

DRW Investment Research



Market Performances and Indicators

31 December 2016

1. FTSE JSE Indices Performances

	ALSI	ALSI TRI	SWIX TRI
1-year	-1.0%	1.6%	2.1%
2-year	0.4%	3.4%	2.9%
3-year	2.8%	5.8%	6.9%
4-year	6.3%	9.5%	10.2%
5-year	9.4%	12.8%	13.7%
6-year	7.7%	11.0%	12.1%
7-year	8.9%	12.1%	13.3%
8-year	11.2%	14.4%	15.3%
9-year	6.3%	9.5%	10.4%
10-year	7.3%	10.4%	11.2%
11-year	9.7%	12.9%	13.5%
12-year	12.2%	15.4%	15.8%
13-year	12.9%	16.2%	17.1%
14-year	12.8%	16.2%	17.3%

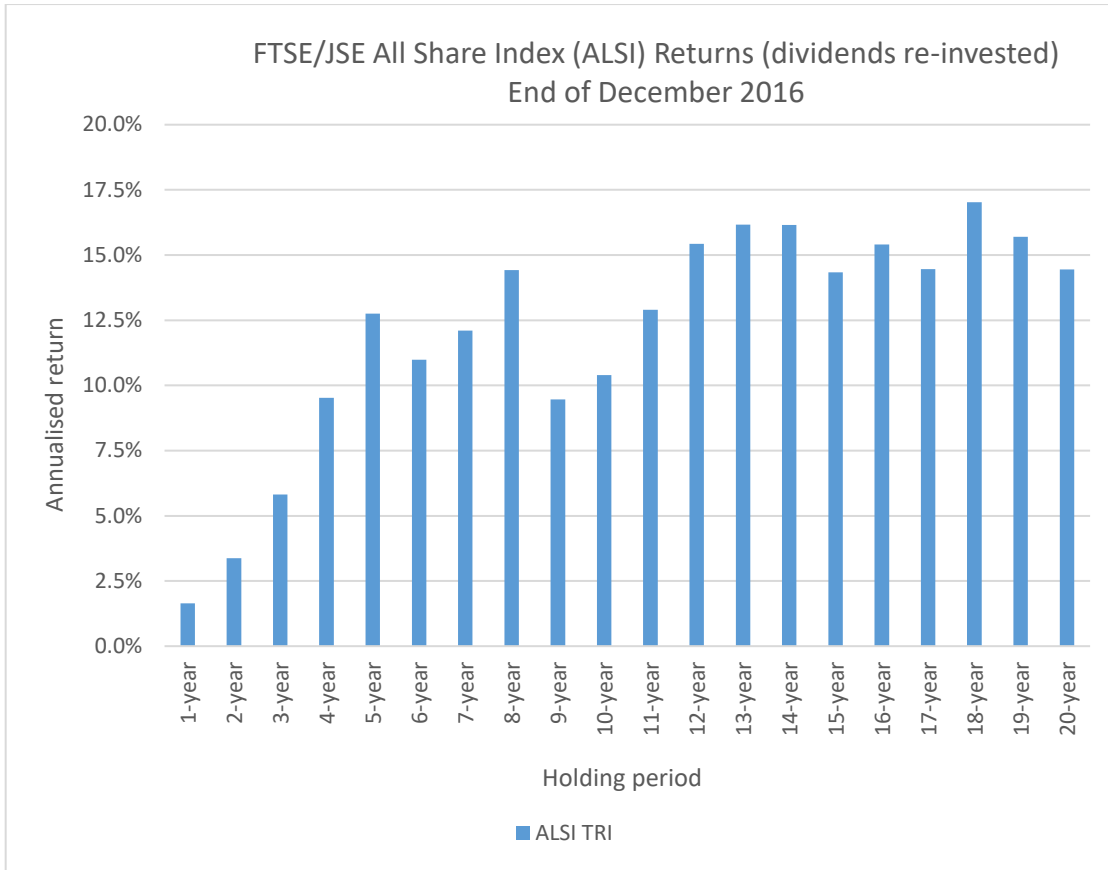
Source: JSE, DRW Investment Research

Return = Annualised return

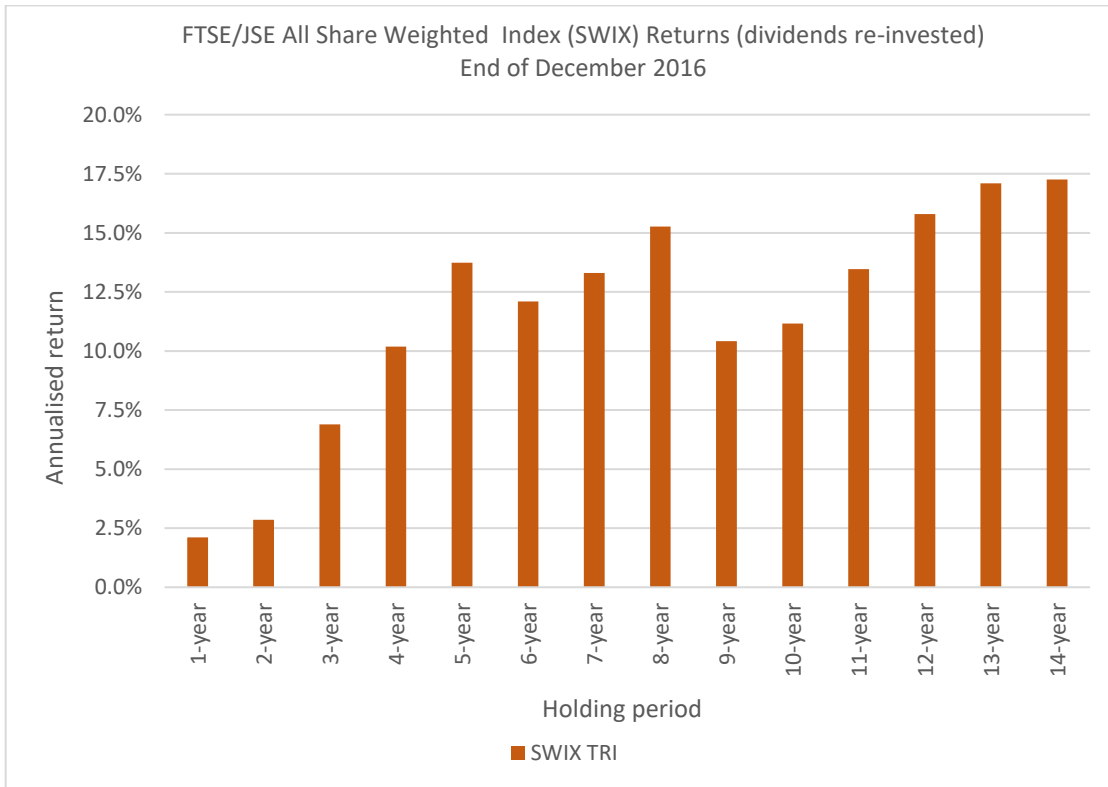
ALSI = All Share Index, price movement only, dividends excluded

ALSI TRI = All Share Index Total return index, dividends re-invested

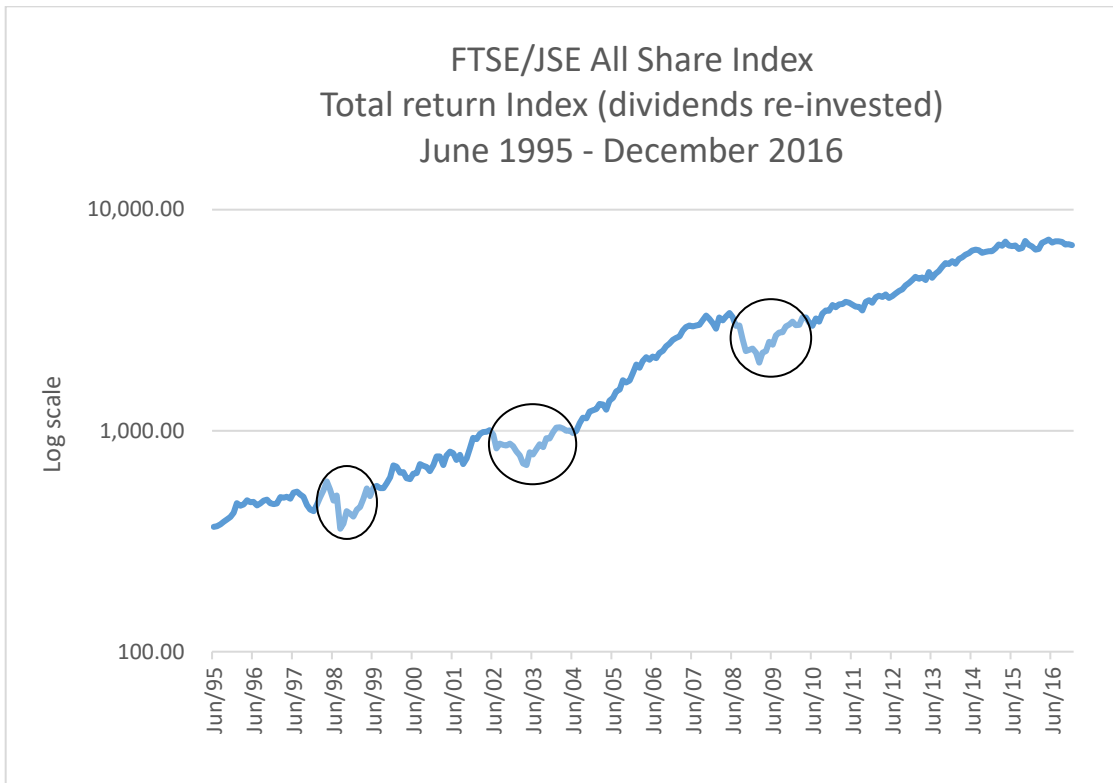
SWIX TRI = Shareholder Weighted All Share Index, dividends re-invested



Source: JSE, DRW Investment Research



Source: JSE, DRW Investment Research



Source: JSE, DRW Investment Research

31 December 2016

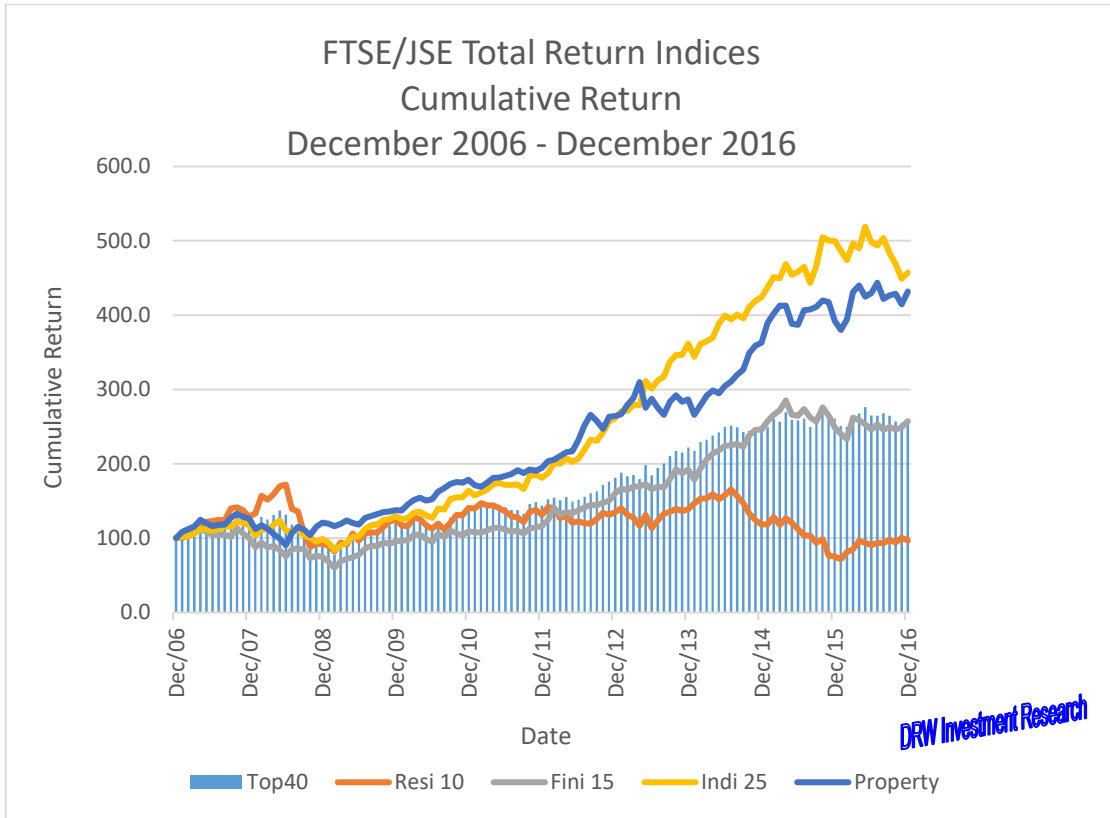
Performance over	J200T	J210T	J212T	J211T	J253T
	Top40	Resi 10	Fini 15	Indi 25	Property
1 Month	0.5%	-3.7%	3.2%	1.8%	4.2%
3 Months	-3.0%	-1.1%	3.2%	-5.4%	1.3%
6 Months	-3.2%	7.0%	4.6%	-8.2%	0.5%
12 Months	-1.6%	28.9%	3.6%	-8.5%	10.2%
24 Months *	2.9%	-9.4%	2.3%	3.9%	9.1%
36 Months *	4.9%	-11.3%	10.2%	8.1%	14.6%
48 Months *	9.1%	-8.0%	12.5%	15.0%	13.1%
60 Months *	12.3%	-5.9%	17.2%	20.4%	17.3%
84 Months *	11.5%	-3.6%	15.3%	19.8%	17.7%
120 Months *	9.9%	-0.3%	9.9%	16.4%	15.8%

