SECTION COLLOQUIUM 2019

THE MODERN ACTUARY - CHALLENGE • INFLUENCE • LEAD

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2 - 5 April 2019

Cape Town South Africa

CTICC

www.colloquium2019.org.za

Hosted by

ACTUARIAL SOCIETY OF SOUTH AFRICA

Economic basis survey

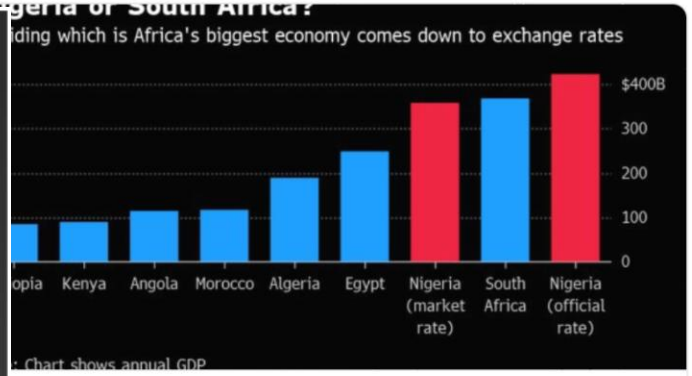
2017 survey feedback

Morne de Vos

2 APRIL 2019

Do we really need another survey?

The call on which African economy is the biggest depends on what exchange rate is used to measure Nigeria's gross domestic product

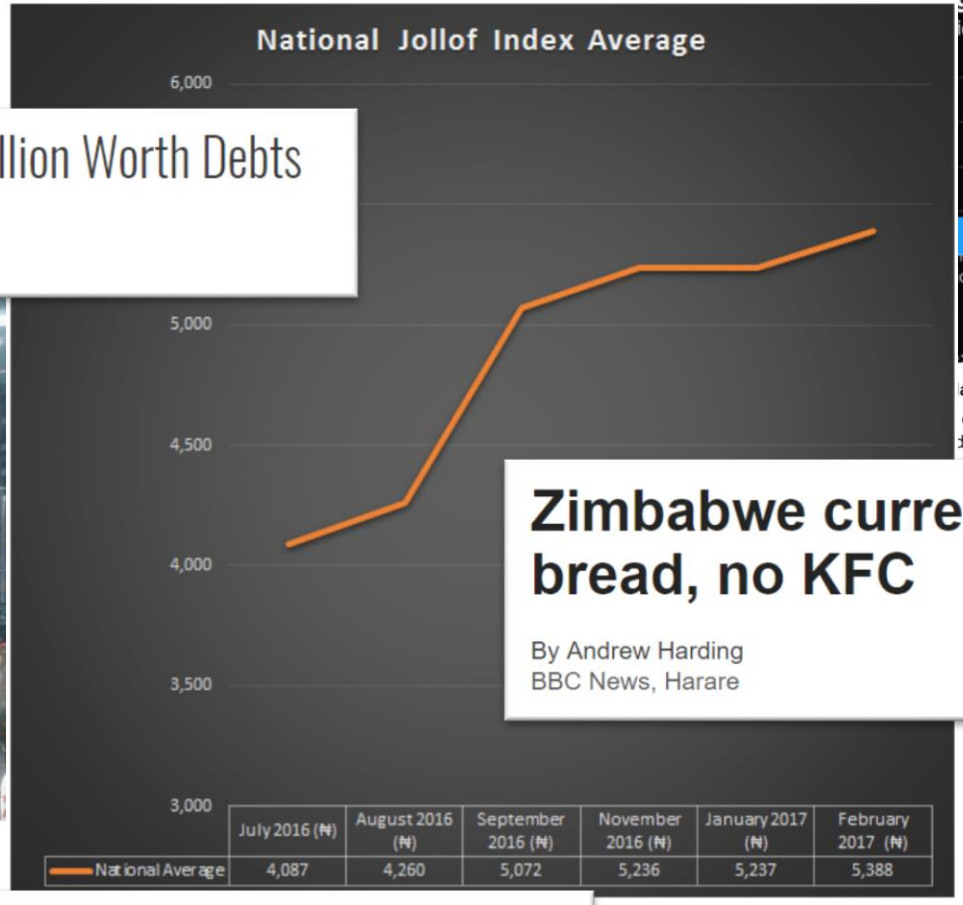


ar Rates Blur Winner in Battle for Africa's Biggest Economy

call on which African economy is the biggest depends on what exchange rate is d to measure Nigeria's gross domestic product.

