SRP

INDEX REPORT 2023

Strategy & Custom Indices

Bespoke exposure

API

Turn Data into Intelligence

The Application Programming Interface (API), is a web-based software application which allows clients to access our data in a controlled manner & integrate it using their own software packages & systems.

Retrieve

- Download real time SRP data directly to excel
- Receive market share on each asset class/payoff for each company of interest

Interrogate

- Monitor & increase your market share
- Carry out accurate trend analysis with comprenhensive product data spanning over 15 years in seconds

Incorporate

- Import data directly into in-house systems/platforms and interrogate the data and risk more effectively
- Combine data sets with other products and visualise it in the context of the larger business

Introduction

The market shift away from the one-size-meets-all approach has forced index providers and investment banks to improve the data they use to build indices as well as their use and their customisation capabilities to build underlyings and develop new bespoke strategies.

Strategy and proprietary or custom indices have carved their own corner in the structured products market over the last few years. Excluding market cap indices, strategy and custom indices have gained the highest market share with Issuance (9,690) and sales (US$29.9 billion) well above two of the fastest growing index categories in the structured products market such as decrement and ESG, between 2019 and 2022. The top 10 indices in the strategy category including custom strategies are featured in almost 10,000 products across markets and have an outstanding of almost US$29.9 billion. The top 10 indices in the custom category on its own represent more than US$4.5 billion in sales across more than 2,500 products.

Strategy & custom indices have become popular in the structured products market over the last few years because they contribute to improve the pricing of products and enable investment banks to deliver systematic rules-based strategies aimed at outperforming benchmark indices. They also provide dynamic exposure to factor-based strategies which have historically delivered a premium over the long run and deploy overlays to embed risk management features such as risk control or synthetic dividends.

All tables/charts are based on data from StructuredRetailProducts.com

The data analysis of the report does not include annuities data on strategy and custom indices as SRP's data on this segment of the market is limited and would not provide an accurate representation of issuance and sales. Some of the indices not featured in the analysis include recent launches such as the **S&P 500 FC TCA 0.50% Decrement Index**, designed in collaboration with Bank of America; the **AI Powered Global Opportunities Index (AIGO)**, sponsored by HSBC, the **UBS Innovative Balanced Index**, and the **SG Smart Climate Index**.

Other strategy & custom indices recorded in 2022 include The **J.P. Morgan Factor Focus index; Barclays Transitions 12 VC Index and Barclays Transitions 6 VC Index; BofA U.S. Strength Fast Convergence Index; Citi Aria Index; Goldman Sachs Grand Prix Index;** as well as the **Franklin BofA World Index, BofA Iris U.S. Sectors Index; BofA Destinations Index; Bank of America Merrill Lynch GPA Index; J.P. Morgan Mercury Index** and **BNPP Global H-Factor index.**

Contents

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Strategy & Custom Indices

Developed by index providers often on behalf of or in collaboration with financial institutions – institutions like investment banks and asset managers, these indices often offer a spin on to a benchmark incorporating methodology different to the market capitalisation rule and incorporate algorithm-driven features to provide active management of the index universe.

Strategy & custom indices offer tailored/personalised solutions to suit clients' particular requirements or investment strategies and in many cases are optimised to provide cheaper optionality for structured products.

In this category, SRP's classification includes indices embedding any of the most common market risk factors on their own or in combination with other factors - quality, value, growth, size, dividend, momentum, volatility, as well as multi-factor, quantitative investment strategies (QIS) with risk control and decrement overlays.

As the SRP Index Report 2023 showcases decrement or synthetic dividend indices in a stand-alone part of the report, in this chapter we pay specific attention to risk control indices as they have become a trademark of the US indexed annuities market with expert input from The Index Standard.

The analysis of the Strategy & Custom index group is based on 280 indices developed by index providers and investment banks featured during the last two years in the structured products market.

The Strategy & Custom index chapter also provides market insights on innovation, usage and applications from some of the most active suppliers of these type of indices to the structured products market, as well as an overview issuance and outstanding volumes of Strategy & Custom indices linked to in the structured products markets across the world including the top 10 indices in this category and a breakdown by provider, region, and payoff.

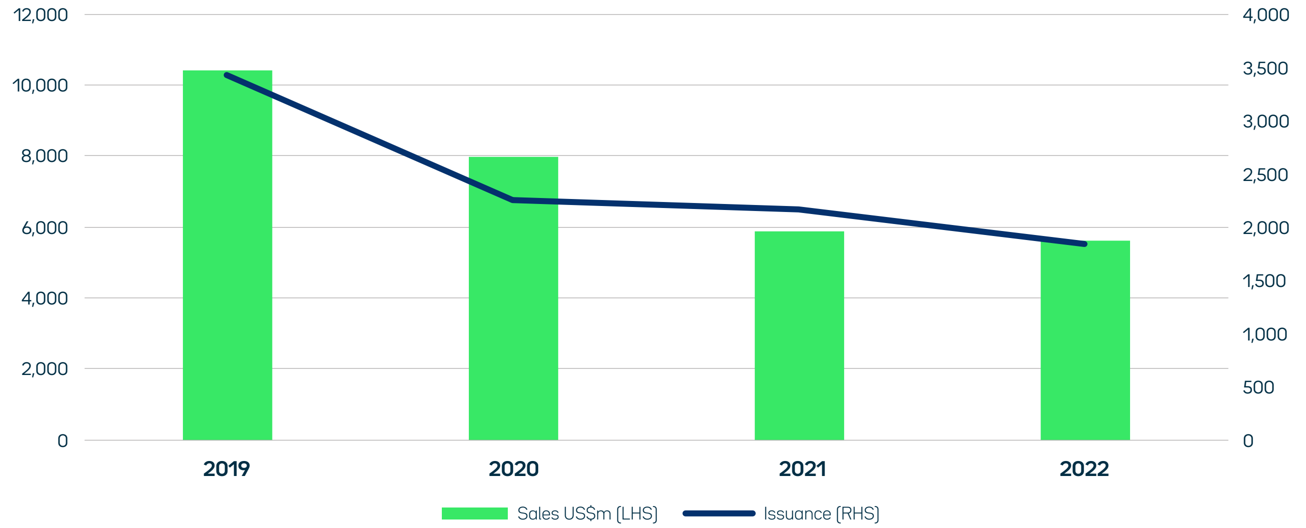
Strategy & Custom indices: top 10 by market share 2019-2022

INDEX	ISSUANCE	SALES USDm	MARKET SHARE (%)
Eurostoxx Select Dividend 30	1,173	11,469	38%
Stoxx Global Select Dividend 100	345	2,020	7%
GS Momentum Builder Multi-Asset 5S ER Index	454	1,020	3%
S&P Economic Cycle Factor Rotator Index	399	978	3%
S&P/TSX Composite Low Volatility Index	363	961	3%
Citi Dynamic Asset Selector 5 ER Index	527	901	3%
DivDAX Price Index	578	797	3%
JP Morgan Efficiente Plus DS 5 Index	435	546	2%
Morgan Stanley MAP Trend Index	504	516	2%
GS Momentum Builder Focus ER Index	152	499	2%
Other	4,760	10,201	34%
Grand Total	**9,690**	**29,907**	**100%**

Strategy

Strategy indices have been an area of focus in the structured products market for quite some time although their significance has somewhat decreased over the last four years.

Strategy indices: sales & issuance



They include quantitative investment strategies (QIS) such as risk premia and actively managed certificates (AMCs), and rules-based factor indices – also known as smart beta – that provide systematic exposure to stock properties and factor-based strategies which have historically delivered a premium over the long run. In this category, SRP's classification includes indices embedding any of the most common market risk factors on their own or in combination with other factors: quality, value, growth, size, dividend, momentum, volatility, and multi-factor.

Between 2019 and 2022, sales volumes for structured products linked to strategy indices decreased by 46%. The highest sales were registered in 2019, when US$10.4 billion was invested in products tied to strategy indices. Fast forward to 2022, and we see that sales have almost halved, although year-on-year (YoY) volumes were only down by 4.5%. Issuance was also down 46% in the period 2019-2022 and like sales, the highest issuance, at 3,423 products, was recorded in 2019. In 2022, some 1,843 products were linked to strategy indices, a 15% fall YoY.

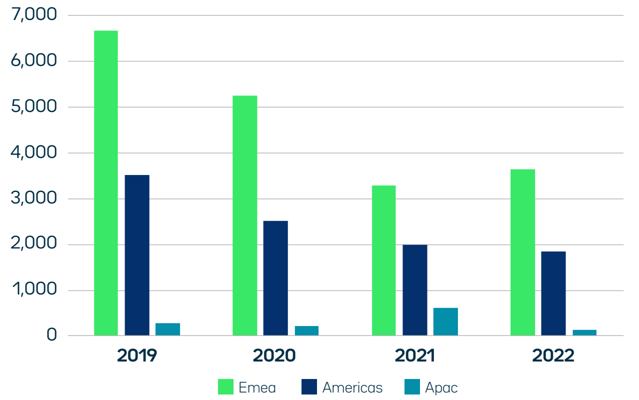
Sales volumes have always been the highest in Europe, Middle East & Africa (Emea). In 2019, 64% of all strategy-linked sales (US$6.7 billion) was invested in products targeted at the region, a figure that stood at 66%, 56% and 65%, respectively, for each of the following years.

Between 32 and 34% of the total sales volumes was invested in the Americas during 2019-2022 while in Asia Pacific

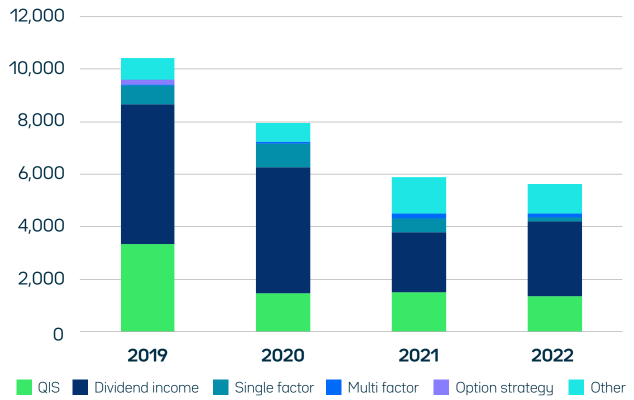
Strategy indices: breakdown by region 2019-2022

REGION	ISSUANCE	SALES USDm	MARKET SHARE (%)
EMEA	3,262	18,814	63%
Americas	5,968	9,846	33%
Apac	460	1,248	4%
Grand Total	**9,690**	**29,907**	**100%**

Strategy indices: annual sales evolution per region of offering (US$m)



Strategy indices: strategy types (US$m)



(Apac) volumes remained stable at 2.6% during the period, except for 2021, when 10.4% of all volumes for the year, or US$612m, was invested in the region.

Although the highest sales during 2019-2022 were seen in Emea, issuance levels in the period were much higher in the Americas, with 62% of all products linked to strategy indices issued in the region. Dividend income strategies claimed a market share of 50% or more in each of the years under review – except for 2021, when they held 39%.

The other main strategy, QIS, captured 32% market share in 2019, but by 2022 their impact had somewhat decreased as they ended the year with 24% market share.

Multi-factor indices steadily increased their market share during the period, and although still relatively small, they reached 3.3% in 2022 with single-factor indices headed in the other direction, going from a market share of 11.3% in 2020 to just 2.2% last year. The 'other' category (20% market share in 2022) includes equity/bond/fund/commodity indices with a risk control strategy (target volatility overlay).