Since January 2016	-1.6%	28.9%	3.6%	-8.5%	10.2%
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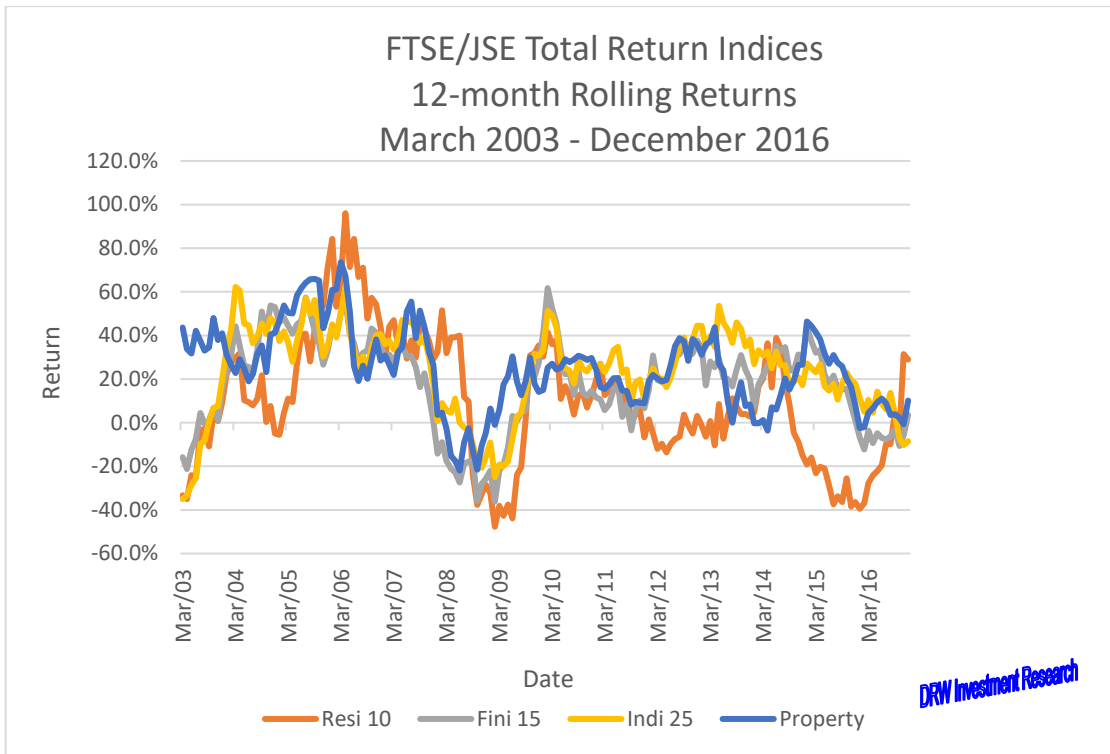
* Annualised Returns

Source: JSE, DRW Investment Research

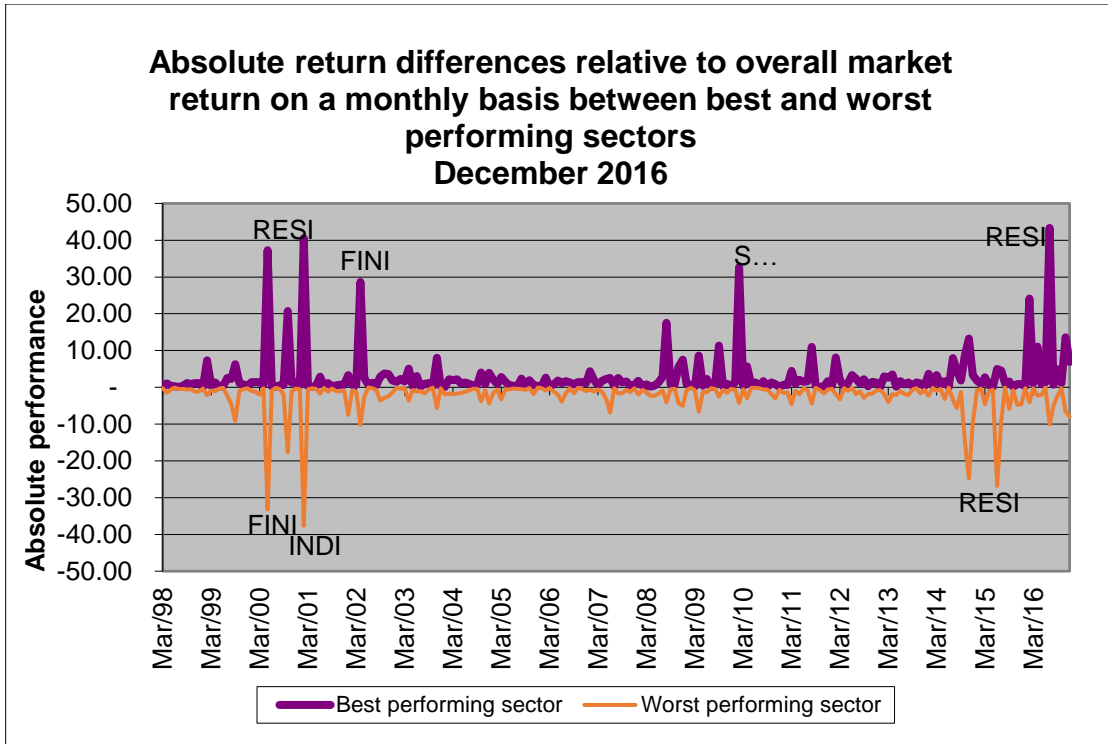
Top40 =	Top 40 shares by market capitalisation
Resi10 =	Top 10 resources sector shares by market capitalisation
Fini =	Top 15 financial sector shares by market capitalisation
Indi =	Top 25 industrial sector shares by market capitalisation
Property =	SA listed property



