Absa Wits Risk-Controlled SA Value Index

Risk-focused index solutions

Seek out the overlooked

Benjamin Graham, the author of *The Intelligent Investor* and the father of 'value' investing, famously stated that, "The intelligent investor is a realist who sells to optimists and buys from pessimists." This is essentially the nature of value investment strategies. Value investing involves buying shares that are viewed to be 'cheap' and avoiding shares deemed to be 'expensive', when comparing their quoted price to fundamental measures of firm value. The search for value requires investors to seek out the overlooked, unglamorous shares in the market.[1] Herein lies an opportunity for investors. Consistently investing in overlooked value shares over the long term would have earned a substantial premium over market cap-weighted benchmarks. In fact, numerous studies have found this premium to be pervasive across asset classes and geographies.[2]

The value anomaly

The notion of value investing can be traced back to Graham and Dodd (1934), but only gained wider attention with more recent academic and practitioner interest.[3] Value investing has an intuitive appeal: investing in overlooked, undervalued shares should earn investors a premium. In the context of the Efficient Markets Hypothesis (EMH) this premium should be arbitraged away as more investors become aware of it. However, investing in overlooked shares does carry risk in that there may be a very good reason that these shares are viewed as cheap. In fact, relative undervaluation can potentially be a sign of distress. In addition, there are behavioural concerns at play. Investors have a tendency to shift towards short investment horizons, which is at odds with the patience and discipline required to wait for a value investment to pay off.[4] Professional money managers have to endure the pressure of being evaluated relative to an index and their peers. Prolonged underperformance that stands apart from the crowd carries notable career risk.

Consequently, these risks drive the value premium and explain its persistence in various markets.[5] Evidence of the value premium in South Africa is convincing, with several notable studies documenting its existence on the JSE.[6] The classification of a value share can be subjective and a great deal of research has been devoted to evaluating various proxies. Extensive research has found the most consistent and reliable measures of value to be the earnings-to-price and book-to-market ratios.[7]

The Absa Wits Risk-Controlled SA Value Index (the 'Value Index') is the culmination of extensive empirical research designed to capture the value premium based on an optimal combination of both earnings-to-price and book-to-market ratios. The Value Index enables investors to pursue long-term cumulative growth that outperforms the market. Table 1 and Figure 1 are an examination of the March 2004 to January 2018 sample period and demonstrate that the Value Index outpaced the FTSE-JSE All Share Total Return Index (ALSI).

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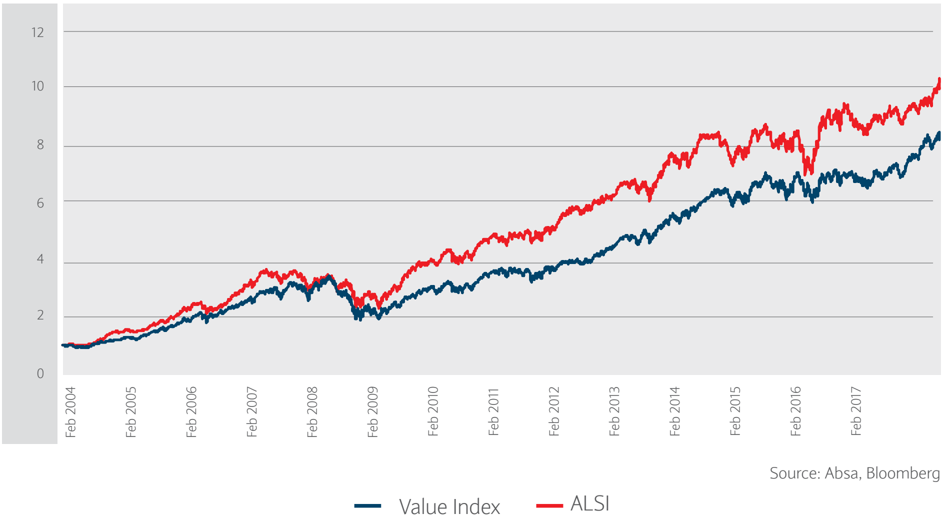
	Value Index	ALSI
Annualised returns	17,99%	16,27%
Standard deviation	16,58%	18,79%
Maximum drawdown	-37,30%	-45,35%