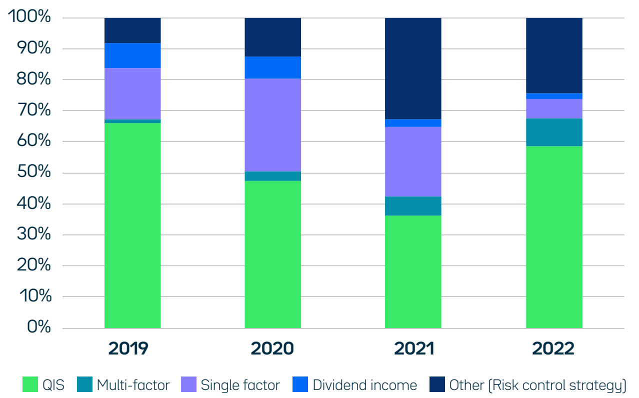
Americas

QIS strategies dominated the Americas. In 2019, they collected sales of US$2.3 billion in the region – the equivalent of a 66% market share. The following two years they lost some market share, mainly to single factor indices, but by 2022 they had recovered most of their losses, ending the year with sales of US$1.1 billion, or 58% of the total market.

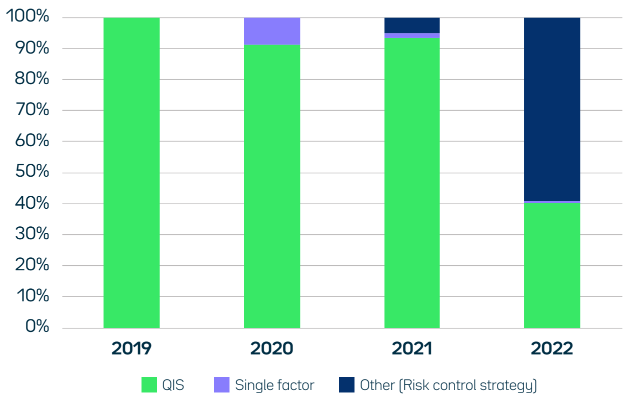
During 2019-2022, Goldman Sachs proprietary GS Momentum Builder Multi-Asset 5 ER Index was the best-selling QIS index, collecting US$1 billion from 475 products targeted at US investors. The index measures the extent to which the exchange-traded funds and a money market position included in the index outperform the sum of the return on the notional interest rate, which is equal to 3-month USD Libor, plus 0.65% per annum (accruing daily).

Another popular QIS strategy was the Citi Dynamic Asset

Strategy indices: Americas - market share by index strategy



Strategy indices: Apac - market share by index strategy



Selector 5 ER Index, which again was solely used in the US market (US$900m from 525 products). It tracks the performance of a rules-based investment methodology, with index exposure allocated to one of three possible hypothetical investment portfolios, each consisting of varying degrees of exposure to the S&P 500 Futures Excess Return Index and S&P 10-year US Treasury Note Futures Excess Return Index.

Single factor indices sold a combined US$1.9 billion in the Americas between 2019-2022, including US$750m in 2020 alone. The main index in this category was the S&P/TSX Composite Low Volatility Index with sales of US$965m from 365 products, which was exclusively targeted at investors in Canada. Launched in April 2012, the index benchmark's low volatility or low variance strategies based on the S&P/TSX Composite.

Other single factor indices that performed well were the S&P 500 Value (US$425m from 170 products) and the Russell 1000 Value (US$355m from 55 products).

Multi-factor indices, despite selling less than their single factor counterparts during 2019-2022 (US$415m vs US$1.9 billion), steadily increased their market share during the period, and by 2022 they were the second most popular category in the Americas (behind QIS) with a nine percent market share.

In total, only four multi-factor indices were utilised in the reporting period. Of these, the S&P 500 Low Volatility High Dividend Index (US$225m from 95 products) and J.P. Morgan Kronos US Equity Index (US$110m from 55 products) were the most in demand.

Dividend income strategies accumulated sales of US$550m, most of which was collected during 2019-2020 (US$465m) while the 'other' category registered total sales of US$1.7 billion. The latter included 36 different indices, including MerQube's US Tech+ Vol Advantage Index (US$225m/245 products), which was seen in the US only while the BMO Global Smart Volatility Index was strictly used in Canada (US$130m/90 products).

Morgan Stanley's Global Opportunity 9% Index was especially popular with investors in Brazil, as were the Solactive BBVA ixESG Lideres Globales MXN Risk Control 10% Index and CS Global Video Gaming and eSports 20% Risk Control Index.

Asia Pacific

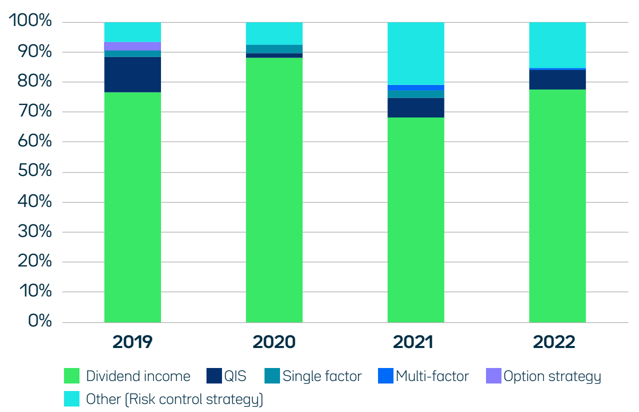
The Apac region was ruled by QIS indices, which captured almost 100% of the market between 2019-2021. By 2022, however, their market share had dropped off to 40%, driven by an increased demand for risk control strategies.

Some 460 products linked to 27 different QIS indices accumulated sales of US$1.2 billion between 2019-2022. Of these, the highest sales, at US$350m were gathered by Huatai Cycle Selected S1 Strategy Index which was seen only in China. A further US$220m was invested in 30 products linked to the S&P Economic Cycle Factor Rotator KRW Hedged Index, which was favoured by investors in South Korea, who also showed interest in the S&P 500 Quanto USD/KRW Currency Adjusted Index, which by issuance (175 products) was the most used QIS index in the region.

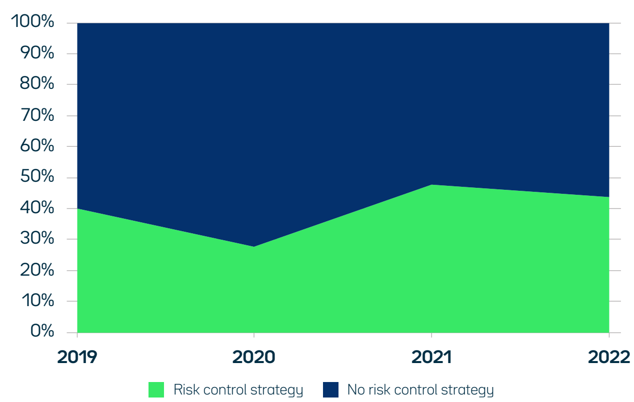
All but one of the 20 products linked to single factor indices were tied to the HSBC Low Beta Factor ESG Europe Price Return Index, which was used by HSBC for structured deposits in China. The only other single factor index seen in the region was the Deutsche Bank Momentum Asset Allocator 5.5% Volatility Control Index, which was the underlying for a note targeted at Krung Thai Bank's private banking clients in Thailand.

By 2022, however, risk control indices had made a notable impact in Asia, or China to be more precise, with the MSCI

Strategy indices: Emea - market share by index strategy



Strategy indices: risk control strategy vs no volatility overlay



World ESG Screened 5% Risk Control Index (US$52m), Morningstar Exponential Technologies ESG Screened Target Volatility 7% Index (US$42m), and Solactive Luxury Dynamic Factors 10% Daily Risk Control TR Index (US$25m) all capturing the imagination of investors.

Emea

In Emea, the focus has always been on dividend income indices. Between 2019-2022 they captured sales of US$13.2 billion, averaging a 77.5% market share over the period.

Fifteen different dividend income indices were utilised in 2,300 structured products during 2019-2022. Of these, the Eurostoxx Select Dividend 30 Index, linked to 1,360 products that sold an estimated US$11.1 billion, was the most popular by far. The index, which tracks high dividend yielding companies across 11 eurozone countries, was seen across the continent but achieved its highest sales in Italy (US$8.5 billion from 200 products), Germany (US$950m from 725 products), France (US$475m from 85 products), and Belgium (US$400m from 45 products).

The Stoxx Global Select Dividend 100, which comprises the highest-yielding stocks in the Americas, Europe and Apac regions from the Stoxx Global 1800 index, was linked to around 320 products worth US$1.5 billion, with 40% of the sales accumulated from structures sold in Italy.

The DivDax Price Index (US$500m), which tracks the 15 Dax companies with the highest dividend yield, was almost exclusively sold in Germany, with 570 out of a total of 580 products linked to the index sold in the country.

QIS indices held an average market share of 6.6% between 2019-2022. In the period, 31 different QIS indices were used in just under 400 products that sold an estimated US$1.3 billion. Of these, the Credit Suisse Global Equity Multi-Factor 10% Risk Control Index (US$115m from 110 products) stood out.

The investible long-only index targets a volatility of 10% whilst aiming to benefit tactically from the negative realised correlation between global equities and US treasuries. It was solely used in South Africa in products distributed via Absa Bank.

Single factor indices only had a marginal presence in Emea. They averaged 2.5% market share between 2019-2021, but by 2022 this had decreased to a meagre 0.1%. The 19 different single factor indices were seen in almost 100 products worth US$370m during the period. Its main protagonist was the Solactive ESG Big Data Europe High Dividend Low Volatility Index, which collected around US$90m from products sold in Belgium, France, and Italy.

The market share for multi factor indices and those that use an option strategy was negligible. In the 'other' category (risk control strategies), some US$2.2 billion was invested in 470 products tied to 98 individual indices. The highest volumes, at US$875m, were seen in Italy, where 19 different risk control indices were used, including the MSCI Emerging Markets 9% Risk Control 2% Decrement Index (US$225m).

However, in Sweden, where US$520m was invested in 200 products, the highest number of individual indices was seen: 52. The indices often replicated the performance of mutual funds and included, among others, Leonteq Nordic Corporate Bond Fund 2% RC Index, Deutsche Bank High Yield Fund 2% Index, and Barclays Mutual Fund ER AF 0% RC 2% SEK 3 Index. The latter is a strategy that provides exposure to Prior Nilsson Realinvest – an actively managed equity fund focused on real estate, forestry, raw material, and infrastructure companies.

Risk control vs no volatility overlay

Risk control strategies, which adjust market exposure in inverse relation to risk to target a stable level of volatility in all market environments (target volatility overlay), have always had slightly less monies invested them compared to those indices with no risk control strategy, although the gap has somewhat narrowed in 2021 and 2022 when 48% and 44%, respectively, of total sales volumes was invested in risk control strategies.

Index providers

STOXX is the number one index provider for strategy indices by some distance. During 2019-2022, 2,353 products linked to 18 different indices accumulated estimated sales of US$14.9 billion – the equivalent of a 50% share of the market.

The company's flagship strategy index was the Eurostoxx Select Dividend 30, but other indices that performed well in the period included the Stoxx Global Select Dividend Risk Control 10% (US$170m), iStoxx Europe Next Dividend Low Risk 50 (US$45m), and the iStoxx AI Global Artificial Intelligence High Dividend 30 Index (US$30m).

S&P Dow Jones Indices (S&P DJI), in second, collected US$3.6 billion from 2,353 issued products – averaging a market share of 12% in the reporting period – although its sales fell from US$1.6 billion in 2019 to US$350m in 2022.

