

# Risk Management Strategies

*Stop your investments  
from going off the rails*

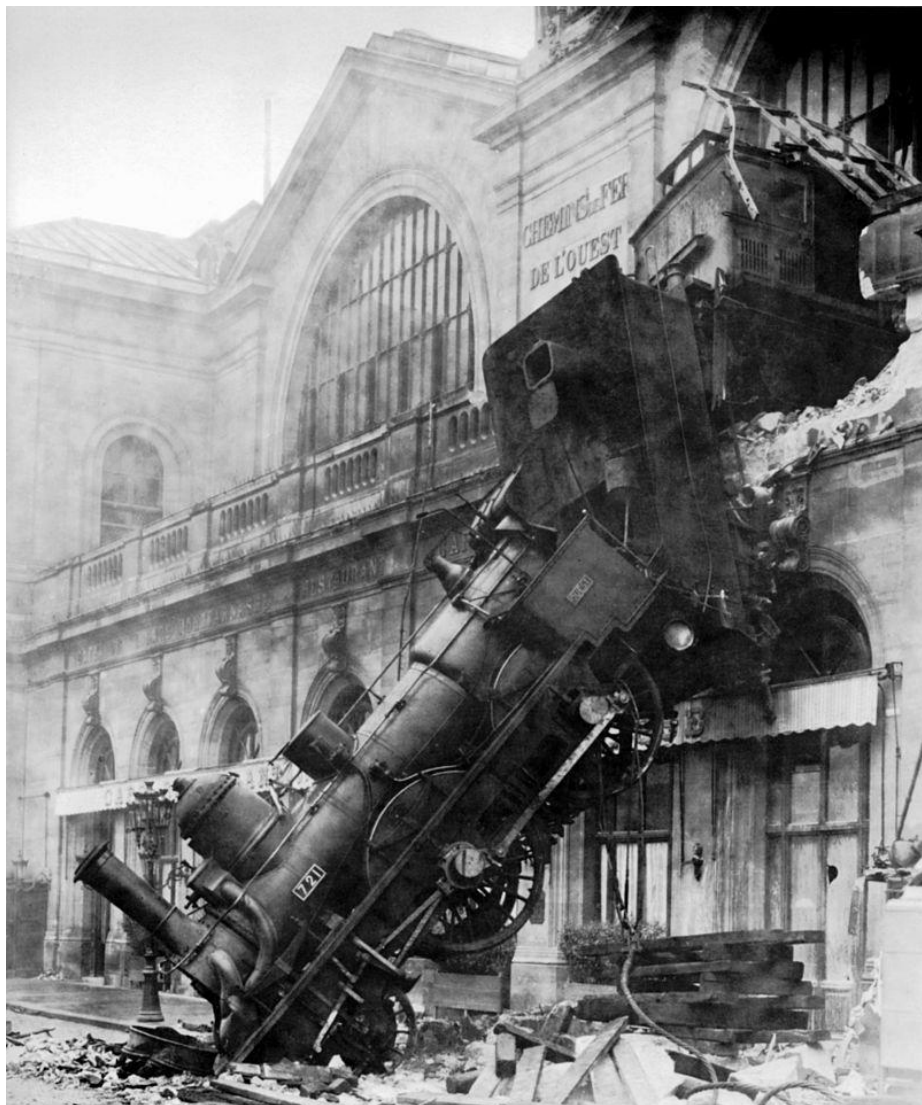
ABSA NewFunds ETFs  
Investment Seminar

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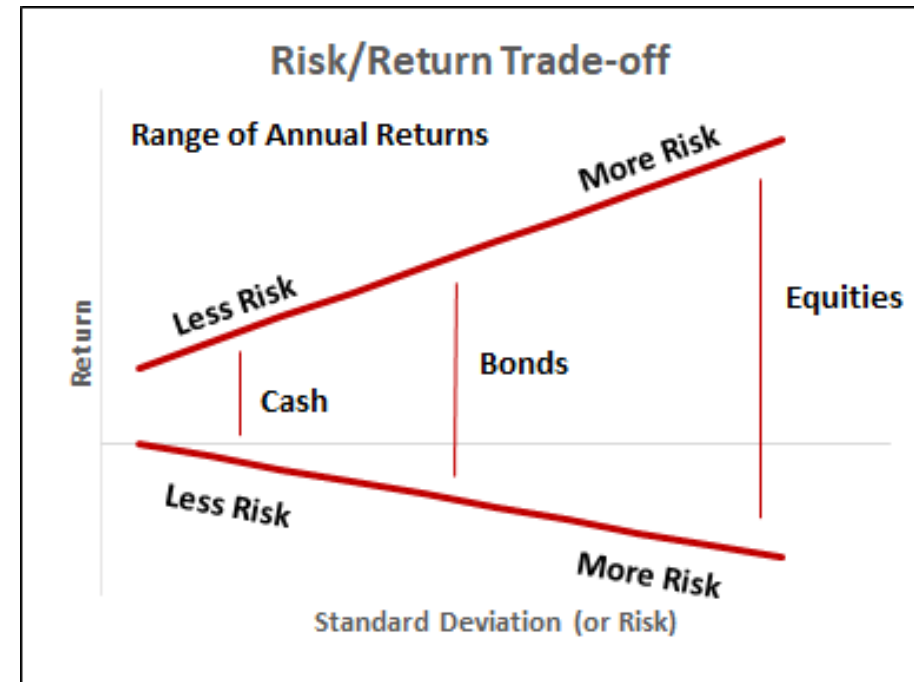
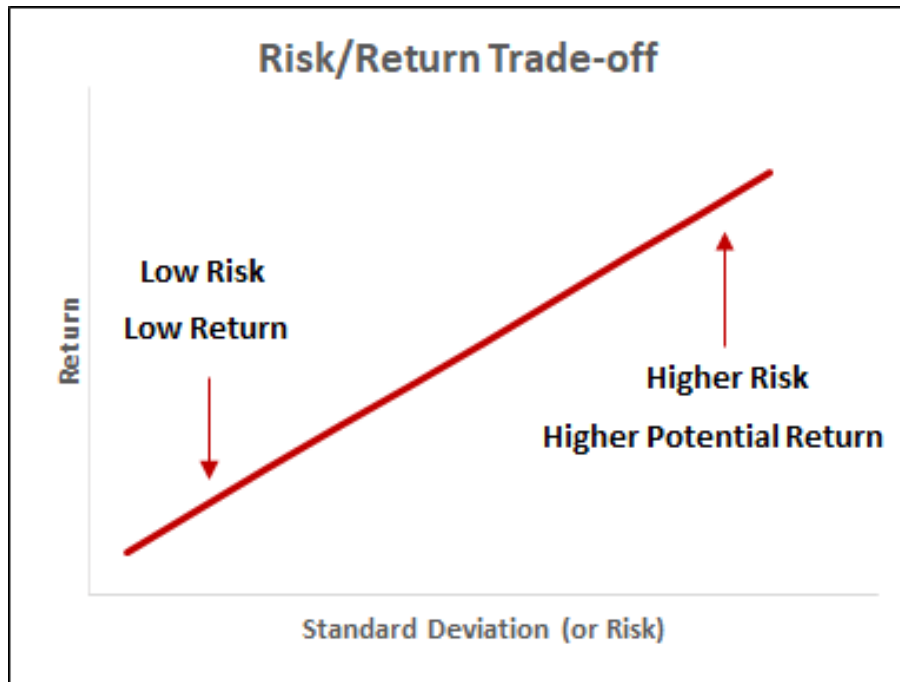
# What is risk?



- Risk is defined as “**deviation** from the **expected** outcome”
- Risk arises from **variability**
- Industry measures risk through **volatility** / standard deviation
- Investor fears the risk of **losing money!**
- Risk **measurement** is not enough  
– to **manage** risk we have to figure out where it comes from

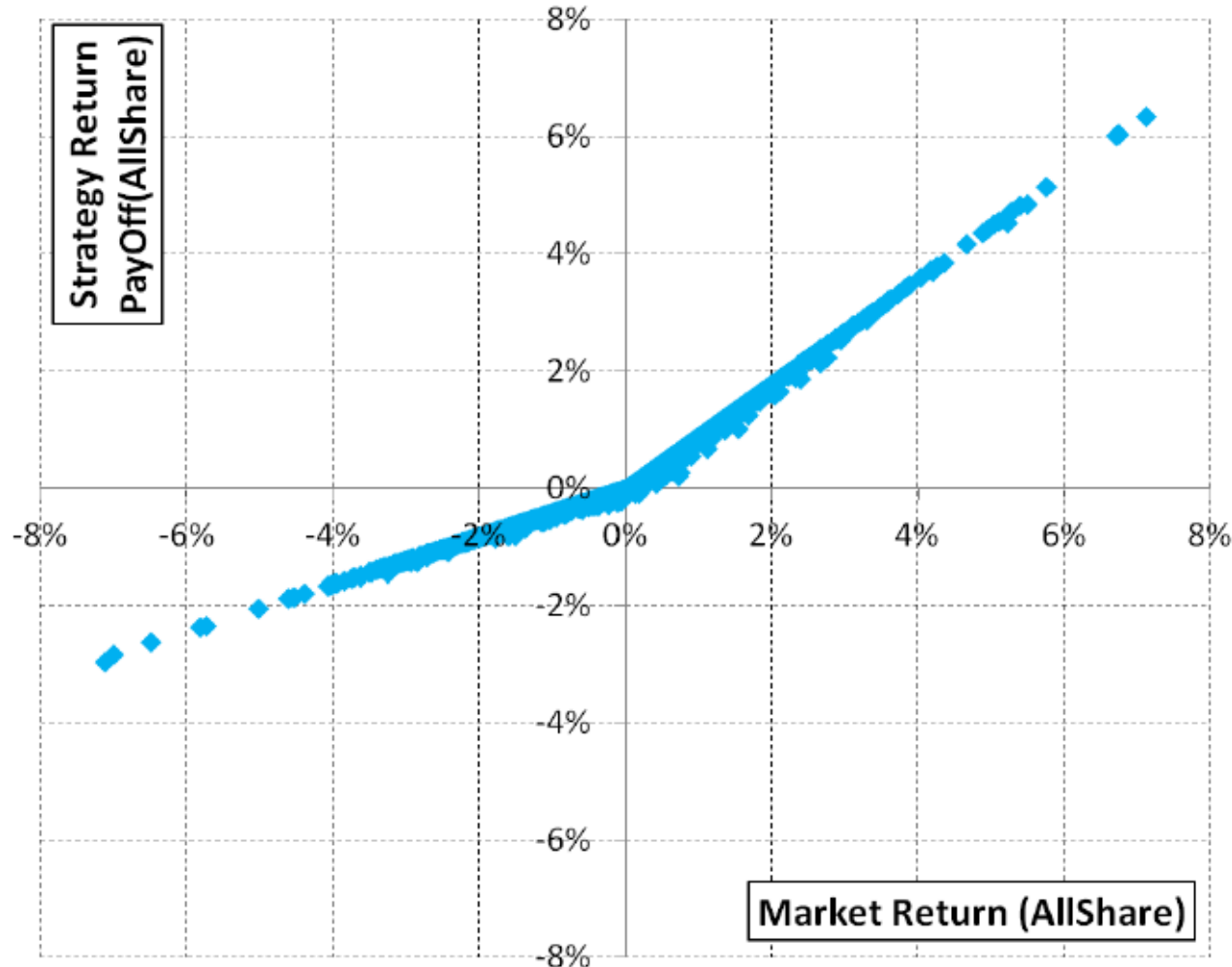
# High Risk = High Return?

