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SPIVA[®] South Africa Scorecard

SUMMARY

S&P Dow Jones Indices has been the de facto scorekeeper of the ongoing active versus passive debate since the first publication of the S&P Indices Versus Active (SPIVA) U.S. Scorecard in 2002. Over the years, we have built on more than a decade of experience publishing that report by expanding coverage into Canada, Europe, India, Japan, Australia, Latin America, and South Africa. While the report will not end the debate on active versus passive investing, we hope to make a meaningful contribution by examining market segments in which one strategy works better than the other.

The SPIVA South Africa Scorecard measures the performance of actively managed, South African equity and fixed income funds denominated in South African rands (ZAR) against their respective benchmark indices over one-, three-, and five-year investment horizons.

SCORECARD RESULTS

South African equity markets, as measured by [S&P South Africa Domestic Shareholder Weighted \(DSW\) Index](#), increased by 5.05% over the one-year period, amid mixed economic news. The country's GDP in the last quarter of 2016 contracted by 0.3%, which is a slight deterioration compared with the third quarter, when the economy grew by 0.2%. On a positive note, the strengthening of the South African rand and the successful elections held in the country last year may have added to positive sentiment. While the economic climate slightly improved from previous years, this did not appear to help active equity managers, whose funds trailed their respective S&P DJI benchmarks over the short- and long-term horizons. For instance, 77% of South African Equity funds underperformed their corresponding benchmark over the five-year horizon.

The performance of equity funds invested in global markets also fell short, as active managers underperformed across all time horizons studied. Over the five-year horizon, over 93% of funds in the Global Equity category underperformed the S&P Global 1200.

In regard to fixed income, the results were mixed. Across all periods analyzed, active managers beat their respective benchmarks in the Short-Term Bond category, but not in the Diversified/Aggregate Bond category.

Another observation from our analysis is that the size of a fund (the amount of assets under management) appears to matter. Results from Reports 3 and 4 highlight that asset-weighted returns across the three time horizons examined were generally higher than equal-weighted returns. In addition, funds seem to disappear at a meaningful rate. Over the five-year period, approximately 20% of equity funds were either liquidated or merged, while fixed income funds were affected to a lesser extent.

A UNIQUE SCORECARD FOR THE ACTIVE VERSUS PASSIVE DEBATE

Since its first publication 15 years ago, the SPIVA Scorecard has served as the de facto scorekeeper of the active versus passive debate. For more than a decade, we have heard passionate arguments from believers in both camps when headline numbers have deviated from their beliefs.

Beyond the SPIVA Scorecard's widely cited headline numbers is a rich data set that addresses issues related to measurement techniques, universe composition, and fund survivorship that are less frequently discussed but are often more fascinating. These data sets are rooted in the fundamental principles of the SPIVA Scorecard that regular readers will be familiar with, including the following.

- **Survivorship Bias Correction:** Many funds might be liquidated or merged during a period of study. However, for someone making an investment decision at the beginning of the period, these funds are part of the opportunity set. Unlike other commonly available comparison reports, SPIVA Scorecards account for the entire opportunity set—not just the survivors—thereby eliminating survivorship bias.
- **Asset-Weighted Returns:** Average returns for a fund group are often calculated using only equal weighting, which means the returns of a ZAR 100 billion fund affect the average in the same manner as the returns of a ZAR 100 million fund. An accurate representation of how market participants fared in a particular period can be ascertained by calculating weighted average returns in which each fund's return is weighted by net assets. SPIVA Scorecards show both equal- and asset-weighted averages.
- **Data Cleaning:** SPIVA Scorecards avoid double counting multiple share classes in all count-based calculations by using only the share class with greater assets. Index, leveraged, and inverse funds, along with other index-linked products, are excluded because this is meant to be a scorecard for active managers.

REPORTS

Report 1: Percentage of South African Funds Outperformed by Benchmarks

FUND CATEGORY	COMPARISON INDEX	ONE-YEAR (%)	THREE-YEAR (%)	FIVE-YEAR (%)
South African Equity	S&P South Africa DSW Index	72.47	80.14	76.98
Global Equity	S&P Global 1200	76.60	96.43	93.10
Short-Term Bond	STeFI Composite	13.04	27.27	21.43
Diversified/Aggregate Bond	JSE/ASSA ALBI	82.61	42.86	57.14

Source: S&P Dow Jones Indices LLC, Morningstar. Data for periods ending Dec. 31, 2016. Outperformance is based on equal-weighted fund counts. Index performance is based on total return in ZAR. Past performance is no guarantee of future results. Table is provided for illustrative purposes.