China Writes-Off Lesotho's Multi-Million Worth Debts

News by news@lescij.org - September 14, 2018



	July 2016 (₦)	August 2016 (₦)	September 2016 (₦)	November 2016 (₦)	January 2017 (₦)	February 2017 (₦)
National Average	4,087	4,260	5,072	5,236	5,237	5,388

The Instigator
@Am_Blujay

Zimbabwe currency crisis: No cash, no bread, no KFC

By Andrew Harding
BBC News, Harare

Business

Selling Toyotas to Congo a Way to Fight Burundi Dollar Snag

By Desire Nimubona

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Introduction

Survey overview

Background

- ASSA Africa Committee
- Principles and approaches adopted by insurers

Methodology

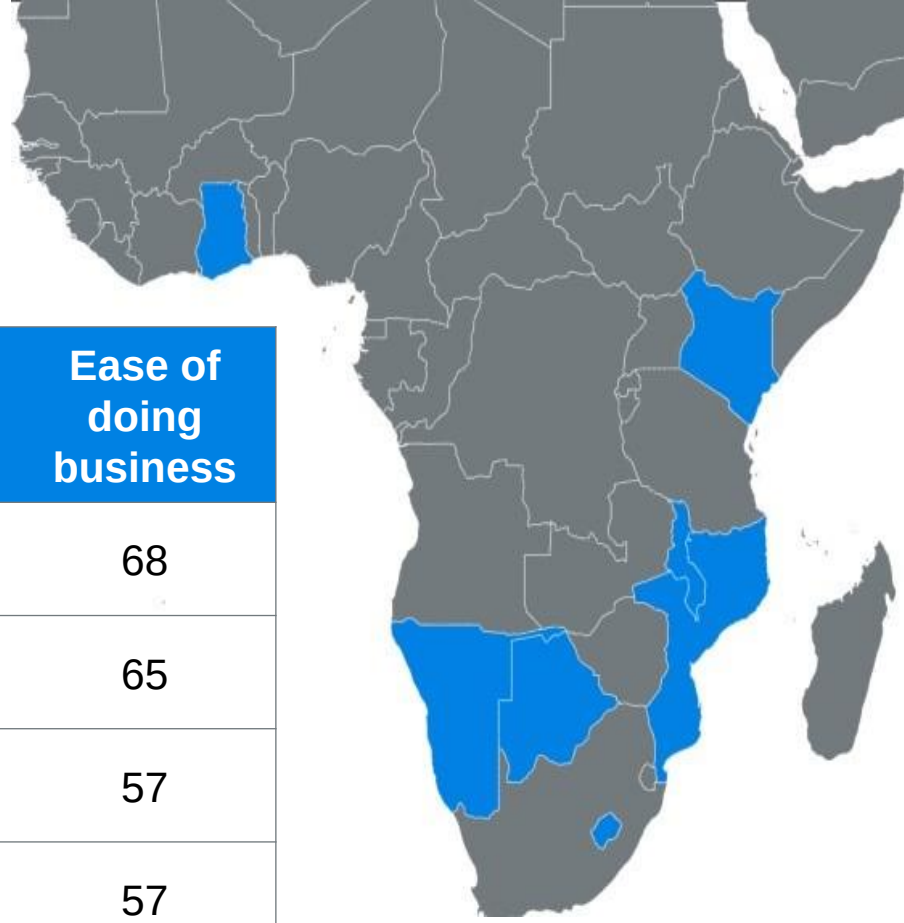
- Survey focus
- Need for sufficient participation
- Respondent anonymity

Responses

- 4 South African Insurers, two leading Nigerian and Ghanaian insurers
- Excludes South African market

