of the financial performance of the entity. These are income and expenses which are defined as follows:

- “(a) *Income* is increases in economic benefits during the accounting period in the form of inflows or enhancements of assets or decreases of liabilities that result in increases in equity, other than those relating to contributions from equity participants.
- (b) *Expenses* are decreases in economic benefits during the accounting period in the form of outflows or depletion’s of assets or incurrences of liabilities that result in decreases in equity, other than those relating to distributions to equity participants” (IASB : 1988 : Paragraph 70).

The definitions presented do not refer to inflows or outflows of recognised assets and liabilities, and the framework states that the same recognition criteria should be met as for assets and liabilities. It is clear from the definitions of income and expenses however that the inflows and outflows of recognised assets and liabilities must first be established before the amount of income or expenses to be shown in the statement of financial performance can be determined. This is consistent with the balance sheet approach to financial statement preparation.

The framework also allows income and expenses to be “presented in the income statement in different ways so as to provide information that is relevant for economic decision-making” (IASB : 1988 : Paragraph 72). Thus for example items of income or expense which arise in the ordinary course of business may be presented separately from those which do not.

### 7.15.1 Income

The framework breaks the term ‘income’ down into two further components, namely revenue and gains. Revenue is defined as to arise in the ordinary course of business,

while gains comprise other items which meet the definition of income but do not arise in the ordinary course of business.

### **7.15.2 Expenses**

The definition of 'expenses' is also broken down into expenses which arise in the ordinary course of business, and losses which are items that meet the definition of an expense but do not arise in the ordinary course of business. Because losses and gains are no different in nature from revenue and expenses that arise in the ordinary course of business they are not considered to be separate elements by the framework.

## **7.16 RECOGNITION CRITERIA**

The definitions set out above identify the elements' key features, but make no attempt to specify criteria which determine if the element must be recognised in the financial statements or not.

The framework requires that items which meet the definition of an element of financial statements and also meets the two recognition criteria should be recognised in the financial statements. The elements should be recognised if :

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- “(a) it is probable that any future economic benefit associated with the item will flow to or from the enterprise, and
- (b) the item has a cost or value that can be measured with reliability” (IASB : 1988 : Paragraph 83).

### **7.16.1 The concept of probability**

Paragraph .85 of the framework states that “ the concept of probability is used in the recognition criteria to refer to the degree of uncertainty that the future economic benefits associated with the item will flow to or from the enterprise” (IASB : 1988). No guidance is given as to what level of certainty makes the future economic benefit flow probable. A study by Reimers (1992) in the U.S. involving the interpretation of uncertainty expressions by auditors, engineering managers, marketing managers, and graduate students found that there was a high level of agreement in the interpretation

of uncertainty terms, both between, and within the different groups. It was found that auditors' average interpretations were most extreme, with the highest average probability for the 'probable' expression. However a study by Houghton and Walawski (1992) (in Laswad and Mak (1994 : 4)) of Australian auditors found that "there was substantial variability and ambivalence in the quantification of the 'probable' expression. "Studies of auditors in the United States and Canada have found that they ascribe a probability of 80 or 90 percent to probable, thereby implying a meaning of "highly likely" or even "virtually certain" (FASB : 1994 : 9). Chesley (1986 : 196) found that a group of mature students studying the same courses had very wide ranges of interpretations of words used for communicating uncertainty. Different preparers therefore have different perceptions of what probable means and how it should be assessed.

#### **7.16.2 Reliability of measurement**

The framework notes that "in many cases, cost or value must be estimated; the use of reasonable estimates is an essential part of the preparation of financial statements and does not undermine their reliability" (IASB : 1988 : Paragraph 86). The Canadian Institute of Chartered Accountants exposure draft dealing with measurement uncertainty sets out clearly the process of measurement as follows, "management's selection of the amount at which an item is recognized in financial statements would be its best estimate of the amount. Management's best estimate would be a specific amount or, when no one specific amount is more likely than another, an amount determined from a range of reasonably possible amounts that is based on reasonable and supportable assumptions" (CICA : 1993 : Paragraph 5).

In terms of the framework, the cost or value must be measurable so as to be measured with reliability. This reliability is discussed in the section dealing with the qualitative characteristics of financial statements. It necessitates that the information comply with faithful representation, substance over form, neutrality, prudence and completeness.

The framework does not specify whether the element must be recognised at cost or another value, because no basis of measurement is specified.

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## 7.17 MEASUREMENT OF THE ELEMENTS OF FINANCIAL STATEMENTS

The framework defines measurement as “the process of determining the monetary amounts at which the elements of the financial statements are to be recognised and carried in the balance sheet and income statement” (IASC : 1988 : Paragraph 99).

The framework provides no guidance as to which basis should be used. It points out that the following bases, amongst others, are used in varying combinations in financial statements;

- “(a) Historical cost
- (b) Current cost
- (c) Realisable (settlement) value
- (d) Present value” (IASC : 1988 : Paragraph 100).

Historic cost is the measurement basis most commonly adopted by enterprises, but it is often modified to incorporate components of the other bases (IASC : 1988 : Paragraph 101).

### 7.17.1 Concepts of capital and capital maintenance

#### 7.17.1.1 Concepts of capital

‘Capital’ is a stock concept and covers the resources employed by the enterprise. The framework points out that a financial concept of capital “is synonymous with the net assets or equity of the enterprise” (IASC : 1988 : Paragraph 102). Under a physical concept of capital, capital is “regarded as the productive capacity of the enterprise based on, for example, units of output per day” (IASC : 1988 : Paragraph 102). This approach does not take into account any liabilities the enterprise may have, as it is not concerned with the financial representation of capital. Most enterprises adopt the financial concept of capital.

#### 7.17.1.2 Concepts of capital maintenance and the determination of profit

The capital maintenance concept “determines the extent to which changes in shareholders’ net worth, as measured in the balance sheet, is partitioned between

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capital and profits, and hence the extent to which gains in value are recognised in the profit and loss account” (Tweedie and Whittington : 1990 : 96).

The financial and physical capital concepts give rise to the concepts of financial and physical capital maintenance.

Financial capital maintenance results in a profit only being earned “if the financial (or money) amount of the net assets at the end of the period exceeds the financial (or money) amount of net assets at the beginning of the period, after excluding any distributions to, and contributions from, owners during the period” (IASC : 1988 : Paragraph 104).

Physical capital maintenance results in a profit only being earned “if the physical productive capacity (or operating capability) of the enterprise (or the resources or funds needed to achieve that capacity) at the end of the period exceeds the physical productive capacity at the beginning of the period, after excluding any distributions to, and contributions from, owners during the period” (IASC : 1988 : Paragraph 104).

## **7.18 CONCLUSION**

This chapter set out an evaluation of the IASC conceptual framework. This provides guidance as to the characteristics of the information that accounting standards should produce. In terms of the conceptual framework the overall objective of financial statements is the provision of information which is useful for investment decision making. In addition the conceptual framework provides definitions of what constitutes an asset, liability or equity and when recognition should take place. The next chapter builds on this basis in order to evaluate the IASC proposals for financial instruments in terms of the conceptual framework.

## **CHAPTER 8 : ANALYSIS OF THE IASC FINANCIAL INSTRUMENT PROPOSALS AND THEIR APPLICATION TO SAFEX FINANCIAL INSTRUMENTS**

### **8.1 INTRODUCTION**

This chapter continues from chapter seven and provides an analysis of the IASC proposals for financial instruments contained in the discussion paper 'Accounting for Financial Assets and Financial Liabilities' issued in March 1997.

### **8.2 IASC DOCUMENTS DEALING WITH FINANCIAL INSTRUMENTS**

The IASC has issued a number of documents dealing with financial instruments. These include E 40 'Financial Instruments' issued in 1991 and replaced with E 48 of the same title issued in 1994. These exposure drafts dealt with the recognition, measurement and disclosure related to financial instruments. The inability to reach consensus on the recognition and measurement principles resulted in the IASC issuing IAS 32 'Financial Instruments: Disclosure and Presentation' in 1995. IAS 32 dealt only with the disclosure issues and certain presentation issues of financial instruments. IAS 32 was used as the basis for AC 125 'Financial Instruments: Disclosure and Presentation' issued as an accounting standard in South Africa. There are no matters of principle in the South African standard which are not consistent with those in IAS 32. The IASC discussion paper 'Accounting for Financial Assets and Financial Liabilities' presents a new set of proposals for recognition and measurement which are not based on the E 48 proposals and it is the intention that these proposals will be formulated into a standard.

### **8.3 THE IASC DISCUSSION PAPER PROPOSALS**

#### **8.3.1 Recognition and derecognition proposals**

It is proposed that initial recognition should take place when the enterprise becomes party to the contractual provisions of the instrument (IASC : 1997 : iii).

Derecognition of a financial asset or portion thereof should take place "when the enterprise realises the rights to benefits specified in the contract, the rights expire, or the enterprise surrenders or otherwise loses control of the contractual rights that comprise the financial asset (or a portion thereof)" (IASC : 1997 : iii). Derecognition

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of a financial liability or portion thereof should take place “when it is extinguished (that is, when the obligation specified in a contract is discharged, cancelled or expires) or when the primary responsibility for the liability (or a portion thereof) is transferred to another party” (IASC : 1997 : iii).

### **8.3.1.1 Measurement proposals**

The IASC (1997 : v) proposals are that initial measurement take place at the fair value of the consideration given or received for the instrument, and that the instrument be subsequently measured at fair value. All gains and losses are considered to be income. In addition all gains and losses are to be taken to the statement of profit and loss as they arise, except for certain designated hedges of anticipated transactions meeting the specified criteria and investments in foreign entities. Gains and losses on hedges of anticipated transactions which meet specified criteria would be recognised as part of other comprehensive income, or recognised in the income statement. The proposed qualification criteria for hedges of anticipated transactions include formal documentation of the hedging instrument, hedged item and the nature of the risk being hedged (IASC : 1997 : 151). In addition the documentation must include sufficient information related to the anticipated transaction “to enable its hedging relationship with the hedging instrument to be defined and future income gain and loss distinctions and allocations to be made” (IASC : 1997 : 151). Further more the “designated hedge should be consistent with the enterprise’s established policy of risk management”, “there should be a supportable basis for expecting that the hedge will be effective”, and “the anticipated transaction that is subject to the hedge must be probable, and present an exposure to price risk that could produce variation in cash flows that will affect reported income” (IASC : 1997 :151). These criteria therefore place the onus on management to ensure that the hedging transaction can be justified at inception of the contract. This will enhance the attestability of the transactions and reduce the possibility of using the allowed accounting treatment of hedges of anticipated transactions to avoid recognising gains and losses on other contracts outside the profit and loss statement. In addition to the criteria outlined above the hedging contract must not be a hedge of “a transaction to acquire assets or incur liabilities that will be measured at fair value subsequent to acquisition or incurrence” (IASC : 1997 : v) to qualify for the allowed treatment. Gains and losses on hedges of investments in

foreign entities should be presented outside the statement of profit and loss to match the treatment of the translation differences.

It is proposed that the definition of 'fair value' be based on the definition of IAS 32 being "the amount for which an asset could be exchanged, or a liability settled, between knowledgeable, willing parties in an arm's length transaction" (IASC : 1995 : Paragraph 5). The IASC further refines the fair value of a financial instrument to represent "the present value of its expected future cash flows discounted at the current market rate of return for instruments of similar term and risk" (IASC : 1997 : 85).

### **8.3.2 The IASC proposals in terms of the objectives of financial statements**

As noted, the overall objective of financial statements in terms of the framework is to provide information that is useful to a wide range of users in making economic decisions. This is primarily achieved by enabling the non homogenous users, to assess the nature, timing and certainty of future cash flows. The information should also have either predictive and/or confirmatory value. Implicit in the assessment of the timing and certainty of the cash flows is the assessment of risk. As noted earlier studies have concluded that risk and return assessments are translated into security price movements, and that the volatility of accounting income and other surrogates (such as leverage ratios) are used to assess the risk associated with an enterprise.

As discussed in section 7.5.3.1 the demonstration of stewardship by management to users is also necessary to provide information useful for making economic decisions. If the IASC proposals are applied, the effect of all management decisions (other than hedges of anticipated transactions and hedges of investments in foreign entities) and therefore their stewardship would be reflected in the income statement. For hedges of investments in foreign entities the effect of these decisions will be offset against the accounting effect of underlying hedged position. For hedges of anticipated transactions the effect will be recognised in the income statement when the gains and losses on the hedged transaction affects the income statement (unless this transaction is no longer probable, in which case the amount is recognised in the income statement immediately).

The IASC is also of the view that “it may be reasoned that fair value provides a better measure of performance and stewardship than cost-based measures because fair value reflects all economic events occurring up to the end of the reporting period” (IASC : 1997 : 89). Management will however be unable to specifically demonstrate their stewardship for contracts entered into as hedges of factors other than fair value. For example the use of the fair value measurement basis may preclude the demonstration of hedging strategies such as hedging cash flows.

As a result of the use of the fair value measurement basis and the requirement that all gains and losses (other than the very limited exceptions detailed above) be recognised in the income statement, management are going to be assessed in relation to the fair value effects of their actions. The flexibility they currently enjoy to present the results of their decisions in the manner they would like will clearly be restricted. This view is also consistent with available evidence which “indicates that, increasingly enterprises are actively managing their financial risks against fair value information” (IASC : 1997 : 88). As discussed in chapter two, enterprises consider a wide variety exposures to be hedgeable. The limiting of the accounting options may therefore impair management’s ability to demonstrate their stewardship as the accounting treatment may not properly represent the strategy of management. For example management may seek to hedge the cash flows over the life of a transaction, although mismatches in the timing of the cash flows between the hedge and the hedged position may lead to short term mismatches in changes in fair value between the two positions. This will result in an impact on earnings, although over the life of the transaction the cash flows and therefore fair value changes will be equal. However the internal and external comparability of transactions will be enhanced in that all transactions will be accounted for in the same manner both within and between enterprises. In addition as discussed in chapter two enterprises may be willing to accept new or additional risks in order to hedge a specific risk. The proposed treatment will result in the effect of these mismatched risks being demonstrated in income, rather than possibly being hidden in the balance sheet.

The SAFEX margin adjustment requirements for listed financial instruments necessitate that the cash flows, and therefore any change in fair value be recognised in

the financial statements as they occur. It is submitted that the IASC proposals clarify the position as regards whether to recognise the gains and losses on these instruments in the income statement, and will provide users with better presentation to enable them to determine the nature, timing and certainty of cash flows. This is as a result of earnings including the full effect of the contracts entered into which will be reflected in the volatility of earnings. In addition the cash inflow or outflow and non deferral of gains and losses will influence the liquidity and leverage of the enterprise. The prohibition on deferring gains and losses as assets and liabilities will further enhance the quality of the inputs into users' risk assessment measures. Such a treatment would make the user aware of the nature of the earnings for making future predictions. In addition the use of the fair value measurement basis offers advantages for meeting the conceptual frameworks' requirements. These are discussed in section 8.3.6 below.

The information provided by the IASC proposals is factual, being the results of actual contracts entered into. The provision of extra interpretative information, such as potential future exposure to price risk should also be made by way of note disclosure.

