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STRATEGY 101

# S&P GIVI Developed

The [S&P GIVI® \(Global Intrinsic Value Index\)](#) is a rules-based index series that is designed to deliver both low volatility and performance, weighted by intrinsic value rather than by traditional market capitalization. The indices are designed to provide those factor tilts while maintaining benchmark-like characteristics (low overall tracking error and similar region, country, and sector bets as the benchmark), along with high capacity.

## 1. METHODOLOGY

The S&P GIVI Indices are constructed from the constituents of the [S&P Global BMI \(Broad Market Index\)](#). The S&P GIVI Indices are designed to measure stocks in their benchmark index with a float-adjusted market capitalization of at least USD 100 million.

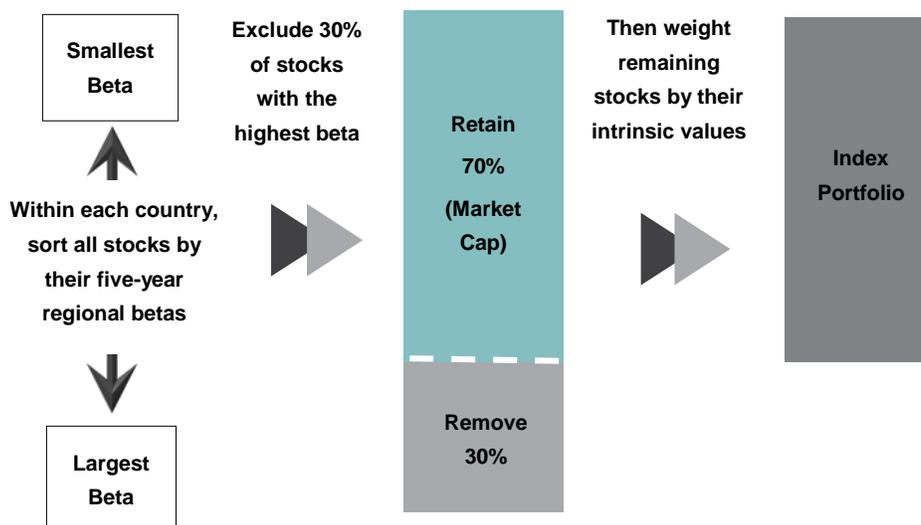
As illustrated in Exhibit 1, the index construction process first ranks stocks by their five-year regional betas and eliminates 30% of the stocks (by index weight) with the highest beta from the universe.

After eliminating those, the remaining stocks are weighted by a measure of each stock's "intrinsic value," which is assessed as book value plus an adjustment to the book value for future growth prospects.

Using this methodology construction, there is exposure to low beta stocks and the weighting of stocks by adjusted book value could potentially introduce a value tilt.

The S&P GIVI Indices are constructed to provide exposure to the low beta and value factors while maintaining benchmark-like characteristics without optimization.

**Exhibit 1: Methodology Construction of the S&P GIVI Indices**



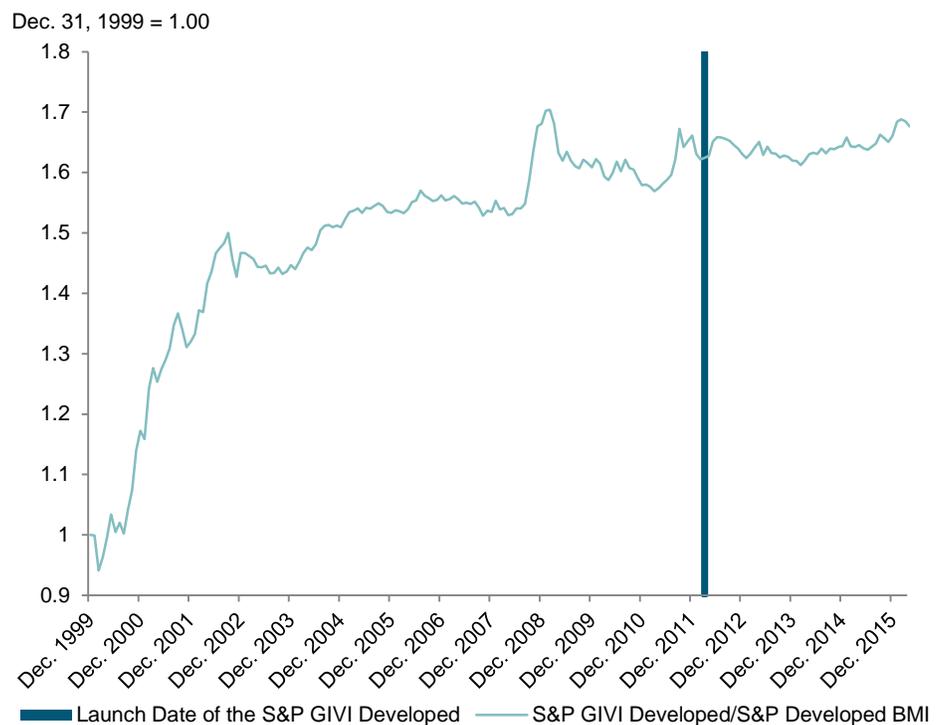
Source: S&P Dow Jones Indices LLC. Chart is provided for illustrative purposes.