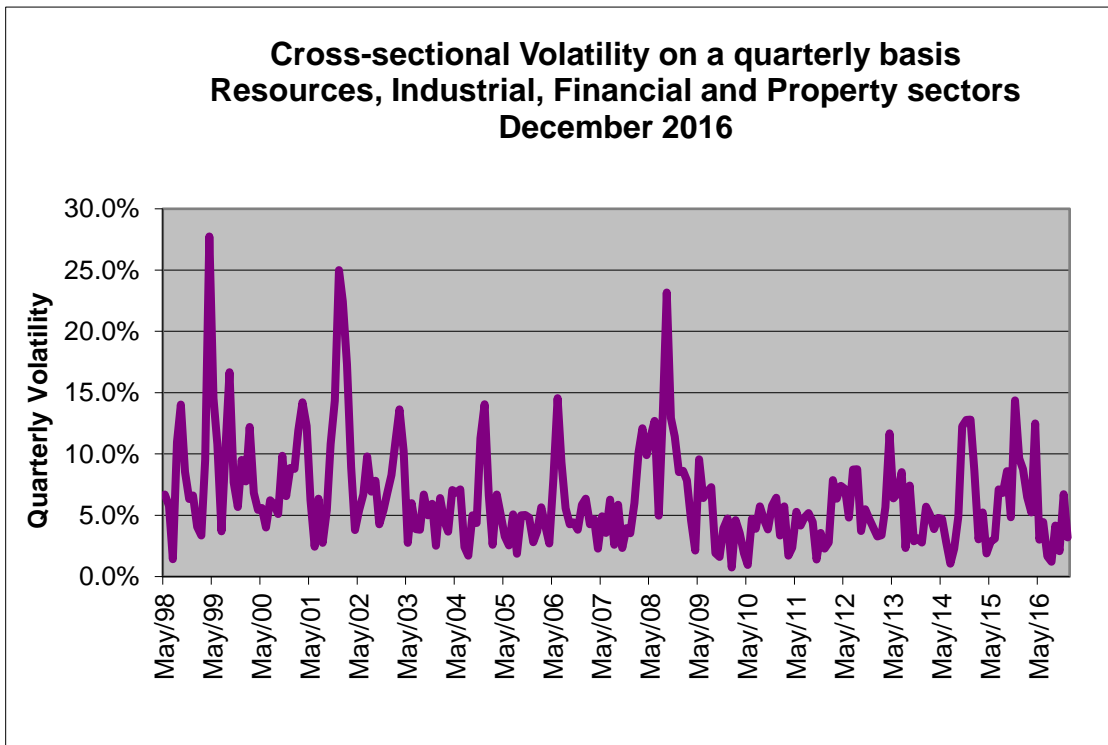
Source: JSE, DRW Investment Research



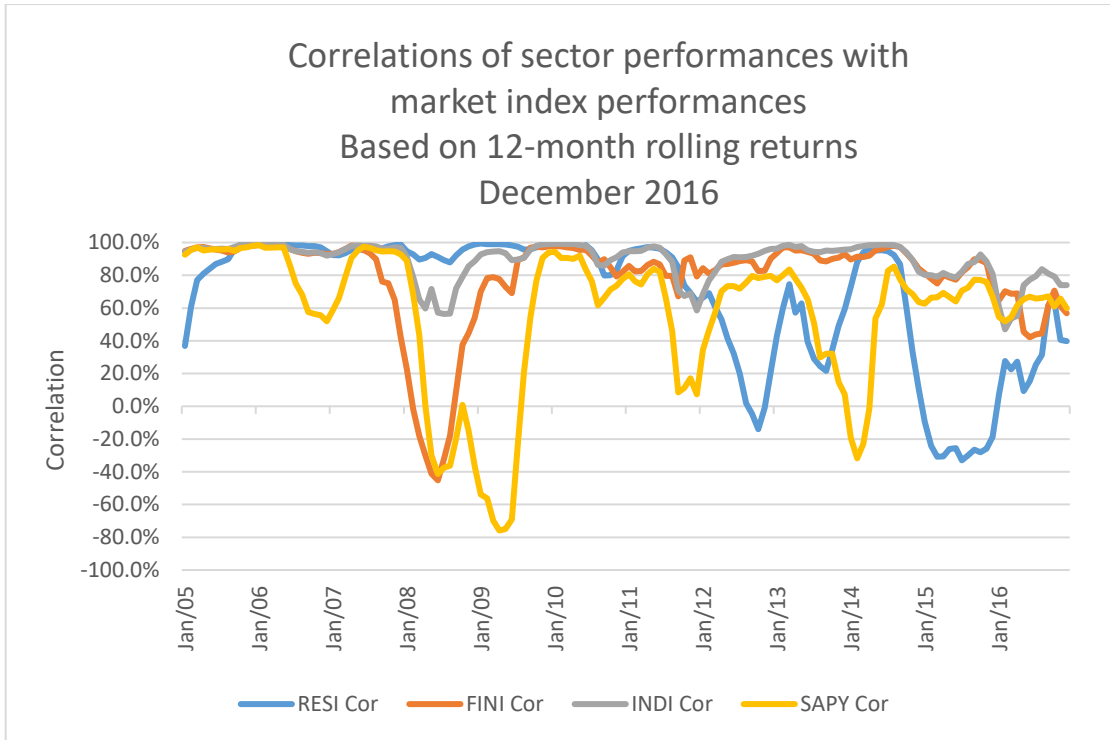
Source: JSE, DRW Investment Research



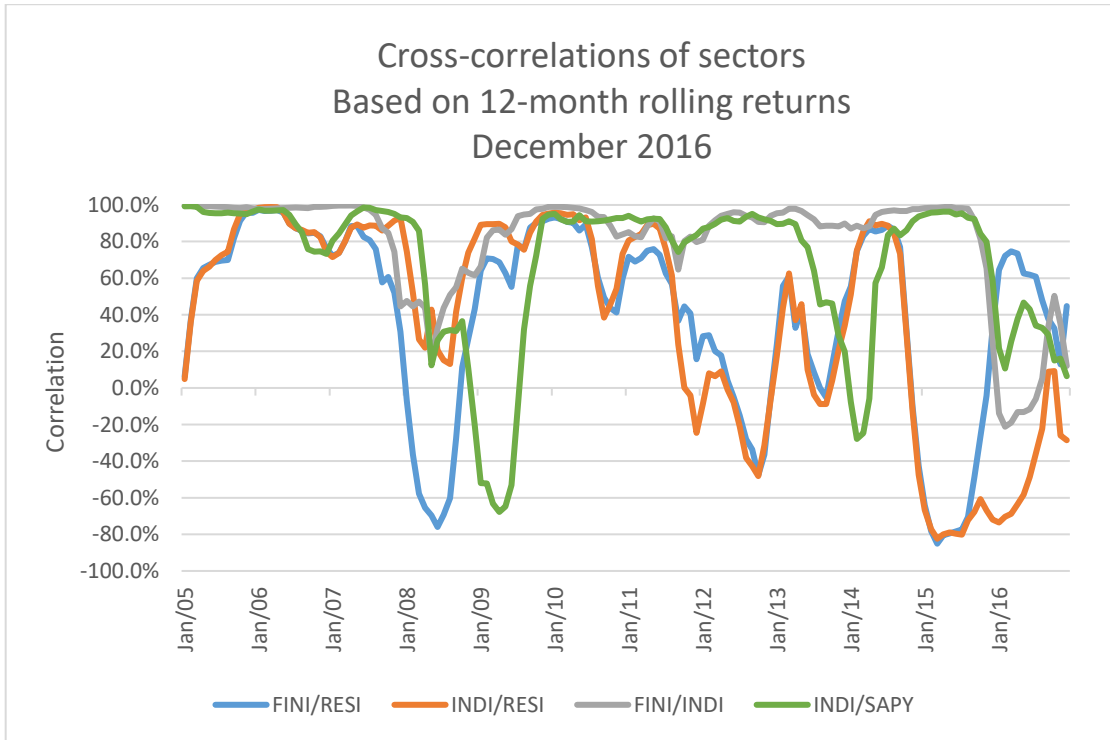
Source: JSE, DRW Investment Research



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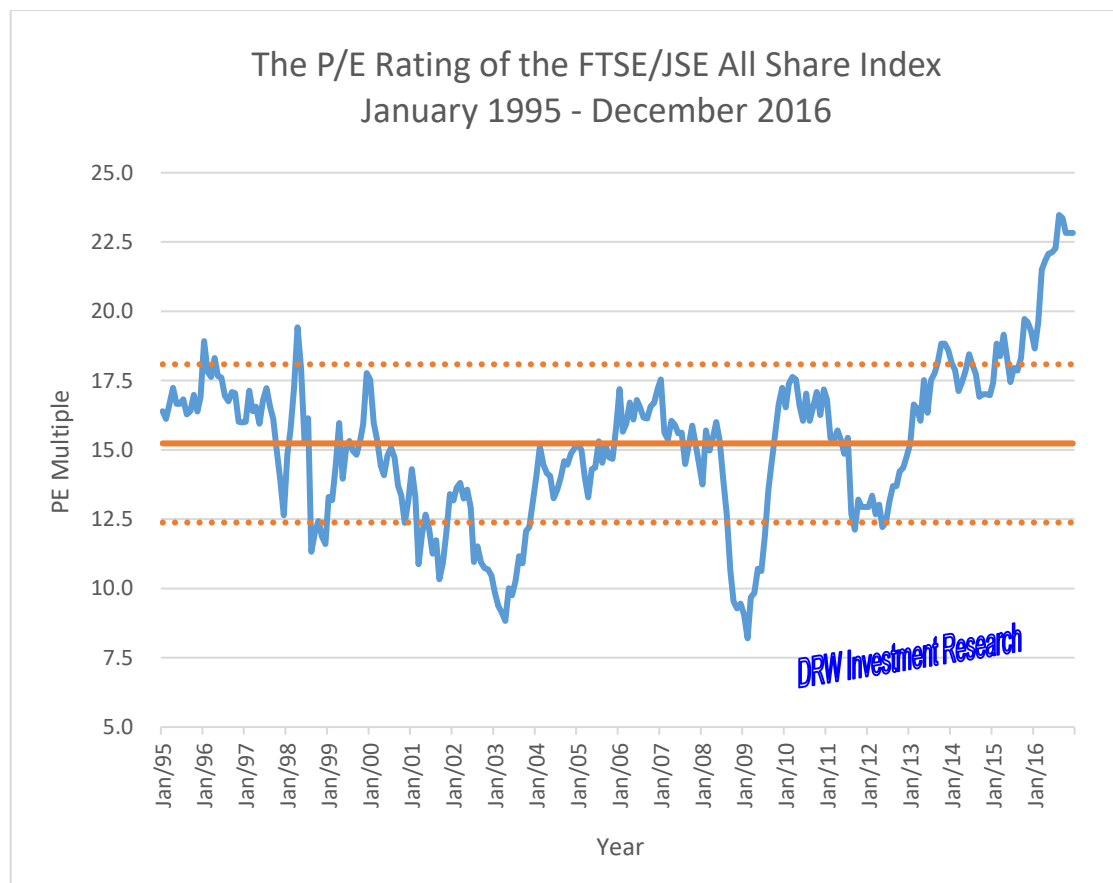


Source: JSE, DRW Investment Research

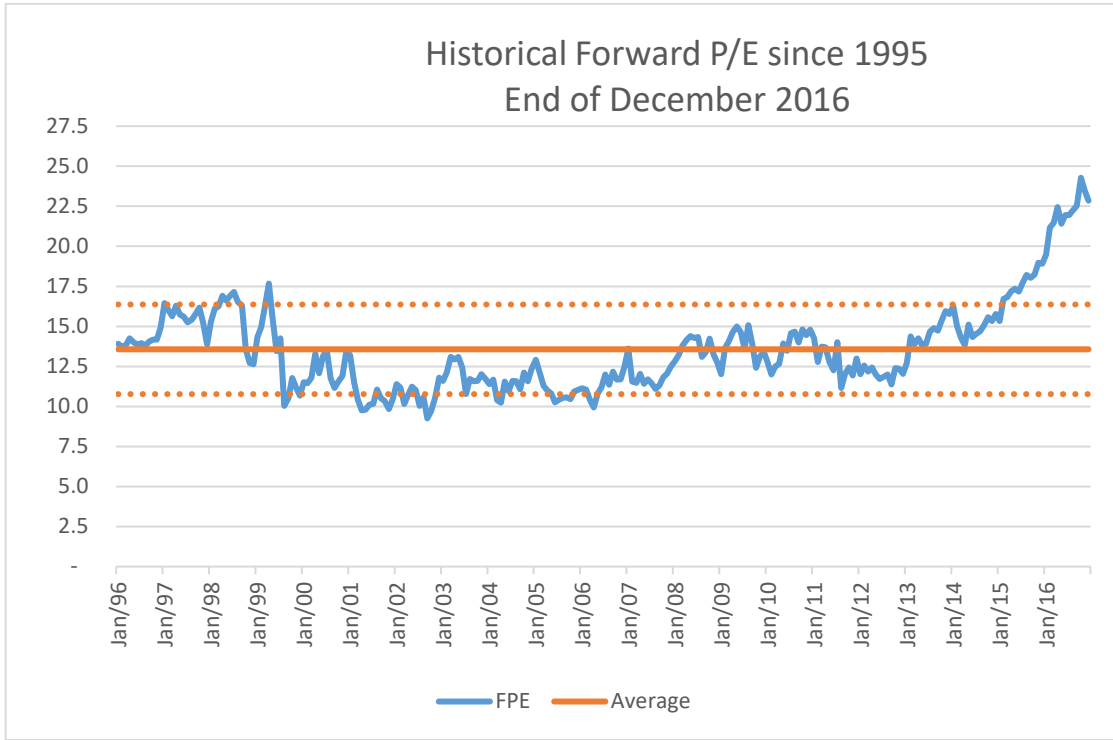
2. Market Indicators

Price / Earnings Ratio

- The most common valuation ratio; current share price relative to the historical earnings per share (EPS).
- How accurate is the market in predicting future earnings; i.e. how well is the price you pay today compensating you for future earnings?
- An alternative and perhaps more useful indicator; share price relative to “normalised” earnings per share whereby historical earnings, adjusted for inflation, are smoothed out over rolling 7-year and 10-year periods.

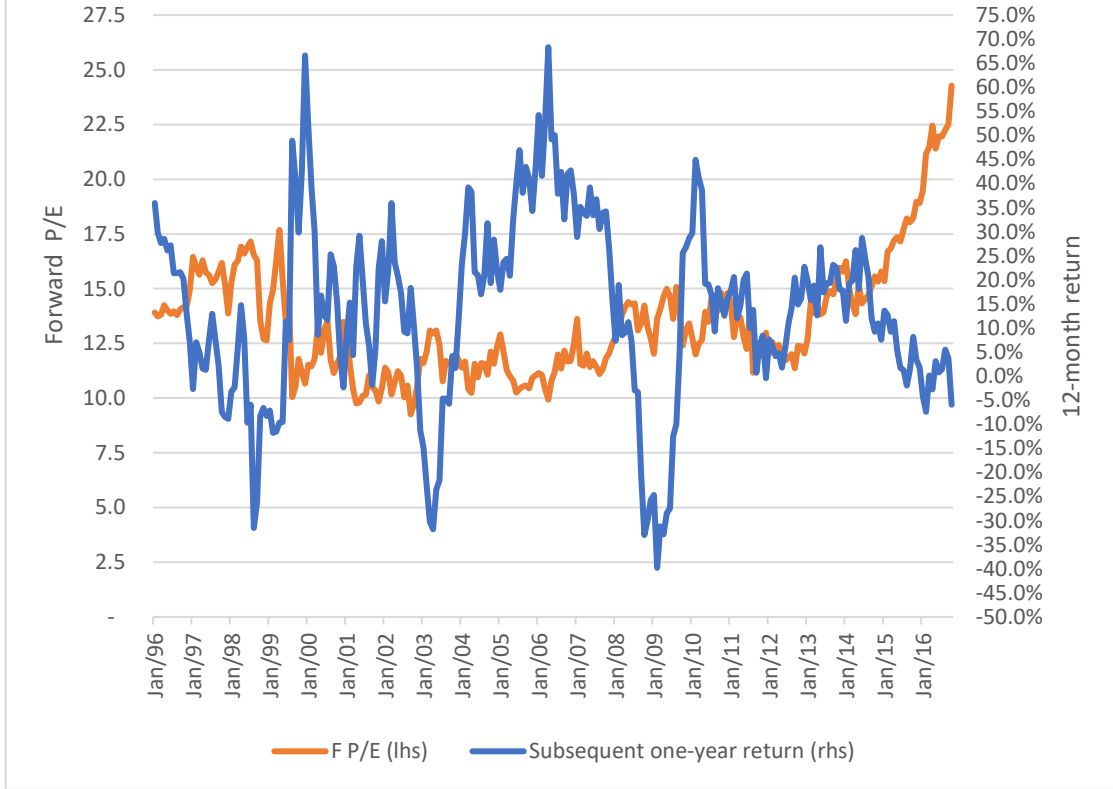


Source: JSE, DRW Investment Research



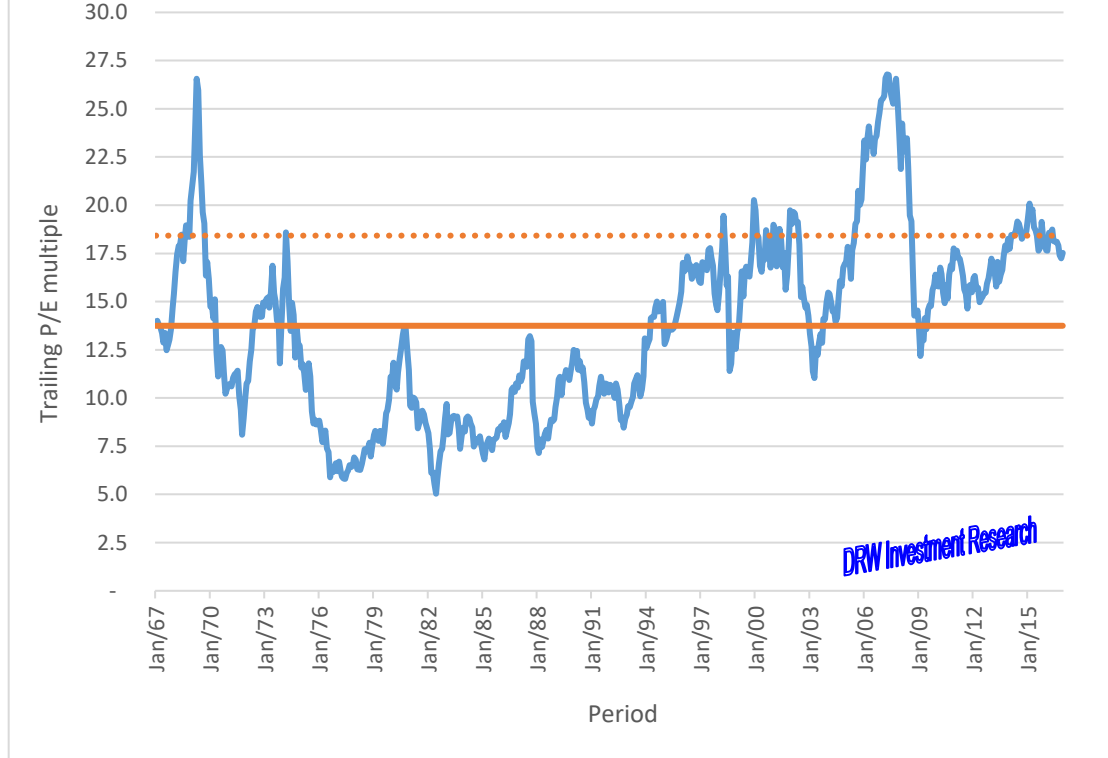
Source: JSE, DRW Investment Research

Relationship between historical Fwd P/E and subsequent 12-month return since 1995 December 2016