Country facts

Some context

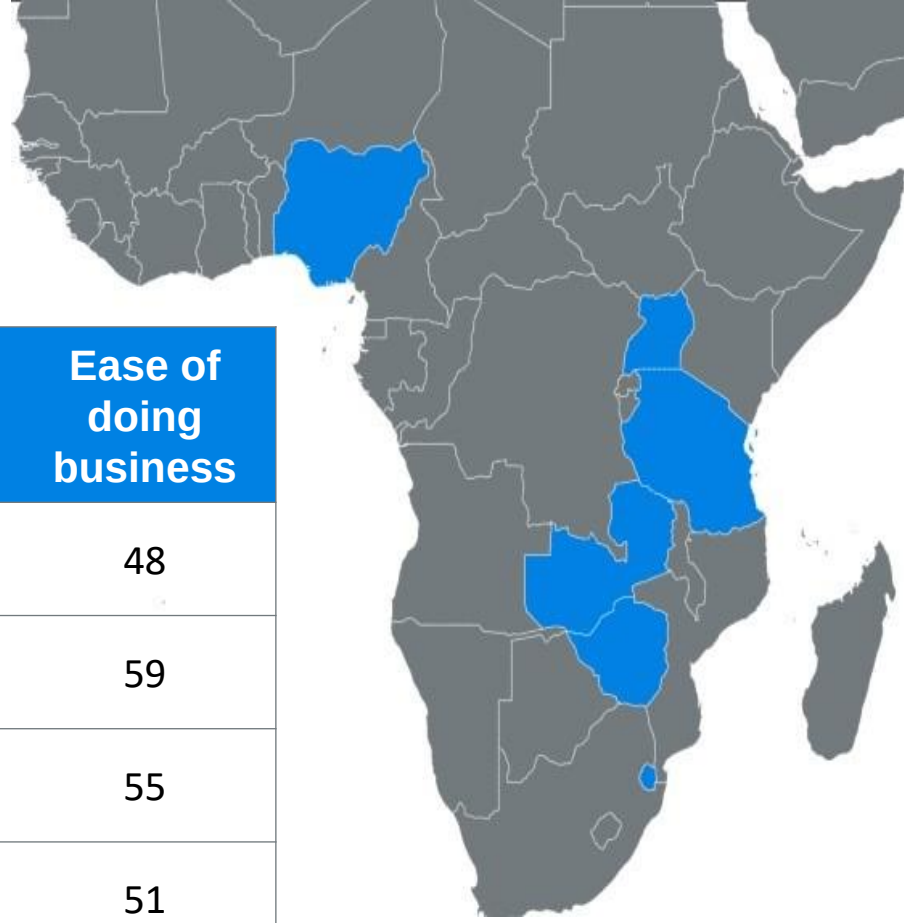


	Code	Currency	Population	Density	% urban	GDP per capita	Ease of doing business
	BWA	Pula	2.29	3.9	68.7%	7 584	68
	GHA	Cedi	28.83	120.9	55.4%	1 663	65
	KEN	Shilling	49.70	85.6	26.6%	1 702	57
	LSO	Loti*	2.23	73.6	27.7%	1 425	57
	MWI	Kwacha	18.62	157.2	16.7%	324	46
	MOZ	Metical	29.67	37.7	35.5%	429	55
	NAM	Dollar*	2.53	3.1	49.0%	5 589	63

https://www.amcharts.com/visited_countries/

Country facts

Some more context



	Code	Currency	Population	Density	% urban	GDP per capita	Ease of doing business
	NGA	Naira	190.89	206.6	49.5%	1 994	48
	SWZ	Lilangeni*	1.37	78.8	23.6%	3 915	59
	TZA	Shilling	57.31	60.5	33.1%	1 034	55
	UGA	Shilling	42.86	177.4	23.2%	699	51
	ZMB	Kwacha	17.09	22.7	43.0%	1 480	63
	ZWE	*Multiple*	16.53	42.3	32.2%	1 176	45

https://www.amcharts.com/visited_countries/

Country facts

Mauritius

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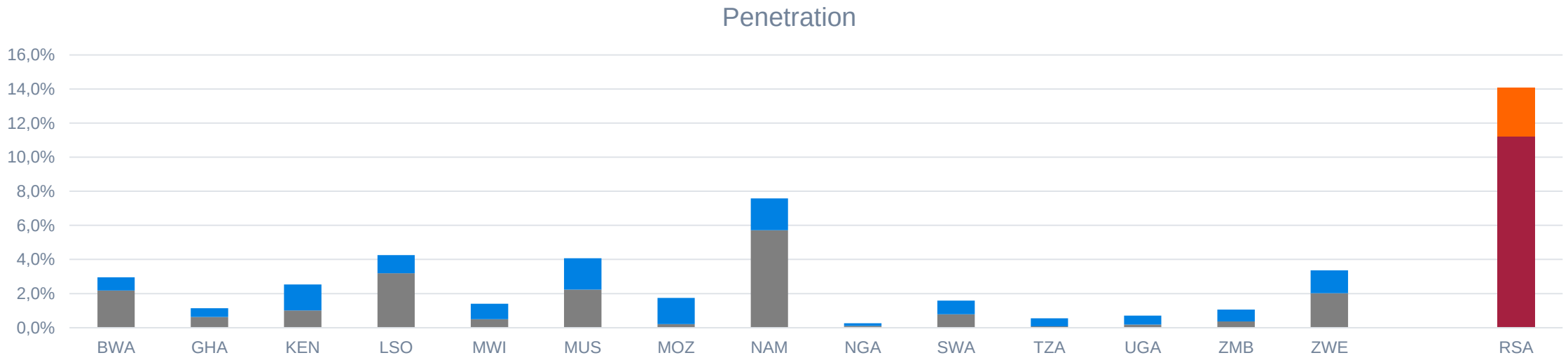
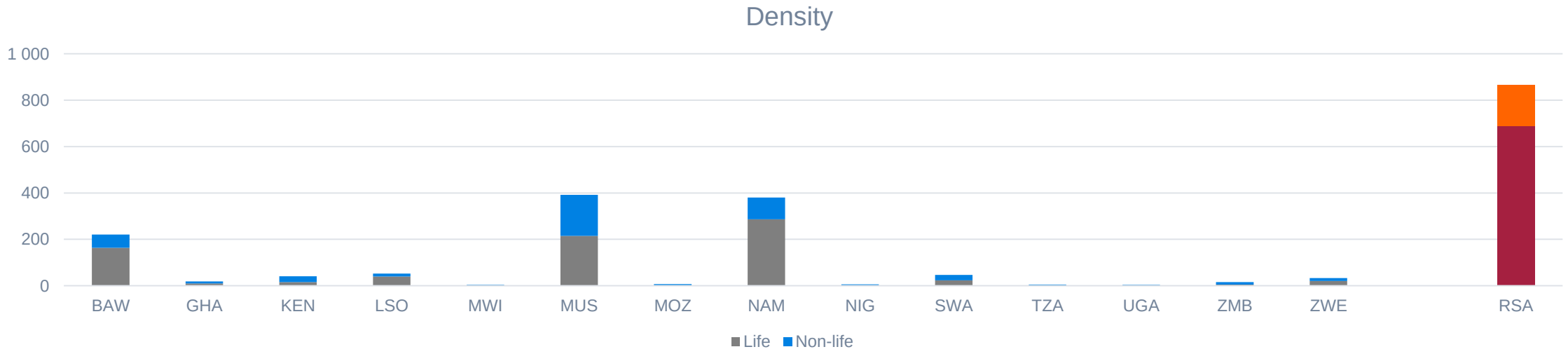
Comparison of key statistics

