

TalkingPoints

Finding Resilience amid Uncertainty: A Low Volatility High Dividend Approach for the A-Share Market



Izzy Wang
Senior Analyst
Strategy and Volatility Indices
S&P Dow Jones Indices



Jason Ye
Director
Strategy and Volatility Indices
S&P Dow Jones Indices

The S&P China A-Share LargeCap Low Volatility High Dividend 50 Index is designed to offer liquid and tradable exposure to dividends and low volatility, two well-known risk factors that have delivered risk premium in the China A-share market in the past.

The two factors are combined through sequential dividend and low volatility screens. Companies exhibiting high dividend yield may fall in a “dividend trap,” since high dividend yield can be caused by decreasing stock prices rather than increasing dividend payments. Overlaying a low volatility screen on a high dividend portfolio may help to eliminate the dividend trap, resulting in improved absolute and risk-adjusted returns.¹

Since inception,² the index has shown robust return, lower risk, reduced drawdown and cheaper valuation than its benchmark. The index may be appealing to those who wish to maintain equity exposure during turbulent market environments or those who are interested in increasing equity exposure but have limited risk appetite.

Uncertainty has been a common theme for the China equity market since 2021, amid worries over economic slowdown. The S&P China A-Share LargeCap Low Volatility High Dividend 50 Index may help to provide a defensive and resilient solution for investors to ride through this challenging period.

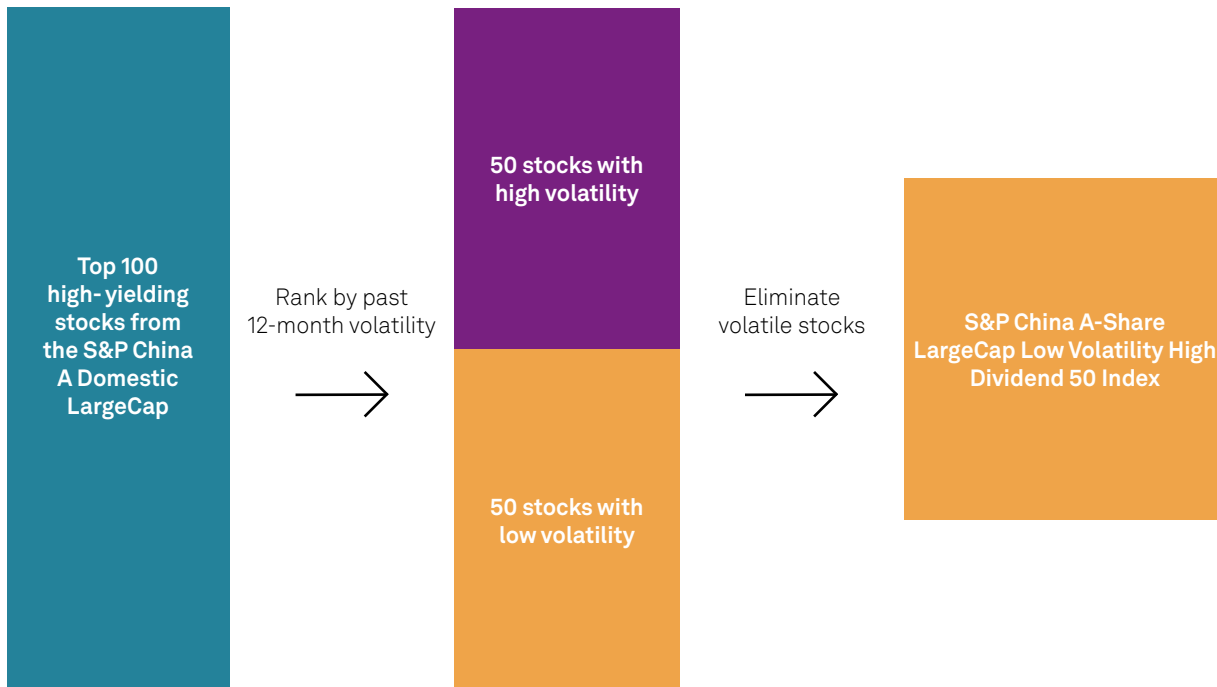
1. How does the index work?

The S&P China A-Share LargeCap Low Volatility High Dividend 50 Index is designed to have significant large-cap and high dividend exposure while limiting volatility. Index construction starts from the S&P China A Domestic LargeCap, which consists of the top 70% of stocks by float market capitalization in the China A market. As of Dec. 31, 2023, the S&P China A Domestic LargeCap had 610 constituents. First, the top 100 stocks with the highest yields are selected. After that, volatility screening is applied to eliminate the 50 most volatile stocks. To maximize dividend exposure, the remaining 50 names are weighted by dividend yield. The index rebalances semiannually in January and July.

¹ Qu, Xiaoya et al. Blending Low Volatility with Dividend Yield in the China A-Share Market.

² The S&P China A-Share LargeCap Low Volatility High Dividend 50 Index was launched April 1, 2019.

