



Irwin, Jacobs, Greene (Pty) Ltd

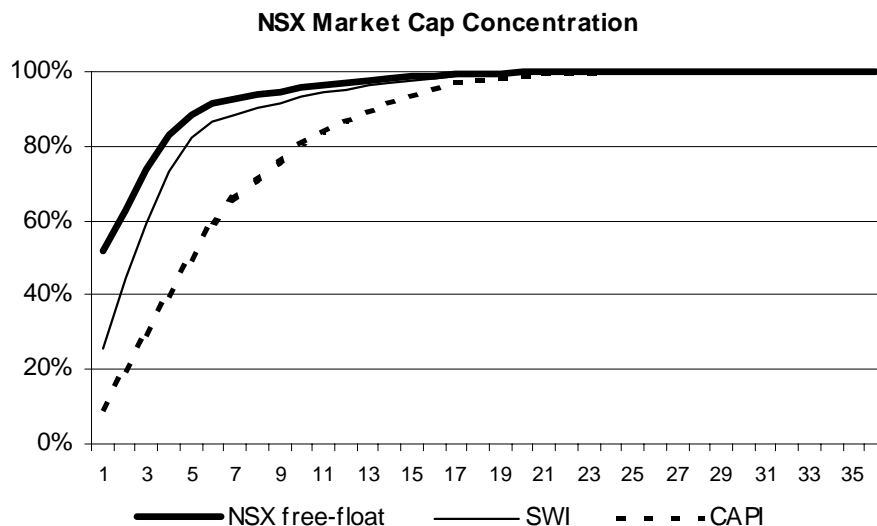
Emerging  
African Markets  
Equity Research

**Namibia**  
**Quantitative**  
**Equity Indices**

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# Namibian Benchmarks

## The Consequences of CAPI and SWI



Source: IJG

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This document has been prepared by Irwin, Jacobs Greene (Pty) Ltd. of Namibia and has been reviewed by Deutsche Securities (Pty) Ltd prior to its publication.

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## Introduction

Following last year’s extensive industry discussions to identify a new benchmark to replace generic market indices, we have assessed the potential impact of adopting a similar set of benchmarks for the Namibian Stock Exchange (NSX).

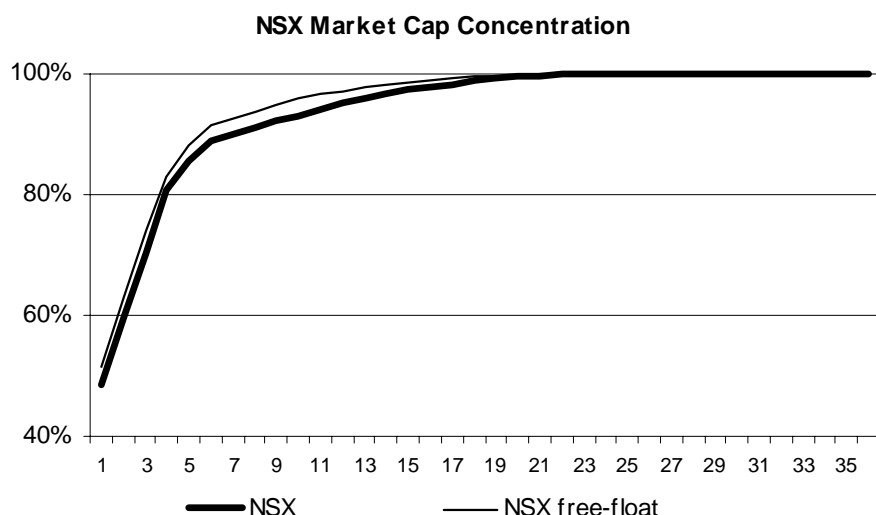
The reasons behind the search for a new benchmark are to be found in the shortcomings of current indices, e.g. market concentration in a few stocks, the investability of benchmarks containing dual-listed stocks, and doubts whether the same benchmarks should be used for active and passive mandates. For a detailed analysis of current and alternative benchmarks and their use for active vs passive investing, please refer to the Deutsche Securities report “Dynamic Benchmarking – Are You Using The Right Yardstick”, dated 8 March 2002.