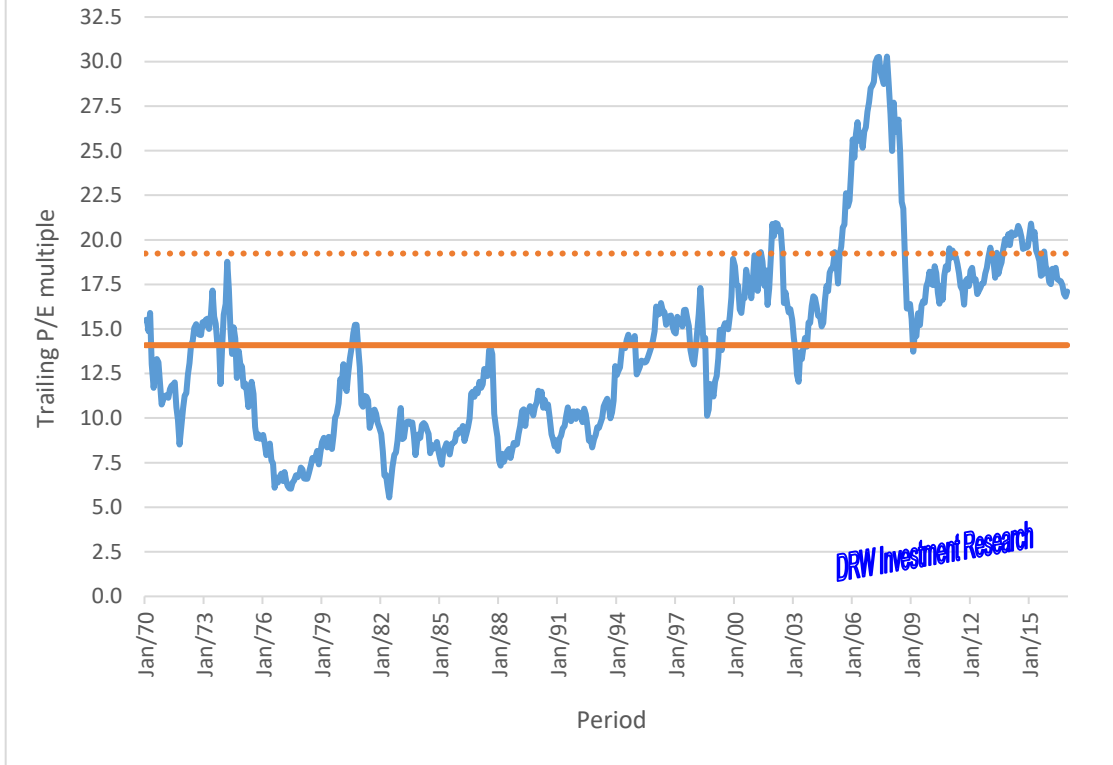
Source: JSE, DRW Investment Research

Shiller's P/E [CAPE7]
(Real ALSI Index divided by 7-year normalised real earnings)
December 2016



Source: JSE, SARB, DRW Investment Research

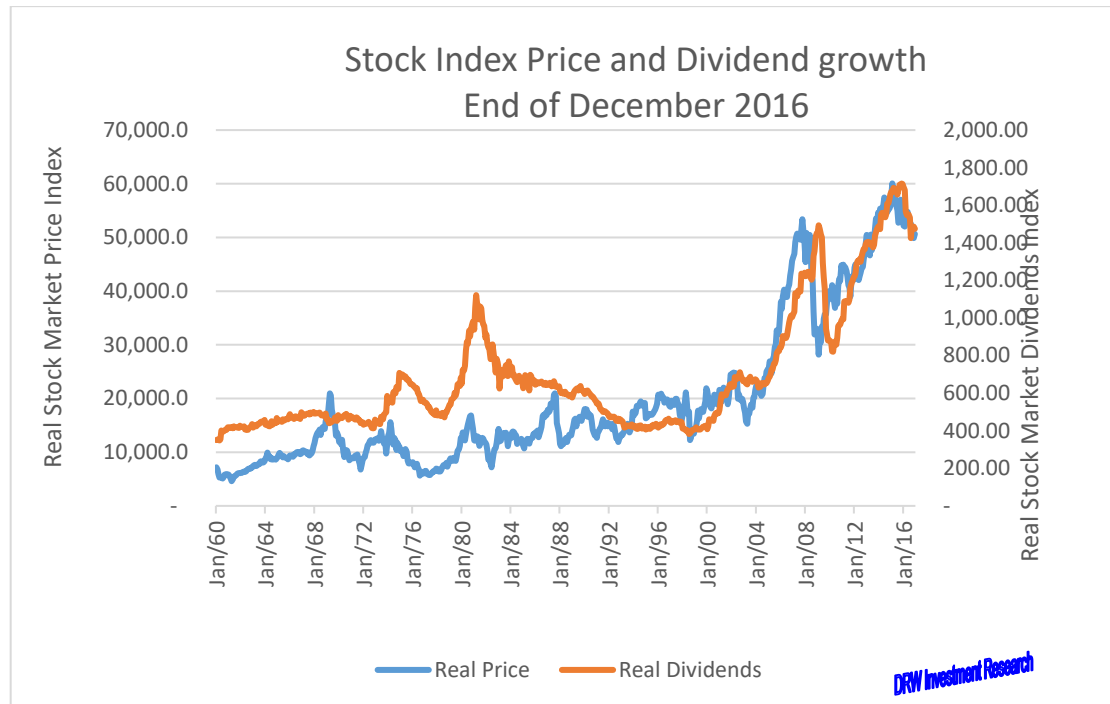
Shiller's P/E [CAPE10]
(Real ALSI Index divided by 10-year normalised real earnings)
December 2016



Source: JSE, DRW Investment Research

Dividend Growth

Stock prices follow dividend growth; sometimes price lags dividend growth—typically a value proposition— but when prices are running far ahead of dividend growth one should take a more cautious stance.



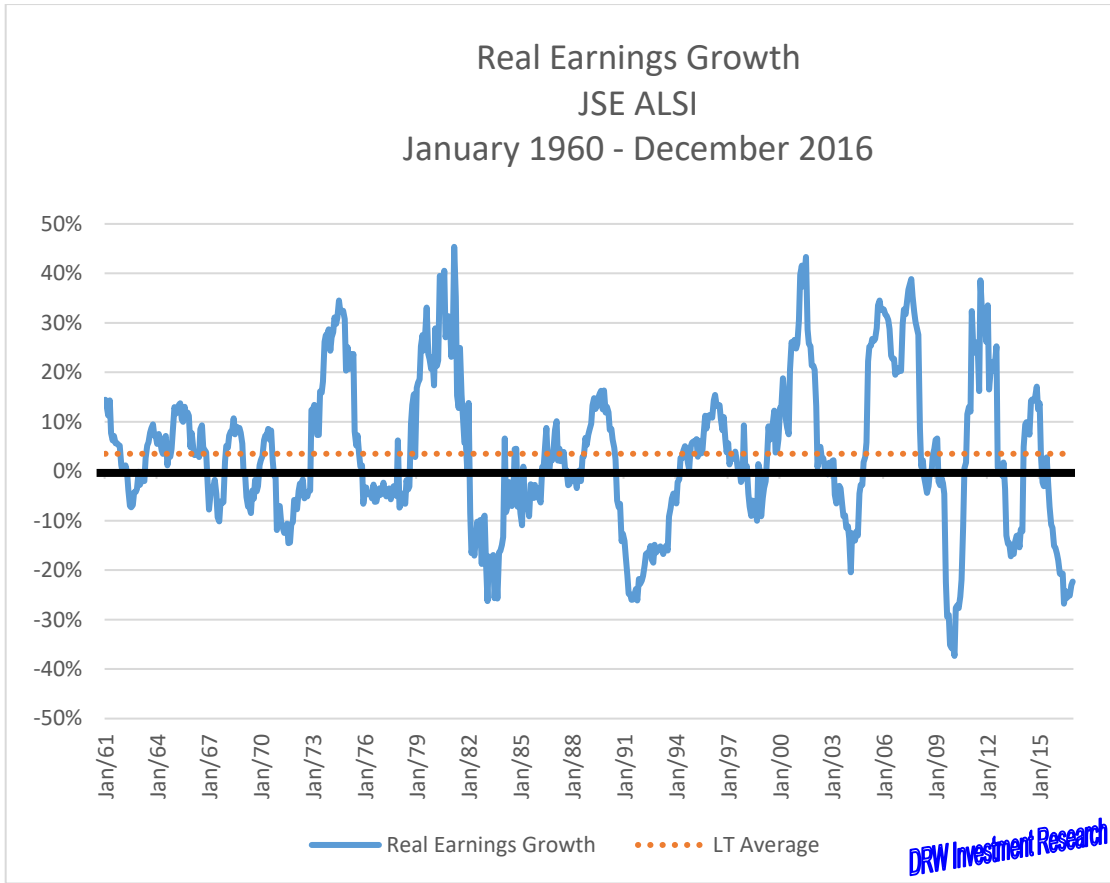
Source: JSE, SARB, DRW Investment Research

Earnings Growth

A primary component of equity returns in the long run that is linked to the overall growth in the economy, which in turn is affected by inflation rate (and interest rate) trends.



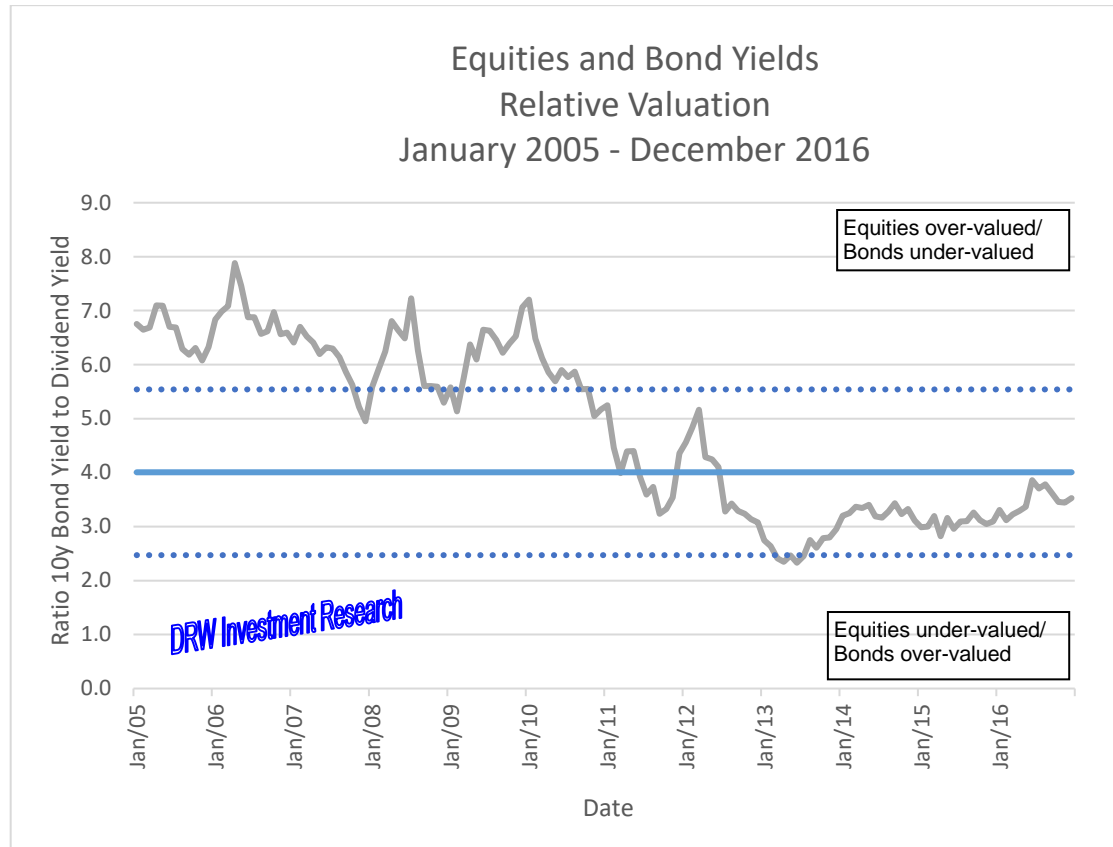
Source: JSE, SARB, DRW Investment Research



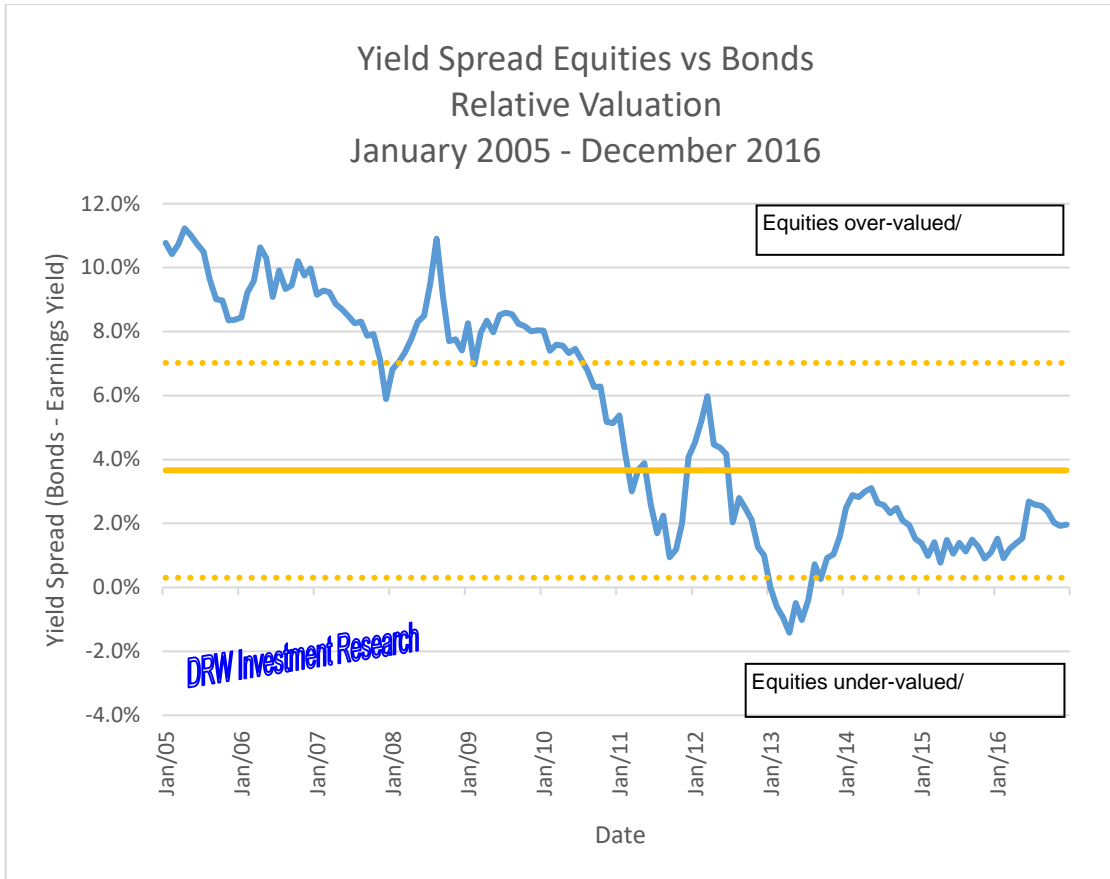
Source: JSE, DRW Investment Research

Equity Income Yield versus Long-term Bond Yield

The dividend and earnings yield of the stock market are compared with the long-term (10-year) bond yield. The spread (difference) between the respective yields is used to gauge the relative expensiveness of the equity market versus the bond market.