Insurance penetration and density

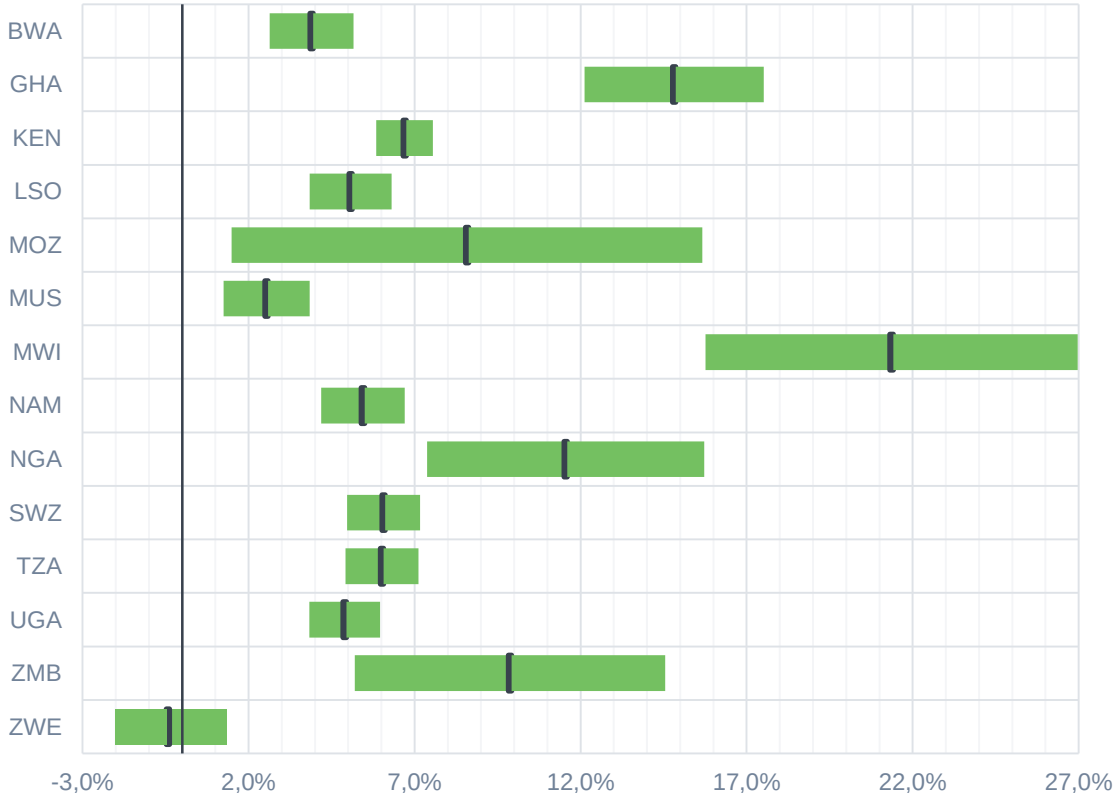




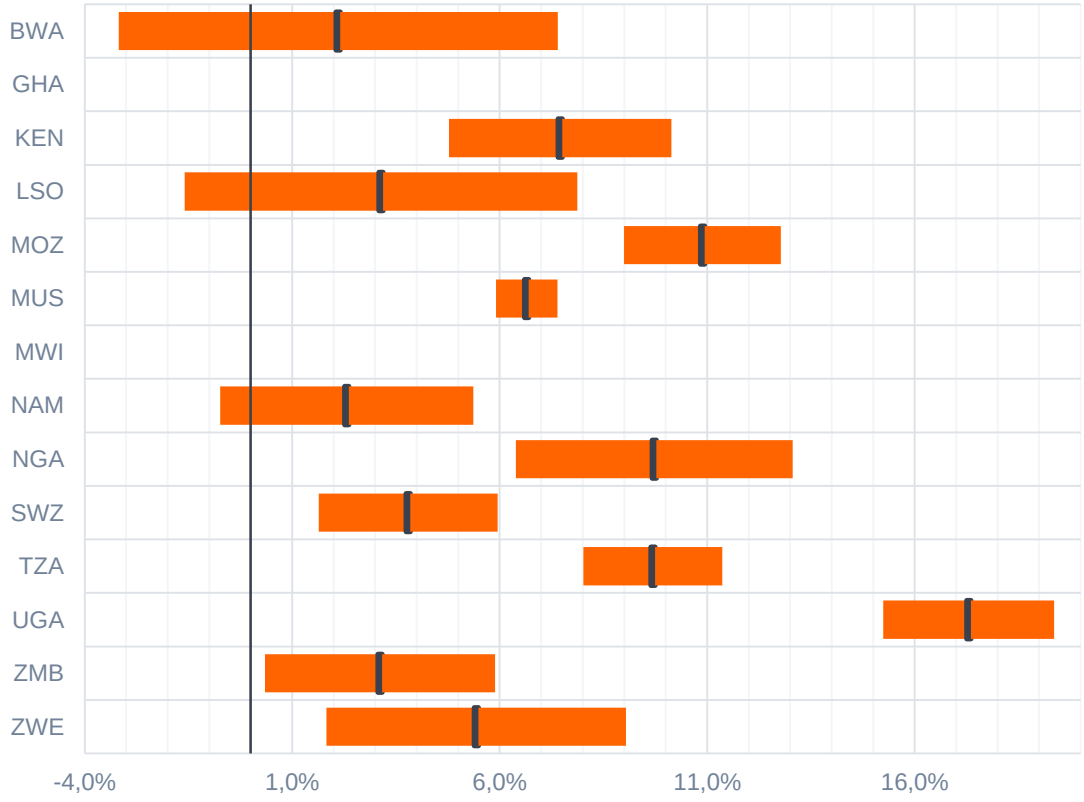
Inflation and real interest rates

5 years ending in 2017

CPI inflation (mean & standard deviation)



Real interest rates (mean and standard deviation)



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Survey findings

Introduction

Considerations

- Survey process
- Group reporting vs country reporting
- Skewed to South African insurer practice

2017 economic basis survey

Valuation interest rate