- Not always. In fact, High Risk = High **Range** of Returns!



- Low volatility does not mean low return, it means low risk

# The Holy Grail: A Convex Payoff



- On the **upside** you want **maximum** participation
- On the **downside** you want **limited** participation

*Can we construct portfolios to look like this?*

Source: ABSA

# Engineering a Better Payoff Profile

## Managing Risk in Investments

- Classic criticism of traditional “passive” – select stocks according to **exposure to desirable risk premia**
  - Introduce **factors** – risk premia investing
- Concentration risk (e.g. Naspers) – **control unwanted and unrewarded risk** in the portfolio
  - Introduce **ERC – Equal Risk Contribution**
- Drawdown risk – explicitly shape final payoff through a volatility control process that **limit risk of losing money**
  - Introduce **target volatility** to limit drawdown

### Naspers:

19% in ALSI  
28% in SWIX40  
39% in INDI25

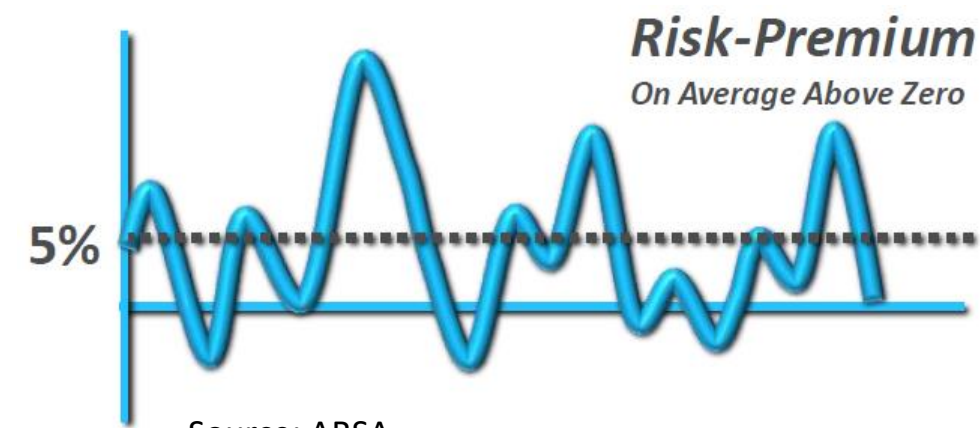
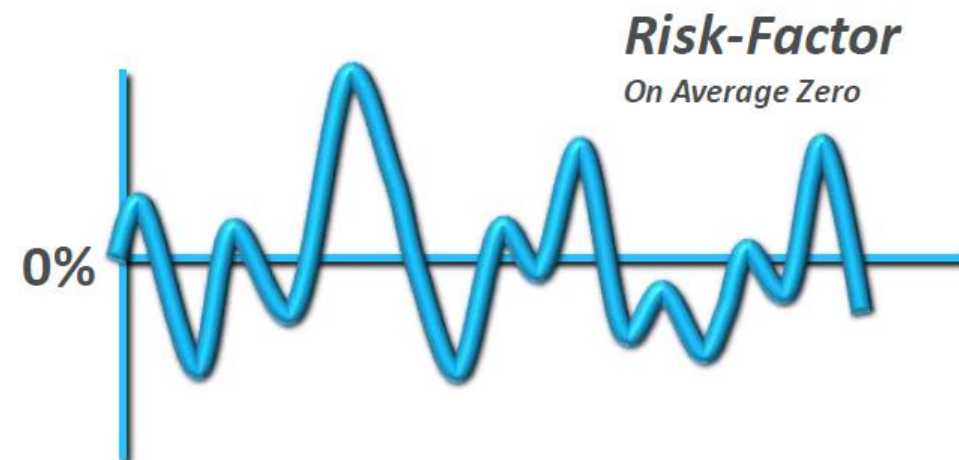
# Risk Factors vs. Risk Premia

## ■ Risk Factor

- On average **zero**
- e.g. Interest rates, currencies, industry sectors (RESI, FINI)

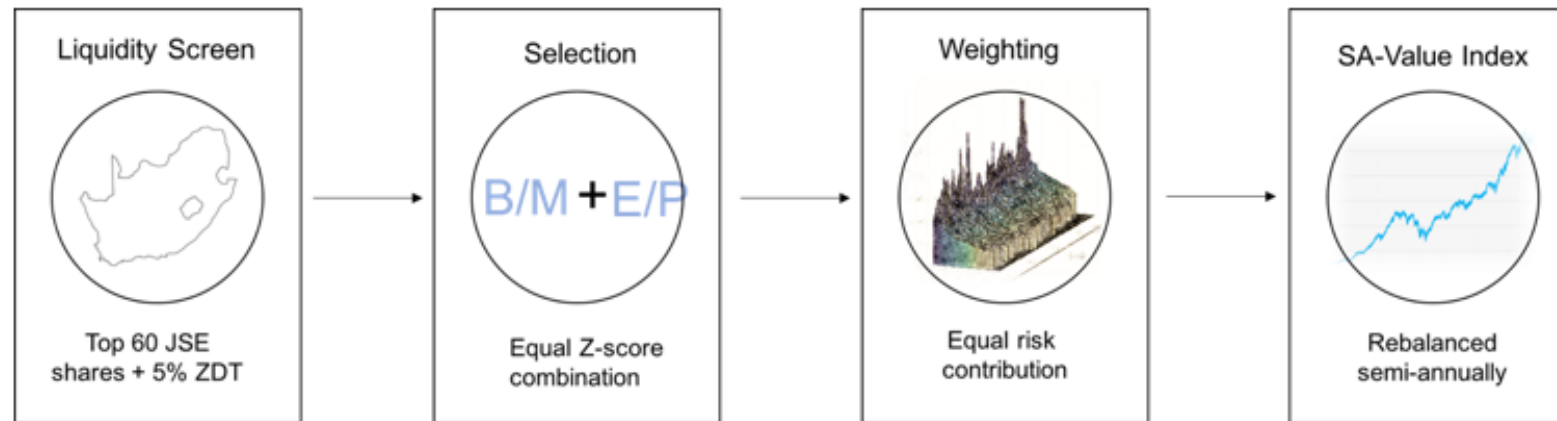
## ■ Risk Premium

- On average **above** zero
- e.g. Equities vs Bonds (ERP), Value, Momentum, Small Cap, etc.
- Passive exposure to these deliver a **positive** payoff, **on average over the long term**



Source: ABSA

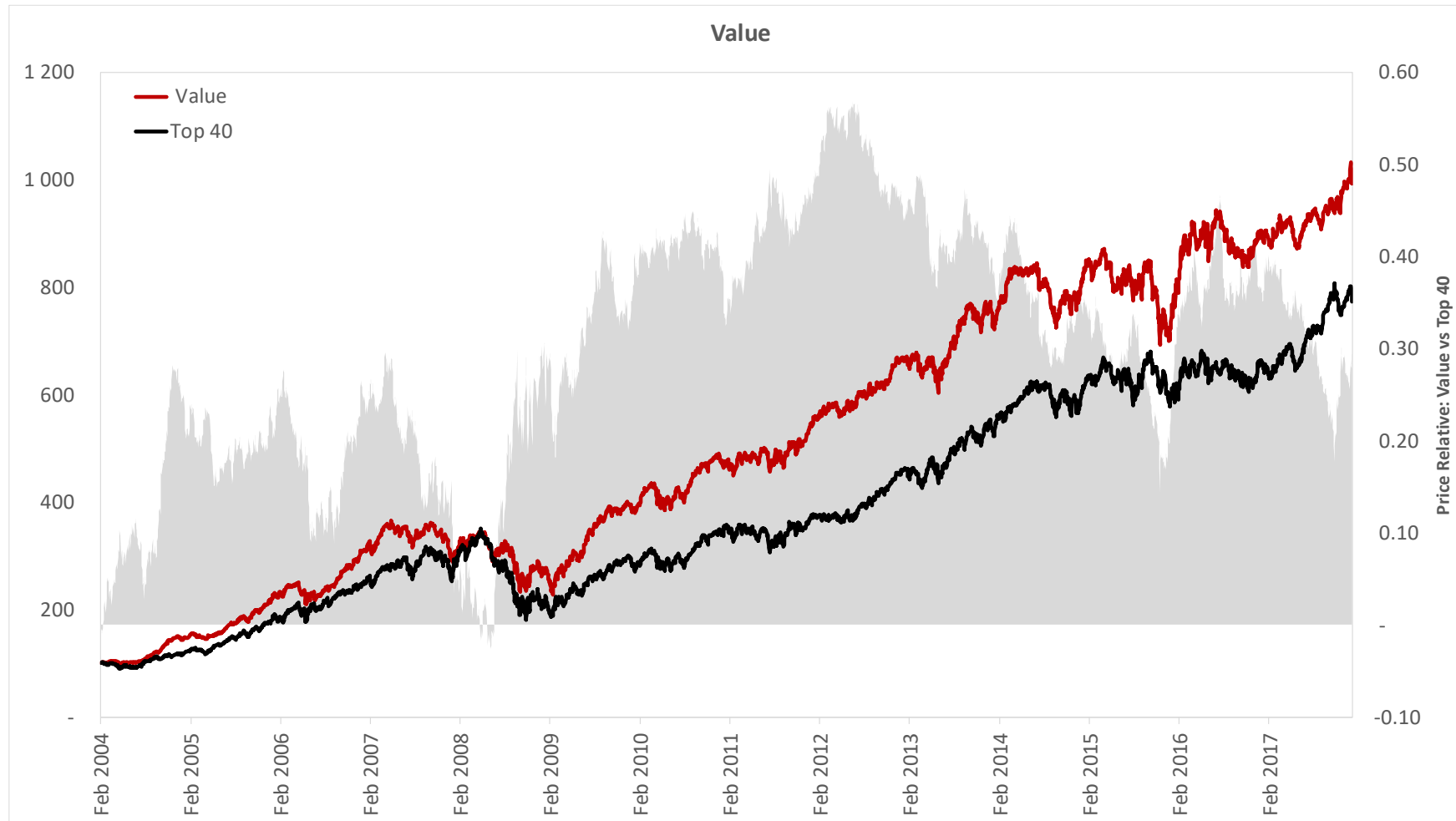
# Value Factor Index



- Initial universe: **Top 60** JSE-listed shares
- Calculate average **book/price** and **E/P ratios** over 1 year
- Select **30** shares with lowest calculated scores
- Apply **ERC** – risk parity weighting\*
- Rebalance **semi-annually**