Exhibit 1: Construction of the S&P China A-Share LargeCap Low Volatility High Dividend 50 Index



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

2. What are the characteristics of this index?

Superior Historical Performance

Over the past three years, the China A stock market went through a depressive downward cycle, and the negative sentiment that emerged with the COVID-19 pandemic outbreak continued in 2023 due to concerns over recession. However, the S&P China A-Share LargeCap Low Volatility High Dividend 50 Index posted an impressive return of 9.3%, significantly outperforming the CSI 300 by 20.4% over the three-year period.

In the long run, the S&P China A-Share LargeCap Low Volatility High Dividend 50 Index was superior to the CSI 300 in terms of better absolute return and lower volatility. From January 2009 to December 2023, it delivered a return of 11.7%, outperforming the CSI 300 by 6.1% per year (see Exhibit 2). Meanwhile, the volatility was lower than the CSI 300 in the 3-year, 5-year, 10-year and full sample periods, resulting in better risk-adjusted returns.

The outperformance came from both price appreciation and dividends. From Jan. 31, 2009, to Dec. 31, 2023, the price return of the S&P China A-Share LargeCap Low Volatility High Dividend 50 Index was 7.6%, 405 bps higher than the price return of the CSI 300 over the same period. Meanwhile, it posted a 4.1% return from dividends and dividend reinvestment, nearly double that of the CSI 300. Historically, the S&P China A-Share LargeCap Low Volatility High Dividend 50 Index offered a good balance between capital appreciation and dividend income generation.

Exhibit 2: Historical Performance

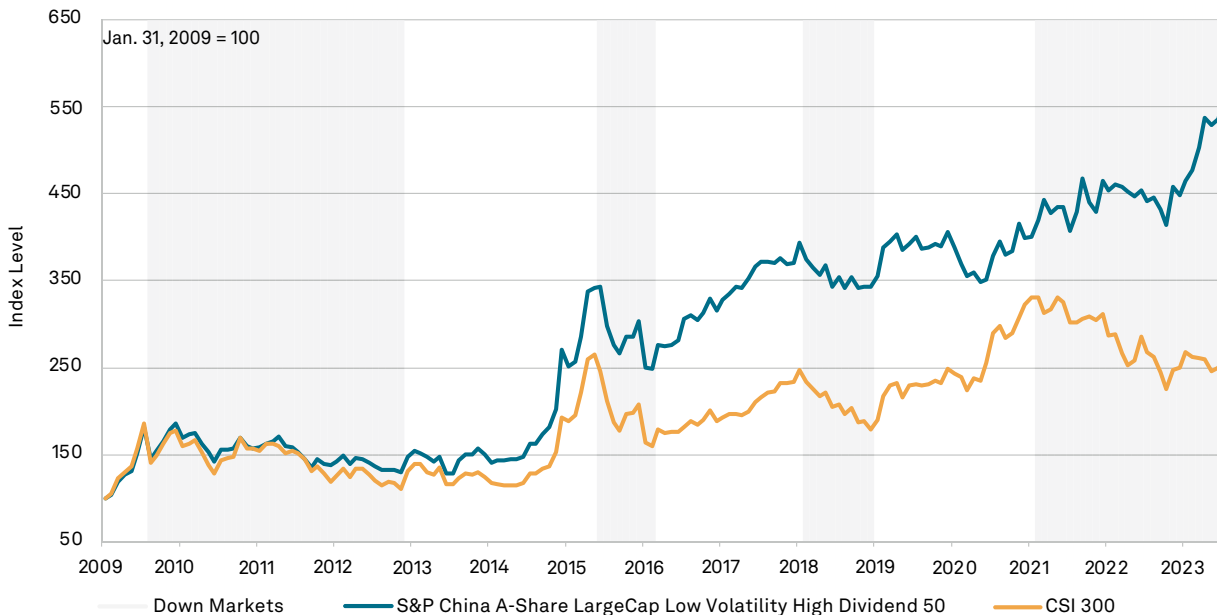
Period	S&P China A-Share LargeCap Low Volatility High Dividend 50 Index	CSI 300
Annualized Total Return (%)		
1-Year	15.97	-9.14
3-Year	9.31	-11.09
5-Year	8.67	4.91
10-Year	13.27	6.22
Since Jan. 31, 2009	11.70	5.64
Annualized Volatility (%)		
1-Year	11.93	13.79
3-Year	14.42	16.32
5-Year	14.27	18.32
10-Year	20.18	21.75
Since Jan. 31, 2009	21.48	23.88
Return/Volatility		
1-Year	1.34	-0.66
3-Year	0.65	-0.68
5-Year	0.61	0.27
10-Year	0.66	0.29
Since Jan. 31, 2009	0.54	0.24
Maximum Drawdown since Jan. 31, 2009		
Maximum Drawdown (%)	31.01	40.07
Return/Maximum Drawdown	0.38	0.14
Dividend Contribution since Jan. 31, 2009		
Annualized Price Return (%)	7.62	3.57
Annualized Total Return (%)	11.70	5.64
Return from Dividend and Dividend Reinvestment (%)	4.07	2.06
% of Total Returns from Dividend and Dividend Reinvestment	34.81	36.63

Source: S&P Dow Jones Indices LLC, FactSet. Data from Jan. 31, 2009, to Dec. 31, 2023. Index performance based on total return in CNY. Past performance is no guarantee of future results. The S&P China A-Share LargeCap Low Volatility High Dividend 50 Index was launched April 1, 2019. All data prior to index launch is back-tested hypothetical data. Table is provided for illustrative purposes and reflect 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.

