Understanding the Risks in Alternative Risk Premia

IAPF Breakfast Briefing

January 2019

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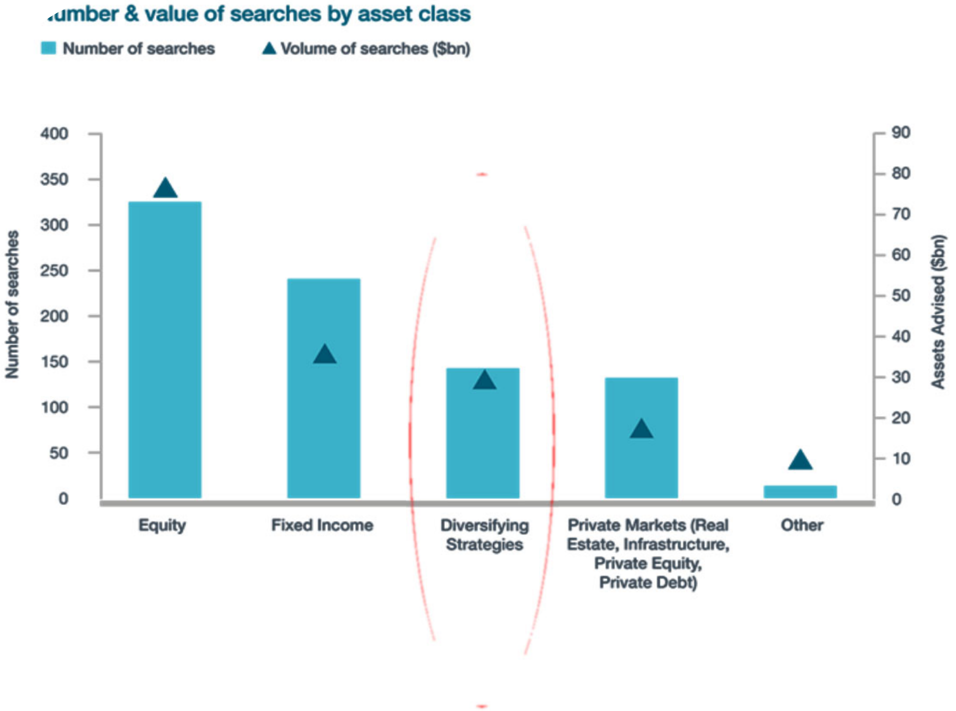
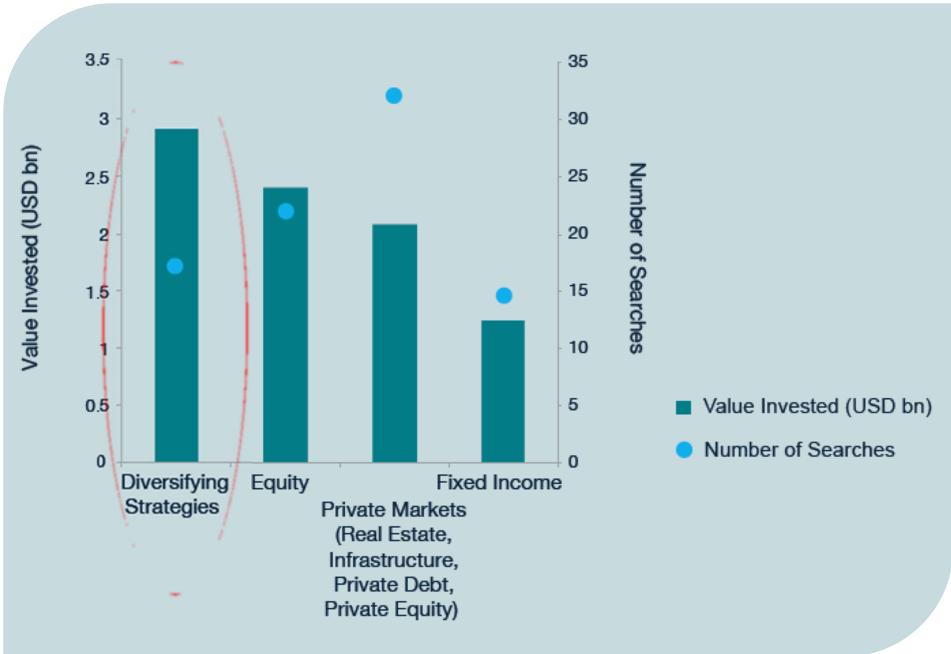
A focus on diversification

Increased level of interest for non-traditional investments. In particular liquid alts

Last 19 years:



Last year:



ARP Investor Objectives

Liquid, transparent diversification is the primary objective for ARP investors

> **Diversification, Diversification, Diversification**

> Control or **reduce equity beta** in the overall portfolio (ARP often funded from equity allocations)

> **Lower cost** alternatives access

> Introduction of multiple **alternative return** streams not available from traditional investing styles

> **Convenience** (Multi-Asset, Multi-Premia ‘one-stop shop’)

> Avoidance of perceived disadvantages of hedge funds

> **Transparency** of investment style / greater understanding of alternative return profile

bfinance Diversifying Strategies activity

Sustained global demand for ARP strategies

> $1bn	Alternative Risk Premia + Trend Following	US Corporate	Q1 2016
> A$70m	Multi-Asset & Alternative Risk Premia	Australian University	Q3 2016
> £320m	Alternative Risk Premia	UK Corporate	Q3 2016
> C$200m	ARP & Hedge Fund Customised Solution	Canadian Corporate	Q3 2016
> £180m	Alternative Risk Premia	UK Corporate	Q4 2016
> €100m	Multi-Asset & Alternative Risk Premia	Italian Institution	Q4 2016
> €40m	Multi-Asset & Alternative Risk Premia	German Public Plan	Q1 2017
> A$400m	Alternative Risk Premia	Australian Corporate	Q1 2017
> C$120m	Multi-Asset & Alternative Risk Premia	Canadian Corporate	Q2 2017
> €95m	Multi-Asset & Alternative Risk Premia	Italian Pension Plan	Q3 2017
> A$150m	Multi-Asset Absolute Return & ARP	Australian Pension Plan	Q3 2017
> C$100m	ARP & Hedge Fund Customised Solution	Canadian Endowment	Q2 2018
> A$300m	Alternative Risk Premia	Australian Insurance	Q4 2018
> €80m	Alternative Risk Premia	German Corporate	Q1 2019