Source: Absa, Bloomberg

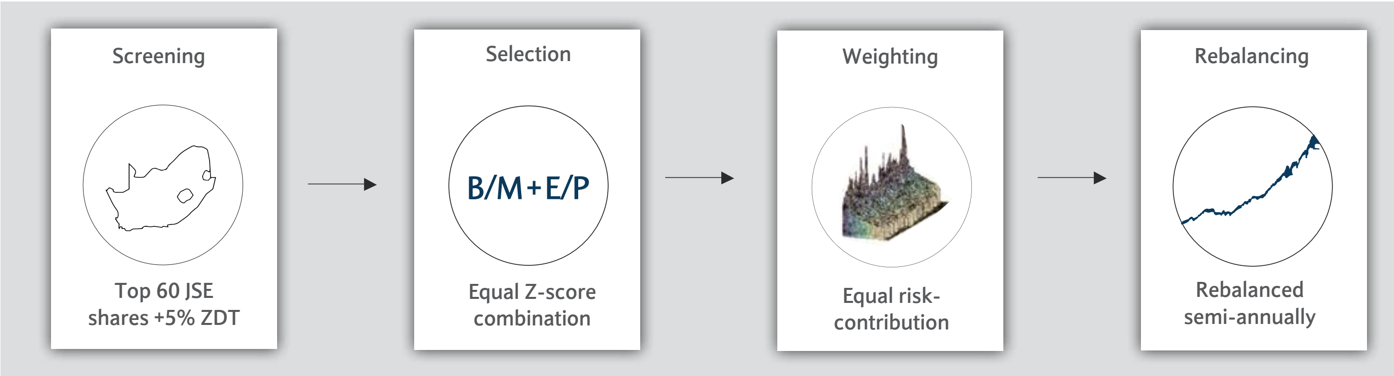
Table 1: Value Index annualised geometric returns vs FTSE-JSE ALSI Total Return Index



Source: Absa, Bloomberg

Figure 1: Value Index cumulative returns vs ALSI

Several innovations were applied to the construction of the Value Index. Firstly, independent tests of the Index were conducted by academics from Wits University. Using the Findata@Wits® database, which is the only known survivorship-bias-free database available in SA, the research team confirmed that the most consistent proxy for the value anomaly is a company's book-to-market ratio and its earnings-to-price ratio. Secondly, combining an equal contribution of book-to-market and earnings-to-price in the ranking of value shares incorporates two important aspects of the value premium into the Index. Thirdly, value strategies require discipline as the premium has been shown to be realised over longer holding periods when compared to other equity risk premia strategies such as momentum and low volatility. To mitigate this risk, the Index applies an equal risk-contribution weighting scheme, the first application of this technique to an index in South Africa.



Screening

The Value Index uses the top 60 most liquid shares by value on the JSE as the starting selection universe. In addition, a 5% zero trade-day filter is applied over the previous year.

Selection

Of the shares that pass the liquidity screen, 30 shares are chosen based on a combined score (equally weighted) of each share's book-to-market and earnings-to-price ratios, with a lookback period of one year.

Weighting

Rather than equally weighting the selected stocks, the Value Index constituents are weighted according to their contribution to risk. That is, each share contributes equally to the overall portfolio risk, which prevents disproportionate risk-contributions. The risk-contribution weighting method improves diversification and mitigates sector concentration. This trait is particularly beneficial in times of high market drawdowns. The suite of Absa Wits indices, including the Value Index, are, at time of publication, the only indices in South Africa to apply the risk-parity weighting scheme.

Rebalancing

The Value Index is rebalanced in February and August each year.

Long-term outperformance

The Value Index makes use of two important measures of value: book-to-market and earnings-to-price. Combining an equal contribution of book-to-market and earnings-to-price ratios captures two fundamental dimensions of value, while maintaining equity risk premia purity. In comparison to the FTSE-JSE All Share Total Return Index (ALSI), the Value Index has outperformed over the period February 2004 to January 2018 by almost 2% per year.

	Value Index	ALSI
Annualised returns	17,99%	16,27%
Standard deviation	16,58%	18,79%
Maximum drawdown	-37,70%	-45,35%
Sharpe ratio	1,08	0,87

