

Convertible Bond Indices

An Overview

SPDR EMEA Strategy & Research

When investing in convertible bond indices, it is important to understand the composition. Inclusion criteria can lead to major differences in exposure across indices.

Inclusion Criteria

The following table provides a summary of the key security inclusion criteria for each of the Refinitiv indices.

The main differences between the three indices, in terms of inclusion criteria, are the minimum issue size, concentration level cap, and price/premium testing. The Global Focus Index has a larger minimum amount outstanding compared to the other two indices, particularly around US bonds where issues have to be greater than \$500 million in size. Both the Global Focus and Qualified Global Index have concentration level caps of 4%, whilst the Global Index has 2%.

This difference leads to there being a greater number of constituents in the Global Index as more securities meet the concentration level cap (see Figure 1). The price/premium test, which is applied to the Global Focus Index but not the Global Qualified Index, is also an important differentiator. The test ensures that the delta of the index remains within a defined range. Later in this document we comment on delta and its contribution to performance.

Figure 1
Refinitiv Global
Convertible Index
Methodology Comparison

Index Criteria	Refinitiv Qualified Global Index (Benchmark for SPDR ETF)	Refinitiv Global Index	Refinitiv Global Focus Index
Minimum Amount Outstanding	Higher and all in local currency	Lower and all in USD	Higher and all in local currency
US	\$350mn	\$300mn	\$500mn
Europe	€375mn	\$200mn	€375mn
Asia	\$275mn	\$100mn	\$275mn
Japan	¥22bn	\$100mn	¥22bn
Other	\$275mn	\$200mn	\$275mn
Eligible Securities	No mandatory, perpetual, or 144A issues	Mandatory and perpetual issues included	No mandatory or perpetual issues
Reselection	Quarterly from Global	Quarterly from Total Universe	Quarterly from Global
Add/Drop Process	Adds at monthly rebalance only Immediate drops for events Quarterly reselection adds/drops	Immediate new issue adds Immediate drops for events Quarterly reselection adds/drops	Adds/drops at monthly rebalance Immediate drops for events Quarterly reselection adds/drops
Concentration Level Cap* (%)	4	2	4
Price & Premium Test	No price limits	No price limits	Dropped if too deeply in the money Dropped if too deeply out of the money

Source: Refinitiv, as of 30 September 2023.
* Concentration factors are calculated based on market capitalisation of issues from a single issuer and market capitalisation of issues with underlying assets from a single issuer.

Characteristic Breakdown

Figure 2
Turnover Statistics

In the following sections we highlight the key characteristics of each index.

Calendar Year	Refinitiv Qualified Global Convertibles Index (%)	Refinitiv Global Convertibles Index (%)	Refinitiv Global Focus Convertibles Index (%)
2009	47.7	57.8	76.6
2010	34.1	39.5	72.1
2011	46.3	40.4	81.9
2012	31.2	34.3	64.7
2013	55.7	55.9	113.7
2014	59.5	49.8	88.4
2015	66.5	56.1	86.7
2016	39.9	44.6	70.9
2017	45.3	46.1	69.0
2018	55.2	52.4	84.1
2019	57.7	57.8	81.2
2020	60.8	63.3	160.0
2021	71.5	48.4	125.1
2022	43.4	35.0	132.3

Source: State Street Global Advisors, Refinitiv as of 31 December 2022. Turnover is measured by the total value of all adds and drops as a percentage of that day's market cap and then summated for each calendar year. Turnover analysis shown above are as of the date indicated, and are subject to change.

On a market capitalisation basis, the Focus Index encompasses \$151 billion of the total global convertible bond universe, whilst the Qualified Index captures a more representative \$226 billion.¹ The Global Convertible Index has the largest market cap at \$313 billion.² In terms of yield, the average running yield is 91bps for the Qualified Global Index and 130bps for the Global Focus Index.³ The Global Index yield is higher at 157bps due to the lower minimum outstanding requirement; this results in the inclusion of bonds from smaller issuers that tend to require larger coupons in order to attract investors.⁴