Report 2: Survivorship of South African Funds

FUND CATEGORY	NO. OF FUNDS AT START	SURVIVORSHIP (%)
ONE-YEAR		
South African Equity	183	98.36
Global Equity	47	95.74
Short-Term Bond	48	95.83
Diversified/Aggregate Bond	92	94.57
THREE-YEAR		
South African Equity	152	91.45
Global Equity	29	96.55
Short-Term Bond	45	93.33
Diversified/Aggregate Bond	72	91.67
FIVE-YEAR		
South African Equity	135	82.96
Global Equity	30	80.00
Short-Term Bond	43	93.02
Diversified/Aggregate Bond	58	84.48

Source: S&P Dow Jones Indices LLC, Morningstar. Data for periods ending Dec. 31, 2016. Survivorship shown for funds in ZAR. Past performance is no guarantee of future results. Table is provided for illustrative purposes.

Report 3: Average South African Fund Performance (Equal Weighted)

CATEGORY	ONE-YEAR (%)	THREE-YEAR (ANNUALIZED %)	FIVE-YEAR (ANNUALIZED %)
S&P South Africa DSW Index	5.05	7.76	14.00
South African Equity	3.36	5.40	11.45
S&P Global 1200	-3.79	14.12	23.16
Global Equity	-8.05	9.14	18.41
STeFI Composite	7.37	6.58	6.09
Short-Term Bond	8.60	6.86	6.69
JSE/ASSA ALBI	15.42	6.89	7.34
Diversified/Aggregate Bond	10.58	7.04	7.40

Source: S&P Dow Jones Indices LLC, Morningstar. Data for periods ending Dec. 31, 2016. Index performance based on total return in ZAR. Funds are equal weighted but indices are not. Past performance is no guarantee of future results. Table is provided for illustrative purposes.

Report 4: Average South African Fund Performance (Asset Weighted)

CATEGORY	ONE-YEAR (%)	THREE-YEAR (ANNUALIZED %)	FIVE-YEAR (ANNUALIZED %)
S&P South Africa DSW Index	5.05	7.76	14.00
South African Equity	5.06	6.25	11.96
S&P Global 1200	-3.79	14.12	23.16
Global Equity	-5.38	11.24	21.56
STeFI Composite	7.37	6.58	6.09
Short-Term Bond	8.90	7.22	7.09
JSE/ASSA ALBI	15.42	6.89	7.34
Diversified/Aggregate Bond	12.46	7.44	7.69

Source: S&P Dow Jones Indices LLC, Morningstar. Data for periods ending Dec. 31, 2016. Index performance based on total returns in ZAR. Past performance is no guarantee of future results. Table is provided for illustrative purposes.

Report 5: Quartile Breakpoints of South African Funds

FUND CATEGORY	THIRD QUARTILE	SECOND QUARTILE	FIRST QUARTILE
ONE-YEAR			
South African Equity	-1.67	1.82	5.74
Global Equity	-11.24	-8.18	-3.79
Short-Term Bond	8.15	8.72	9.11
Diversified/Aggregate Bond	8.34	9.72	14.77
THREE-YEAR			
South African Equity	3.91	5.68	7.19
Global Equity	8.62	9.85	12.54
Short-Term Bond	6.64	7.02	7.36
Diversified/Aggregate Bond	6.62	7.17	7.75
FIVE-YEAR			
South African Equity	10.25	12.24	14.20
Global Equity	18.78	19.45	20.57
Short-Term Bond	6.26	6.74	6.93
Diversified/Aggregate Bond	6.96	7.46	7.97

Source: S&P Dow Jones Indices LLC, Morningstar. Data for periods ending Dec. 31, 2016. Index performance based on total returns in ZAR. Past performance is no guarantee of future results. Table is provided for illustrative purposes.

APPENDIX A

SPIVA Styles and Morningstar Fund Classifications

Data from Morningstar is obtained for all managed funds domiciled in South Africa for which month-end data is available during the performance period. The data includes the most comprehensive South African fund data on active and finalized (merged or liquidated) funds over the chosen period. Funds are classified based on the Morningstar fund classification system, and the SPIVA South Africa Scorecard covers South African and international equity and fixed income categories.

International and South African Funds

The SPIVA South Africa Scorecard covers both domestic and international funds that are denominated in South African rands and they have been mapped to the relevant Morningstar fund categories as indicated in this report. The Morningstar classification system produces narrow, style-based classifications for funds, particularly in relation to international equities. S&P Dow Jones Indices has consolidated the style-based categories in order to generate a larger sample size and develop a broad-market comparison to market-based benchmarks. A narrow, style-based comparison would yield a limited sample size, given that value and growth style segments are not consistently discernible over a five-year period.

Morningstar categories have been mapped to SPIVA peer groups in the following manner.

