Commodities & the search for yield

A voyage beyond the obvious

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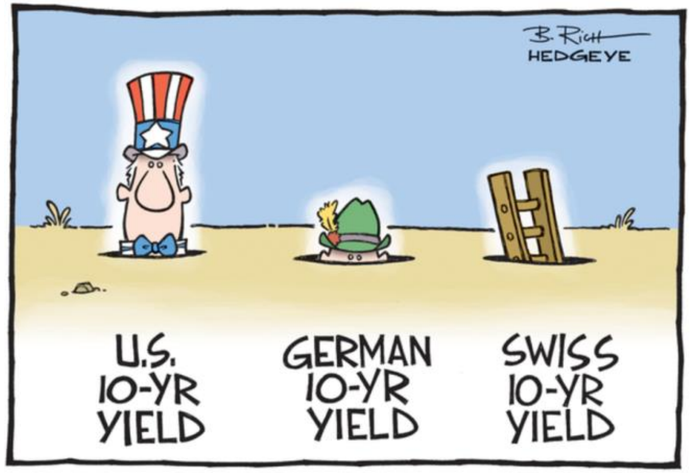
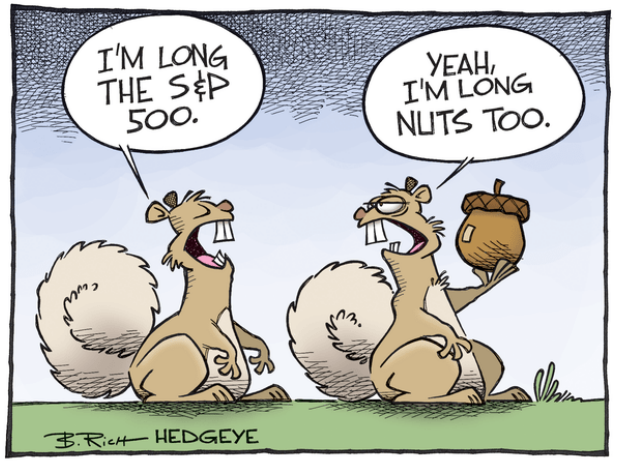
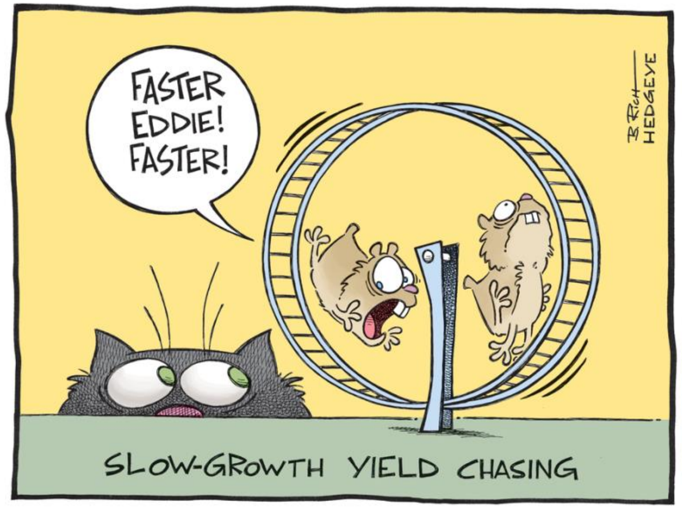
Bond yields are sub-zero



Equity valuations are rich





Everyone is chasing yield, in exactly the same way…

What is yield? Where do we find it?

Yield: Yield describes ***the amount in cash*** (in percentage terms) ***that returns to the owners of a security***. Normally, it does not include the price variations, distinguishing it from the total return

Typical Solution:
1) Increase credit risk (add corporate credits to the Matching Portfolio)
2) Extend credit risk (increase allocation to High Yield bonds)
3) Increase illiquidity (increase allocation to Dutch Mortgages)
4) Extend illiquidity (invest in Private Debt)

Result: Yields in those asset classes decline
Illiquidity premium slowly disappears

Can we find a less crowded, non-traditional source of return?

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Investment Philosophy: Fundamental Law of Active Management

$$IR \approx IC * TC * \sqrt{n}$$

Framework developed by Grinold & Kahn (2000), supplemented by Clarke, de Silva & Thorley (2002)

$IR =$ **Information Ratio** Trade-off between relative returns and relative risk

$IC =$ **Information Coëfficiënt** Amount of “skill” in an investment process, the source of alpha

Fuller (2000) sees three kinds of alpha sources:

1.	**Informational**	*consistently* aquire superior information	(highly unlikely)
2.	**Analytical**	superior processing of data	(unsustainable in the long term)
3.	**Behavioural**	utilise market participant behaviour	(behaviour changes very slowly)

$TC =$ **Transfer Coëfficiënt** The extent to which the investment process can be implemented in the portfolio