Some 27 different strategy indices from S&P DJI were used between 2019-2022. Of these, the S&P Economic Cycle Factor Rotator Index, which was mainly seen in the US and on the institutional market, achieved sales of US$975m (from 400 products). The index seeks to rotate its investment strategy across four distinct portfolios based on the most recent economic data from the Chicago Fed

Breakdown by issuance

STRATEGY	>>>	RISK CONTROL STRATEGY	NUMBER OF PRODUCTS			
			2019	2020	2021	2022
QIS	Dynamic allocation		18	5		2
		✓	721	511	456	415
	Efficient frontier portfolio	✓	521	146	59	33
	Trend-based allocation	✓	262	140	54	153
	Rotation Strategy		5	6	35	31
		✓	308	110	52	7
	Currency hedged		1	36	181	13
		✓			9	1
	Risk premia		5		1	
		✓	16			27
	Leveraged		18	1		
Dividend Income	Select dividend		752	777	536	385
		✓	122	26		4
Single factor	Low volatility		266	103	20	12
		✓		1	8	15
	Value		46	96	105	58
	Low beta			13	6	
	Quality		2	3	12	1
	Momentum			2	2	
		✓	1			5
Multi-factor	Multi-factor		30	46	75	68
		✓			24	10
Other	Equity index	✓	282	205	446	533
	Fund index	✓	19	17	47	31
	Bond index	✓		1	10	38
	Commodities	✓			28	

National Activity Index, with a target volatility of 6%. There is also a KRW hedged version of the index which collected US$220m in South Korea.

Other popular S&P DJI strategy indices included the S&P/TSX Composite Low Volatility Index (US$960m), which was exclusively seen in the Canadian market, and the S&P 500 Value (US$460m), which collected most of its volumes in the US but was also available to investors in South Africa.

Solactive, in third, saw its strategy indices – 38 in total – used in 469 products that sold a combined US$1.8 billion (6% market share).

Two of its main indices were Solactive Erste Future Invest VC (US$190m) and Solactive Erste Green Invest VC Index (US$160m), which were both based on an ETF portfolio idea and developed in collaboration with Austria's Erste Group Bank. The Solactive US Pharma 10% Risk Control 3% Decrement Net EUR Index performed well in Italy, where it collected US$130m from one product distributed by Fideuram, the private banking arm of Intesa Sanpaolo, while the Solactive BBVA ixESG Lideres Globales MXN Risk Control 10% Index was seen in 25 products issued via BBVA in Mexico (US$100m).

MSCI's 12 strategy indices collected just under US$500m from 148 products. Its bestselling indices were the MSCI Emerging Markets 9% Risk Control 2% Decrement Index (US$225m) and MSCI Global Select ESG Multiple-Factor 4% Decrement USD Index, which sold US$225m and US$85m, respectively, in Italy. The company's MSCI World ESG Screened 5% Risk Control Index (US$50m) was solely targeted at investors in China while sales for its World Business Cycle Clock Factor Select Index (US$30m) were limited to South Africa.

FTSE Russell's market share, albeit small, was achieved on the back of 75 products linked to either the Russell 1000 Value or Russell 2000 Value that sold a combined US$425m, slightly ahead of MerQube, which achieved sales of US$330m from 376 products.

The latter is a relatively new kid on the block. It first entered the US market in 2021 with the MerQube US Tech+ Vol Advantage Index, which was launched in June that year. The index provides a dynamic rules-based exposure to an unfunded rolling position in E-Mini Nasdaq-100 futures, which reference the Nasdaq-100 Index, while targeting a level volatility of 35%, with a maximum exposure to the futures contracts of 500%. It is subject to a daily deduction of six percent pa index fee.

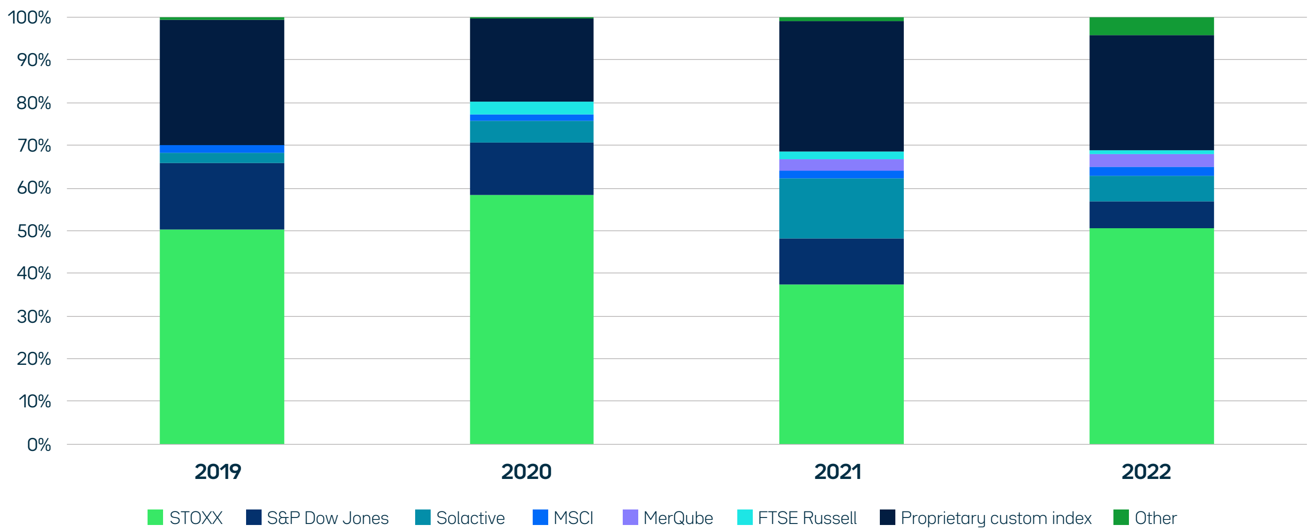
Its other main indices in the US are the MerQube US Small-Cap Vol Advantage Index and the MerQube US Large-Cap Vol Advantage Index, although sales linked to the former were marginal.

MerQube is also active in Brazil where its MerQube XP Multi Asset 6% VT Index attracted sales of US$50m in 2022.

The 'Other' category comprised of 15 indices, including 14 from Leonteq that were mostly used in private placements on the Swedish market. Of these, the Leonteq Nordic Corporate Bond Fund 2% RC Index achieved the highest sales (US$160m), followed, at some distance, by the Leonteq European High Yield Bonds 4% RC Index (US$15m) and the Leonteq Diversified Nordic Bonds 2%RC Index (US$13m).

The only none-Leonteq strategy index was the CSI Citic Multi-asset Trend Index, which was utilised by Citic Securities in China.

Strategy indices: index providers - market share sales volume (US$m)



Breakdown by sales

STRATEGY	>>>	RISK CONTROL STRATEGY	US$M			
			2019	2020	2021	2022
QIS	Dynamic allocation		17	4		2
		✓	1,218	823	707	902
	Efficient frontier portfolio	✓	695	189	88	20
	Trend-based allocation	✓	250	167	72	218
	Rotation Strategy		0	7	40	38
		✓	1,059	237	468	20
	Currency hedged		1	41	113	19
		✓			10	65
	Risk premia		34		2	
		✓	45			88
	Leveraged		30	7		
Dividend Income	Select dividend		5,144	4,722	2,275	2,843
		✓	163	48		1
Single factor	Low volatility		538	325	217	12
		✓		1	9	27
	Value		175	558	289	77
	Low beta			19	10	
	Quality		2	1	11	1
	Momentum			0	0	
		✓	1			5
Multi-factor	Multi-factor		47	81	114	162
		✓			74	21
Other	Equity index	✓	697	680	1,133	836
	Fund index	✓	28	26	145	53
	Bond index	✓		2	31	207
	Commodities	✓			58	

Proprietary/Custom

Some US$8 billion was invested in around 4,400 structured products linked to a proprietary or custom index between 2019-2022, representing around 27% of the market for strategy indices.

Goldman Sachs, J.P. Morgan, and Citi were the main providers, each collecting north of US$1 billion from products linked to proprietary indices. Other investment banks active in this segment included Barclays, Bank of Montreal, Credit Suisse, Deutsche Bank, HSBC, and Morgan Stanley, among others.

The highest selling proprietary index was the aforementioned GS Momentum Builder Multi-Asset 5S ER Index, which accumulated sales of US$1 billion from 475 products issued in the US market between 2019 and 2022. The index is one of seven utilised by Goldman during the period, selling a combined US$1.6 billion from 635 products. They also included the GS Momentum Builder Focus ER Index (US$500m from 150 products), which again was exclusively targeted at investors in the US, and GS RP Equity World Long Short Series 37 Excess Return Strategy (US$30m from 18 products), which was only seen in Brazil.

J.P. Morgan achieved sales of US$1.2 billion from just under 1,000 products in the period. In total, 18 of the bank's indices were used, including the J.P. Morgan Efficiente Plus DS 5 Index (US$550m from 435 products), which tracks the return of a dynamic portfolio consisting of up to 20 ETFs and the J.P. Morgan Fallback Cash Index. It seeks to provide a dynamic and diversified asset allocation based on Modern Portfolio Theory. Other JPM indices frequently used are the J.P. Morgan Balanced Value Dividends Index (US$180m from 115 products), J.P. Morgan Kronos US Equity Index (US$110m from 40 products), and the J.P. Morgan Kronos+ Index (US$70m from 82 products). All these indices were only used in the US market.

Citi's six prop indices were seen in 722 products that attracted sales of US$1.1 billion. Its flagship index, the Citi Dynamic Asset Selector 5 ER Index, sold US$900m (525 products), while the Citi Radar 5 Excess Return Index collected US$165m (155 products). The latters methodology is based on the idea that there is a relationship between the prevailing interest rate environment in the United States and the relative performance of different sectors of the U.S. equity and Treasury market. It aims to maintain a volatility target of five percent. Like Goldman and JPM, almost all products linked to Citi's indices were targeted at investors in the US, but there were also some seen in Brazil, South Africa, and Thailand.

A total of 14 different indices from Morgan Stanley were used in 715 products that sold US$960m. This figure included US$515m invested in around 500 products linked to the Morgan Stanley MAP Trend Index, which combines a risk-weighted approach to portfolio construction with a momentum-based asset allocation methodology to construct a notional portfolio. It has a target volatility of five percent and was used in the US market only. A version of the index with a six percent target volatility sold an

Strategy indices: top index providers by market share 2019-2022

INDEX PROVIDER	ISSUANCE	SALES USDm	MARKET SHARE (%)
STOXX	2,353	14,958	50%
S&P Dow Jones	1,757	3,593	12%
Solactive	469	1,816	6%
MSCI	148	497	2%
FTSE Russell	73	424	1%
MerQube	376	329	1%
Proprietary custom index	4,379	7,934	27%
Other	135	356	1%
Total	**9,690**	**29,907**	**100%**

Proprietary/custom indices: top 10 by market share 2019-2022

CUSTOM INDEX	ISSUANCE	SALES USDm	MARKET SHARE
GS Momentum Builder Multi-Asset 5S ER Index	454	1,020	13%
Citi Dynamic Asset Selector 5 ER Index	527	901	11%
JP Morgan Efficiente Plus DS 5 Index	435	546	7%
Morgan Stanley MAP Trend Index	504	516	7%
GS Momentum Builder Focus ER Index	152	499	6%
Huatai Cycle Selected S1 Strategy Index	21	353	4%
HSBC Vantage5 ER Index	125	232	3%
Morgan Stanley Global Opportunity 9% Index	101	227	3%
JPMorgan Balanced Value Dividends Index	114	180	2%
Credit Suisse Swiss Equity Enhanced Call Writing Index	2	175	2%
Others	1,944	3,286	41%
Total	**4379**	**7,934**	**100%**

estimated US$100m from 45 products distributed by XP Investimentos in Brazil where also US$235m was invested in 108 products linked to the Morgan Stanley Global Opportunity 9% Index.