Investor Landscape

Variety of uses in portfolios. Investor demand from 4 primary channels:

1) ARP as the sole **liquid alternatives allocation**

> A single line item providing diversified exposure to a range of alternative investment styles

> A viable alternative where typical hedge fund characteristics (e.g. cost, perception risk) may be prohibited by investment policy

2) ARP as a **complement to Hedge Fund / Fund of fund** allocations

> Typically used to lower the overall cost of an alternative portfolio

> Reserves fee-budget for high conviction allocations to hedge funds offering differentiated strategies and exposures

3) ARP as an **unconstrained Multi-Asset** allocation:

> Often used alongside more long-biased (non-market neutral) Multi-Asset strategies, DGFs

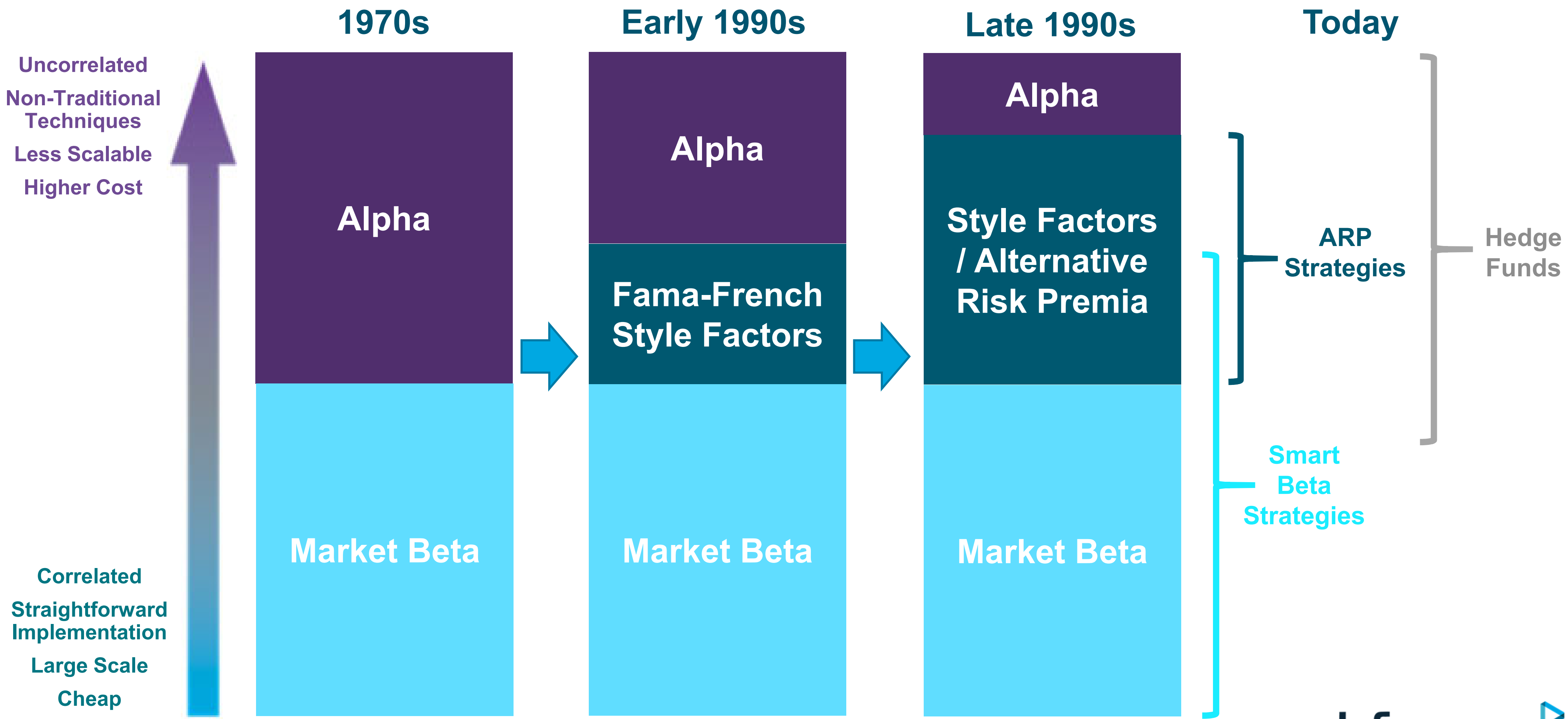
4) ARP as **an extension to long-only factor investing** / smart beta

> Investors comfortable with factor-based (long-only) equity investing, looking to extend scope into other asset classes, or add market independent component

The evolution of risk premia investing

The understanding of market return sources has changed over time

The academic study of return drivers (beginning with equity markets) has identified common styles or exposures that explain returns that were previously thought of as ‘alpha’.



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What are Alternative Risk Premia?

Broad agreement regarding some basic characteristics of an Alternative Risk Premium:

Alternative

> Requires non-traditional investment techniques, i.e. a **Long / Short** construction of exposures, use of derivatives, leverage…

> Expected to be **uncorrelated** to traditional assets classes over the medium to long term.

> A systematic definition of a known alternative investment strategy or style. Historically the preserve of hedge fund investing, but now accessible in a transparent, liquid, low cost format.

Risk Premium

Similar to a traditional risk premium, an alternative risk premium should be:

> **Attractive** in having a positive expected return over time

> **Explainable** in having an **economic rationale** for why returns exist, either as a direct function of being the compensation available for bearing an identifiable risk, or be exploiting an identifiable behavioural anomaly or structural bias of other investors

> **Persistent** in being present across time, having evidence (in and out of sample) that it is a rewarded investment approach

> **Pervasive** in being present across markets (different asset classes and geographies)

> **Accessible** in being both **liquid** and investible using a **systematic** investment process.