MORNINGSTAR CATEGORY	SPIVA CATEGORY	BENCHMARK INDEX
Africa Open-Ended South Africa & Namibia Equity	South African Equity	S&P South Africa DSW Gross Total Return (ZAR)
Africa Open-Ended Global Large-Cap Blend Equity	Global Equity	S&P Global 1200 Gross Total Return (ZAR)
Africa Open-Ended Global Large-Cap Growth Equity		
Africa Open-Ended Global Large-Cap Value Equity		
Africa Open-Ended Global Flex-Cap Equity		
Africa Open-Ended ZAR/NAD—Short Term Bonds	Short-Term Bond	South Africa Short Term Fixed Interest (STeFI) Composite Total Return (ZAR)
Africa Open-Ended ZAR/NAD—Ultra Short Term Bonds		
Africa Open-Ended ZAR/NAD—Diversified Bonds	Diversified/Aggregate Bond	Johannesburg Stock Exchange/Actuarial Society of South Africa (JSE/ASSA) All Bond Index (ALBI) Total Return (ZAR)
Africa Open-Ended ZAR/NAD—Flexible Bonds		

Source: S&P Dow Jones Indices LLC, Morningstar. Table is provided for illustrative purposes.

APPENDIX B

Glossary–Reports

PERCENTAGE OF FUNDS OUTPERFORMED BY THE INDEX

To correct for survivorship bias, we use the opportunity set available at the beginning of the period as the denominator. We determine the count of funds that have survived and beat the index. We then report the index outperformance percentage.

SURVIVORSHIP (%)

The survivorship measure represents the percentage of funds in existence at the beginning of the time period that are still active at the end of the time period.

EQUAL-WEIGHTED FUND PERFORMANCE

Equal-weighted returns for a particular style category are determined by calculating a simple average return of all active funds in that category in a particular month.

ASSET-WEIGHTED FUND PERFORMANCE

Asset-weighted returns for a particular style category are determined by calculating a weighted average return of all funds in that category in a particular month, with each fund's return weighted by its total net assets. Asset-weighted returns are a better indicator of fund category performance because they reflect the returns of the total money invested in that particular style category with more accuracy.

QUARTILE BREAKPOINTS

The p th percentile for a set of data is the value that is greater than or equal to $p\%$ of the data but is less than or equal to $(100-p)\%$ of the data. In other words, it is a value that divides the data into two parts: the lower $p\%$ of the values and the upper $(100-p)\%$ of the values. The first quartile is the 75th percentile, which is the value separating the elements of a population into the lower 75% and the upper 25%. The second quartile is the 50th percentile, and the third quartile is the 25th percentile. For fund category quartiles in a particular time horizon, the data used is the return of the largest share class of the fund net of fees, excluding loads.

SURVIVORSHIP BIAS

Many funds might liquidate or merge during a period of study. This usually occurs due to continued poor performance by the fund. Therefore, if index returns were compared to fund returns using only surviving funds, the comparison would be biased in favor of the fund category. The SPIVA reports remove this bias in three ways. The first method to remove the bias is to use the entire investment opportunity set, made up of all funds in that particular category at the outset of the period, as the denominator for outperformance calculations. The second is explicitly to show the survivorship rate in each category. The final way is to construct a peer average return series for each category based on all available funds at the outset of the period.

FEES

The fund returns used are net of fees, excluding loads.

Indices

A benchmark index provides an investment vehicle against which fund performance can be measured.

S&P SOUTH AFRICA DOMESTIC SHAREHOLDER WEIGHTED (DSW) INDEX

The [S&P South Africa Domestic Shareholder Weighted \(DSW\) Index](#) adjusts the weights of companies in the [S&P South Africa Composite](#) in order to reflect the level of ownership by South African investors. The S&P South Africa Composite is a float-adjusted, market-cap-weighted index that measures the performance of large-, mid-, and small-cap companies listed on the Johannesburg Stock Exchange.

S&P GLOBAL 1200

Capturing approximately 70% of the world's capital markets, the [S&P Global 1200](#) is a composite of seven headline indices, many of which are accepted leaders in their regions. It includes the [S&P 500®](#) (U.S.), [S&P Europe 350](#) (Europe), [S&P/TOPIX 150](#) (Japan), [S&P/TSX 60](#) (Canada), [S&P/ASX All Australian 50](#) (Australia), [S&P Asia 50](#) (Asia Ex-Japan), and [S&P Latin America 40](#) (Latin America).

SOUTH AFRICA SHORT TERM FIXED INTEREST (STEFI) COMPOSITE

The South Africa Short Term Fixed Interest (STeFI) Composite Index approximates the performance of money market instruments in the market. Instruments such as call deposits and negotiable certificates of deposits (BCD's) represent common, liquid instruments and provide a good proxy of short-term markets.

JOHANNESBURG STOCK EXCHANGE/ACTUARIAL SOCIETY OF SOUTH AFRICA (JSE/ASSA) ALL BOND INDEX (ALBI)

The Johannesburg Stock Exchange/Actuarial Society of South Africa (JSE/ASSA) All Bond Index (ALBI) comprises the top-20 listed bonds ranked by market capitalization and liquidity.

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