$\sqrt{n} =$ **Breadth** The number of independent positions in the portfolio

Goal is to implement a behavioural alpha source (IC), with as little constraints as possible (TC), as often as possible ($\sqrt{n}$)

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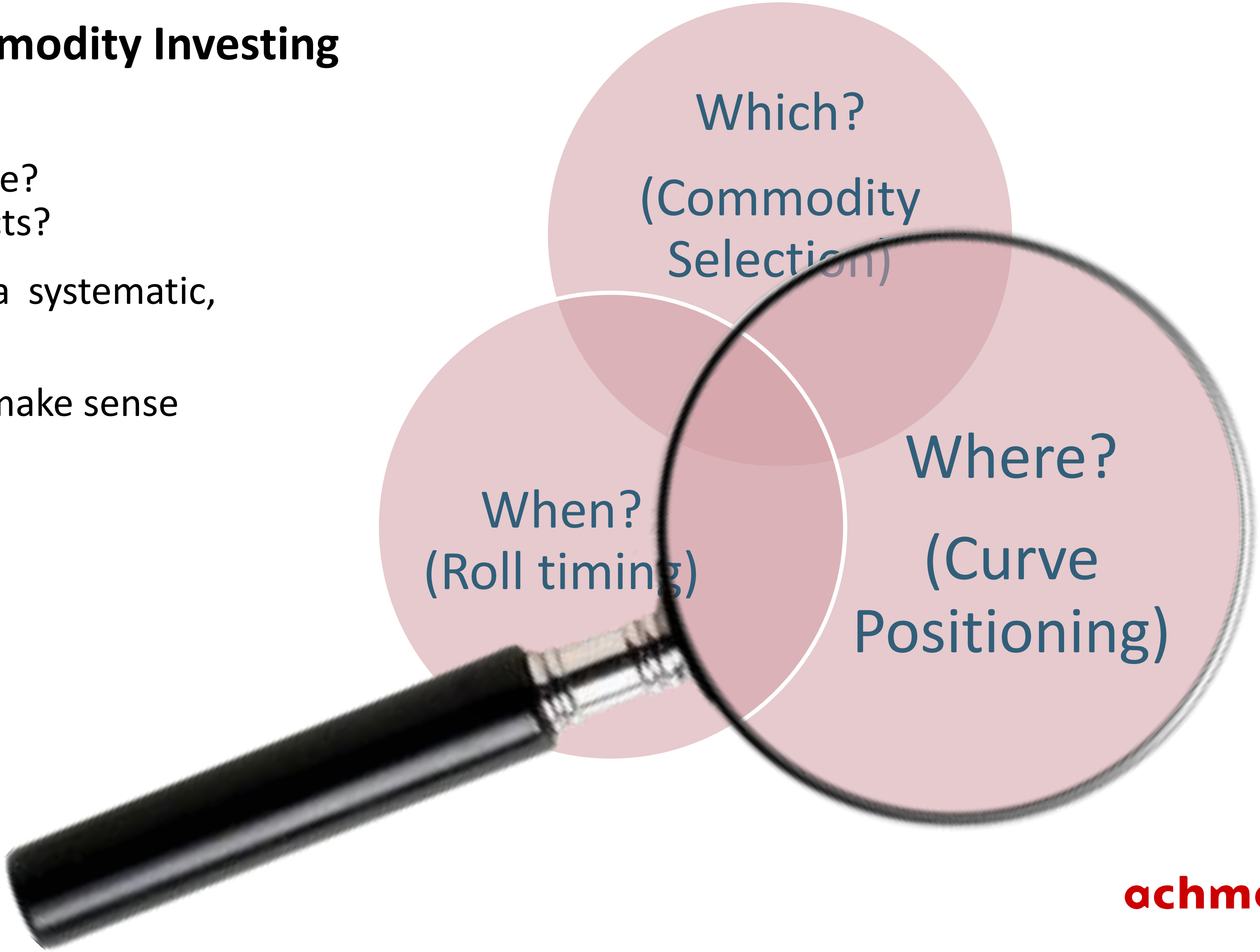
The three W's of Commodity Investing

Which commodities?
Where on the futures curve?
When to roll these contracts?