Rather than repeat the pros and cons of alternative benchmark types, we will apply the findings to the current Namibian benchmark, the NSX Overall Index, and demonstrate the implications of adapting that index to create alternative benchmarks.

We will confine the analysis to the NSX Overall Index, since the extremely low liquidity of NSX Local Index constituents would cause very high rebalancing costs for a capped Local Index.

## NSX Market Concentration

The chart below illustrates the extreme concentration of NSX market capitalisation in a few stocks. The largest stock, **Anglo American**, already **contributes 48%** to market cap (as at 10 March 2003), with the **largest four**, including Standard Bank, Old Mutual, and FirstRand, making up **81% of the index**. The next 10% market cap are contributed by another four stocks, while the **remaining 28 stocks only make up the last 10%**! Interestingly, the **smallest six stocks contribute less than a tenth of a per cent each**.

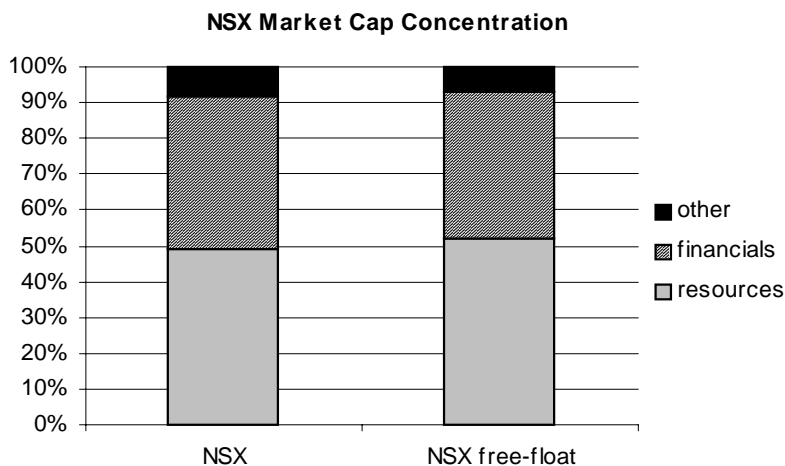


Source: IJG

The recent introduction of **free-float adjusted FTSE indices** has not improved the situation. With a free-float of 96%, **Anglo American is fully weighted** in the new NSX Overall Index, whereas the **remaining index constituents are down-weighted by an average 12%**. Accordingly, market concentration worsened with Anglo American making up 52% now. The

remaining concentration curve more or less maintains its shape, so that 80% and 90% concentration levels are reached only marginally earlier.

The **impact on sector rankings** is rather marginal, with Resources at 49% of the NSX Overall Index, Financials at 43%, and Industrials (pre-FTSE definition) at merely 8%. Post free-float introduction, Resources rose to a weight of 52%, Financials are somewhat lower at 41%, and Industrials (all remaining economic groupings put together) declined to 7%.<sup>1</sup>



Source: IJG

## The New South African Benchmarks

Latest indications are that the FTSE/JSE Advisory Committee agreed on four new benchmarks that incorporate two new methodologies applied to two existing indices, respectively.

The first methodology will **cap constituents** of the **FTSE/JSE All Share Index** as well as the **FTSE/JSE Top 40 Index at 10% (CAPI)**. Current free-float indices will form the basis for the capping process. Lower weights from capped stocks will raise the relative weight of other index constituents, which may require further rounds of capping through an iterative process.

The alternative benchmark will be constructed by **adjusting** about 26 constituent companies of the **FTSE/JSE All Share Index** as well as the **FTSE/JSE Top 40 Index for non-South African ownership (Shareholder-Weighted Index, SWI)**<sup>2</sup>. The number and type of companies to be down-weighted for foreign holdings is largely determined by the accessibility and availability of shareholder register data from STRATE. The down-weighting is intended to **capture presumed non-availability of stock for South African investors due to foreign ownership** and will come on top of the free-float adjustment already incorporated in the current indices. Earlier indications that only shares dual-listed on the London Stock Exchange (LSE) would be down-weighted for foreign ownership were revised to avoid structural distortions. To avoid excessive volatility in the benchmark, it is suggested that foreign ownership be categorised in bands, similar to the current free-float bands used by FTSE.