#### **8.3.2.1 Position of the accrual basis**

As discussed in section 7.7.1 the accrual basis envisaged in the framework was to enable the matching of costs and revenue in order to get a better indication of enterprise performance. With financial instruments however, this concept loses relevance as the relationship of cost to revenue may not be applicable. For example with SAFEX futures contracts there is no cost and the gains or losses are realised in cash daily, making the accrual basis irrelevant. For SAFEX purchased options the contracts are not entered into for the purpose of generating revenue, but rather to speculate or hedge. The premium paid cannot therefore be viewed as a cost to be offset against any gains. In addition any gains or losses are realised in cash daily and therefore the accrual concept is not relevant.

#### **8.3.3 The IASC proposals in relation to the qualitative characteristics of financial statements**

As noted the four principal qualitative characteristics of financial information are relevance, reliability, understandability and comparability. These may have

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constituent components, which must be met in order to achieve the principal characteristics.

#### **8.3.3.1 Relevance**

In order to be relevant the information must help the decision maker in making an economic decision. The assessment of the relevance of the information is necessarily a subjective exercise. There is however a strong conceptual argument that the fair value measurement basis and the recognition of all gains and losses (other than the allowed exceptions) in the income statement in the period in which they occur does present the most relevant information for economic decision making. Refer to section 8.3.2 above and section 8.3.6 below for the argument in favour thereof. In addition the recognition of all financial assets and liabilities in the balance sheet will impact on the inputs (such as leverage ratios) into users' decision making processes and will therefore be relevant to their decision making.

#### **8.3.3.2 Reliability**

The proposal that all financial assets and financial liabilities be recognised in the financial statements enhances the reliability and completeness of the financial statements as no off balance sheet instruments are allowed. It is submitted that the reliability of the financial statements as a whole will be enhanced as users of financial statements would expect the effect of financial instruments to be recognised in the financial statements. This is reinforced by the concern of accounting standard setting bodies and the International Organization of Securities Commissions (IOSCO) over the current non recognition of financial instruments. As detailed in chapters three and four there are clear economic consequences associated with SAFEX futures and options. It is submitted that the IASC proposals will result in the economic substance of SAFEX futures and options being presented in the financial statements. In addition the limitation of accounting bases open to management enhances the neutrality of the information. There is however still scope for management to influence the neutrality of the calculation of fair value as the definition thereof is not rigorous as it is defined in general terms which are open to interpretation (refer to section 8.3.1.1). However ultimately management must ensure that reliability of measurement is achieved in order to comply with the requirements of the conceptual framework.

### **8.3.3.3 Comparability**

As already discussed the IASC proposals severely limit the accounting options of management, and therefore enhance the comparability of the financial information between enterprises. The only area for choice relates to hedges of anticipated transactions. This choice may hinder comparability as the gains and losses can be recognised in the income statement or directly in equity. In addition as the IASC points out “the fair values of all financial assets and financial liabilities at any moment in time are fully comparable because they reflect the same market-determined present value measure of expected future cash flows” (IASB : 1997 : 87). As noted above however, the inputs management use to determine the fair value may differ.

### **8.3.3.4 Understandability**

Understandability is also enhanced by the IASC proposals as fair value is the only allowed measurement basis. In addition all financial assets and financial liabilities are to be recognised in the financial statements. There is therefore reduced complexity and ambiguity related to the measurement bases and recognition or non recognition of financial statements. In addition the use of fair value is consistent with how modern capital markets operate, and should therefore be more easily understandable to users.

## **8.3.4 The IASC proposals in relation to the elements of financial statements**

The central issue is whether SAFEX financial instruments represent assets and liabilities in terms of the framework definitions. The IASC proposals are that all financial assets and financial liabilities as defined are assets and liabilities in terms of the conceptual framework definitions. The following section provides an analysis of the IASC asset and liability definitions.

### **8.3.4.1 A resource controlled by or present obligation of the enterprise**

SAFEX contracts are legally enforceable. Therefore other enterprises can be excluded from any benefits derived therefrom. Control over any resource is therefore readily identifiable. Conversely the enterprise will be legally obliged to deliver benefits owing under a contract. The enterprise therefore will have an obligation for any

outflow of benefits. For SAFEX financial instruments any benefit or obligation will be settled in cash as part of the mark-to-market process.

#### **8.3.4.2 Past event**

As discussed in section 7.12.1.2, a past event may be viewed as a de facto exchange of value. In the case of SAFEX futures contracts, no value is exchanged when the contract is entered into, and therefore it is difficult to contend that a past event has taken place. The margin payment is not an exchange between the counterparties, and cannot be viewed as an exchange of value. The above view is reinforced by the historic treatment of executory contracts discussed in chapter six. The IASC proposals however discard this view and contend that for financial assets the “past event occurs when the enterprise becomes a party to the underlying contract, because this event establishes the enterprise’s rights to the economic benefits that comprise the financial asset” (IASC : 1997 : 48). For financial liabilities “the past event is the act of becoming party to the contract” (IASC : 1997 : 49).

For SAFEX options the payment of a premium by the purchaser to the writer evidences the event, and therefore falls more easily into the traditional interpretation of a past event. The IASC proposals however remove all doubt related to whether an event occurs when purchasing or selling these instruments.

#### **8.3.4.3 From which economic benefits are expected to flow to the enterprise**

In order for there to be an asset, there must be the potential to contribute to the flow of cash and cash equivalents to the enterprise. For SAFEX futures (purchased and sold) the exposure to price risk creates the potential for favourable cash and cash equivalent flows. As discussed in chapter three, a futures contract traditionally involves the exchange of one resource for another at an agreed price. There is therefore an outflow and inflow of cash or cash equivalents which will occur. These may be settled on a net basis. This is consistent with the IASC (1997 : 50) which considers the financial asset and financial liability constituting a forward to be inseparable and which should be accounted for together until the time it is settled. This view represents a change in thinking from that detailed in E48, where the IASC considered either the right or obligation in terms of the forward contract to have intrinsic value at any one time. It

is submitted that the current IASC proposals present the correct analysis of the nature of a futures contract.

With SAFEX purchased options, the valuation incorporates the probability of a flow to the enterprise (refer to section 8.3.5 below). The fact that the option has value, is indicative of the potential to result in the flow of cash or cash equivalents to the enterprise.

#### **8.3.4.4 The settlement of which is expected to result in an outflow from the enterprise of resources embodying economic benefits**

For SAFEX futures the issues are the same as those for an inflow of economic resources discussed above, except that there is an obligation to deliver cash or cash equivalents.

For SAFEX written options, the enterprise is obliged to perform under the contract. An outflow of cash or cash equivalents under the contract will only occur if the contract is in the money and exercised by the holder thereof or SAFEX as applicable. The premium received is calculated based on the probable outflow of economic benefits, and therefore there is the expectation of an outflow of cash or cash equivalents. The premium received in cash clearly represents an asset. The obligation in terms of the option contract however represents a liability. At inception of the contract it may be reasoned that the premium received and the best estimate of the potential outflow are equal and opposite.

#### **8.3.5 The IASC proposals in relation to the recognition criteria**

As discussed in section 7.16, the framework sets out two recognition criteria. The first is that it must be "probable that any future economic benefit associated with the item will flow to or from the enterprise" (IASB : 1988 : Paragraph 83). As discussed in chapter four, the probability of the flows associated with an option is taken into account when valuing it. This is consistent with the view of the IASC that "for a financial instrument, the probability of future benefit inflow or outflow is a matter affecting its valuation rather than its recognition" (IASB : 1997 : 57). The IASC is

therefore of the view that the probability criteria as set out in the framework are met when valuing the financial instrument.

The second requirement is that the “item has a cost or value that can be measured with reliability” (IASC : 1988 : Paragraph 83). The IASC is of the view that “no exemption should be given on the grounds of measurement uncertainties” (IASC : 1997 : 59). This makes the presumption that the measured value can be made within a range of the actual amount which will not undermine users’ of financial statements confidence in the reliability of the information. For SAFEX the cost when entering into a contract will be determined on the market. It is submitted that it is reasonable to assume that the cost will equal the fair value. Subsequent to initial recognition, the fair value (as proposed) will be relatively easy to determine for those contracts that are actively traded. There are however some contracts listed on SAFEX where the fair value may need to be determined as the market may be illiquid.

As discussed in section 8.3.1 the proposed recognition criteria are not based on these criteria. They are instead detailed in terms of contractual rights.

### **8.3.6 The IASC proposals in relation to the measurement basis**

The IASC proposals are that the fair value measurement basis be used. The definition of ‘fair value’ as set out in IAS 32 is accepted by the IASC in the discussion paper. The IASC proposals would however amend the suggestion in paragraph 81 of IAS 32 that transaction costs be taken into account when determining fair value as it is proposed that transaction costs not be taken into account (IASC : 1997 : 84).

Implicit in the determination of the fair value of a financial instrument is that the expected future cash flows related to an instrument be discounted at the expected market interest rates for the risk associated with the instrument (IASC : 1997 : 84). This measure therefore provides users of financial statements with the best information to enable them to assess the timing, nature and risk of future cash flows associated with a financial instrument. In addition this basis offers predictive value by incorporating the best assessment of the market as to what will happen. In the case of SAFEX futures, the fair pricing is determined as discussed in chapter three. For index

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based futures the present value concept is incorporated in determining the price of the index underlying the contract. For SAFEX options, the fair value is determined as detailed in chapter 4. The value is therefore the present value of the expected future cash flows from the futures contract.

### **8.3.7 Income**

As discussed in section 7.15 income and expenses are determined by calculating the change in recognised assets and liabilities. Therefore if only assets and liabilities as defined in the framework are recognised in the statement of financial position, the inflows and outflows thereof should be recognised as income. The IASC proposals would not allow the deferral of gains and losses on hedging contracts. Such deferred amounts do not represent assets and liabilities in terms of the framework. For example if an enterprise purchases a future and a loss is made, the loss will be paid to the counterparty as part of the margining requirements. There is no expected inflow of economic benefits arising therefrom.

### **8.3.8 Capital maintenance**

As discussed in section 7.17.1.2 the capital of an enterprise must be maintained before the profit thereof can be determined. In the context of financial instruments the physical capital maintenance concept is not relevant. As a consequence, the IASC accepts the financial capital maintenance concept for financial instruments. The IASC's view is that "financial capital is maintained as long as the fair value of an enterprise's financial instruments, measured by discounting their future cash flows at the expected market rates of return, neither increases nor decreases" (IASC : 1997 : 129). Where hedging seeks to preserve fair value, there is the intention to maintain the enterprise's financial capital employed in the hedged position.

## **8.4 CONCLUSION**

It can be seen from the above analysis that the conceptual framework does offer some guidance in accounting problem solving, particularly with regard to the qualitative characteristics with which financial information must comply. The IASC proposals for accounting for financial instruments are reasoned within the confines of the

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framework, and when the practical considerations of SAFEX financial instruments are taken into account the result is broad compliance.

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**CHAPTER 9 : RESEARCH METHODOLOGY****9.1 INTRODUCTION**

This chapter details the research methodology used in order to gather the data to meet the first objective of the study set out in chapter one.

**9.2 THE RESEARCH METHOD**

In selecting the research method the use of questionnaires and personal interviews were considered as approaches to collecting the data. Although personal interviews could have yielded more information and allowed for an element of flexibility, this method was discarded because of the large sample sizes and the dispersed geographic location of the participants. In addition the achievement of the objectives of the study did not require additional information or flexibility which would have necessitated an interview approach. Furthermore the data required could easily be structured into a questionnaire format. A further reason for selecting the questionnaire approach was that the large sample sizes and the dispersed location of respondents meant that the cost and time which needed to be invested made the personal interview method prohibitive. Therefore the questionnaire approach was adopted as it allows for in-depth data collection from widely dispersed sources at a reasonable cost.

**9.3 QUESTIONNAIRE DEVELOPMENT****9.3.1 Purpose of the questionnaires**

Two questionnaires were developed. Firstly a 'preparer's questionnaire' that was designed to obtain data from the viewpoint of enterprises on accounting for SAFEX financial instruments. Secondly a 'user's questionnaire' that was designed to obtain data on accounting for SAFEX financial instruments from the viewpoint of the users of financial statements. Where possible, the two questionnaires were designed to complement each other so as to obtain relevant and balanced information. The purpose in developing the preparer's questionnaire was to obtain from enterprises:

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- General information about which SAFEX financial instruments they use and the purpose for which they are used.
  - Their viewpoint as to the reliability of the market price determined on SAFEX for futures and options as a measure of the fair value of the instruments and any adjustments respondents would wish to make to the market price.
  - The view of preparers as to whether gains and losses on fair valuation of SAFEX financial instruments are considered to be assets, and whether these views differ for instruments classified as speculative or hedges.
  - To gather pertinent information in relation to the respondents' technical SAFEX and accounting knowledge.

The purpose in developing the user's questionnaire was to obtain from external users:

- Their views as to whether gains and losses on fair valuation of SAFEX financial instruments are considered to be assets, and whether the views differ for instruments classified as speculative or hedges.
- To determine whether users consider the SAFEX market prices for futures and options to be a reliable measure of fair value for financial reporting purposes and any adjustments to the market prices they would consider necessary.
- To gather pertinent information in relation to the respondents accounting knowledge.

### **9.3.2 Survey populations (respondents)**

#### **9.3.2.1 Preparers of financial statements**

Statistics from SAFEX indicate that most of the futures and options contracts traded are equity index based. For example, these contracts accounted for 99,3 percent of turnover in the 1996 SAFEX financial year (SAFEX : 1996 : 7). It was therefore considered appropriate to limit the population for preparers to financially orientated enterprises, as it was most likely that they were accounting for SAFEX financial instruments. In addition it was felt that the technical nature of the questionnaire would lead to non-responses if preparers were not actually accounting for the instruments.

The survey was therefore limited to banks (96 in total, including representative offices of foreign banks), corporate treasurers (six in total), long term (33 in total) and short term (54 in total) insurers, professional reinsurers (nine in total), as well as technical partners at large accounting and auditing firms (five in total). The names and addresses of the preparers surveyed were extracted from the 1997 Financial Markets Handbook (Profile Media : 1997 : v)). The questionnaires were addressed to the financial director (or national technical partner for auditing firms) of the respective enterprise, unless a specific local representative was listed in the Financial Markets Handbook. The total number of questionnaires mailed to preparers was 203.

### **9.3.2.2 Users of financial statements**

For users of financial statements, a decision was made to survey the investment analysts ranked in the annual Financial Mail investment analysts survey published in the 16 May 1997 issue. This was because these analysts are regarded by their clients as being the best in their respective fields in formulating investment decisions. In addition by virtue of the nature of their work they can reasonably be expected to utilise financial statements and be familiar with current accounting developments. All analysts listed as being equity analysts were selected. The total number of questionnaires mailed to users was 99.

### **9.3.3 Questionnaire distribution and collection**

The questionnaire distribution and collection was performed in the following fashion. All participants within each group i.e. users and preparers, were mailed their respective questionnaires on or about the same date. The questionnaires were sequentially numbered so as to record from whom the replies had been received. Questionnaires postmarked prior to the first reply deadline specified were differentiated from those mailed after this date. The postmark date was used as a result of the inefficiencies inherent in the South African postal system which makes the actual delivery date unreliable. The differentiation was performed so as to enable testing for non-response bias. A second mailing of questionnaires was done for all non repliers five weeks after the initial mailing. All responses to the second mailing were identified as non-respondents for the purpose of testing non-response bias.

