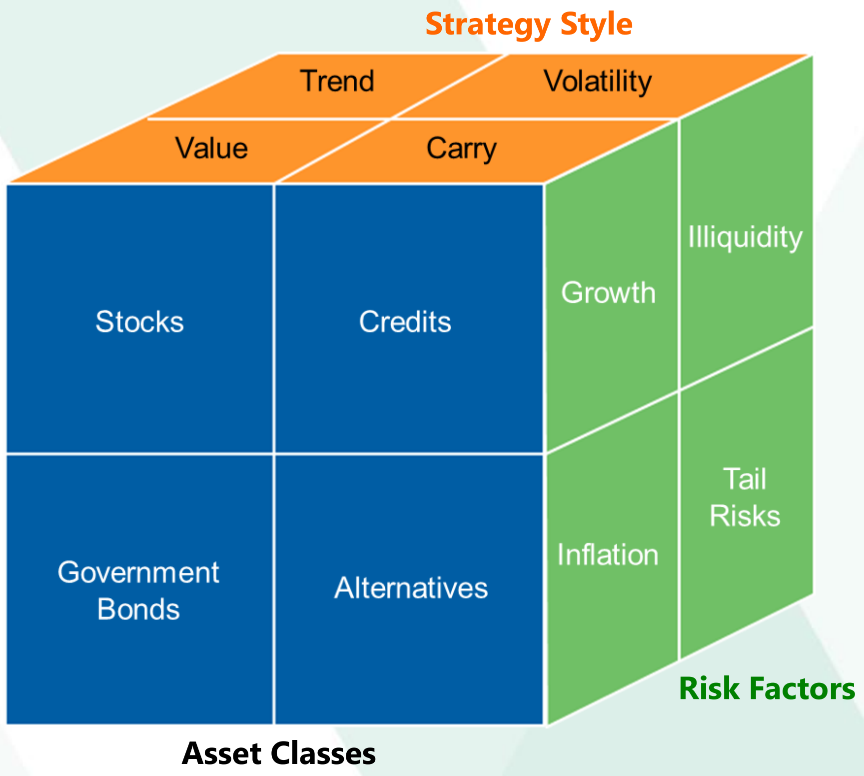
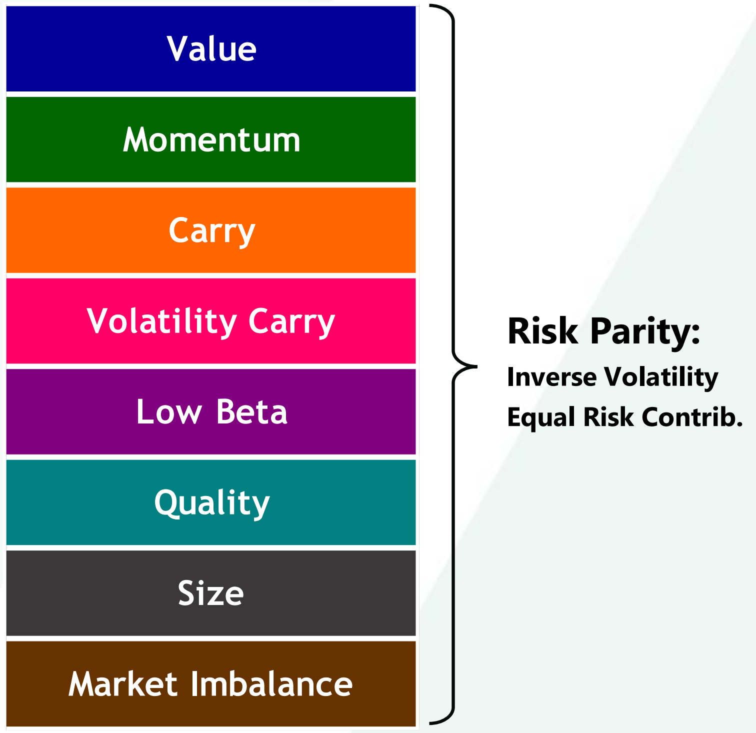
VERITAS

Framework for Risk Premia Investing: Is There Anywhere to Hide?

