

## **University of Zurich** Guest lecture Roger Hilty – LGT Capital Partners

Commersialisation of models or how to pitch



21 November 2016





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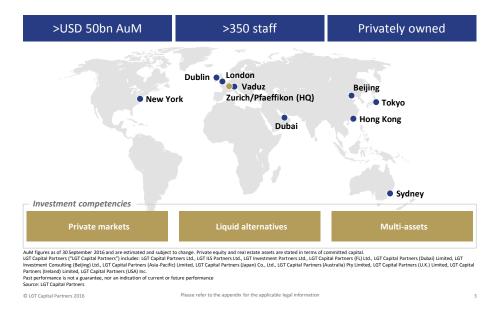
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- III. Portfolio management
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- V. Hedge Funds in portfolio construction
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## A global multi-alternatives platform







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## Investment philosophy

How we manage hedge fund money

Core values			manifest in
Alignment of interest	•		one of highest co-investments in fund of hedge funds industry
			one of the most successful risk management track records in industry
Focus	Highest standards of quality, dedication and integrity		degree of specialisation each team member possesses and the collective vision that we share
			team with long-term industry experience, entrepreneurial spirit and collegiate nature of work environment

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- LGT Castle
- LGT Crown Select Opportunities
- LGT Crown Multi-Strategy UCITS
- Crown Asia Pacific Balanced

#### Theme-based

- LGT Crown Corporate Activity
- LGT Crown Emerging Markets

- LGT Crown Managed Futures
- LGT Crown Managed Futures

Standard deviation

Correlation

Concentration

Legal structure

 Liquidity Transparency

- UCITS
- LGT Crown Global Macro

### Credit/Arbitrage

- Crown Distressed Credit Opportunities (closed)
- Crown Distressed Credit Opportunities II (closed)
- Crown Debt and Credit Opportunities III
- LGT Crown Relative Value

#### Long/Short Equity

- LGT Crown Equity Long/Short
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### Investment process – overview

Disciplined and integrated with clear responsibilities throughout

Asset Allocation Styles Sub-styles Investment themes	Manager Selection and Monitoring Approved managers
<b>Risk Management</b> Prudent, well-rewarded risks	Portfolio Management Portfolio designed to meet risk/return/correlation objectives

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Research & manager selection



## Hedge Funds manager selection process

Due Diligence – Qualitative Ar	alyse	
People		
Process		
Performance 4 Ps		
Partnership		
Due Diligence – Quantitative A	nalyse	
Performance		
Risiko		
Effizienz/Konsistenz		
Korrelation		
ource: LGT Capital Partners		
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## Hedge Funds manager selection – process overview

Manager identification	Initial research	Quantitative analysis	Extensive due diligence	Operational, counterparty and legal due diligence	Due diligence by risk control	Approval
	Return p	otential				

- Systematic, disciplined process
- No predefined hurdles, yet stringent criteria
- Evaluated, analyzed and filtered by specialist teams
- All relevant communication distributed and logged in proprietary database



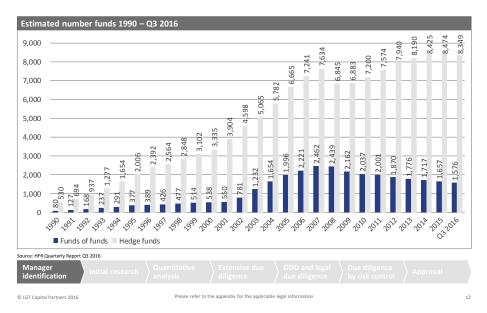
## Hedge Funds manager identification

- Sourced via industry network, references and conferences
- Review key documents
- What are we looking for?
  - High integrity
  - Proven money making and risk management skills
  - Discernible and sustainable edge
  - Significant co-investments and strong alignment of interest

Manager identification	Initial research					
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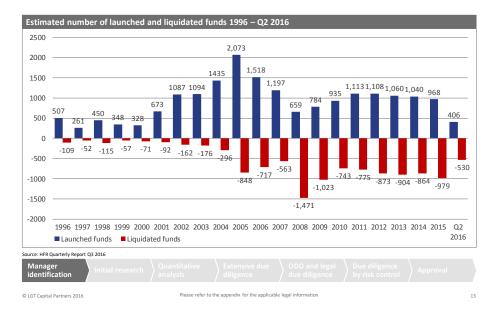