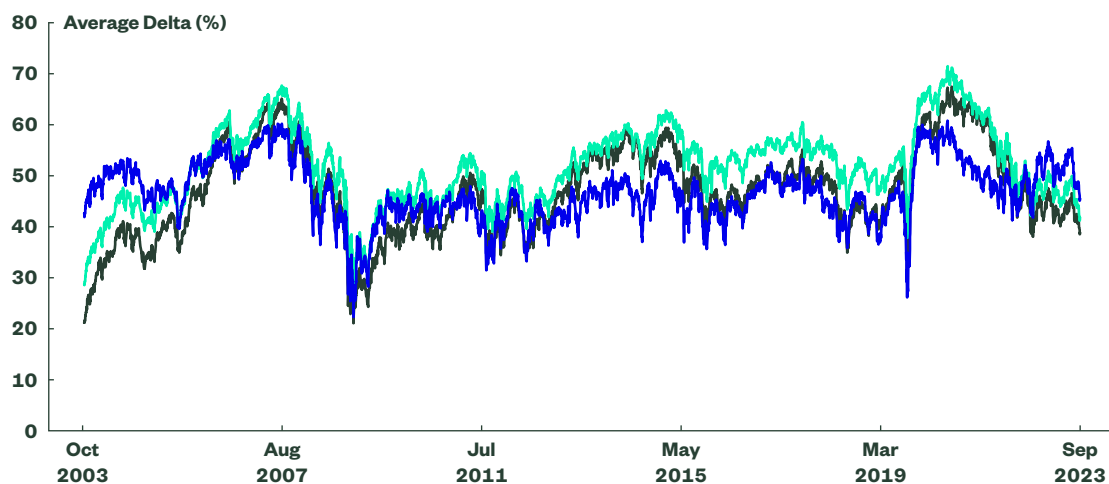
2023 so far has been characterised by some degree of volatility. Issuance rebounded in 2023, with close to 60bn\$ of new issues. However, net issuance remained negative at -26bn\$ as of the end of the third quarter and deeply negative net issuance of convertible bonds, -\$57 billion, the lowest level seen since 1998. Turnover was low in 2022, and is expected to be a bit higher for the whole of 2023 when the year draws to a close. The Global Focus index has historically seen a higher level of churn due to the tests on prices and premia that exclude bonds and reincludes them as prices move.

Delta

Delta measures the sensitivity of a convertible bond price to changes in the price of the underlying stock. The historical average delta of each index is plotted in Figure 3. The Qualified Global Index (delta 38.8) is slightly less sensitive to equity price movements compared to the Global Focus Index (45.4).⁵ The Global Convertible Index delta is 41.7, which is in part due to its including bonds with mandatory conversion clauses.⁶ These bonds tend to be issued with conversion prices closer to 'at the money', which in turn affects the overall delta of the index.

Figure 3
Average Delta

■ Refinitiv Qualified Global Convertible Index
■ Refinitiv Global Convertible Index
■ Refinitiv Global Focus Convertible Index



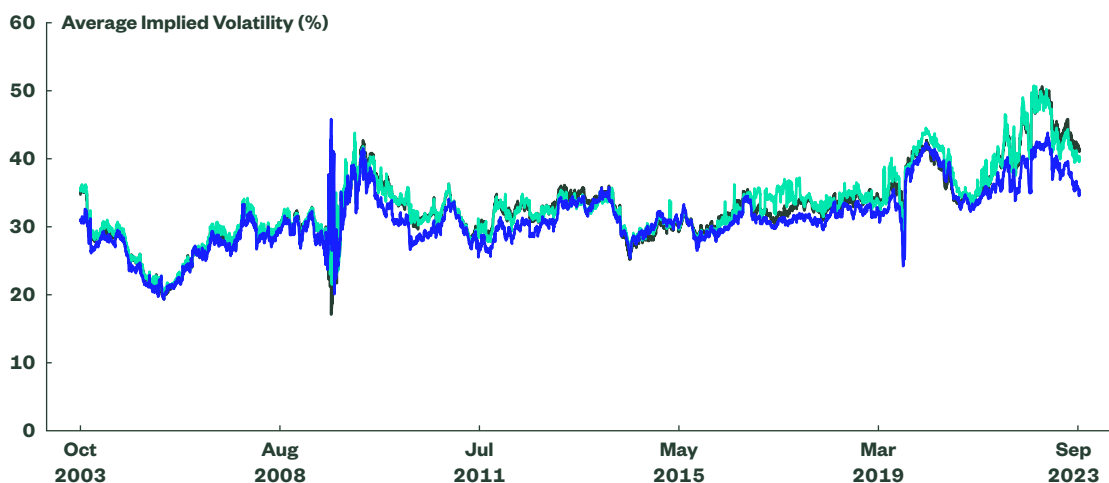
Source: Refinitiv, as of 30 September 2023 in USD. Delta shown above is subject to change. The Refinitiv Qualified Global Convertible Index was inceptioned on 10 December 2008. Results prior to this date were back-test calculated by using available data at the time in accordance with the Index's current methodology. Refinitiv Qualified Global Convertible Bond Index includes back-tested returns supplied by Refinitiv. Effective 1 June 2020, the index name has been changed from Thomson Reuters Qualified Global Convertible Index to Refinitiv Qualified Global Convertible Index.