Risk free rates and asset class risk premium

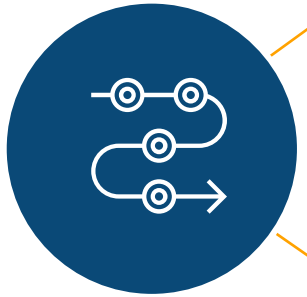
Inflation estimates
CPI and expense inflation

Embedded value reporting
Choosing a risk discount rate

Issues encountered
Concerns of respondents

Valuation interest rate

Use of the yield curve as a risk free rate



Annuity products

Products with low to moderate interest rate sensitivity

Risk free yield curve

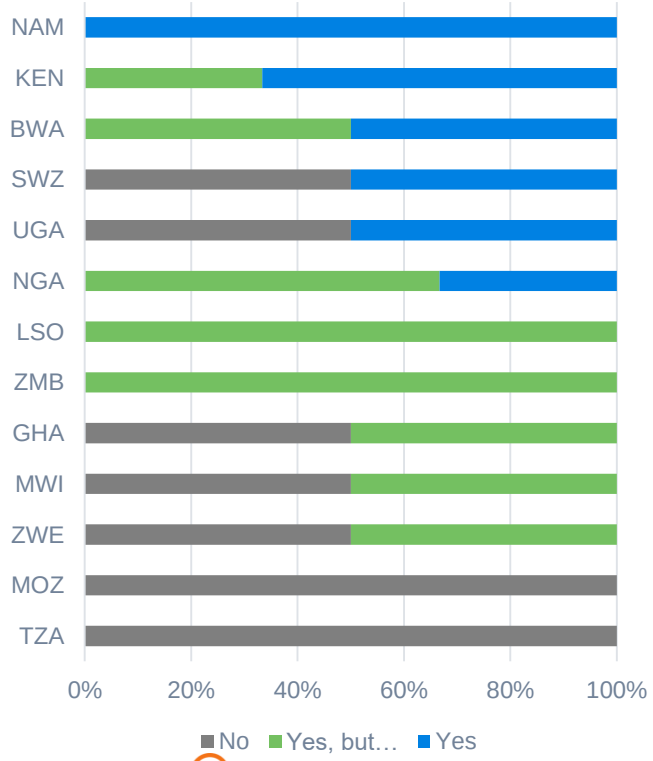
Usage

- Yield curve used: BWA; KEN; NAM; ZMB
- CMA: SWZ; LSO; NAM
- Point estimate used: MWI; NGA