## Hedge Funds and Fund of Hedge Funds universe



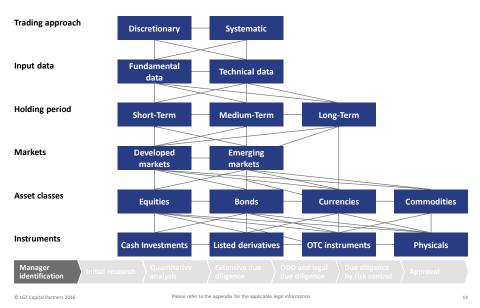


## Hedge Funds and Fund of Hedge Funds launches/liquidations



Research & manager selection	University of Zurich	
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## Investment strategies – classification framework



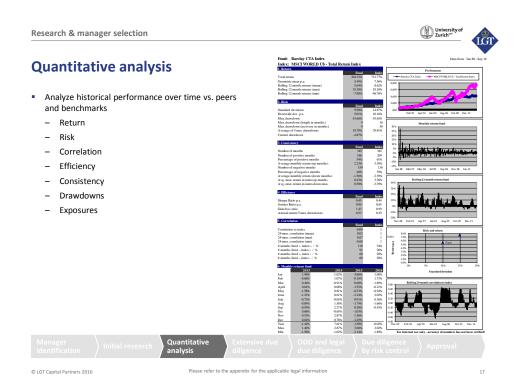
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## **Initial research**

- Schedule meeting or call to understand
  - Company and team
  - Investment strategy and investment examples
  - Performance and drivers
  - Risk management
  - Competitive edge
- Conclusion
  - Conduct extensive due diligence
    - Short list
    - Prospect
  - No immediate follow up, but on "radar"
    - Candidate
  - Below average, no further work
    - Not investable
    - Not interesting

	Initial research	Quantitative analysis				
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## Manager identification – HF-Styles and HF-Substyles Performance



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## Extensive due diligence and proposal preparation

- Numerous interactions with various members of hedge fund
  - Portfolio manager(s)
  - Analysts
  - Risk manager
- Minimum of one onsite visit by lead analyst and style head or member of Hedge Fund Research Committee
- Discuss and assess
  - Company history and background of team
  - Investment philosophy, strategy and edge
  - Performance and risk/return drivers
  - Risk management
  - Portfolio composition and transparency
  - Ownership and alignment of interests
  - Fund terms, existing investors
- Review and analyze all relevant documents
- References



			Extensive due diligence	ODD and legal due diligence			
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## Operational, legal and counterparty due diligence

- Operational due diligence team
- Proprietary due diligence questionnaire
- Onsite due diligence meeting
- Assessment of managed account capabilities
- Ranking

			ODD and legal due diligence	Due diligence by risk control	
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## Due diligence by Risk Control

- Risk Control team
  - Independent from investment side but integrated into process and sharing of information
- Understand risk management concepts and application in practice
- Adequacy of framework and systems given specific trading strategy
- Decision making process, roles and responsibilities
- Actual decisions and results in the past
- Independent estimation of expected drawdown and other risks
- Additional risk reports
  - Start up risk
  - Life cycle considerations
  - Behavior risk
  - Fraud
  - Significance of analytics
  - Investor base related risks
- Verification and probing

Research & manager selection

				Due diligence by risk control	Approval	
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## Customised risk and monitoring reports

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## **Approval by Hedge Fund Research Committee**

Meetings and decision making

- Research Summary
  - Contains all conclusions
- Pre-approval
  - Lead analyst presents investment rationale
  - Interactive forum to challenge and identify potential stumbling blocks
  - Open items and pending questions consolidated for follow-up
- Approval
  - Determine if manager meets due diligence criteria
  - A veto or two "votes of non-support" prevent an approval of a manager
- Disapproval
  - A veto or two "votes of non-support" disapproves a manager
  - Enforced by style head/lead analyst or voting member

				Approval	
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## Example – systematic short term trading CTA