For further details on the latest South African benchmark specifications please refer to the Deutsche Securities note *“Latest Benchmark News – Update of the Last Advisory Committee Meeting”*, dated 23 December 2002.

<sup>1</sup> Please note that sector shifts were initially reported to be stronger in favour of industrials because free floats for large-cap financials like Old Mutual and Sanlam were reported too low by the NSX.

<sup>2</sup> The name “Shareholder-Weighted Index”, SWI, replaces the former designation “PENI”.

## Namibian Benchmark Applications

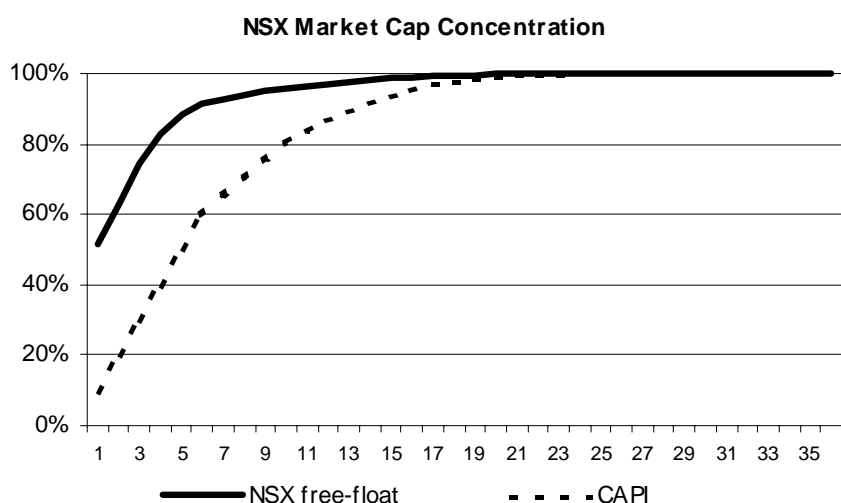
We have applied both methodologies described above to the current Namibian benchmark, the NSX Overall Index, to highlight the implications of alternative benchmarks for the local market. We have not considered an extension of our analysis to the NSX Local Index, as rebalancing costs for a capped Local Index would be prohibitive due to the extremely low liquidity of second-tier constituent stocks.

### NSX CAPI

The current **free-float adjusted NSX Overall Index** serves as the **basis** for the official capping exercise. A **10% cap** is applied, including on those stocks whose relative weight rises above 10% after the first-round capping.

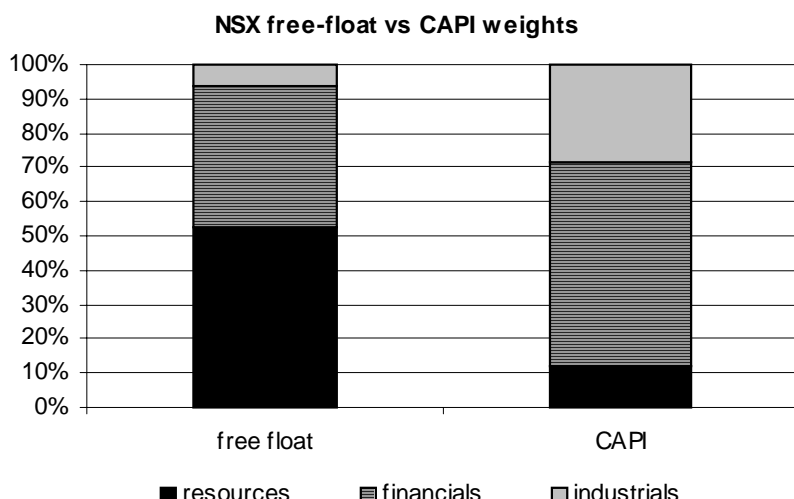
**Anglo American, Standard Bank Group, and Old Mutual** are the three companies to be capped in the **first round**, with initial weights of 52%, 11%, and 11%, respectively. Due to first-round capping one other stock, viz. **FirstRand**, gains a weighting higher than the 10% threshold, while subsequent capping shifts **Sanlam** and **Barloworld** above the limit. Further iteration then reduces all these stocks to a 10% weight, while others gain further in weight without reaching the threshold.