Implied Volatility

The implied volatility of a convertible bond is a measure used to value the worth of the bond's option component. With increased geopolitical conflict, inflation at 40-year highs, rising interest rates and negative equity and bond market returns, volatility rose sharply and hit above-average levels in the third quarter of 2022. While implied volatility has been higher than realised volatility in 2023, it has receded from the 2022 peaks and this helped support the performance of the convertible bond asset class so far this year. Figure 4 shows the historical average implied volatility of the three indices.

Figure 4
Average Implied Volatility

■ Refinitiv Qualified Global Convertible Index
■ Refinitiv Global Convertible Index
■ Refinitiv Global Focus Convertible Index



Source: Refinitiv, as of 30 September 2023 in USD. Implied Volatility shown above are subject to change. The Refinitiv Qualified Global Convertible Index was inceptioned on 10 December 2008. Results prior to this date were back-test calculated by using available data at the time in accordance with the Index's current methodology. Refinitiv Qualified Global Convertible Bond Index includes back-tested returns supplied by Refinitiv. Effective 1 June 2020, the index name has been changed from Thomson Reuters Qualified Global Convertible Index to Refinitiv Qualified Global Convertible Index.

Regional, Currency and Sector Breakdown

All three indices are global in terms of exposures. Figure 6a shows the regional breakdown of each index. Of note, the Global Focus index has a lower exposure to the US compared to the other two indices, with the difference spread over other regions.

The regional breakdown bias is also evident in the currency breakdown (see Figure 6b), and there are also sector differences between the three indices (Figure 6c).

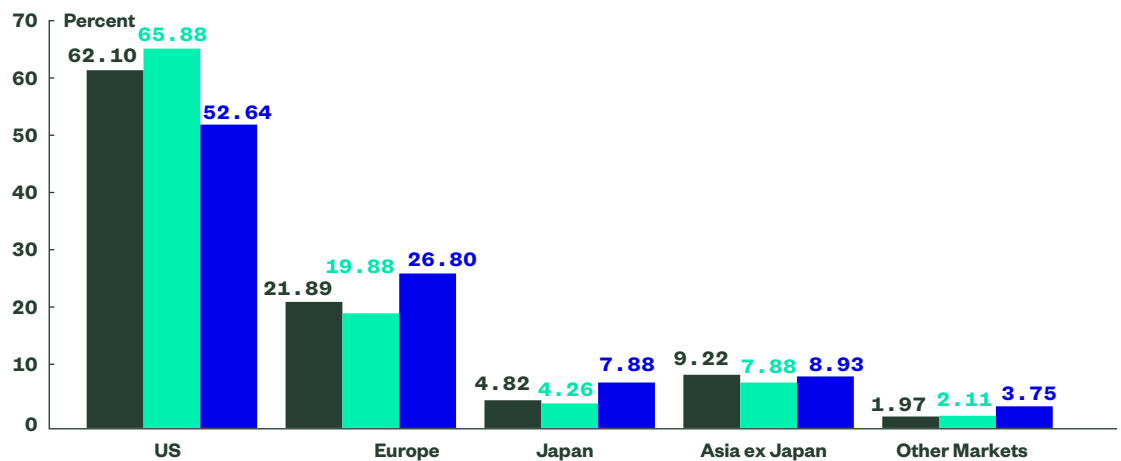
Figure 5
Convertible Bond
Indices Overview

Index Characteristics Convertible Index	Refinitiv Qualified Global Convertibles Index (%)	Refinitiv Global Convertibles Index (%)	Refinitiv Global Focus Convertibles Index (%)
Number of Issues	360	525	235
Market Capitalisation (\$B)	226	313	151
Average Running Yield (%)	0.91	1.57	1.30
Weighted Average Delta	38.8	41.7	45.4
Implied Volatility	41.5	40.4	35.5
Base Date of Index	10-Dec-08 (History: 11 April 2003)	31-Dec-93	31-Dec-93

Source: Refinitiv, as of 30 September 2023. Characteristics are as of the date indicated, are subject to change, and should not be relied upon as current thereafter. Past performance is not a guarantee of future results.