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## 9.4 QUESTIONNAIRE FORMULATION

Draft questionnaires were formulated with reference to the research objectives listed in chapter one.

Draft questionnaires were pilot tested among academics and chartered accountants in practice. This included a review by a specialist in banking and treasury instruments. In total five of the preparer's questionnaires were pilot tested. The user's questionnaires were based directly on the preparer's questionnaires and therefore only limited pilot testing amongst academics was performed. In addition, as noted below the mailing of questionnaires to users was delayed in order to allow the evaluation of the preparer's responses.

During this pilot testing, respondents completed the questionnaire as it was. The responses were assessed for ease of analysis and understandability. This assessment indicated that changes were necessary to the questionnaires and these changes were incorporated into the final questionnaire. An example of the preparer's and user's questionnaires are included in appendices A and B respectively. It must be noted that the questionnaire sent to the auditors did not include the first three questions in the preparer's questionnaire due to their non applicability.

The length of the questionnaire was an area of particular focus, in order to minimise non-responses due to excessive questionnaire length. The final questionnaire length is regarded as reasonable given the time it took testing respondents to complete the questionnaire and the technical nature of the questions asked.

The final step in the formulation of the questionnaires was the drafting of covering letters. The letters, including the follow up letters, are shown in Appendices C to F.

### 9.4.1 Mailing of questionnaires

The first mailing of questionnaires to preparers took place on 6 and 7 August 1997. Respondents were asked to return the questionnaires by 5 September 1997. A follow up questionnaire was sent on 15 September 1997 to all who had not responded by

12 September 1997.

The first mailing of questionnaires to users took place on 1 September 1997. Respondents were asked to return the questionnaires by 30 September 1997. A follow up questionnaire was sent on 6 October 1997 to all who had not responded by 3 October 1997. Respondents were requested to return this questionnaire by 31 October 1997. The mailing of questionnaires to users was delayed in order to evaluate the initial responses to the preparers' questionnaire which indicated that a highly technical questionnaire would result in a low response rate. The highly technical questions were therefore omitted from the users questionnaire.

## 9.5 ANALYSIS AND INTERPRETATION

The study, interpretation and evaluation of the data collected is detailed in chapters ten and 11.

The responses to the two questionnaires were as follows:

Group	Number of questionnaires mailed	Useable responses (first mailing)	Useable responses (second mailing)	Total number of useable responses	Total percentage of useable responses
Preparers	203	13	15	28	13.8%
Users	99	4	8	12	12.0%

**Table 7 : Questionnaire response rates**

55 responses were received from preparers (27.1 percent of questionnaires mailed) indicating that the respondents could not complete the questionnaire for various reasons, of which the predominant reason was that they did not use SAFEX financial instruments. Therefore the total response rate to the preparers questionnaire was 40.9 percent. As a result of the above, the low response rates for completed questionnaires are attributed to the highly technical nature of the area being studied which did not enable respondents to complete the questionnaire without detailed knowledge of SAFEX financial instruments.

The constituents of responses from preparers were as follows:

- Six banks
- Eleven long-term insurers
- Six short-term insurers
- One reinsurer
- Two corporate treasurers, and
- Two accounting and auditing firms.

### 9.5.1 Statistical analysis

A decision was made to use nonparametric statistical testing in the analysis of the data. This was for the following reasons. Firstly parametric tests make rigorous assumptions related to the populations from which the samples are drawn (for example a normally distributed population). In contrast nonparametric statistical tests are “based on a model that specifies only very general conditions and none regarding the specific form of the distribution from which the sample was drawn” (Siegel and Castellan : 1988 : 34). Secondly the sample sizes were very small and as noted by Siegel and Castellan (1988 : 35) “there may be no alternative to using a non-parametric statistical test unless the nature of the population distribution is *known exactly*.” The population distribution is not known exactly, and consequently nonparametric techniques which “result in conclusions which require fewer qualifications” (Siegel and Castellan : 1988 : 3) were selected.

The non-parametric binomial test, where appropriate, was used for data collected from a binomial population (such as yes/no responses). This test enables the assessment of whether it is reasonable to believe that the proportions (or frequencies) of the two categories in the sample could have been drawn from the same population with the hypothesised values of  $p_0$  and  $1 - p_0$  (where  $p_0$  is the probability of the first answer (e.g. yes) and  $1 - p_0$  is the probability of the second answer (e.g. no)). If the hypothesis is  $H_0 : p_0 = 1 - p_0 = 1/2$ , the probabilities of the various outcomes when it is assumed that  $H_0$  is true can be calculated. This probability is expressed as the test statistic  $k$ . Siegel and Castellan (1988 : 324) gives the probabilities associated with the occurrence under  $H_0$  of observed value as small as  $k$  for samples where the sample size is less

than or equal to 35 and when  $p_0=(1-p_0)=\frac{1}{2}$ . The basis of rejection of  $H_0$  consists of all values of  $Y$  (where  $Y$  is the number of respondents who answered yes or no as appropriate), which are so small that the probability associated with their occurrence under  $H_0$  is equal to or less than the confidence interval (e.g.  $p<0.01$ ).

Where the respondents ranked  $N$  items, the Kendall coefficient of concordance ( $W$ ) was used to determine if there was an association amongst the rankings of the respondents. Where necessary tied observations were adjusted for. A high or significant value of  $W$  may be interpreted as meaning that the  $k$  observers are applying essentially the same standard in ranking the  $N$  items under study. The null hypothesis,  $H_0$ , is that the  $k$  rankings are unrelated. If  $W$  is greater than the critical value (as set out in Siegel and Castellan (1988 : 365) for  $N \leq 7$ ), then  $H_0$  is rejected and the conclusion is that the rankings are not unrelated (i.e. there is an association amongst the respondents).

## **9.6 TEST FOR NON-RESPONSE BIAS**

As noted by (Wallace and Mellor : 1988 : 138) non-responses can relate to questionnaires as well as specific questions in the questionnaire. These non-responses can substantially bias inferences drawn from responses to the questionnaires.

### **9.6.1 Item non-response**

In order to reduce the possibility of non-responses to specific questions, the questionnaire design incorporated response alternatives which enable respondents not willing, or not knowing the answer to complete the question.

### **9.6.2 Questionnaire non-response**

In order to reduce the questionnaire non-response rate the two methods detailed by Wallace and Cooke (1990 : 285) were considered. The first method whereby the questionnaire could be answered by someone in the enterprise other than to whom it was addressed was clearly detailed in the covering letter. Pertinent information of the respondent was collected in the questionnaire. The second method, namely multiple mailing was performed as discussed above.

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In order to test for questionnaire non-response bias the three methods recommended by Wallace and Mellor (1988 : 132) were considered. The 'surrogate' method, whereby a comparative analysis of responses by date of reply is performed was selected to determine any non response bias. The other two methods discussed by Wallace and Mellor (1988 : 133) whereby the profile of respondents are compared against known characteristics of a sampled population or where the characteristics (for example geographical location) of respondents are compared with those of non-respondents from the sample were not used because of the difficulty of making them operational. This is because of the difficulty in obtaining the requisite information.

In performing the comparative analysis between respondents and non-respondents the Fisher exact probability test was used for nominal data (for example yes/no replies). The Wilcoxon-Mann-Whitney test was used for the ordinal data. This analysis was performed question by question. However certain questions could not be tested for non-response bias because of the nature of the questions. For the nominal data, the first six responses (respondents) received were tested against the last six responses (non-respondents) received. Testing of the nominal data indicated that the null hypothesis (that there is no difference between respondents and non-respondents) can be accepted at the 95 percent confidence interval. For the ordinal data the first five responses received were tested against the last six responses received. The testing of the ordinal data indicated that the null hypothesis (that there is no difference between respondents and non-respondents) can be accepted at the 95 percent confidence interval.

In the case of the user's questionnaire, all the questionnaires received prior to the first deadline date (four in total) were tested against all the questionnaires received after this date (eight in total). All the nominal data was tested using the Fisher exact probability test and it was concluded at the 95 percent confidence interval that the null hypothesis (that there is no difference between respondents and non-respondents) could be accepted.

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## 9.7 TEST FOR RESPONDENT DIFFERENCES

In order to test whether the responses of respondents to the preparers questionnaire differed by virtue of the sector in which they operate (for example banks) the same statistical tests as were performed to test non-response bias were used to compare the responses from banks to the long-term and short-term insurance enterprise responses. The tests indicated that the null hypothesis (that there is no difference between the banks and the relevant group) can be accepted at the 95 percent confidence interval for short term insurers for all nominal and ordinal responses. The tests also indicated that the null hypothesis can be accepted at the 95 percent confidence interval for long-term insurers for all nominal and ordinal data, except for the responses to question 11. The testing indicated that the null hypothesis be rejected at the 95 percent confidence interval for question 11. Therefore this has been taken into account in the analysis in chapter ten.

## 9.8 CONCLUSION

This chapter outlined the research methodology used in this research study. Postal questionnaires were utilised in order to collect the data and the responses were tested for non-response bias and differences between the groups surveyed.

## CHAPTER 10 : PREPARERS - ANALYSIS OF SURVEY RESULTS

### 10.1 INTRODUCTION

This chapter analyses the responses of the respondents that returned the preparers questionnaire. A summary of the 28 useable responses is included in chapter nine. A copy of the questionnaire is included in appendix A.

### 10.2 GENERAL INFORMATION

The first three questions of the preparers questionnaire were designed to gather general information about the instruments used by the enterprise. Questions four and 25 collected information about the respondent that completed the questionnaire.

#### 10.2.1 Instruments used

Table 8 below, sets out the number of respondents indicating which SAFEX instruments they use and the purpose for entering into the contracts. Instruments listed in question one in the questionnaire, but not indicated as being utilised by any respondents have been omitted from table 8.

Contract entered into	Purpose for entering into the contracts		
	Speculation	Hedging	Arbitrage
JSE index based futures	10	16	5
JSE index based options	7	15	4
Long bond based futures	5	6	4
Long bond based options	7	12	5
Rand/Dollar based futures	1	1	1
Rand/Dollar based options	1	1	1
<i>Other-individual equity options</i>	1	2	0

**Table 8 : Nature of SAFEX contracts utilised by respondents - All respondents**

The responses indicate that JSE index based futures and options are used by the most respondents. This was expected and is consistent with the fact, as discussed in section 9.3.2.1 that 99,3 percent of the contracts traded on SAFEX in 1996 were JSE equity index based. The responses also indicate that the use of long bond based futures and

options are relatively wide spread. The predominant use of these instruments is also for hedging purposes. No inference can however be made from the above responses as to the level of use of these contracts and this was tested in the next question the results of which are set out in section 10.2.2 below.

The responses included in table 8 are analysed for the predominant constituent business sectors namely banks, long-term insurers and short-term insurers in tables 9 to 11 below.

<b>Contract entered into</b>	<b>Purpose for entering into the contracts</b>		
	Speculation	Hedging	Arbitrage
JSE index based futures	4	3	3
JSE index based options	3	3	2
Long bond based futures	2	2	3
Long bond based options	3	3	4
Rand/Dollar based futures	1	1	0
Rand/Dollar based options	1	1	1
Other-individual equity options	1	1	1

**Table 9 : Nature of SAFEX contracts utilised by respondents - Banks**

A review of the responses included in table 9 indicates that banks do not enter into the contracts for any predominant reason.

<b>Contract entered into</b>	<b>Purpose for entering into the contracts</b>		
	Speculation	Hedging	Arbitrage
JSE index based futures	4	10	2
JSE index based options	3	9	1
Long bond based futures	0	1	0
Long bond based options	3	5	1
Rand/Dollar based futures	0	0	0
Rand/Dollar based options	0	0	0
Other-individual equity options	0	1	0

**Table 10 : Nature of SAFEX contracts utilised by respondents - Long-term insurers**

The responses of long-term insurers indicate that the predominant use of SAFEX financial instruments is for hedging purposes.

Contract entered into	Purpose for entering into the contracts		
	Speculation	Hedging	Arbitrage
JSE index based futures	2	3	0
JSE index based options	1	3	0
Long bond based futures	1	2	0
Long bond based options	1	3	0
Rand/Dollar based futures	0	0	0
Rand/Dollar based options	0	0	0
Other-individual equity options	0	0	0

**Table 11 : Nature of SAFEX contracts utilised by respondents - Short-term insurers**

The responses of short-term insurers indicate that it can tentatively be concluded that the predominant use of SAFEX financial instruments is also for hedging purposes.

### 10.2.2 Use of the instruments

Table 12 below sets out the number of respondents indicating the level of the enterprise's SAFEX hedging, speculation or arbitrage activities in relation to the operations of their enterprise.

Level of importance	Use of instrument		
	Speculation	Hedging	Arbitrage
Very significant	3	4	1
Significant	3	8	3
Insignificant	8	10	6

**Table 12 : Level of importance of SAFEX financial instruments to respondents**

Both tables 8 and 12 indicate that the majority of respondents use SAFEX index and bond based instruments for hedging and speculation and consider hedging to be the most significant use for the instruments in relation to the level of their enterprise's operations. However a review of the analysis related to banks provided in table 9 indicates that banks do not use the instruments predominantly for hedging although long-term and short-term insurers do.

Table 13 below indicates the exposures hedged with SAFEX financial instruments by respondent enterprises.

<b>Position hedged</b>	<b>Number of respondent enterprises</b>
The fair value of equity positions	17
The fair value of bond positions	10
The value of import/export commitments	0
The value of foreign creditors/debtors/borrowings	0
Other	0

**Table 13 : Nature of positions hedged by respondent enterprises**

This is also consistent with the expected results given the nature of the instruments traded on SAFEX as discussed in section 9.3.2.1. There however is inconsistency with two of the responses to question one. A respondent indicated that rand/dollar based instruments were used for hedging but the positions indicated as being hedged did not include a foreign currency exposure. This respondent did however indicate that the level of use of these instruments was minimal, and therefore it may be concluded that the level of use of the instruments for hedging was insignificant to the operations of the enterprise. The other respondent indicated that bond options are used for hedging but did not indicate that bond positions are hedged.

All respondents indicated that the fair value of positions is the exposure being hedged. It therefore appears that SAFEX financial instruments are not used as cash flow hedges.

### **10.2.3 Knowledge of respondents**

Question four collected data related to the respondents' knowledge of the SAFEX mark-to-market margining procedures. This may be viewed as a proxy for the respondents' technical knowledge of SAFEX instruments and the mechanics of the market.

Table 14 sets out the number of respondents falling into each discrete ranking value (a one ranking is having no knowledge and a six ranking is having a detailed knowledge of the mark-to-market margining procedures).

Instrument	Rating of knowledge						Mean score
	1	2	3	4	5	6	
Futures	4	2	2	7	4	8	4.07
Options	4	2	2	7	5	7	4.04

**Table 14 : Rating of SAFEX margining procedure knowledge of respondents - preparers**

One respondent did not provide the data. All respondents except one considered their knowledge of the mark-to-market margining procedures to be the same for both futures and options. The responses also indicate that the majority of respondents consider their knowledge of the procedures to be better than average (as measured by the mean score).