Source: JSE, DRW Investment Research

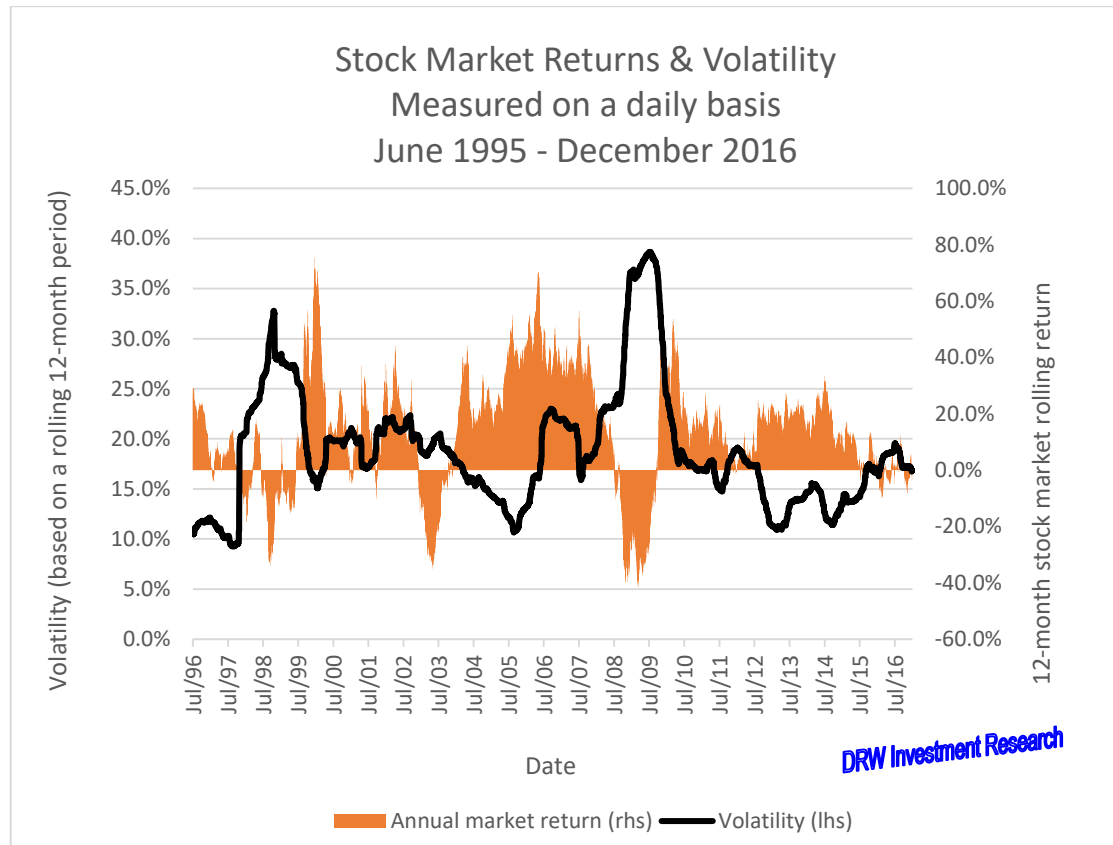


Source: JSE, DRW Investment Research

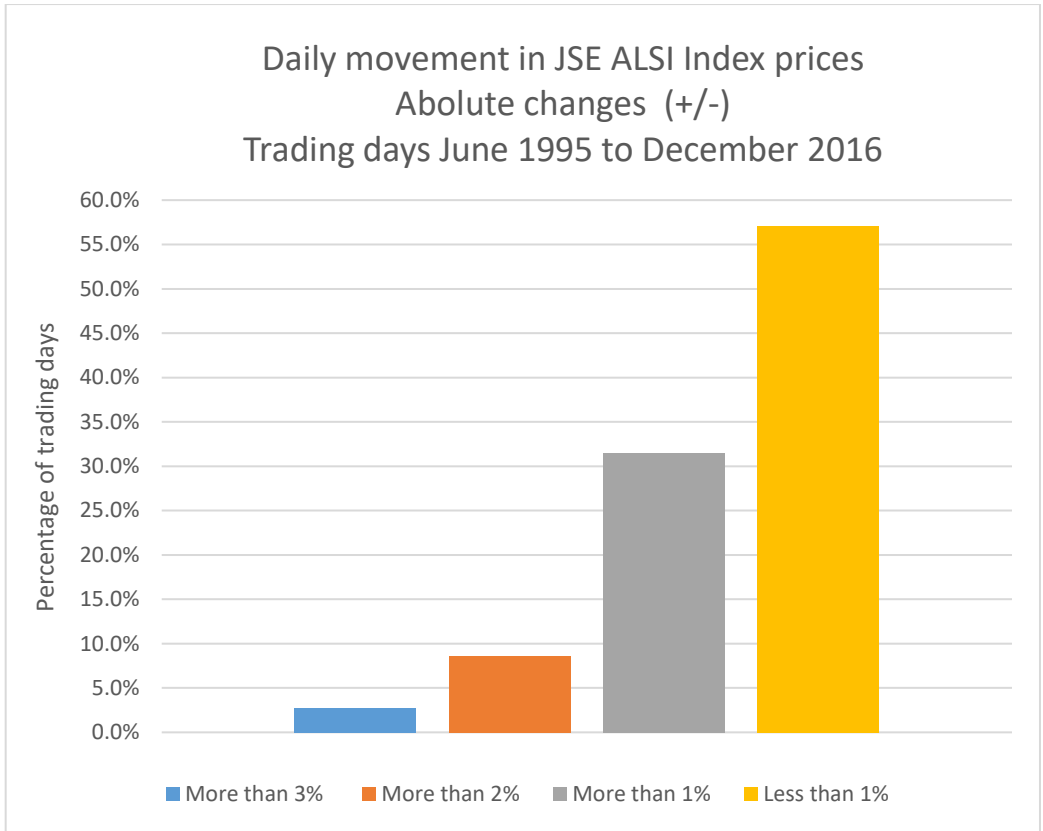
Stock Market Volatility

The short-term volatility trend is calculated by the annualised standard deviation of the daily returns of the FTSE JSE All Share index.

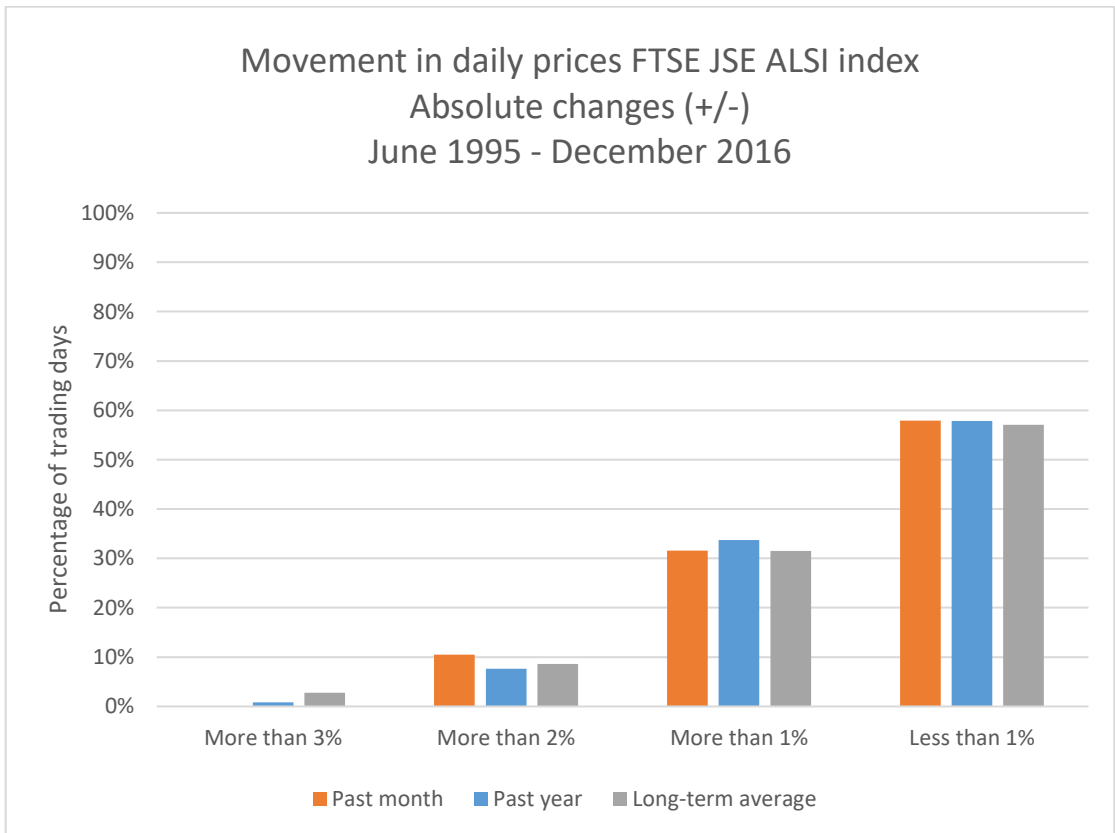
The long-term volatility trend is calculated by the annualised standard deviation of the monthly returns of the FTSE JSE All Share index.