Source: Absa, Bloomberg

Table 2: Value Index annualised geometric returns vs ALSI

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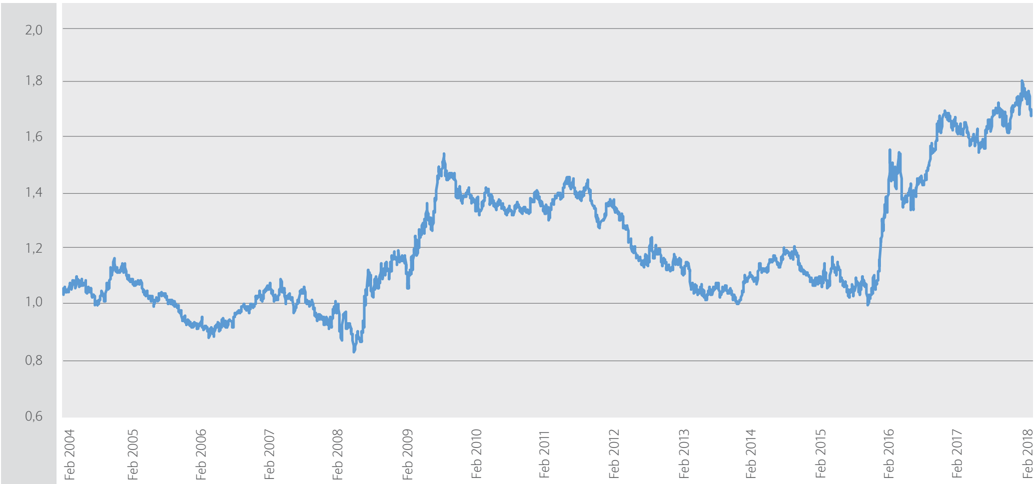
Figure 2 plots the excess return performance of a notional portfolio with a long position in value shares and a short position in anti-value (growth) shares. Over the 2004 to 2018 period, the premium attributable to value shares generates an annual positive excess return of approximately 3,69%. The premium is consistently positive, albeit with a decline relative to growth experienced during the Global Financial Crisis. Value shares underperformed in late 2007 and early 2008 before rebounding sharply in early 2009. Between 2011 and 2013 the value premium displayed a shallow declining trajectory, which stabilised in 2014, but overall the premium remained positive throughout. As with the rest of the market, value shares were negatively affected in the immediate aftermath of Finance Minister Nhlanhla Nene's dismissal in December 2015. However, in January 2016 value surged, rallying for the duration of the year, continuing a largely positive trend all the way into 2018.

The value premium is significant over the long term and is not limited to a particular period. The result of value stocks outperforming growth stocks confirms global evidence of the persistence and reliability of the value premium in the South African equity markets.



Source: Absa

Figure 2: Excess Return Series, top quintile vs bottom quintile value shares

Comparative performance

Table 3 demonstrates that the Value Index displays strong performance relative to the ALSI. Table 3 also reveals that the Value Index performs well in comparison to the RESI but lags the FINDI (which realised strong gains over the same period). One should be cognisant, however the outperformance did come with a much more concentrated sector risk and larger standard deviation. The performance of all four indices is shown in Table and Figure 3.

	FINDI	RESI	ALSI	Value Index
Annualised returns	20,11%	7,11%	16,27%	17,99%
Standard deviation	18,06%	29,50%	18,79%	16,58%
Beta	0,85	1,37	1,00	0,76
Alpha	6,23%	-15,14%	0,00%	5,31%
Sharpe ratio	1,11	0,24	0,87	1,08
Maximum drawdown	-41,46%	-63,88%	-45,35%	-37,30%