The chart below shows the free-float and CAPI **concentration curves**, with the expected lower degree of market concentration clearly visible. While the free-float curve starts at 52%, the CAPI curve starts at 10% and reaches the **50% level only with five stocks**, including Anglo American, Standard Bank, FirstRand, Old Mutual, and Sanlam. However, the slope of the curve after the first six stocks is significantly steeper than before due to the **bigger relative weight of second-tier constituents**. Nevertheless, the NSX CAPI still reaches a level close to 100% with only half the index constituents, indicating a continued marginalisation of the remaining constituent stocks.



Source: IJG

As shown below, the **80% reduction in Anglo American’s weight** causes a **significant shift in sector weights**, with the biggest beneficiaries being industrial stocks (+22pps) followed by financials (+18pps). **Resources** experience a shift **from being the largest sector by weight to being the smallest sector**.



Source: IJG

### NSX SWI

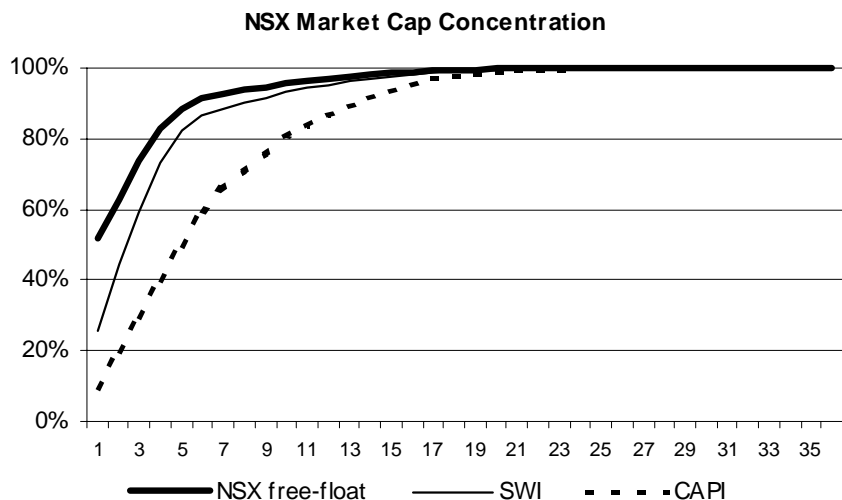
Again, the current **free-float adjusted NSX Overall Index** serves as the **basis** for the Shareholder-Weighted Index, SWI. No capping is applied, instead free-float market capitalisations are **further adjusted to exclude foreign ownership**.

Contrary to earlier indications, all companies will be adjusted for foreign ownership, which will be determined using **company share registers** rather than **trade weights** between the JSE and the LSE. To avoid excessive volatility in the benchmark, foreign ownership will be categorised in bands, similar to the current free-float bands used by FTSE.

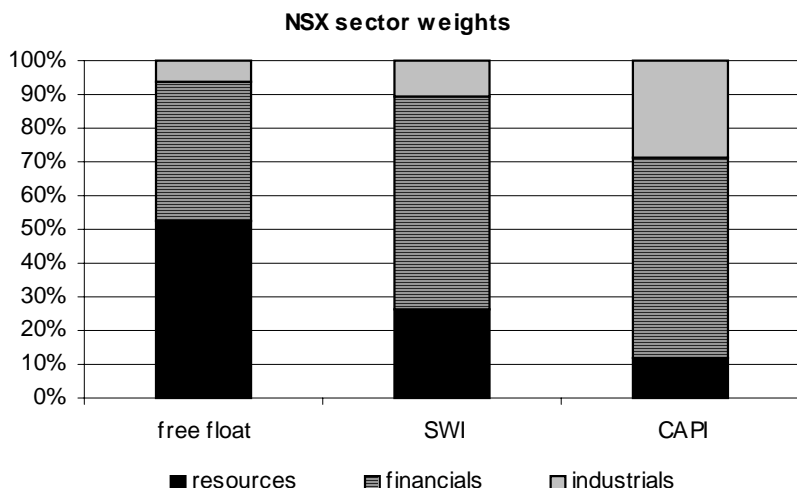
Using the latest information disclosed by FTSE/JSE, NSX constituents that will be affected by shareholder weighting will be **Anglo American** (banded factor of 30%), **Old Mutual** (75%), **Investec Limited** (75%), and **Barloworld** (100%). The respective **company weights** move from 52%, 11.2%, 1.1%, and 2.5% in the current free-float index to **26%, 13.9%, 1.3%, and 4.1% in the SWI**. Relative constituent weights of other companies change accordingly.