Kari Vatanen, CFA, FRM

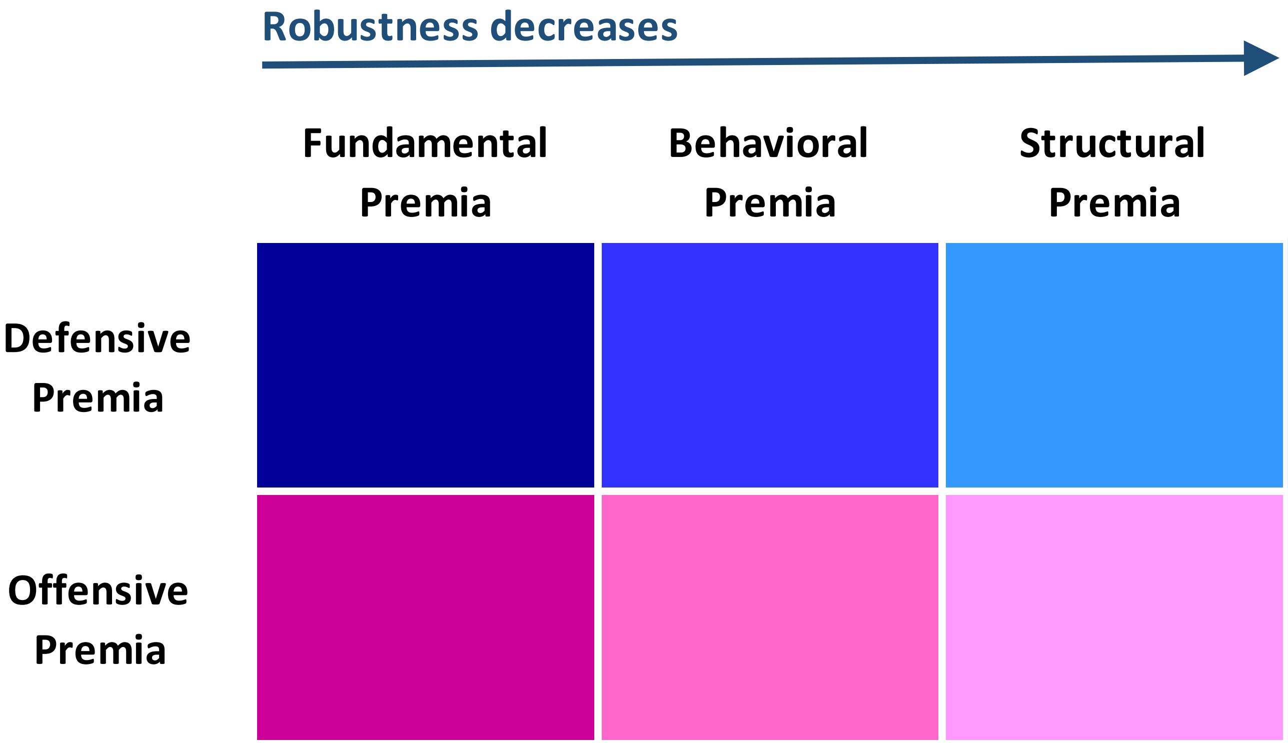
First Generation of Alternative Risk Premia Portfolio Construction





Ref: Antti Ilmanen (2011): *Expected Returns*

New Framework for Risk Premia Investing



Categories describe the nature and the robustness of the premia

Categories are divided in compartments reflecting the risk characteristics of the premia

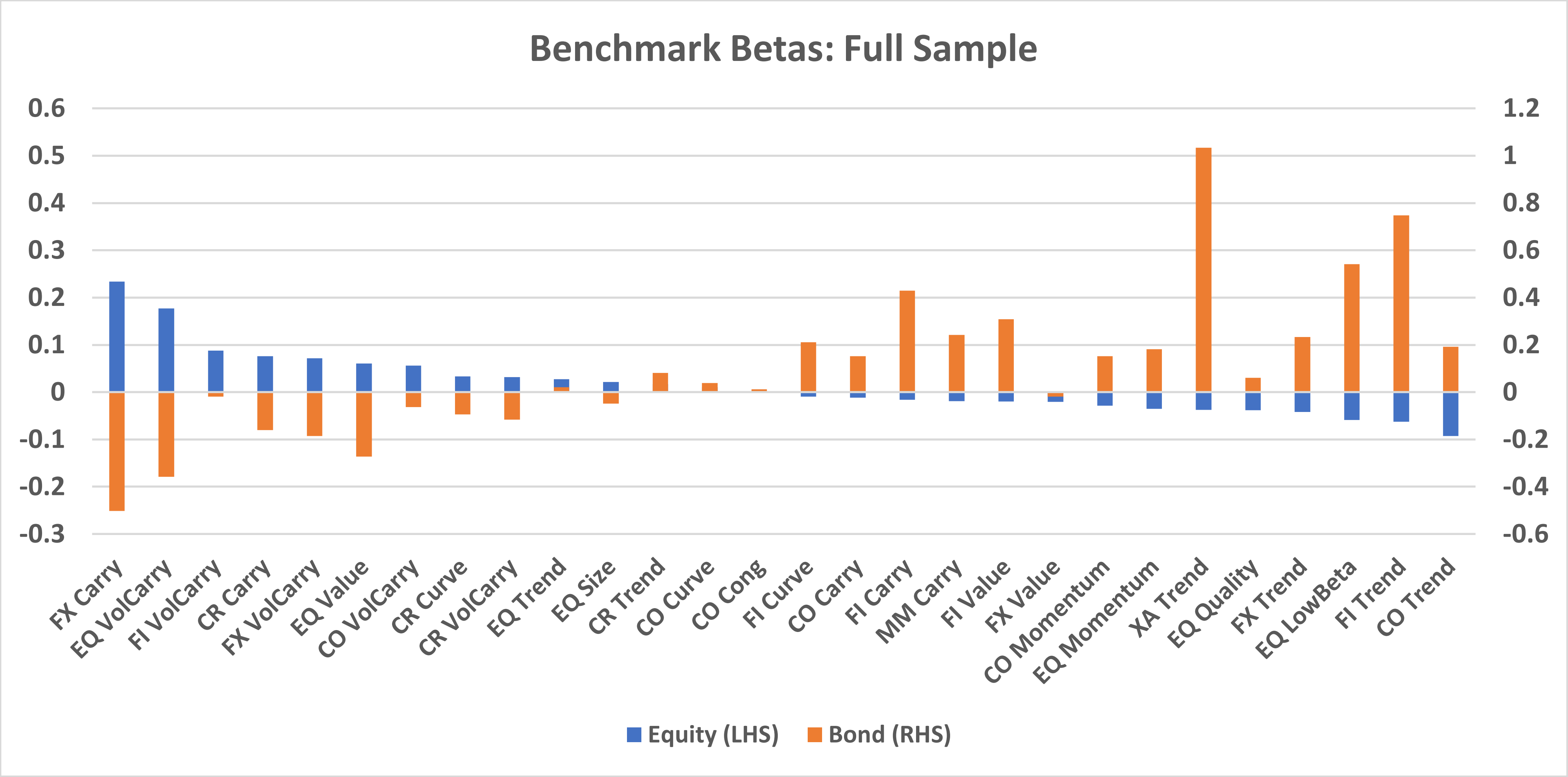
Ref: Vatanen & Suhonen (2017), *A Framework for Risk Premia Investing*