Downside Protection in Volatile Markets

As various financial reforms are ongoing, the Chinese equities market is especially volatile compared with many developed markets. The 2015 Market Crash is a vivid memory for many A-share investors. Thanks to low volatility screening and a large-cap focus, the S&P China A-Share LargeCap Low Volatility High Dividend 50 Index could provide some extent of downside protection during market downturns. It reduced drawdowns by 11.2%, 12.3%, 15.3%, and 61.4% in the Post Global Financial Crisis (GFC) Drawdown, 2015 Market Crash, 2018 Bear Market and COVID-19 Sell-Off and Post-Pandemic Recession, respectively (see Exhibit 3).

Exhibit 3: Performance during Down Markets



Index	Post GFC Drawdown (August 2009–November 2012)	2015 Market Crash (June 2015–February 2016)	2018 Bear Market (February 2018–December 2018)	COVID-19 Sell-Off and Post Pandemic Recession (February 2021–December 2023)
S&P China A-Share LargeCap Low Volatility High Dividend 50 Index Return (%)	-28.88	-27.50	-12.73	29.86
CSI 300 Return (%)	-40.07	-39.78	-28.04	-31.57
Excess Return of the S&P China A-Share LargeCap Low Volatility High Dividend 50 Index Return (%)	11.18	12.27	15.30	61.43

Source: S&P Dow Jones Indices LLC, FactSet. Data as of Dec. 31, 2023. Index performance based on total return in CNY. Past performance is no guarantee of future results. The S&P China A-Share LargeCap Low Volatility High Dividend 50 Index was launched April 1, 2019. All data prior to index launch is back-tested hypothetical data. Chart and table are 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.

Expanding the investment horizon shows the index’s historical ability to mitigate the cyclicality of performance. Exhibit 4 shows the relative performance of the S&P China A-Share LargeCap Low Volatility High Dividend 50 Index in rolling 3-, 5-, and 10-year excess returns.

As indicated by the historical data, the longer the performance measurement period, the higher the probability of outperforming the CSI 300. Over the period from Jan. 31, 2009, to Dec. 31, 2023, 144 observations spanning a three-year performance horizon were identified. The S&P China A-Share LargeCap Low Volatility High Dividend 50 Index beat the CSI 300 in 78% of cases with an average monthly excess return of 4.6%. When expanding to 10 years, quite impressively, the S&P China A-Share LargeCap Low Volatility High Dividend 50 Index could outperform the CSI 300 in all 60 cases observed, while maintaining an average monthly excess return of 4.7%.

Exhibit 4: Rolling Performance Observations of the S&P China A-Share LargeCap Low Volatility High Dividend 50 Index versus the CSI 300

Category	3-Year	5-Year	10-Year
Number of Observations	144	120	60
Number of Outperformance Observations	112	95	60
Percent of Outperformance Observations (%)	77.8	79.2	100.0
Average Excess Return (%)	4.6	4.8	4.7

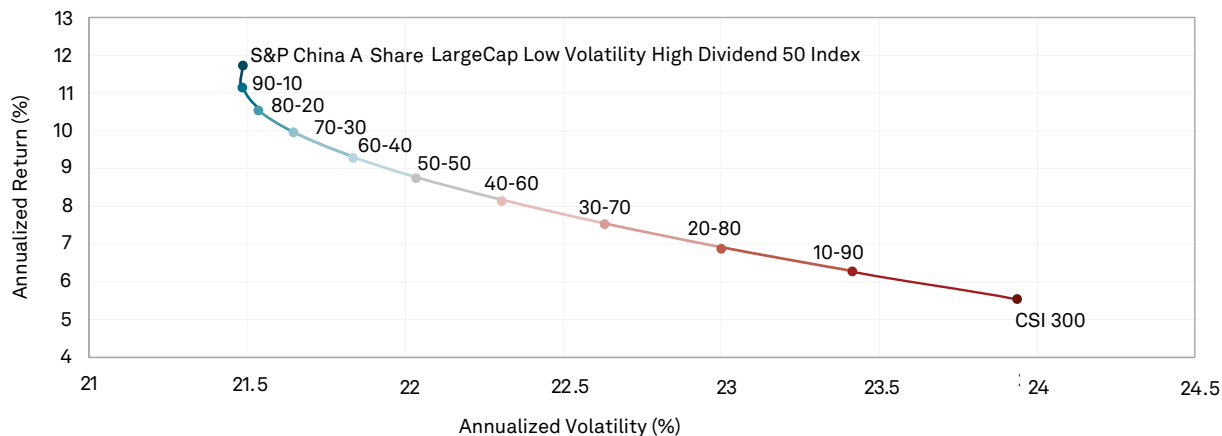
Source: S&P Dow Jones Indices LLC, FactSet. Data from Jan. 31, 2009, to Dec. 31, 2023. Index performance based on total return in CNY. Past performance is no guarantee of future results. The S&P China A-Share LargeCap Low Volatility High Dividend 50 Index was launched April 1, 2019. All data prior to index launch is back-tested hypothetical data. 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.