Two more indices from the bank targeted at investors in Brazil are the Morgan Stanley Brazil Large Cap 20% Index and Morgan Stanley Brazil Small Cap 17% Index, which are rule based, long-only strategy indices, that offer exposure to a basket comprising the 20 stocks with the lowest market capitalisation and the 10 stocks with the highest market capitalisation in the Ibovespa index, respectively.

Credit Suisse was the European bank with the highest count of strategy indices: 17. Its volumes totalled US$470m from 240 products that were sold across five different markets: South Africa, Brazil, USA, Sweden and Switzerland. The Swiss bank's main index was the Credit Suisse Global Equity Multi-Factor 10% Risk Control Index, which was used by Absa as the underlying for its Twin Fixed Return and Growth Protector series (US$115m from 110 products).

HSBC's Vantage5 ER Index, which aims to maximize returns for a given level of risk using Modern Portfolio Theory principles and the related concept of Efficient Frontier, gathered US$150m from 105 products issued in the US while a further US$80m (from 20 products) was collected in China.

China was also the sole market were the Huatai Cycle Selected S1 Strategy Index (US$350m) and Minsheng Bank Global Assets Rotation Multi Strategy Index (US$160m) were implemented while the BMO Global Smart Volatility Index, another index based on the Modern Portfolio Theory approach to asset allocation, was seen in Canada only (US$130m/95).

Other indices that caught the eye between 2019-2022 included Barclays Trailblazer Sectors 5 Index, which tracks a portfolio selected from a universe of 14 ETFs that provide exposure to US equity sectors or fixed-income assets, while targeting a portfolio volatility of five percent. The index was linked to 147 products that sold US$150m in the US market.

The NXS Climate Optimum Prospective VT USD Hedged Index was used as the underlying for a capital protected green bond issued on the paper of Natixis in France. The product was listed on the Luxembourg Stock Exchange for an issued amount of US$65m.

BlackRock's Dynamic Factor Index was another index exclusively seen in the US market where it accumulated US$60m from 100 products while Unicredit's strategy indices were targeted at investors in the German and Eastern European Markets where they collected a combined US$95m from 32 products. Unicredits offering included the HVB Global Water Risk Control 6 Index, which reflects an investment in the base index, the S&P Global Water Price Index. It was only used once on the SRP database, in a product launched by Allianz in the Czech Republic (US$7m).

Strategy indices 2019 - historical market share of the top 10 '2022

INDEX	SALES USDm	MARKET SHARE (%)
Eurostoxx Select Dividend 30	4,038	39%
S&P Economic Cycle Factor Rotator Index	890	9%
GS Momentum Builder Multi-Asset 5S ER Index	561	5%
Stoxx Global Select Dividend 100	537	5%
S&P/TSX Composite Low Volatility Index	531	5%
DivDAX Price Index	472	5%
JP Morgan Efficiente Plus DS 5 Index	421	4%
Morgan Stanley MAP Trend Index	231	2%
Citi Dynamic Asset Selector 5 ER Index	224	2%
HSBC Vantage5 ER Index	210	2%
Others	2319	22%
Total	**10,433**	**100%**

Strategy indices 2020 - historical market share of the top 10 '2022

INDEX	SALES USDm	MARKET SHARE (%)
Eurostoxx Select Dividend 30	3,490	44%
Stoxx Global Select Dividend 100	949	12%
GS Momentum Builder Multi-Asset 5S ER Index	362	5%
S&P 500 Value	254	3%
Russell 1000 Value	231	3%
S&P/TSX Composite Low Volatility Index	229	3%
DivDAX Price Index	187	2%
Citi Dynamic Asset Selector 5 ER Index	187	2%
Solactive US Pharma 10% Risk Control 3% Decrement Net EUR Index	131	2%
S&P Economic Cycle Factor Rotator KRW Hedged Index	123	2%
Others	1,818	23%
Total	**7,962**	**100%**

Strategy indices 2021 - historical market share of the top 10 '2022

INDEX	SALES USDm	MARKET SHARE (%)
Eurostoxx Select Dividend 30	1,672	28%
Huatai Cycle Selected S1 Strategy Index	353	6%
Citi Dynamic Asset Selector 5 ER Index	237	4%
Stoxx Global Select Dividend 100	204	3%
S&P/TSX Composite Low Volatility Index	192	3%
Eurostoxx Select Dividend 30 TRN Index	175	3%
S&P 500 Value	153	3%
MerQube US Tech+ Vol Advantage Index	148	3%
DivDAX Price Index	114	2%
Solactive BBVA ixESG Lideres Globales MXN Risk Control 10% Index	110	2%
Others	2,530	43%
Total	**5,888**	**100%**

Strategy indices 2022 - historical market share of the top 10 '2022

INDEX	SALES USDm	MARKET SHARE (%)
Eurostoxx Select Dividend 30	2,269	40%
GS Momentum Builder Focus ER Index	432	8%
Stoxx Global Select Dividend 100	329	6%
Citi Dynamic Asset Selector 5 ER Index	253	5%
Eurostoxx Select Dividend 30 TRN Index	182	3%
Morgan Stanley MAP Trend Index	157	3%
Leonteq Nordic Corporate Bond Fund 2% RC Index	142	3%
S&P 500 Low Volatility High Dividend Index	92	2%
S&P 500 Daily Risk Control 5% ER	80	1%
MerQube US Tech+ Vol Advantage Index	74	1%
Others	1,614	29%
Total	**5,625**	**100%**

THE INDEX STANDARD

RATINGS
FORECASTS

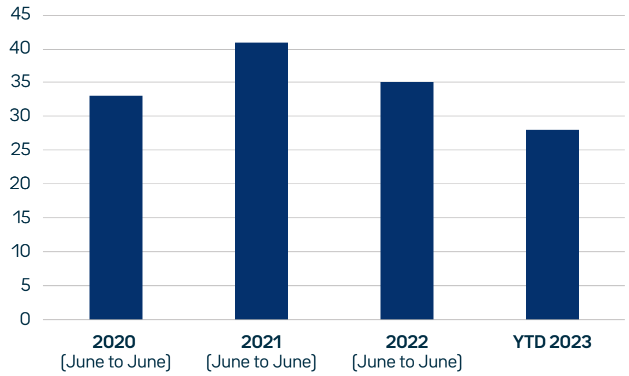
Insights and clarity to help you better serve your clients

The Index Standard®

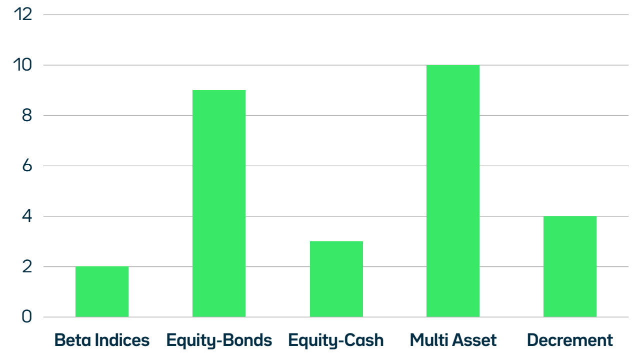
Index Annuity Market Review 2023

Over the past year, 28 indices have been launched compared with 35 in the previous period. We are seeing an increase in innovation and sophistication in these new indices, reflecting the dynamic needs of carriers.

Number of Indices Launched (June to June)



Number of Indices Launched (June to June)



Launching an index in an annuity chassis is costly and time-consuming, and carriers are now also very selective when adding an index to their platform. Note we are examining June to June periods, as there is a lag between when indices are launched and their appearance in products.

A key trend this year has been to devise novel strategies to navigate the challenges posed by high prices. One notable development is the introduction of indices that can go short or incorporate sub-indices with short positions (a short position allows the holder to profit as the price of the asset falls).

This innovation enables investors to benefit from downward market movements and provides a hedge against overvalued securities. Previously, many industry participants doubted whether end purchasers would comprehend the intricacies of shorting in indices, but this skepticism has been overcome, signaling a shift in market perception.

A concept fresh to the insurance space has emerged this year in the form of decrement indices. This draws inspiration from the well-established practice in Europe of extracting a pre-determined drain from an index to enhance option pricing. Some indices have also implemented variable decrement fees based on momentum, although the long-term viability of this trend remains uncertain, given the substantial rise in interest rates and credit spreads. The key trend in the previous year was the launch of intra-day risk control indices.

For the last few years, five percent has been the sweet spot for the target volatility level with about 70% of newly launched indices at this target volatility. However, with the rise in yields, in the last year only 50% of indices have been at the 5% level, with the other newly launched indices having higher volatility targets ranging from six percent to 12.5%.

The Index Standard classifies risk control indices into three main categories: multi-asset, equity-bonds, equity-cash, beta indices (primarily designed for RILAs) and decrements. This taxonomy provides a comprehensive framework for understanding the various types of risk control indices and their respective market dynamics.

As in the last few years, multi-asset and equity-bonds remained the most popular types of indices launched.

Finally, there has been a discernible and consistent preference of index designers for US exposure, with about 64% of indices with exposure to US underlying's. This proportion is roughly the same as over the last few years, reflecting the home-market bias and the impressive performance of US assets compared to international markets.

As we look ahead, we think there will be continued advancement in index designs that can adapt to changing market conditions and add differentiated features to various annuity chassis.

TIS Ratio

Benchmark vs risk control

The Index Standard has released a new functionality aimed at creating an apples-to-apples comparison of raw index performance for FIAs.

The Problem

Fixed indexed annuities (FIAs) offer an attractive combination of principle protection with participation in upside performance of an underlying index. Over the last decade there has been huge growth in the number and variety of custom risk control indices specifically designed for use in FIAs. But comparing these indices presents a problem.

Given that FIAs floor index returns at zero, feedback from our clients highlighted that the usual historical measures of raw index performance, such as average annual return, volatility, drawdown and Sharpe ratio, are not directly applicable. This is because these measures include downside performance. Furthermore, FIA "par" rates, which determine the participation in upside performance, vary considerably. This is mainly because index option costs vary.

As a result, investors and financial professionals struggle to make meaningful performance comparisons between familiar benchmarks and custom risk control indices used in FIAs.

To solve this problem, The Index Standard has developed a new measure that captures just the upside performance of an index and compares it to the cost of the corresponding call option. This measure enables direct comparisons between any type of index in the context of FIAs. We call this the TIS Ratio.

The TIS Ratio

The TIS Ratio measures the realised performance of a one-year call option on an index compared to the estimated mid-market cost of that option. The TIS Ratio is calculated for each day in the history of the index. For the option cost we use the Black-Scholes model.

For a given day, a value of the TIS Ratio greater / less than one means that the option paid off more / less than its estimated mid-market cost, respectively. A value of zero for the TIS Ratio means the one-year index performance was negative, so that the call option paid nothing.

To see how the TIS Ratio can be used, imagine an investor has a budget of $100 to spend on a one-year index call option. The TIS Ratio measures the historical realised payoff of the option per unit of option cost. The $100 budget multiplied by a historical average value of the TIS Ratio for the index therefore gives a historical idealized average result of the $100 investment in a one-year call option on that index.