\* each share contributes an equal amount of risk to the overall portfolio

# Value Relative Performance



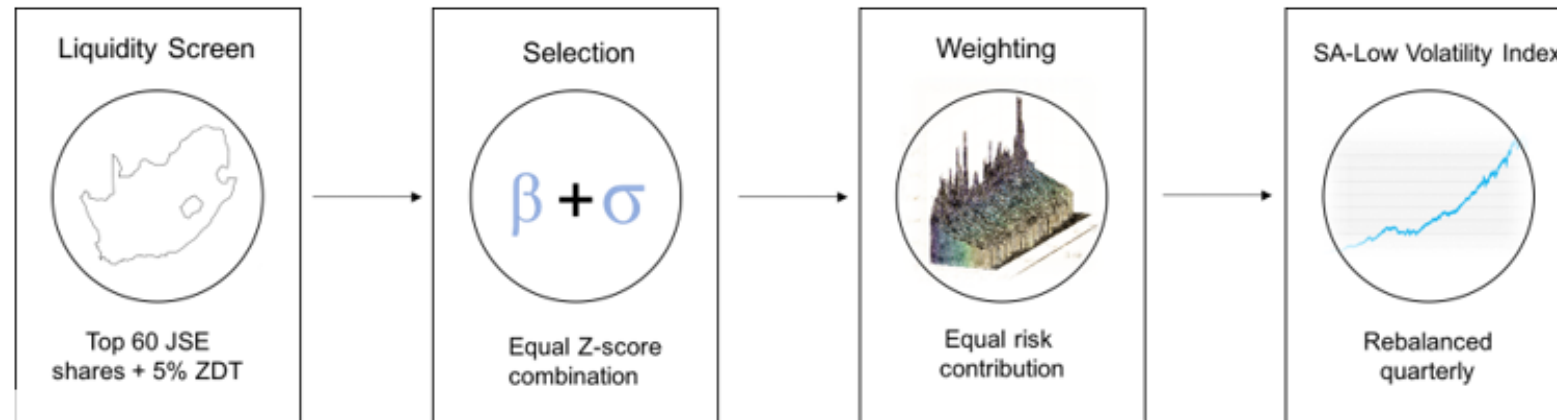
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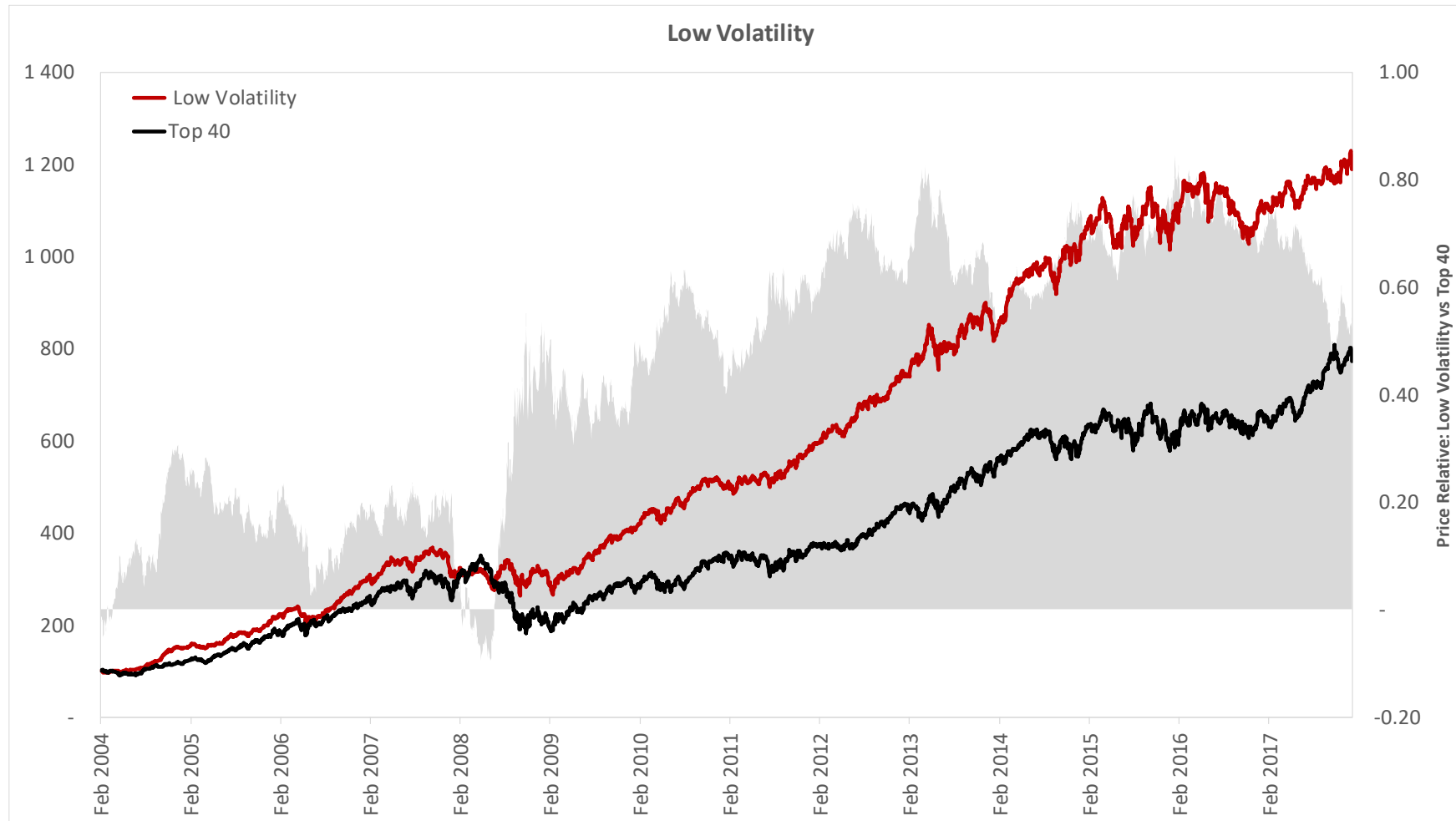
# Low Volatility Factor Index



- Initial universe: **Top 60** JSE-listed shares
- Calculate **standard deviation** and **beta** over 1 year
- Select **20** shares with lowest calculated scores
- Apply **ERC** – risk parity weighting\*
- Rebalance **quarterly**