Source: Absa, Bloomberg

Table 3: Value Index annualised geometric returns vs FINDI, RESI and ALSI

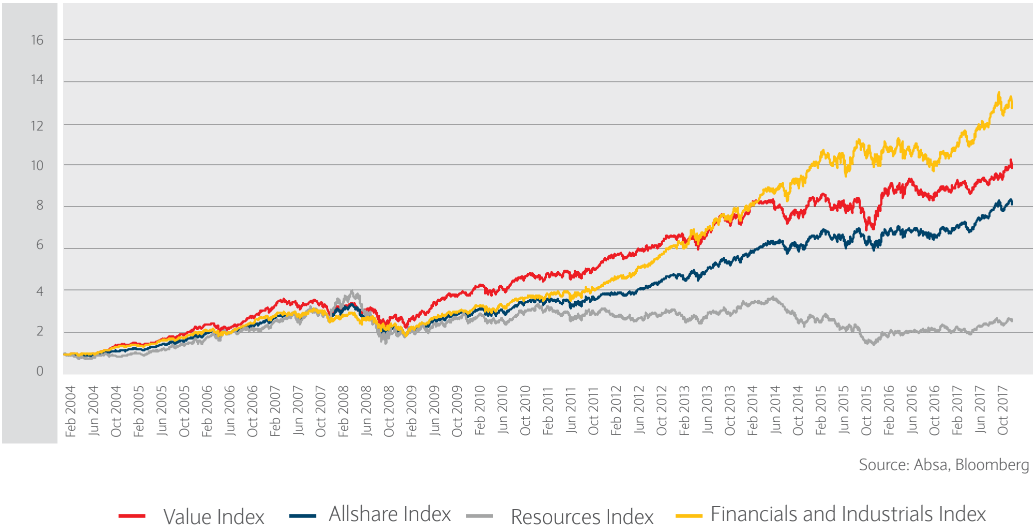


Figure 3: Value Index cumulative returns vs FINDI, RESI and ALSI

The Value Index is compared to the ALSI by dividing the cumulative rolling return of the Value Index by the corresponding returns of the ALSI. The relative performance is plotted in Figures 4 to 6. Any points above zero indicate that the Value Index outpaced the return of the ALSI, whereas points below zero indicate that the ALSI was the best performer.

Figure 4 illustrates the superior performance of the Value Index over the ALSI (an upward sloping line is where the Value Index is outpacing the ALSI and vice versa). The Value Index would have provided investors with an outperformance of almost 23% relative to the ALSI had they persisted with the strategy (the red shaded area). Whilst value stocks are not immune to large drawdown's (as indicative buy the Global Financial Crisis in 2007 to 2008 and in October 2015 a period which peaked with the firing of Finance Minister Nhlanhla Nene), they do exhibit the ability to rebound strongly in the aftermath of a crisis.

The period February 2012 to Oct 2015 was characterised by a long period of underperformance against ALSI – the industry saying "wrong for long" often used to describe a value strategy for this exact reason and whilst this was a sustained period of underperformance (the momentum equity risk premia being the strongest driver at the time) it's worth noting that a value style has very different sectoral construct to other equity risk premia and in a portfolio is important for this diversification benefit. See Table 4 for sector weightings at time of publication.