Defining the Characteristics of the Commonly Known Alt Risk Premia

	Style Group	Risk Premia Strategy Composites	Annualized Mean	Annualized Standard Deviation	Skewness	Excess Kurtosis	Annualized Raw Sharpe	Correlation between constitutients
Trend	Time-Series Momentum	Equity Trend	0.71 %	7.08 %	-0.208	5.732	0.101	0.697
		Bond Trend	3.37 %	3.63 %	0.622	4.387	0.928	0.401
		Credit Trend	3.09 %	4.42 %	-0.014	1.250	0.700	0.605
		FX Trend	1.55 %	6.14 %	0.156	3.334	0.253	0.536
		Commodity Trend	3.72 %	6.89 %	0.275	3.909	0.539	0.579
		Cross-asset Trend	5.75 %	7.99 %	-0.101	2.133	0.720	0.703
	Cross-Sectional Momentum	Equity Momentum	2.22 %	5.35 %	-0.762	2.418	0.414	0.395
		Commodity Momentum	1.36 %	6.44 %	-0.358	1.002	0.211	0.624
	Value	Equity Value	-0.26 %	4.01 %	0.324	1.737	-0.065	0.361
		Bond Value	2.95 %	2.22 %	0.355	1.310	1.328	0.095
		FX Value	2.04 %	2.35 %	0.496	2.228	0.870	0.219
	Equity Specific	Equity Quality	1.65 %	2.33 %	0.546	4.319	0.708	0.192
		Equity Low Beta	2.52 %	4.52 %	-0.282	0.738	0.557	0.339
		Equity Size	0.45 %	3.11 %	-0.291	0.940	0.144	0.349
Carry	Cross-Sectional Carry	Bond Carry	1.78 %	2.25 %	0.160	0.652	0.790	0.439
		Money Market Carry	0.99 %	1.02 %	0.082	5.073	0.976	0.739
		Credit Carry	2.85 %	3.80 %	-0.499	6.643	0.749	0.643
		FX Carry	0.81 %	5.99 %	-1.112	5.504	0.135	0.740
		Commodity Carry	4.91 %	4.60 %	0.075	1.118	1.068	0.420
	Curve Carry	Bond Curve Carry	1.58 %	2.95 %	-0.275	1.633	0.534	0.701
		Credit Curve Carry	1.09 %	1.26 %	-0.478	4.596	0.866	0.649
		Commodity Curve Carry	3.95 %	2.38 %	0.240	2.758	1.661	0.462
	Short Volatility Carry	Equity Volatility Carry	9.36 %	6.22 %	-1.811	11.543	1.504	0.523
		Bond Volatility Carry	5.43 %	5.62 %	-1.260	7.886	0.967	0.454
		Credit Volatility Carry	4.99 %	2.99 %	-2.298	17.024	1.666	0.561
		FX Volatility Carry	3.02 %	4.19 %	-1.429	8.540	0.721	0.519
		Commodity Volatility Carry	5.59 %	3.12 %	-1.191	6.330	1.792	0.482
	Flow Based	Commodity Congestion	1.38 %	0.68 %	1.206	5.107	2.031	0.437

Ref: Vatanen & Suhonen (2019), *A Framework for Risk Premia Investing: Anywhere to Hide*