Construction

- Selection of bonds and other stock exchanges
- Last Liquid Point

Availability of current market yields



Valuation interest rate

Use of point estimates

Annuity products

Products with low to moderate interest rate sensitivity

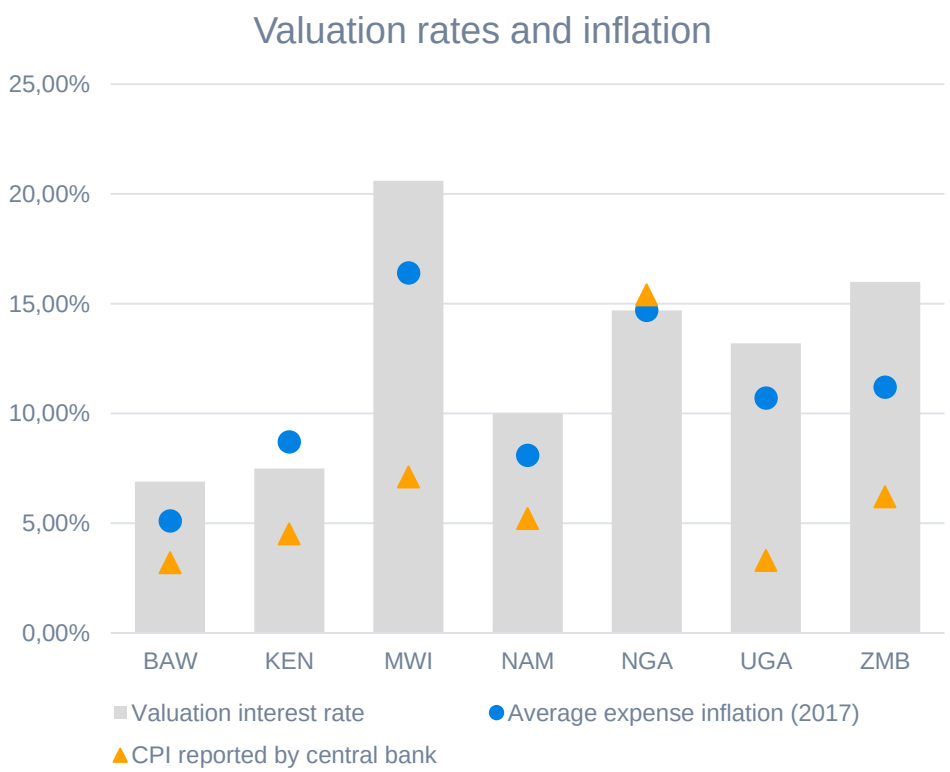
Data source for risk free estimate	Valuation rate	Asset class risk premiums
▪ Pre-selected long bond ▪ Point on yield curve based on average DMT	▪ Company rather than country choice ▪ Subjective in certain countries	▪ Consistent with RSA ▪ Equity: 3.5 - 4% ▪ Cash: (2%) ▪ Property: 1.5 - 2%