The resulting market capitalisation **concentration curve** shown below is less severe than the original free-float curve, but still displays a **significantly higher degree of concentration than the CAPI** in all respects, with a higher starting level, the curve being steeper than both the free-float and CAPI curve, and the 90%-concentration level being reached well ahead of the CAPI curve, although slightly later than in the original free-float curve.

With less of the initial resource-sector weight being cut, **financials are the main sector to gain in the SWI** (+22pps), while industrials benefit substantially less than in the CAPI (+4pps). **Resources maintain a second position** by weight after financials instead of falling to last position.



Source: IJG



Source: IJG

## Assessing Rebalancing Costs

Moving from one benchmark to another implies re-balancing of portfolios with concomitant trading costs. To estimate the cost impact of re-balancing from the initial to the new benchmark weight, we have worked out the number of trading days per constituent stock, using 25% of the average daily trading value as being available without price distortions.

The table below shows the **maximum number of days to re-balance portfolios of different sizes**, with the required re-balancing time shown to change **from the current free-float NSX Overall Index to the CAPI and the SWI**. In both cases the days are shown if all stocks are re-balanced as against a re-balancing of constituents that have a weight in excess of 1% of the new benchmark. The last row of the table shows the **stock that effectively determines the re-balancing time through its limited liquidity**.

**Re-balancing costs are significantly lower for a move to the SWI than to the CAPI**, as would be expected from the lower impact on the concentration curve shown above. Overall, **Oryx Properties** would currently be the **limiting factor to swift re-balancing** in both the

CAPI and SWI, while re-balancing portfolio constituents with a **weight in excess of 1%** would be **slowed by Ellerine** in the case of the **CAPI** and **Afrox** in the case of the **SWI**.

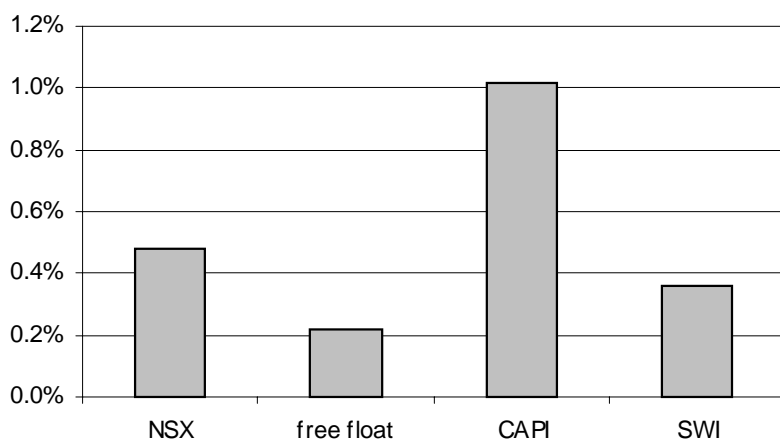
Days to Re-Balance NSX Free-Float Index				
	CAPI	CAPI	SWI	SWI
Fund size	all	>1%	all	>1%
N\$500m	25,308	18	4,487	3
N\$1bn	50,615	37	8,973	6
N\$2bn	101,231	74	17,947	11
limiting stock	ORYX	ELLERINE	ORYX	AFROX

