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FOLLOW THE BIG MONEY

# **The Process of constructing and analyzing a Trend following Trading Strategy**

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# Agenda

- **First Steps**
- **Trend Filter**
- **Components**
- **Basic TF Strategy**
- **Analysis of Trend-Following Performance**
- **Reverse Engineering**
- **Tweaks and improvements**
- **Practicalities**



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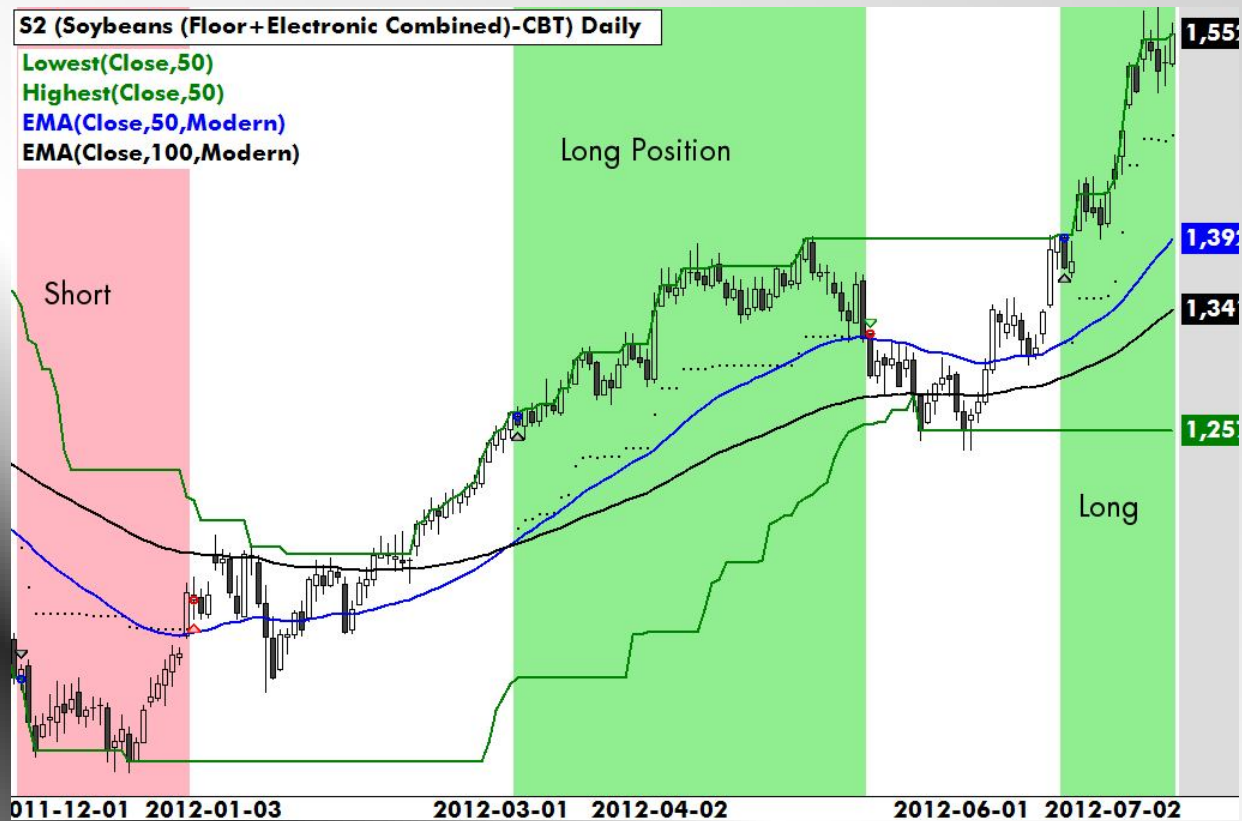
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## First Steps

- They are all doing the same thing – High drawdowns, high leverage, riding volatility, High returns
- Investment Universe
- Position Sizing
- Slippage, commission and other costs
- Strategy Personality
- Interest on liquidity

# Trend Filter

- What is a trend filter?



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# Components

## 1. Investment Universe

### ➤ Investment Universe

Trading a trend following system on a single market or only a few different markets is suicidal.

The investment universe you chose will have a much greater impact than tweaking buy and sell rules, so choose wisely.

# Components

## 2. Position Sizing

- Some markets are inherently more volatile than others
- Position sizing formula matters more than trading rules
- Determining a risk factor – basis points (20 basis point = 0,2%)
- Based on Volatility – Average True Range
- Standard deviation instead of ATR
- $\text{Contracts/shares} = (0,002 \times \text{Equity}) / (\text{ATR}100 \times \text{Point Value})$



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## Components

### 3. Slippage, commission and other costs

- When rubber meets the road
- Take into account all fees
- Use reliable data vendors – pay for them, they will save you money

# Components

## 4. Liquidity

- Test only markets with very good Liquidity
- Leverage is helpful
- Account for interest on excess cash holdings
- Equity should be used wisely



# Components

## 5. Strategy Personality

- Treat Trading like a business
- Know what you want and why
- Know whether your expectations are achievable (have realistic SMART goals)
- Knowing yourself is the path to success in trading

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# Basic TF Strategy

## Entry Signal

Enter long positions on a new 50 day high. Vice versa for shorts. Go with the breakout and ride the trend. Nothing else.