In the context of an FIA, the participation or "par" rate for a particular index is in principle just the amount the insurance company has available to pay for the index option (the "option budget") divided by the cost of the option. This is like the $100 budget example above. When comparing different indices used in one-year call options in FIAs, the TIS Ratio therefore automatically accounts for different idealized par rates. In this way, it is an "apples-to-apples" measure.

BVR: Benchmark vs Risk Control

The Index Standard has calculated historical average values for the TIS Ratio for each of the 10 semi-annual periods from 2018 H2 to 2023 H1 for a large set of risk control indices used in FIAs, as well as for a benchmark for US large-cap stocks. For each index, we have used only historical data strictly after the index "live" date. This means we have not included any indices launched since January 1st, 2022.

Figure 1 shows the 10th, 50th and 90th percentile values of the average TIS Ratio from the risk control indices, versus the average TIS Ratio for the US large-cap benchmark, for each semi-annual period.

We see a wide dispersion in risk control index performance, both among risk control indices and compared to the benchmark. We also see that the post-Covid rally in US equities lead to very strong performance of the US large-cap benchmark versus risk control indices. In 2019 H2 and 2020 H1, the risk control indices out-performed the US benchmark. In 2022 H2 all indices struggled, as both equity and bond markets sold off.

For FIAs, we see that judicious choice of risk control indices can lead to higher credits compared to those from benchmarks. Equally, poor selection can result in minimal returns.

Figure 1: Average TIS Ratio

Source: The Index Standard

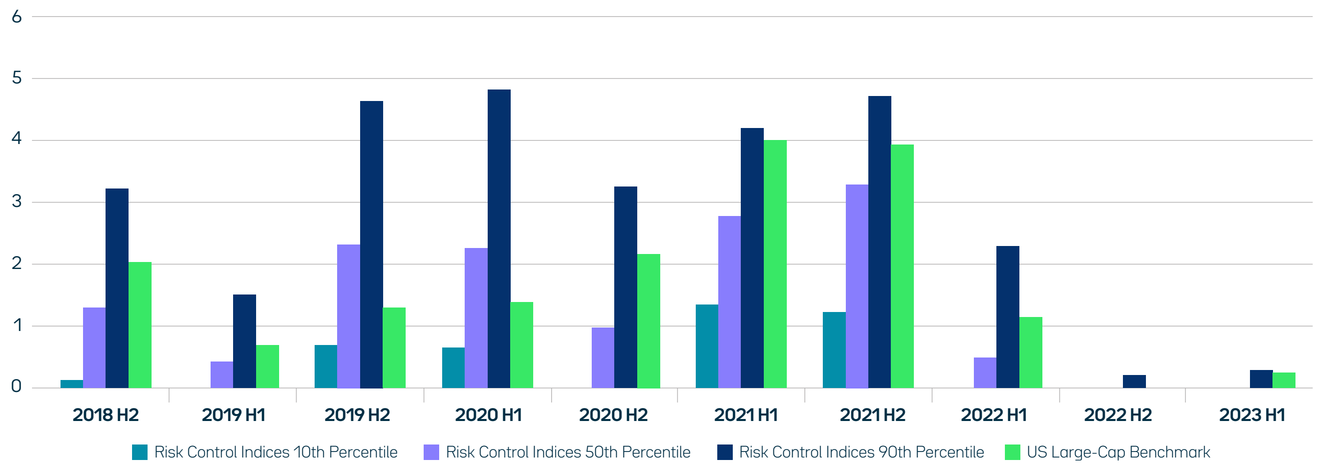


Table 1 shows the percentage of risk control indices for which the average TIS Ratio exceeded that for the US large-cap benchmark, for each semi-annual period and also for the overall five-year sample period. The overall average value is 31%, but shows significant variation through time. We see that, in general, it has been hard for risk control indices to out-perform the US large-cap benchmark. This is similar to the difficulty active managers have in persistently out-performing their benchmarks.

Summary

The TIS Ratio is designed to enable an "apples-to-apples" comparison of historical raw performance for all index types used in FIAs. It provides a measure of return versus cost which enables risk control indices to be directly compared both with one another and versus benchmark indices.

We see that over our 5-year sample period, risk control indices out-performed the US large-cap equity benchmark in one-year call options, averaged over a half-year, in 31% of cases. This is a respectable number when compared to mutual funds' performance, and also given the very strong performance of US large-cap benchmarks over the last decade, driven by the technology sector.

The Index Standard developed the TIS Ratio as a response to client feedback regarding the insufficiency of traditional metrics when considering FIAs. We believe this is a useful lens through which to view risk control index performance, and we seek industry feedback. We plan to publish regular reports measuring the performance of indices using the TIS Ratio, and to apply the TIS Ratio concept to indices used in structured products too.

Table 1

Source: The Index Standard

PERIOD	NUMBER OF RISK CONTROL INDICES CONSIDERED	PERCENTAGE OF RC INDICES FOR WHICH AVERAGE TIS RATIO EXCEEDED US LARGE-CAP BENCHMARK AVERAGE TIS RATIO
2023 H1	139	16%
2022 H2	126	20%
2022 H1	114	28%
2021 H2	102	28%
2021 H1	86	16%
2020 H2	75	27%
2020 H1	70	71%
2019 H2	60	70%
2019 H1	58	34%
2018 H2	50	36%
Overall Average	**All of the above**	**31%**

MerQube

New providers are driving efficiencies and cost reduction on custom underlyings

MerQube is one of the latest entrants to the structured products market and has established one of its strategies - the MerQube's US Tech+ Vol Advantage Index - as one of the highest selling thematic indices in the US market.

The index has featured across 246 products issued via J.P. Morgan in the US worth US$74m in 2022. MerQube has also collaborated with UBS after being appointed by the Swiss bank as the calculation agent and administrator of the UBS Constant Maturity Commodity Index (CMCI) range.

Founded as a next generation indexing provider with a particular focus on the annuities and insurance space, MerQube's full-service index administrator offering includes index development tailored to unique investment objectives, cloud-based indexing and distribution platform, multi-asset dynamic risk-control mechanisms with real-time implementation as well as global data coverage and custom data integration.

Since its launch in 2019 MerQube has developed a full range of indexes including equity baskets as well as decrement, risk control and thematic indexes such as the MerQube Defined Protection Indices, MerQube Single Stock TR indices, MerQube AI for Alpha Multi Asset VT Core, MerQube Vol Edge or the MerQube Reverse Convertible Indices.

The firm has also partnered the investment banks supporting the business to develop new custom indices such as the Citi AI for Alpha Multi Asset range; the UBS CMCI Sustainability, UBS Multi Asset Inflation Aware and UBS Global Intraday Trading Indexes; the MerQube US Large-Cap Vol Advantage Index and MerQube US Tech+ Vol Advantage Index which were developed with J.P. Morgan; and the MerQube XP Multi Asset 6% VT Index which was developed with Brazil's XP Banco.

"Our focus on the structured products market is driven by some of the investors backing MerQube," says MerQube's CEO Vinit Srivastava.

"At the moment probably 90% of what we do falls in the investment bank bucket and 80% of our revenue comes from structured products, which is obviously something that we intend to grow."

MerQube's focus on technology is aimed at addressing client needs in relation to speed to market and the ability to build complex strategies that use diverse data sources.

"The ability to put all those pieces together in a fashionable amount of time gives us an edge as this is not core for the major index providers which are more on a brand path," he said.

"It is not in their nature to chase a new index because an investment just thinks that they can do really well with it. This is why product providers like JPM, Morgan Stanley or UBS are backing us. We can deliver solutions to their product development needs."

The firm's chief commercial officer Roby Muntoni noted that MerQube has onboarded 1,100 indices in three months, including two families and two additional subsets.

"Once you build the core index, we can slice and dice very fast and very efficiently, and put it in the market," she said.

"We have created sector indices from our US large cap benchmark, and we have done it in Europe with Eurozone sectors. We don't compete with the big index providers on providing broad indices but we can leverage our technology to introduce overlays and take advantage of the shift away from the one size fits all approach by offering a customised exposure to the market."

A good example of this approach is the MerQube Vol Advantage Indices which has been used by J.P. Morgan in its structured products and was launched in collaboration with the bank within eight weeks – this risk control strategy uses futures and one-week VIX equivalent to calculate the implied volatility on an intraday basis.

Do you see QIS trickling down to the retail market further?

Srivastava: Very much so. Intraday kind of strategies which have been developed since late 2015 onwards, were strategies use within the banks realm, but they are getting

> New players are bringing value to the market and driving efficiencies and cost reduction to providers and investors
>
> **Roby Muntoni,** chief commercial officer, MerQube

more and more mainstream even in the retirement space where MerQube has launched three UBS branded underlyings.

There is demand for this kind of index in the annuities space which is a growing part of the market because the funding that an insurance company can provide is actually much higher than what investment banks can provide, so, there is much more to play at a product development level.

The need for complexity has grown but the current rates are also fuelling activity around vanilla s&p 500 products which are still selling a lot more than fixed income type of products. We expect budgets to remain tighten and we think multi asset indices will price better than vanilla indices.

Are investors shifting their focus to new custom and strategic indices?

Muntoni: In the early 2000 the S&P 500 had 95% of FI space but with the explosion and diversification of indexing that 95% has gone down significantly to around 70%.

This means new players are bringing value to the market and driving efficiencies and cost reduction to end investors. You don't get that in a monopoly where whoever owns the space dictates the price. Competition is fierce and that is a benefit to the investor. Index providers are generally vehicle agnostic and we develop strategies that fit many vehicles - mutual fund ETF collective trust structured products. It becomes a time to revenue for an index provider, particularly smaller index providers like us.

What other elements of your offering are giving you an edge to develop new underlyings?

Srivastava: Data is one of our biggest edges. We have great tech to put things together. But a big part of it is how we ingest and process data in real time. Data is critical to how we operate and the tech enables us to process significant amounts of data.

The introduction of NLP has opened opportunities to develop new strategies and systematic indices. There are four or five different players that we have talked to that have moved to AI to do their sector classification and stock selection, and most recently asset allocation. It's a growing part of the market and will be beneficial for index providers.

Do you think there is scope for further growth around custom underlyings?

Muntoni: This is an area of growth for us. The overlay game now is definitely a big one - risk control and decrement are defensive layers which fit well with certain types of investors and products. Once you build the core index, you can add layers and tilts and with our technology we can make it extremely simple.

This is absolutely relevant to us and we can help investment banks to build new strategies and leverage our technology to take the complexity out of it.

Srivastava: From an end investors perspective, you can certainly go down the path of over engineering things. But in general we see a shift towards democratising investing as you can see what were considered complex rotation and factor strategies being adopted by retail investors – as people get more savvy they realise that there's no complexity to volatility control. It is a very simple concept.

Markets are getting much more complicated and you have derivatives that are designed to hedge your risk, and when you embed derivatives in a strategy, you are trying to achieve an outcome. Our goal is to make it simpler and easier to achieve those outcomes in an index form.

On the product side, we have also developed building blocks available with futures trackers which have both intra-day and end-of-day fixings – these include the MerQube Rolling Futures Rapid Response 15% Volatility Target Index which measures the performance of a strategy that targets a 15% level of realized volatility by dynamically varying the weight in the Rolling E-Mini S&P 500 Futures Tracker; UBS Bond Futures Trackers; and MerQube US Technology Rolling Futures Index (TWAP) which replicates a hypothetical portfolio of a series of long positions in the eMini Nasdaq100 (CME) Futures.

Solactive

SOLACTIVE
German Index Engineering

Demand for customisation is high in the US FIA market

Solactive increased its visibility as an active provider in the strategy and custom index space following a partnership with Goldman Sachs in mid-2020 to replace Motif Capital as the calculating agent and administrator for three families of indices - National Defense, Aging of America and Artificial Intelligence.