Manager identification Determine universe of suitable managers	Vinitial research Overview of com- pany and strategy	Quantitative analysis Analyze historical performance	Extensive due diligence In-depth research and analysis	ODD and legal due diligence Operational due diligence	Due diligence by risk control Risk management concepts and practice	Approval Formal approval and rating assigned
Portfolio Managers Communicated the need for short- term tactical trading advisors capable of reallocating risk dynamically given the quickly changing market regime Style Head Discussed research needs within team Assigned lead analyst Lead Analyst Ead Analyst Sourced managers via database and network	meetings/calls Outcome • Managers eliminated due to: - Deficient research and/o model development process	<ul> <li>Outcome</li> <li>Over half of the advisors elimi- nated due to unreasonably high correlation to existing</li> </ul>	Lead Analyst  Outcome  Vuc ommages  Key departures  Lack of transparency into model development	<ul> <li>Op DT Team</li> <li>Onsite meetings with back office operations professionals including the COO, CFO and controller</li> <li>Calls with manager counterparties including administrators and brokers</li> <li>Several concerns regarding operational set- up in two cases</li> </ul>	Risk Control  Call with risk manager and portfolio manager  Eatailed quant analysis  Cutcome  Risk management procedures and performance characteristics deemed acceptable	Lead Analyst • Investment proposal Hedge Fund Research Committee • Approval
						Approval

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#### Number of managed accounts and funds by style Managed accounts by region Europe ILS US 7 36 23 **Relative Value** СТА 7 21 $O \bigcirc O$ Asia-Pacific (13) 8994 Event Driven 14 17 Managed accounts by firm size (in USDm) Λ Macro 23 20 16 14 11 L/S Equity 20 4 Managed accounts Funds <200 201 - 500 501 - 1,000 1,001 - 5,000 >5,001

## **Global manager selection across investment styles**

Data as of 30 September 2016 Source: LGT Capital Partners

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## **Process overview**

Investment objectives		nager racteristics	plementation	Risk control	Portfolio analysis and attribution
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## Framework for Multi-Manager CTA portfolio

Decisions

Investment degree

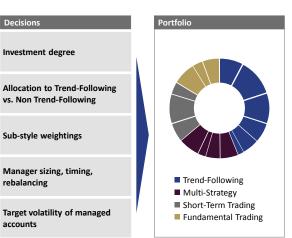
Sub-style weightings

rebalancing

accounts

Top down input factors

- ۰. Macroeconomic outlook (internally and externally sourced)
- Global macro manager themes and positions
- Identification and probability of events or catalysts that could alter the outlook
- Bottom up input factors
- Core exposures and sector concentrations (by manager and in aggregate)
- Manager specific analyses (margin utilization, VaR, open trade equity)
- Correlation amongst managers and sub-styles



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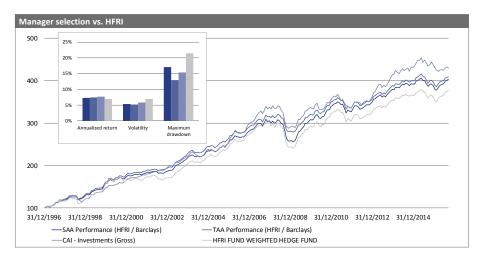


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## Value added vs. HFRI

Portfolio management

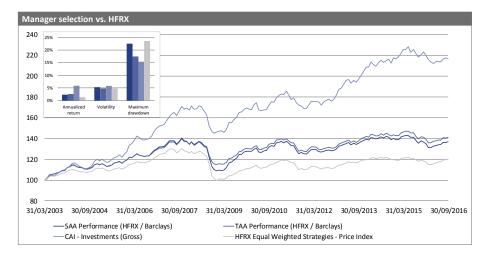


Source: LGT Capital Partners, Datastream Data and ranges from 1 January 1997 to 30 September 2016 in USD gross of fees. Past performance is not a guarantee, nor an indication of current or future performance. Management fees and other fees will influence the performance negatively. Please refer to the appendix for the applicable legal information

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## Value added vs. HFRX



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## Manager monitoring



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Manager monitoring

## Managed Account platform NAV Consulting – 100% transparency

- NAV Consulting as Application Service Provider Front-end Platform via Internet Access
  - Individual position transparency for each managed account
  - Various portfolio management reports (e.g. sector breakdown, P/L attribution, margin-to-equity ratio reports)
  - Effective Risk Management through full position transparency and various portfolio risk report

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Source: LGT Capital Partners, NAV Consulting

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Hedge Funds in portfolio construction	University of Zurich"	

## Hedge Funds in portfolio construction

Portfolios of institutional investors increasingly contain Hedge Funds. The characteristic of an efficient portfolio can be further improved when Hedge Funds are added. The following two major positive characteristics can be mentioned:

#### 1. Negative or low correlation

The correlation between Hedge Funds and bonds respective equities is significantly low or negative. Therefore the addition of Hedge Funds to a portfolio is connected with an aspect of diversification, which is likely to reduce the portfolio volatility.