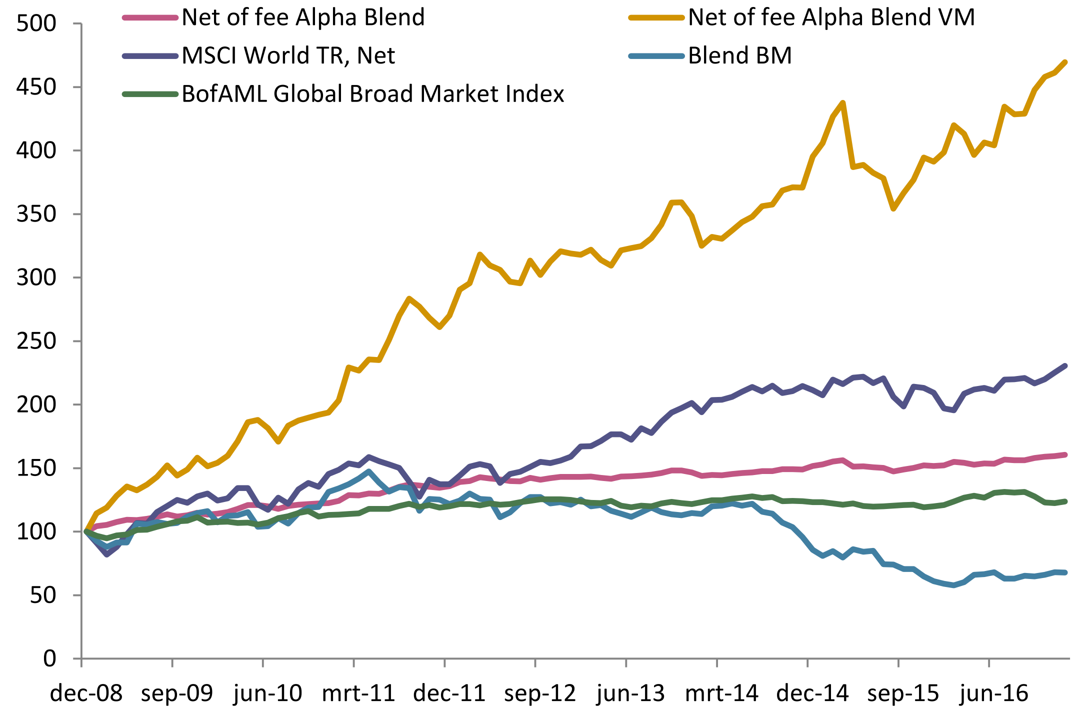
Each factor is based on a systematic, repeatable process

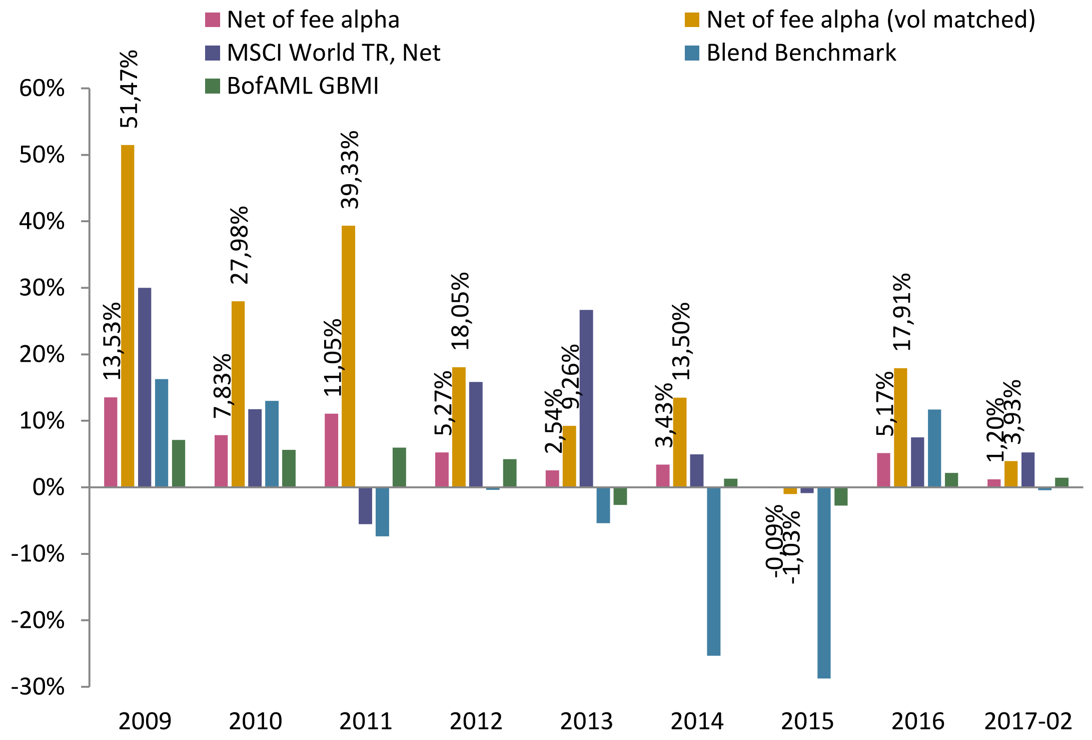
Factors should intuitively make sense



Key Takeaways

1. **Breakdown indices into three factors**
2. **Small, systematic adaptations per factor**
3. **Reintegrating factors and shorting benchmark leads to attractive risk/reward profile**





The returns on this page have been adjusted for transaction costs involved in obtaining the desired exposure. They have not been adjusted for the Achmea IM management fee.