Complementing Core Holding

Many investors start equity investment with a broad market holding, sometimes a long-term investment that forms the basis of one’s portfolio. Like a healthy meal cannot comprise only staple foods, a portfolio needs “nutrition” from “side dishes” as well. The S&P China A-Share LargeCap Low Volatility High Dividend 50 Index is significantly different from the broad-based equity benchmarks in A-share market. Measured by active share,³ 81% of stock holdings were different from the CSI 300 as of January 2024. Thus, the S&P China A-Share LargeCap Low Volatility High Dividend 50 Index could potentially complement a core holding in a portfolio and supply the right “nutrition.”

Illustrated in Exhibit 4, when the allocation moved from CSI 300 to the S&P China A-Share LargeCap Low Volatility High Dividend 50 Index by increments of 10%, the risk/return point moved toward the top left of the CSI 300 portfolio, which means higher return and lower risk. For example, at a 50-50 allocation, the total return increased by 315 bps to 8.79% per year and volatility decreased to 22.1%.

Exhibit 5: Historical Risk/Return Profile When Blending CSI 300 with the S&P China A-Share LargeCap Low Volatility High Dividend 50 Index



Source: S&P Dow Jones Indices LLC, FactSet. Data from Jan. 31, 2009, to Dec. 31, 2023. Index performance based on total return in CNY. Past performance is no guarantee of future results. The S&P China A-Share LargeCap Low Volatility High Dividend 50 Index was launched April 1, 2019. All data prior to index launch is back-tested hypothetical data. 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.

³ Active share = $1/2 \sum_{i=1}^n |weight_{portfolio,i} - weight^{benchmark,i}|$, where the benchmark is the CSI 300.

Favorable Valuation and Dividend Yield

Due to dividend yield screening, the S&P China A-Share LargeCap Low Volatility High Dividend 50 Index tends to be less expensive than its benchmark, the S&P China A Domestic LargeCap. During the past seven years, the price/earnings and price-to-book ratios of the S&P China A-Share LargeCap Low Volatility High Dividend 50 Index were consistently lower than those of the S&P China A Domestic LargeCap (see Exhibits 6 and 7).

Exhibit 6: Price/Earnings (Trailing)

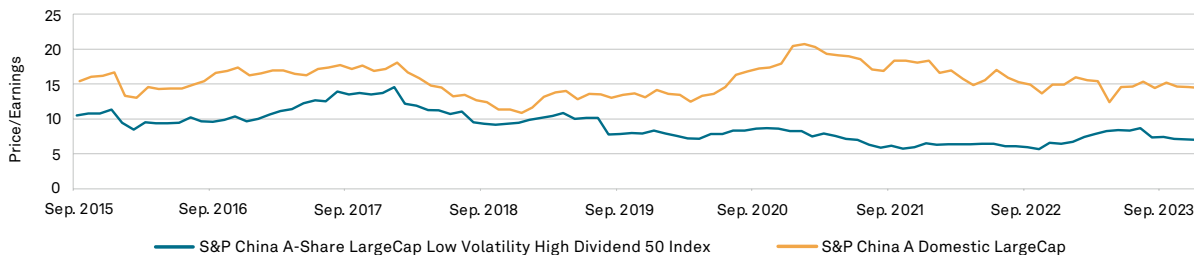
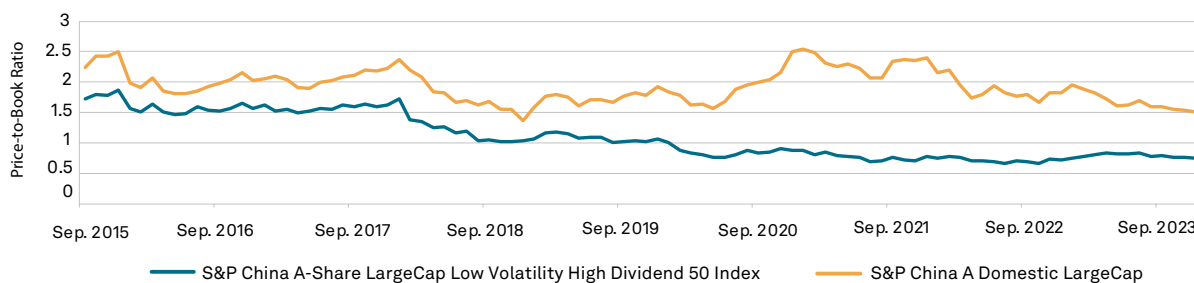