Figure 6a
Regional Breakdown

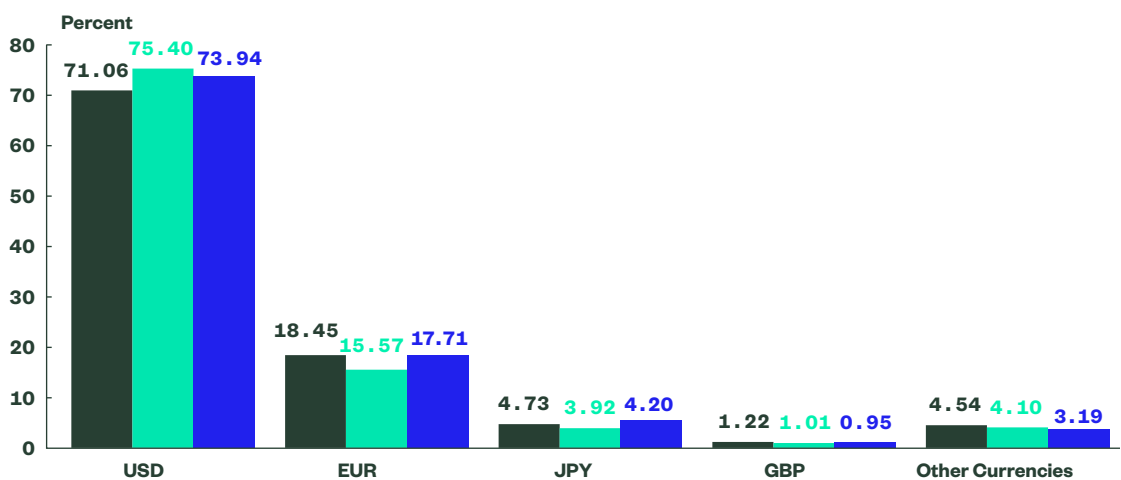
■ Refinitiv Qualified Global
Convertible Index
■ Refinitiv Global
Convertible Index
■ Refinitiv Global Focus
Convertible Index



Source: Refinitiv, as of 30 September 2023. Regional breakdowns are as of the date indicated, are subject to change, and should not be relied upon as current thereafter. **Past performance is not a guarantee of future results.** 'Other Markets' includes: United Arab Emirates, Israel and South Africa and will vary with issuance.