Different styles of ARP investing

Academic vs. Practitioner Styles

Academically Defined ARP

> Have been widely studied in the academic literature with an established economic rationale and a body of empirical evidence.

> Form the core of almost all ARP strategies and are applied across asset classes (equity, fixed income, commodities and currencies) in a broadly market neutral format:

Carry	Higher yielding assets expected to outperform lower yielding assets
Momentum	Tendency for recent price behaviour to persist into the future
Value	Expectation that cheaper assets will outperform expensive assets
Defensive	Expectation that on a normalised basis low risk / higher quality assets will outperform higher risk assets

Practitioner Premia (‘Hedge Fund Betas’)

> Well-established as trading styles within the hedge fund space, but often somewhat less studied by academia.

> Typically act as a complement to core ARP investment styles above, exploiting the behaviour of other investors classes or market structure effects.

> Examples include **Trend-Following, Merger Arbitrage, Volatility Arbitrage, Event Driven, Seasonality / Flow.**

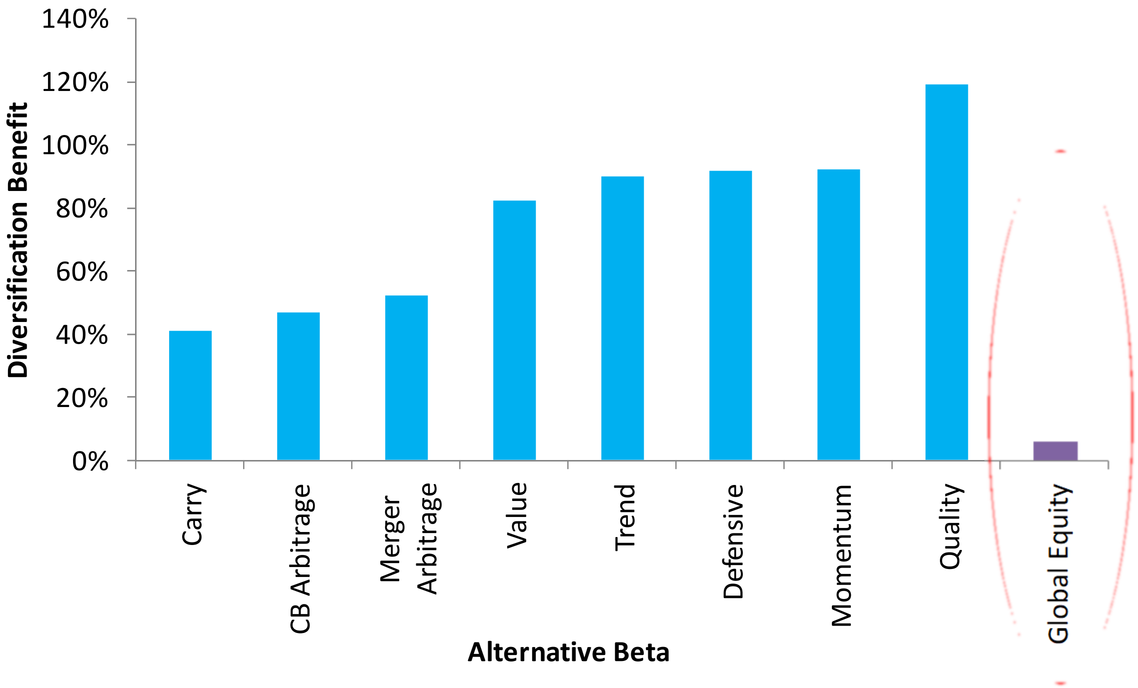
Diversification benefits of ARP

Diversification is a very personal property

> Illustrative marginal diversification benefits of various risk premia when added to a ‘60/40’ portfolio

> Benefit portfolio dependent and will be dynamic over time

> Broadly two classes of premia: Convergent and divergent



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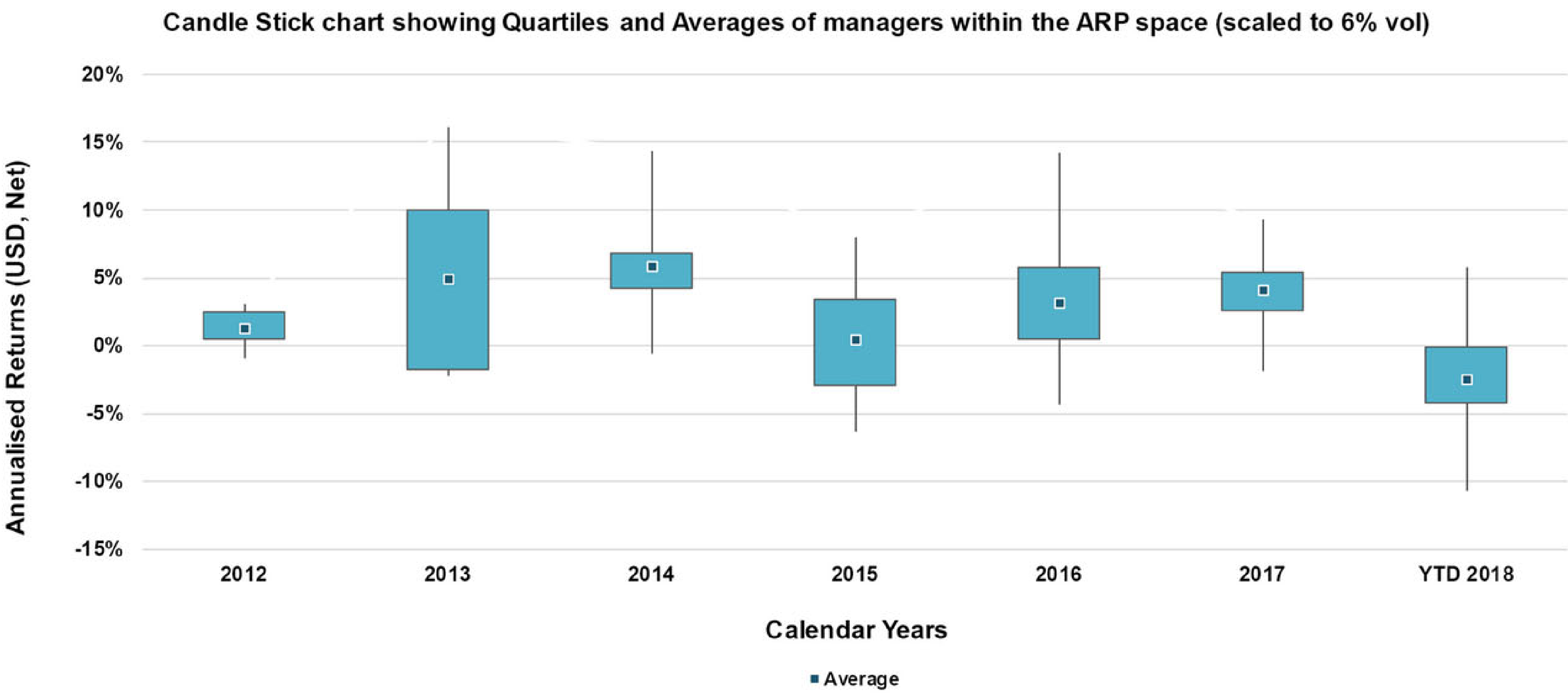
ARP Overview