Source: IJG

### NSX Local Stocks in Perspective

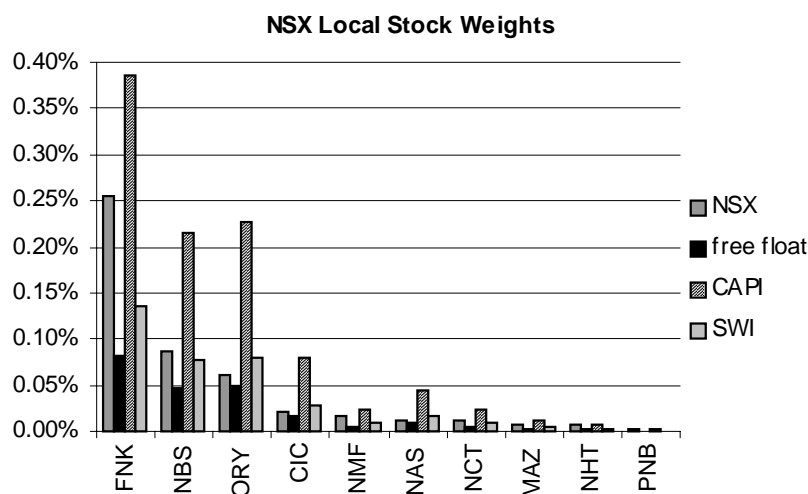
While we have not considered a capped or shareholder-weighted NSX Local Index, the question arises what effect the envisaged benchmark adjustments will have on the position of Local Index constituents. At current prices (10 March 2003), **local stocks contribute 0.2% to free-float NSX market capitalisation**, compared with **0.5% to the unadjusted NSX Overall Index**. In the **CAPI**, **local stocks would have an enhanced weight of 1%** due to the one-sided reduction in large-cap stocks, whereas the weight would only be **0.4% in the SWI**.

Local Stock Weights in NSX Overall Index



Source: IJG

Of the larger local stocks, **only FNB Namibia has a weight in excess of 0.1% in both the CAPI and SWI**, with **Namibia Breweries<sup>3</sup>** and **Oryx** only achieving this threshold in the CAPI, and **CIC** coming close to 0.1%. Other local stocks don't feature at all.



Source: IJG

**Re-balancing times for local shares** are bound to be significantly longer than for large-caps of the NSX Overall Index, but again are **less severe for the SWI than for the CAPI**. Of the three largest local shares (excluding property-loan stock Oryx with its limited trading history), **CIC represents the least limiting factor, followed by Namibia Breweries, while FNB Namibia requires the longest re-balancing time.**

Days to Re-Balance NSX Local Stocks			
Fund size	CAPI		
	FNK	NBS	CIC
N\$500m	446	150	73
N\$1bn	892	299	145
N\$2bn	1,784	598	290
Fund size	SWI		
	FNK	NBS	CIC
N\$500m	79	27	13
N\$1bn	158	53	26
N\$2bn	316	106	51

Source: IJG

<sup>3</sup> At the earlier share price of 250c, Nambrew would be at equal weight to FNB Namibia in the free-float, CAPI, and SWI indices.

## Going Forward...

Latest information indicates that the **four new South African benchmark indices will go live on 1 July 2003**, with calculation of the CAPI having started in February and calculation of the SWI being planned for April.

Thus far we have no indication that the FTSE/JSE plan to introduce similar benchmarks on the NSX. In order to ensure future comparability of Namibian and South African equity performance, we suggest that the NSX together with asset consultants and asset managers approach the FTSE/JSE to discuss the implementation of similar benchmarks in Namibia. IJG will in the meantime maintain an in-house database on the composition of such new benchmarks that will be available to clients on request.