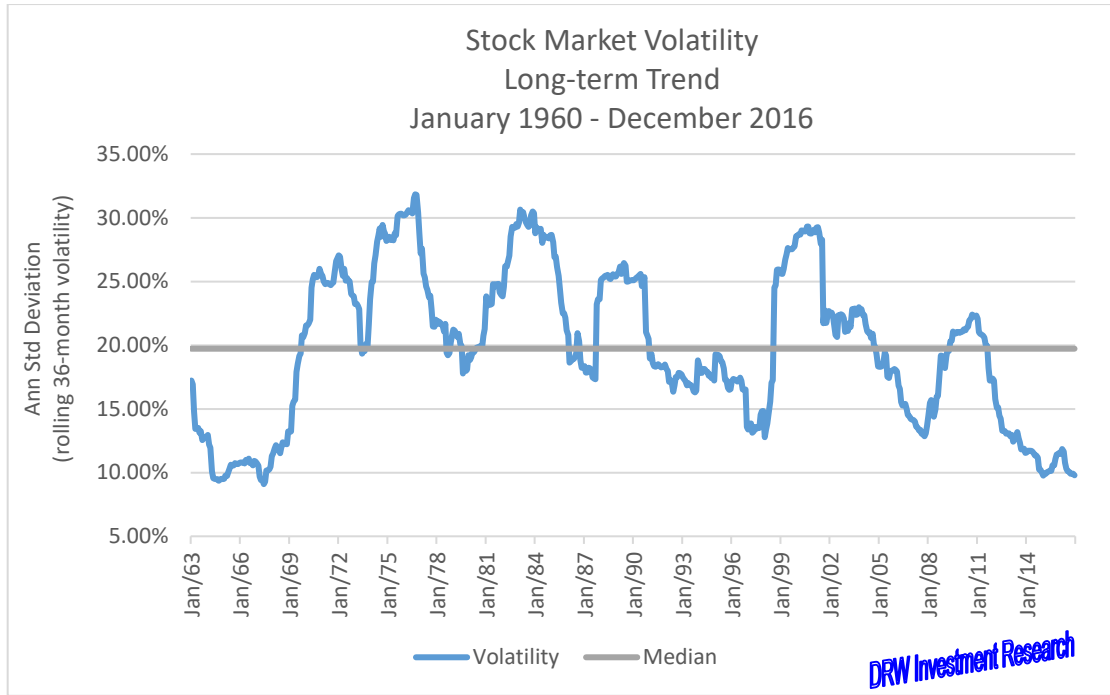
Source: JSE, DRW Investment Research



Source: JSE, DRW Investment Research



Source: JSE, DRW Investment Research



Source: JSE, DRW Investment Research

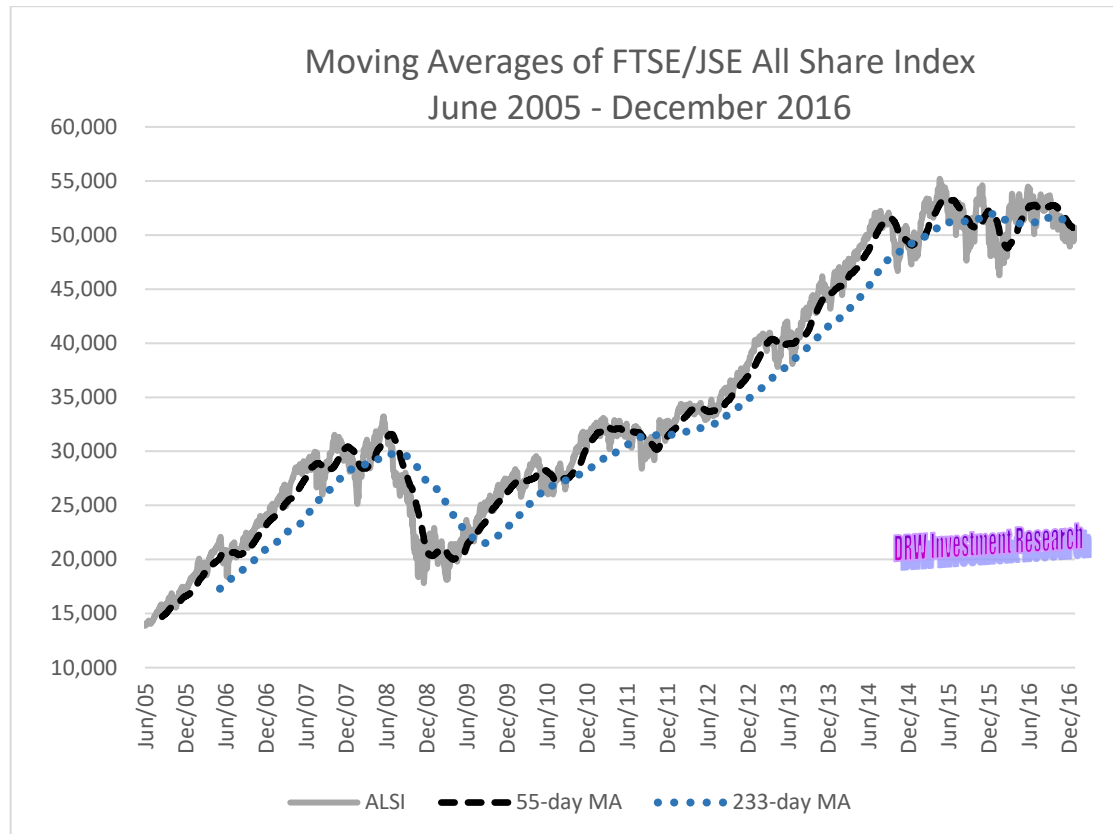
Volatility Statistics:

Statistics	Bottom Half Volatility	Top Half Volatility
Percentage of months with positive return	86%	64%
Percentage of months with negative return	14%	36%
Average Annual Return across all periods	19.3%	11.5%
Positive periods only, Average Annual Return	24.1%	27.4%
Negative periods only, Average Annual Return	-9.4%	-16.8%

Source: JSE, DRW Investment Research

Moving Averages (MA)

The relative price movement of 55-day and 233-day MAs; crossovers of these trendlines often indicate buy or sell opportunities. For example, if the 55-day trendline breaks out above the 233-day trendline it represents a bullish market period or if the 55-day trends below the 233-day it represents a bearish market period.



Source: JSE, DRW Investment Research

Asset Class Returns

Historical returns of the major asset classes

YEAR	EQUITIES	PROPERTIES	BONDS	CASH
1989	56%	49%	22%	14%
1990	-5%	5%	16%	15%
1991	31%	21%	14%	14%
1992	-2%	1%	28%	12%
1993	55%	16%	32%	11%
1994	23%	17%	-9%	10%
1995	9%	10%	30%	11%
1996	9%	-9%	7%	12%
1997	-5%	13%	29%	17%
1998	-10%	-4%	5%	17%
1999	61%	44%	30%	16%
2000	0%	26%	20%	11%
2001	29%	6%	18%	11%
2002	-8%	18%	16%	12%
2003	16%	37%	18%	12%
2004	25%	41%	14%	8%
2005	47%	50%	11%	8%
2006	41%	28%	5%	8%
2007	19%	27%	4%	9%
2008	-23%	-5%	17%	12%
2009	32%	14%	-1%	9%
2010	19%	30%	15%	7%
2011	3%	9%	9%	6%
2012	26%	36%	16%	5%
2013	21%	8%	1%	5%
2014	11%	27%	10%	6%
2015	5%	8%	-4%	6%

Average	Equities	Properties	Bonds	Cash
Ann Return	16.0%	18.3%	13.4%	10.4%
Ann Volatility	21.7%	16.4%	10.8%	3.6%

Source: DRW Investment Research

YEAR	BEST	2ND	3RD	WORST
1989	EQUITIES	PROPERTIES	BONDS	CASH
1990	BONDS	CASH	PROPERTIES	EQUITIES
1991	EQUITIES	PROPERTIES	BONDS	CASH
1992	BONDS	CASH	PROPERTIES	EQUITIES
1993	EQUITIES	BONDS	PROPERTIES	CASH
1994	EQUITIES	PROPERTIES	CASH	BONDS
1995	BONDS	CASH	PROPERTIES	EQUITIES
1996	CASH	EQUITIES	BONDS	PROPERTIES
1997	BONDS	CASH	PROPERTIES	EQUITIES
1998	CASH	BONDS	PROPERTIES	EQUITIES
1999	EQUITIES	PROPERTIES	BONDS	CASH
2000	PROPERTIES	BONDS	CASH	EQUITIES
2001	EQUITIES	BONDS	CASH	PROPERTIES
2002	PROPERTIES	BONDS	CASH	EQUITIES
2003	PROPERTIES	BONDS	EQUITIES	CASH
2004	PROPERTIES	EQUITIES	BONDS	CASH
2005	PROPERTIES	EQUITIES	BONDS	CASH
2006	EQUITIES	PROPERTIES	CASH	BONDS
2007	PROPERTIES	EQUITIES	CASH	BONDS
2008	BONDS	CASH	PROPERTIES	EQUITIES
2009	EQUITIES	PROPERTIES	CASH	BONDS
2010	PROPERTIES	EQUITIES	BONDS	CASH
2011	BONDS	PROPERTIES	CASH	EQUITIES
2012	PROPERTIES	EQUITIES	BONDS	CASH
2013	EQUITIES	PROPERTIES	CASH	BONDS
2014	PROPERTIES	EQUITIES	BONDS	CASH
2015	PROPERTIES	CASH	EQUITIES	BONDS

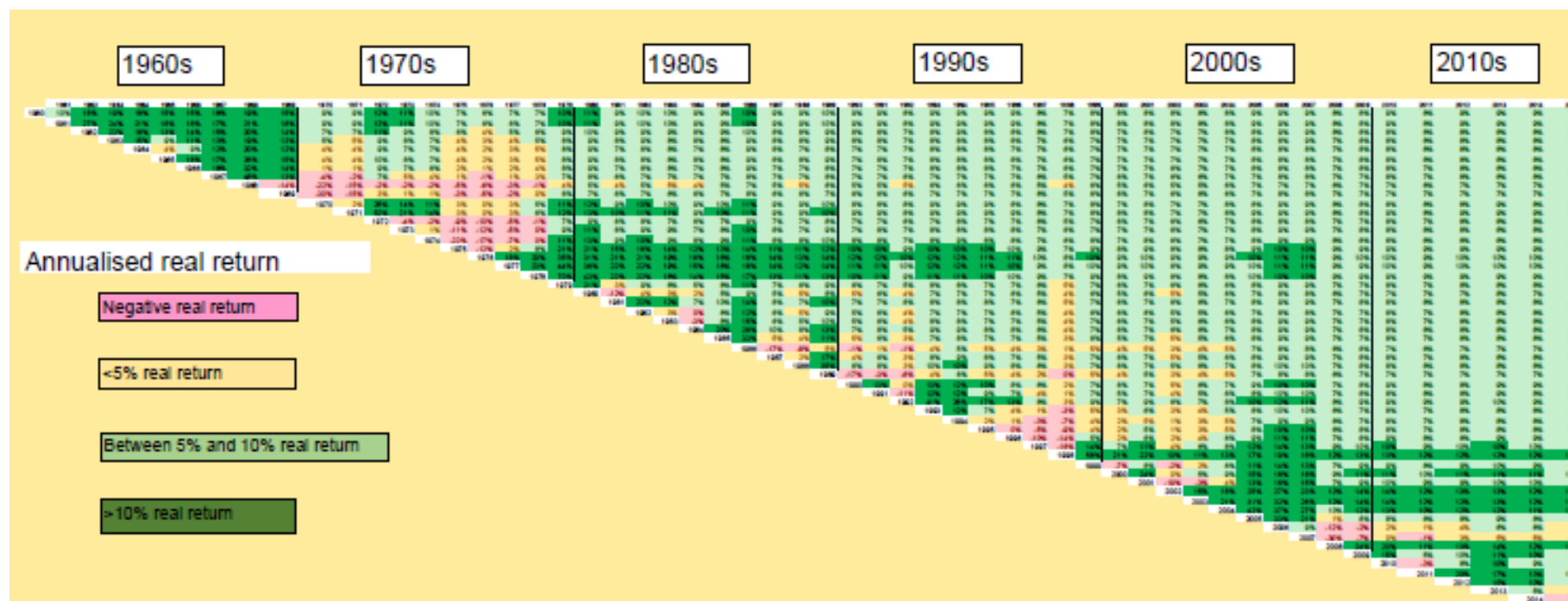
Source: DRW Investment Research

Heat Map: Real returns from equities over time

Based on real (after-inflation) annual equity returns from 1960 to 2015

Start of investment = vertical axis

Investment period = horizontal axis



Source: DRW Investment Research

Interpretation of graph:

Negative real returns = red areas

0-5% real returns = light-brown areas

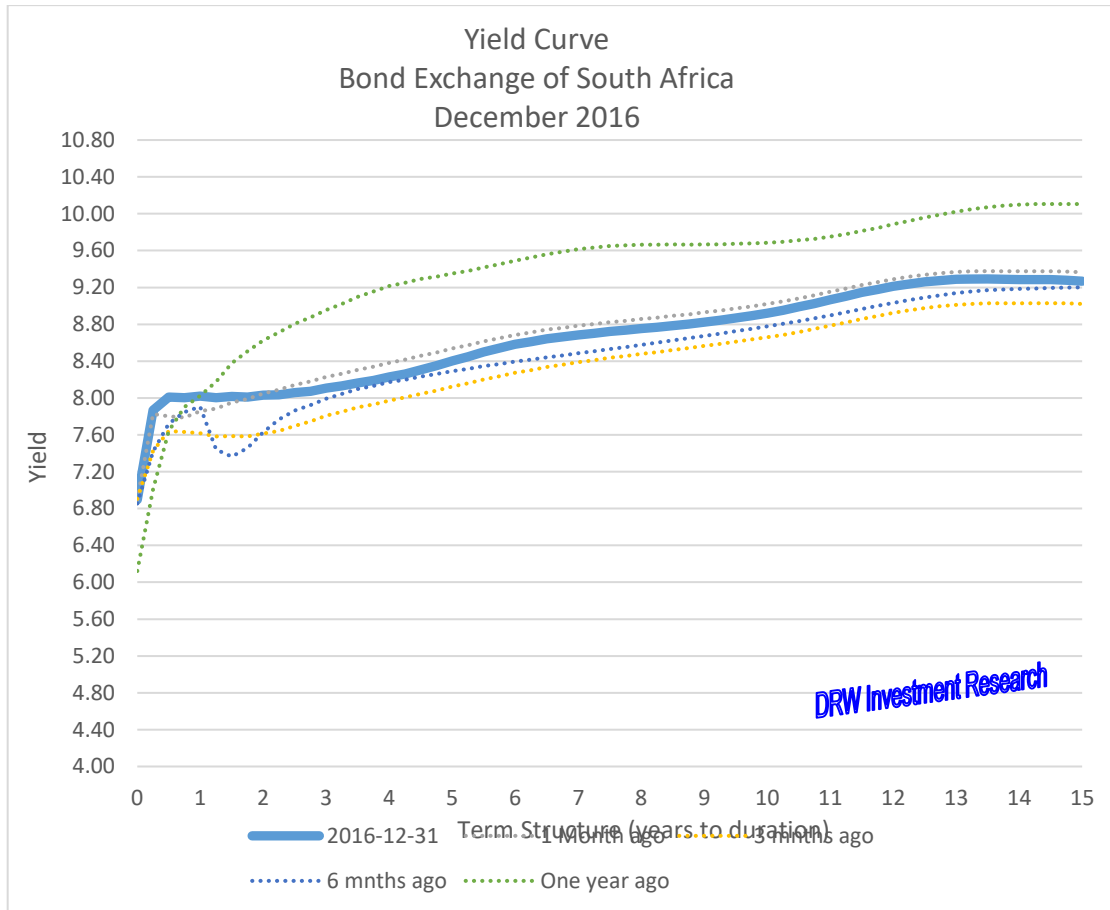
5-10% real returns = light-green areas

>10% real returns = dark-green areas

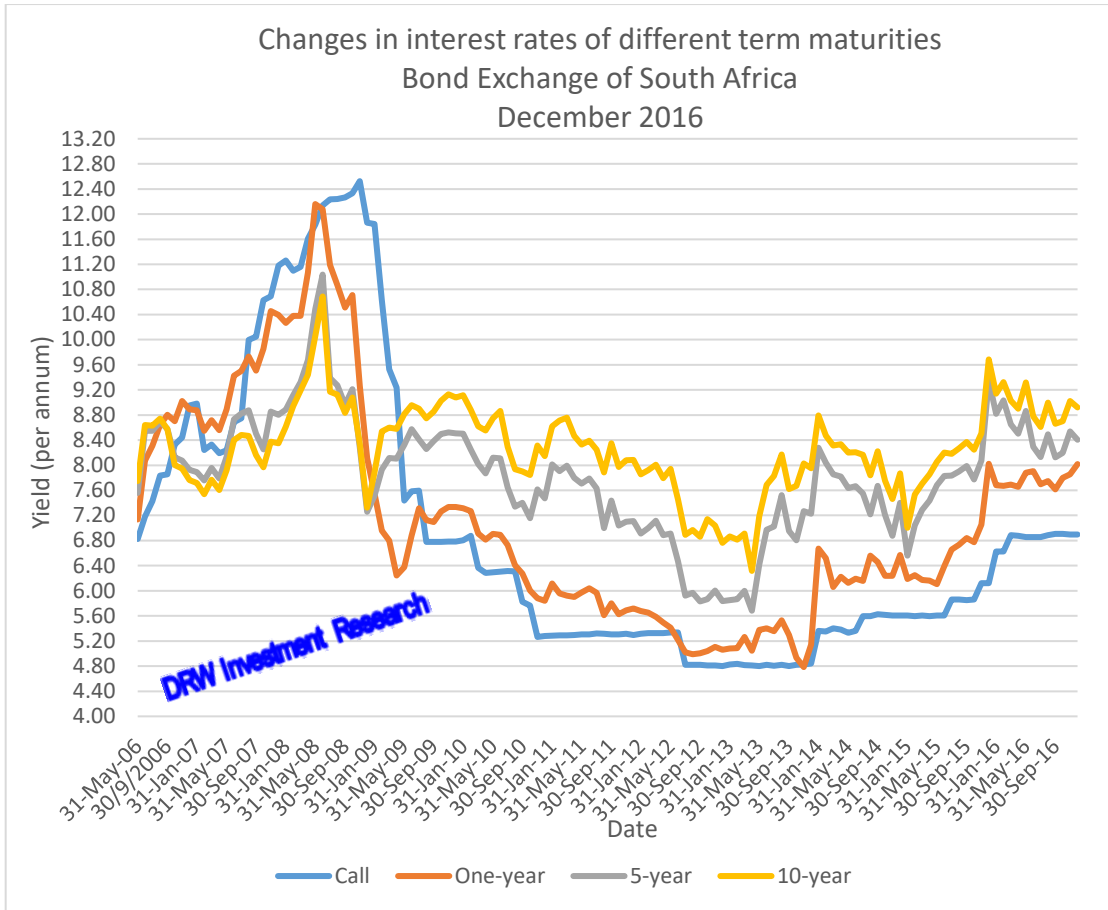
Returns from equity investing are certainly volatile over short-term periods and may easily yield negative outcomes, as shown by the red-coloured areas on the chart. Yet, long-term equity investors historically experienced most of the time more than 5% real return per annum, as depicted by the light and dark green shaded areas on the chart.

Yield Curve (Bond Exchange of South Africa)

The yield curve is derived from the yields of government bonds with different maturities traded on the Bond Exchange of South Africa.



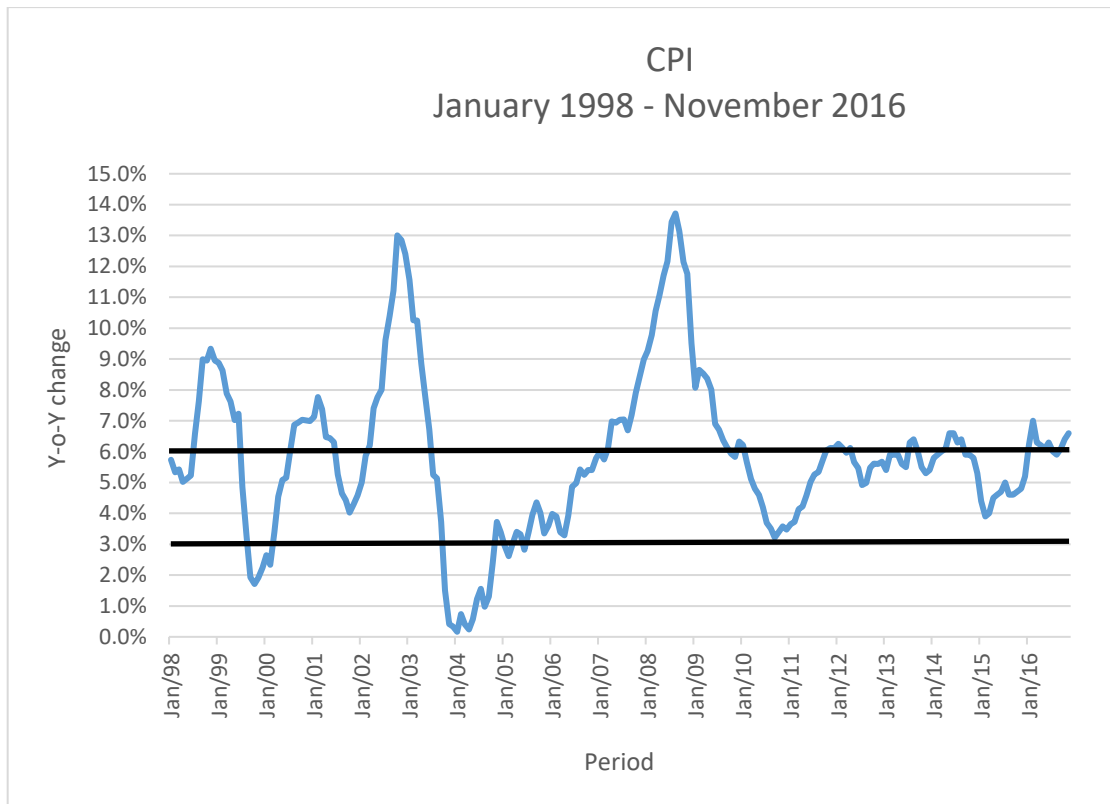
Source: JSE, DRW Investment Research



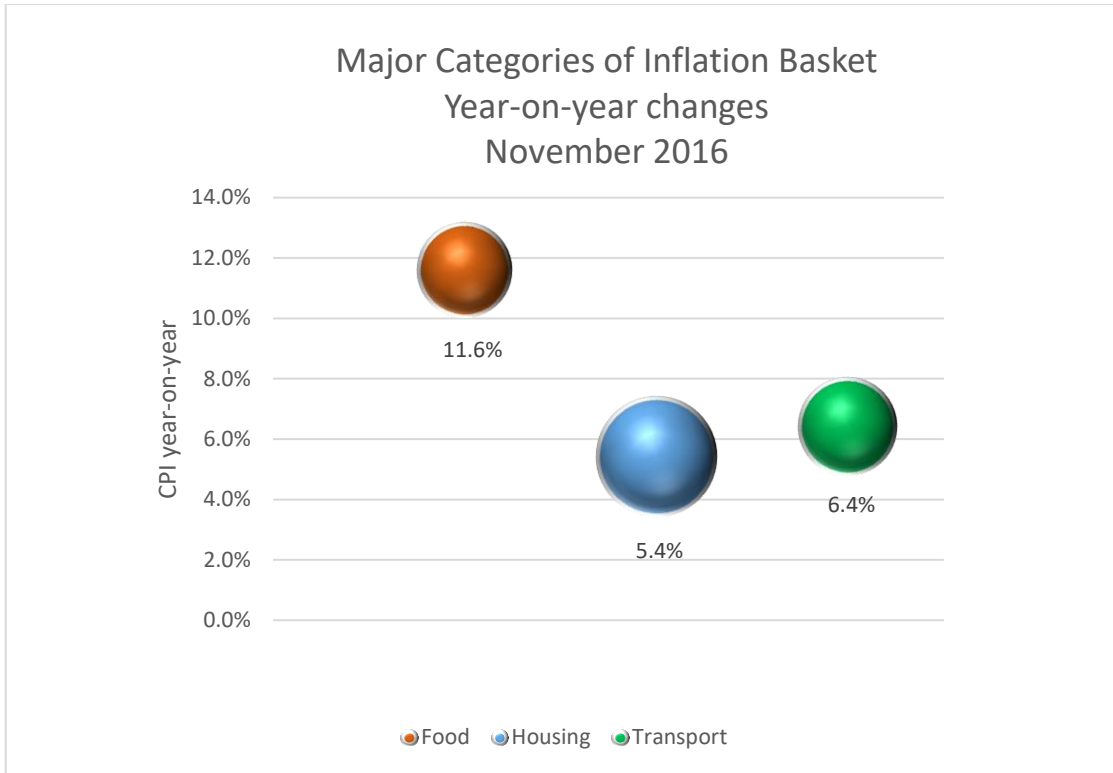
Source: JSE, DRW Investment Research

Inflation, Money Supply and Credit

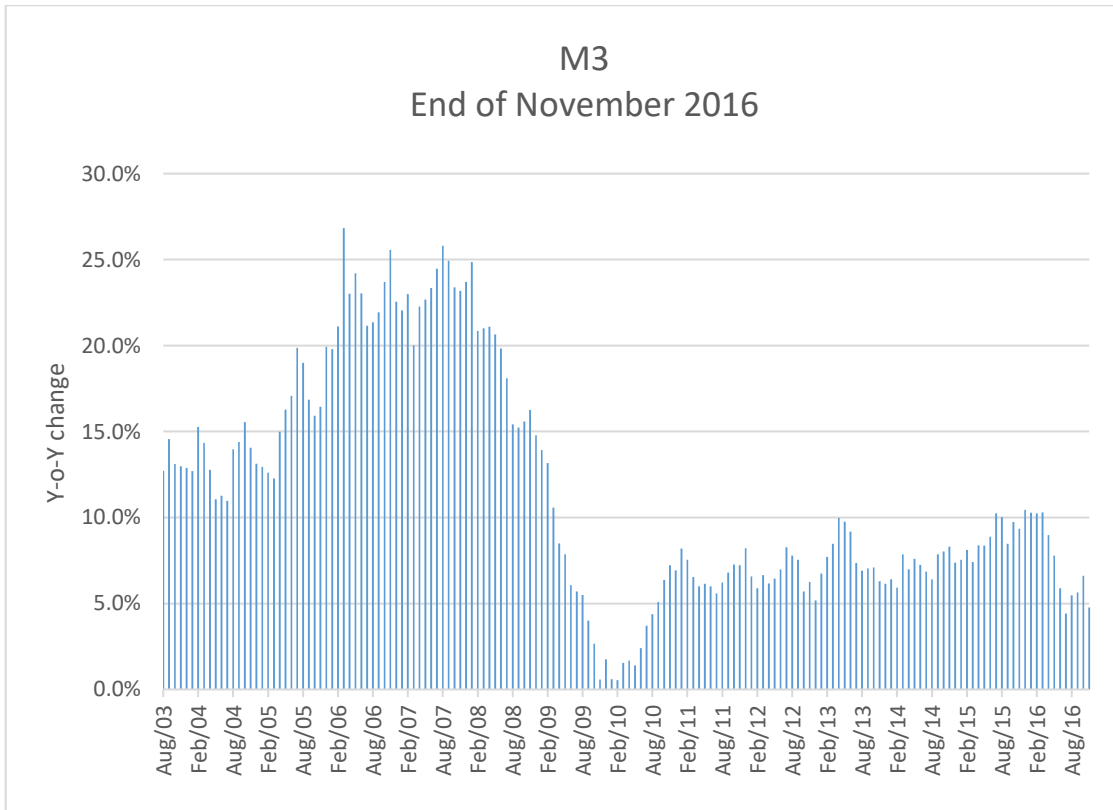
Data may reflect a one-month lag to current period