Since then, the German index provider has increased its visibility as a third-party calculating agent for other custom and quantitative investment strategies (QIS) sold in the structured products market. "We do already more [QIS] than thematic indices but very often you don't see that because we are just the calculating agent for some of the very large banks," said Solactive's chief markets officer Timo Pfeiffer.

"They launch a quant strategy, and they need to trade a swap with a pension fund, and they need somebody to calculate the index which Solactive does on the back end. These QIS are often institutional strategies."

When it comes to the strategy and factors space, the index provider has seen a comeback of value since the beginning of 2023, "mostly minimum volatility factor strategies, but compared to thematics and ESG it is still relatively small".

Solactive launched a factor family about a year ago to respond to demand for new building blocks, and ingredients to develop multi factor rotation strategies.

"This year, we have looked at minimum volatility and we've done research on minimum downside volatility or MDV," said Pfeiffer. "What we effectively do is to penalise negative returns and calculate the volatility, your risk, based on that.

"It's a more conservative approach. Effectively, you don't care about volatility when the market is going up. It's a different way to look at that factor. It works well, tracks the upside but it is more conservative when the going gets wrong."

According to Pfeiffer, this strategy also fits well in principal-protected structures. "A year ago, it would not have been possible because of the lower rates environment," he said.

US annuities

Pfeiffer notes that the fixed index annuity (FIA) market is growing fast and has become an area of growth where demand for customisation is high.

"We see demand for risk control features and multi asset strategies. The minimum downside volatility is exactly the kind of index you can see in the FIA space [which is based on a] protected insurance wrapper and conservative exposure to the market," he said.

"We are becoming increasingly active and focusing on the segment by providing some of our research, own ideas around indexing. This is a distribution game, and you need a narrative that resonates with the investor."

Performance

According to Pfeiffer, the 'what's your best performing index?' question pops up in many meetings with clients and prospects.

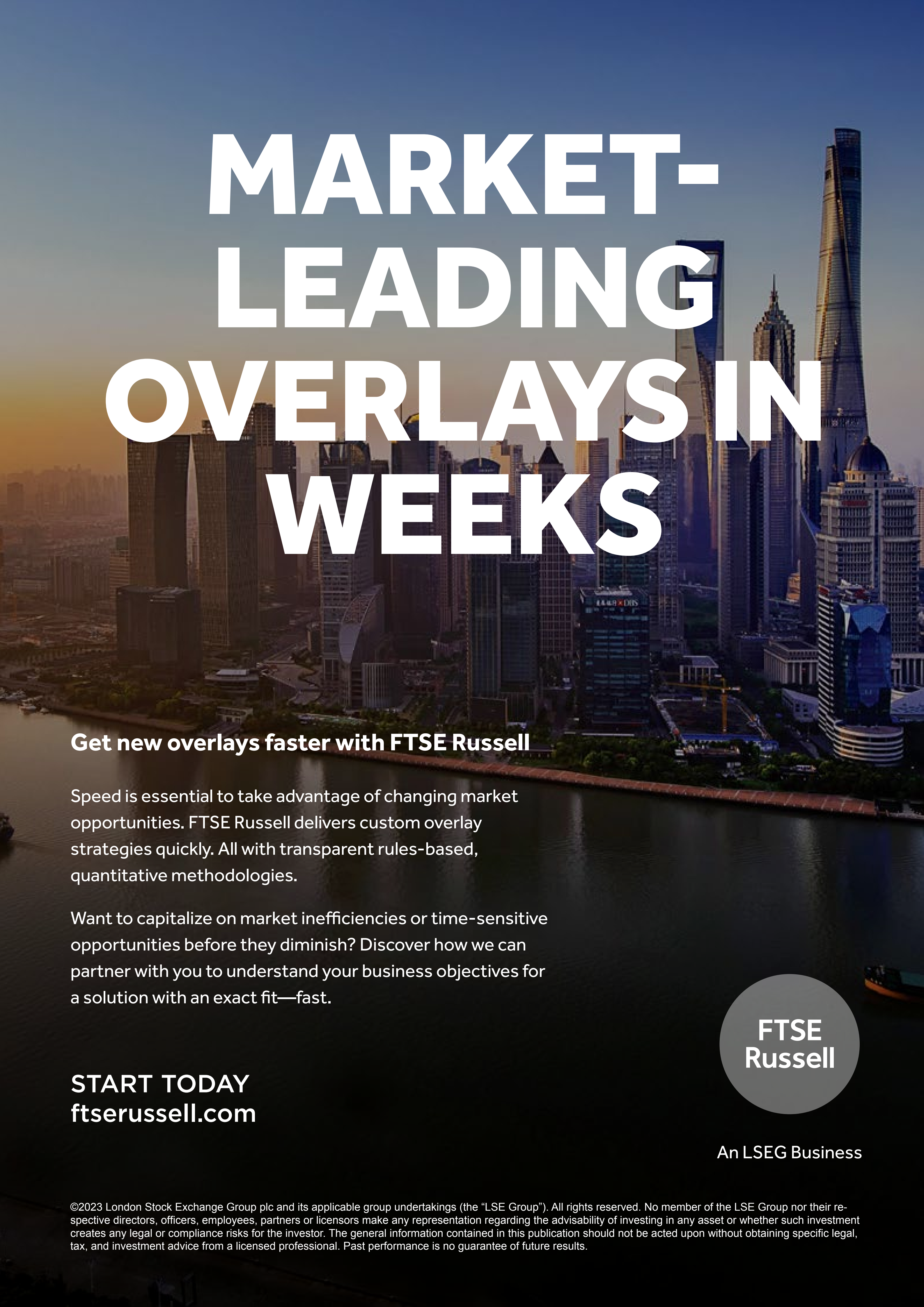
"The answer is, I don't know," he said. "We have indices on 5x Tesla long and 5x Tesla short – depending on the day, either of the two indices is going to be the best performer. I don't know whether Tesla long or short is a good idea, but I'm calculating the index."

Pfeiffer believes it is very helpful as a business to understand what's happening downstream in the ecosystem to better understand "our clients and their clients".

"That will help me proactively develop better, more suitable strategies," he said. "That brings a different responsibility than just saying it's five times long and five times short. I don't need to know more."

Particularly from an overlay perspective (decrement/risk control features), index providers can effectively provide any decrement level required, but "that's not the right thing to do".

"We need to put a bit of sense to it so that it stays in line with the original dividend, and that it's generating a benefit for the investor," said Pfeiffer. "Officially, I'm just an enabler and I don't have that responsibility. But it helps if I understand my clients better. It helps me in making a better offering. Also, I don't need the regulator to come in and put suitability and appropriateness responsibilities for index providers, but that's a separate conversation."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FTSE Russell

FTSE Russell

The great US equity regime change

The index provider believes that timing the regime change between growth and value and allocating to style on a trend surfing basis can reap extra returns to investors.

FTSE Russell's market share in the strategy & custom index space, albeit small, has remained steady over the last two years and was achieved on the back of products sold in the US market linked to either the Russell 1000 Value or Russell 2000 Value which sold a combined US$425m.

Daniel Yang, head of synthetic index investments at FTSE Russell, spoke to SRP about how long-term US equity performance can be broken down into two distinct investment styles, growth and value, and the findings of recent in-house research on this topic.

"We may be witnessing a historic shift between the two style regimes," said Yang. "Often, investors tend to focus on one style or the other. US equity funds, for example, are often labelled 'growth' or 'value' to indicate the managers' preferred approach."

FTSE Russell's Russell US Style indices were launched in 1987 to provide US equity investors with accurate benchmarks for measuring the growth and value segments. In fact, the Russell Growth and Value index histories go back to the late 1970s, "providing us with a rich source of data to analyse", said Yang. The Russell 1000 Growth index and the Russell 1000 Value index are complementary. They add up to the Russell 1000 index, which is professional investors' preferred benchmark for US large-cap stocks.

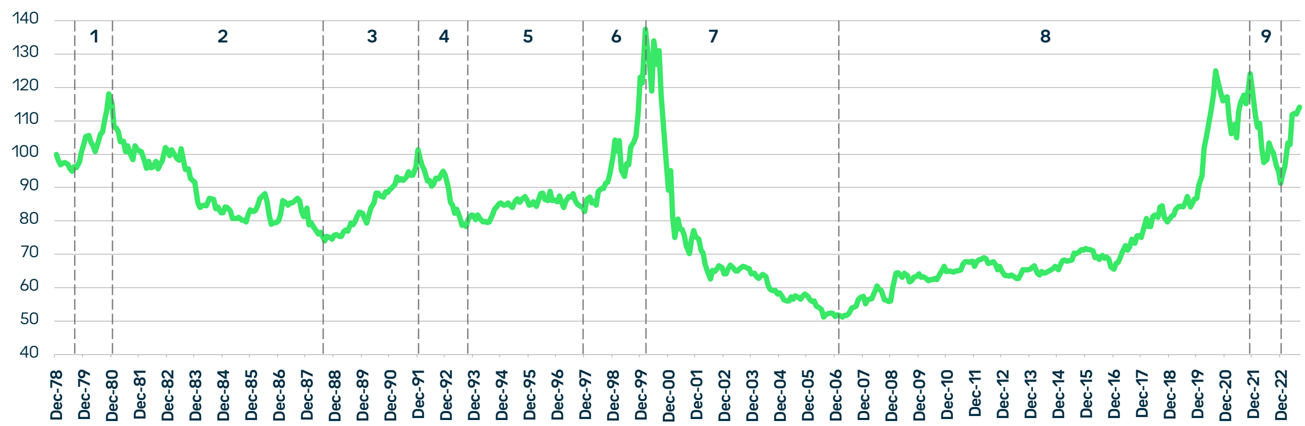
What's the difference between growth and value?

In simple terms, growth stocks are those expected to produce higher long-term growth in earnings than the market average. Higher expected growth is often reflected in higher price/earnings (P/E) ratios and low or no yield—as growth companies often reinvest their earnings internally rather than paying them out as dividends. Value stocks are growth stocks' alter ego. They are stocks that are cheap relative to the market as a whole. Value could be measured by the ratio of the share price to book value, the ratio of the share price to earnings or the dividend yield.

How often is there a 'regime change' between growth and value?

My colleague Ryan Giannotto has recently published two papers on this topic. In his research he studies nine distinct

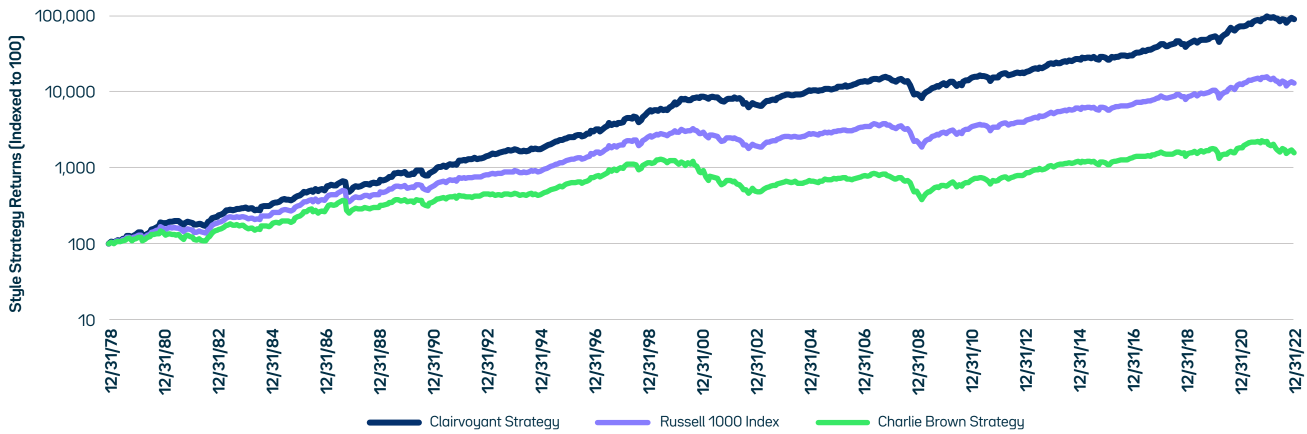
Nine distinct growth/value regimes since 1978



Depiction of Russell 1000 Growth Index total returns divided by Russell 1000 Value Index total returns, parity set to 100 with an inception date of December 31st, 1978. Upward Trends indicate strong growth performance, downward trends reveal strength in value. In total we observe 9 distinct cycles of styles returns.