Question 25 also collected general data relating to the level of accounting knowledge of the respondents. The results of this are set out in table 15 below (a one equates to no formal accounting education whereas a four equates to being a qualified chartered accountant).

Number of respondents	Level of accounting knowledge				Mean score
	1	2	3	4	
	2	4	9	11	3.12

**Table 15 : Rating of accounting knowledge of respondents - preparers**

Two respondents did not complete the question. The responses indicate that the level of accounting knowledge of respondents can be considered to be good.

The possibility of bias exists in that respondents may not have an objective view of their abilities, unless there is no subjectivity in the response (such as being a qualified chartered accountant). It is however submitted that this potential bias is at least partially mitigated by the respondent remaining anonymous.

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### 10.3 RELIABILITY OF SAFEX MARKET PRICES FOR DETERMINING THE FAIR VALUE FOR FINANCIAL REPORTING PURPOSES

Data was collected using questions five to nine of the preparers questionnaire in order to test the hypothesis that preparers of financial statements consider the cumulative SAFEX mark-to-market adjustments to be a reliable measure of the fair value of futures for financial reporting purposes. Question seven was designed to determine the method(s) preparers use in determining the fair value of SAFEX futures. It also collected data as to the relative importance of the different methods available in determining the fair value. Questions eight and nine afforded respondents the opportunity to set out any alternative methods of determining the fair value they considered appropriate. Question five was included to determine whether preparers wanted to make any adjustments (such as for transaction costs) in determining the fair value of SAFEX futures. Finally question six was designed to collect data as to the perceived relative importance of various factors in determining the reliability of the SAFEX mark-to-market price as a measure of the fair value for financial reporting purposes of SAFEX futures.

In order to test the related hypothesis that preparers of financial statements consider the SAFEX mark-to-market price to be a reliable measure of the fair value of options for financial reporting purposes questions ten to 14 were used. The structure and objectives of these questions were consistent with those for futures outlined above. Question 12 was designed to determine the method(s) preparers use to determine the fair value of SAFEX options and the relative importance of the different methods. Questions 13 and 14 tested whether any alternative methods of determining fair value were considered appropriate. In addition question ten was included to determine what adjustments (if any) preparers believe should be taken into account in determining the fair value of SAFEX options. Question 11 was designed to provide insight into the perceived relative importance of various factors affecting the reliability of the SAFEX mark-to-market price as a measure of the fair value for financial reporting purposes.

The survey results and analysis thereof related to the above hypotheses and questions are set out below in sections 10.3.1 to 10.3.3.

### 10.3.1 Method for determining fair value

#### 10.3.1.1 SAFEX Futures

Table 16 below summarises the responses to question seven which was designed to determine the method(s) preparers use to determine the fair value of SAFEX futures and the relative importance of these methods. Respondents ranked the four possible choices on a discrete scale of one to four, with a one being used for the most preferred method of determining the fair value and a four being used for the least preferred method. The mean presented in table 16 therefore represents the average ranking of respondents.

Method for determining fair value	mean	ranking
Futures pricing theory	2.15	2
Adjust current mark-to-market price	2.59	3
Use the current value for a comparable over-the-counter instrument	3.52	4
Use the current SAFEX mark-to-market price	1.74	1

**Table 16 : Rating of methods for determining the fair value of SAFEX futures**

From the mean rankings of the alternative methods available it can be concluded that the SAFEX mark-to-market price is the most preferred method for determining the fair value of SAFEX futures for financial reporting purposes. All but one respondent did not list any alternative methods (in question eight) for calculating the fair value of SAFEX futures for financial reporting purposes. This indicates that the four methods listed in the questionnaire substantially covered all the possibilities for calculating the fair value. The respondent that indicated that they may use an alternative method for calculating the fair value indicated that they may use their own valuation model. This may be categorised into the use of futures pricing theory.

In addition it can be concluded that there is good agreement between the respondents as to the ranking of the methods (Kendall Coefficient of Concordance ;  $W=0.3492$  ;  $p<0.05$ )<sup>6</sup>. It can therefore be concluded that the respondents are in consensus on the ranking.

<sup>6</sup> Note : The results of statistical analysis is presented in the following format (test performed ; test statistic value ; probability [1-confidence interval]).

As discussed previously the IASC discussion paper proposes that the fair value of an instrument is considered to be “its quoted market value where an active market for it exists” (IASB : 1997 : 84). Clearly the interpretation of whether a market is sufficiently active to enable quoted prices to be considered to be the fair value is a subjective decision made by the preparer of the financial statements. The principle underlying this decision is whether the market price is sufficiently reliable for financial reporting purposes. The current mark-to-market price of a SAFEX future will result in a ‘fair value’, defined as being “the present value of its expected future cash flows discounted at the current market rate of return for instruments of similar term and risk” (IASB : 1997 : 85), if the current market is active enough, as all the cash flows will have been received or paid as part of the mark-to-market process. If the market is not considered to be active enough then the cash flows will not necessarily all have been received or paid as for example a cash loss may have to be borne to sell a contract which is held.

From the mean rankings listed in table 16 above, it can tentatively be concluded that the SAFEX futures market is considered to be sufficiently active to allow the use of the market price as the fair value. The ranking of futures pricing theory as the next most preferred method indicates that the SAFEX futures market price is considered to be a theoretically accurate price for the fair value of the instrument.

The discussion above must be contrasted with the discussion related to the factors affecting the fair value of the futures, and adjustments respondents consider necessary to the market price which are detailed below in section 10.3.3. In particular the liquidity of the contract is considered to be important. Two (of the eight) respondents who completed question nine as to how they would adjust the current mark-to-market price, listed adjustments for liquidity and the bid / offer spread. One respondent listed only adjustment for liquidity while one respondent listed only the bid /offer spread. One respondent indicated that the risk free interest rate should be taken into account. Presumably this would entail discounting the future cash flows in terms of the futures contract at the risk free rate. Such a treatment would appear to be flawed as the cash flows occur daily in terms of the mark-to-market process. One respondent indicated that if the mark-to-market appears to be away from the market an adjustment would

be made to bring it into line with their expectations. No indication was given as to how the adjustment would be determined.

### 10.3.1.2 SAFEX Options

Table 17 below summarises the responses to question 12 of the questionnaire related to SAFEX options. As discussed in section 10.3 the objectives and form of data collected by this question is consistent with that for question seven which related to SAFEX futures. The scale of the data underlying the mean ranking set out in table 16 is therefore consistent with that of question seven, with a one ranking for the most preferred method and a four ranking for the least preferred method.

Method for determining fair value	mean	ranking
Options pricing theory	2.04	2
Adjust current mark-to-market price	2.74	3
Use the current value for a comparable over-the-counter instrument	3.30	4
Use the current SAFEX mark-to-market price	1.93	1

**Table 17 : Rating of methods for determining the fair value of SAFEX options**

The results set out in table 17 indicate that the SAFEX mark-to-market price is the most preferred method for determining the fair value of SAFEX options for financial reporting purposes, and is consistent with the views for futures discussed above. All but one respondent did not list any alternative methods for calculating the fair value of SAFEX options (question 13) indicating that the four items listed substantially covered all alternatives. One respondent indicated that they may run their own valuation model, this could be classified as options pricing theory. Another respondent noted that if you wish to trade far out of the money options the purchaser may have to overpay versus the fair value per option valuation models. This is because the mark-to-market volatility that SAFEX use is determined by the volatilities of at-the-money options (SAFEX : 1997b : 2). From the analysis in chapter four it is clear that the volatility value of deeply in and out of the money options is small when compared to at the money options. Therefore the mark-to-market price of options that are deeply in and out of the money may be overstated. As SAFEX utilise an option valuation model to determine the mark-to-market price, it is therefore to be expected that the use of an options valuation model would be ranked as being important.

As with SAFEX futures, it can be concluded that the respondents are applying essentially the same standard in ranking the methods (Kendall Coefficient of Concordance ;  $W=.2472$  ;  $p<0.05$ ). From this it can be concluded that respondents were in consensus in the ranking.

Of the respondents (five in total) that indicated adjustments they would make to the current mark-to-market price, four indicated that they would adjust for the volatility 'smile' whereby the volatility value of an option decreases if the option is deeply in or out of the money. As discussed above SAFEX use the volatilities from at-the-money options when performing their valuation and do not take this effect into account. One respondent also indicated that there should be adjustments for liquidity and the bid / offer spread in addition to the volatility smile. One respondent also indicated that they would adjust the mark-to-market price to take account of the risk free rate of interest. It is difficult to conceive how this can be the case, particularly as the cash flows take place daily in terms of the mark-to-market process.

### 10.3.1.3 Comparison of the ranking of the methods for determining the fair value of SAFEX futures and options

Table 18 lists the mean rankings for futures and options as set out in tables 16 and 17 respectively.

Method for determining fair value	mean	
	futures	options
Futures / options pricing theory	2.15	2.04
Adjust current mark-to-market price	2.59	2.74
Use the current value for a comparable over-the-counter instrument	3.52	3.30
Use the current SAFEX mark-to-market price	1.74	1.93

**Table 18 : Comparison of rating of methods for determining the fair value of SAFEX futures and options**

The ranking of the mean rankings is consistent for futures and options. Observation of the mean rankings set out in table 18 indicates that the current SAFEX mark-to-market price is considered to be a better measure of the fair value for financial reporting purposes for futures than for options. This is supported by the mean rankings of futures and options pricing theory. Options pricing theory has a mean

score only marginally above that of the current SAFEX mark-to-market price of the options. On the other hand futures pricing theory has a mean ranking which is substantially above that of current SAFEX mark-to-market price. The responses also indicate that respondents are more disposed to adjusting the current mark-to-market price for futures than for options. This indicates a reluctance to use the current SAFEX mark-to-market price for options and is consistent with importance ascribed to options pricing theory. In addition respondents would more readily use the current value for a comparable over-the-counter instrument for options than for futures. Again this indicates that an alternative to the SAFEX mark-to-market price is more preferable for options than for futures.

### 10.3.2 Factors affecting the fair value

#### 10.3.2.1 Futures

Question six collected data related to the relative importance of the effect of various factors in impacting on the reliability, for financial reporting purposes, of the mark-to-market price as a measure of the fair value of SAFEX futures. This provides some insight into the nature of factors impacting on the SAFEX mark-to-market price. As detailed above it has been concluded that this is the most appropriate measure of fair value for financial reporting purposes. The results can be summarised as follows:

Factor	Mean ranking value	Overall ranking
Bid/offer spread	3.88	4.5
Liquidity of the contract	3.88	4.5
Last date the contract traded	4.76	6
Prices quoted by market makers	3.64	3
Last traded price	3.16	1
Spot price of the underlying instrument	3.44	2
Manipulation of market prices by market participants	4.96	7

**Table 19 : Ranking of factors affecting the fair value of SAFEX futures**

This indicates that in evaluating the mark-to-market price as a measure of fair value, preparers consider the last traded price of the future to be the most important indicator of the reliability thereof. In other words if there is a large divergence between the last traded price and the mark-to-market price (as determined by the mid point of the bid and offer prices) then preparers would question the reliability of the mark-to-market

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price the most. The spot price of the underlying instrument is ranked as the second most important factor. This is to be expected as this is a major determinant of the theoretical futures price as detailed in chapter three.

The ranking of the liquidity of the contract and the bid/offer spread as tied fourth and fifth indicates that preparers do not consider these to be very important in determining the reliability of the SAFEX market prices. This is further supported by the ranking of the last traded date of the contract as the sixth most important factor. In addition the ranking ascribed to the bid / offer spread may also indicate that the liquidity is not such an important factor as a large bid / offer spread could be as a result of illiquidity leading to uncertainty as to the fair price of an instrument. This contrasts with the adjustments preparers wish to make to the market price as discussed in section 10.3.3.

Interestingly, manipulation of the market prices by market participants was ranked as the least important factor. This possibly indicates that preparers consider SAFEX to not be heavily manipulated, despite recent moves by the Johannesburg Stock Exchange to reduce the possibility of the manipulation of the prices of the index constituents.

The rankings were tested using the Kendall Coefficient of Concordance and the null hypothesis that respondents were applying essentially the same standard in ranking the items could not be accepted ( $W=0.0952$  ;  $p<0.05$ ). It can therefore not be concluded that the respondents were in consensus in the ranking. The discussion above must therefore be viewed within the context of this conclusion.

Readers are cautioned that the rankings cannot be considered to be indicative of all factors affecting the reliability of determining the fair value, nor can the items ranked be considered to be the most important, as the listing included only seven items. It is possible that other factors not included in the question may be considered to have a significant impact on the reliability of the current market price for financial reporting purposes by preparers of financial statements. However the question does provide some insight into the nature and perceived relative importance of the factors affecting

the reliability of the mark-to-market price for SAFEX futures for financial reporting purposes.

### 10.3.2.2 Options

As for SAFEX futures, question 11 provides insight into the relative importance of various factors in affecting the reliability for financial reporting purposes as a measure of the fair value for SAFEX options. As noted in section 10.3.1.2 it was concluded that the SAFEX mark-to-market price was the most preferred method for determining the fair value of options for financial reporting purposes.

Factor	Mean ranking value	Overall ranking
The spread between the bid and offer of the underlying future	4.58	6
Liquidity of the option contract	3.88	3
Last traded date of the option contract	5.17	7
Last traded price of the option	4.13	5
Spot price of the underlying future	3.00	1
The time left to expiry of the option	3.29	2
The volatility derived by SAFEX from the underlying future ( $\lambda$ )	3.96	4

**Table 20 : Ranking of factors affecting the fair value of SAFEX options - All respondents**

$\lambda$  - This statement is not entirely accurate in that SAFEX imply the volatility from the ruling price of at the money options (SAFEX : 1997b : 2). Theoretically the implied volatility provides a “superior estimate of the volatility because it is essentially forward looking” (Blake : 1990 :207). It is nevertheless important to note that the volatility of the underlying future is clearly an important factor to preparers in determining the fair value of a SAFEX option for financial reporting purposes.

Of the first four factors listed as being most important, three are constituents of the option valuation models as discussed in chapter four. Interestingly however the last traded price of the option is ranked fifth. This indicates that the last traded price may be perceived to be a less reliable measure of the fair value if the values of the underlying determinants of the option value are not as expected. The liquidity of the contract is ranked as being relatively important (in this case ranked third). However the last traded date is ranked as the least important factor.

It cannot however be concluded that there is agreement between the respondents as to the ranking of the methods (Kendall Coefficient of Concordance ;  $W=0.1156$  ;  $p<0.05$ ). This therefore reduces the confidence with which conclusions can be drawn.

As a result of the differences detected by the statistical testing detailed in chapter nine the aggregate responses, the responses of the banks, long-term insurance and short-term insurance enterprises have been separately shown in tables 21 to 23 below.