Curve Positioning (Where): Qualitative

Production cycles of consumers and producers are different

Prices inflated at the start of the curve, too low at the end

Producer: Farmer

- Hedges price risk as soon as decision on to be grown crop has been made
- Uses the contract that expires ***after*** the harvest
- Length of production cycle: several months

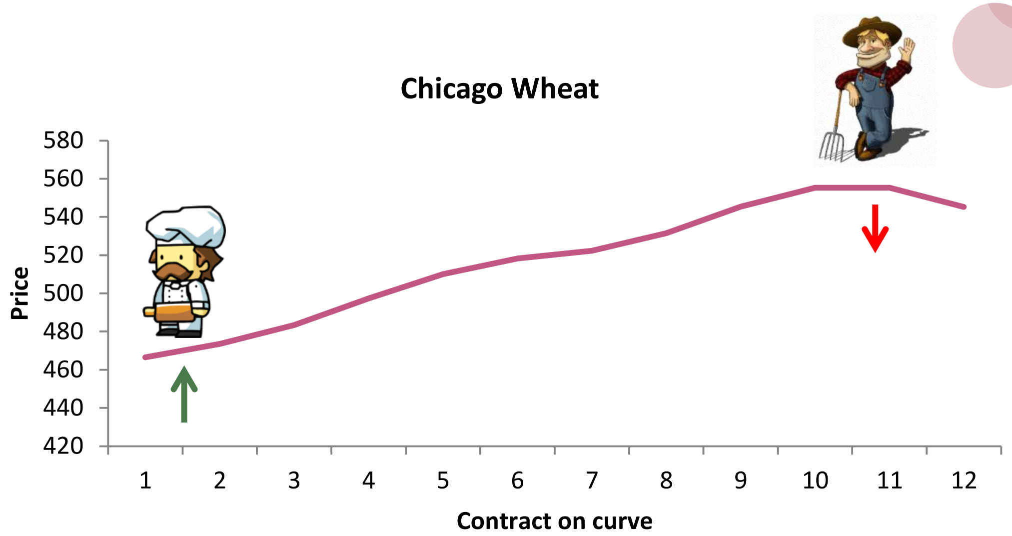
Consumer: Baker

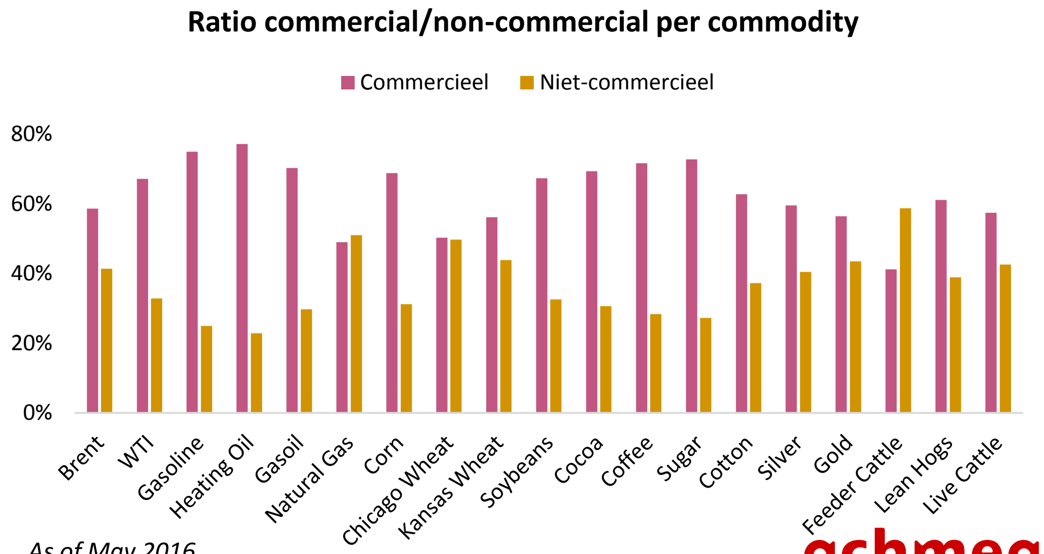
- Wheat price is only small factor in production costs
- Has less visibility on his future consumption
- Will generally trade at the start of the curve
- Length of production cycle: one day

Surely everyone must be implementing this trade?