2. Returns

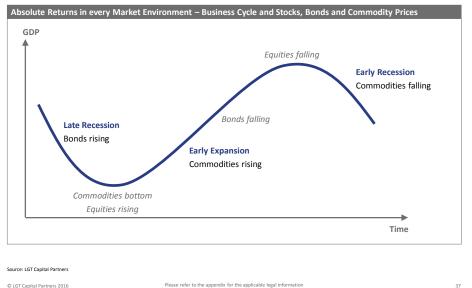
Hedge funds generate absolute returns and often perform when other asset classes are performing weakly. In the past Hedge Funds have performed well in situations of market stress during which the value of both equities and bonds suffered significant losses. From this perspective Hedge Funds add additional value in situations when it is required to balance a given portfolio.

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## **Asset Classes in the Business Cycle**



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University o Zurich Hedge Funds in portfolio construction

## Investments in Fund of Hedge Funds (FoHF)

#### Advantages

- Retailing smaller minimum investment than single HF
- Access - to soft-closed and/or hard-closed HFs
- Diversification portfolio with different HS styles
- Expertise manager selection with specialized HF analysts
- Due Diligence (DD) initial and ongoing DD/monitoring •

#### Disadvantages

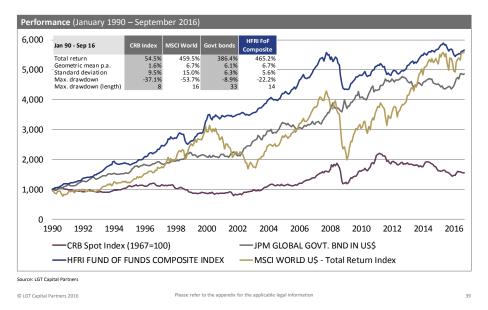
- Fees – additional Fund of Hedge Funds fee layer
- Performance selection partly based on historical performance .
- Diversification FoHF portfolio maybe over-diversified

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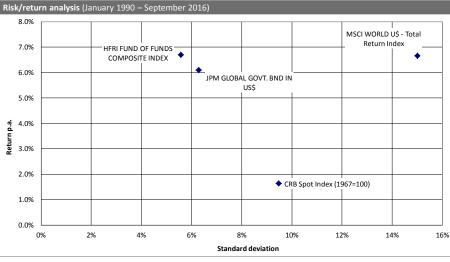
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## Funds of Hedge Funds vs. traditional Indices





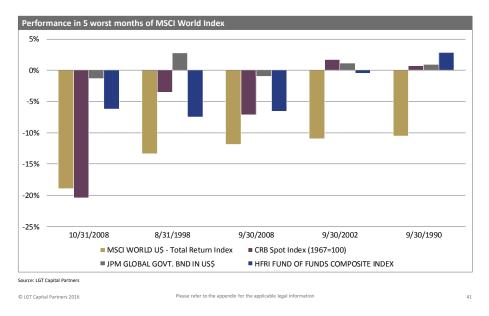


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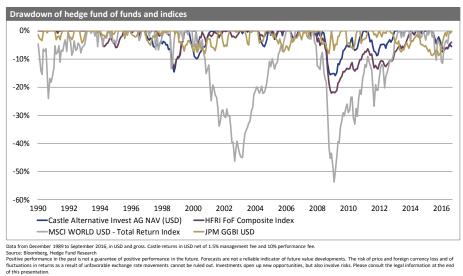


## Funds of Hedge Funds vs. traditional Indices





## Hedge Funds have shown much lower drawdowns



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## Good upside-/downside capture of diversified HF portfolios

Average returns of CAI in all index up/down month Return of CAI in 5 worst equity months Monthly return Monthly return 5% 4% 3.2% 0.4% 0.1% 0% 2% 1.0% -3.2% -5% -3.7% -6.1% 0% -0.4% -10% -8.9% -10.7% -11.1% -2% -15% 13.8% -15.8% -3.5% -20% -4% Aug 98 Oct 08 Sep 02 Sep 08 Sep 01 144 up months 93 down months MSCI World Hedged USD (NR) Castle AI NAV - USD ■ MSCI World Hedged USD (NR) ■ Castle AI NAV - USD

Data from January 1997 to September 2016, in USD net of 1.5% management fee and 10% performance fee. Index returns: in USD gross. Source: LGT CP, Datatream, Hedge Fund Research. Positive performance in the past is not a guarantee of positive performance in the future. Forecasts are not a relif fluctuations in returns as a result of unfavorable exchange rate movements cannot be ruled out. Investments ope dicator of future value developments. The risk of price and foreign currency loss and of new opportunities, but also involve risks.