## 2. PERFORMANCE

Exhibit 2 provides a visual illustration of the performance of the [S&P GIVI Developed](#) relative to its benchmark, the [S&P Developed BMI](#). We can see that much of the long-term performance superiority was achieved at the start of the sample period, in the aftermath of the so-called internet bubble. For the rest of the sample period, there was consistent outperformance, including the live period since March 2012.

### Exhibit 2: Performance of the S&P GIVI Developed Relative to the S&P Developed BMI

We can see that that much of the long-term performance superiority was achieved at the start of the sample period, in the aftermath of the so-called internet bubble.



Source: S&P Dow Jones Indices LLC. Data as of June 30, 2016. Index performance based on total return in USD. Past performance is no guarantee of future results. Chart is provided for illustrative purposes and reflects hypothetical historical performance. Please see the Performance Disclosure at the end of this document for more information regarding the inherent limitations associated with back-tested performance.

Exhibit 3 provides a detailed comparative overview of the S&P GIVI Developed and the S&P Developed BMI, as well as the two subindices of the S&P GIVI Developed:

- The S&P Low Beta Developed Index, which is a market-cap-weighted index constructed by excluding the highest 30% of S&P Developed BMI stocks by beta; and
- The [S&P Intrinsic Value Weighted Developed Index](#), which forms an intrinsic value-weighted index that is designed to measure the full universe of S&P Developed BMI stocks, including the high beta names excluded from the S&P GIVI Developed.

Exhibit 3 shows that the [S&P GIVI Developed](#) has produced the highest alpha, Sharpe, Sortino, MAR, and Omega ratios over the full sample period—the latter three could be of interest to market participants more concerned with downside risk.

In addition, the sequential approach to the index's construction does seem to matter over the full sample period, as the **S&P GIVI Developed** delivered a higher return and a better Sharpe ratio than either of the subindices.

Exhibit 3: Statistical Summaries

STATISTIC	S&P GIVI DEVELOPED	S&P LOW BETA DEVELOPED INDEX	S&P INTRINSIC VALUE WEIGHTED DEVELOPED INDEX	S&P DEVELOPED BMI
Annual Return (%)	7.64	6.37	6.22	4.29
Maximum Drawdown (%)	-49.3	-48.5	-55.4	-54.5
Annual Volatility (%)	13.64	13.28	16.01	15.96
Annual Skewness	-0.22	-0.21	-0.19	-0.19
Monthly Alpha Against S&P Developed BMI (%)	0.32	0.22	0.16	-
T-Stats of Alpha	4.10	3.83	2.58	-
Beta to S&P Developed BMI	0.82	0.81	0.99	-
Correlation With S&P Developed BMI	0.96	0.98	0.98	-
Sharpe Ratio	0.44	0.36	0.29	0.17
Sortino Ratio	0.64	0.51	0.41	0.23
Mar Ratio	0.15	0.13	0.11	0.08
Omega Ratio	1.58	1.49	1.42	1.30

Source: S&P Dow Jones Indices LLC. Data from Dec. 31, 1999, to June 30, 2016. Index performance based on total return in USD. Past performance is no guarantee of future results. Table is provided for illustrative purposes and reflects hypothetical historical performance. Please see the Performance Disclosure at the end of this document for more information regarding the inherent limitations associated with back-tested performance.