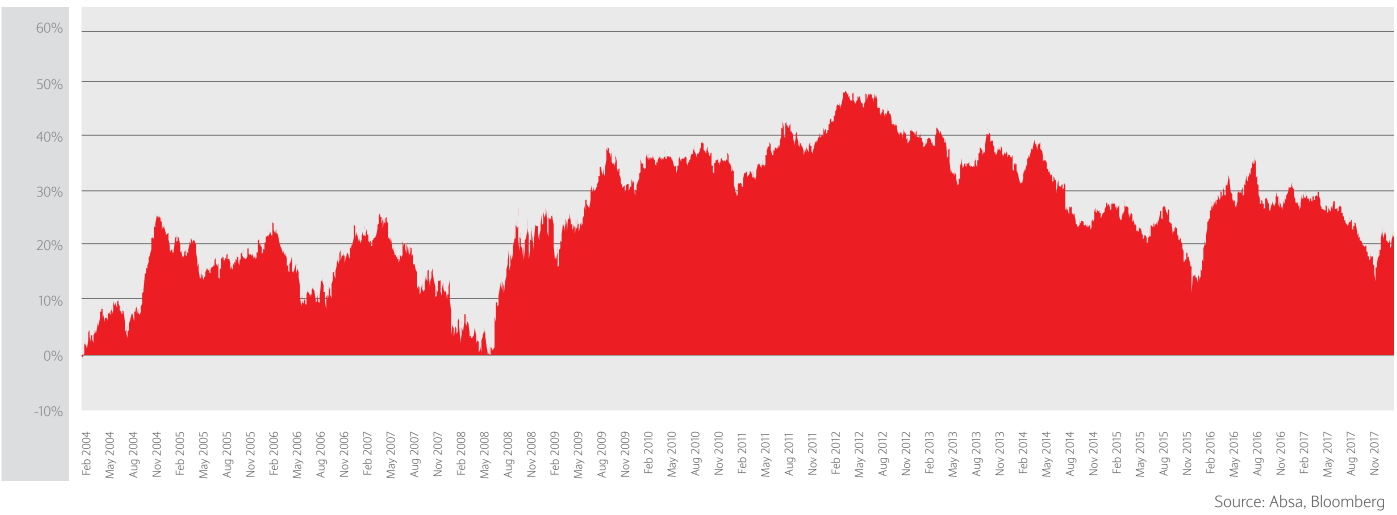


Figure 4: Value Index cumulative return relative to ALSI

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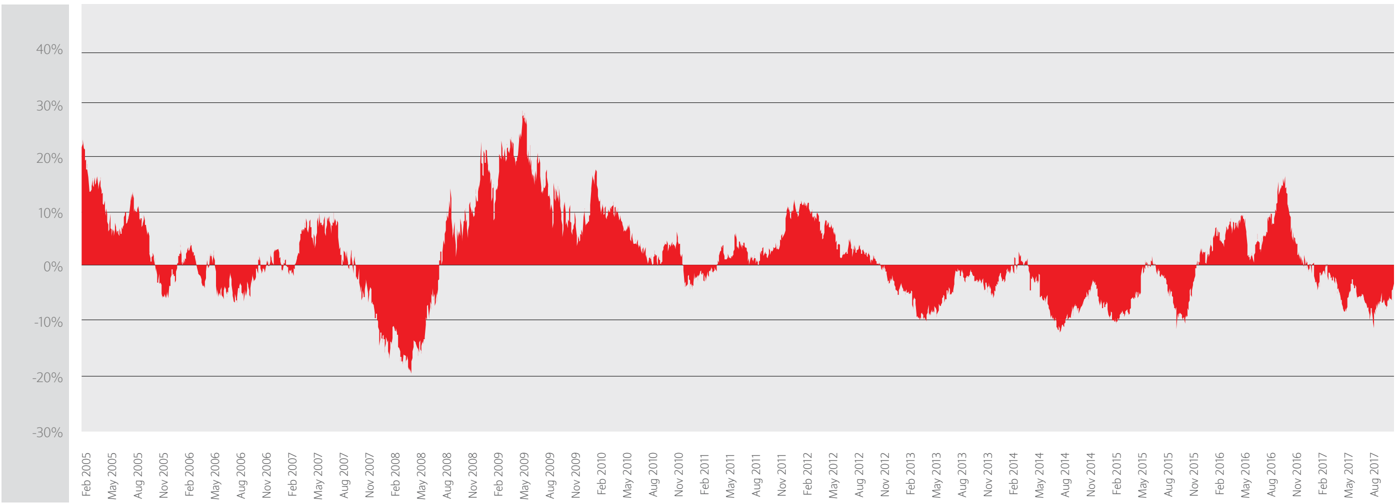
	Value	Low Vol	Momentum
Materials	28,29%	10,00%	4,00%
Consumer Staples	–	28,00%	18,00%
Consumer Discretionary	5,35%	5,00%	21,00%
Financials	26,27%	26,00%	27,00%
Real Estate	23,52%	21,00%	14,00%
Health Care	3,89%	4,50%	–
Telecoms	3,75%	5,50%	–
Industrials	6,40%	–	11,00%
Energy	2,53%	–	5,00%

Source: Absa as at 28/2/2018

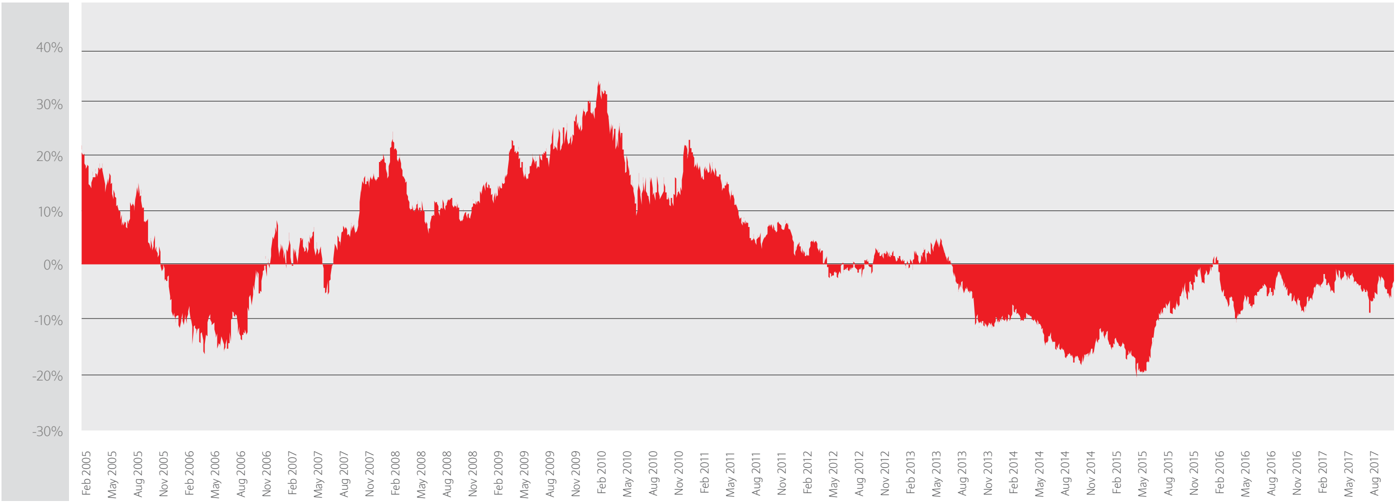
Table 4: Sector Weighting of Factor Indices