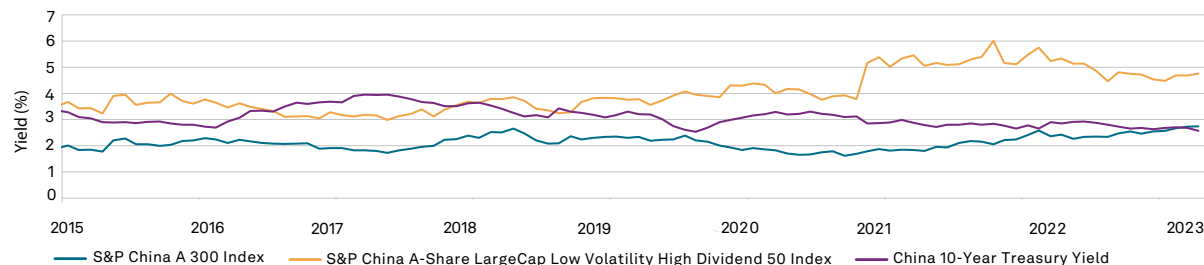
Exhibit 7: Price-to-Book Ratio (LTM)



Source: S&P Dow Jones Indices LLC. Data from Sept. 30, 2015, to Dec. 31, 2023. Index performance based on total return in CNY. Past performance is no guarantee of future results. The S&P China A-Share LargeCap Low Volatility High Dividend 50 Index was launched April 1, 2019. All data prior to index launch is back-tested hypothetical data. 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.

As the low-rate environment persists in A-share market, the S&P China A-Share LargeCap Low Volatility High Dividend 50 Index could be a compelling alternative for income-seeking investors. It has been consistently delivering higher dividend yields compared with the market benchmark CSI 300 (see Exhibit 8). From 2017 to 2023, the China 10-Year Treasury Yield decreased from 4.0% to 2.6%. In contrast, the dividend yield of the S&P China A-Share LargeCap Low Volatility High Dividend 50 Index increased from 3.0% to 4.8% during the same period.

Exhibit 8: Index Yields



Source: S&P Dow Jones Indices LLC. Data from Sept. 30, 2015, to Dec. 31, 2023. Index performance based on total return in CNY. Past performance is no guarantee of future results. The S&P China A-Share LargeCap Low Volatility High Dividend 50 Index was launched April 1, 2019. All data prior to index launch is back-tested hypothetical data. 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.

Selection-Driven Outperformance

Since January 2009, the S&P China A-Share LargeCap Low Volatility High Dividend 50 Index has delivered impressive outperformance compared with CSI 300 (see Exhibit 2). To understand the performance drivers, we conducted an attribution analysis and factor regression.

From Feb. 2021, to Dec. 31, 2023, the S&P China A-Share LargeCap Low Volatility High Dividend 50 Index outperformed the S&P China A 300 Index by 60% in terms of cumulative compound return. Exhibit 9 shows that the selection effect was a larger contributor than the allocation effect. The outperformance during this period could be partly attributed to overweight in Energy and Utilities, and more importantly to the selection effect in Industrials, Financials and Information Technology.

Exhibit 9: Three-Factor Brinson Performance Attribution

Sector	S&P China A-Share LargeCap Low Volatility High Dividend 50 Index		S&P China A 300		Attribution Analysis			
	Average Weight (%)	Total Return	Average Weight (%)	Total Return	Allocation Effect	Selection Effect	Interaction Effect	Total Effect
Industrials	20.46	41.69	14.45	-25.13	0.15	10.14	3.53	13.82
Financials	29.59	9.03	19.81	-22.46	1.54	6.94	3.22	11.70
Energy	8.57	123.83	1.98	98.36	5.93	0.32	1.60	7.85
Utilities	10.87	46.65	2.73	43.64	6.16	0.05	-0.04	6.16
Information Technology	3.81	4.31	14.80	-35.04	0.94	7.11	-2.19	5.86
Real Estate	10.86	4.27	2.16	-42.92	0.80	1.30	2.44	4.54
Materials	5.42	6.82	9.32	-33.26	0.32	4.81	-2.58	2.55
Health Care	0.47	-0.73	9.35	-46.02	1.90	0.60	-0.54	1.95
Consumer Discretionary	6.44	-23.09	8.49	-39.54	0.59	0.79	0.35	1.74
Consumer Staples	2.38	0.95	15.47	-30.80	-0.35	3.92	-1.91	1.66
Communication Services	1.13	79.78	1.43	-40.40	0.90	0.47	0.12	1.49
Total	100.00	29.11	100.00	-30.20	18.86	36.44	4.00	59.31

Source: S&P Dow Jones Indices LLC, FactSet. Data from Feb. 1, 2021, to Dec. 31, 2023. Index performance based on total return in CNY. Past performance is no guarantee of future results. The S&P China A-Share LargeCap Low Volatility High Dividend 50 Index was launched April 1, 2019. All data prior to index launch is back-tested hypothetical data. Table is provided for illustrative purposes and reflect 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 10 shows the result of the factor regression. The S&P China A-Share LargeCap Low Volatility High Dividend 50 Index exhibited strong exposure to value and quality factors. After controlling for six common equity factors, the index demonstrated a 4.69% annualized alpha with statistical significance.

