

The corporate use of derivatives: a survey of South Africa's top listed non-financial firms

PRESENTER: DR GLEN HOLMAN

AUTHORS: CARLOS CORREIA, ANTHON JAHRESKOG & GLEN HOLMAN

UNIVERSITY OF CAPE TOWN

Introduction

Significant growth in the use of derivatives by the corporate sector

Research has focused on determinants of hedging policies, impact on firm value and surveys of the corporate use of derivatives

Our study is the first survey (as far as we know) of derivative usage by large listed South African companies

Losses from derivatives / Warren Buffett

Research Questions

- To what extent are derivatives used by large listed South African companies?
- Does firm size and industry sector affect the use of derivatives?
- Which risks are most often hedged by companies?
- Which derivative securities are most often used by companies to hedge foreign exchange, interest rate, and commodity price and equity risks?
- To what extent are derivatives used for hedging contractual commitments or for other purposes, including speculative purposes?
- What are the most important concerns that finance directors have in regard to the use of derivatives?
- What reasons are given by companies that do not use derivatives?
- To what extent are companies willing to hedge future expected foreign exchange exposure if permitted under South African law?

Review of prior international studies

- USA – survey of 2000 non-financial firms – 65% of large firms used derivatives whilst only 13% of small firms used derivatives
- New Zealand – 67% of all firms used derivatives but 95% of large firms used derivatives. Open nature of NZ economy. Use of OTC forwards and interest rate swaps
- Germany – 78% of all firms included in the survey used derivatives. Integration of tax and financial accounting.
- Sweden – 59% of firms used derivatives but 86% of large firms used derivatives

Review of prior international studies

- Belgium – 66% of firms used derivatives – survey of only large firms. Firms mainly hedge currency risk – both contractual and anticipated obligations – and interest rate risk. Only 16% of firms hedge commodity risk. Focus on use of OTC forwards, options and interest rate swaps
- UK – 60% of firms used derivatives – mainly to hedge contractual obligations. Main reason for non-use is non-exposure
- Netherlands – 96% of firms hedge currency risk, 81% hedge interest rate risk and only 20% of firms hedge commodity risk
- Singapore & Hong Kong – 90% of firms hedge currency risk, 70% of firms hedge interest rate risk and only 19% of firms hedge commodity price risk. Also, 78% of firms hedge anticipated exposure.

Data & Methodology

- Questionnaire survey to 98 large listed South African non-financial firms
- Survey design based on Wharton surveys by Bodnar et al, 1998 and the surveys by Alkeback and Hagelin for Sweden published in 1999 and 2006
- Exclusion of banks
- Market Capitalisation of firms > ZAR 2.4 billion. This translates loosely to "large" category for USA study
- Firms make up more than 90% of the market capitalisation of the JSE
- Three sectors – Services, Primary Products and Manufacturing
- Size - three subsets – "major" is >R20bn, "middle" and "minor" is < R5bn

Survey versus analysis of Annual Financial Statements

- International Financial Reporting Standard 7 sets out the disclosure required to be presented in annual financial statements relating to financial instruments employed by companies.
- This standard became effective from 1 January 2007 which is subsequent to the date of this study.

Response rate & Use of derivatives

	Number of companies	Percent
Panel A: Response rate		
Responding firms	52	53.1%
Non-responding firms	46	46.9%
Total	98	100.0%
Panel B: Analysis of responding firms		
Respondents that use derivatives	45	90%
Respondents that do not use derivatives	5	10%
Total	50	100%

Response rates for prior studies

Study	Year	Market	Response rate	Observations
Bodnar et al. (1995)	1994	USA	27%	530
Bodnar et al. (1996)	1995	USA	18%	350
Alkeback and Hagelin (1999)	1996	Sweden	77%	163
Berkman et al. (1997)	1996	New Zealand	64%	79
Bodnar et al. (1998)	1997	USA	21%	399
De Ceuster et al. (2000)	1997	Belgium	22%	73
Mallin et al. (2001)	1997	UK	29%	231
Bodnar and Gebhardt (1999)	1997	Germany	34%	126
Bodnar et al. (2003)	1998	Netherlands	50%	84
Prevost et al. (2000)	1998	New Zealand	46%	155
El-Masry (2006)	2001	UK	43%	173
Alkeback et al. (2006)	2003	Sweden	51%	134
This study	2006	South Africa	53%	52

Survey response rate according to size category & industry sector

	No of surveys sent out	No of responses received	Response rate
Panel A: Size			
Major (>= R20 bn)	26	15	57.7%
Middle (from R5bn to R20 bn)	43	22	51.2%
Minor (< R5 bn)	29	15	51.7%
Total	98	52	53.1%
Panel B: Industry sector			
Manufacturing	26	15	57.7%
Services	52	29	55.8%
Primary products	20	8	40.0%
Total	98	52	53.1%