Commercial parties dominate commodity markets

Opportunity for non-commercial parties to profit





As of May 2016

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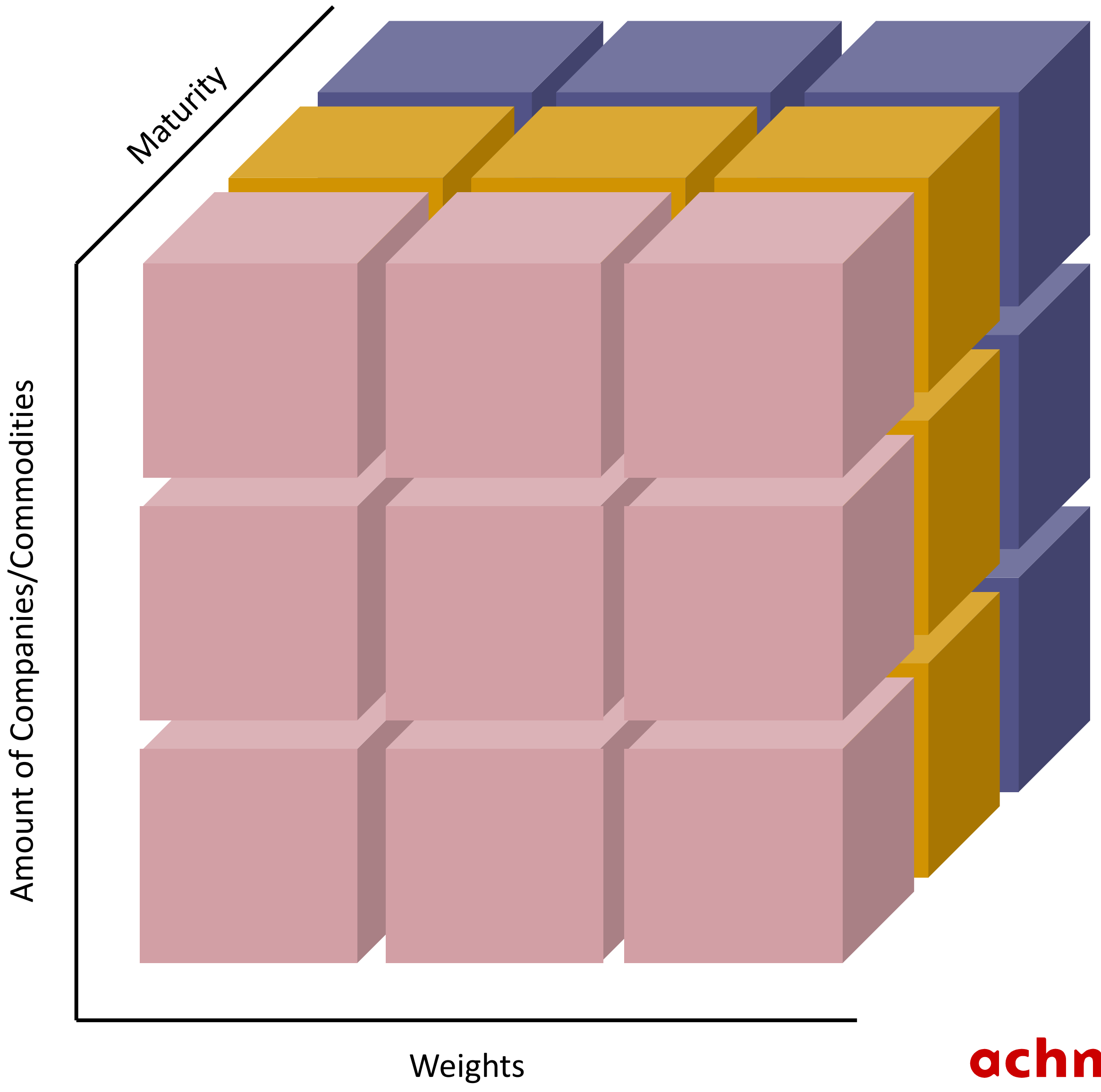
Difference Commodities/Equities