\* each share contributes an equal amount of risk to the overall portfolio

# Low Volatility Relative Performance

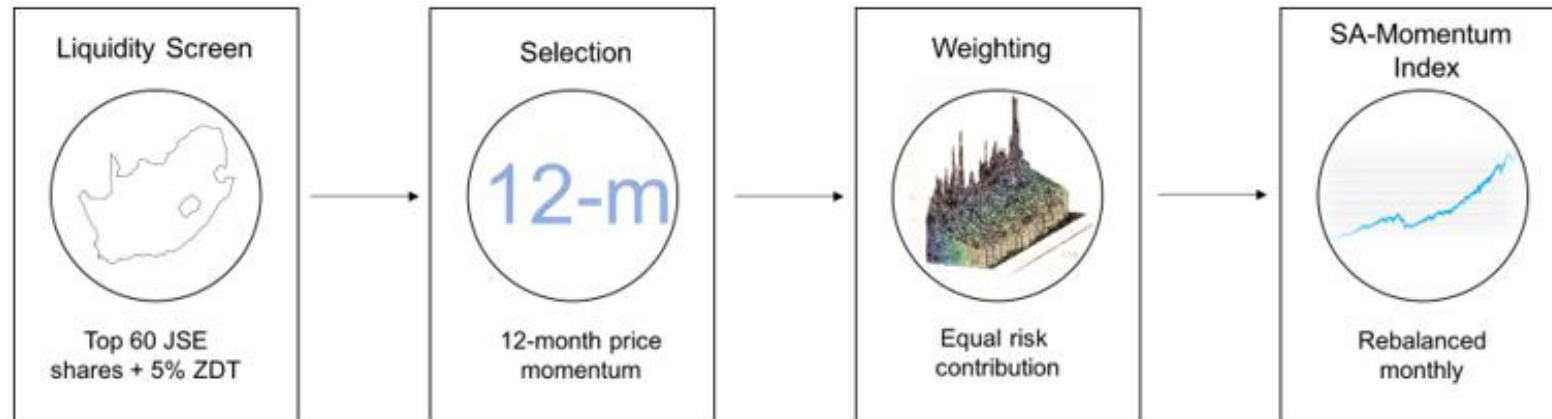


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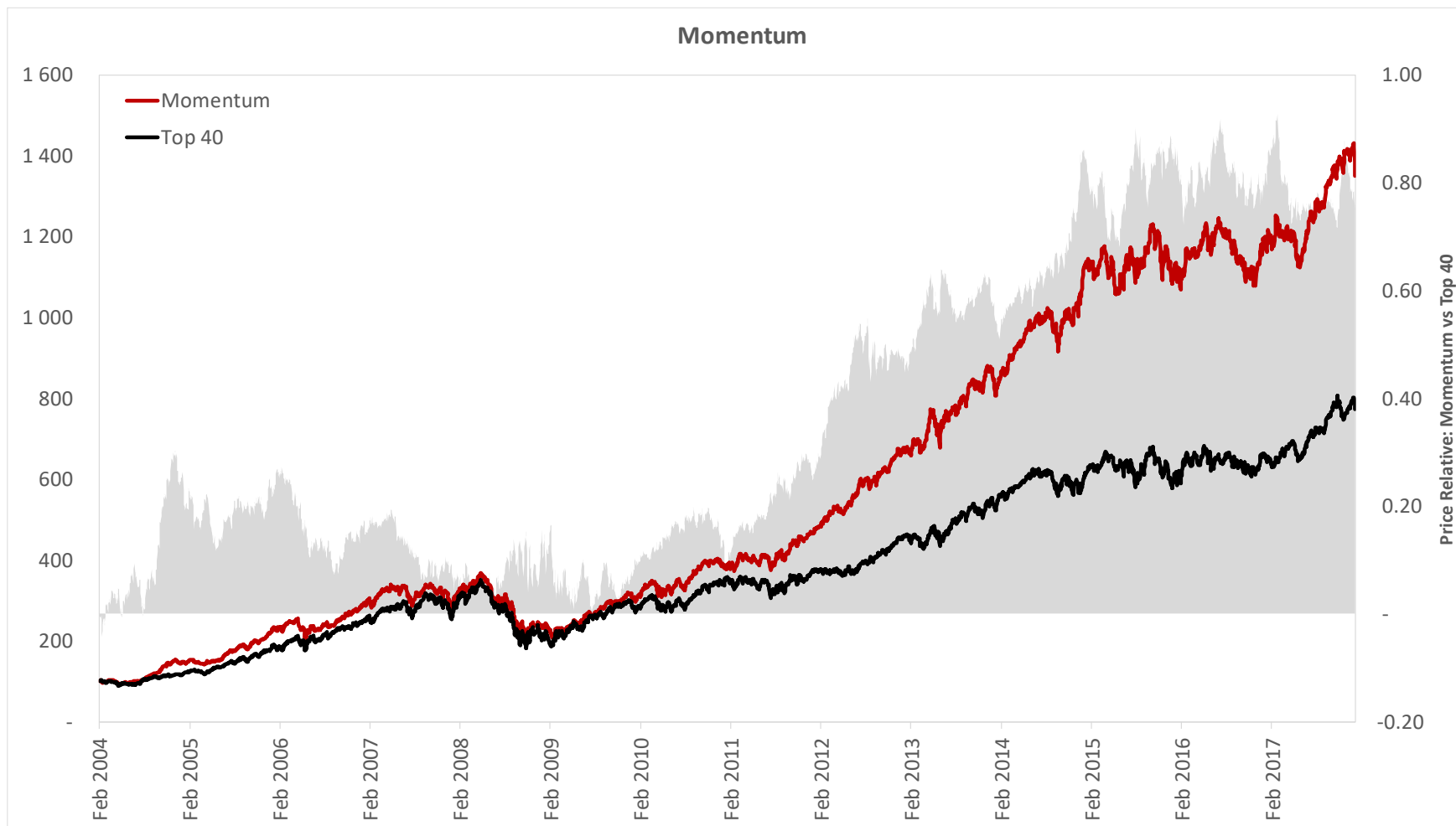
# Momentum Factor Index



- Initial universe: **Top 60** JSE-listed shares
- Calculate **price momentum** over 1 year, excl. last month
- Select **20** shares with highest momentum
- Apply **ERC** – risk parity weighting\*
- Rebalance **monthly**

\* each share contributes an equal amount of risk to the overall portfolio

# Momentum Relative Performance



Source: ABSA

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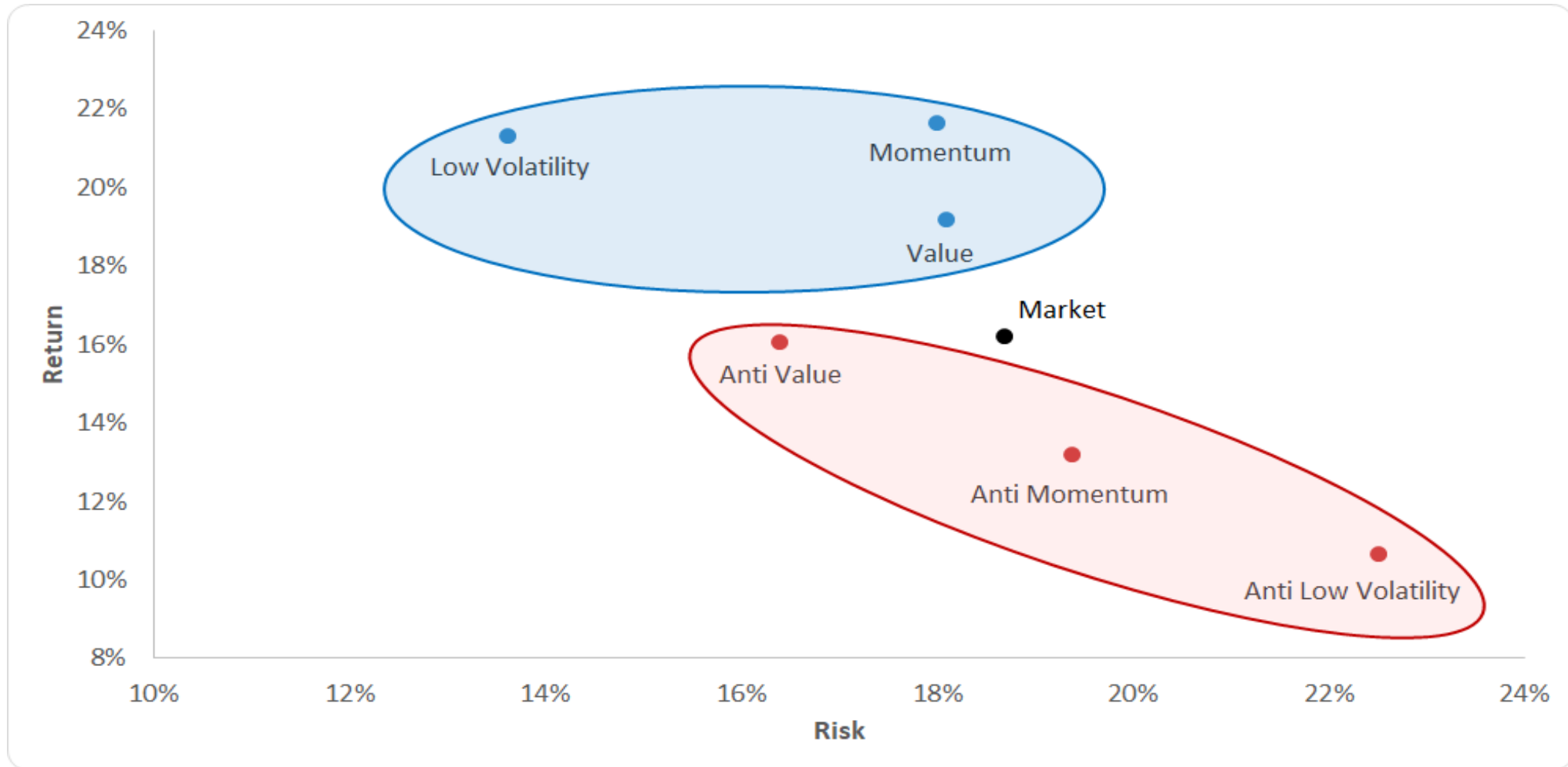




# Anti-factors

- When is a Risk Factor a **good** Risk Premium?  
When the opposite – the **anti-factor** – is **bad**
- For example (factor vs. **anti-factor**):
  - Volatility (variability): Low vs. **High**
  - Value: Cheap vs. **Expensive**
  - Momentum: “On a roll” vs. “**Not going anywhere**”
- A good (risk premium) factor is one that **outperforms** its anti-factor