2018 was a challenging year for many ARP strategies

> 2018 was the first calendar in which the ‘average’ ARP strategy finished in negative territory.

> Most challenging period since 2015 (Flash Crash – Aug 2015).



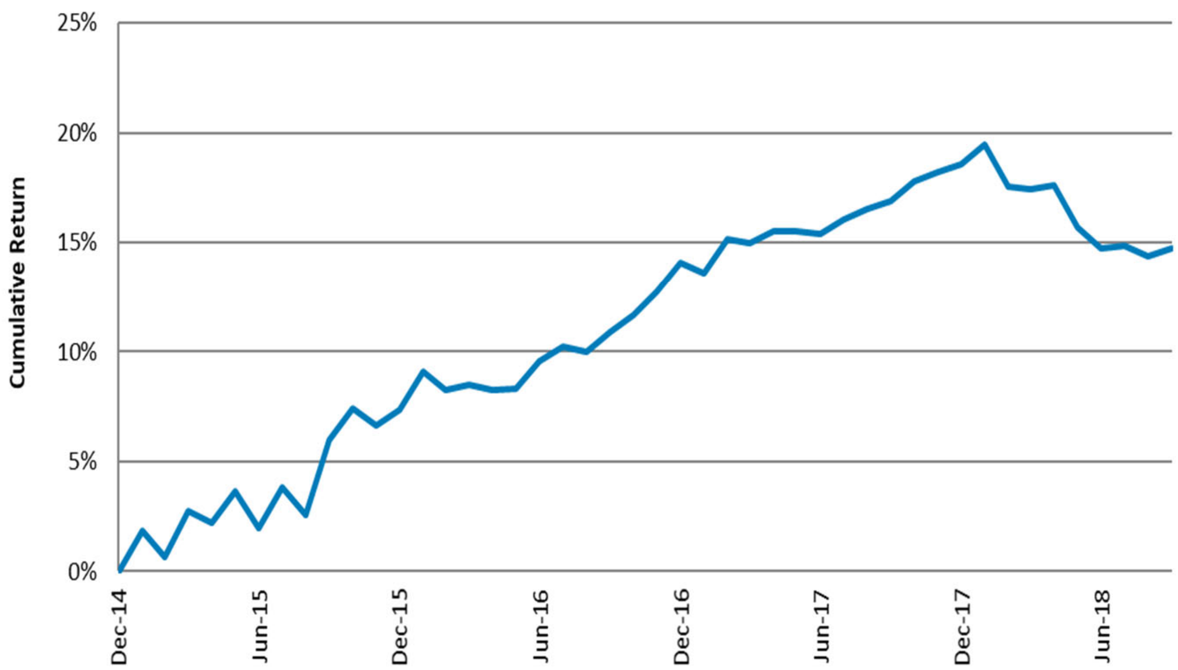
ARP Overview

bfinance ARP composite shows similar characteristics

> Composite of 10 ARP strategies, considered broadly representative of the universe

> Realised Sharpe ratio ~ 1.0, above expected range 0.6 – 0.8 (due to inclusion of proforma data)

> Composite volatility lower due to diversification (low pairwise manager correlations)



Performance	Fund
Annualised ROR	**3.74%**
Deviations (p.a.)	
Std. Deviation	3.62%
Gain Deviation	2.62%
Loss Deviation	1.91%
Hit Ratios	
% Winning Months	64%
Ratios	
Sharpe (RFR = 0%)	1.03
Moments	
Skew	0.33
Excess Kurtosis	0.63
3 Best Months	
Sep-15	3.38%
Mar-15	2.12%
Jan-15	1.86%
3 Worst Months	
Jun-15	-1.63%
May-18	-1.60%
Feb-18	-1.59%
Max Drawdown	
	-4.26%

bfinance ARP composite (net USD) contains both live and pro forma data.