Equities

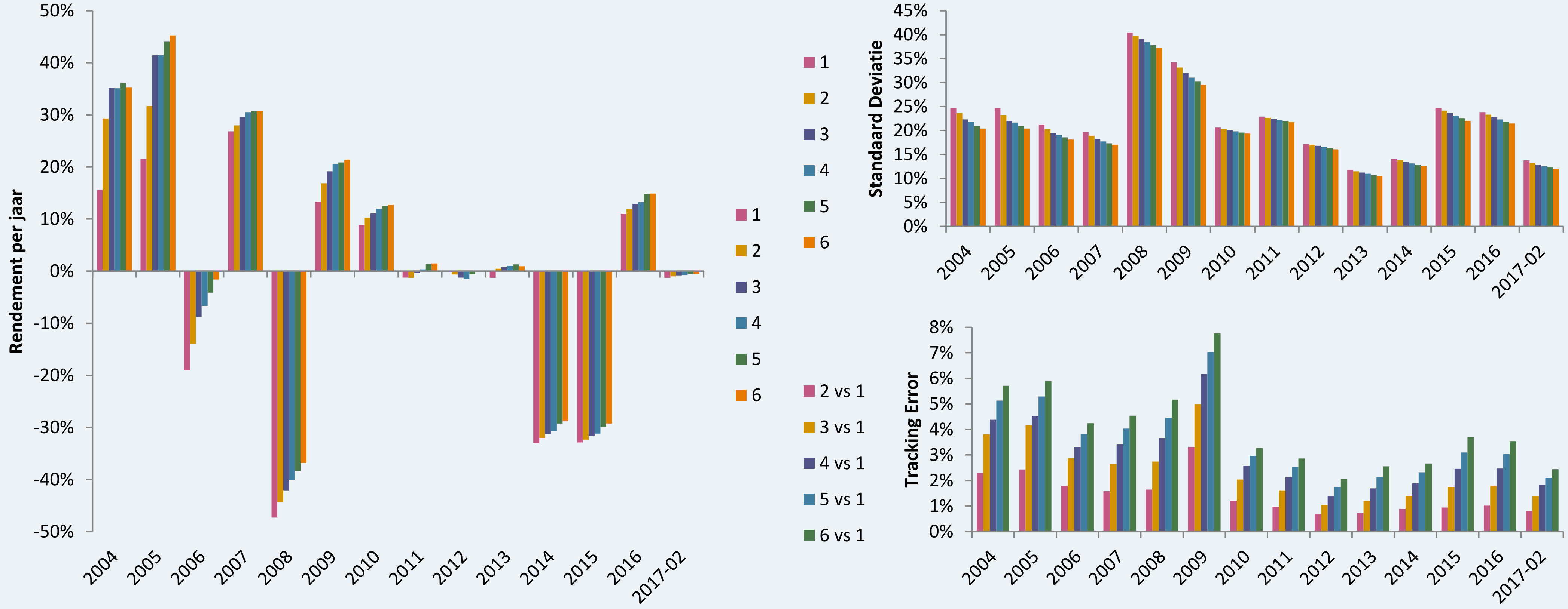
- Amount of companies
  - Benchmark: Largest 1.000 companies
  - Traditional active management: selection of ± 100 lines based on fundamental analysis
- Weights
  - Benchmark: Market Cap
  - Smart Beta: 1/n, equal risk contribution, fundamentally weighted

Commodities

- Extra dimension: Maturity
  - When does the commodity future expire?
  - Benchmark: first contract on curve
  - Smart Beta: positioning further out