# Relative Performance of Anti-Factors



Source: ABSA

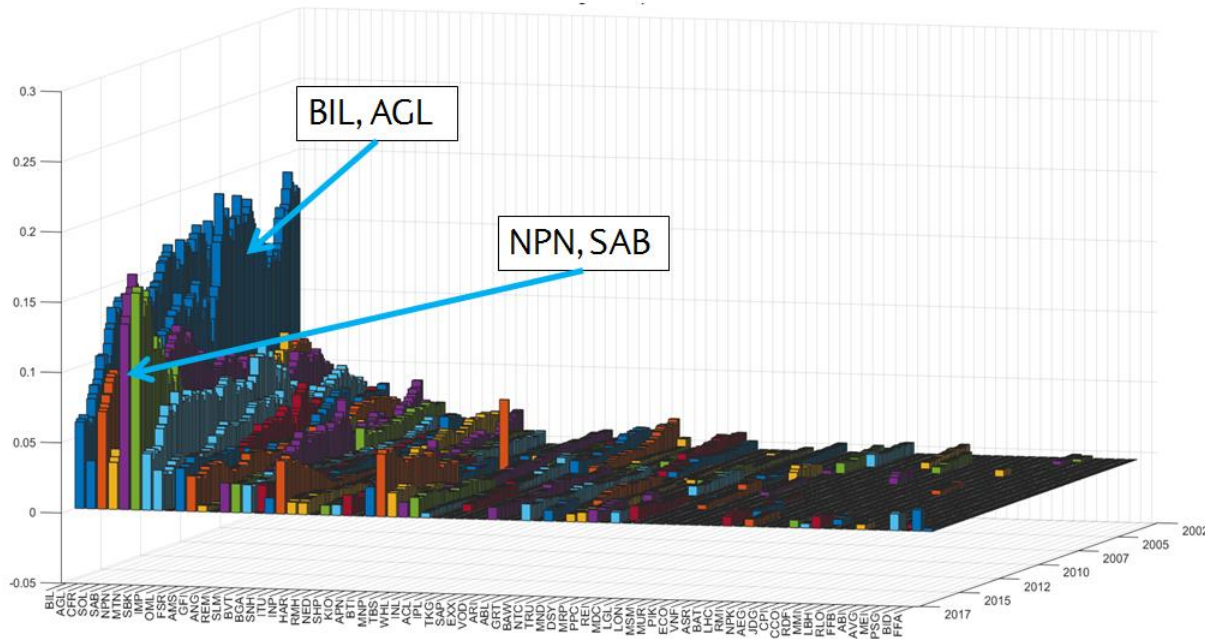
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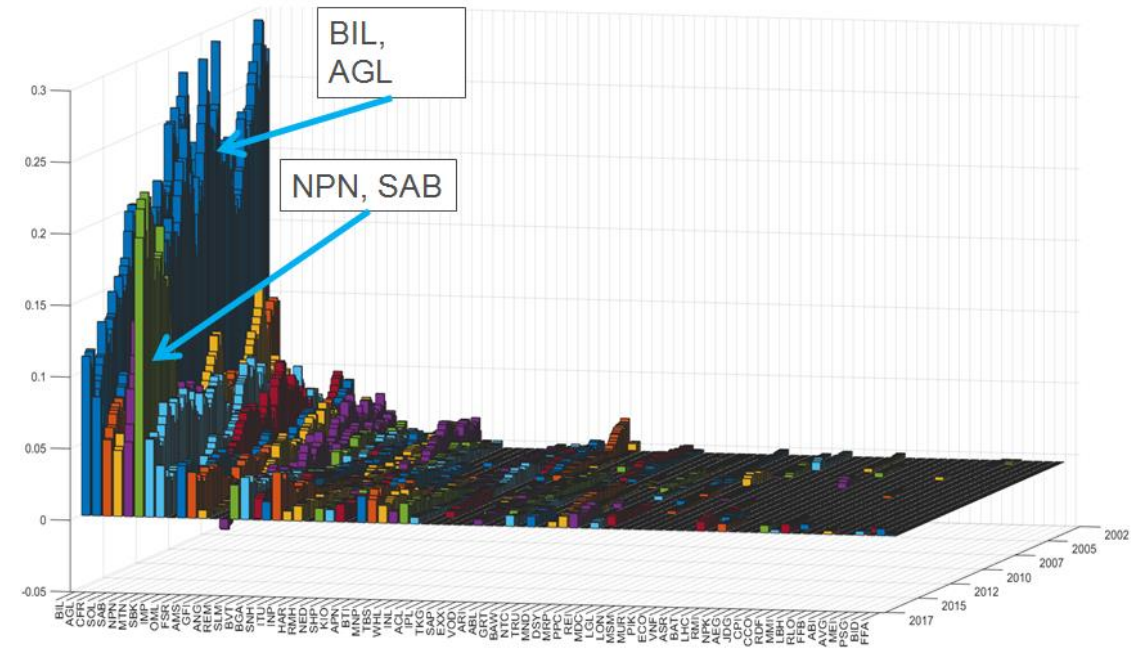
# Concentration Risk

*It's not just size (market cap)*

Contribution to **weight**



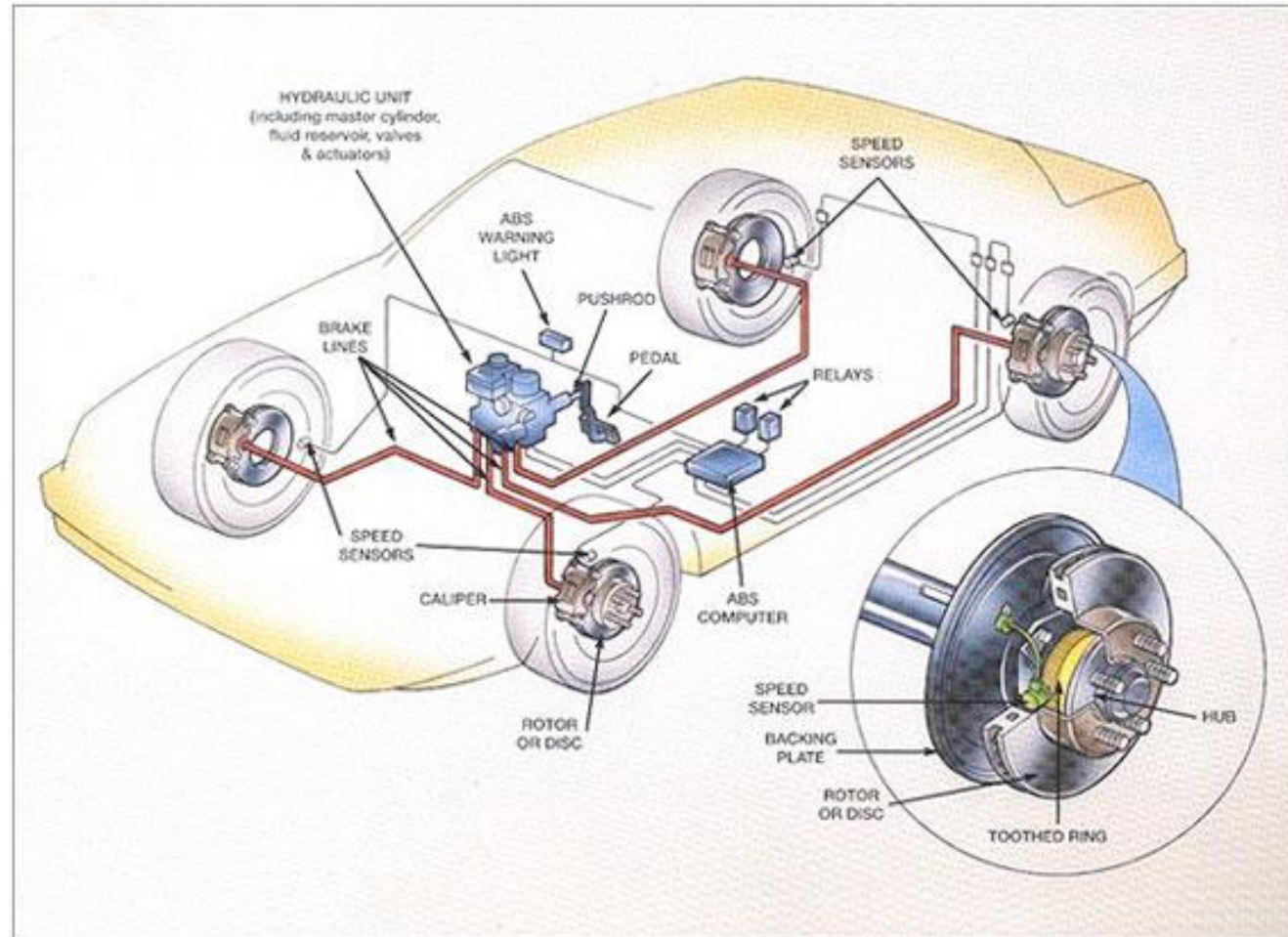
Contribution to **risk**



Source: ABSA

# ERC? ABS!

I don't need to  
**understand**  
how it works...

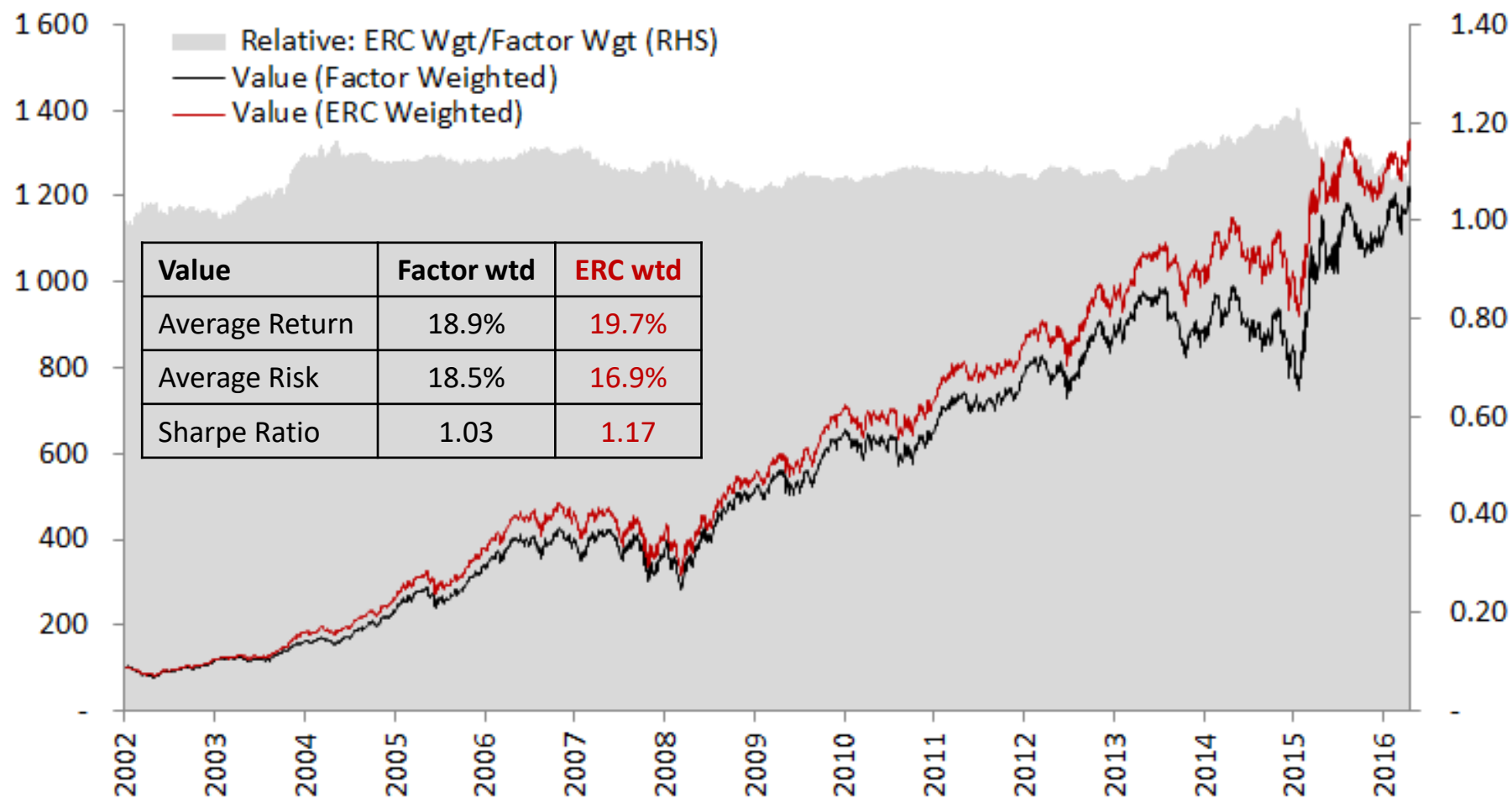


... to know  
what it can **do**  
for me!

