Virsolus Sports Companies Index (VSCI)
VOLATILITY & RISK ANALYTICS REPORT

1. Overview
This report analyses the volatility and risk characteristics of the Virsolus Sports Companies Index (VSCI) relative to major global equity benchmarks. Volatility measures how much prices move: higher volatility means larger price swings and higher short-term risk; lower volatility means more stable prices.

The report provides:
• Short- and medium-term volatility measures (30- and 90-day).
• Long-term volatility trends.
• Risk-adjusted performance metrics (return per unit of risk).
• Maximum drawdown (peak-to-trough losses).
• Volatility percentile rankings (is current risk high or low historically?).
• Rolling correlation and beta versus the S&P; 500.
• A traffic-light style volatility heatmap.

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1. Overview

This report analyses the volatility and risk characteristics of the Virsolus Sports Companies Index (VSCI) relative to major global equity benchmarks. Volatility measures how much prices move: higher volatility means larger price swings and higher short-term risk; lower volatility reflects more stable pricing.

The analysis includes:
• Short- and medium-term volatility estimates (30- and 90-day).
• Long-term volatility trends since index inception.
• Risk-adjusted performance metrics (return per unit of risk).
• Maximum drawdown analysis.
• Volatility percentile rankings to show whether current market conditions are elevated or typical.
• Rolling correlation and beta versus the S&P; 500.
• A colour-coded volatility heatmap to visualise current risk regimes.

Together these measures provide a clear view of how listed sports companies behave as a financial asset class, and whether they resemble a traditional equity sector or exhibit the characteristics of a distinct, diversifying alternative asset.

2. Executive Summary

This summary box highlights the current risk profile of the flagship index **VSCI_EW** and the overall sports-equity segment:

• **Sector-Pulse Score:** 20.7 / 100 (Calm)

• **Current 30-Day Volatility:** 0.0834 (annualised)
• **Volatility Percentile:** 6.5% of its own history
• **Max Drawdown:** -0.187 (peak-to-trough)
• **Beta vs S&P; 500:** 0.128

Metric	Value
Sector-Pulse Score	20.7 (Calm)
30D Vol (annualised)	0.0834
30D Vol Percentile	6.5%
Max Drawdown	-0.187
Beta vs S&P 500	0.128

3. Automated Interpretation

Sector-Pulse assessment:
The composite Sector-Pulse score for **VSCI_EW** is **20.7** out of 100, which places the listed-sport segment in a **Calm** risk regime based on its own historical behaviour.

Most volatile index (30D): SP500
Least volatile index (30D): VSCI_EW

Relative to the S&P; 500:
Indices with **higher** short-term volatility than the S&P; 500: None.
Indices with **lower** short-term volatility than the S&P; 500: VSCI_CW, VSCI_EW, VSCI_FAW.

Correlation and beta profile:
The index most closely moving with the S&P; 500 is: **NASDAQ100**, while the least correlated index is **VSCI_EW**.
The highest beta (most sensitive to US equity market moves) is: **VSCI_CW**, and the lowest beta is **VSCI_EW**.

Taken together, these metrics show whether listed sports companies are behaving like a conventional equity sector or displaying a more distinct, diversifying risk profile.

3. Volatility Summary

How to read this table:
• **30D Vol** – most recent short-term volatility (annualised).
• **90D Vol** – medium-term volatility.
• **Annualized Vol** – volatility computed over the full sample.
• **Relative Volatility** – values above 1 mean more volatile than the S&P; 500; below 1 means less volatile.