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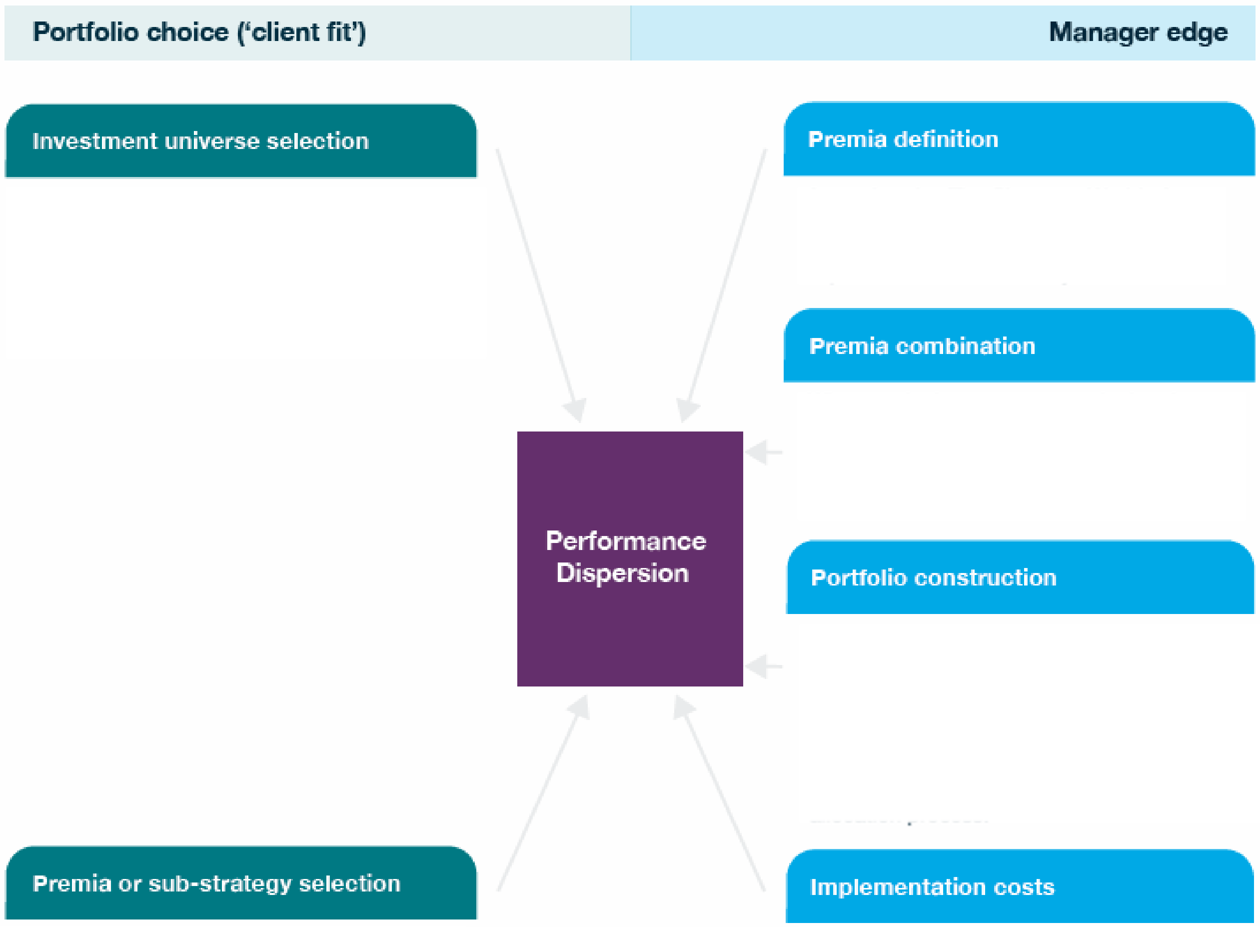
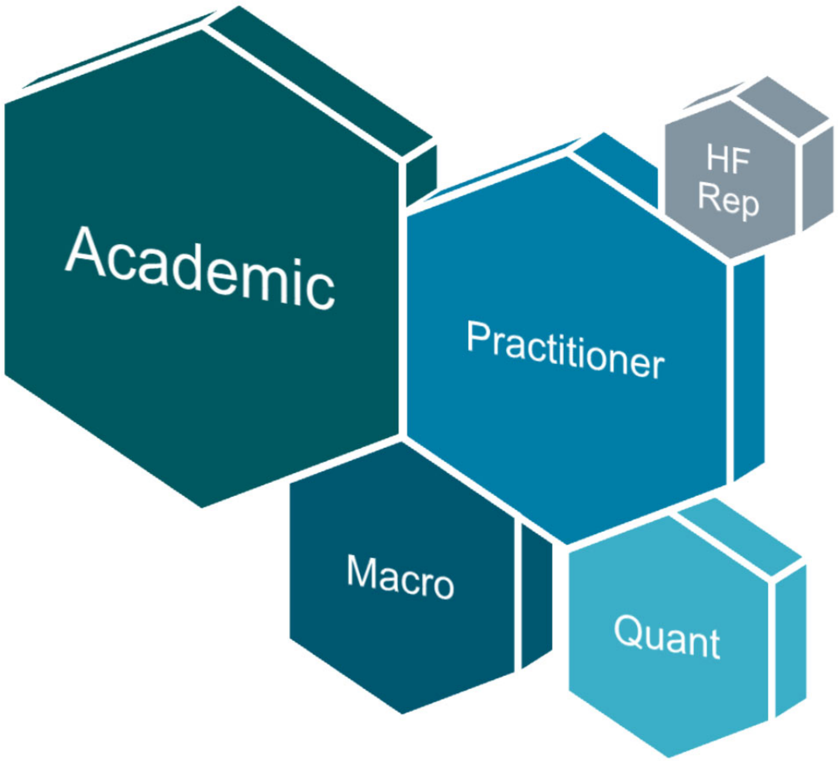
Drivers of Performance Dispersion

Premia Selection has been the main driver of return dispersion in 2018



Alternative Risk Premia Universe

Academic premia focused managers are weakest performers



Segmentation by broad ARP approach

- Academic-focus ≤ Practitioner-focused
- No commodities ≤ with commodities (commodities exposures generally positive and also less weight to equity)
- More volatile ≤ more conservative

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Alternative Risk Premia Universe

2018 Performance dominated by Equity Value

> Trend Following and Short Volatility have also contributed negatively

	Momentum	Carry	Value	Defensive	Trend
Equity	☑	☑	☑	☑	☑
Fixed Income	☑	☑	☑	☑	☑
Currency	☑	☑	☑		☑
Commodities	☑	☑	☑		☑

+ Other specific markets e.g. Volatility, Credit

+ Range of specific ‘practitioner’ premia, e.g. Event / Merger Arbitrage

Equity Value

Value signals across all asset classes challenging, in particular Equity Value

> Managers with the largest exposures Equity Value have typically performed weakest

> Equity index <u>and</u> single stock ≤ equity index only (increased weight towards Value premia).