Low Betas to Major Market Variables Imply High Diversification Benefits



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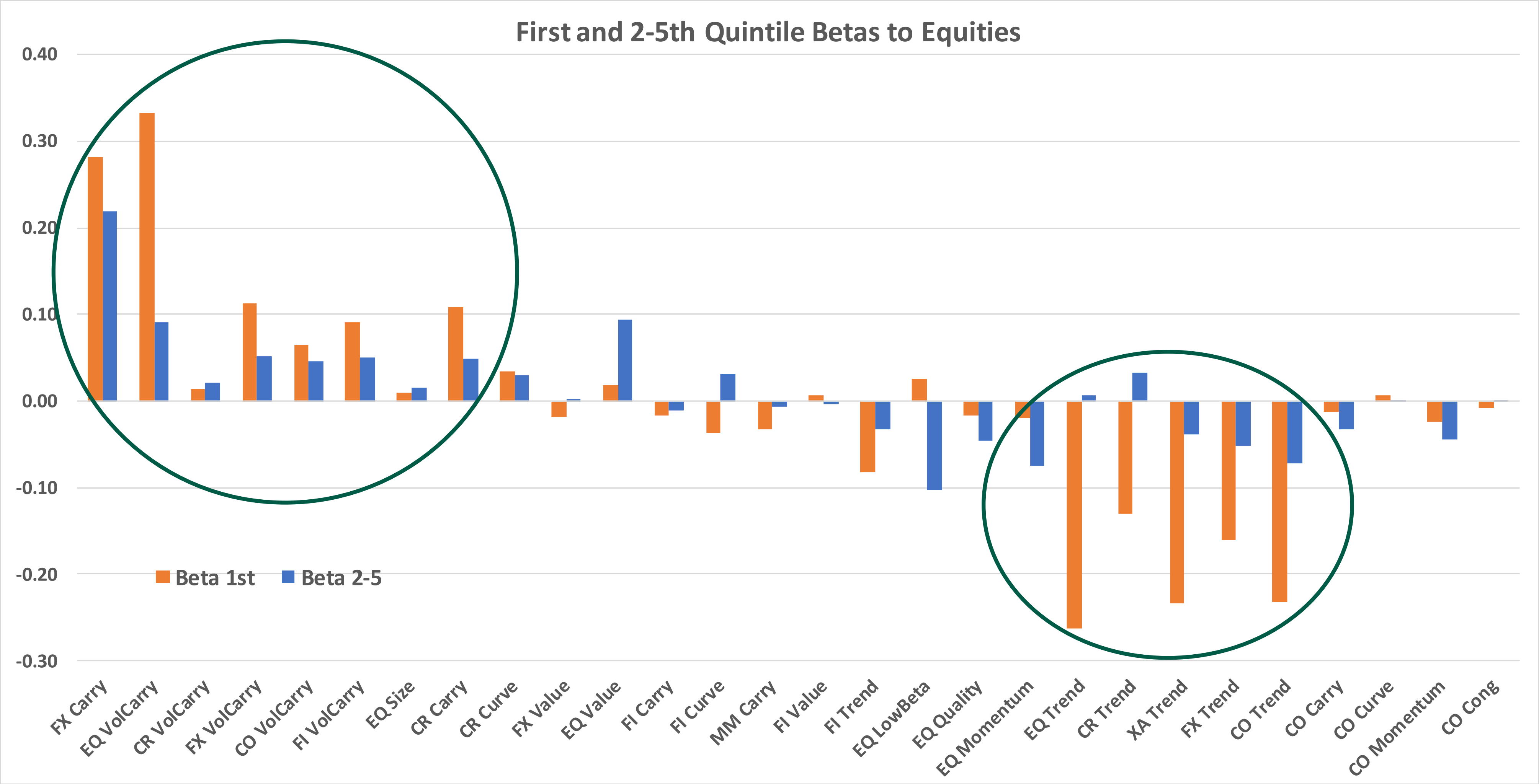
Tail Betas to Equity Markets



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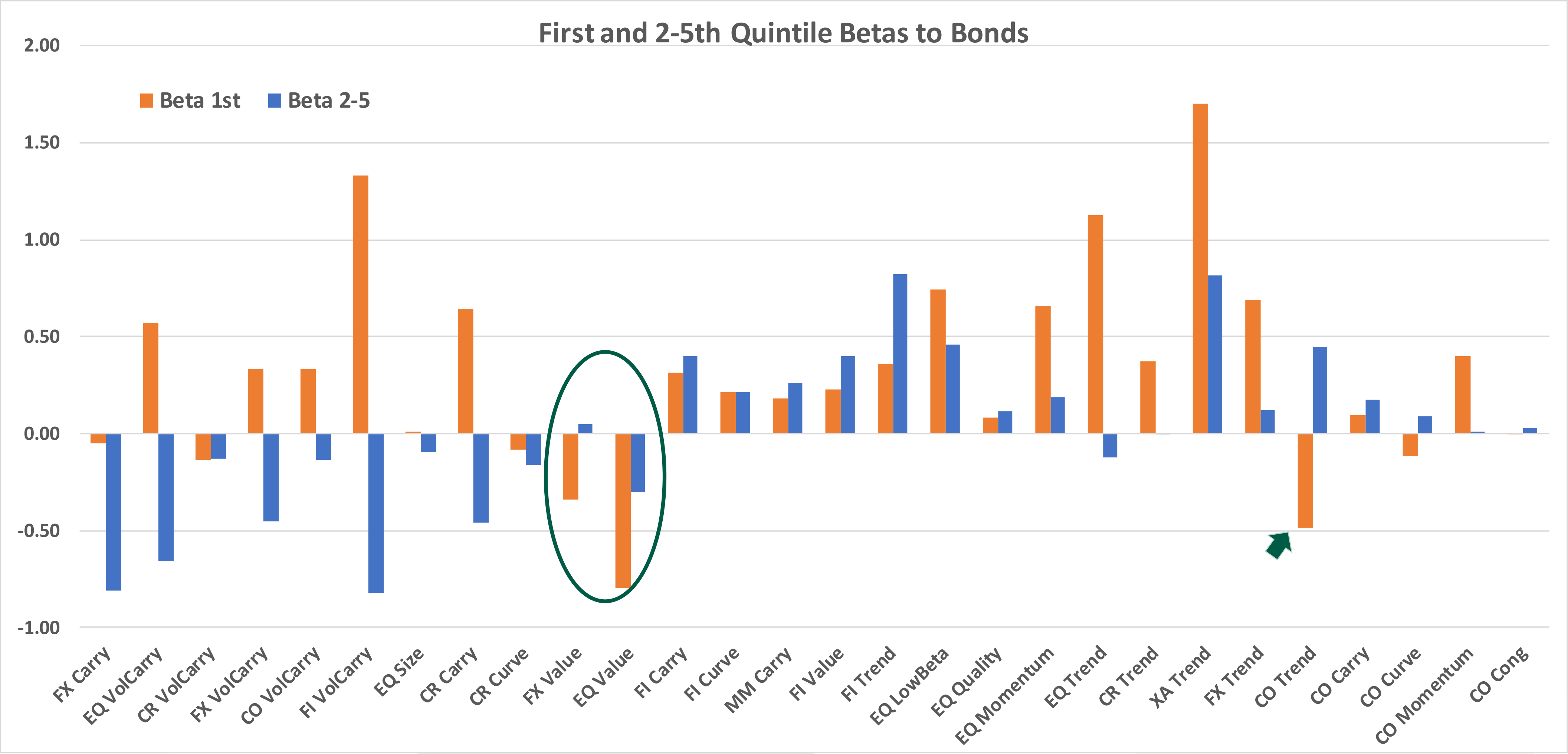
Tail Betas to Bond Markets