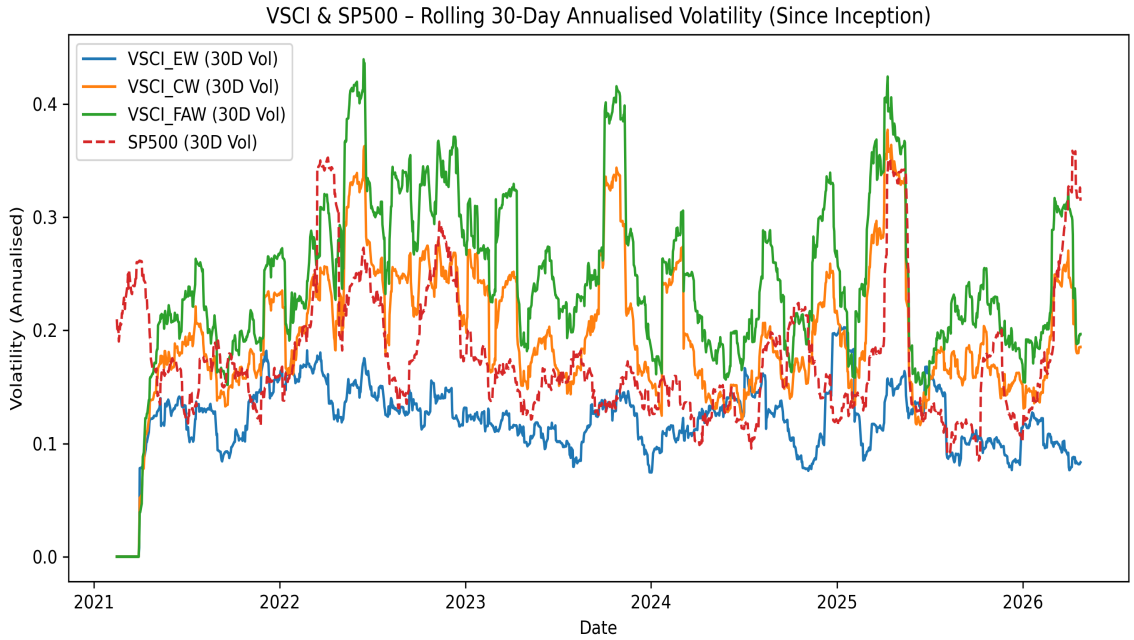
Higher numbers indicate greater price variability and higher short-term risk.

30D Vol	90D Vol	Annualized Vol	RelVol_30D_vs_SP500	RelVol_90D_vs_SP500
0.1633	0.1346	0.1257	nan	nan
0.2169	0.1817	0.224	nan	nan

0.173	0.1389	0.1661	nan	nan
0.1843	0.1438	0.1587	nan	nan
0.3146	0.25	0.1863	nan	nan
0.1854	0.1928	0.2035	0.5892	0.7711
0.0834	0.1008	0.1245	0.265	0.4032
0.1967	0.235	0.2517	0.6253	0.9401

4. Volatility Trend Since Inception

This chart shows how rolling 30-day annualised volatility has evolved over time for VSCI indices and the S&P; 500. Sustained increases indicate more turbulent market conditions; sustained decreases indicate calmer regimes.



5. Volatility Percentile Rankings

How to read this table:
• **Current 30D Vol** – latest short-term volatility.
• **30D Vol Percentile** – where today's volatility sits within its own history.
Values above 67% indicate unusually high volatility; values below 33% indicate unusually low volatility.

Index	Current 30D Vol	30D Vol Percentile
VSCI_EW	0.0834	6.5
VSCI_CW	0.1854	50.4
VSCI_FAW	0.1967	25.2

SP500	0.3146	94.8
NASDAQ100	0.1843	79.9
FTSE100	0.1633	85.7
MSCIWorld	0.173	72.4
MSCIEmerging	0.2169	65.4

6. Risk-Adjusted Returns

What this table shows:
• **Annualised Return** – estimated yearly return based on historical price changes.
• **Annualised Volatility** – yearly risk estimate.
• **Return/Volatility Ratio** – a Sharpe-like measure (higher is better).
• **Max Drawdown** – worst peak-to-trough loss (negative numbers).

Indices with a higher return/volatility ratio and smaller drawdowns offer more efficient risk–return trade-offs.