Factor	Mean ranking value	Overall ranking
The spread between the bid and offer of the underlying future	3.60	4
Liquidity of the option contract	3.20	2
Last traded date of the option contract	5.60	6
Last traded price of the option	5.80	7
Spot price of the underlying future	3.40	3
The time left to expiry of the option	2.40	1
The volatility derived by SAFEX from the underlying future ( $\lambda$ )	4.00	5

**Table 21 : Ranking of factors affecting the fair value of SAFEX options - Banks**

Factor	Mean ranking value	Overall ranking
The spread between the bid and offer of the underlying future	5.50	6
Liquidity of the option contract	4.40	4
Last traded date of the option contract	4.90	5
Last traded price of the option	5.80	7
Spot price of the underlying future	2.80	2
The time left to expiry of the option	2.70	1
The volatility derived by SAFEX from the underlying future ( $\lambda$ )	3.90	3

**Table 22 : Ranking of factors affecting the fair value of SAFEX options -Long term insurers**

Factor	Mean ranking value	Overall ranking
The spread between the bid and offer of the underlying future	4.20	4
Liquidity of the option contract	4.60	5
Last traded date of the option contract	4.90	6
Last traded price of the option	5.20	7
Spot price of the underlying future	2.40	1
The time left to expiry of the option	3.60	2
The volatility derived by SAFEX from the underlying future ( $\lambda$ )	3.80	3

**Table 23 : Ranking of factors affecting the fair value of SAFEX options - Short term insurers**

The responses indicate that banks consider the liquidity of the contracts to be more important than the long and short term insurers do. This may be as a result of both the long and short-term insurers using the contracts predominantly for hedging purposes (as discussed in section 10.2.1) and therefore being less concerned about being able to close out positions quickly. In addition the longer term view makes the liquidity less important in determining the fair value for financial reporting purposes. The banks also consider the volatility of the option to be less important.

### 10.3.3 Adjustments to the market price

Question five and question ten collected data related to adjustments to be made to the SAFEX market price for futures and options respectively. Table 24 indicates the percentage of respondents which were of the opinion that transaction costs and liquidity risk be taken into account when determining the fair value of a SAFEX financial instrument.

	Futures				Options			
	Number of respondents		Percentage		Number of respondents		Percentage	
	Yes	No	Yes	No	Yes	No	Yes	No
<b>Transaction costs</b>	18	9	66.7	33.3	17	10	63.0	37.0
<b>Liquidity risk</b>	19	7	73.1	26.9	20	7	74.1	25.9

**Table 24 : Adjustments to the SAFEX market price**

The percentages presented in table 24 exclude the responses where the respondent did not mark either a 'yes' or 'no'. Therefore no presumption is made about respondents opinions and the number of respondents may not total the number of responses received i.e. 28. This principle has also been applied in the statistical testing presented below.

This indicates that liquidity of SAFEX financial instruments is a major concern. This is in contrast to the importance ascribed to liquidity in sections 10.3.2.1 and 10.3.2.2 above. It is however interesting to note that although the market price was considered to be the most preferred method for determining the fair value of a SAFEX instrument there appears to be considerable concern as to the liquidity of the market as borne out by the responses. Testing indicated that preparers' want to adjust for transaction costs

(Binomial test ;  $k=.061$  ;  $p<.10$ ) and liquidity costs (Binomial test ;  $k=.014$  ;  $p<.05$ ) for SAFEX futures. However testing for SAFEX options indicated that the same conclusion cannot be made for transaction costs (Binomial test ;  $k=.124$ ), although preparers do wish to adjust for liquidity risk (Binomial test ;  $k=.010$  ;  $p<.05$ ).

Question five also collected information as to whether respondents wanted to include the basis (defined as the difference between the futures price and the spot price) in the fair value. 18 (75.0 percent of the 24 respondents that indicated 'yes' or 'no') respondents indicated that they did indeed wish to take the basis into account. Statistical testing indicated that it could be concluded that the basis be included in the fair value (Binomial test ;  $k=.011$  ;  $p<.05$ ).

Question ten also collected data as to whether preparers wanted to omit either the volatility or time value options from the fair value of SAFEX options for financial reporting purposes. 85.2 percent (23 out of 27 respondents) of respondents indicated that the volatility value should be taken into account, and 95.8 percent (23 out of 24 respondents) of respondents indicated that the time value should be taken into account. Statistical testing indicated that it can be concluded that the volatility value and time value should be taken into account (Binomial test ;  $k<.0005$  and  $k<.0005$ ;  $p<.05$ ). This means that the support for the argument of for example identifying the time value of a purchased option and writing it off over the life of the option has little support in an environment where the fair value measurement basis is used. Volatility value is a sub-component of the time value of the option. This may be the reason for two respondents not indicating that the time value being taken into account although they were of the opinion that the volatility value be taken into account.

#### **10.4 IASC ASSET / LIABILITY DEFINITION**

Questions 15 to 24 were designed to test the hypotheses that preparers consider gains and losses from the fair valuation of speculative SAFEX financial instruments and SAFEX financial instruments designated as hedges to be income. Questions 15 and 16 tested both hypotheses. These questions concentrated specifically on the components of the IASC asset definition (refer to section 7.12.1 for an analysis of the components). Questions 17 and 18 gathered data specific to the hypothesis related to

speculative contracts, and focused on recognition of the gains and losses on fair valuation in the income statement. Finally questions 19 to 24 collected data specific to the hypothesis related to SAFEX financial instruments designated as hedges. Question 19 had an objective consistent with question 17. Questions 20 and 21 were included to provide some insight into reasons behind the including (or not including) the gains and losses on fair valuation of contracts designated as hedges in the income statement. Questions 22 and 23 looked at the situation of a contract designated as a hedge where the hedge as measured by change in fair value is not perfect. Finally question 24 tested the asset definition related to hedging contracts without testing the components of the asset definition. The responses related to speculative contracts have been analysed in section 10.4.1, while the responses related to contracts designated as hedges have been analysed in section 10.4.2.

Questions 15 and 16 were designed to collect data related to respondents' views as to whether gains and losses on fair valuation of speculative and hedging SAFEX contracts were assets in terms of the IASC definition. They were also designed to enable the assessment as to whether respondents consider that the intention when entering into the contract should alter the nature of the gains and losses on fair valuation of the instrument.

#### **10.4.1 Speculative contracts**

18 of the 27 respondents (66.7 percent) that completed question 15 did not consider there to be any future economic benefit to be associated with a cumulative loss on fair valuation of a speculative SAFEX financial instrument. In addition 80.0 percent (20 of 25 respondents that completed question 16) of respondents did not consider these cumulative losses to be a resource of the enterprise. From these responses there appears to be inconsistency between the interpretation of the two components of the IASC asset definition. It can however be concluded that respondents believe there is no future economic benefit associated with a cumulative loss on fair valuation of a SAFEX financial instrument (Binomial test ;  $k=0.061$  ;  $p<.10$ ), nor is it a resource of the enterprise (Binomial test ;  $k=0.002$  ;  $p<.05$ ). It can therefore be deduced from the non adherence to both the parts of the IASC asset definition tested that preparers of financial statements do not consider the cumulative losses on fair valuation of

speculative SAFEX financial instruments to be assets, at the ten percent confidence interval. It must however be noted that the 'as a result of a past event' criterion was not tested. It is however submitted that the nature of the contracts will result in the entry into a SAFEX contract being considered to be a past event. It is also submitted that the same conclusion can be drawn that cumulative gains are not considered to be liabilities.

The findings are consistent with the conclusion reached in chapter eight that the gains and losses on financial instruments are not assets or liabilities in terms of the IASC conceptual framework.

Question 17 collected data as to whether speculative gains and losses on fair valuation should be included in the income statement in the period in which they arise. 27 of the 28 respondents (96.4 percent) were of the opinion that this is indeed the case. It can be concluded, that the gains and losses should be included in the income statement in the period in which they arise (Binomial test ;  $k < 0.0005$  ;  $p < .05$ ). This is as expected as it is in line with current South African generally accepted accounting practice (for example AC 208). It also indicates consistency between the conclusion that the gains and losses are not assets reached above. However analysis of the responses to question 18, which asked for reasons as to why the gains and losses on speculative contracts should be included in the income statement, indicated no consensus as to the reason. The highest number of responses having the same reason was that the gains and losses 'should be' (three respondents). No additional support as to their opinion was provided by these respondents. Two respondents believed the reason to be because the cash flow arose in the period. One respondent indicated that the IASC discussion paper required this, whereas another indicated that the gains and losses represented the most likely effect of the income statement. One respondent indicated that they were the best measure of the change in net worth and therefore they should go through the income statement.

In a related question, question 22 collected data as to how hedging mismatches (as measured by fair value change mismatches) should be dealt with. 76.0 percent (19 of the 25 respondents that completed the question) of respondents also considered that all

gains and losses on hedging imperfections be recognised in the income statement in the period in which the mismatch occurs. It could be concluded that these mismatches should be recognised in the income statement in the period in which the mismatch occurs (Binomial test ;  $k=.007$  ;  $p<.10$ ).

In question 23 respondents provided their reason(s) for why they are of the opinion that the mismatch between the changes in fair value of the hedge and the hedged position be recognised in the income statement in the period in which it arises or not. Of the respondents that were of the opinion that the mismatch not be recognised in the income statement in the period it arises;

- Two stated that it depended on the reason for the mismatch.
- One respondent was of the opinion that where equity portfolios are hedged and the underlying portfolio did not exactly match the index underlying the future the mismatch was an accepted risk and should therefore not be recognised in the income statement immediately.
- One respondent considered that the hedge costs must be matched with the underlying.
- Two respondents did not provide a reason for their opinion.

Of the respondents that were of the opinion that the mismatch be recognised in the income statement in the period it arises, three did not provide a reason for their opinion. Of the remainder there were varied reasons including three respondents were of the opinion that the mismatch was similar in nature to speculation. One respondent believed that that as substantial losses could arise and the losses could be inversely related to changes in the underlying instrument the mismatches should be reflected in the income statement to show this risk.

#### **10.4.2 Hedging contracts**

As discussed in section 10.4 questions 15 and 16 also collected data related to contracts designated as hedges. 14 of the 26 respondents (53.9 percent) that completed question 15 did not consider there to be a future economic benefit to be associated with a cumulative loss on fair valuation of the instrument. However 13 of the 24 respondents (54.2 percent) that completed question 16 considered there to be

no resource associated with the cumulative loss on fair valuation. Performance of statistical testing indicated that no conclusion can be made for both aspects of the IASC asset definition (Binomial test ;  $k=.423$  and  $k=.419$ ). This indicates there is considerable difference of opinion as to whether the gains and losses are assets or liabilities in terms of the IASC conceptual framework. This is possibly as a result of the current accounting practice which allows the deferral of such gains and losses on the balance sheet and the necessity to classify them as assets or liabilities. On the other hand it is not easy to justify the economic benefits or the cumulative loss being a resource when presented with the IASC asset definition.

Questions 19 and 24 also collected information related to the IASC asset definition and contracts designated as hedges. 46.4 percent (13 of the 28 respondents) of respondents were of the opinion that the gains and losses should not be included in the income statement in the period in which they arise. The conclusion cannot be made that respondents want the gains and losses included in the income statement in the period in which they occur (Binomial test ;  $k=.425$ ). In addition 61.5 percent (16 of the 26 respondents that completed the question) of respondents to question 24 considered a loss on fair valuation of a contract designated as a hedge to be an amount which can be deferred on the balance sheet. Testing based on this question indicated that no conclusion can be made as to the views of preparers regarding the loss being deferred on the balance sheet (Binomial test ;  $k=.163$ ). However it must be noted that the responses of seven respondents did not have internal consistency in that they did not answer 'yes' to only one of either question 19 or question 24. They are therefore of the opinion that the gains and losses on fair valuation of SAFEX financial instruments designated as hedges should be included in the income statement in the period in which they occur, and that they can be deferred on the balance sheet. These opinions are clearly incompatible.

This indicates that preparers do not necessarily agree that the gains and losses on fair valuation of SAFEX financial instruments designated as hedges are not assets and liabilities in terms of the IASC conceptual framework. A possible implication of this is that there may be resistance from preparers if an accounting standard based on the

premise that the gains and losses on fair valuation are not assets or liabilities, is issued.

Question 20 collected information as to why preparers did not want the gains and losses on hedge contracts to go to the income statement in the period in which they arise. The responses to this question are set out in table 25 below.

Reason	Number of respondents <sup>7</sup>	Percentage
The effect of the underlying hedged position must be netted off to determine the income amount recognised in the income statement	6	42.9%
The hedging represents the protection of capital	9	64.3%
The gains or losses are only recognised in income when the gain or loss on the underlying is recognised	11	78.6%

**Table 25 : Reasons for deferring hedging instrument gains and losses - preparers**

This indicates that the principal reason behind not wanting to recognise the gains and losses on hedging contracts in the income statement in the period in which they arise is the accounting treatment of the underlying hedged position. The high percentage allocated to the protection of capital also alludes to the consideration of hedging to be of a capital nature and therefore not to be recognised in the income statement. The responses clearly indicate that management are seeking to demonstrate the effects of their decisions in a manner that enables the results of these decisions to be properly understood. The responses to question 22, with reference to mismatches, detailed above do not indicate that preparers are seeking to hide the effects of the decisions, particularly if these are not effective.

One respondent noted that the gains and losses of the underlying must be offset against those of the hedged position, and a meaningful picture is only obtained in financial statements using the market value measurement basis.

No other reasons for deferral were provided by respondents. Therefore the fact that respondents only indicated reasons supplied in the questionnaire may be indicative of bias in that they may not have taken the time to add additional reasons.

<sup>7</sup> Note : For the responses in tables 25 and 26, respondents could indicate more than one item.

Question 21 collected information as to why preparers want the gains and losses on hedge contracts to go to the income statement in the period in which they arise. The responses to this question are set out in table 26 below.

Reason	Number of respondents	Percentage
The gains and losses represent income	7	53.9%
The underlying hedged position is carried at fair value and gains and losses thereon are recognised in income in the period in which they occur	12	92.3%
It is current generally accepted accounting practice	5	38.5%

**Table 26 : Reasons for not deferring hedging instrument gains and losses - preparers**

The responses set out in table 26 also indicate that the accounting treatment of the underlying is the main determinant of where the gains and losses are to be recognised.

As with the responses included in table 25, there is a possibility of bias in that respondents did not take the time to add additional reasons for not deferring the gains and losses on the hedging instrument.

## 10.5 CONCLUSION

This chapter detailed the results of the preparer's questionnaire. The next chapter details the results of the user's questionnaire.

## CHAPTER 11 : USERS - ANALYSIS OF SURVEY RESULTS

### 11.1 INTRODUCTION

This chapter analyses the responses of the respondents that returned the users' questionnaire. The respondents were professional investment analysts as discussed in chapter nine. A copy of the questionnaire is included in Appendix B. The number of responses was low, being 12 in total.

### 11.2 GENERAL INFORMATION

Question 15 was designed to determine the accounting knowledge of the respondents. The responses are set out in table 27 below (a one equates to no formal accounting education and a four equates to being a qualified chartered accountant).

	Level of accounting knowledge				Mean score
	1	2	3	4	
Number of respondents	0	5	1	6	3.08

**Table 27 : Rating of accounting knowledge of respondents - users**

The responses set out in table 27 indicate that the accounting knowledge of respondents can be considered to be better than average, with the mean score of 3.08, and six (50 percent) of the respondents being qualified chartered accountants. The mean score of the users is only marginally below that for the preparers of 3.12 (refer to section 10.2.3). However of the 26 preparers which provided the data, 76.9 percent ranked their knowledge as a three or more. This contrasts with users where only 58.3 percent ranked their knowledge as a three or more. This therefore indicates that the accounting knowledge of the users that returned the users questionnaire is lower than that of the preparers that returned the preparers questionnaire.