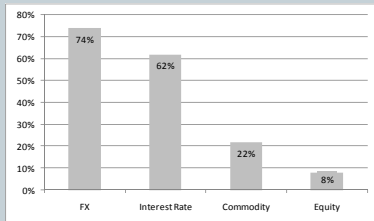
Results

- 90% of responding firms in South Africa used derivatives as compared to 50% for USA firms, 67% of NZ firms, 78% of German firms and 67% of firms in the UK
- Comparative analysis is subject to lack of contemporaneous data
- USA economy is less dependent on international trade & due to pricing in US Dollars
- Derivative use in South Africa is high and compares favourably with developed economies and exceeds by far other developing economies such as Malaysia (20%). Bartram et al (2009) found that only 39.6% of companies in non-OECD countries make use of derivatives.
- The high use of derivatives belies South Africa's status as an emerging economy that is subject to exchange controls
- Volatility of the Rand and the relative level of liquidity

Non-use of derivatives

- Specific questionnaire sent to companies that do not use derivatives
- Main reasons for non-use
 - Insignificant exposure to currency, interest rate risk, commodity price risk and equity price risk
 - Exposures managed more effectively with other means (such as operational hedges)
 - Concerns about the accounting
 - Costs of maintaining a derivatives programme
- Limited sample so results cannot be used on their own but results are similar to other studies
- Companies not using derivatives operate in sectors such as real estate, construction, health-care, hotels and mining.
- Apart from mining (which may have operational hedges), the other sectors will have minimal currency exposure and most companies have low levels of financial leverage

Types of risks hedged by S A Companies

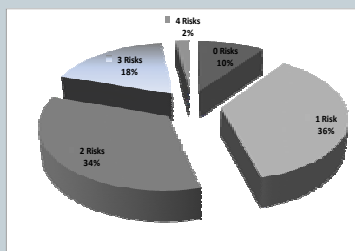


- Focus on currency risk (FX) and Interest rate risk is similar to results of international studies

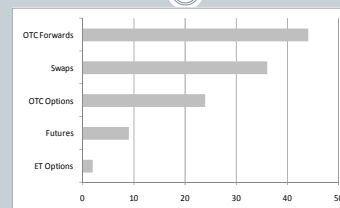
Comparison to Sweden and UK

- Sweden – Alkeback et al (2006) found that 90% of companies hedge currency risk whilst 47% of companies hedge interest rate risk
- UK – El Masry (2006) found that 64% of companies hedge currency risk and 47% of companies hedge interest rate risk and only 9% of companies hedge commodity price risk
- Increase in the use of interest rate swaps over time for most countries

Number of risks hedged

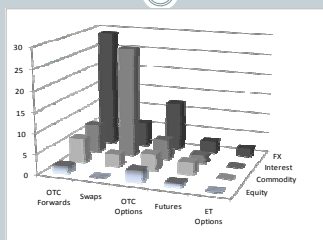


Types of derivatives used by SA companies



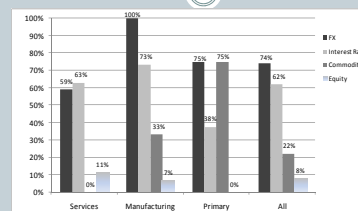
- Focus on OTC forwards and swaps and to a lesser extent – the use of OTC options
- Insignificant use made of ET Futures and Options

Which derivatives are used for each type of exposure?



- Focus on OTC forwards to hedge currency risks and interest rate swaps to hedge interest rate risk. This is similar for other studies

Derivative use per sector



- All manufacturing companies hedge currency risk and 3/4 of primary producers hedge commodity price risks

Reasons for derivative use

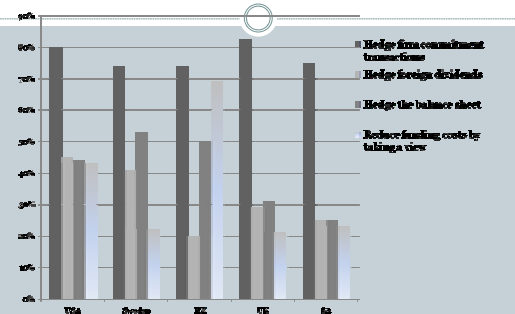
	Often	Sometimes	Never	Don't know
Hedge opportunistically	0.0%	19.4%	80.6%	0.0%
Reduce funding by taking a view on the market	5.6%	16.7%	75.0%	2.8%
Hedge foreign dividends	5.6%	19.4%	75.0%	0.0%
Hedge the balance sheet	11.1%	13.9%	75.0%	0.0%
Hedge contractual commitments	55.6%	19.4%	25.0%	0.0%

- Mostly companies use derivatives to hedge contractual obligations as 75% of companies often or sometimes use derivatives to hedge contractual commitments.
- Very few companies will often use derivatives to reduce funding by taking a view on the market, and
- Few companies will often use derivatives to hedge foreign dividends.
- The survey found that only 11.1% of companies hedge the balance sheet.
- Over 80% of companies never hedge opportunistically and 75% of companies never try and reduce funding requirements by taking a view on the market.