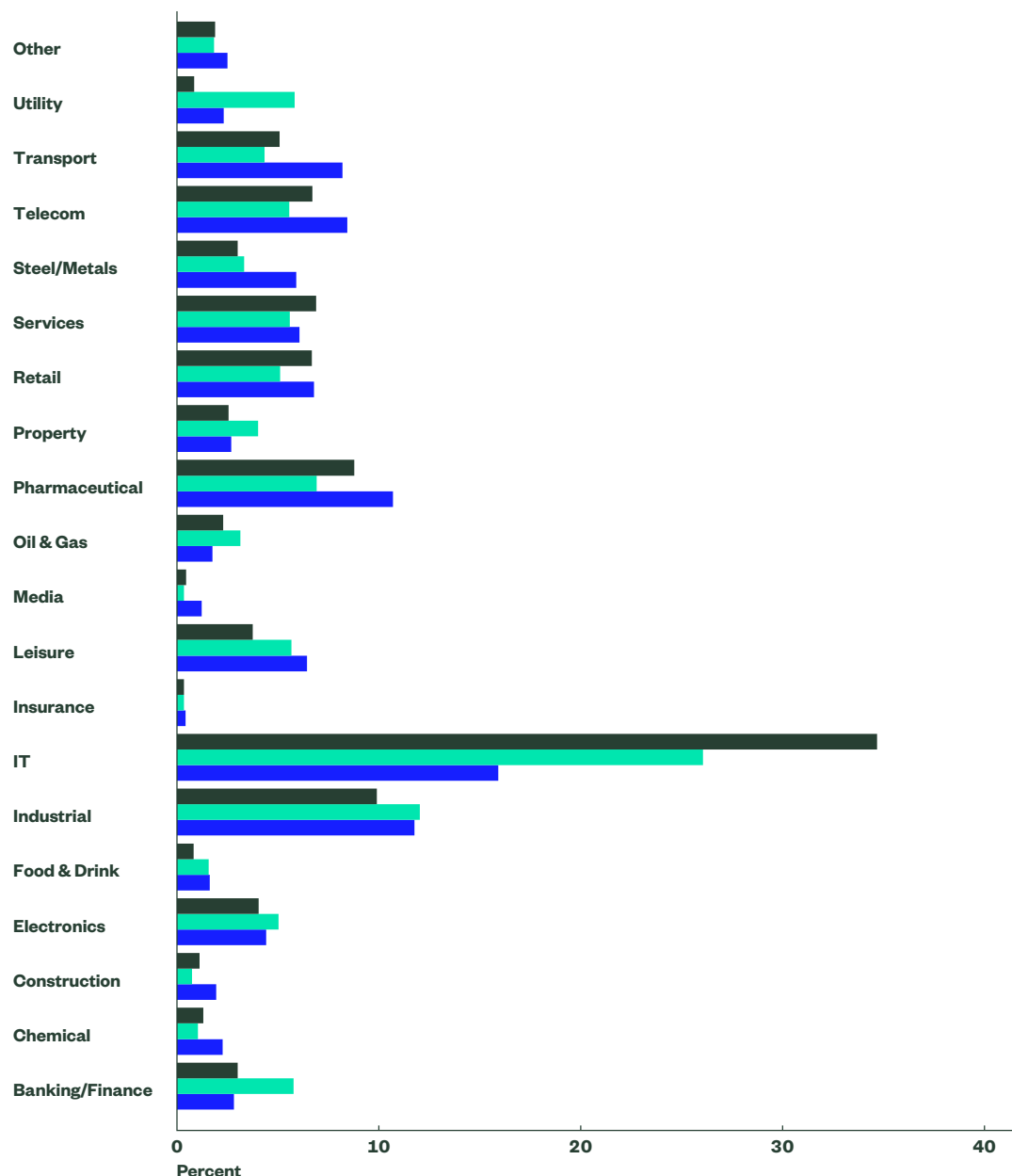
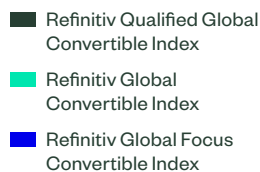
Figure 6b
Currency Breakdown

■ Refinitiv Qualified Global
Convertible Index
■ Refinitiv Global
Convertible Index
■ Refinitiv Global Focus
Convertible Index



Source: Refinitiv, as of 30 September 2023. Currency breakdowns are as of the date indicated, are subject to change, and should not be relied upon as current thereafter. **Past performance is not a guarantee of future results.** 'Other Currencies' includes: SGD, CNH, HKD, TWD, CHF, KRW, ZAR, SEK.

Figure 6c

Sector Breakdown

Source: Refinitiv, as of 30 September 2023. Sector weights are as of date indicated, are subject to change, and should not be relied upon as current thereafter. This information should not be considered a recommendation to invest in a particular sector or to buy or sell any security shown. It is not known whether the sectors or securities shown will be profitable in the future.

