

S&P Dow Jones Indices

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INDEX INVESTMENT STRATEGY

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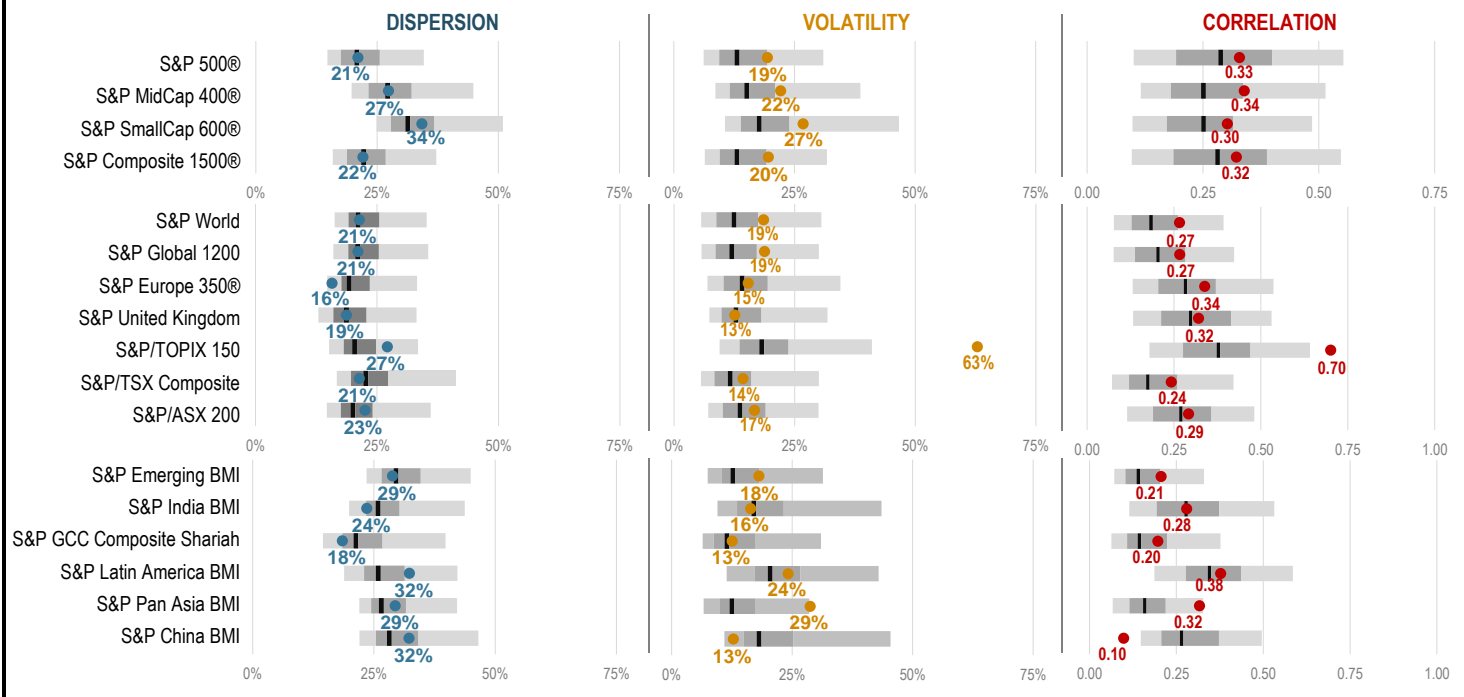
Index Dashboard: Dispersion, Volatility & Correlation

August 31, 2024

COMMENTARY

- Was it just a flash in the pan? August began with turmoil in Japan and double-digit one-day declines in broad equities, confusingly followed by a near-recovery the next day. It was the worst day for the S&P/TOPIX 150 this century, and monthly index volatility rose to an annualized 63%.
- Global equity markets were thoroughly rattled by the sell-off, but built confidence through the month as a second burst of intensity failed to materialize. VIX fell back down to end August at a near-median level of 15, a full four points below the level of realized S&P 500 volatility this month.
- Overall, volatility and correlations were notably higher this month and – as shared risks took precedence over idiosyncratic concerns, dispersion declined both in the U.S. and European equity markets.