> Strong recovery for equity ARP in Dec 2018 however.

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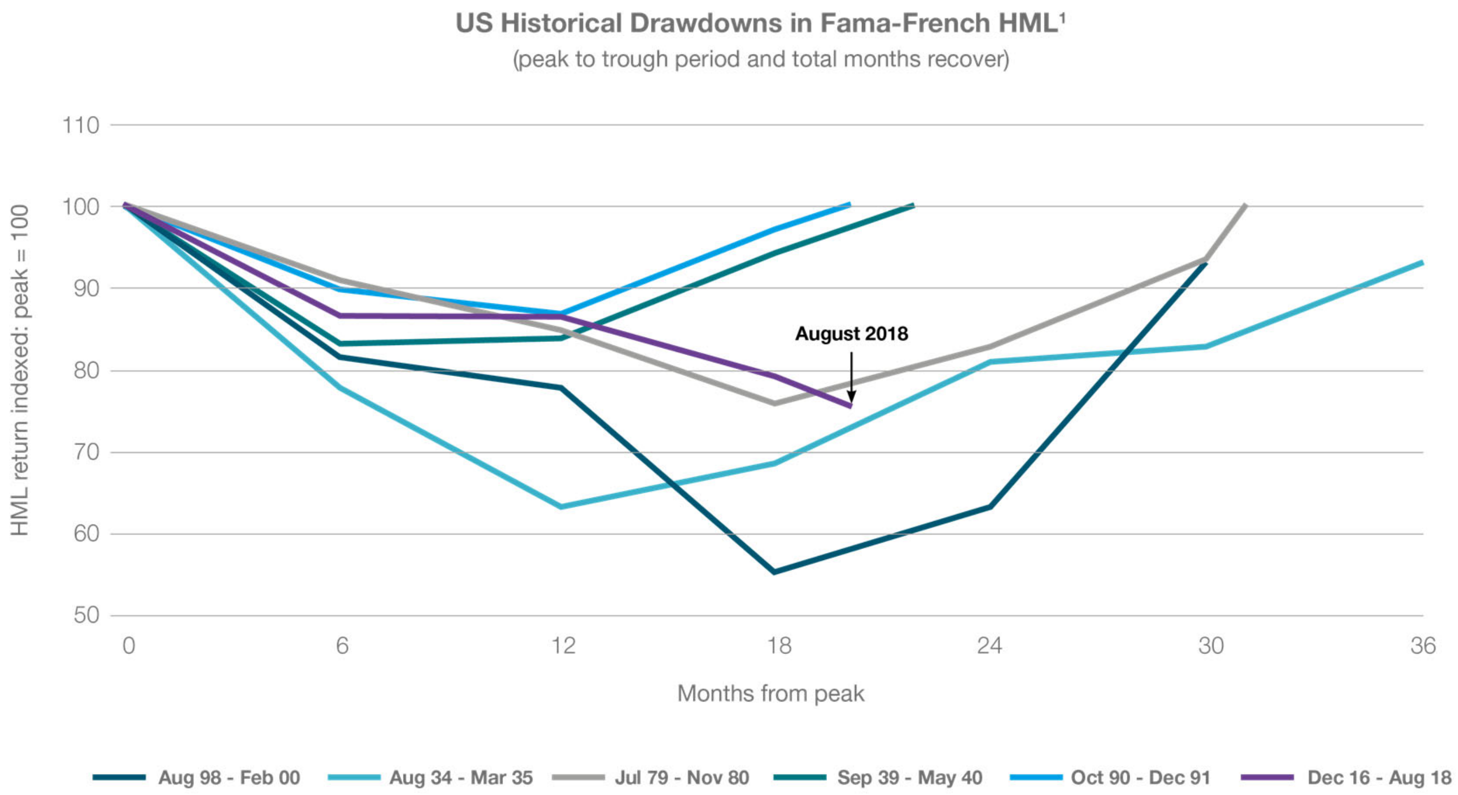
Equity Value

Equity Value losses significant but not unprecedented

> Current Equity Value drawdown is both deep and long.

> Equity Value has historically exhibited multi-year drawdowns, but with strong mean reversion.



Source: BlackRock

Short Vol

Monday 5th February 2018

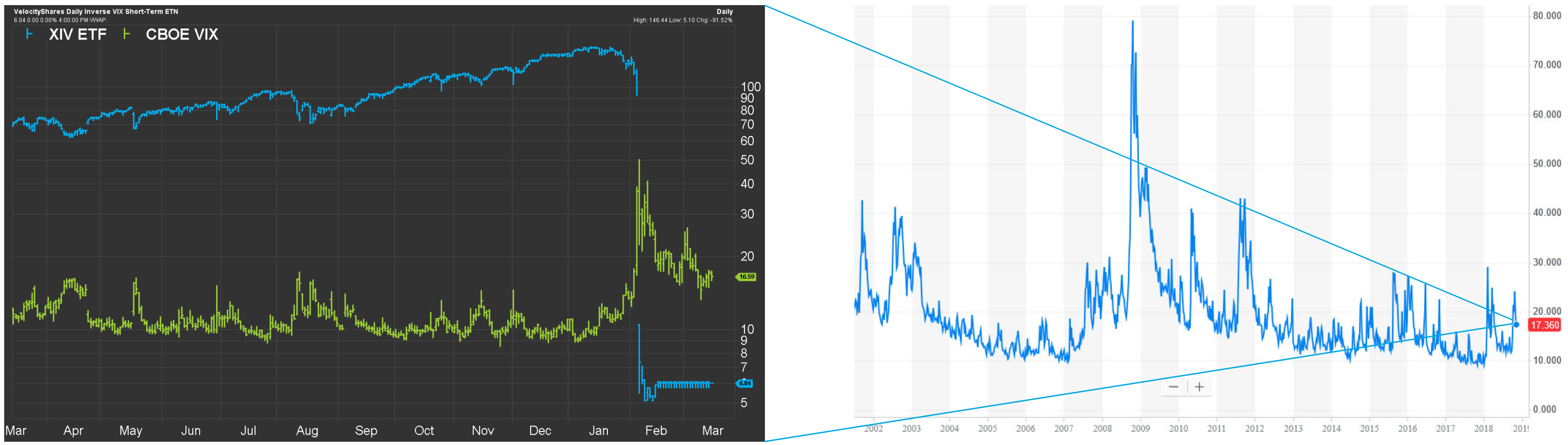
> Fears of a US rate hike saw equity markets fall and volatility spike in early Feb 2018