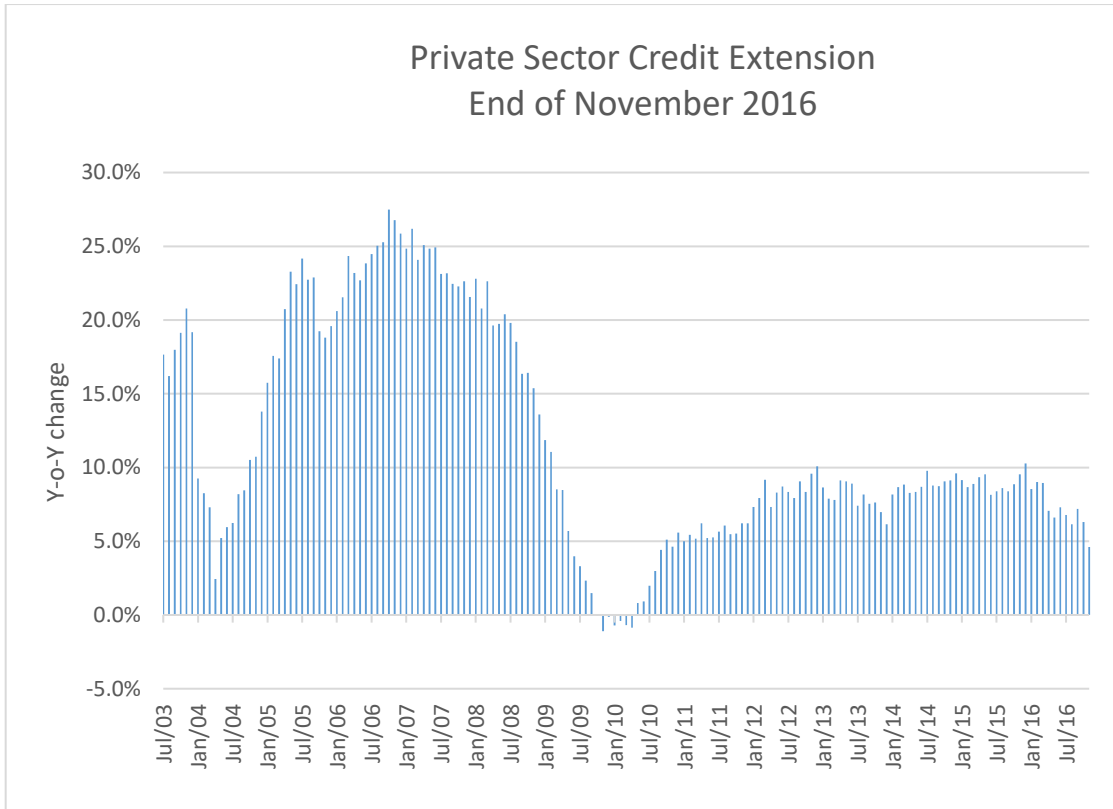
Source: Statistics SA, DRW Investment Research



Source: Statistics SA, DRW Investment Research



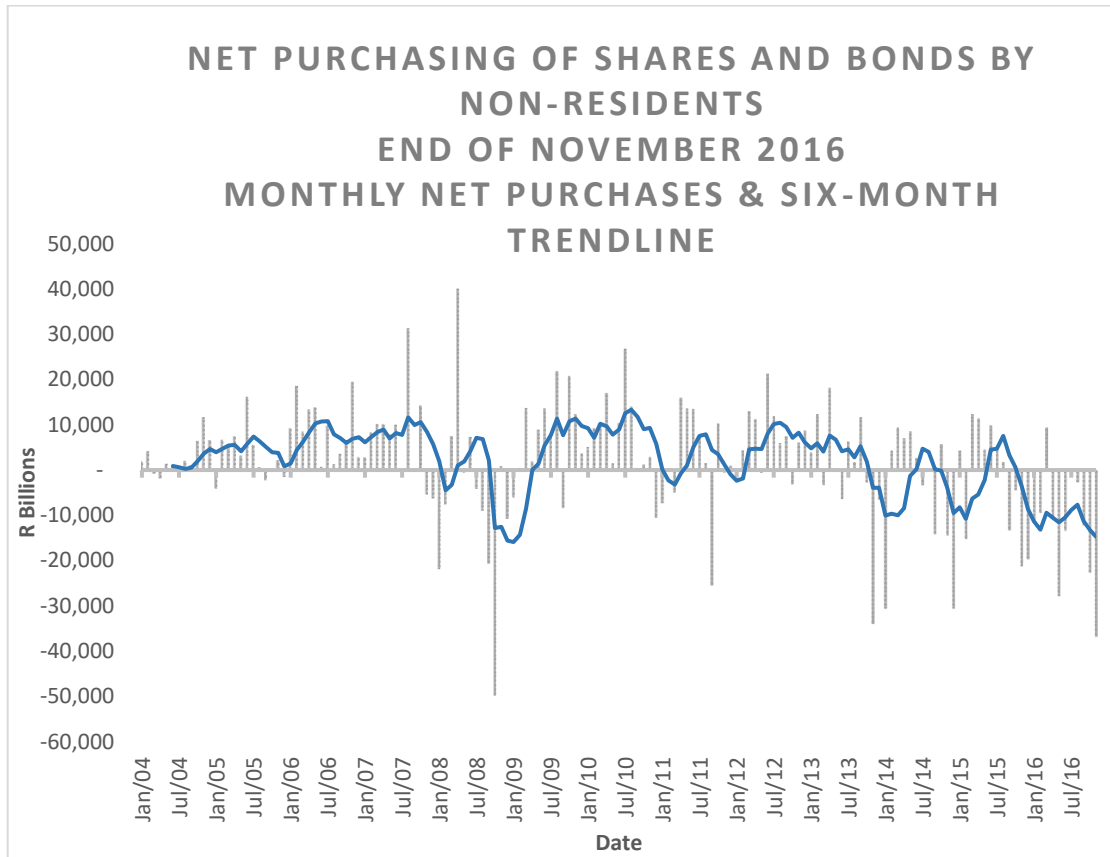
Source: SARB, DRW Investment Research



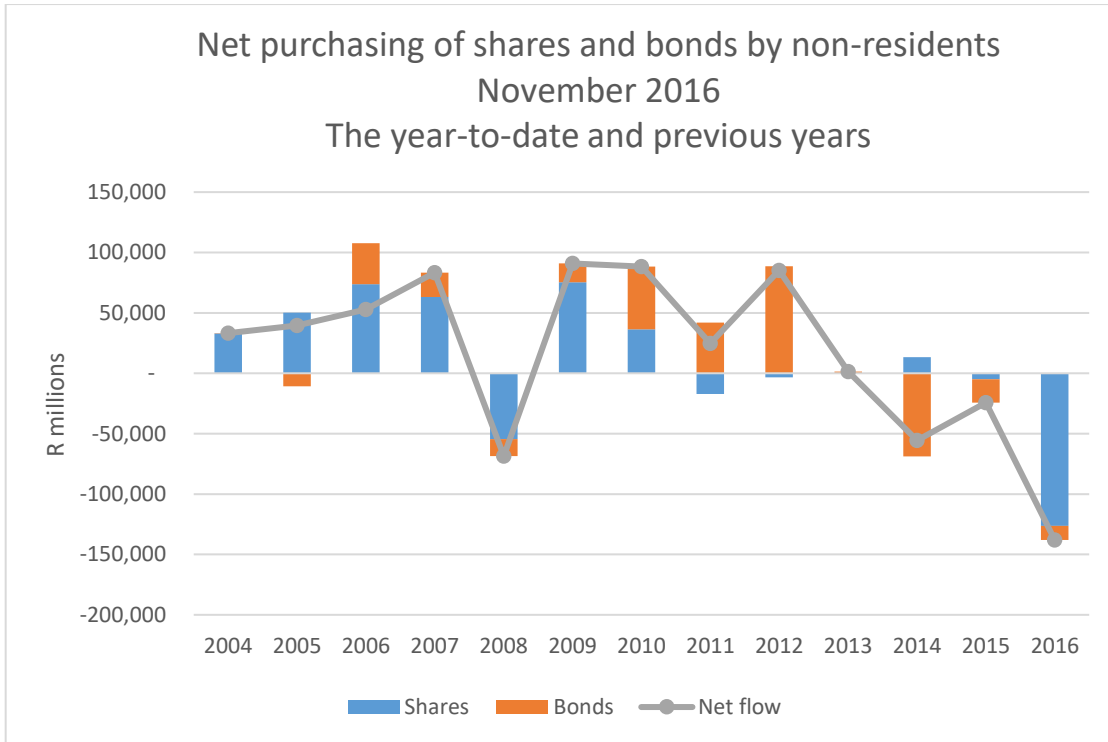
Source: SARB, DRW Investment Research

Foreign Portfolio Flows

Foreign portfolio flows (the purchasing and selling of shares and bonds by non-residents) directly influence the direction of the rand exchange rate and overall investor sentiment on the local bourse.



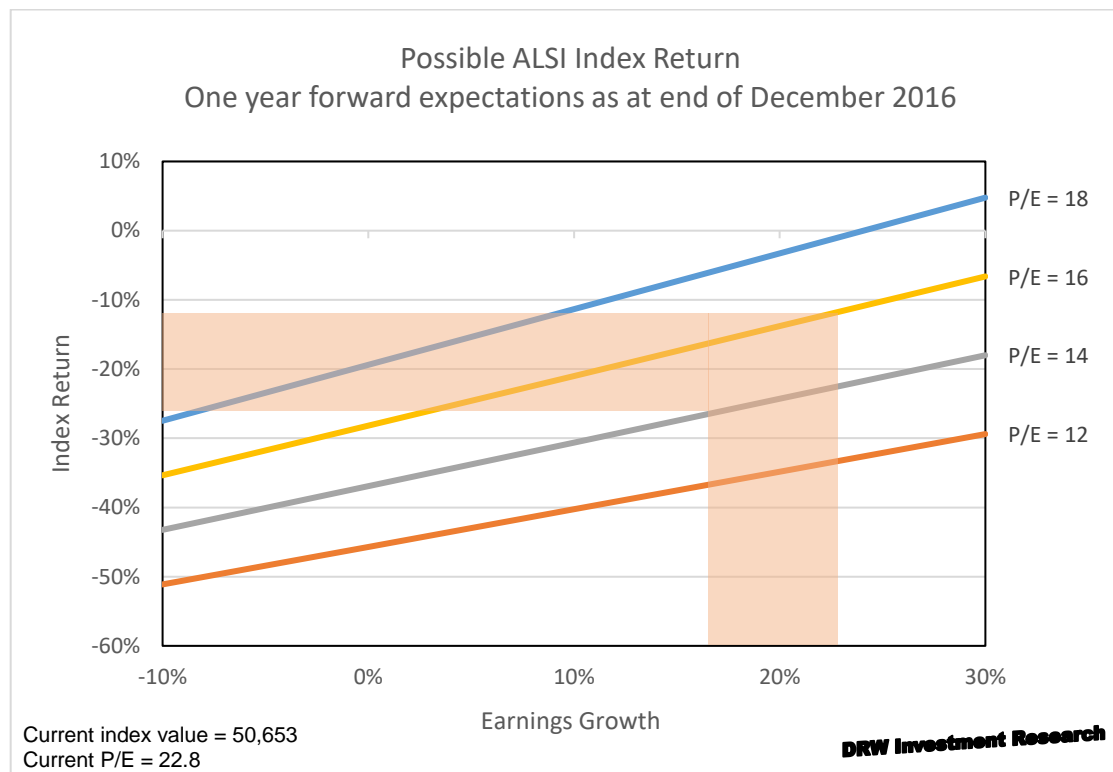
Source: SARB, DRW Investment Research



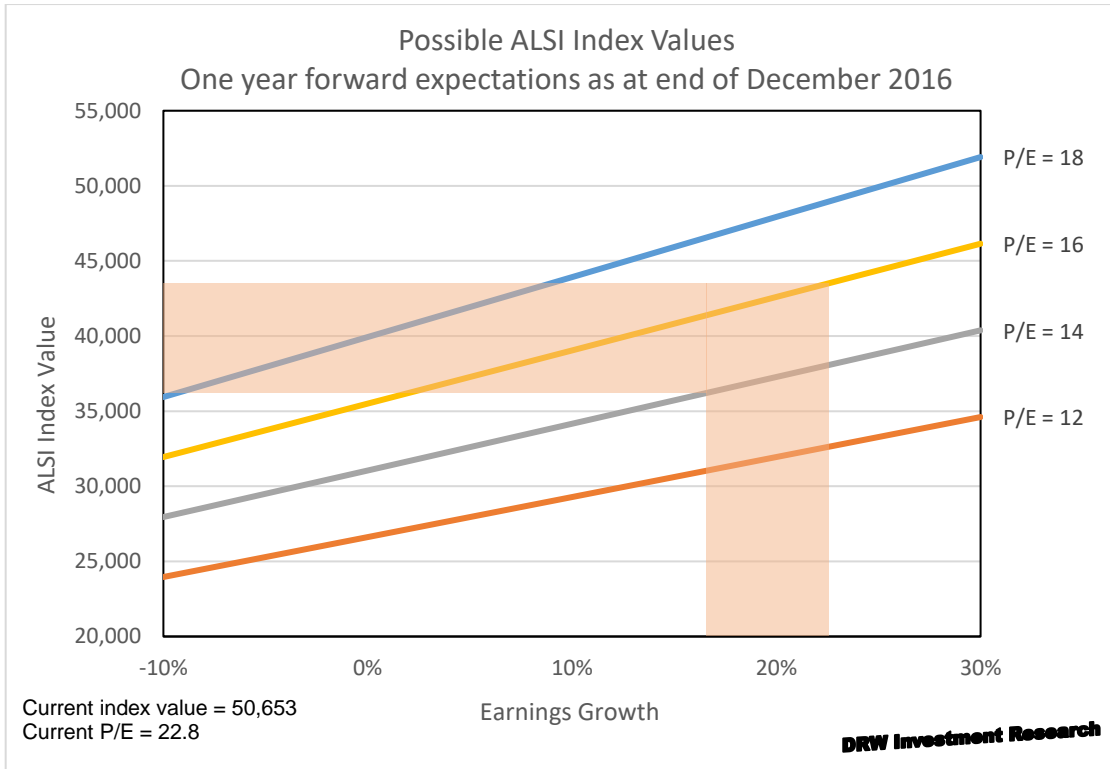
Source: SARB, DRW Investment Research

3. Return expectations

Equity returns, at least over the shorter term are predominantly driven by changes in market ratings (P/E ratio) and earnings growth expectations. The most likely market returns over the next twelve months are depicted below based on possible combinations of earnings growth and market ratings.



Source: JSE, DRW Investment Research



Source: JSE, DRW Investment Research



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