## Annexure 1: NSX Stock Weights

Stock Weights in Indices						
rank	code	name	NSX	free float	CAPI	SWI
1	ANM	Anglo American	48.43%	51.99%	10.00%	25.76%
2	SNB	Stanbank Group	10.63%	11.41%	10.00%	18.85%
3	OLM	Old Mutual	10.43%	11.20%	10.00%	13.88%
4	FST	FirstRand	11.15%	8.98%	10.00%	14.83%
5	SLA	Sanlam	5.05%	5.42%	10.00%	8.95%
6	BWL	Barloworld	3.05%	2.45%	10.00%	4.05%
7	NWC	New Africa Capital	1.11%	1.19%	5.56%	1.96%
8	IVD	Investec	1.01%	1.08%	5.06%	1.34%
9	AFS	Alexander Forbes	0.97%	1.04%	4.88%	1.72%
10	SRH	Shoprite	0.97%	1.04%	4.87%	1.72%
11	JDL	JD Group	0.64%	0.69%	3.23%	1.14%
12	AOX	Afrox	1.20%	0.64%	3.01%	1.06%
13	SNM	Santam	1.01%	0.54%	2.54%	0.90%
14	ELL	Ellerine	0.41%	0.44%	2.04%	0.72%
15	THX	Trans Hex	0.52%	0.42%	1.96%	0.69%
16	TRW	Truworths	0.78%	0.42%	1.95%	0.69%
17	AHG	Avis	0.43%	0.34%	1.61%	0.57%
18	OCS	Oceana Group	0.43%	0.19%	0.87%	0.31%
19	MTF	Mutual & Federal	0.95%	0.15%	0.71%	0.25%
20	PRF	Profurn	0.31%	0.10%	0.47%	0.17%
21	FNK	FNB Namibia	0.26%	0.08%	0.38%	0.14%
22	ORY	Oryx	0.06%	0.05%	0.23%	0.08%
23	NBS	Nambrew	0.09%	0.05%	0.22%	0.08%
24	WTN	Wooltru-N	0.02%	0.02%	0.11%	0.04%
25	CIC	CIC	0.02%	0.02%	0.08%	0.03%
26	WLT	Wooltru	0.02%	0.02%	0.08%	0.03%
27	NAS	Namsea	0.01%	0.01%	0.04%	0.02%
28	NMF	Namfish	0.02%	0.01%	0.02%	0.01%
29	NCT	Nictus	0.01%	0.00%	0.02%	0.01%
30	MAZ	M&Z	0.01%	0.00%	0.01%	0.00%
31	NHT	NamHarvest	0.01%	0.00%	0.01%	0.00%
32	KOL	Kolosus	0.01%	0.00%	0.01%	0.00%
33	PNB	Pep Namibia	0.00%	0.00%	0.00%	0.00%

Ranking in first column by weight in free-float index

Source: IJG

## Annexure 2: NSX Index Weight Factors

Index Weight Factors					
rank	code	name	free float *	CAPI **	SWI **
1	ANM	Anglo American	1.07	0.19	0.50
2	SNB	Stanbank Group	1.07	0.88	1.65
3	OLM	Old Mutual	1.07	0.89	1.24
4	FST	FirstRand	0.81	1.11	1.65
5	SLA	Sanlam	1.07	1.85	1.65
6	BWL	Barloworld	0.81	4.08	1.65
7	NWC	New Africa Capital	1.07	4.68	1.65
8	IVD	Investec	1.07	4.68	1.24
9	AFS	Alexander Forbes	1.07	4.68	1.65
10	SRH	Shoprite	1.07	4.68	1.65
11	JDL	JD Group	1.07	4.68	1.65
12	AOX	Afrox	0.54	4.68	1.65
13	SNM	Santam	0.54	4.68	1.65
14	ELL	Ellerine	1.07	4.68	1.65
15	THX	Trans Hex	0.81	4.68	1.65
16	TRW	Truworths	0.54	4.68	1.65
17	AHG	Avis	0.81	4.68	1.65
18	OCS	Oceana Group	0.43	4.68	1.65
19	MTF	Mutual & Federal	0.16	4.68	1.65
20	PRF	Profurn	0.32	4.68	1.65
21	FNK	FNB Namibia	0.32	4.68	1.65
22	ORY	Oryx	0.81	4.68	1.65
23	NBS	Nambrew	0.54	4.68	1.65
24	WTN	Wooltru-N	1.07	4.68	1.65
25	CIC	CIC	0.81	4.68	1.65
26	WLT	Wooltru	1.07	4.68	1.65
27	NAS	Namsea	0.81	4.68	1.65
28	NMF	Namfish	0.32	4.68	1.65
29	NCT	Nictus	0.43	4.68	1.65
30	MAZ	M&Z	0.32	4.68	1.65
31	NHT	NamHarvest	0.21	4.68	1.65
32	KOL	Kolosus	0.10	4.68	1.65
33	PNB	Pep Namibia	0.21	4.68	1.65

\* new weight as a factor of initial NSX weight

\*\* new weight as a factor of free-float weight

Ranking in first column by weight in free-float index

Source: IJG

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