> Monday 5th February saw the VIX spike 116% in one day, resulting in the most significant one-day fall for Short Volatility strategies in recent times.

> Vol spikes happen. Left tail events are to be expected.

> Risk management therefore a critical facet of Short Volatility premia.

> ARP losses through February ranged from 0 to -9% (cf. XIV ETF down **-94%)**



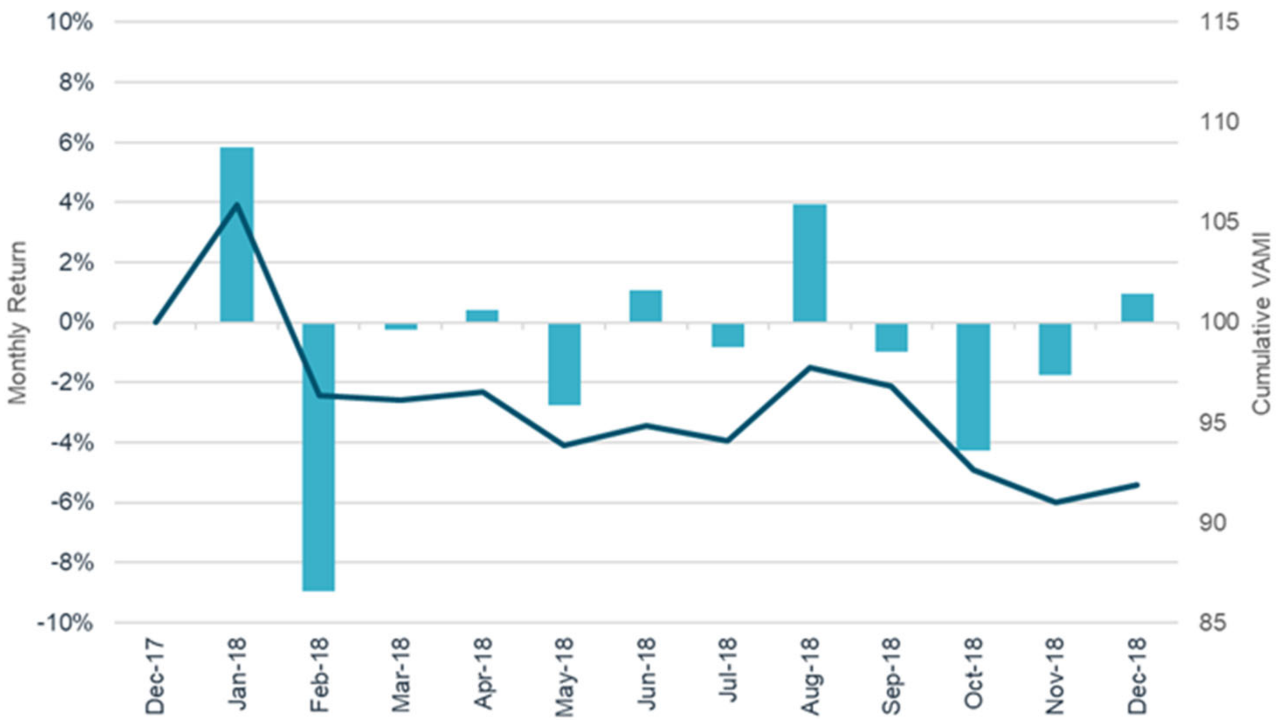
Trend-Following

A volatile Q1 2018

> Strong performance in **January** following on from a positive Q4 2017 (c.+8%)

> Sharp equity market reversal in **February** hurt by significant net-long equity Trend positioning

> Gains in **August** from FX and commodities



Source: SocGen

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Trend-Following

Trend-Following now more usefully placed for portfolio diversification?

> Long equity (globally) a dominant theme for Trend-Following through 2017 and early 2018 from a prolonged equity bull market.

> Now positioned **net short** across many equity markets (except US) as a result of recent market volatility.

> Return expectations aside, Trend now likely to be a **better portfolio diversifier** for traditional equity exposures.

Late 2017 / Early 2018

Equity Index Futures	-1 -0.6 -0.3 0 0.3 0.6 1						
S&P 500 (ES)		-0.36	Long	No	Long	0.09	0.01
NASDAQ-100 (NQ)		-0.78	Long	No	Long	-0.18	-0.01
Russell 2000 (RTA)		-0.07	Long	No	Long	0.45	0.01
S&P 400 MidCap (FA)		-0.04	Long	No			
TSX 60 (PT)		-0.1	Long	No	Long	0.55	-0.01
EuroSTOXX 50 (VG)		0.1	Long	No	Long	0.52	0.01
EURO STOXX Banks (CA)		0.7	Long	No			
DAX (GX)		0.2	Long	No	Long	0.43	0.01
FTSE 100 (Z)		-0.1	Long	No	Long	0.58	0.01
CAC 40 (CF)		0.4	Long	No	Long	-0.02	0.01
Swiss Market Index (SM)		-1.0	Long	No			
IBEX 35 (IB)		-0.1	Long	No			
FTSE MIB (ST)		1.16	Long	No	Long	0.73	0.00
Nikkei 225 (NK)		-0.41	Long	No	Long	0.49	0.01
TOPIX (TP)		-0.19	Long	No	Long	0.42	0.01
JPX Nikkei 400 (JPW)		-0.23	Long	No			
S&P ASX 200 (XP)		-0.97	Long	No	Long	0.35	0.96