Exhibit 4 provides the risk/return profile of the S&P GIVI Developed over different time horizons. The S&P GIVI Developed outperformed the [S&P Developed BMI](#) in terms of absolute and risk-adjusted returns over the past 1-, 3-, 5-, 10-, and 15-year periods. **Historically, the tracking error against the S&P Developed BMI was between 1.5% and 4%.**

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<b>Exhibit 4: Risk/Return Profiles</b>			
<b>TIME PERIOD</b>	<b>S&amp;P GIVI DEVELOPED</b>	<b>S&amp;P DEVELOPED BMI</b>	<b>S&amp;P GIVI DEVELOPED</b>
	<b>ANNUAL RETURN (%)</b>		<b>EXCESS RETURN (%)</b>
Past 1 Year	0.22	-2.56	2.78
Past 3 Years	8.35	7.44	0.91
Past 5 Years	8.27	7.00	1.27
Past 10 Years	6.00	5.14	0.85
Past 15 Years	7.91	6.00	1.90
<b>TIME PERIOD</b>	<b>ANNUAL VOLATILITY (%)</b>		<b>TRACKING ERROR (%)</b>
Past 3 Years	10.61	11.66	1.68
Past 5 Years	11.55	13.35	2.60
Past 10 Years	14.72	16.90	2.94
Past 15 Years	13.77	15.85	3.35
<b>TIME PERIOD</b>	<b>RISK-ADJUSTED RETURN</b>		<b>INFORMATION RATIO</b>
Past 3 Years	0.79	0.64	0.54
Past 5 Years	0.72	0.52	0.49
Past 10 Years	0.41	0.30	0.29
Past 15 Years	0.56	0.27	0.71

Historically, the tracking error against the S&P Developed BMI was between 1.5% and 4%.

Source: S&P Dow Jones Indices LLC. Data from Dec. 31, 1999, to June 30, 2016. Index performance based on total return in USD. Past performance is no guarantee of future results. Table is provided for illustrative purposes and reflects hypothetical historical performance. Please see the Performance Disclosure at the end of this document for more information regarding the inherent limitations associated with back-tested performance.

## PERFORMANCE DISCLOSURE

The S&P GIVI Developed was launched on March 19, 2012. The S&P Low Beta Developed Index and the S&P Intrinsic Value Weighted Developed Index were launched on May 8, 2014. All information presented prior to an index's Launch Date is hypothetical (back-tested), not actual performance. The back-test calculations are based on the same methodology that was in effect on the index Launch Date. Complete index methodology details are available at [www.spdji.com](http://www.spdji.com).

S&P Dow Jones Indices defines various dates to assist our clients in providing transparency. The First Value Date is the first day for which there is a calculated value (either live or back-tested) for a given index. The Base Date is the date at which the Index is set at a fixed value for calculation purposes. The Launch Date designates the date upon which the values of an index are first considered live: index values provided for any date or time period prior to the index's Launch Date are considered back-tested. S&P Dow Jones Indices defines the Launch Date as the date by which the values of an index are known to have been released to the public, for example via the company's public website or its datafeed to external parties. For Dow Jones-branded indices introduced prior to May 31, 2013, the Launch Date (which prior to May 31, 2013, was termed "Date of introduction") is set at a date upon which no further changes were permitted to be made to the index methodology, but that may have been prior to the Index's public release date.

Past performance of the Index is not an indication of future results. Prospective application of the methodology used to construct the Index may not result in performance commensurate with the back-test returns shown. The back-test period does not necessarily correspond to the entire available history of the Index. Please refer to the methodology paper for the Index, available at [www.spdji.com](http://www.spdji.com) for more details about the index, including the manner in which it is rebalanced, the timing of such rebalancing, criteria for additions and deletions, as well as all index calculations.

Another limitation of using back-tested information is that the back-tested calculation is generally prepared with the benefit of hindsight. Back-tested information reflects the application of the index methodology and selection of index constituents in hindsight. No hypothetical record can completely account for the impact of financial risk in actual trading. For example, there are numerous factors related to the equities, fixed income, or commodities markets in general which cannot be, and have not been accounted for in the preparation of the index information set forth, all of which can affect actual performance.

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