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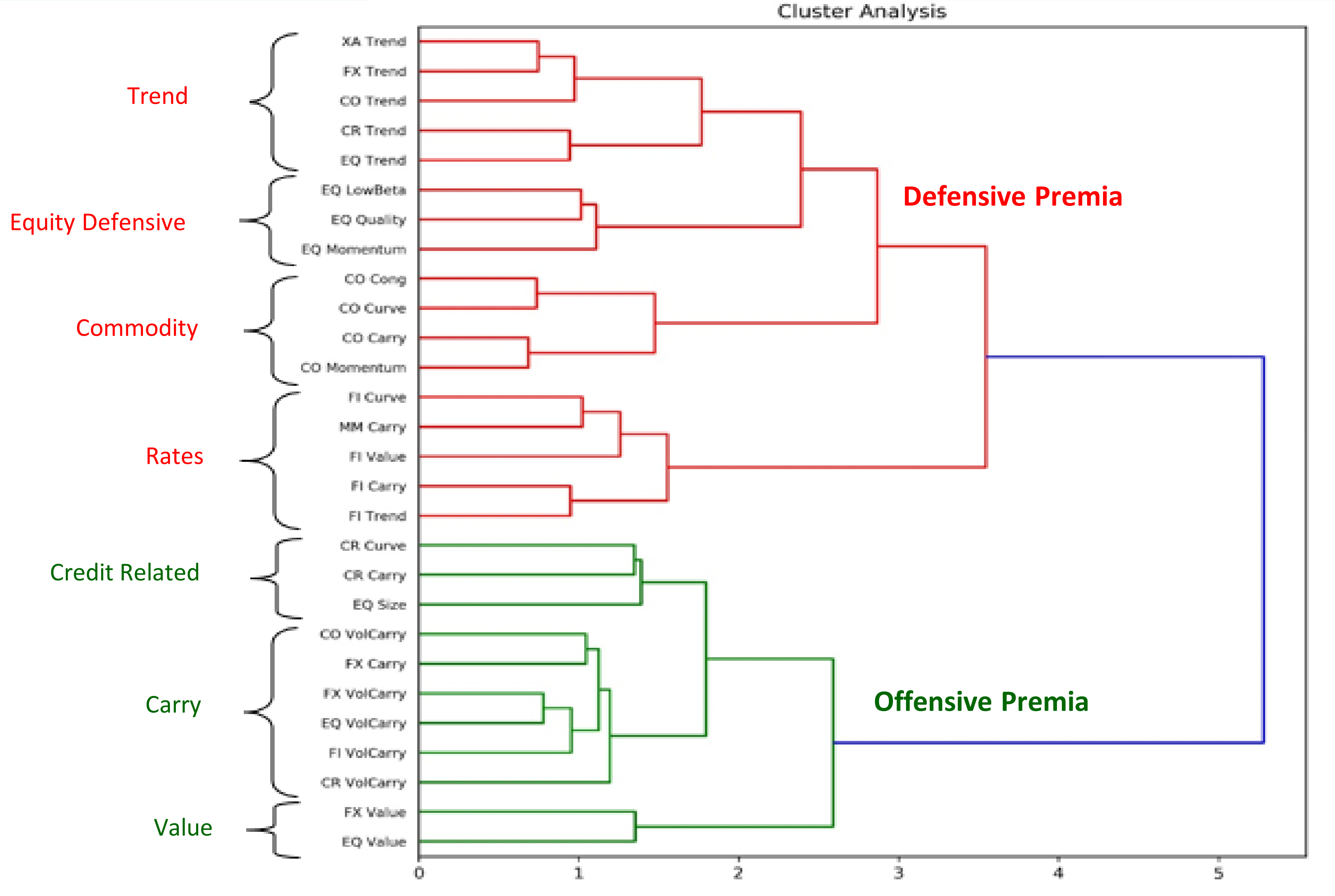
Clustering the Risk Premia Strategies by Euclidean Distance