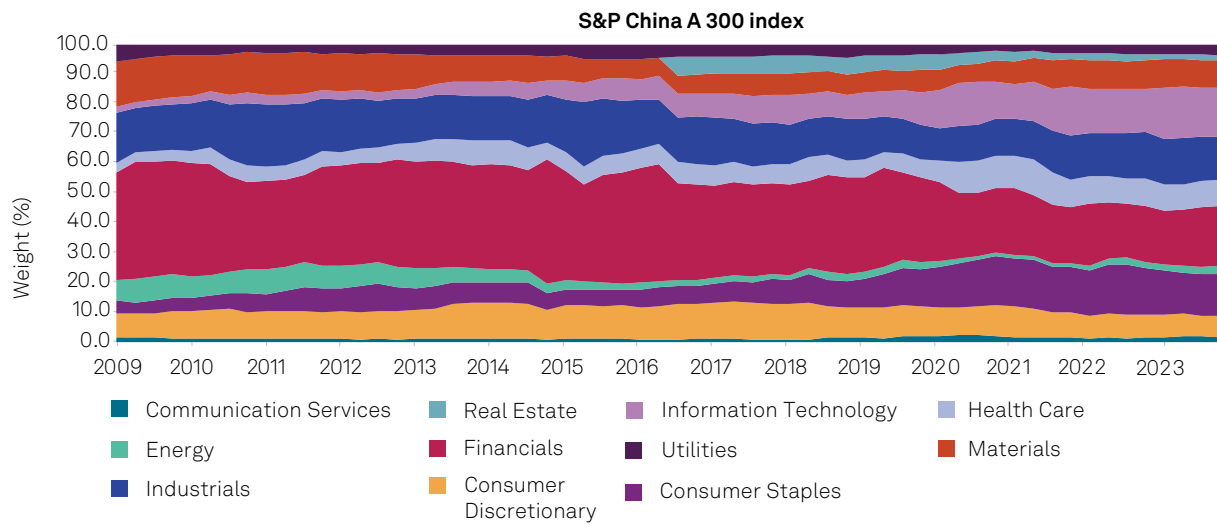
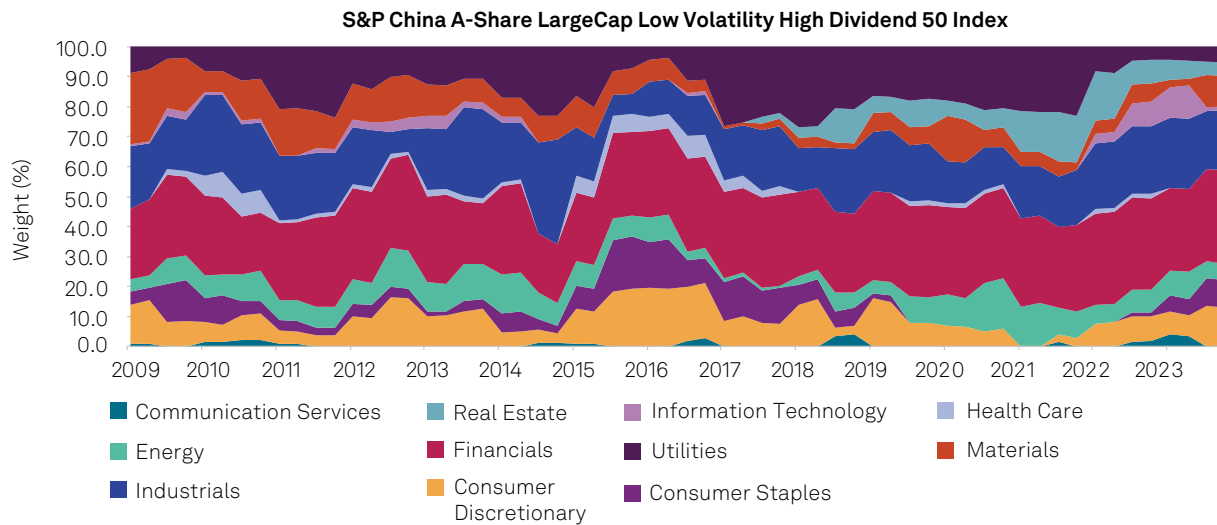
Exhibit 10: Six-Factor Regression of the S&P China A 300 Index and S&P China A-Share Dividend Opportunities Index

Category	S&P China A-Share LargeCap Low Volatility High Dividend 50 Index	CSI 300
Annualized Alpha	4.69%	1.21%
T-stats	2.73	1.40
Market Beta	0.91	1.11
T-stats	36.80	89.42
Size	0.02	-0.27
T-stats	0.39	-11.57
Value	0.38	-0.11
T-stats	6.30	-3.73
Profitability	0.28	0.15
T-stats	3.37	3.64
Investment	0.23	0.07
T-stats	2.18	1.35
Momentum	-0.20	-0.09
T-stats	-5.20	-4.54
R-Square	0.92	0.98

Source: S&P Dow Jones Indices LLC, FactSet, BetaPlus, Data from Jan. 31, 2009, to Dec. 31, 2023. Index performance based on total return in CNY. Past performance is no guarantee of future results. The S&P China A-Share LargeCap Low Volatility High Dividend 50 Index was launched April 1, 2019. All data prior to index launch is back-tested hypothetical data. Table is provided for illustrative purposes and reflect 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.