GLOBAL DASHBOARD



KEY 5th %ile Median 75th %ile
25th %ile Current 95th %ile

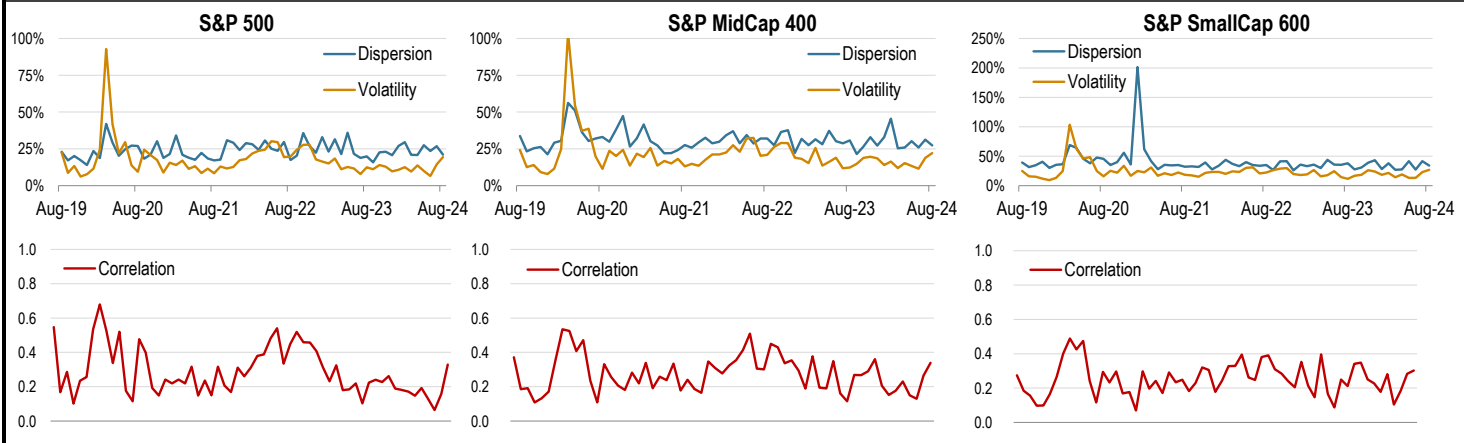
Dispersion, correlation and volatility shown in relation to the median and 5th, 25th, 75th and 95th percentile of monthly values (over the period Jan 2007 to date). Dispersion and volatility are annualized, correlation is the absolute level during the past month.

S&P 500 Implied Indicators

	Level	1M +/-
Volatility Index (VIX®)	15.00	↓ -1.36
Dispersion Index (DSPX)	26.93	↓ -6.51

The Cboe Volatility Index (VIX) and the Cboe S&P 500 Dispersion Index (DSPX) measure market expectations for S&P 500 index volatility and dispersion, respectively, over the next 30 days. The Dispersion Index was launched on September 27, 2023.

MAJOR BENCHMARKS - PAST FIVE YEARS



Source: S&P Dow Jones Indices as of Aug 31, 2024 * See "Notes" for explanations and definitions.