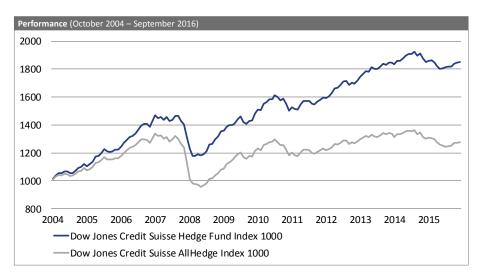
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## **Investable vs. Non-Investable Hedge Funds Indices**

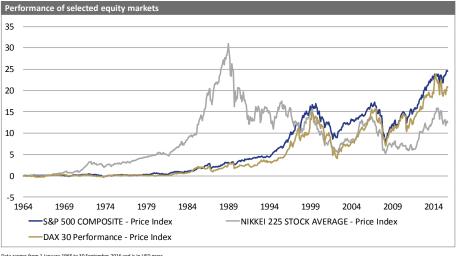


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Data ranges from 1 January 1965 to 30 September 2016 and is in USD gross. Source: LGT Capital Partners, Datastream Past performance is not a guarantee of future results, nor an indication of current or future performance.

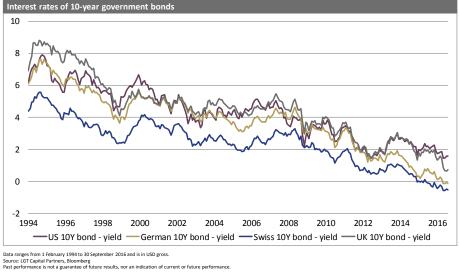
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## Long-term interest rates are approaching historical lows



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University of Zurich Excursion - Managed Futures portfolio **Protection during equity market shock** Performance of managed futures strategies during equity downturns 15.000 12,000 9,000 6,000 3,000 100 0 lan-86 lan-88 lan-90 lan-92 Jan-94 Jan-96 lan-98 Jan-00 Jan-02 Jan-04 Jan-06 Jan-08 Jan-10 lan-12 lan-14 Russian crisis/LTCM 1998 (Jul 98 - Aug 98) Black Monday (Sep 87 - Nov 87) Oil price shock/Gulf war I (Jan 90 - Sep 90) Tech bubble burst/Sep 11 (Apr 00 - Sep 02) Credit crisis (Nov 07 - Feb 09)

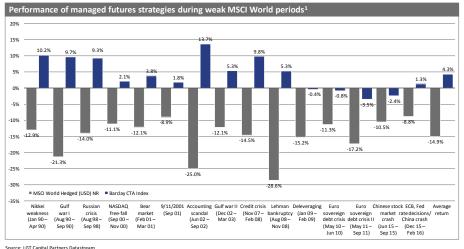
40% 22.1% 22.5% 16.1% 20% 9.7% 5.69 0% -20% -13.8% -20.4% -40% -28.0% -60% -45.6% MSCI World Hedged USD Net Return Index
 Barclay CTA Index

Source: LGT Capital Partners,Datastream Data ranges from 1 Jan 1986 to 3 IDecember 2015 in USD. Past performance is not aguarantee, nor an indication of current or future performance

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## Protection during equity markets downturns



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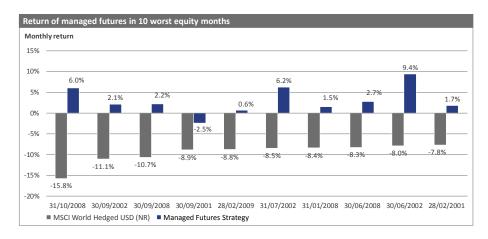
Source: LGT Capital Partners,Datastream 1 Weak period is defined as a loss of more than 8% within 1 t& months (from 1 Jan 1990 to 29 Feb 2016 on a month-end basis). Returns are expressed in USD. Past performance is not a guarantee, nor an indication of current or future performance.