## Exit Signal

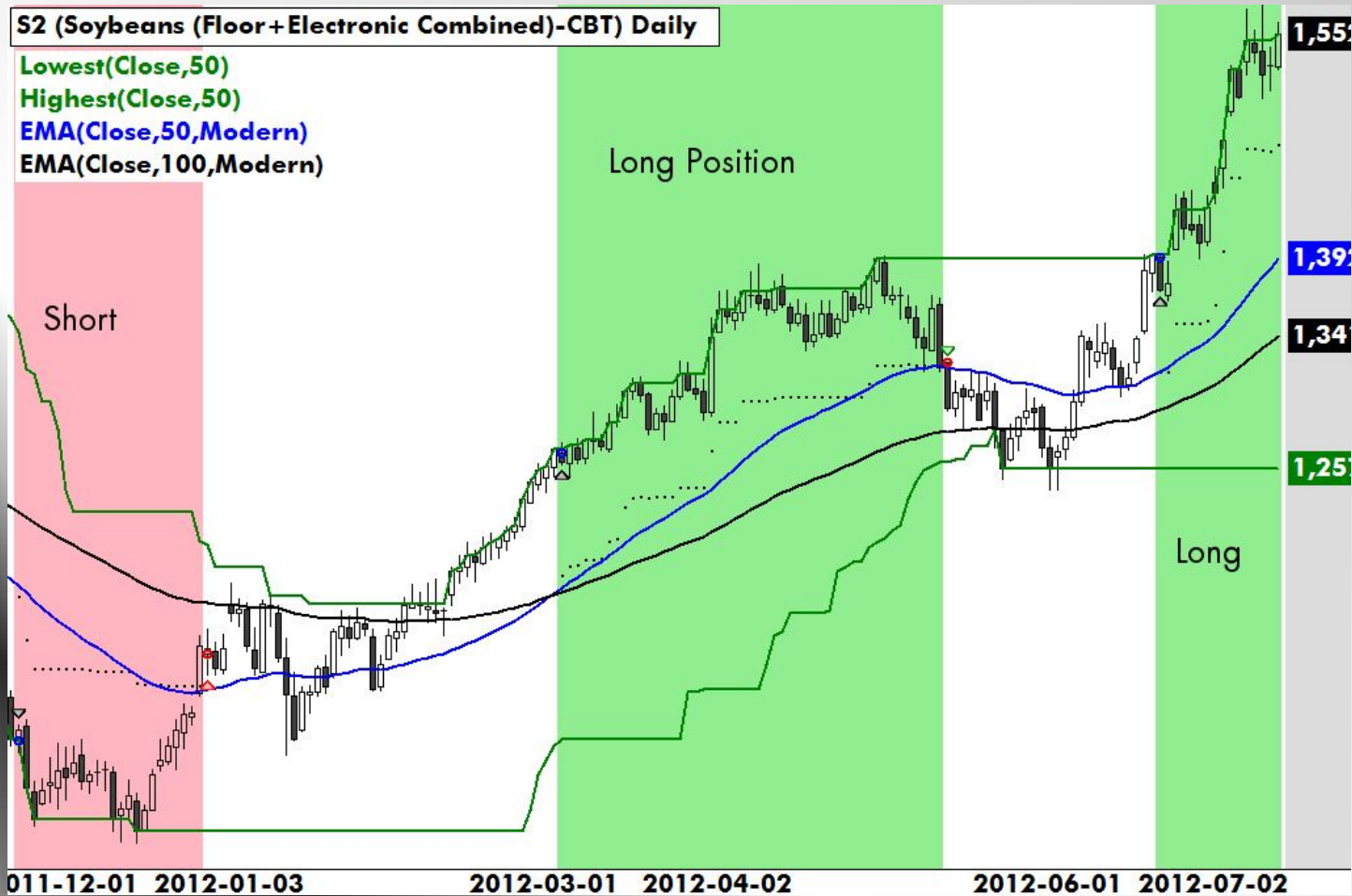
Exit on three average true range moves against the position from its peak reading. Thereby we have a theoretical loss of 60 basis points. No intraday stops are used, so a close beyond three ATR units are needed for a stop to be triggered the following day.



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# Basic TF Strategy



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# Basic TF Strategy

Compound Annual Return	25.9%
Maxium Drawdown	-29.2%
Best Month	45.8%
Worst Month	-18.4%
Average Month	2.3%
Percent Profitable Months	63%
Sharpe (RF:2.5%)	0.90
Sortino Ratio:	1.92

# Analysis of Trend-Following Performance

- Parameter Stability Comparison – Experiment
- Correlation between strategies
- Compare to benchmarks (Barclay BTOP 50 Index)
- Compare to competition



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# Analysis of Trend-Following Performance

- What to compare?
  - CAR (Compounded annual return)
  - Worst Drawdown
  - Best month
  - Worst month
  - Sharpe ratio
  - Sortino ratio
  - Percentage profitable months



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# Reverse Engineering

## Study what the best do

- Investment Universes – liquidity differs a lot in each of the traded assets
  - Equal-Weighted (Agri, Non-agri, Currencies, Equities, Rates)
  - Large ( as above + more Equities, Rates, Currencies)
  - Large ( with reduced equities)
  - Financially Heavy Investment Universe (more weight on Rates)
  - Commodity Heavy Investment Universe
  - Percentage profitable months



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# Reverse Engineering

## Study what the best do

### ➤ Risk factor

Volatility of each fund can show significant variations compared to each other.

To replicate it – position sizing formula must be changed to match the volatility level of the fund



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## Tweaks and improvements

- Be adaptive, markets change!
- Rules don't change significantly - risk factor, position sizing and investment universe is key
- Test your system on multiple Time frames
- Consider adding a countertrend component
- Use Correlation Matrices
- Walk-forward testing



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## Practicalities

- Asset base
- Going Live
- Execution
- Cash Management
- Portfolio Monitoring



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