Examining the one-year and three-year rolling relative returns of the Value Index reaffirms its better than market performance. Figure 5 demonstrates that the Value Index can outperform the ALSI but generally following a market crash but in more benign markets it tends to underperform. Over a three-year rolling period the performance of the Index is somewhat similar to the pattern of the one-year rolling returns. Figure 6 shows that the Index displays more frequent episodes of outperformance over a three-year rolling period. However, the Value Index suffered a long period of underperformance from mid-2014 until late 2018, with a good recovery in August 2016 and 2017 to claw back some of the relative losses..



Source: Absa, Bloomberg

Figure 5: Value Index vs ALSI one-year rolling returns



Source: Absa, Bloomberg

Figure 6: Value Index vs ALSI three -year rolling returns

Risk control

The Value Index is designed to select shares that reflect the highest value based on an equal combination of book-to-market and earnings-to-price. While this strategy has demonstrated strong performance in the past, on both a risk-adjusted and an absolute-return basis, it is important to be aware that rules-based portfolio construction can potentially lead to selecting shares that are exposed to similar risks. In addition, value strategies can be susceptible to drawdowns and what is commonly referred to as the 'value trap'. To mitigate this risk, the Value Index employs an equal risk-contribution weighting scheme. This ensures that the Value Index is well diversified. The application of the equal risk-contribution method is the first instance of such an application to a value index in South Africa.

The equal risk-contribution weighting method is a dynamic process that considers changing market conditions and is optimised over a rolling lookback window. The weights of constituent shares in the Value Index are determined by their contribution to the total risk of the portfolio, which is a function of the current correlation structure and the individual volatilities of the stocks in the Value Index. As a result, shares with either (or both) low volatilities and low correlations are upweighted, enabling the Value Index to capture shares with lower risk. By upweighting stocks that exhibit low correlations to other stocks, we select shares with returns that are least related to other stocks, thereby always avoiding risk concentration.

Examining the drawdowns in Figures 7 to 9 shows that the Value Index is resilient. The Value Index experienced a significantly shallower drawdown than the market in 2004 and 2008/2009 and recovered at a quicker pace along with a lower standard deviation. The severe reversals witnessed during the Global Financial Crisis saw the Value Index fall along with the market and fared better than the ALSI in the teeth of the crisis. Furthermore, as is clear in Figure 9, the Value Index recovered at a much quicker pace than the market. The Value Index recovered all of its losses by September 2009, whereas the ALSI remained approximately 20% below its peak prior to the crisis.