Index	Annualised Return	Annualised Volatility	Return/Volatility Ratio	Max Drawdown
VSCI_EW	0.132	0.1245	1.0599	-0.187
VSCI_CW	0.1649	0.2035	0.8104	-0.2002
VSCI_FAW	0.1466	0.2517	0.5824	-0.2437
SP500	0.0609	0.1863	0.3267	-0.3982
NASDAQ100	0.1252	0.1587	0.7886	-0.2605
FTSE100	0.088	0.1257	0.6999	-0.1343
MSCIWorld	0.1296	0.1661	0.7806	-0.2543
MSCIEmerging	0.1517	0.224	0.6774	-0.3556

7. Rolling Correlation vs S&P; 500

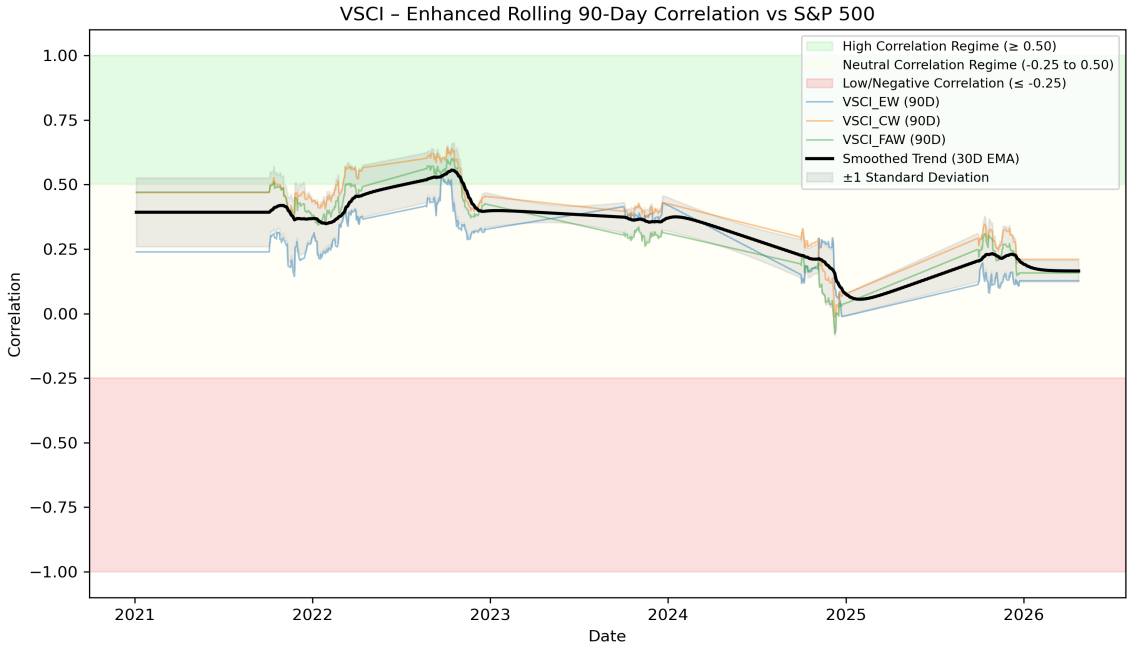
How to interpret this chart:

Market Regimes:
Green regions indicate periods where correlations were high (≥ 0.50), meaning listed sports companies moved broadly in line with the S&P; 500.
Yellow regions show neutral correlation (-0.25 to 0.50), reflecting partial co-movement.
Red regions mark low or negative correlations (≤ -0.25), indicating strong diversification benefits.

Thin Lines: represent the 90-day rolling correlations for each VSCI index.
Thick Black Line: is a 30-day smoothed trend (EMA) helping to reveal the underlying pattern.
Grey Band: shows ±1 standard deviation around the correlation, illustrating typical variability.

Why this matters:
Correlation dynamics reveal whether sports equities behave like a conventional equity sector or exhibit alternative-asset characteristics. Low-correlation regimes indicate enhanced portfolio

diversification.



8. Beta vs S&P; 500

Beta measures how sensitive an index is to moves in the S&P; 500.
• **Beta ≈ 1** – moves broadly in line with the market.
• **Beta > 1** – amplifies market moves (more aggressive).
• **Beta < 1** – dampens market moves (more defensive).

Higher beta implies larger swings when the broad market moves; lower beta implies more resilience.

Index	Beta vs S&P 500
VSCI_EW	0.128
VSCI_CW	0.245
VSCI_FAW	0.24

9. Volatility Regime Heatmap

This table colour-codes current 30-day volatility:
• **Green** – relatively low volatility (bottom third of history).
• **Amber** – typical volatility (middle third).
• **Red** – elevated volatility (top third).