ERC = Equal Risk Contribution; ABS = Anti-lock Braking System



# ERC – Value Factor

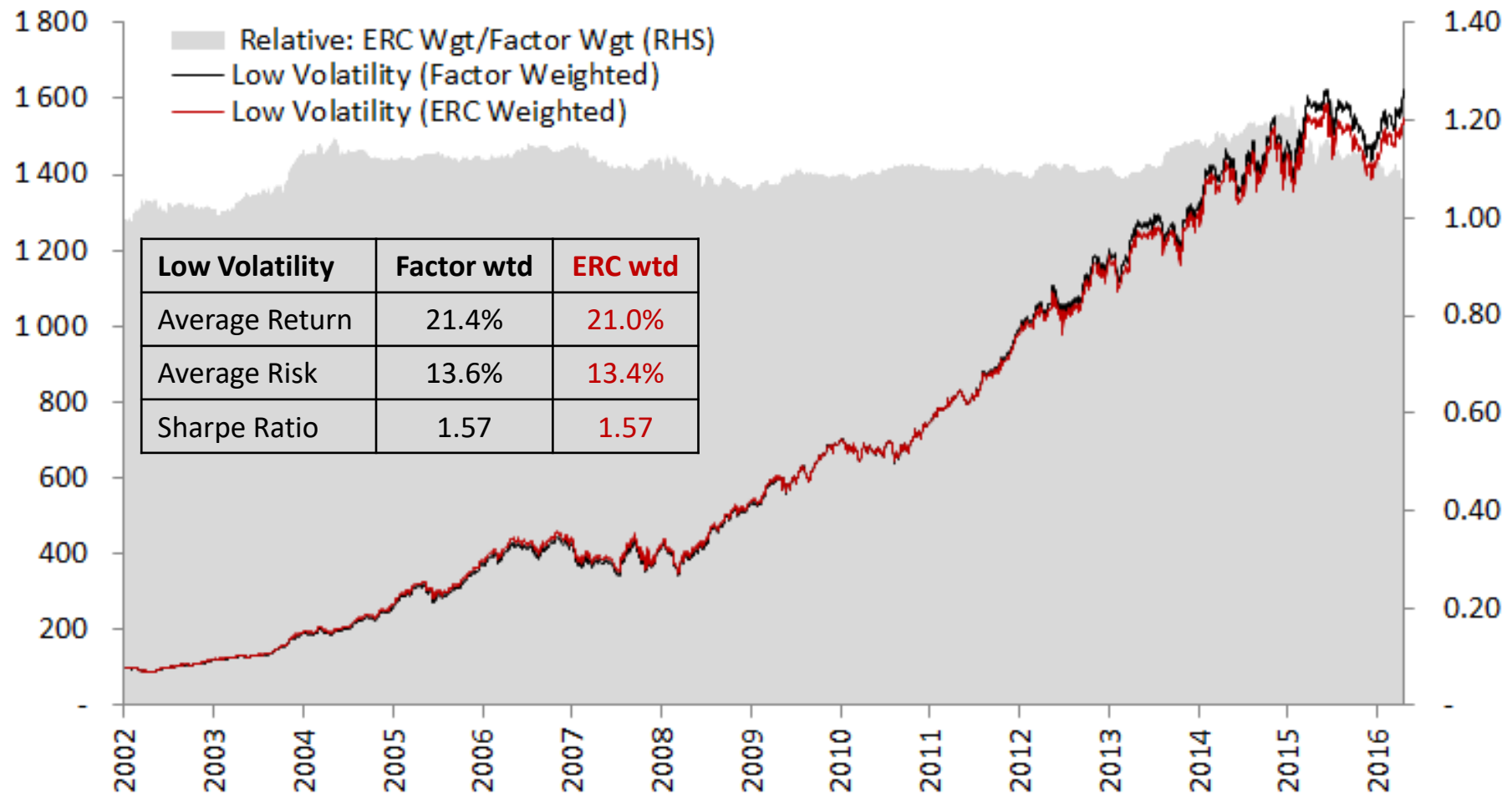


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# ERC – Low Volatility Factor

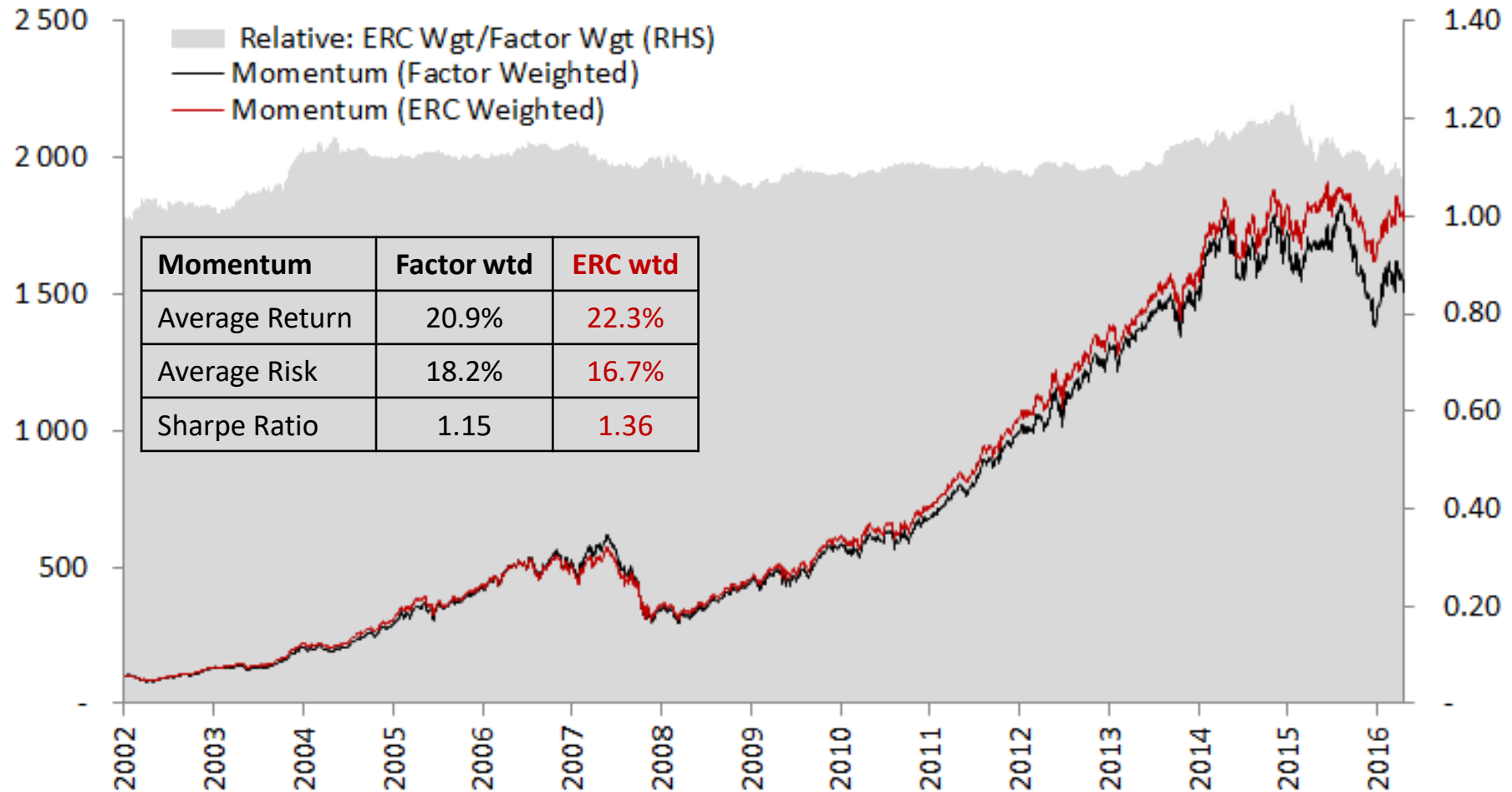


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# ERC – Momentum Factor



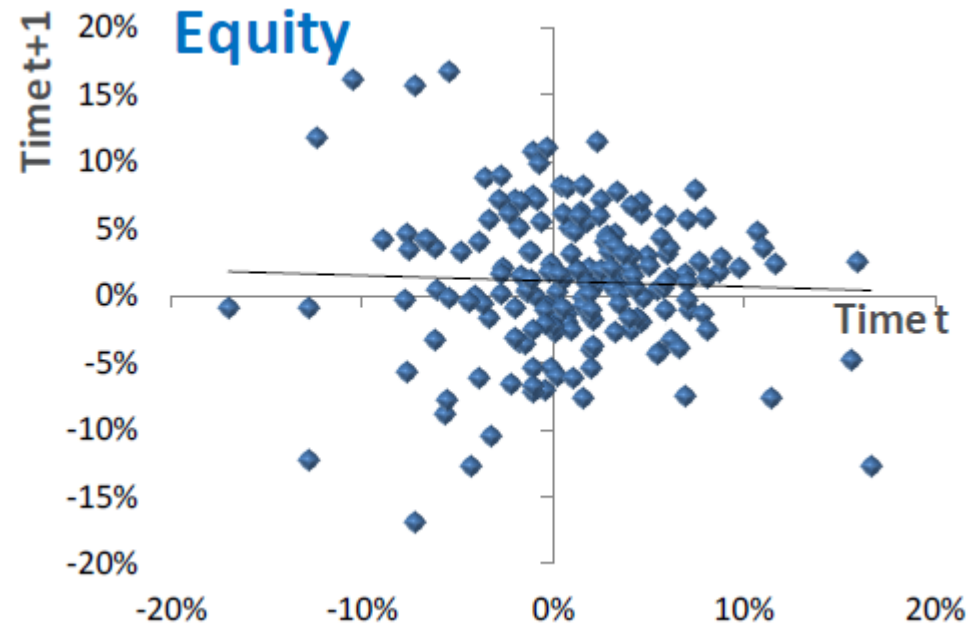
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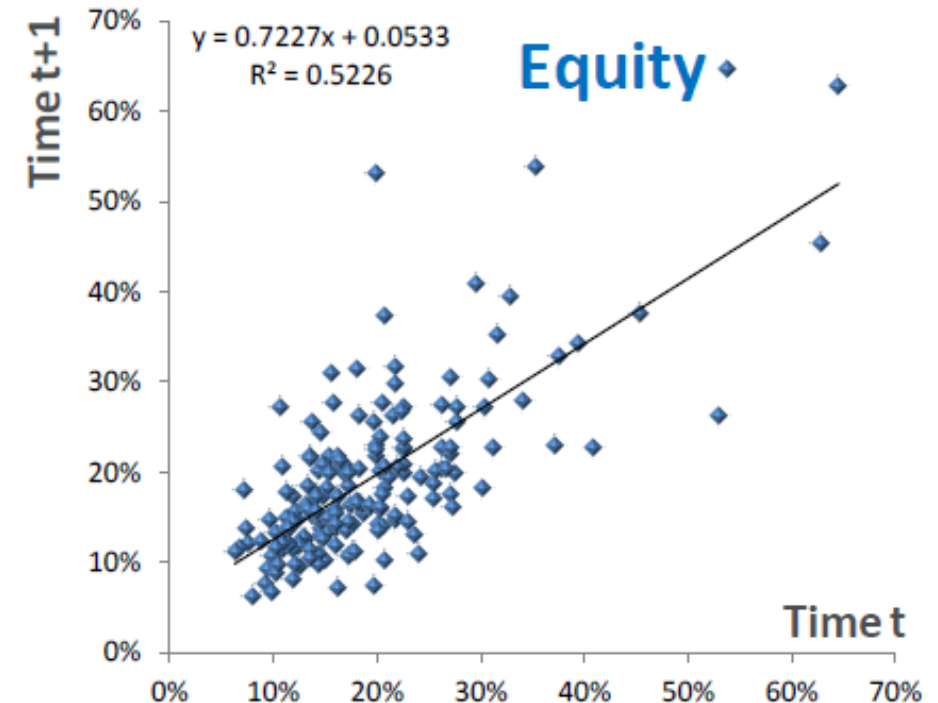