Appendix

Exhibit 11: The S&P China A-Share LargeCap Low Volatility High Dividend 50 Index and S&P China A 300 Index Historical Sector Weight



Source: S&P Dow Jones Indices LLC. Data from Jan. 31, 2009, to Dec. 31, 2023. Index performance based on total return in CNY. Past performance is no guarantee of future results. The S&P China A-Share LargeCap Low Volatility High Dividend 50 Index was launched April 1, 2019. All data prior to index launch is back-tested hypothetical data. Charts are provided for illustrative purposes and reflect 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/Back-Tested Data

The S&P China A-Share LargeCap Low Volatility High Dividend 50 Index was launched April 1, 2019. All information presented prior to an index's Launch Date is hypothetical (back-tested), not actual performance, and is based on the index methodology in effect on the index launch date. However, when creating back-tested history for periods of market anomalies or other periods that do not reflect the general current market environment, index methodology rules may be relaxed to capture a large enough universe of securities to simulate the target market the index is designed to measure or strategy the index is designed to capture. For example, market capitalization and liquidity thresholds may be reduced. In addition, forks have not been factored into the back-test data with respect to the S&P Cryptocurrency Indices. For the S&P Cryptocurrency Top 5 & 10 Equal Weight Indices, the custody element of the methodology was not considered; the back-test history is based on the index constituents that meet the custody element as of the Launch Date. Complete index methodology details are available at spglobal.com/spdji. Back-tested performance reflects application of an index methodology and selection of index constituents with the benefit of hindsight and knowledge of factors that may have positively affected its performance, cannot account for all financial risk that may affect results and may be considered to reflect survivor/look ahead bias. Actual returns may differ significantly from, and be lower than, back-tested returns. Past performance is not an indication or guarantee of future results.

Please refer to the methodology for the Index 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. Back-tested performance is for use with institutions only; not for use with retail investors.

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 to a fixed value for calculation purposes. The Launch Date designates the date when 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 data feed 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.

Typically, when S&P DJI creates back-tested index data, S&P DJI uses actual historical constituent-level data (e.g., historical price, market capitalization, and corporate action data) in its calculations. As ESG investing is still in early stages of development, certain datapoints used to calculate S&P DJI's ESG indices may not be available for the entire desired period of back-tested history. The same data availability issue could be true for other indices as well. In cases when actual data is not available for all relevant historical periods, S&P DJI may employ a process of using "Backward Data Assumption" (or pulling back) of ESG data for the calculation of back-tested historical performance. "Backward Data Assumption" is a process that applies the earliest actual live data point available for an index constituent company to all prior historical instances in the index performance. For example, Backward Data Assumption inherently assumes that companies currently not involved in a specific business activity (also known as "product involvement") were never involved historically and similarly also assumes that companies currently involved in a specific business activity were involved historically too. The Backward Data Assumption allows the hypothetical back-test to be extended over more historical years than would be feasible using only actual data. For more information on "Backward Data Assumption" please refer to the FAQ. The methodology and factsheets of any index that employs backward assumption in the back-tested history will explicitly state so. The methodology will include an Appendix with a table setting forth the specific data points and relevant time period for which backward projected data was used.

Index returns shown do not represent the results of actual trading of investable assets/securities. S&P Dow Jones Indices maintains the index and calculates the index levels and performance shown or discussed but does not manage actual assets. Index returns do not reflect payment of any sales charges or fees an investor may pay to purchase the securities underlying the Index or investment funds that are intended to track the performance of the Index. The imposition of these fees and charges would cause actual and back-tested performance of the securities/fund to be lower than the Index performance shown. As a simple example, if an index returned 10% on a US \$100,000 investment for a 12-month period (or US \$10,000) and an actual asset-based fee of 1.5% was imposed at the end of the period on the investment plus accrued interest (or US \$1,650), the net return would be 8.35% (or US \$8,350) for the year. Over a three-year period, an annual 1.5% fee taken at year end with an assumed 10% return per year would result in a cumulative gross return of 33.10%, a total fee of US \$5,375, and a cumulative net return of 27.2% (or US \$27,200).