Invest in contracts 4, 5 and 6



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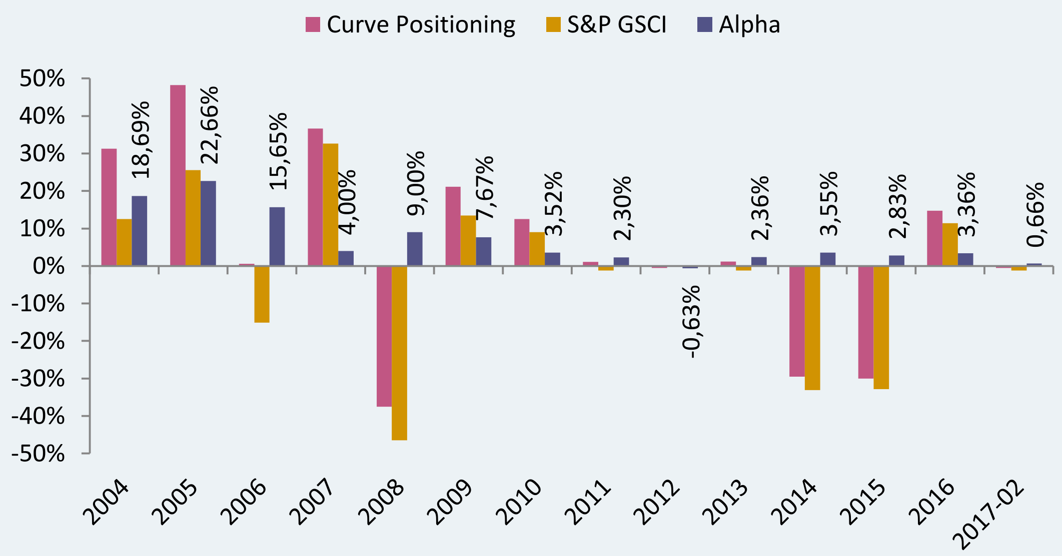
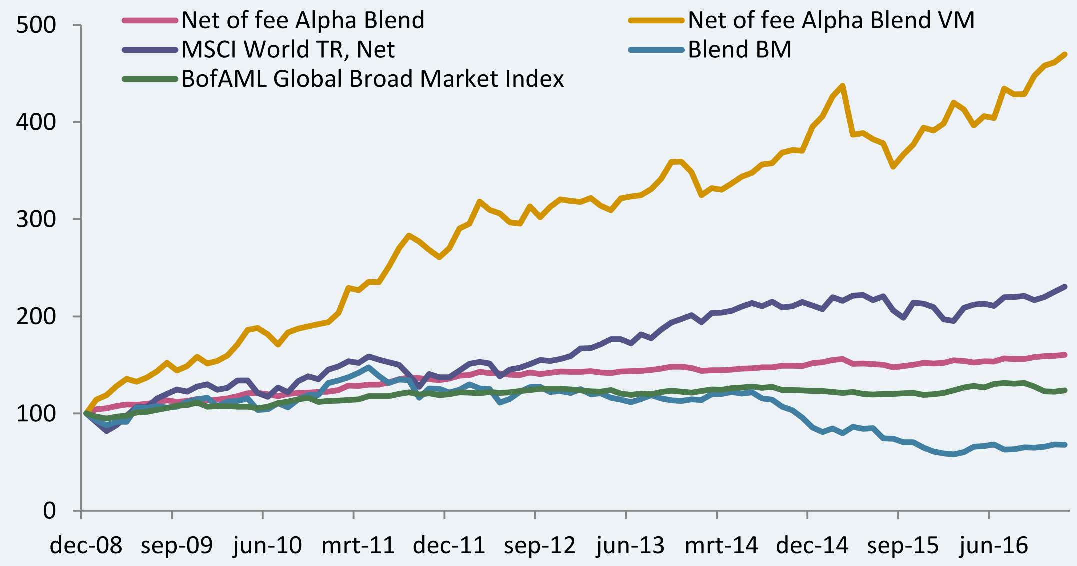
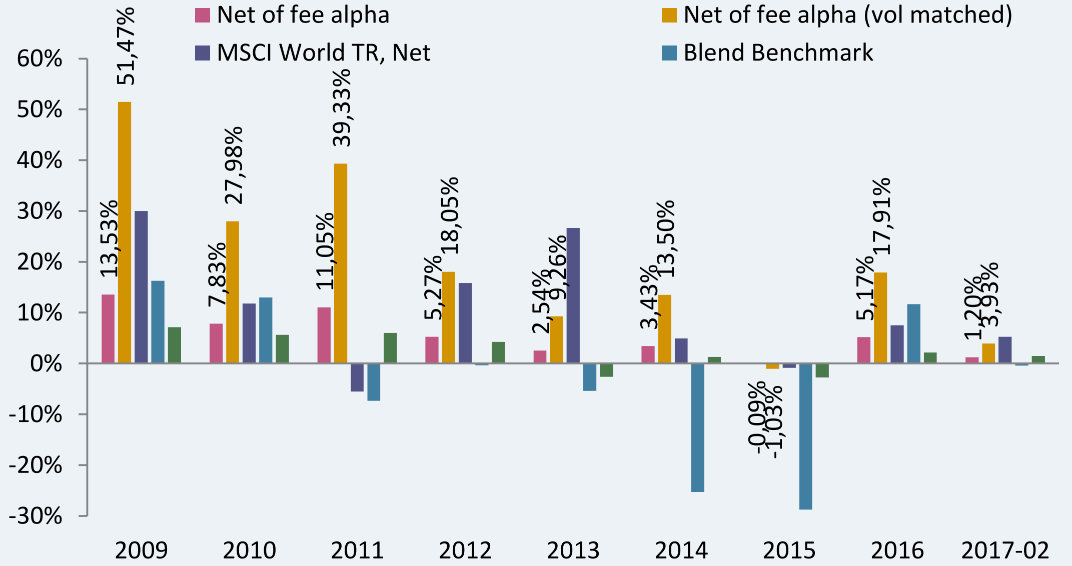
Curve Positioning (Where)



2004 till 28-02-2017	Curve Positioning	S&P GSCI	Difference
Return per year	2,05%	-5,01%	7,05%
Standard deviation	21,85%	24,07%	-2,21%
Sharpe Ratio	0,09	-0,21	0,30

Achmea IM Commodities: Long/Short (Absolute Return)





2009 till 28-02-2017	Achmea IM	Achmea IM (vol matched)	50% BCOM/ 50% S&P GSCI	MSCI World TR, Net	BofAML GBMI
Return per year	6,04%	21,16%	-4,64%	11,14%	2,69%
Standard deviation	4,11%	14,23%	17,35%	15,10%	5,23%
Sharpe Ratio	1,47	1,49	-0,27	0,74	0,52

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Conclusion

Considerations

- When all commodities experience strong positive returns, the strategy is likely to lag, as the commodity selection factor does not compensate for the lower returns of the curve positioning factor
- Investment process is partially based on analytical alpha source: ongoing research is required
    - Analysis of Commodity Selection factor
    - Further specify the Curve Positioning factor

Key Takeaways

1. Breakdown indices into three factors
2. Small systematic adaptations per factor
3. Reintegrating factors and shorting benchmark leads to attractive risk/reward profile

Achmea IM Commodity Absolute Return Strategy offers attractive risk/reward profile