Q4 2018

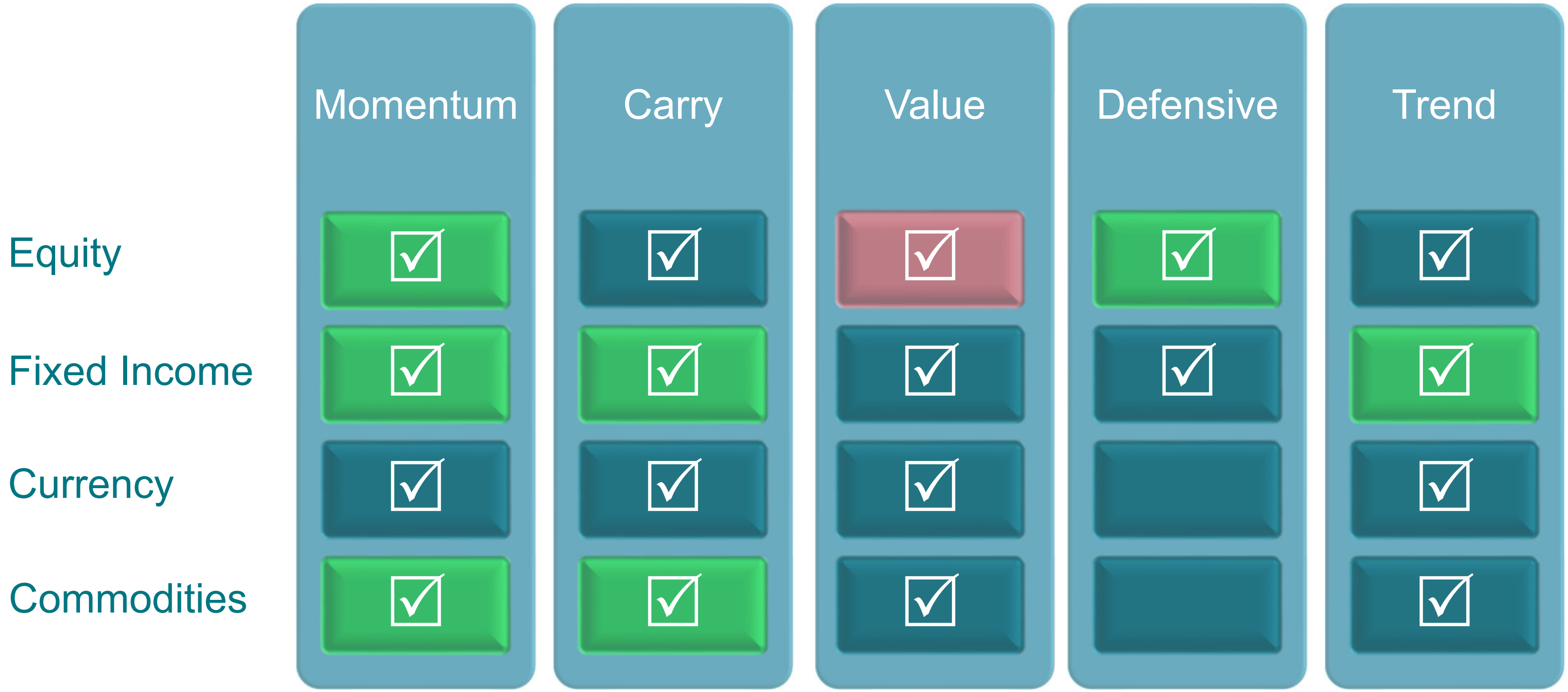
Equity Index Futures	-1 -0.6 -0.3 0 0.3 0.6 1						
S&P 500 (ES)		-0.84	Long	No	Long	-1.66	-1.61
NASDAQ-100 (NQ)		-0.85	Long	No	Long	-0.97	-2.63
Russell 2000 (RTY)		-1.03	Short	Yes	Long	-0.94	-2.43
S&P 400 MidCap (FA)		-0.87	Short	Yes			
TSX 60 (PT)		-0.67	Short	Yes	Long	-0.60	-1.67
EuroSTOXX 50 (VG)		-0.6	Short	No	Short	-2.25	0.03
EURO STOXX Banks (CA)		-0.5	Short	No			
DAX (GX)		-0.7	Short	No	Short	-2.49	-0.52
FTSE 100 (Z)		0.0	Short	Yes	Long	-0.72	0.02
CAC 40 (CF)		-0.6	Short	Yes	Long	-0.38	0.01
Swiss Market Index (SM)		-0.4	Long	No			
IBEX 35 (IB)		-0.7	Short	No			
FTSE MIB (ST)		-0.64	Short	No	Short	-1.91	0.03
Nikkei 225 (NK)		-0.89	Long	No	Long	-0.38	-1.54
TOPIX (TP)		-0.71	Short	Yes	Long	-0.97	-1.91
JPX Nikkei 400 (JPW)		-0.72	Short	Yes			
S&P ASX 200 (XP)		-0.93	Short	Yes	Long	0.29	0.01

Source: Morgan Stanley

Other Factors

A number ARP factors posted positive performance in 2018…

Just not sufficient to offset losses from Equity Value.



> Event Driven / Merger Arbitrage premia also positive for 2018.

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Key takeaways

Alternative Risk Premia

> Alternative Risk Premia is a **highly diversified** space with many different styles of ARP strategy.

> High dispersion in process style and risk-return profile means **manager selection is critical**.

> Capable of providing **uncorrelated non-traditional returns** that are diversifying to traditional portfolio risks.

> Well-understood **challenging performance in 2018** for some premia, but strategy certainly not ‘broken’.

> A **usefully different** alternative to DGFs and other top-down / discretionary multi-asset strategies.

> ARP very **relevant** to investors’ current key areas of focus.

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