As with preparers the possibility of bias exists as respondents may consider their accounting knowledge to be better than an assessment by an independent person would indicate.

### 11.3 RELIABILITY OF THE SAFEX MARKET PRICES FOR FINANCIAL REPORTING PURPOSES

Questions 11 to 14 were designed to test the hypotheses that users consider the SAFEX mark-to-market price to be a reliable measure of the fair value for futures and options. As with preparers the nature of adjustments that users wish to make to the SAFEX mark-to-market price were tested. This was done in questions 13 and 14. The results of the testing of the above hypotheses is presented below and in section 11.4.

Question 11 collected data as to whether users felt that the SAFEX market prices (prior to any adjustments dealt with in sections 11.4.1 and 11.4.2 below) were a sufficiently reliable measure of fair value for financial reporting purposes. 50.0 percent (six out of 12 respondents) of respondents were of the opinion that this was indeed the case for all SAFEX financial instruments. However two respondents indicated that the market price for SAFEX options on futures were not a sufficiently reliable measure of fair value for financial reporting purposes. Both these respondents considered the volatility used for out of the money options (as discussed in chapter ten) was unrealistic, thereby distorting the value of these options. As a result 50.0 percent (six out of 12) of respondents considered the SAFEX market price for options, and 66.7 percent (eight out of 12) of respondents considered the SAFEX price for futures to be sufficiently reliable for financial reporting purposes.

Testing indicates that it cannot be concluded that users consider the SAFEX market price for futures (Binomial test :  $k=.194$ ) and options (Binomial test ;  $k=.613$ ) to be a sufficiently reliable measure of fair value for financial reporting purposes.

There therefore appears to be some reservations amongst users as to the reliability of the SAFEX market price as a measure of fair value for financial reporting purposes. This contrasts with the views of preparers discussed in chapter ten that the SAFEX market prices are the most preferred method of determining the fair value for financial reporting purposes.

Question 12 collected the reasons for respondents' responses to question 11. Of the four respondents that were of the opinion that the SAFEX mark-to-market prices for all financial instruments were unreliable, two were of the opinion that the illiquidity of the market distorted the prices, and one was of the opinion that manipulation of the market was prevalent. One respondent considered that market players could choose to trade the instruments above or below fair value depending on sentiment. This view is consistent with the possibility of market manipulation. In addition the reason for the two respondents considering the market price of options to be unreliable were discussed above. The importance ascribed to market manipulation and liquidity by users differs from that of preparers as discussed in section 10.3.2.1. Preparers ranked market manipulation of market prices by market participants as the least important factor in determining the reliability of the SAFEX mark-to-market price for financial reporting purposes. However although the ranking ascribed to the liquidity of the contract indicated that preparers do not consider the liquidity to be a very important factor in determining the reliability of SAFEX market prices, they did wish to adjust for liquidity risk in determining the fair value of futures and options for financial reporting purposes. This indicates concern by both users and preparers related to the liquidity of the market.

Eight respondents were of the opinion that the SAFEX market prices for futures were sufficiently reliable for financial reporting purposes. Of these five did not provide a reason for their views. One respondent was of the opinion that the use of the market price would result in standardised reporting. One respondent considered the SAFEX market price to be a sufficiently close proxy to the price determined between a willing buyer and seller for it to be used for financial reporting purposes. In addition one respondent considered SAFEX to be efficient enough to provide a fair price.

#### **11.4 ADJUSTMENTS TO THE SAFEX MARK-TO-MARKET PRICES**

Questions 13 and 14 collected data about which adjustments should be taken into account in determining the fair value of SAFEX futures and options respectively.

### 11.4.1 Futures

Table 28 sets out the responses to question 13 which determined the adjustments users wish to make to the SAFEX mark-to-market prices for SAFEX futures.

Adjustment	Number of respondents		Percentage	
	Yes	No	Yes	No
Transaction costs	8	2	80.0	20.0
Liquidity risk	6	4	60.0	40.0

**Table 28 : Adjustments to be made to the SAFEX market price for futures**

The percentages shown in table 28 are based on responses that indicated either 'yes' or 'no' for the items. It has therefore not been assumed that if a respondent did not mark one of the boxes that their response was 'no'.

The responses indicate that there is support for adjustment for transaction costs. There is however less support for adjusting for liquidity risk. No other items were identified by respondents as being needed to be taken into account. It can be concluded, although only at the 90 percent confidence interval that users want to adjust for transaction costs (Binomial test ;  $k=.055$  ;  $p<.10$ ) for SAFEX futures. However it cannot be concluded that they wish to adjust for liquidity risk (Binomial test ;  $k=.377$ ) for SAFEX futures.

The conclusions drawn for users not entirely consistent with those made for preparers in section 10.3.3. Both users and preparers wish to adjust for transaction costs for SAFEX futures. However it could not be concluded that users wish to adjust for liquidity risk, whereas it could be concluded that preparers wished to adjust for liquidity risk for SAFEX futures.

### 11.4.2 Options

Table 29 sets out the responses to question 14 which determined the adjustments users wish to make to the mark-to-market prices for SAFEX options.

Adjustment	Number of respondents		Percentage	
	Yes	No	Yes	No
Transaction costs	8	2	80.0	20.0
Liquidity risk	6	4	60.0	40.0

**Table 29 : Adjustments to be made to the SAFEX market price for options**

As with question 13 the responses set out in table 29 do not make any presumptions as to the opinion of respondents if they did not mark either of the boxes.

The responses related to SAFEX options are essentially consistent with the views for SAFEX futures. No other adjustments were identified by respondents. Statistical testing indicated that the same conclusions can be drawn for SAFEX options as for the futures above i.e. it can be concluded at the 90 percent confidence interval that users are of the opinion that transaction costs be taken into account (Binomial test ;  $k=.055$  ;  $p<.05$ ) and no conclusion could be made for liquidity risk (Binomial test ;  $k=.377$ ).

From the above, it appears that users of financial statements consider the transaction costs to be part of the fair value determination. This is consistent with the views of preparers set out in the previous chapter. This contrasts with the proposal by the IASC that transaction costs not be taken into account in determining the fair value of a financial instrument as discussed in chapter eight.

### 11.5 THE IASC ASSET / LIABILITY DEFINITION

Questions one to ten were designed to test the hypotheses that users consider gains and losses from the fair valuation of speculative SAFEX financial instruments and SAFEX financial instruments designated as hedges, to be income. In order to achieve this questions one, two and ten collected data as to the views of users on whether the cumulative gains and losses on SAFEX financial instruments are considered to be assets or liabilities. Question one related to speculative contracts, while questions two

and ten related to contracts designated as hedges. Questions three and four collected data related to whether gains and losses on speculative contracts should be recognised in the income statement in the period in which they arise. Questions five to seven collected data in relation to contracts designated as hedges. Questions eight and nine focused on the situation where a hedge as measured by fair value changes is imperfect. The responses to these questions are set out below.

Table 30 below details the respondents that related to the gains and losses on fair valuation of SAFEX financial instruments designated as speculative and hedging contracts. The IASC asset definition was not specifically identified in the question and it cannot be presumed that the IASC conceptual framework will have been used as a reference point unless the respondents are accountants. As already discussed in section 11.2 the accounting knowledge of respondents is not considered to be strong and therefore the presumption that the IASC asset definition will have been used as a reference point cannot be made.

Use	Number of respondents		Percentage considering to be asset	
	Yes	No	Yes	No
Speculation	1	11	8.3	91.7
Hedging	4	8	33.3	66.7

**Table 30 : The IASC asset definition - users' views**

As shown in table 30 most respondents did not consider the cumulative losses on speculative contracts to be assets. Statistical testing supported this conclusion (Binomial test ;  $k=.003$  ;  $p<.05$ ). This is consistent with the conclusions drawn for preparers in chapter 10. However for contracts designated as hedges there appears to be indecision as to whether the cumulative losses constitute assets or not. Statistical testing indicated that no conclusion can be made at the 90 percent confidence interval (Binomial test ;  $k=.194$ ). This is also consistent with the conclusions drawn for preparers.

Question ten also collected data related to the asset classification. Of the respondents 75.0 percent (nine out of 12) are of the opinion that the cumulative gains and losses on fair valuation of an instrument designated as a hedge could be deferred on the balance sheet. Statistical testing indicated that it can be concluded that respondents consider that the cumulative gains and losses on fair valuation can be deferred on the balance

sheet (Binomial test ;  $k=.073$  ;  $p<.10$ ). This contrasts with the responses to question two outlined above, where no conclusion could be made as to whether a cumulative loss on fair valuation of a SAFEX financial instrument designated as a hedge was considered to be an asset. This also contrasts with the views of preparers, discussed in section 10.4.2 where statistical testing indicated that it could not be concluded that preparers were of the view that the amounts could be deferred on the balance sheet.

Question eight also collected data about imperfect hedges. 72.7 percent (eight out of 11) of respondents were of the opinion that the net gains and losses on imperfect hedges should be recognised in the income statement of the enterprise in the period in which the mismatch occurs. One respondent did not complete the question. However testing indicated that no conclusion could be made (Binomial test ;  $k=.113$ ). This differs from preparers, as discussed in section 10.4.1, where it could be concluded that the mismatches should be recognised in the income statement in the period in which they occur.

These views are also reflected in the percentage of users that are of the opinion that the cumulative gains and losses be included in the income statement in the period in which they arise. The responses to questions three and five which tested this issue are set out below.

	To be included in the income statement			
	Number of respondents		Percentage	
Use	Yes	No	Yes	No
Speculation	9	3	75.0	25.0
Hedging	5	6	45.5	54.5

**Table 31: Users views on recognising the gains and losses on fair valuation of SAFEX financial instruments in the income statement**

Statistical testing indicated that it can be concluded, at the 90 percent confidence interval, that users are of the opinion that the gains and losses on fair valuation of speculative SAFEX contracts be immediately recognised in the income statement (Binomial test ;  $k=.073$  ;  $p<.10$ ). However no such conclusion could be made for hedging contracts (Binomial test ;  $k=.500$ ). This is consistent with the views of preparers which are discussed in sections 10.4.1 and 10.4.2.

One respondent did not answer question five. Of the respondents that were of the opinion that the gains and losses on fair valuation of speculative contracts should not

be recognised in the income statement in the period in which they occur, one did not provide a reason therefore, while one was of the opinion that the gains and losses were not always easy to quantify and that the gains and losses were only realised at closeout. This view appears to be drawn from the historic cost model rather than a market value accounting model. The last respondent was of the opinion that losses may be incurred in the future prior to closeout of the contract. The respondent therefore is applying the prudence concept in that gains may be offset by future losses. The respondent did not indicate that losses on speculative contracts should be recognised in the income statement immediately.

The reasons provided as to why the speculative gains and losses should be recognised in the income statement in the period in which they occur were varied and are listed below;

- One respondent that did not provide a reason for his (or her) opinion.
- 
- Two respondents were of the opinion that the speculative contracts form part of the normal trading or revenue producing activities of the enterprise and should therefore be included in the income statement.
- One respondent was of the opinion that fair and complete presentation would be achieved, and the high risk exposures and contingent losses would be more prominently displayed in the financial statements.
- Two respondents were of the opinion that it would reflect the economic consequences of the trading activities.
- One respondent felt that it allows the analyst to draw more realistic conclusions.
- One respondent felt that because of the uncertain outcome of the position it should not be deferred.
- One respondent was of the opinion that the losses were 'real'.

The reasons for deferring the gains and losses on contracts designated as hedges are discussed below.

### 11.5.1 Reasons for deferring gains and losses on hedging transactions

Table 32 sets out the responses from users who are of the opinion that the gains and losses on fair valuation of SAFEX instruments should not necessarily be included in the income statement in the period in which they occur. The percentages presented represent the percentage of respondents (six respondents) that answered 'no' to question five plus the one respondent that did not complete question five but did complete question six.

Reason	Number of respondents <sup>8</sup>	Percentage
The effect of the underlying hedged position must be netted off to determine the income amount recognised in the income statement	4	57.1%
The hedging represents the protection of capital	1	14.3%
The gains or losses are only recognised in income when the gain or loss on the underlying is recognised	3	42.9%

**Table 32 : Reasons for deferring hedging gains and losses - users**

As with preparers, the responses indicate that the accounting treatment of the underlying position is the primary motivation for not including the gains and losses on fair valuation of SAFEX financial instruments in the income statement.

No other reasons were provided by respondents. The fact that respondents only indicated reasons supplied in the questionnaire may be indicative of bias in that the respondents may not have taken the time to add an additional reason or that there might not be additional reasons for the respondents.

### 11.5.2 Reasons for not deferring gains and losses on hedging transactions

Table 33 sets out the responses of respondents that do not consider that the gains and losses on fair valuation of SAFEX financial instruments be deferred. Similarly to the previous section the percentages represent the number of respondents ( five respondents) that answered 'yes' to question five less one respondent that did not complete question seven despite having completed question five.

<sup>8</sup> Note : For both tables 32 and 33 respondents could indicate more than one reason.

Reason	Number of respondents	Percentage
The gains and losses represent income	1	25.0%
The underlying hedged position is carried at fair value and gains and losses thereon are recognised in income in the period in which they occur	3	75.0%
It is current generally accepted accounting practice	1	25.0%

**Table 33 : Reasons for not deferring hedging gains and losses - users**

Again it appears as if the accounting treatment of the underlying hedged position is critical in determining the accounting treatment of the gains and losses on fair valuation of the hedging instrument.

From the responses of both preparers and users of financial statements, it appears that in order to have the gains and losses on fair valuation of the hedging instruments recognised in income, the accounting for the underlying hedged position will also have to be revised to be consistent with the fair value accounting for the financial instrument.

As for table 32 no additional reasons for table 33 were provided and therefore reasons are again cautioned as to the possibility of bias as discussed above.

## 11.6 CONCLUSION

This chapter analysed the results of the users survey and drew conclusions to the extent possible. In addition the responses of users were contrasted with those of preparers where insightful.

**CHAPTER 12: CONCLUSION****12.1 THE RESEARCH STUDY**

This study determined the views of both preparers' and users' on issues related to SAFEX financial instruments within the context of the IASC proposals for financial instruments.

This was achieved by a literature review related to financial instruments and SAFEX as well as empirical data collection through the use of postal questionnaires. The questionnaires were mailed to financial enterprises (as detailed in chapter nine) as well as the analysts ranked by the annual Financial Mail investment analysts survey. The response rates were 40.9 percent (of which 13.9 percent was useable responses) for preparers and 12.0 percent from the investment analysts.

The responses to the questionnaires are analysed in chapters ten and 11. Chapters ten and 11 also draw conclusions from the various responses to both questionnaires. This chapter relates the research hypotheses set out in chapter one to the conclusions drawn.

Nonparametric statistical bases were applied to the questionnaire responses to enable conclusions to be drawn as to the views of preparers and users. However for users and preparers of financial statements the response rate was low although the number of responses for the preparers was higher than that for the users. Therefore subject to the qualification that the sample sizes were small, conclusions as to the validity of the hypotheses are drawn in the next section.