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Excursion - Managed Futures portfolio

## Holding up well in 10 worst global equity months and past crisis scenarios



Source: LGT Capital Partners, Datastream, Bloomberg Data from 1 October 2000 to 30 September 2105, in USD net of 1% management fee and 7.5% performance fee. Index returns in USD gross of fees. Past performance is not a guarantee, nor an indication of current or future performance.

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Excursion – Managed Futures portfolio



# Managed Futures offer protection in long lasting equity market drawdowns ...

Managed Futures Strategy performance during largest equity markets drawdowns (MSCI World) Oct 00 – Mar 03 Oct 07 – Feb 09 40% ł +29% +22% 20% 0% -20% -40% -43% -50% -60% MSCI World Hedged USD (NR) Managed Futures Strategy Source: LGT Capital Partners, Bloomberg. Data ranges from 1 October 2000 to 31 March 2016, in USD net of 1% management fee and 7.5% performance fee. Past performance is not a guarantee, nor an indication of current or future performance.

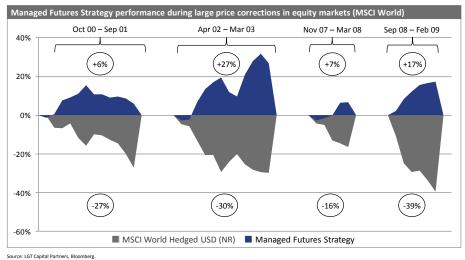
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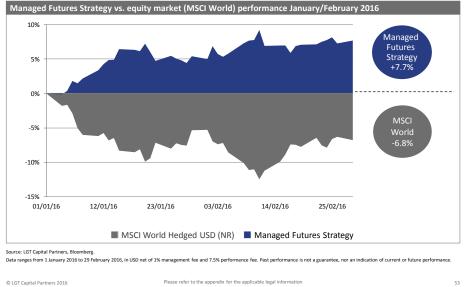
## ... in medium-term equity market corrections ...



Source: Lo Lapital Partners, subcomberg. Data ranges from 1 October 2000 to 31 March 2016, in USD net of 1% management fee and 7.5% performance fee. Past performance is not a guarantee, nor an indication of current or future performance.

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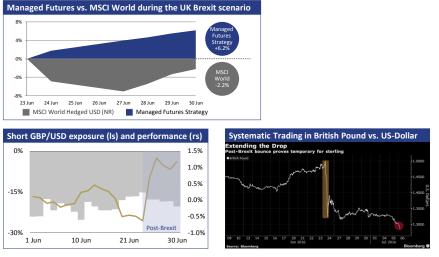




## ... and short-term drawdowns

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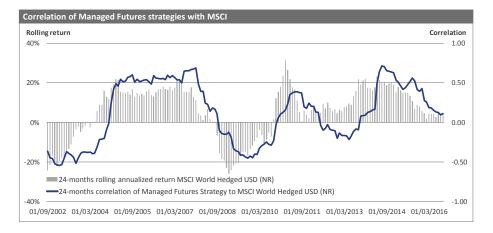
Source: LGT Capital Partners, NAV Consulting, Bloomberg Data ranges from 1 June to 30 June 2016, in USD net of 1% management fee and 7.5% performance fee. Past performance is not a guarantee, nor an indication of current or future performance.

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Excursion – Managed Futures portfolio



## Proven negative correlation to global equity markets over several business cycles



#### Source: LGT Capital Portners, Datastream, Bloomberg Data from 1 Cotoper 2001a 33 September 2016, in LISO net of 1% management fee and 7.5% performance fee. Index returns in USD gross of fees Past performance is not a guarantee, nor an indication of current or future performance.