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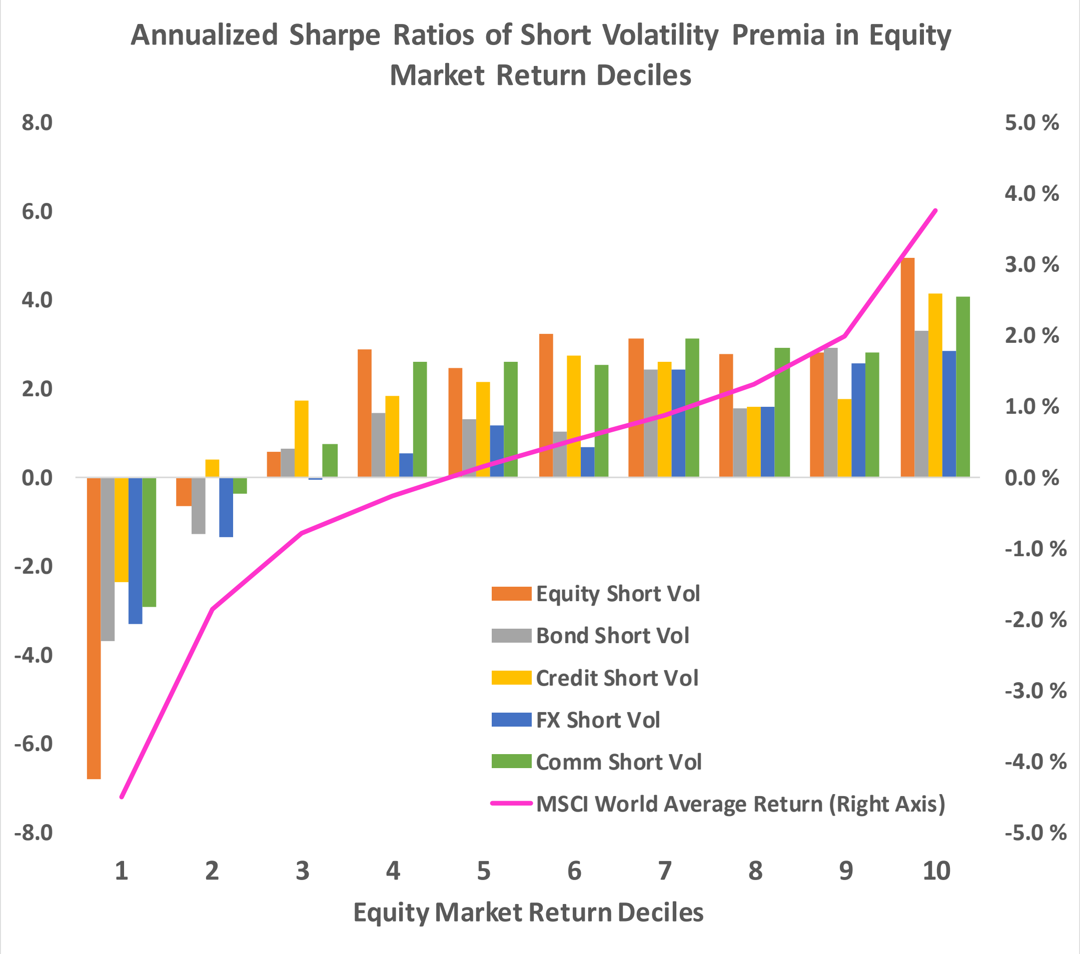
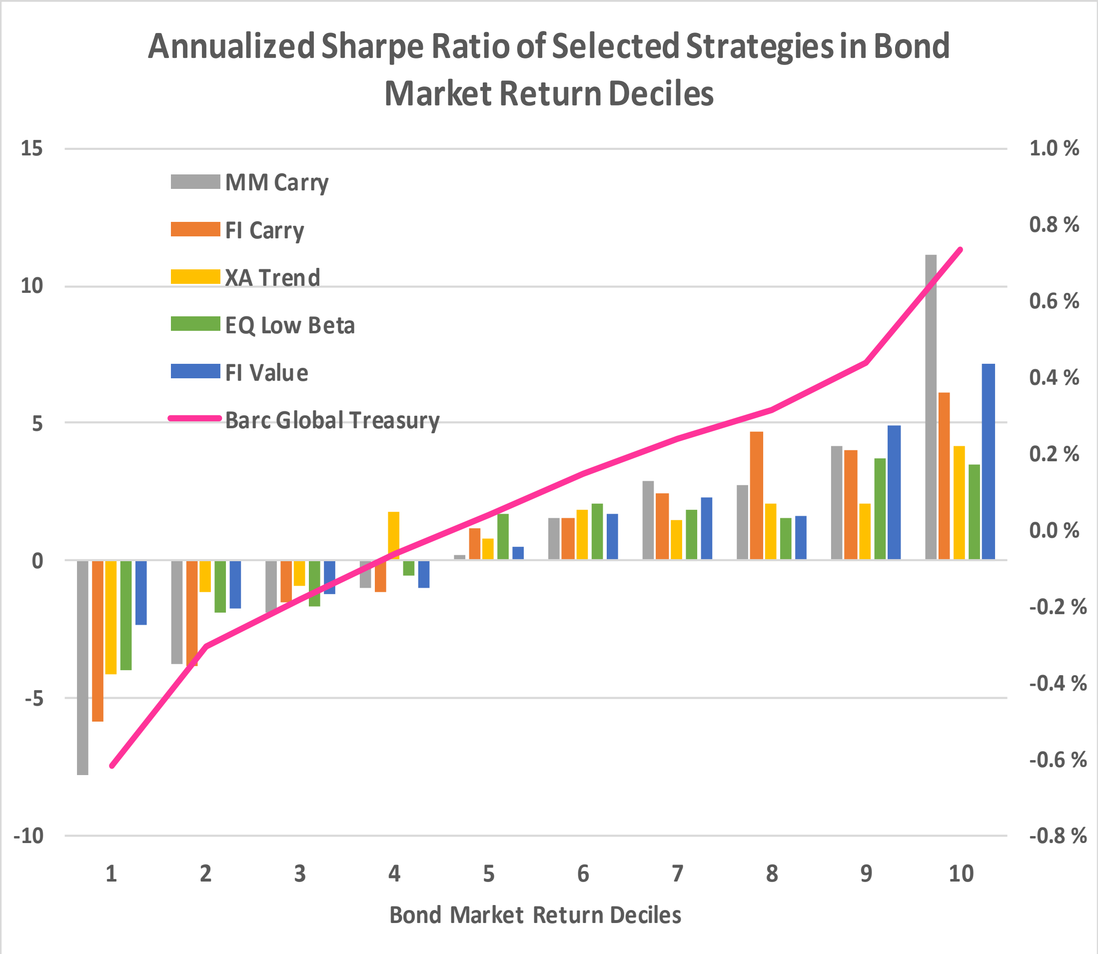
Examples of the Risk Characteristics of Risk Premia Strategies