## 12.2 THE RESEARCH HYPOTHESES

### Preparers of financial statements

- H1 Preparers consider the cumulative SAFEX mark-to-market adjustments to be a reliable measure of the fair value for futures.

Responses indicated that the SAFEX mark-to-market price is the most preferred method for determining the fair value of SAFEX futures. The second most preferred method is futures pricing theory. This indicates that preparers of financial statements consider the SAFEX mark-to-market price to be a theoretically defensible measure of the fair value. However the responses indicated that adjustment to the SAFEX mark-to-market price should be made for transaction costs (at a statistically significant 90 percent confidence level) and liquidity risk (at a statistically significant 95 percent confidence level). Based on the responses it can be tentatively concluded that the SAFEX futures market is considered to be sufficiently active to allow the use of the market price as a measure of the fair value for financial reporting purposes.

Based on the above this hypothesis is accepted, with the proviso that preparers consider certain adjustments to the mark-to-market price to be necessary.

The adjustments which preparers wish to make for transaction costs and liquidity risk do not form part of the proposed fair value definition of the IASC. This may hinder the implementation of the IASC proposals as part of a measurement standard, as preparers of financial statements may resist the use of the current fair value definition. Any concession by the IASC allowing preparers of financial statements to make adjustments to the fair value may reduce the relevance and comparability of the information for users.

- H2 Preparers consider the SAFEX mark-to-market price to be a reliable measure of the fair value for options.

Responses indicated that the SAFEX mark-to-market price is the most preferred method for determining the fair value of SAFEX options with options pricing theory being the next most preferred method. When compared to futures the SAFEX mark-to-market price for options is considered to be less appropriate for determining the fair value. In addition the current SAFEX mark-to-market price is only marginally preferred over options pricing theory.

Statistical testing of responses indicated, at a 95 percent confidence level, that adjustment for liquidity risk should be made. As already noted this adjustment does not form part of the proposed fair value definition of the IASC. 67 percent of respondents also indicated that transaction costs should be adjusted for, although statistical testing indicated that it could not be concluded that the respondents wanted to adjust for these costs. In addition four respondents indicated that the volatility 'smile' (which arises as a result of SAFEX's mark-to-market process and may lead to deeply in and out of the money options being overvalued) should be adjusted for.

The responses also indicated, at a statistically significant 90 percent confidence level, that gains and losses on hedging mismatches (as measured by fair value change mismatches) should be recognised in the income statement in the period in which the mismatch occurs. This indicates that preparers consider these mismatches to be akin to speculative contracts, although no distinction as to the magnitude of the mismatch was made.

Therefore this hypothesis is accepted, with the proviso that preparers consider certain adjustments to the mark-to-market price to be necessary.

As with SAFEX futures, the measurement standard incorporated in an IASC pronouncement may meet with resistance if no allowance is made for the adjustments

preparers consider to be necessary. However any concession by the IASC may reduce the relevance and comparability of the information for users.

H3 Preparers consider gains and losses from the fair valuation of speculative SAFEX financial instruments to be income.

The results of the preparers questionnaire indicated, at a statistically significant 90 percent confidence interval, that preparers did not consider that losses on fair valuation were either a resource of the enterprise or have any future economic benefits associated with them. Although the “as a result of a past event” criterion of the IASC asset definition was not tested it can be tentatively concluded that the losses on fair valuation of SAFEX financial instruments entered into for speculative purposes are not considered to be assets by preparers of financial statements. This is consistent with the conclusion that the gains and losses on financial instruments are not assets or liabilities in terms of the IASC conceptual framework. In addition 96.4 percent of respondents indicated that the gains and losses on fair valuation of speculative SAFEX financial instruments should be included in the income statement in the period in which they arise.

Therefore this hypothesis is accepted.

This conclusion is in line with current generally accepted accounting practice in South Africa and indicates that the current IASC proposals will be well received if incorporated into an accounting standard for South Africa. However this does not appear to be as a result of the conceptual framework conclusions but rather because of the past accounting treatment adopted in South Africa

H4 Preparers do not consider gains and losses from the fair valuation of SAFEX financial instruments designated as hedges to be income.

The results of the preparers questionnaire indicated that there was a considerable difference of opinion as to whether the gains and losses on fair

valuation of contracts designated as hedges are assets or liabilities in terms of the IASC conceptual framework. This is in contrast to contracts entered into for speculative purposes where preparers almost unanimously considered the gains and losses on fair valuation to be income. It is submitted that this is as a result of current accounting practice which allows the deferral of gains and losses on fair valuation of financial instruments designated as hedges on the balance sheet.

Therefore this hypothesis is rejected.

The above indicates that the current IASC proposals dealing with the treatment of the gains and losses related to hedging contracts will meet with resistance. In order to enhance the acceptance of a standard, the accounting for the underlying hedged position as well as the hedge should be dealt with simultaneously. In addition the divergence of views related to speculative and hedging contracts indicates that considerable resources may need to be devoted to improving the acceptance of the IASC conceptual framework amongst preparers of financial statements.

### **Users of financial statements**

H1 Users consider the SAFEX mark-to-market price to be a reliable measure of the fair value for futures.

Responses indicated that the SAFEX mark-to-market price was not overwhelmingly considered to be a reliable measure of fair value. There was however an indication that the market price of SAFEX futures was considered to be more reliable than that of SAFEX options. In addition there was support for adjustments to the market price related to transaction costs (at a statistically significant 90 percent confidence level). However it could not be concluded that users want liquidity risk to be adjusted for. Therefore users appear to have concerns as to the reliability of measurement if the SAFEX mark-to-market price is used for financial reporting purposes. As already noted the indication that adjustment for transaction costs and possibly liquidity risk

should be made may reduce the comparability between enterprises unless the method of determining the adjustments is prescribed.

Therefore this hypothesis is rejected.

As with preparers there may be resistance from users of financial statements to the issue of a measurement standard that does not allow adjustment for at least transaction costs and liquidity risk. The concerns of users related to the use of the SAFEX mark-to-market price as a measure of fair value for financial reporting purposes indicates that preparers of financial statements should consider the use of an alternative method of determining the fair value, such as futures pricing theory.

H2 Users consider the SAFEX mark-to-market price to be a reliable measure of the fair value for options.

As for SAFEX futures the responses indicated that the mark-to-market price was not necessarily considered to be a reliable measure of fair value, and that the market price of options was considered to be less reliable than that of futures. In addition there was support (which was statistically significant at the 90 percent confidence level) for adjustment for transaction costs. There was also concern expressed that the volatility smile is not taken into account for deeply in and out of the money options. As for futures it could not be concluded that users wish to adjust for liquidity risk.

As such this hypothesis is rejected.

The responses indicate that users' confidence in the financial statements may be undermined if the SAFEX mark-to-market price for options is used as the measure of fair value. Although adjustments being made to the mark-to-market price may also reduce the comparability of the financial statements between enterprises the above findings indicate that users may resist a measurement standard that does not allow for these adjustments. As with futures the concerns of users related to the use of the SAFEX mark-to-market price as a measure of fair value for financial reporting

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purposes indicates that preparers of financial statements should consider the use of an alternative method of determining the fair value, such as options pricing theory.<sup>7</sup>

H3 Users consider gains and losses from the fair valuation of speculative SAFEX financial instruments to be income.

The responses indicate that 91.7 percent of respondents (statistically significant at a 95 percent confidence level) do not consider the cumulative losses on fair valuation of speculative SAFEX financial instruments to be assets. In addition 75.0 percent of respondents (statistically significant at a 90 confidence level) indicated that the gains and losses on fair valuation of speculative contracts should be included in the income statement in the period in which they arise.

Based on the above there appears to be strong support for this hypothesis and therefore it is accepted.

The responses also indicate that the issue of an accounting standard for speculative contracts based on the IASC proposals will be well received. This is in line with expectations and current South African generally accepted accounting practice.

H4 Users do not consider gains and losses from the fair valuation of SAFEX financial instruments designated as hedges to be income.

The responses indicate considerable dichotomy related to whether the gains and losses on fair valuation of SAFEX financial instruments designated as hedges represent income in terms of the IASC conceptual framework. 66.7 percent of respondents do not consider the gains and losses on fair valuation of hedging contracts to be assets, although only 45.5 percent indicated that they should be included in the income statement in the period in which they arise. However no conclusion (based on statistical testing) could be drawn for either of the above.

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Therefore this hypothesis is rejected.

The opinions of respondents appear to be heavily influenced by the accounting treatment of the underlying position being hedged. It is submitted that current accounting practice leads to this situation.

As for preparers the above indicates that there may be resistance to the issue of an accounting standard dealing with hedging contracts. Any proposed standard should therefore also deal with the accounting treatment of the underlying position to reduce resistance to the standards implementation.

### 12.3 SCOPE FOR FURTHER RESEARCH

This study has identified a number of possible areas for further research related to SAFEX financial instruments. The more pertinent areas for further research are set out below:

- Both preparers and users of financial statements indicated that the volatilities used by SAFEX are not realistic for options that are deeply in or out of the money. This concern deserves further investigation. In particular the effect on the fair value should be quantified and methods developed to adjust for this if necessary.
- This study concentrated on financially orientated enterprises. It should be determined whether the views of preparers and users employed by non-financial enterprises are consistent with the findings set out in this study.
- It is not clear as to whether preparers of financial statements are conceptually opposed to considering the gains and losses on SAFEX financial instruments designated as hedges to be income. The results of the surveys indicated that the accounting treatment of the underlying hedged position is a key determinant in the views of users and preparers. This issue can be investigated further.
- This study dealt with the nature of the hedging relationship in general terms. There is however considerable difficulty in setting objective criteria that must be met in order for a contract to be considered a hedge and qualify for hedge accounting. The IASC proposals will alter this process considerably. The views

of preparers and users may be explored. This is particularly the case for preparers who may have many reasons for hedging.

- This study only dealt with certain of the issues related to SAFEX financial instruments. The study can be extended to other financial instruments.
- This study did not test whether entry into a SAFEX contract is considered to be a 'past event' in terms of the IASC asset definition. This may be tested.

## **12.4 CONCLUSION**

This study has provided some insight into the perceptions of SAFEX market prices for fair value measurement for financial reporting purposes. It also provided some insight into the factors influencing the perceptions. In addition this study has gone some way towards evaluating the perceptions of the IASC asset and liability definitions of the IASC conceptual framework when applied to SAFEX financial instruments. A number of further research topics have been identified, which if followed will undoubtedly provide useful results in dealing with these complex issues.

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**PREPARERS' QUESTIONNAIRE**

This study relates to certain of the accounting issues related to the financial instruments listed on the South African Futures Exchange (SAFEX).

Please could you return the completed questionnaire in the attached self addressed stamped envelope by 5 September 1997.

Alternatively could you fax the completed questionnaire to me on (011) 780 2054 or mail the completed questionnaire to:

**S.B. Baker**  
**Suite No. 62**  
**POSTNET X11**  
**BIRNAM PARK**  
**2015**

**QUESTIONNAIRE DEFINITIONS**

For the purposes of this questionnaire, the following definitions apply:

<b>Speculation</b>	Seeking to profit from price movements.
<b>Hedging</b>	Protection of the enterprise from the risk of loss due to adverse price movements.
<b>Arbitrage</b>	Seeking to make a riskless profit by simultaneously entering into transactions in two or more markets.
<b>Fair value</b>	The present value determined by discounting the expected future cash flows at the current market rate of return for the instrument or instruments of a similar term and risk.
<b>Liquidity risk</b>	The risk that lower than market price proceeds may be realised in a forced liquidation of a position.
<b>Basis</b>	The difference between the futures price and the spot price.
<b>SAFEX</b>	South African Futures Exchange.
<b>Future</b>	A standardised agreement between two counterparties that fixes the price of an exchange that will take place between them at some future date, that is listed on an exchange.
<b>Option</b>	A contract between a holder and a writer giving the holder of the option the right, but not the obligation, to buy (sell) an agreed nominal value of an underlying financial instrument from (to) the writer during an agreed period at a predetermined price.

**General Information**

1) Please categorise and which SAFEX instruments (if any) your enterprise uses for:

	Speculation	Hedging	Arbitrage
• JSE index based futures.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
• JSE index based options.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
• Long bond based futures.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
• Long bond based options.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
• Bankers acceptance based futures.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
• Bankers acceptance based options.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
• Rand/Dollar based futures.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
• Rand/Dollar based options.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
• Other(s). (Please specify below)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

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2) In relation to the operations of your enterprise, do you consider your SAFEX speculation, hedging and arbitrage operations (if any) to be:

	Speculation	Hedging	Arbitrage
• very significant.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
• significant.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
• insignificant.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

3) Please indicate what exposures (if any) are hedged with SAFEX futures and options:

• The fair value of equity positions.	<input type="checkbox"/>
• The fair value of bond positions.	<input type="checkbox"/>
• The value of import/export commitments.	<input type="checkbox"/>
• The value of foreign creditors/debtors/borrowings.	<input type="checkbox"/>
• Other(s). (Please specify below)	<input type="checkbox"/>

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4) Please rate on a scale of 1 to 6 your knowledge of the mark-to-market margining procedures for SAFEX (1 = no knowledge ; 6 = detailed knowledge).

Futures	
Options	

**IN RELATION TO SAFEX FUTURES**

5) Are you of the opinion that any of the following should be taken into account when determining the **fair value** of a SAFEX future for financial reporting purposes?

	Yes	No
• Transaction costs.	<input type="checkbox"/>	<input type="checkbox"/>
• Liquidity Risk.	<input type="checkbox"/>	<input type="checkbox"/>
• Basis.	<input type="checkbox"/>	<input type="checkbox"/>
• Other(s). (Please specify below)	<input type="checkbox"/>	<input type="checkbox"/>

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6) Please rank the following factors (from 1 to 7) in order of their relative importance to you in determining the **reliability**, for financial reporting purposes, of the current market price as a measure of the **fair value** of a SAFEX future. (1 = most important ; 7 = least important)

• Bid/offer spread.	<input type="checkbox"/>
• Liquidity of the contract.	<input type="checkbox"/>
• Last date the contract traded.	<input type="checkbox"/>
• Prices quoted by market makers.	<input type="checkbox"/>
• Last traded price.	<input type="checkbox"/>
• Spot price of the underlying instrument.	<input type="checkbox"/>
• Manipulation of market prices by market participants.	<input type="checkbox"/>

7) Please rank the following from 1 to 4 (1 = most preferred ; 4 = least preferred) as the method you would use for determining the **fair value**, of a SAFEX future for financial reporting purposes?

- futures pricing theory.
- adjust the current mark-to-market price.
- using the current value for a comparable over-the-counter instrument.
- use the current SAFEX mark-to-market price.

8) Which alternative methods not listed in question 7 above do you consider to be appropriate for determining the fair value of a SAFEX future for financial reporting purposes ?

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9) Were you to 'adjust the current mark-to-market price' as referred to in question 7 above, please explain how the adjustment(s) would be made.

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#### IN RELATION TO SAFEX OPTIONS

10) Do you consider that any of the following should be taken into account when determining the **fair value** of a SAFEX option for financial reporting purposes?