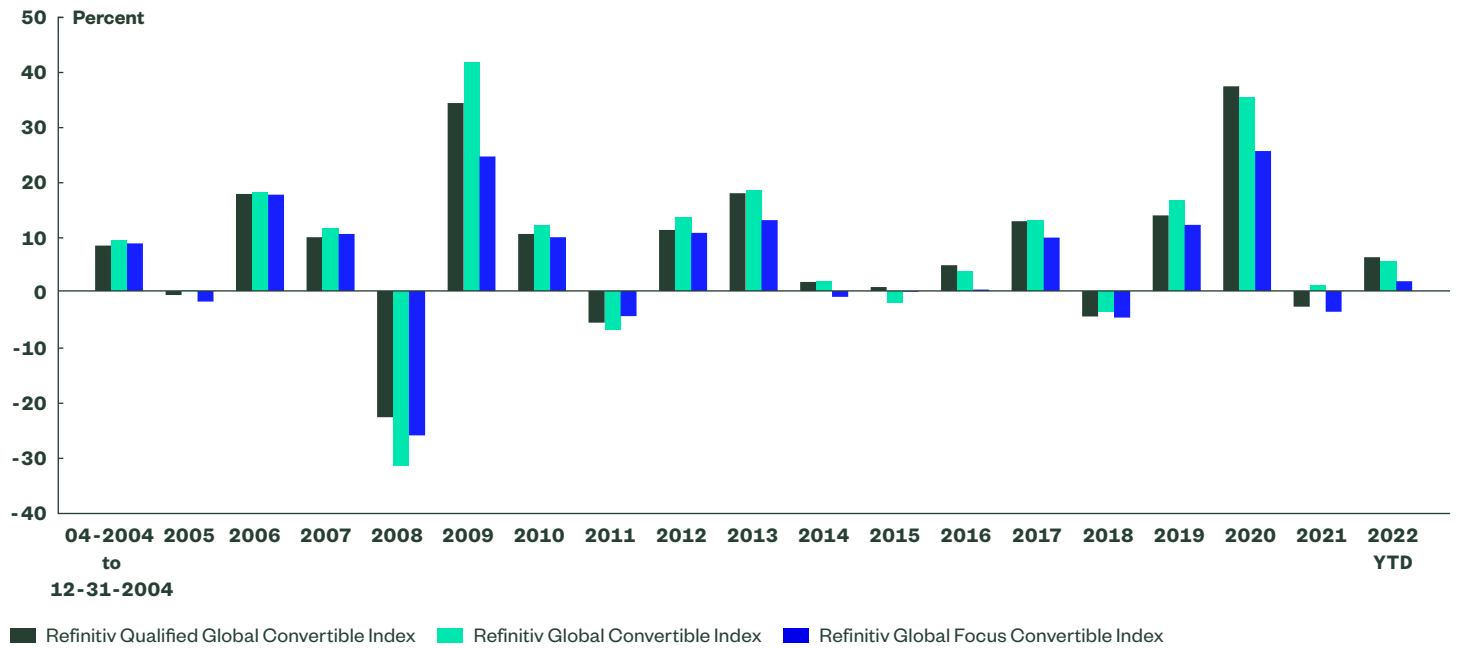
Performance

Finally, when looking at the overall performance of the three indices we can see that, historically, the Qualified Global Index, which the SPDR ETF tracks, has performed well compared to its peers in particular since the ETF's inception in October 2014 (see Figure 7). A salient point to note is that the ten-year performance of the Qualified Index, at an annual average of close to 4.5%, is only marginally lower than that of the Global Index (4.7%) despite the fact that equity sensitivity 'delta' and implied volatility (or 'cost of optionality') have been lower. Meanwhile the lower gearing of the Global Focus has weighed on its performance, returning only 1.7% annualised over 10 years (in USD unhedged terms).

Summary

Understanding the characteristics of different global convertible bond indices is important, given that the portfolio benchmark becomes the basis for an investor's beta. Though at first glance these three indices may appear similar, there are material differences in their inclusion criteria. These differences mean that each index will have different risk and return characteristics, and investors should consider these factors carefully when choosing their benchmark.

Figure 7
Calendar Performance



Source: Refinitiv, as of 30 September 2023, Total Returns in USD. Qualified Index includes back-tested returns supplied by Refinitiv. **Index returns are unmanaged and do not reflect the deduction of any fees or expenses. Index returns reflect all items of income, gain and loss and the reinvestment of dividends and other income as applicable. Index performance is not meant to represent that of any particular fund. Past performance is not an indicator of future performance.** The Refinitiv Qualified Global Convertible Index was inceptioned on 11 December 2008. Results prior to this date were back-test calculated by using available data at the time in accordance with the Index's current methodology. Effective 1 June 2020, the index name was changed from Thomson Reuters Qualified Global Convertible Index to Refinitiv Qualified Global Convertible Index.

Endnotes

- | | |
|---|---|
| 1 Source: Refinitiv, as of 30 September 2023. | 4 Source: Refinitiv, as of 30 September 2023. |
| 2 Source: Refinitiv, as of 30 September 2023. | 5 Source: Refinitiv, as of 30 September 2023. |
| 3 Source: Refinitiv, as of 30 September 2023. | 6 Source: Refinitiv, as of 30 September 2023. |

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