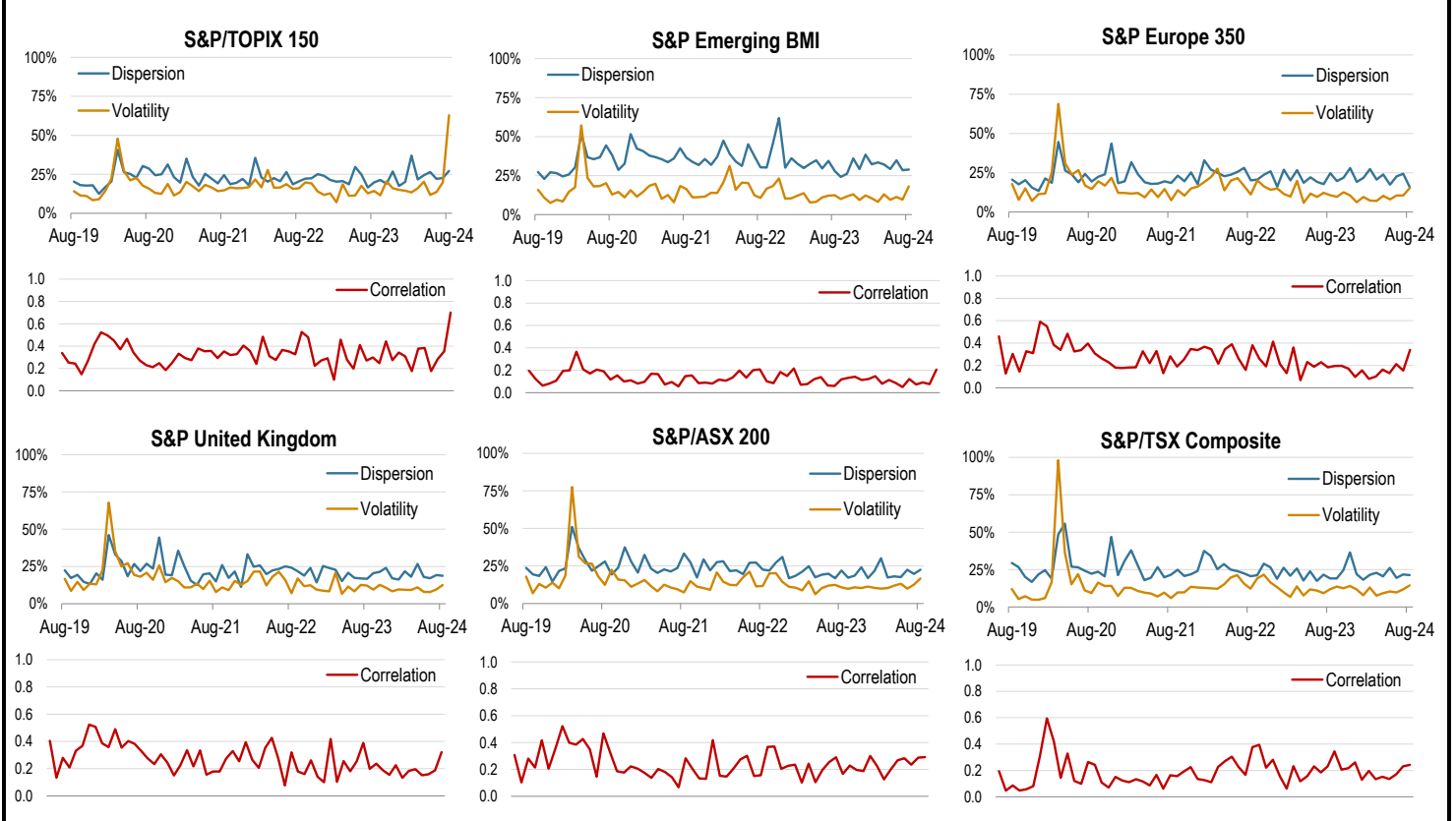
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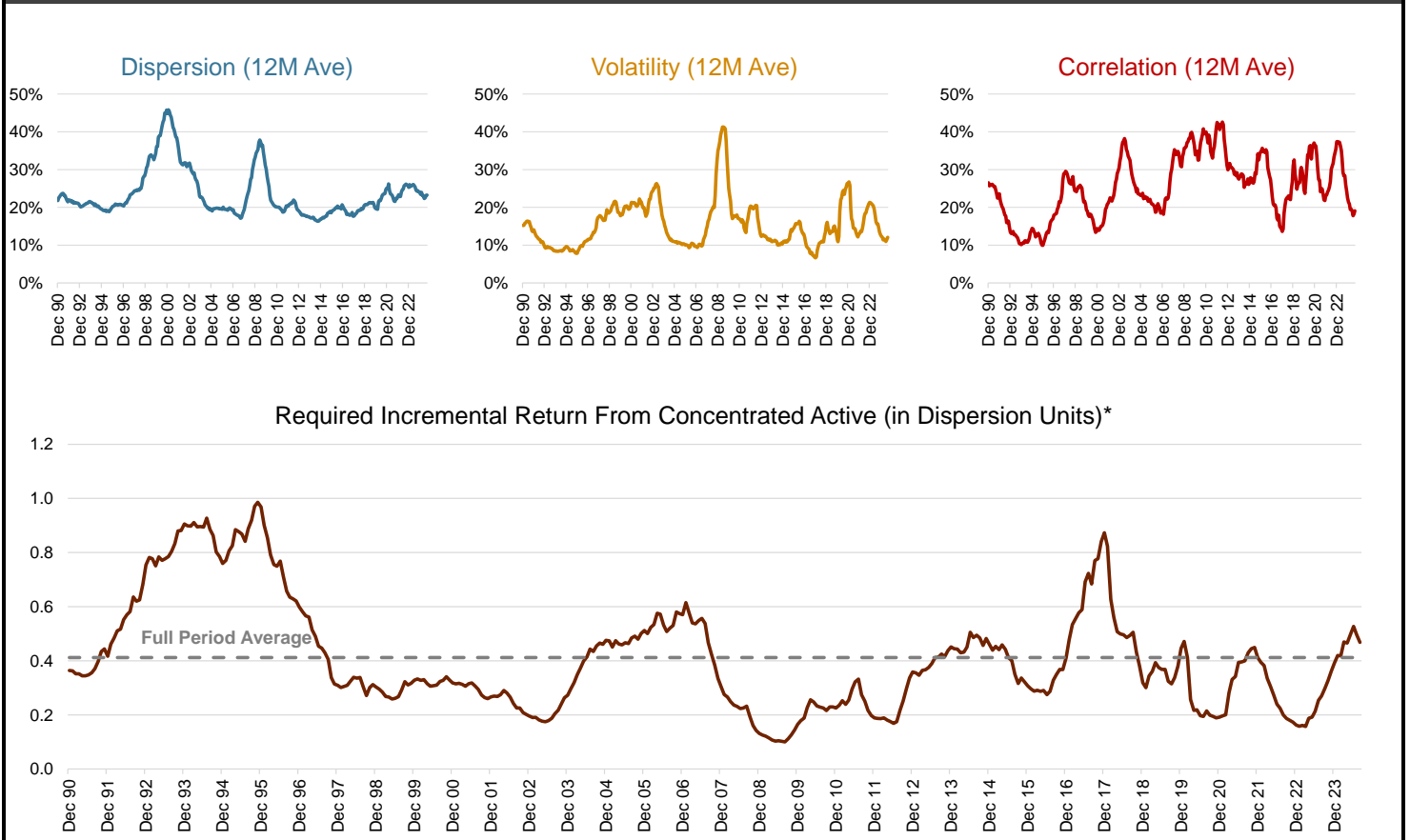
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MAJOR BENCHMARKS - PAST FIVE YEARS (cont'd)