General Disclaimer

© 2024 S&P Dow Jones Indices. All rights reserved. S&P, S&P 500, SPX, SPY, The 500, US500, US 30, S&P 100, S&P COMPOSITE 1500, S&P 400, S&P MIDCAP 400, S&P 600, S&P SMALLCAP 600, S&P GIVI, GLOBAL TITANS, DIVIDEND ARISTOCRATS, Select Sector, S&P MAESTRO, S&P PRISM, S&P STRIDE, GICS, SPIVA, SPDR, INDEXOLOGY, iTraxx, iBoxx, ABX, ADDBI, CDX, CMBX, LCDX, MBX, MCDX, PRIMEX, TABX, HHPI, IRXX, I-SYND, SOVX, CRITS, CRITR are registered trademarks of S&P Global, Inc. ("S&P Global") or its affiliates. DOW JONES, DJIA, THE DOW and DOW JONES INDUSTRIAL AVERAGE are trademarks of Dow Jones Trademark Holdings LLC ("Dow Jones"). These trademarks together with others have been licensed to S&P Dow Jones Indices LLC. Redistribution or reproduction in whole or in part are prohibited without written permission of S&P Dow Jones Indices LLC. This document does not constitute an offer of services in jurisdictions where S&P Dow Jones Indices LLC, S&P Global, Dow Jones or their respective affiliates (collectively "S&P Dow Jones Indices") do not have the necessary licenses. Except for certain custom index calculation services, all information provided by S&P Dow Jones Indices is impersonal and not tailored to the needs of any person, entity or group of persons. S&P Dow Jones Indices receives compensation in connection with licensing its indices to third parties and providing custom calculation services. Past performance of an index is not an indication or guarantee of future results.

It is not possible to invest directly in an index. Exposure to an asset class represented by an index may be available through investable instruments based on that index. S&P Dow Jones Indices does not sponsor, endorse, sell, promote or manage any investment fund or other investment vehicle that is offered by third parties and that seeks to provide an investment return based on the performance of any index. S&P Dow Jones Indices makes no assurance that investment products based on the index will accurately track index performance or provide positive investment returns. S&P Dow Jones Indices LLC is not an investment advisor, and S&P Dow Jones Indices makes no representation regarding the advisability of investing in any such investment fund or other investment vehicle. A decision to invest in any such investment fund or other investment vehicle should not be made in reliance on any of the statements set forth in this document. S&P Dow Jones Indices is not an investment adviser, commodity trading advisor, commodity pool operator, broker dealer, fiduciary, promoter" (as defined in the Investment Company Act of 1940, as amended), "expert" as enumerated within 15 U.S.C. § 77k(a) or tax advisor. Inclusion of a security, commodity, crypto currency or other asset within an index is not a recommendation by S&P Dow Jones Indices to buy, sell, or hold such security, commodity, crypto currency or other asset, nor is it considered to be investment advice or commodity trading advice.

These materials have been prepared solely for informational purposes based upon information generally available to the public and from sources believed to be reliable. No content contained in these materials (including index data, ratings, credit-related analyses and data, research, valuations, model, software or other application or output therefrom) or any part thereof ("Content") may be modified, reverse-engineered, reproduced or distributed in any form or by any means, or stored in a database or retrieval system, without the prior written permission of S&P Dow Jones Indices. The Content shall not be used for any unlawful or unauthorized purposes. S&P Dow Jones Indices and its third-party data providers and licensors (collectively "S&P Dow Jones Indices Parties") do not guarantee the accuracy, completeness, timeliness or availability of the Content. S&P Dow Jones Indices Parties are not responsible for any errors or omissions, regardless of the cause, for the results obtained from the use of the Content. THE CONTENT IS PROVIDED ON AN "AS IS" BASIS. S&P DOW JONES INDICES PARTIES DISCLAIM ANY AND ALL EXPRESS OR IMPLIED WARRANTIES, INCLUDING, BUT NOT LIMITED TO, ANY WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE OR USE, FREEDOM FROM BUGS, SOFTWARE ERRORS OR DEFECTS, THAT THE CONTENT'S FUNCTIONING WILL BE UNINTERRUPTED OR THAT THE CONTENT WILL OPERATE WITH ANY SOFTWARE OR HARDWARE CONFIGURATION. In no event shall S&P Dow Jones Indices Parties be liable to any party for any direct, indirect, incidental, exemplary, compensatory, punitive, special or consequential damages, costs, expenses, legal fees, or losses (including, without limitation, lost income or lost profits and opportunity costs) in connection with any use of the Content even if advised of the possibility of such damages.

S&P Global keeps certain activities of its various divisions and business units separate from each other in order to preserve the independence and objectivity of their respective activities. As a result, certain divisions and business units of S&P Global may have information that is not available to other business units. S&P Global has established policies and procedures to maintain the confidentiality of certain non-public information received in connection with each analytical process.

In addition, S&P Dow Jones Indices provides a wide range of services to, or relating to, many organizations, including issuers of securities, investment advisers, broker-dealers, investment banks, other financial institutions and financial intermediaries, and accordingly may receive fees or other economic benefits from those organizations, including organizations whose securities or services they may recommend, rate, include in model portfolios, evaluate or otherwise address.