Return Profile of Volatility Carry Premia



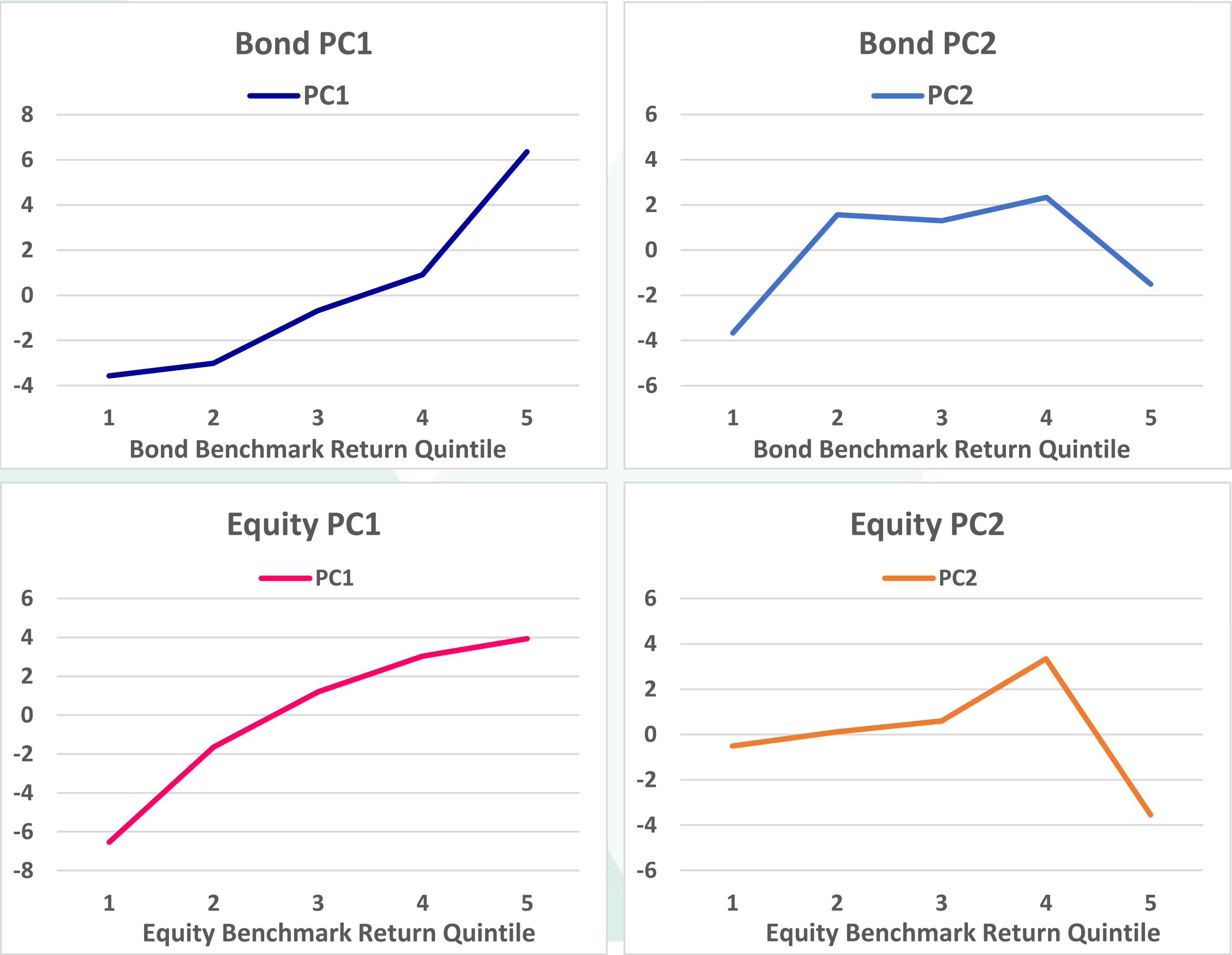
Return Profile of Some Defensive Strategies