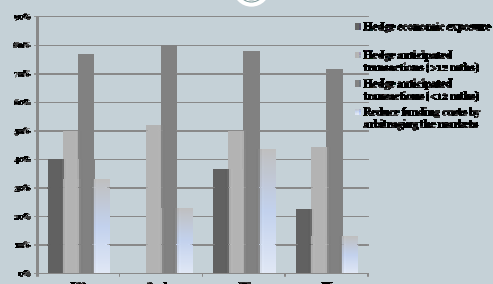
USA and Sweden

- In USA, 43% of companies often or sometimes use derivatives to reduce funding costs by taking a view and 40% of companies hedge economic exposure. This is not permitted in RSA.
- In Sweden, 74% of companies used derivatives to hedge contractual commitments and 29% of companies hedge the balance sheet and 15% of companies hedge dividends. Only 14% of companies use derivatives for speculative purposes
- Reasons for use in South Africa is in line with other developed countries except for hedging expected and economic exposure which are affected by exchange control.

The use of derivatives in other countries



Additional reasons for derivative use in other countries



Hedging of expected future foreign exchange exposure

- Prevost et al (2006) reports that for New Zealand, 74% of companies hedge anticipated exposures expected to occur within the next 12 months. This is almost as often as the percentage of firms hedging contractual commitments (80%).
- Alkeback et al (1999) reported that the main use of derivative instruments was for hedging purposes, mostly to hedge anticipated transactions expected to occur within one year.
- Bodnar et al (1995) found that 77 percent of companies hedge exposures expected to occur within the next 12 months and this compares to 80 percent of companies that hedge firm commitments.
- What about South Africa?

Companies wishing to hedge expected forex exposures

- Exchange Control in South Africa
- Documentary proof of transactions in order to enter into OTC forward contracts
- The final question in all the questionnaires that were forwarded to all companies asked companies whether or not the companies in the survey population would hedge future expected foreign exchange exposures if this was permitted under South African law.

	Yes	No	Don't know	Total
Number of companies	29	5	14	48
Percentage	60%	10%	29%	100%

- 60% of companies would hedge expected future exposures and only 10% of companies would not hedge expected exposure

Hedging expected exposure

- South African companies were lacking an important mechanism to manage future foreign exchange exposure due to the continuing effects of exchange control regulations.
- As South African firms make a comparable use of derivatives to hedge actual exposure, it is submitted that companies in South Africa would in line with their international counterparts utilise derivatives to hedge expected or anticipated foreign currency exposures.

Concerns in respect to use of derivatives

Issues	Percentage of respondents citing High Concern	Percentage of respondents citing High or Moderate Concern
Transaction costs	21%	42%
Negative perceptions by investors, regulators and the public	21%	42%
Counterparty credit risk	19%	27%
Liquidity risk	17%	33%
Evaluating the risk of a proposed transaction	15%	67%
Reduce funding by taking a view on the market (speculative)	15%	29%
Lack of knowledge about derivatives within the company	13%	42%
Monitoring and evaluating hedge results	10%	52%
Pricing and valuing derivatives	8%	56%
Uncertainty regarding hedge accounting	8%	44%
Tax or legal issues	8%	42%
Disclosure requirements	6%	52%
Difficulty quantifying exposures	6%	33%

Analysis

- One of the most serious concerns relates to transaction costs. This may reflect the lack of depth of the capital markets in South Africa.
- This result is similar to the result of the survey undertaken by Prevost et al (2000) for New Zealand, which found that transactions costs were the issue of greatest concern.
- In Sweden, according to the study by Alkeback et al (2006), the issue of most concern related to the accounting treatment of derivatives, followed by transaction costs and then liquidity risk.
- El-Masry (2006) found that lack of knowledge about derivatives was the issue causing the most concern for UK firms.

Conclusions

- The use of derivatives by South African companies is similar to larger, developed economies and similar if not higher than open developed economies such as the UK, Sweden, Netherlands, Germany and New Zealand.
- This study found that close to **90 per cent** of companies use derivatives. South Africa is an open, small emerging economy with flexible, volatile exchange rates and relatively high interest rates. This means that South African companies are exposed to significant exchange rate and interest rate exposures.

Conclusions

- South African companies mainly use **OTC forward contracts to hedge exchange rate exposure and swaps to hedge interest rate risk.**
- The dependence on the use of forward contracts and swaps is similar to the hedging methods used by firms in such developed economies as the USA and particularly, the UK, Sweden, Germany and New Zealand.
- The use of interest rate swaps appear to have increased in recent years and this is consistent with recent developments in such economies as New Zealand.

Conclusions

- **Hedging firm commitment transactions or contractual obligations** is by far the most important reason for the use of derivatives in South Africa and this is in line with other countries.
- Few firms hedge the balance sheet in contrast to most other countries and few firms hedge foreign dividends.
- South African companies do not hedge opportunistically and do not use derivatives for speculative purposes.

Conclusions

- As in New Zealand, **transaction costs** were cited by South African companies to be of high concern but negative perceptions by investors, regulators and the public as well as **counterparty credit risk** were also cited to be of high concern for the use of derivatives.
- The survey found, in line with actual practices of firms in other countries, that most **South African companies would hedge anticipated future exposures if permitted to do so in terms of exchange control.**
- This indicates a well defined need by the corporate sector in South Africa to hedge expected foreign exchange exposures in contrast to hedging only actual exposures.

The End

Thank You