Source: FTSE Russell, December 2022

The clairvoyant and Charlie Brown strategies



Timeseries analysis of successful and unsuccessful allocation to growth and value styles. Clairvoyant strategy refers to the consistent selection of the outperforming style trend, and the Charlie Brown timeseries denotes allocation to the underperforming style regime.

Source: FTSE Russell, December 2022

growth and value investment regimes between December 1978 and the end of 2022. You can see them in the chart, where we show the ratio of the Russell 1000 Growth total return index to the Russell 1000 Value total return index. The chart is rebased to 100 in December 1978.

When the green line is rising, growth stocks are outperforming value stocks. When the green line is falling, value is doing better than growth. The vertical dotted lines indicate the points in time where there's been a shift between the growth and value regimes—these are the moments of regime change.

Since 1978, there have been five growth regimes for US equities (labelled 1, 3, 5, 6 and 8) and four value regimes (labelled 2, 4, 7 and 9). We've distinguished two successive growth regimes (5 and 6) because the run-up to the 2000 stock market peak (regime 6) was so unique.

We're currently in regime 9. Since the end of 2021, value stocks have started to outperform growth stocks again, although in 2023 to date (which is not shown in the chart) growth has temporarily done better than value again.

Why should investors pay attention to these distinct styles?

US equities have been a fantastic investment over the last 45 years: the Russell 1000 index has given a total return of 128 times (12,800%) between 1978 and 2022.

If you can time the regime change between growth and value, you can reap handsome extra returns. But if you're investing in the wrong style at the wrong time, you can lose a lot of your equity gains.

If you had invested with perfect timing, switching out of growth and into value at the end of regimes 1, 3, 6 and 8—and from value back into growth at the end of regimes 2, 4 and 7—you'd have made a total return of an incredible 897 times (89,700%)! We call this the 'clairvoyant' strategy in the chart above.

If you'd had perfectly bad timing, though—we call this the 'Charlie Brown' strategy in the chart—your gains over the 44-year period would have been only about an eighth of the overall equity market's return. Of course, we can't expect to time such regime changes perfectly. But it's worth being aware of the scale of the potential return differences.

Which other market segments play a role in driving equity returns, and how can we exploit them?

So far, we've made comparisons of the value and growth styles using the Russell 1000 Value and Growth indices. But there are many other equity indices within the FTSE Russell range that embed similar characteristics.

Equity factors like quality, size, value, momentum, volatility and yield are systematic drivers of equity market returns from which there is ample academic support. We're seeing this in play now with megacap outperformance in recent years, which has disrupted the customary return differences between large cap and small cap equities.

The need to navigate these factors a decade ago led us to innovate with partners, such as Invesco and Research Affiliates, to design indices that reflect the performance of these systematic strategies. Using these, along a wide range of asset class indices allow us to efficiently engineer the next generation of indexes suited for the needs of our partners.

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Broad range of index families with a flexible framework

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Diverse and innovative data sets used for stock selection

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White-labelling is a growing business

Armelle Loeb, head of index sales for Emea at STOXX, talks about the evolution and appeal of custom and factor-based indices, and why custom income strategies have delivered good performance.

"We are seeing more demand for customized strategies built around our benchmarks, dividend and thematic indices," said Loeb. "Outside of our traditional STOXX products, we work with clients to develop specific, tailored solutions under the iSTOXX and idDAX brands, as well as white label indices for banks' quantitative investment strategies (QIS)."

On the QIS side of things, the index provider has included "some very innovative products, where we can provide indices solely as calculation agent or also as administrator".

"Even when the methodology is developed by the bank, some end clients find comfort in having the entire calculation managed by an independent party," said Loeb. "For us at STOXX, white labelling is a large and growing business, and having a flexible client approach and an open architecture for third-party data is essential."

Where is demand for customisation coming from?

There is a very wide range of white label indices, from equities to multi-asset. And here we have seen demand for factor-based approaches, as well as for volatility target and options-based indices. Many indices are derived from flagship STOXX benchmarks, where clients can rely on deep and liquid derivatives trading around them.

To be sure, dividends continue to take up the lion's share of the strategy segment. We introduced our first Select Dividend index, the EURO STOXX® Select Dividend 30, 25 years ago – one of the very first solutions launched as STOXX itself was created. The index still ranks year after year as the most tracked strategy index by structured products in the world. The Select Dividend family remains extremely popular and indeed leads in the industry in terms of market share."

Can you provide examples of recent strategy indices you have developed?

Issuers have been quite busy with new strategies, and we have worked closely with them. It is often the case that the structured products industry is not the first to pick a trend, but rather you often see it first in the ETFs and asset-owner mandate segments. There has been demand for our newest suite of STOXX Factor indices from those two industries, so we expect this to enter the structured products segment. The STOXX Factor indices target proven sources of market risk and excess returns, while managing exposure, liquidity and risk characteristics to provide an efficient approach to factor investing.

There has also been very good reception to our new STOXX World indices, which allow investors to slice and dice the world's equity markets in a modular way, with a consistent methodology and international standards, and implement any desired factor, sustainability or thematic strategy around them.

A large UK asset manager last year licensed the iSTOXX® World Min Vol ESG index for a pension fund mandate. I expect to see structured products issued on this new index suite."

There has been a massive influx of decrement and there is talk of a return of risk control. Is this an area of interest?

Yes. Almost all client requests we get for structured products include a decrement. And risk control is a frequent topic too. STOXX introduced the market's first decrement index in 2014, and we have offered risk-control strategies for over a decade, supporting investors who want to manage risk and try to avoid the worst of market swings. Decrements have proved to be a total success, after initial resistance from some issuers and regulators.

As product issuance grows within more sophisticated and complex strategies, it underpins continuous demand for decrements, and increasingly for risk control too.

This year we introduced an exclusive suite of clean-energy thematic indices for Citi that included both decrement and risk control versions to suit the end investor's needs. Issuers are well aware of what investors want, and the need to control for volatility and provide protection continues to be front and center.

MSCI

Economic Regime Allocator Indexes

Suite of indexes to adjust your exposure to market cycles based on four economic regimes: Stagflation, Heating up, slow growth and Goldilocks.

SCAN TO READ MORE

MSCI

No room for black-box despite growing appetite for new approaches

The craze around strategy and customised indices in the US annuities market and beyond has not gone unnoticed for MSCI.

The index provider entered into a collaboration agreement with Salt Financial, a provider of risk-focused tools and index design for retirement solutions and investment management, to create risk-controlled index solutions for insurance companies using Salt's patent-pending truVol Risk Control Engine (RCE).

In early July, MSCI partnered with US alternative data specialist QuantCube Technology to integrate real time macro-economic data into the new MSCI Economic Regime Allocator Index, a new index series which include US and world versions as well as optimised risk control options of five and 10% aimed at structured products allocates assets into different exposures based on a pre-determined set of rules.

"There is certainly significant activity around custom indices in the structured products market," said Stephane Mattatia, managing director, head of index products for Europe, Middle East and Africa and global thematic index products at MSCI.

"What we see is that QIS desks are happy to calculate their own indices, but they also come to us to license our universe of indexes, or our factor and ESG data."

MSCI does not see QIS indices developed by investment banks as competition for its own index offering.

"QIS desks would use 100 indexes to create a very sophisticated base index," he said, noting that the most recent launch – the MSCI Economic Regime Allocator Index – for instance, offers "a more straight forward approach for investors seeking a long only position in their portfolios that will adjust to the market environment and the economy".

MSCI has licensed its MSCI ACWI universe to several investment banking QIS structuring desks "which then used their algorithms to develop new strategies".

"Our relationship with QIS desks is about supplying our data and indices more than developing and creating the indexes," said Mattatia.

Regarding the use of QIS in the retail market, Mattatia notes that there is always a risk of conflict of interest and issues around the complexity and transparency of the strategies.

"Retail investors don't like a black box approach even if the product is sold as a hedge fund substitute for retail clients," he said.

However, demand for customisation continues to increase opening new opportunities across markets. "We are having discussions with annuities providers, but we have also received interest from private banks in APAC," said Mattatia.

The development of new custom indices represents 95% of our work with structuring desks. We usually release a standard version as we have done with the MSCI Economic Regime Allocator Index and then we get queries from structuring desks about different parameters and signals."

Many of the requests are aimed at modifying and optimising existing strategies but the index provider also receives "very clever questions from structurers who look at different angles to customise exposures", according to Mattatia.

"This is very healthy for the market and also from an index development perspective because it allows us to consider new ideas and improve the strategies underlying new products," he said.

Black-box

MSCI approach towards strategy indices is reactive and "will develop them as long as they reflect the view of a clients".

"We don't push discretionary strategies or try to replicate the job of portfolio managers and investment advisors," said Mattatia. "We have limits in terms of what we can bring to the market."

On the factor side of things, however, there is growing appetite for new approaches as well as factor rotation. Factors require a different approach because there is a risk of misleading investors as we saw with smart beta which were pitched as strategies that would always outperform the market.

HSBC

QIS can provide a hedge in the current inflationary environment

HSBC is one of the most active providers of custom indices to the structured products market across regions.

Over the last few months the UK bank has focused on deploying AI powered underlyings including the HSBC AI Powered US Equity Index (AiPEX), HSBC AI Powered Global Opportunities Index 8% Volatility Controlled (AiGO8), HSBC AI Global Tactical Index (HSBC AIGT), HSBC AI Powered Multi-Asset Investing Indexes (AiMAX) and HSBC ESG Risk Improvers Index.

Systematic strategies and proprietary indices have become popular in the structured products market over the last few years, according to Romain Benvenuto, global head of QIS structuring, as they can contribute to improving the pricing of products and enable investment banks to deliver rules-based investment products aimed at outperforming benchmark indices equivalent.

“They can also provide exposure to factor-based strategies, which have historically delivered a premium over the long run,” he said.

2022 was a very interesting year because of the performance of the traditional 60/40 portfolio, and investors started to look for bond replacements and enhanced diversification.

“In that sense, QIS was very topical last year,” said Benvenuto.

“We saw a comeback of traditional QIS strategies like trend following and value, when the macro change - more inflation and higher rates - benefitted this type of strategy.

“We [also] saw renewed interest in trend following, value and anything that could replace the bond component and add diversification to the portfolio.”

Commodity Trading Advisor (CTA) strategies delivered very strong performance in 2022 which explains the increased demand as investor interest tend to follow performance.

In response to the demand in that space HSBC started to work on a “new transparent, cost-efficient investable CTA index for structured products” during the summer”.