Defining the Common Risk Characteristics of the Risk Premia Strategies

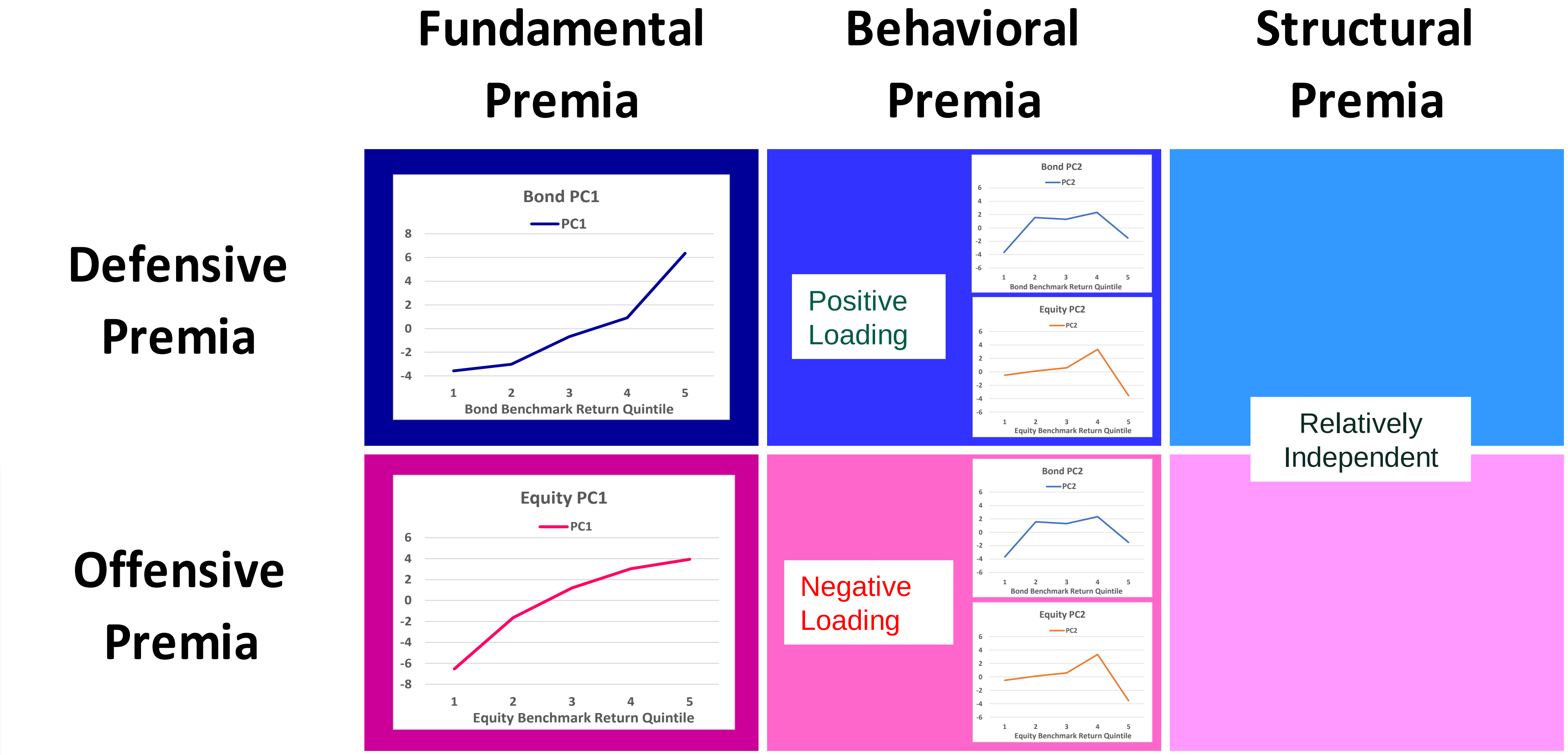
Return Profile on Bond Market Return Quintiles

Return Profile on Equity Market Return Quintiles



Ref: Vatanen & Suhonen (2019), *A Framework for Risk Premia Investing: Anywhere to Hide*

New Framework for Risk Premia Investing



Ref: Vatanen & Suhonen (2019), *A Framework for Risk Premia Investing: Anywhere to Hide*

Portfolio Construction with the New Framework

Core Portfolio: Fully diversified, balanced portfolio including fundamental & behavioral premia

Satellite Portfolio: weaker robustness of the strategies requires better diversification

Core ARP Portfolio

Fundamental Premia	Behavioral Premia
Rates Carry Low Volatility Quality	Trend Momentum
FX, Credit & Volatility Carry	Value

Satellite Portfolio

Structural Premia
Flow Premia Commodities
Market Structure Premia

Satellite Portfolio will offer non-correlated, diversifying strategies to the core portfolio

Questions & Answers