Inflation

Expense and CPI

Expense and CPI inflation

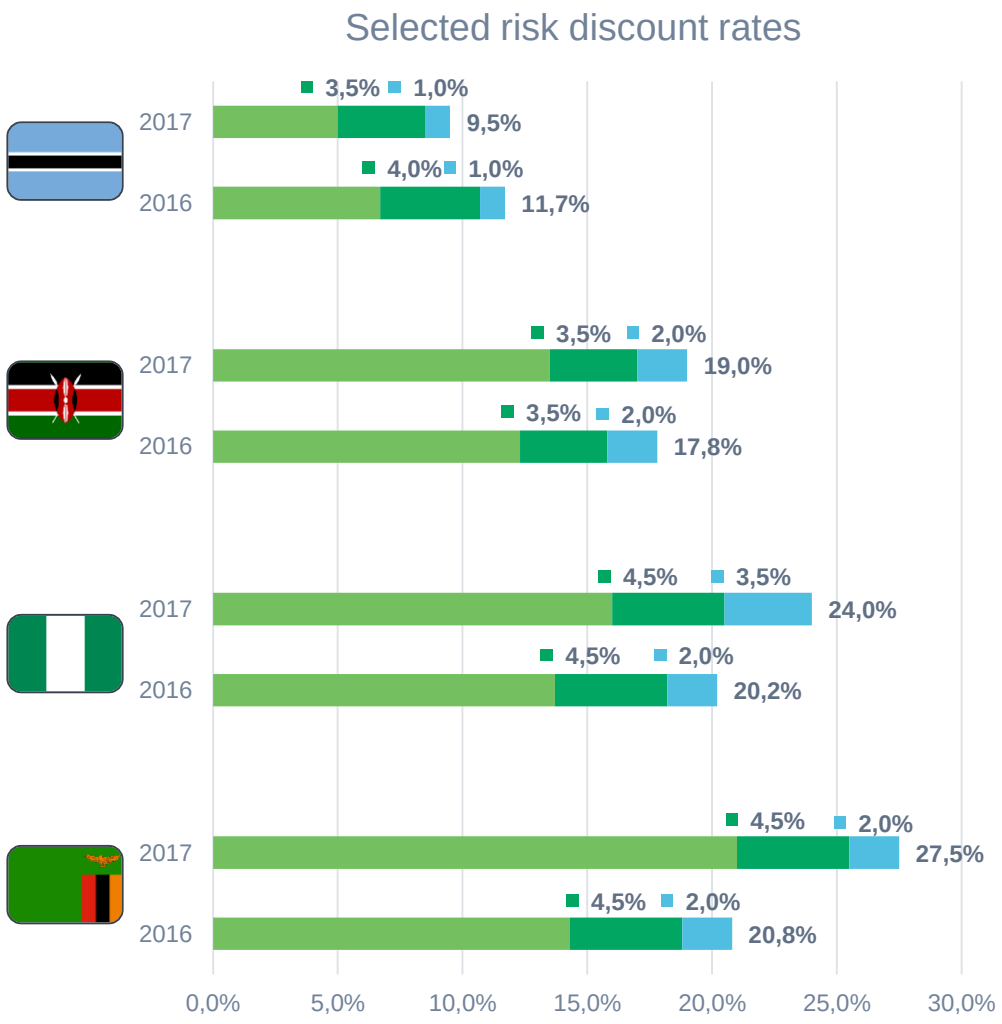
- Company vs country approach
- Expense inflation mostly set as a fixed gap relative to nominal yields
- CPI mostly set relative to risk free



Embedded value reporting

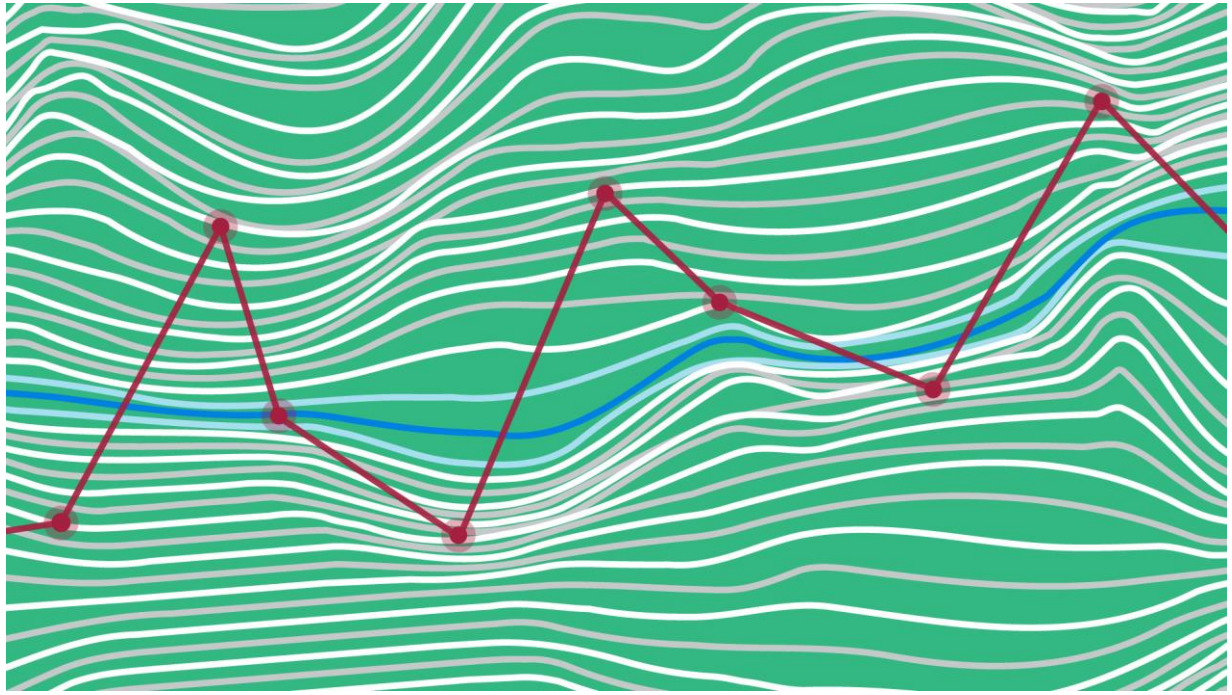
Risk discount rate

- Risk free rate — CAPM-style approach
- Systematic risk premium — Average 3.5% - 4.5%
- Company specific / other risk premium — Specific adjustment 1% - 3.5%