# We can't predict the future but we can manage it!

Returns do not predict **future** returns



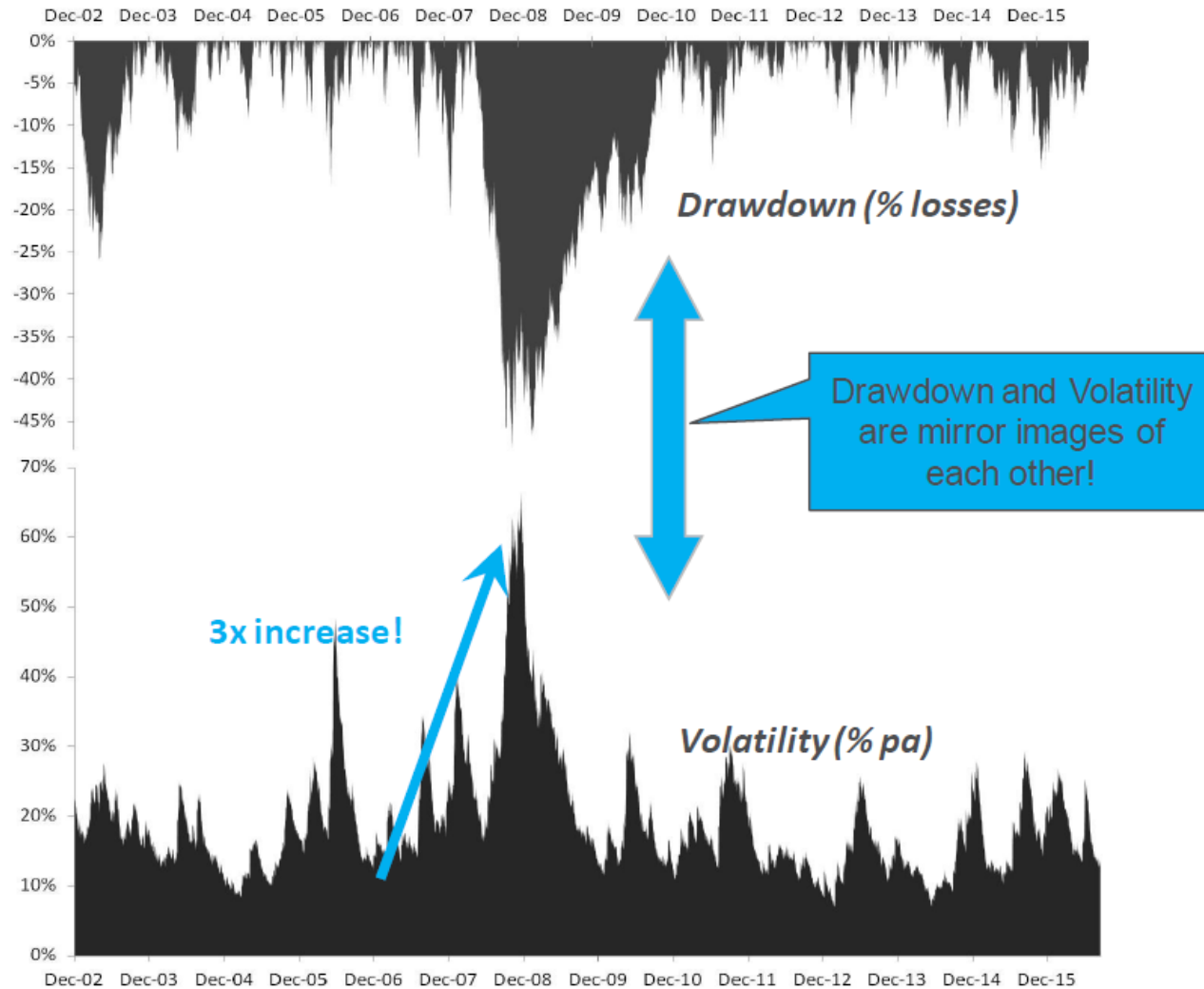
Volatility predicts **more** volatility



Source: ABSA



# Volatility & Drawdown: Mirror Images

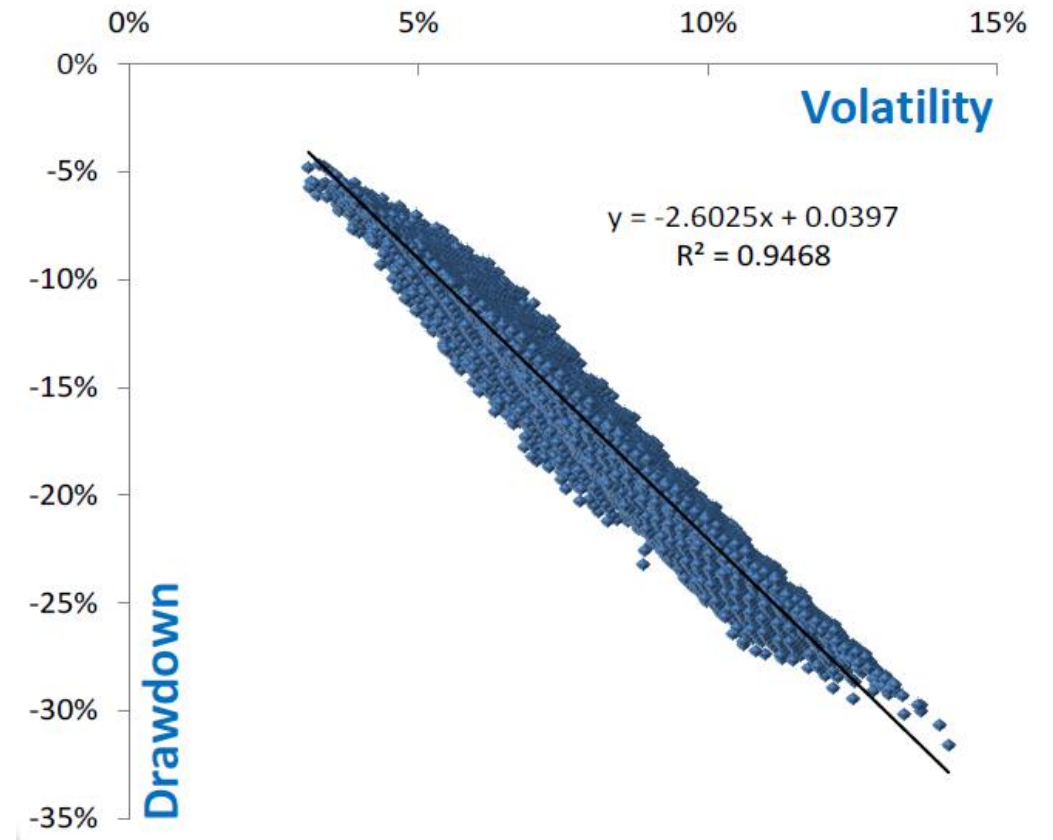


- Analysis of Top40 index – **drawdown** and **volatility**
- Allowing volatility to float **unrestricted** (i.e. passive exposures to the market), results in **full participation** in market drawdowns