It provides an at-a-glance view of where risk is currently concentrated.

Index	Current 30D Vol	Volatility Regime

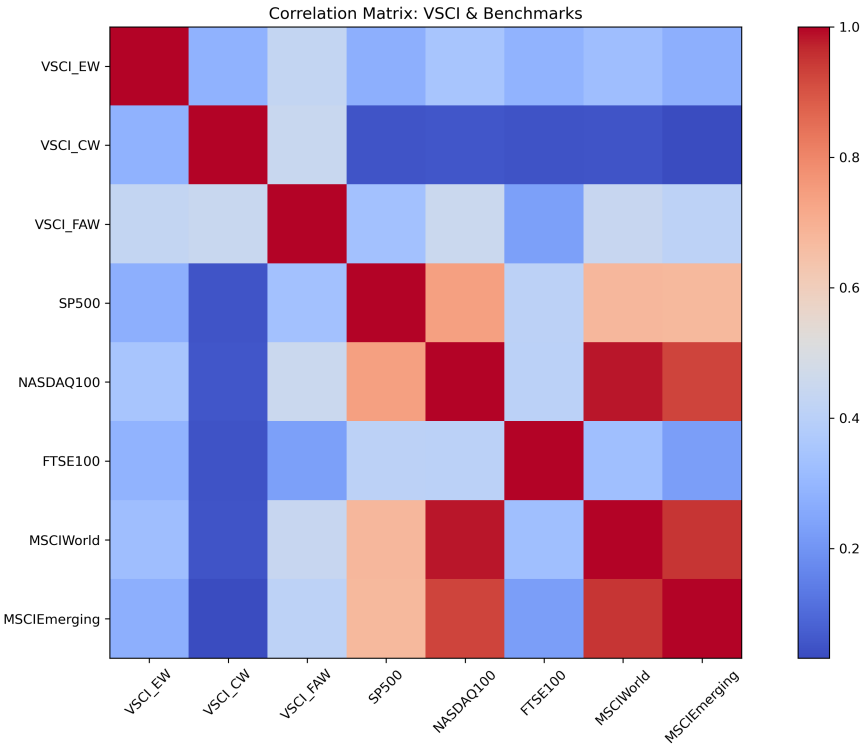
VSCI_EW	0.0834	Low
VSCI_CW	0.1854	Moderate
VSCI_FAW	0.1967	Low
SP500	0.3146	High
NASDAQ100	0.1843	High
FTSE100	0.1633	High
MSCIWorld	0.173	High
MSCIEmerging	0.2169	Moderate

10. Correlation Matrix

The correlation matrix shows how closely indices move together.
• Values near +1 indicate strong co-movement.
• Values near 0 indicate independent behaviour.
• Values near -1 indicate opposite movement.

Low correlation between VSCI and broad equity indices suggests diversification benefits.

	VSCI_EW	VSCI_CW	VSCI_FAW	SP500	NASDAQ100	FTSE100	MSCIWorld	MSCIEmerging
VSCI_EW	1.0	0.437	0.347	0.273	0.342	0.285	0.315	0.266
VSCI_CW	0.437	1.0	0.962	0.397	0.542	0.281	0.529	0.486
VSCI_FAW	0.347	0.962	1.0	0.342	0.47	0.243	0.46	0.429
SP500	0.273	0.397	0.342	1.0	0.746	0.419	0.681	0.676
NASDAQ100	0.342	0.542	0.47	0.746	1.0	0.414	0.983	0.924
FTSE100	0.285	0.281	0.243	0.419	0.414	1.0	0.338	0.235
MSCIWorld	0.315	0.529	0.46	0.681	0.983	0.338	1.0	0.949
MSCIEmerging	0.266	0.486	0.429	0.676	0.924	0.235	0.949	1.0



11. Concluding Remarks

The volatility, drawdown, beta and correlation profile of VSCI provides a structured way to understand how listed sports companies behave as a financial asset. When combined with traditional return metrics, this risk analytics framework helps investors assess whether sports equities function like a conventional sector or exhibit the characteristics of a distinct alternative asset class driven by performance, fandom and event risk. **This report does not provide investment advice and is for informational, education and research purposes only. If you would like further information, please contacts us at www.virsolus.com**