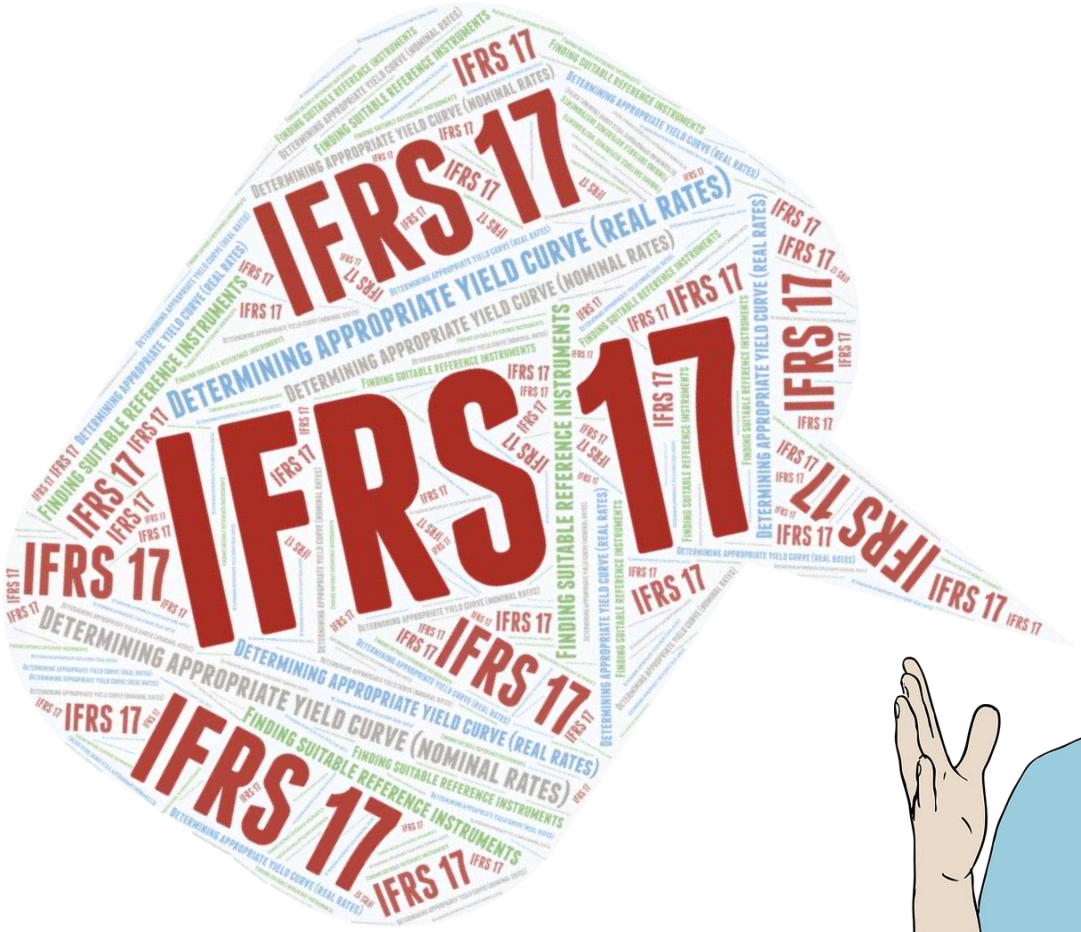
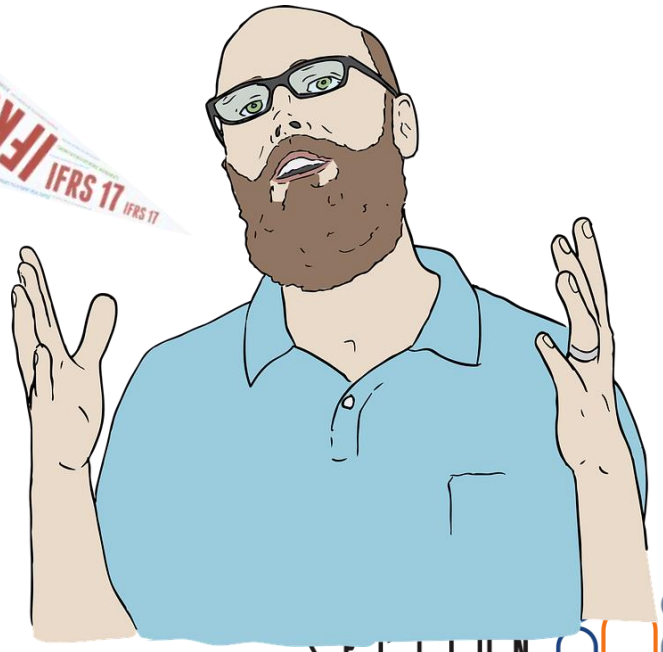


What have we learnt

Findings from the survey



- Volatility in estimates
- Level of judgement applied
- Secondary markets
- Group methodology
- Internal controls & documentation

Areas of concern

What respondents worried about