“We see a continuation of what happened last year as rates and market volatility remain high,” said Benvenuto, noting that the challenges investors are facing remain, and that they are looking at changing their portfolio allocation, accordingly.

“We’re having very active discussions about the challenges in 2023 and helping investors to adapt their portfolios with our range of QIS strategies,” he said.

QIS for retail

Although every segment of the market has different needs, QIS can help both retail and institutional investors but when it comes to retail and private banking/wealth management investors, “it’s very important to be clear on the scenarios and investment outcomes”.

“We have some smart beta products on portfolios held by retail and private banking clients, mostly from clients who want to have diversification through different types of investment, but still want to preserve some equity beta,” said Benvenuto. “That’s why we tend to do more long-only or long-biased products for retail and wealth clients.

“If we look at institutional activity, the focus is more on market neutral / long-short and overlay protection strategies,” he said.

In the current inflationary environment QIS has also provided a hedge and has triggered new demand for different portfolio assets such as energy sector or inflation-linked treasuries, for example.

“We are mindful of investor needs for strategies that can adapt to the macro environment such as a macro indicator or macro strategies,” said Benvenuto. “We have a macro QIS yield curve product (HSBC METYS Index) that has been performing well and was sold in various tranches. The macro angle has become more important in the current environment.”

The bank also started to add AI-powered strategies to its QIS range. In 2023, the bank launched the HSBC ESG Risk Improvers Index, an AI powered ESG index developed in partnership with Arabesque AI and ESG Book; it licensed its HSBC AI Global Tactical Index to Ibexis Life & Annuity Insurance Company in the US for a fixed indexed annuity (FIA); and it also rolled out a set principal-protected participation

> Traditional QIS strategies like trend following and value returned when the macro change benefited this type of strategy.
>
> **Romain Benvenuto,** global head of QIS structuring

notes linked to its AI Powered Global Opportunities Index 8% Volatility Controlled in Asia.

According to Benvenuto, demand for AI powered strategies has increased as investor demand shifted towards thematic exposure.

"AI can be used to measure the performance of companies across different sectors but can also become a thematic in its own right," he said. "We have been focusing on artificial intelligence and NPL over the last four years as a way to help forecast stock returns and to allocate different asset classes to an index. We do see client interest and demand for this kind of index."

HSBC also partnered with MSCI to launch the MSCI Global Thematic Sentiment Rotation Select Index, which aims to represent the performance of the four highest ranked thematic indexes, selected quarterly from a set of twenty-two MSCI thematic indexes, including the MSCI ACWI IMI Ageing Society Opportunities Index, MSCI ACWI IMI Autonomous Technology & Industrial Innovation Index, and MSCI ACWI IMI Blockchain Economy Index, among other MSCI ACWI indexes.

The MSCI Global Thematic Sentiment Rotation Select Index was launched with a volatility control overlay.

Risk control

Demand for risk control globally remains high in the current environment alongside capital protected structures as investors seek to deploy the right call option on a range of strategies. The licensing of the MSCI thematic rotation index came alongside the Morningstar Exponential Technologies ESG Screened Target Volatility 7% Select Index which has been used by the UK bank in 43 structured products marketed in China.

"In the US, we have a whole range of QIS strategies as demand from the annuities market has increased over the last few years – investors and distributors are looking for innovation and diversification," said Benvenuto.

"With the recent rates increases, there has been a clear shift as investors move to take advantage of the rates environment via upside participation structures. Volatility control is a tool and feature that can be used to help achieve more efficient and protected exposure in the structured product space."

Strategic allocation

Innovation has brought some complexity around underlyings but Benvenuto notes that it is important to make a distinction between risk and complexity.

"It comes down to what the investment objective is. We spend a lot of time on illustrations to ensure that investors can see the performance of our indices throughout different market cycles," he said.

Due to the volatility in the bond markets, there is new demand for liquid alternatives from both the retail and the institutional side of the market.

"To some extent, some investors are rethinking their strategic asset allocation, given the current rates environment and macro trends - and obviously QIS can provide an alternative to hedge funds, for example," said Benvenuto.

"QIS can also provide tools that add overlays to protect and add diversification to portfolios.

"We are working on several partnerships to develop new indices, especially on the data side as we look to develop indices based on specific datasets. When you look at ESG indices, which are a core part of our QIS offering, you need to find the right data for the investment objective."

In this context, according to Benvenuto, it makes a lot of sense to partner with third-party index providers or data providers to develop new strategies with thematic overlays.

"The market has evolved from simple ESG screening to more targeted features so it is key to partner with the right providers to achieve this kind of targeted exposure and targeted investment outcome," he said.

According to Benvenuto, different markets have different drivers, but demand for QIS across markets and regions remains strong.

RBC Capital Markets

Sentiment, risk appetite are drivers of custom underlyings

The ability to slice and dice new datasets and capture market trends has fuelled the development of new underlyings which have captured the imagination of investors.

Mike Heraty, RBC Capital Markets' new head of US equity solutions and structured product sales talks about the drivers behind the increasing visibility of strategy and custom indices, the opportunities in the indexed annuity and structured notes markets in the US and the continued need for education and transparency around these strategies.

"We have seen it many times over the years," said Heraty. "Investors tend to gravitate towards trends that are visible to them like consumer technology but when a sector is either out of foot or in a challenging environment, there is a natural move back to broad based indexes."

According to Heraty, the use of custom underlyings also goes back to sentiment and risk appetite.

"That is what drives investors to single stock indices. But volatility also plays a role in the choice of wrapper - put it this way, if you're in an income product, and volatility is reasonably high, you can generate income using a broad-based index," he said.

"Now if you have a situation where mark to market volatility is extremely low then the income that can be generated using broad-based indexes is more limited. This gap has been filled by custom indices which can generate more income."

FIA/Rila tail winds

In the US insurance and indexed annuities market the growth of custom underlyings has been very well documented and responds to different reasons.

"Number one is differentiation as custom indices give carriers the ability to have something that is differentiated versus the competitors. That's part of the value proposition of these indices," said Heraty.

Secondly, there are two variables driving the annual renewal rates. On one hand volatility which will impact any broad-based index and on the other, interest rates "which sometimes can be a brick block".

"If the policyholder's experience isn't consistent after buying a product with 100% participation the next year the renewal rate will be 80%," said Heraty.

"With custom indices you can deliver a more stable performance and a higher renewal rate. The storyline is very consistent and delivers better policyholder experience."

Structured notes

Structured notes have not seen the explosion of custom and strategy indices seen in the annuities space but continues to be a significant driver of issuance and sales across markets.

"Structured notes have different payoff options and a different life cycle, but it is absolutely a place for custom indexes as they also offer a compelling argument to investors. Custom indices allow investors to deploy new thematics and balance the exposures of their portfolios," said Heraty.

"Most of the activity around custom indices has taken place in the annuities space but in our discussions with clients it is very much a topic of interest. We expect custom indices to continue to increase their share in the structured products market over the next few years," he said.

Foreign trends, red flags

Heraty's view on replicating strategy and custom indices as well as overlays and thematics used in other markets is that it "depends on the moment and the client views".

"The decrement index phenomenon has not happened in the US marketplace - it was never adopted and as a result, it just hasn't been as popular as in other markets," he said.

"With ESG, is slightly different as the US has recorded some ESG indices despite inconsistent demand. ESG hasn't caught on as much in the United States as in other markets either. This could change but right now there is little interest from investors in that topic."

As the number of indices and strategies grows Heraty stresses the responsibility of product providers in ensuring that "there is a full understanding" of the product and that investors "understand the underlying strategy".

Société Générale

Prop indices work well in long-dated products, dynamic rates environment

Société Générale has 35 in-house indices used as underlyings across live structured products across markets.

These include the SGI Ethical & Efficient Europe 30 Index, SG Macro Compass Index, SGI Multi Asset Global Futures EUR Index, SGI Sustainable & Efficient Europe 30, SGI 7% VT on SG Wellness and Healthy Living Index, SGI European Green Deal AR EUR 5% Index and SG Rise Of The Robots VT 9 ER Index.

In Europe, Société Générale was recognised earlier this year as the provider of the best proprietary strategy in the region in 2022. The French bank continues to leverage the capabilities of its index business SG Index to complement its equity derivatives structuring and hedging activities.

In the US, SG has also committed resources to servicing insurance company needs "in a unified and cohesive manner with dedicated resources". According to Natasha Dadlani, head of cross-asset insurance coverage, US, at SG Global Market, the fact that the bank has a head of cross-asset insurance coverage for all of global markets is testimony of the importance of this client segment.

"We have an entire team built around the US insurance market and most of those insurance companies that we cover, are actually annuity issuers. It's key client group for us, in terms of what we've done in this space around index design and index partnerships," said Dadlani.

SG started in the Americas index design space in 2017 and since them it has forged many partnerships and established itself in the FIA and RILA markets – the bank has more than 20 different partnerships in the annuity market, mostly in the fixed indexed annuity (FIA) space, but also growing its RILA relationships as well as its VA and indexed universal life (IUL) relationships.

"We are very much focused on creating sound strategies with solid investment rationales, not just on a great back-test," said Dadlani.

The RILA market is quite different from the FIA market which had some early adopters and it's a much more developed segment of the annuities market with around 150 volatility-control indices. Part of the success of those indices is based on the FIA distribution model which is dominated by independent agents and IMO channels which demand innovation. The RILA market is very different, and the upcoming regulations will be a huge driver of RILA adoption.

The first proprietary indices appeared in the RILA market just a few years ago, whereas prop indices have been part of the FIA market since 2012.

"The idea of proprietary indices is fairly recent and may not take hold in the same way that it did in the FIA market," said Dadlani. "That doesn't mean that providing proprietary indices is not a value-add proposition because these indices offer choices for diversification."

Diversification

Fuelled by its equity derivatives DNA, SG has always been at the forefront of innovation in the market, but "with a focus on simplicity".

"The outperformance element is important, but the focus is not on only on historical performance but on providing diversification to the end client," said Dadlani.

The US market is a very competitive space dominated by the big tier one domestic players but there is still a lot of opportunity to provide new investment ideas, especially in the indexed annuity market which is the fastest growing segment of the US market.

"At this juncture being a French investment bank gives us an edge,"Dadlani said. "We have a strong brand that is recognised in the US market, and our DNA is to leverage our engineering capabilities and our best-in-class ideas to develop new investment solutions. We're known for being derivative experts and it is actually a pro when we engage with clients."

The French bank which is also well known for its structuring capabilities sees the RILA market as a space where it can leverage the attributes that have been proven a success in other markets. SG expects demand for proprietary indices and new ideas that work in dynamic rate environments to remain at least from the insurance providers side of the market.

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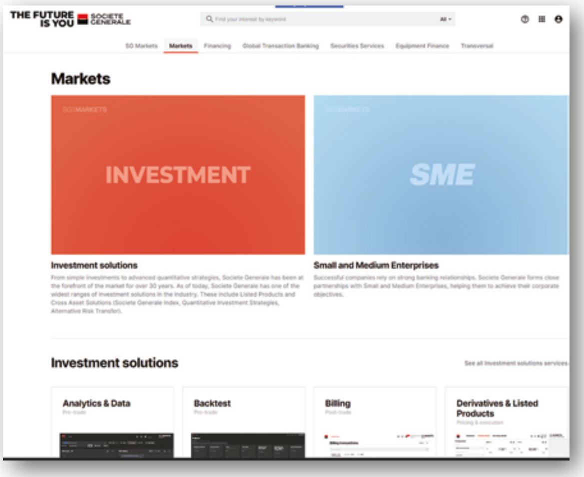

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