- |                                       | Yes                      | No                       |
|---------------------------------------|--------------------------|--------------------------|
| • Transaction costs.                  | <input type="checkbox"/> | <input type="checkbox"/> |
| • Liquidity Risk.                     | <input type="checkbox"/> | <input type="checkbox"/> |
| • The volatility value of the option. | <input type="checkbox"/> | <input type="checkbox"/> |
| • The time value of the option.       | <input type="checkbox"/> | <input type="checkbox"/> |
| • Other(s). (Please specify below)    | <input type="checkbox"/> | <input type="checkbox"/> |

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11) Please rank on a scale of 1 to 7, (1 = most significant ; 7 = least significant) how you consider the following factors to impact on the **reliability**, for financial reporting purposes, of the mark-to-market price as a measure of the **fair value** of a SAFEX option.

- the spread between the bid and offer of the underlying future.
- the liquidity of the option contract.
- the last traded date of the option contract.
- the last traded price of the option.
- the spot price of the underlying future.
- the volatility derived by SAFEX from the underlying future.
- the time left to expiry of the option.

12) Please rank the following from 1 to 4 (1 = most preferred ; 4 = least preferred), as the method you consider most appropriate for determining the fair value of a SAFEX option for financial reporting purposes?

- options pricing theory (Black-scholes and Binomial models).
- adjust the current mark-to-market price.
- using the current value for a comparable over-the-counter instrument.
- use the current SAFEX mark-to-market price.

13) Which alternative methods, not listed in question 12 above do you consider to be appropriate for determining the fair value of a SAFEX option for financial reporting purposes?

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14) Where you to use the 'adjust the current mark-to-market price' technique referred to in question 12 above, please explain how the adjustment(s) would be made:

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15) Do you consider there to be any future economic benefit associated with a cumulative loss (debit amount) on fair valuation of:

- |   | Yes                      | No                       |
|---|--------------------------|--------------------------|
| • speculative SAFEX financial instruments?          | <input type="checkbox"/> | <input type="checkbox"/> |
| • SAFEX financial instruments designated as hedges? | <input type="checkbox"/> | <input type="checkbox"/> |

16) Do you consider a cumulative loss (debit amount) on fair valuation to be a resource of the enterprise for:

- |   | Yes                      | No                       |
|---|--------------------------|--------------------------|
| • speculative SAFEX financial instruments?          | <input type="checkbox"/> | <input type="checkbox"/> |
| • SAFEX financial instruments designated as hedges? | <input type="checkbox"/> | <input type="checkbox"/> |

17) Are you of the opinion that the gains and losses on fair valuation of **speculative** SAFEX financial instruments should be included in the income statement of the enterprise in the period in which they arise?

Yes	No
<input type="checkbox"/>	<input type="checkbox"/>

18) Please give reasons for your answer to question 17 above.

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19) Are you of the opinion that the gains and losses on fair valuation of SAFEX financial instruments **designated as hedges** should be included in the income statement in the period in which they occur?

Yes	No
<input type="checkbox"/>	<input type="checkbox"/>

20) If you answered **NO** to question 19 above, is this because: (more than one choice may be made)

- |   |                          |
|---|--------------------------|
| • the effect of the underlying hedged position must be netted off to determine the income amount recognised in the income statement | <input type="checkbox"/> |
| • the hedging represents the protection of capital  | <input type="checkbox"/> |
| • the gains or losses are only recognised in income when the gain or loss on the underlying is recognised                           | <input type="checkbox"/> |
| • other(s)? (Please specify below)  | <input type="checkbox"/> |

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21) If you answered YES to question 19 above, is this because: (more than one choice may be made)

- the gains and losses represent income
- the underlying hedged position is carried at fair value and gains and losses thereon are recognised in income in the period in which they occur
- it is current generally accepted accounting practice
- Other(s)? (Please specify below)

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**For the purposes of questions 22 and 23 ONLY, the 'net gains and losses on fair valuation' referred to is to be taken to mean that both the hedge and hedged position are measured at fair value, but that there is a mismatch in total (i.e. the hedge is imperfect).**

22) Do you consider that the net gains and losses on fair valuation of SAFEX financial instruments, **designated as hedges**, which are imperfect hedges, should be recognised in income during the period in which the mismatch occurs?

Yes  No

23) Please give reasons for your answer to question 22 above.

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24) Do you consider the loss (debit amount) on fair valuation of a SAFEX financial instrument designated as a hedge to be an amount which can be deferred on the balance sheet?

Yes  No

25) Please rate your level of accounting knowledge on a scale of 1 to 4 (1 = No formal accounting education ; 4 = Qualified chartered accountant)

Thank you for your time, your contribution is appreciated.

## USERS' QUESTIONNAIRE

This study relates to certain of the accounting issues related to the financial instruments listed on the South African Futures Exchange (SAFEX).

Please could you return the completed questionnaire in the attached self addressed stamped envelope by 31 October 1997.

Alternatively could you fax the completed questionnaire to me on (011) 780 2054 or mail the completed questionnaire to:

**S.B. Baker**  
**Suite No. 62**  
**POSTNET X11**  
**BIRNAM PARK**  
**2015**

## QUESTIONNAIRE DEFINITIONS

For the purposes of this questionnaire, the following definitions apply:

<b>Speculation</b>	Seeking to profit from price movements.
<b>Hedging</b>	Protection of the enterprise from the risk of loss due to adverse price movements.
<b>Fair value</b>	The present value determined by discounting the expected future cash flows at the current market rate of return for the instrument or instruments of a similar term and risk.
<b>Liquidity risk</b>	The risk that lower than market price proceeds may be realised in a forced liquidation of a position.
<b>Basis</b>	The difference between the futures price and the spot price.
<b>SAFEX</b>	South African Futures Exchange.
<b>Future</b>	A standardised agreement between two counterparties that fixes the price of an exchange that will take place between them at some future date, that is listed on an exchange.
<b>Option</b>	A contract between a holder and a writer giving the holder of the option the right, but not the obligation, to buy (sell) an agreed nominal value of an underlying financial instrument from (to) the writer during an agreed period at a predetermined price.

- 1) Do you consider a cumulative loss (debit amount) on fair valuation of a speculative SAFEX financial instrument to be an asset?

Yes	No
<input type="checkbox"/>	<input type="checkbox"/>

- 2) Do you consider a cumulative loss (debit amount) on fair valuation of a SAFEX financial instrument **designated as a hedge** to be an asset?

Yes	No
<input type="checkbox"/>	<input type="checkbox"/>

- 3) Are you of the opinion that the gains and losses on fair valuation of **speculative** SAFEX financial instruments should be included in the income statement of the enterprise in the period in which they arise?

Yes	No
<input type="checkbox"/>	<input type="checkbox"/>

- 4) Please give reasons for your answer to question 3 above.

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- 5) Are you of the opinion that the gains and losses on fair valuation of SAFEX financial instruments **designated as hedges** should be included in the income statement of an enterprise in the period in which they occur?

Yes	No
<input type="checkbox"/>	<input type="checkbox"/>

- 6) If you answered **NO** to question 5 above, is this because: (more than one choice may be made)

- the effect of the underlying hedged position must be netted off to determine the amount recognised in the income statement
- the hedging represents the protection of capital
- the gains or losses are only recognised in income when the gain or loss on the underlying instrument is recognised
- other(s)? (Please specify below)

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7) If you answered YES to question 5 above, is this because: (more than one choice may be made)

- the gains and losses represent income
- the underlying hedged position is carried at fair value and gains and losses thereon are recognised in income in the period in which they occur
- it is current generally accepted accounting practice
- Other(s)? (Please specify below)

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For the purposes of questions 8 and 9 ONLY, the 'net gains and losses on fair valuation' referred to is to be taken to mean that both the hedge and hedged position are measured at fair value, but that there is a mismatch in total (i.e. the hedge is imperfect).

8) Do you consider that the net gain and losses on fair valuation of SAFEX financial instruments, **designated as hedges**, which are imperfect hedges, should be recognised in the income statement of an enterprise in the period in which the mismatch occurs?

Yes  No

9) Please give reasons for your answer to question 8.

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10) Do you consider the loss (debit amount) on fair valuation of a SAFEX financial instrument designated as a hedge to be an amount which can be deferred on the balance sheet of an enterprise?

Yes  No

11) Do you consider the SAFEX market price to be a **reliable** measure of the fair value of a SAFEX financial instrument for financial reporting purposes (NOT taking into account any adjustments you may envisage in terms of questions 13 and 14)?

Yes  No

12) Please explain the reasons for your answer to question 11 above.

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13) Are you of the opinion that any of the following should be taken into account when determining the fair value of a SAFEX future for financial reporting purposes:

- |                                    | Yes                      | No                       |
|------------------------------------|--------------------------|--------------------------|
| • Transaction costs.               | <input type="checkbox"/> | <input type="checkbox"/> |
| • Liquidity Risk.                  | <input type="checkbox"/> | <input type="checkbox"/> |
| • Basis.                           | <input type="checkbox"/> | <input type="checkbox"/> |
| • Other(s). (Please specify below) | <input type="checkbox"/> | <input type="checkbox"/> |

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14) Do you consider that any of the following should be taken into account when determining the fair value of a SAFEX option for financial reporting purposes:

- |                                       | Yes                      | No                       |
|---------------------------------------|--------------------------|--------------------------|
| • Transaction costs.                  | <input type="checkbox"/> | <input type="checkbox"/> |
| • Liquidity risk.                     | <input type="checkbox"/> | <input type="checkbox"/> |
| • The volatility value of the option. | <input type="checkbox"/> | <input type="checkbox"/> |
| • The time value of the option.       | <input type="checkbox"/> | <input type="checkbox"/> |
| • Other(s). (Please specify below)    | <input type="checkbox"/> | <input type="checkbox"/> |

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15) Please rate your level of accounting knowledge on a scale of 1 to 4 (1 = No formal accounting education ; 4 = Qualified chartered accountant)

Thank you for your time, your contribution is appreciated.



Suite No. 62  
POSTNET XII  
BIRNAM PARK  
2015  
4 August 1997

## Department of Accounting

Leslie Commerce Building  
Engineering Mall - Upper Campus  
OR Private Bag - Rondebosch 7700  
Tel: 650-2269  
Telex: 57-21439  
Tel. Acc.: ALUMNI, Cape Town  
Fax No: (021) 689-7582

Dear sir

### **SURVEY OF ACCOUNTING ISSUES RELATED TO SAFEX FINANCIAL INSTRUMENTS**

There is considerable focus at present on the accounting issues related to financial instruments. This will undoubtedly impact on many enterprises and will remain an area of focus. I am conducting research in this area, for a Master's degree at the University of Cape Town.

Enclosed please find a questionnaire regarding certain of the accounting issues related to the financial instruments listed on the South African Futures Exchange (SAFEX). It would be much appreciated if you or a relevant person within your organisation, would complete the questionnaire.

I am aware that there will be differing levels of familiarity with, and use of SAFEX financial instruments. It will however be appreciated if your organisation completes the questionnaire irrespective of the level of use of these instruments, as the views of your organisation will be useful to the study.

Please note that your confidentiality is assured.

Please could you return the questionnaire in the enclosed self addressed stamped envelope by 5 September 1997. Alternatively you can fax it to me on (011) 780 2054.

Yours sincerely

SHANNON BAKER



## Department of Accounting

Suite No. 62  
POSTNET X11  
BIRNAM PARK  
2015  
12 September 1997

Leslie Commerce Building  
Engineering Mcd - Upper Campus  
OR Private Bldg - Rondebosch 7701  
Tel: 650-2269  
Telex: 57-21439  
Tel. Add.: ALUMNI, Cape Town  
Fax No: (021) 689-7582

Dear Sir

**SECOND REQUEST - SURVEY OF ACCOUNTING ISSUES RELATED TO  
SAFEX FINANCIAL INSTRUMENTS**

There is considerable focus at present on the accounting issues related to financial instruments. This will undoubtedly impact on many enterprises and will remain an area of focus. I am conducting research in this area, for a Master's degree at the University of Cape Town.

Enclosed please find a questionnaire regarding certain of the accounting issues related to the financial instruments listed on the South African Futures Exchange (SAFEX). I have as yet not received a response to the questionnaire sent to you previously. It would be much appreciated if you or the relevant person within your organisation, would complete the questionnaire.

I am aware that there will be differing levels of familiarity with, and use of SAFEX financial instruments. It will however be appreciated if your organisation completes the questionnaire irrespective of the level of use of the instruments, as the views of your organisation will be useful to the study.

Please note that your confidentiality is assured.

Please could you return the questionnaire in the enclosed self addressed stamped envelope or fax it to me on (011) 780 2054 by 10 October 1997. If you have any questions please phone me on (011) 780 2000.

yours sincerely

SHANNON BAKER



Suite No. 62  
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BIRNAM PARK  
2015  
28 August 1997

Department of Accounting

Leslie Commerce Building  
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Fax No: (021) 689-7522

Dear

**SURVEY OF ACCOUNTING ISSUES RELATED TO SAFEX FINANCIAL INSTRUMENTS**

There is considerable focus at present on the accounting issues related to financial instruments. This will undoubtedly impact on many enterprises and will remain an area of focus. I am conducting research in this area, for a Master's degree at the University of Cape Town.

Enclosed please find a questionnaire regarding certain of the accounting issues related to the financial instruments listed on the South African Futures Exchange (SAFEX). It would be much appreciated if you would complete the questionnaire.

I am aware that there will be differing levels of familiarity with SAFEX financial instruments. It will however be appreciated if you would complete the questionnaire irrespective of the level of knowledge of these instruments as your views will be useful to the study.

Please note that your confidentiality is assured.

Please could you return the questionnaire in the enclosed self addressed stamped envelope or fax it to me on (011) 780 2054 by: **September 1997**. If you have any questions please contact me on (011) 780 2000.

Yours sincerely

SHANNON BAKER



Department of Accounting

Suite No. 62  
POSTNET X11  
BIRNAM PARK  
2015  
3 October 1997

Leslie Commerce Building  
Engineering M03 - Upper Campus  
OR Private Bag - Rondebosch 7701  
Tel: 650-2269  
Telex: 57-21439  
Tel. Add.: ALUMNI, Cape Town  
Fax No: (021) 689-7532

Dear

**SECOND REQUEST - SURVEY OF ACCOUNTING ISSUES RELATED TO  
SAFEX FINANCIAL INSTRUMENTS**

There is considerable focus at present on the accounting issues related to financial instruments. This will undoubtedly impact on many enterprises and will remain an area of focus. I am conducting research in this area, for a Master's degree at the University of Cape Town.

Enclosed please find a questionnaire regarding certain of the accounting issues related to the financial instruments listed on the South African Futures Exchange (SAFEX). I have as yet not received a response to the questionnaire sent to you previously. It would be much appreciated if you would complete the questionnaire.

I am aware that there will be differing levels of familiarity with, and use of SAFEX financial instruments. It will however be appreciated if you would complete the questionnaire irrespective of the level of knowledge of these instruments as the views will be useful to the study.

Please note that your confidentiality is assured.

Please could you return the questionnaire in the enclosed self addressed stamped envelope or fax it to me on (011) 780 2054 by 31 October 1997. If you have any questions please phone me on (011) 780 2000.

yours sincerely

SHANNON BAKER