Source: ABSA

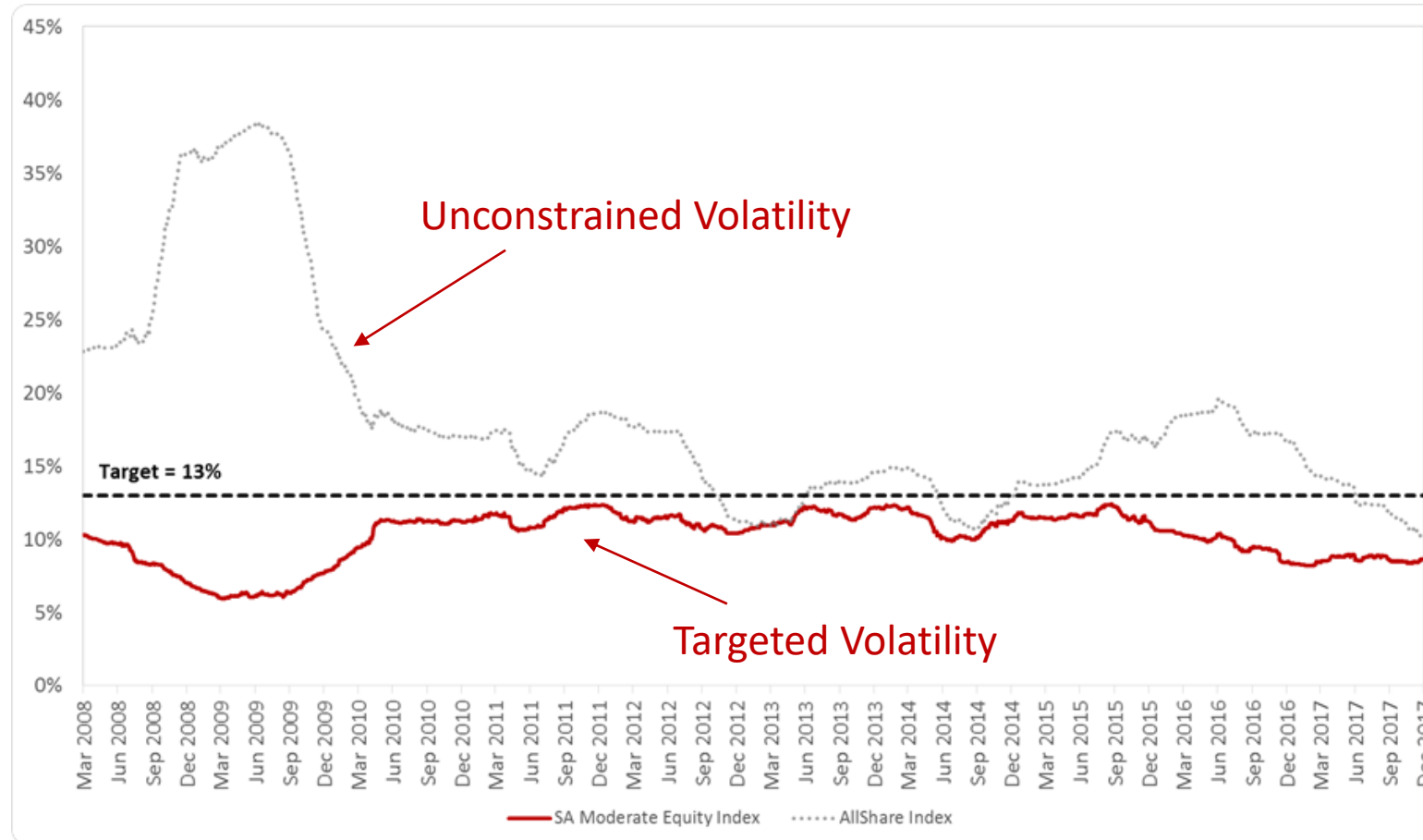
# Inverse Correlation between Volatility & Drawdown

- The higher the historical **volatility**, the bigger the **drawdown** (fall in price)
- To **reduce** the risk of drawdown, **target** a maximum volatility
- Achieve this by switching between **equities** and **cash** (increase cash holdings to reduce overall volatility)



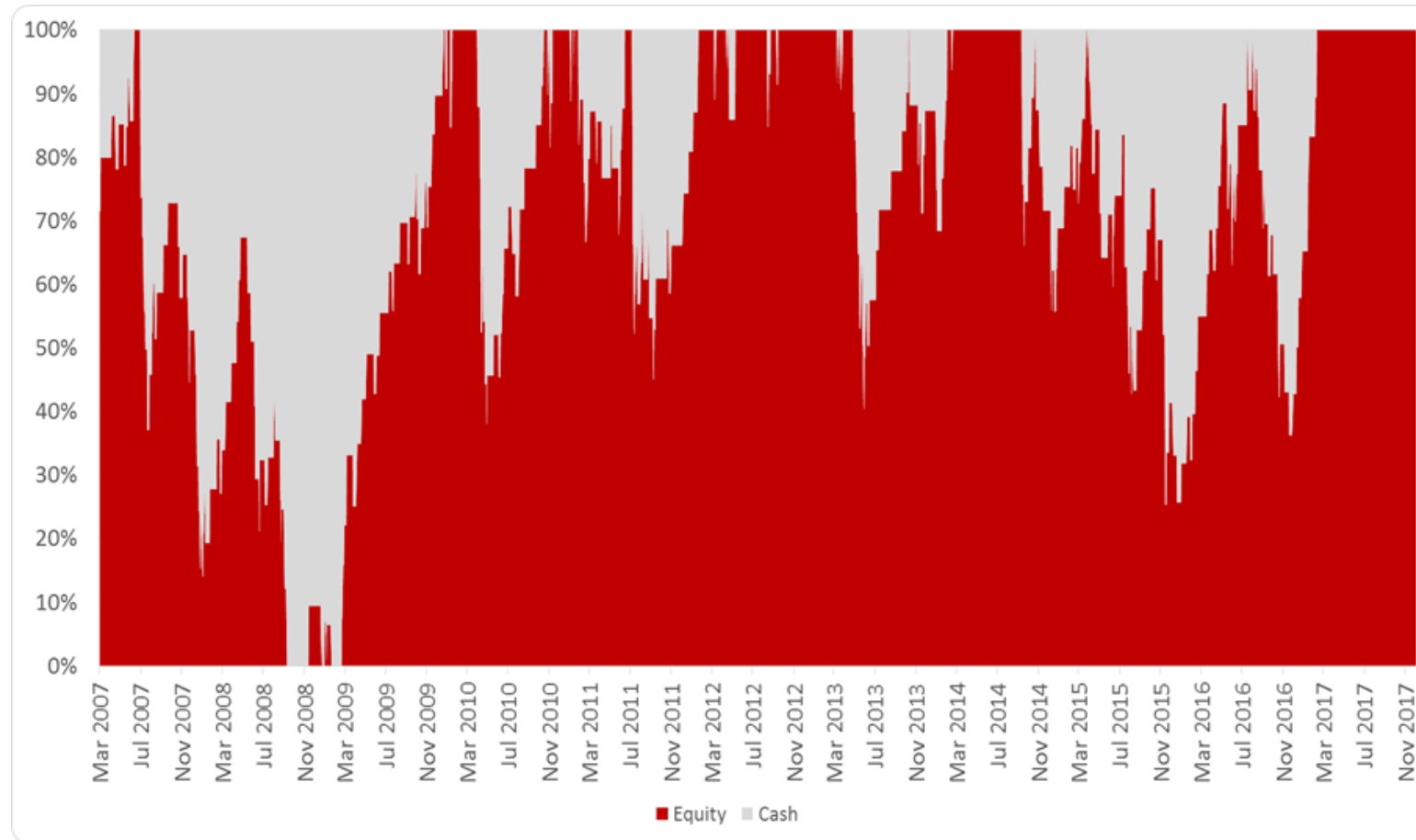
Source: ABSA

# Limit the Drawdown by Controlling (Target) the Volatility



Source: ABSA

# Switch between Equity and Cash

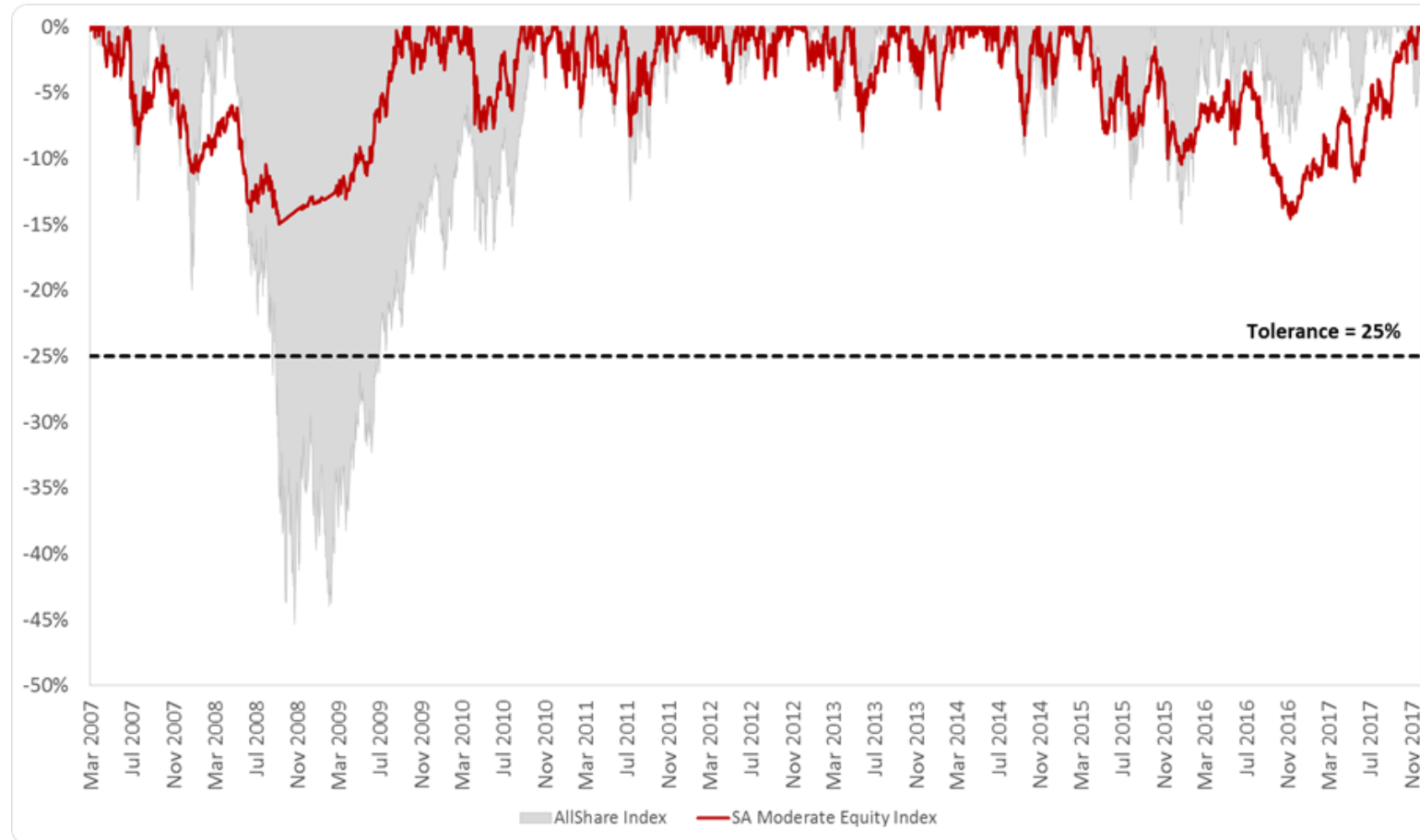


Source: ABSA

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# Result: Limited Drawdown!



If it's an **index**,  
it can be  
offered as an  
**ETF!**

Watch this  
space...

Source: ABSA

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Question time...



...after Mike



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