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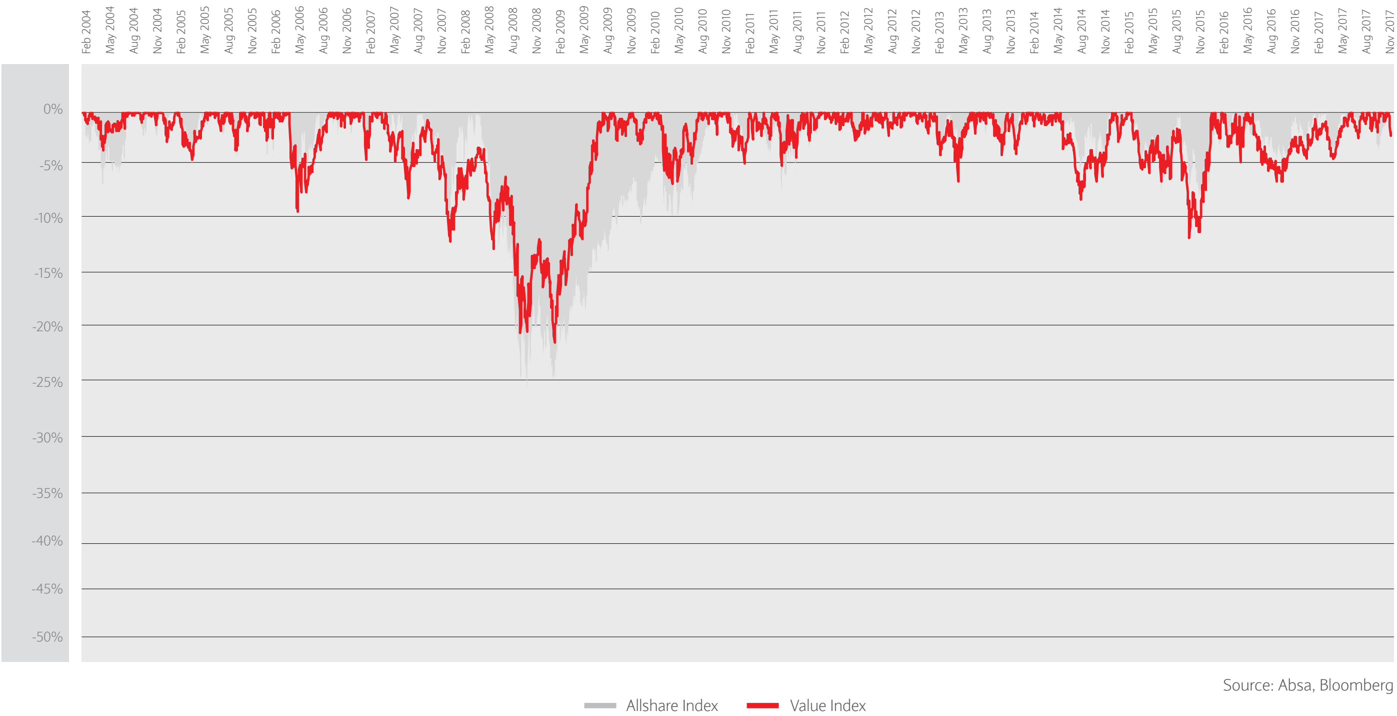
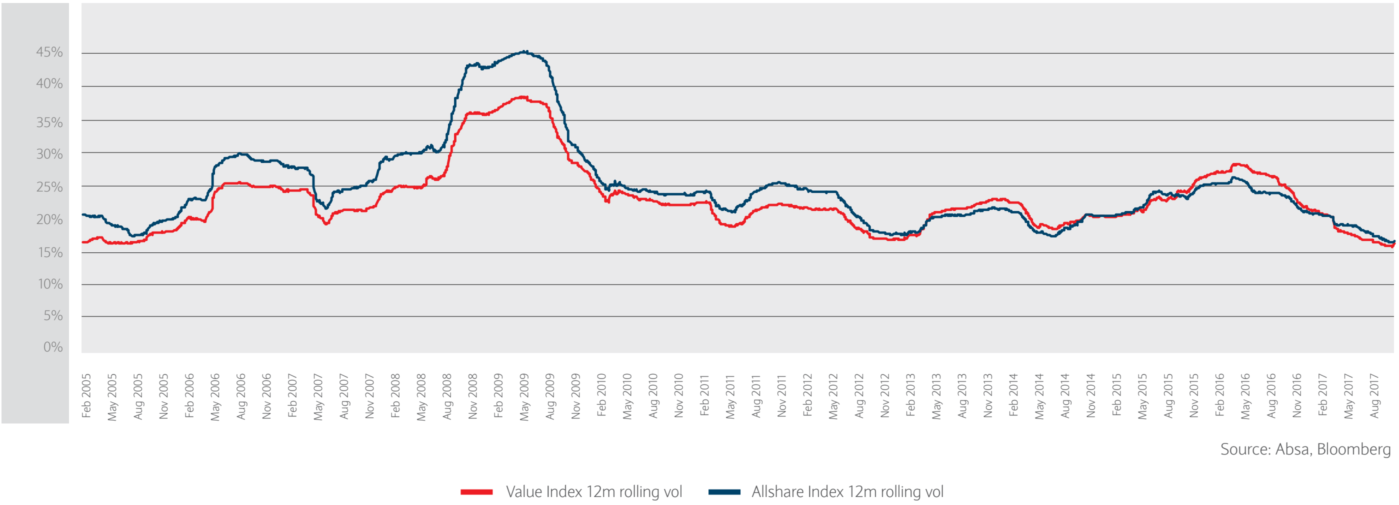