- Factors add value in standalone context
- Factors complement each other
    - In years when one factor lags, another has outperformed

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Appendix

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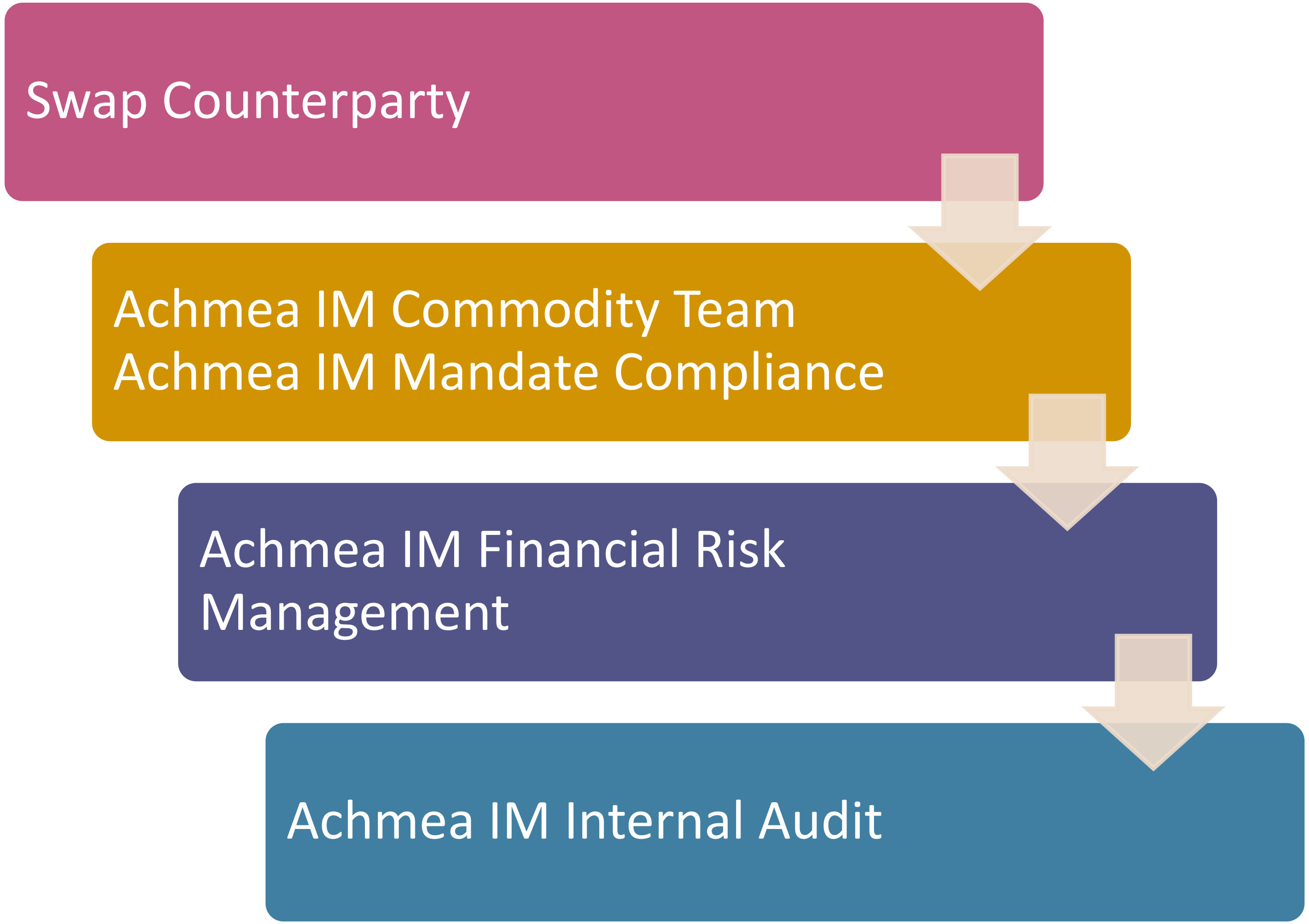

Risk Management

Four lines of defence

1. Swap counterparty – Multiple counterparties execute the same calculations
2. Achmea IM Commodity Team and Mandate Compliance – Implement investment process within Mandate Guidelines
3. Achmea IM Financial Risk Management – Adequate control of financial risks and independent risk measurement
4. Achmea IM Internal Audit – Control on process execution

Socially Responsible Investing

We do not invest in Coal

We do not withdraw commodities from the markets

- No investments in physical commodities

Our positioning incentivises producers to produce more

- Investing further along the curve offers a higher price to commodity producers
- Higher price offers more clarity on future income and incentivises producers to increase production

Our positioning offers consumers a lower price for their commodities

- By moving away from the beginning of the curve, the prices of those future contracts are marginally lowered, this gives commodity consumers a lower price to implement their hedges on

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