S&P 500 - 12M TRAILING AVERAGES & ACTIVE RETURN DIFFICULTY



Source: S&P Dow Jones Indices as of Aug 31, 2024 * See "Notes" for explanations and definitions.

NOTES

Definitions

Dispersion for each index is the annualized, index-weighted standard deviation of the index constituents' full-month total returns. See "[Dispersion: Measuring Market Opportunity](#)" for a formal definition of dispersion and more information on its uses.

Correlation for each index measures the correlation among the daily returns of the index constituents during the month, calculated via the ratio of index variance to the index-weighted average constituent variance. See "[At the Intersection of Diversification, Volatility and Correlation](#)" for a more detailed explanation of the calculation.

Volatility for each index is the annualized standard deviation of daily index price returns during the month. See "[The Landscape of Risk](#)" for details on the relationship of correlation, volatility and dispersion.

Required Incremental Return From Concentrated Active (in Dispersion Units) provides the excess return, in multiples of 12M trailing average dispersion, required from a concentrated position in a single index constituent with 12M trailing volatility equal to the index-weighted average, such that the ratio of return to volatility of the position matches that of an investment with volatility matching the index's trailing 12M volatility, and an annual return of 10%. For further details, see "[The Active Manager's Conundrum](#)".

Measurement Periods For Historical Ranges (p1)

The time period over which the median and percentiles of dispersion and correlation are measured begins with January, 2007 and ends with the current month except in the case of the S&P GCC Composite Shariah (which has a history to April, 2007).

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