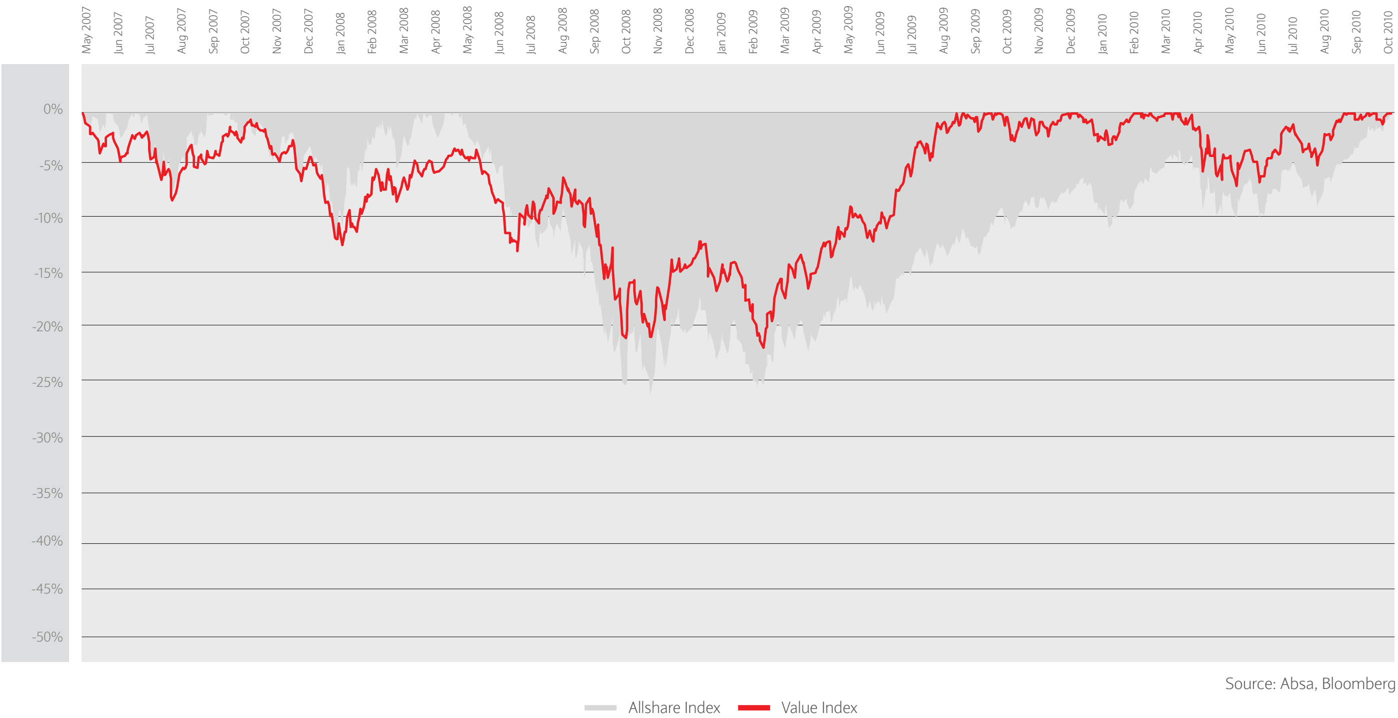
Source: Absa, Bloomberg

Figure 7: Value Index maximum drawdown vs ALSI 2004 to 2018



Source: Absa, Bloomberg

Figure 8: Realised volatility comparison, Value Index vs ALSI



Source: Absa, Bloomberg

Figure 9: Value Index maximum drawdown vs ALSI 2007 to 2010

Conclusion

The value premium is robust and widely documented in academic literature. The strategy has been shown to earn a significant long-term premium that can be captured in long-only investment portfolios. The Absa Wits Risk-Controlled SA Value Index has been developed using exclusive data, with research methods that apply the latest global index innovations in South Africa. This provides investors with the independently tested opportunity to capture the value premium via a transparent and robust rules-based methodology with built-in downside mitigation.

References

[1] Lakonishok, Shliefer and Vishny (1994)
[2] Fama and French (1993); Asness, Moskowitz and Pedersen (2013)
[3] Basu (1977); Fama and French (1992)
[4] Sheifer and Vishny (1990); Cespa and Vivers (2015)
[5] Fama (1998)
[6] Van Rensburg and Robertson (2003); Auret and Sinclair (2006); Basiewiczs and Auret (2009, 2010); Muller and Ward (2014)
[7] Fama and French (1996); Asness (1997); Pontiff and Schall (1998); Griffin and Lemmon (2002); Auret and Sinclair (2006); Fama and French (2015)

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