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Excursion - Managed Futures portfolio

## Framework for Multi-Manager CTA portfolio

#### Top down input factors

- Macroeconomic outlook (internally and externally sourced)
- Global macro manager themes and positions
- Identification and probability of events or catalysts that could alter the outlook

#### Bottom up input factors

- Core exposures and sector concentrations (by manager and in aggregate)
- Manager specific analyses (margin utilization, VaR, open trade equity)
- Correlation amongst managers and sub-styles

#### Decisions

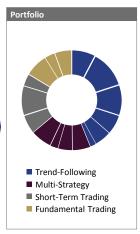
Investment degree

Allocation to Trend-Following vs. Non Trend-Following

#### Sub-style weightings

Manager sizing, timing, rebalancing

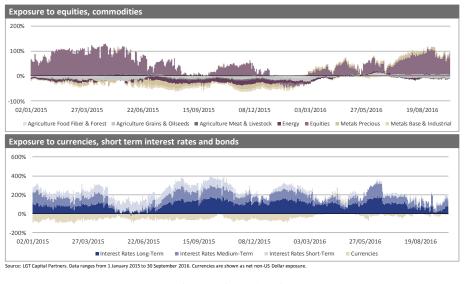
Target volatility of managed accounts



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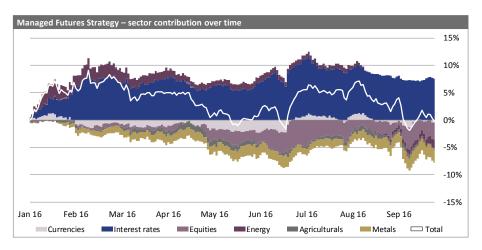
## **Dynamic changes in exposures**



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## Performance contribution by sector since January 2016



Source: LGT Capital Partners, NAV Consulting Data ranges from 1 January 2016 to 30 September 2016 in USD net of 1% management fee and 7.5% performance fee. Past performance is not a guarantee, nor an indication of current or future performance.

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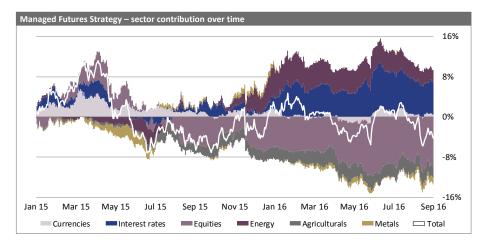
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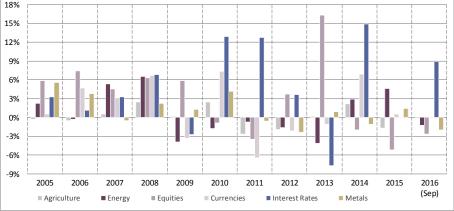
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## Performance contribution by sector since January 2015



Source: LGT Capital Partners, NAV Consulting Data ranges from 1 January 2015 to 30 September 2016 in USD net of 1% manager ent fee and 7.5% performance fee. Past pe mance is not a guarantee, nor an indication of current or future performance © LGT Capital Partners 2016 Please refer to the appendix for the applicable legal information 59





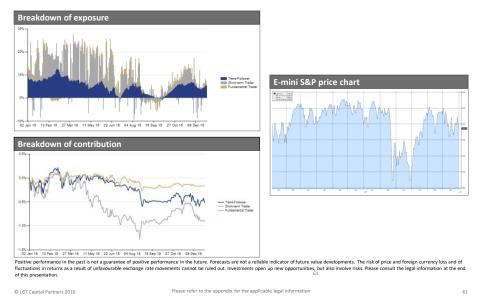
Source: LGT Capital Partners

Data is in USD and gross of fees. Past performance is not a guarantee, nor an indication of current or future performance. Management fee and other fees will influence the performance negatively.

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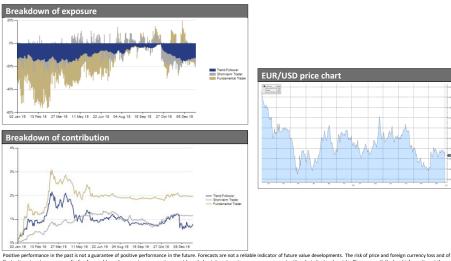
## E-mini S&P trading – sub-strategies comparison



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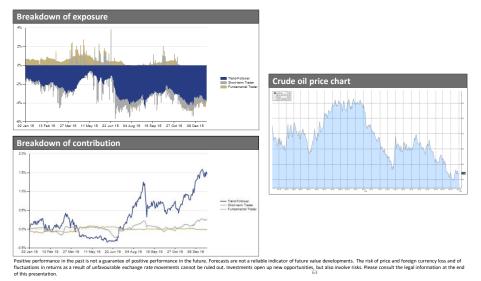


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## Crude oil trading – sub-strategies comparison



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