NEUBERGER | BERMAN

**This is a marketing communication. Please refer to the prospectus of the fund and to the KIID before making any final investment decisions. Investors should note that by making an investment they will own shares in the fund, and not the underlying assets.**

# Neuberger Berman US Equity Index PutWrite Fund

**PORTFOLIO MANAGERS:** Derek Devens, CFA, Rory Ewing

## Performance Highlights

In the fourth quarter, the Neuberger Berman US Equity Index PutWrite Fund ("the Fund") generated a return of 5.28%, outperforming the 4.79% return of its benchmark, the 42.5% CBOE S&P 500 One-Week PutWrite Index, 42.5% CBOE S&P 500 PutWrite Index, 7.5% CBOE Russell 2000 One-Week PutWrite Index, and 7.5% CBOE Russell 2000 PutWrite Index.

**Past performance does not predict future returns**

| CUMULATIVE (%)[1] | 1m | 3m | YTD | 1y | 3y | 5y | SI[3] |
|---|---|---|---|---|---|---|---|
| Fund | 2.95 | 5.28 | 18.36 | 18.36 | 48.36 | 53.40 | 53.40 |
| Benchmark | 2.53 | 4.79 | 15.69 | 15.69 | 26.66 | 24.82 | 24.82 |

| ANNUALISED (%)[1] | | | | 1y | 3y | 5y | SI[3] |
|---|---|---|---|---|---|---|---|
| Fund | | | | 18.36 | 14.05 | 8.93 | 8.92 |
| Benchmark | | | | 15.69 | 8.20 | 4.53 | 4.54 |

| CALENDAR (%)[2] | 2016^ | 2017 | 2018 | 2019 | 2020 | 2021 |
|---|---|---|---|---|---|---|
| Fund | - | 10.80 | -6.68 | 15.09 | 8.91 | 18.36 |
| Benchmark | - | 10.38 | -10.73 | 14.01 | -3.97 | 15.69 |

[1] **Performance to latest month end. YTD - Year to Date, SI - Since Inception.**
[2] Performance for the current calendar year is the year to date performance up to the reporting month end.
[3] Performance from 30 December 2016 to latest month end.
Fund performance is representative of the USD I Accumulating Class and has been calculated to account for the deduction of fees.
**Fund performance does not take account of any commission or costs incurred by investors when subscribing for or redeeming shares. The Fund is actively managed, which means that the investments are selected at the discretion of the investment manager. The Fund is not constrained by its benchmark, which is used for comparison purposes only.** Investors who subscribe in a currency other than the base currency of the Fund should note that returns may increase or decrease as a result of currency fluctuations. The fees and charges paid by the Fund will reduce the return on your investment.
Source of all data and charts (unless stated otherwise): Neuberger Berman Europe Limited.

### *Not to be Overshadowed*

The S&P 500 Index's 28.7% return cast a very long shadow over most investment strategies in 2021. So, despite the many headlines of the long-awaited return of alternative 'strategies'—2021 was to be an encore year—we find ourselves uninspired by the limited number of strategies that kept pace with the S&P 500 or provided comparable risk-efficient results. Looking at the table below, the Cboe S&P 500 PutWrite Index 'held its own' on an absolute basis and, importantly, did so in an exceptionally risk-efficient manner.

| Index | 2021 Total Return | Risk-Adjusted |
|---|---|---|
| **S&P 500 Index** | **28.71** | 1.81 |
| Nasdaq 100 Index | 27.51 | 1.24 |
| Bloomberg Commodity Index | 27.11 | 1.55 |
| Cboe S&P 500 30-Delta BuyWrite | 22.18 | 1.78 |
| **Cboe S&P 500 PutWrite Index** | **21.79** | **2.54** |
| Russell 2000 Index | 14.82 | 0.68 |
| HFRI Equity Hedged Index (Net) | 11.96 | 0.38 |
| MSCI EAFE Index | 11.78 | 0.95 |
| HFRI Credit Index (Net) | 7.77 | 0.66 |
| HFRI Macro Index (Net) | 7.52 | 0.31 |
| HFRI Fund of Funds Index (Net) | 6.53 | 0.32 |
| HFRI Equity Mkt. Neutral (Net) | 5.72 | 0.52 |
| Bloomberg U.S. High Yield | 5.28 | 2.54 |
| Cboe S&P 500 Iron Condor Index | 1.10 | 0.50 |
| Bloomberg U.S. Aggregate | -1.54 | - |
| MSCI EM Index | -2.22 | - |
| ICE BofA 15+ Yr U.S. Treasury | -4.62 | - |

*Source Bloomberg LP. Risk-adjusted return is calculated as the 2021 return divided by the 2021 standard deviation of the index,*

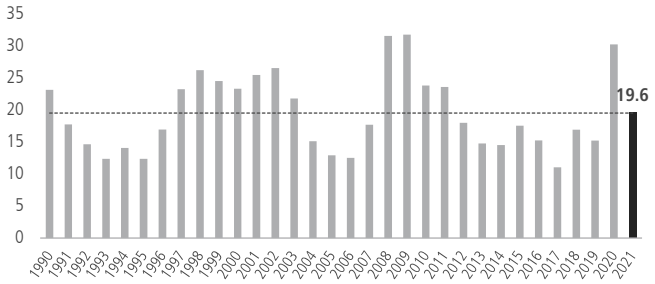
2021 was a successful year for our strategy as our equity putwrite posted double digit returns. Based on the above and our belief that financial markets remain in a regime characterized by elevated levels of volatility, we believe the absolute and risk-adjusted results of our strategy in 2021 stacks up well and furthers the argument for incorporating risk-efficient, total return-oriented index option strategies into asset allocations. While many are seeking hedges against the next market correction, we believe investors will be better served by harnessing the volatility as a source of structural diversification. There are many strategies that have come in and out of favor of the last few decades, some have eroded all together. Few have endured like the volatility monetization strategies.

### *A Year of Strong Revenues*

In the wake of 2020, option premiums (implied volatility levels) remained elevated relative to the years preceding the pandemic providing a good reminder that implied volatility levels only need to be near historic averages to provide amply 'revenue' for our strategies to seek to produce attractive returns.

**AVERAGE ANNUAL CBOE S&P 500 VOLATILITY INDEX ("VIX")**

1990 – 2021

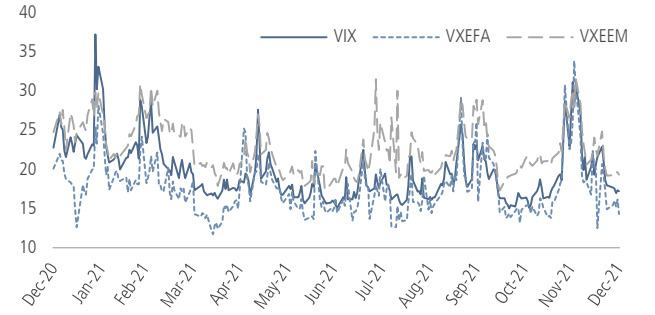



*Source: Bloomberg LP*

What held for the S&P 500 (above) also held for MSCI EAFE and MSCI EM Indexes. Despite relatively wide ranges over the year, average levels of 17.7 for the Cboe MSCI iShares EAFE ETF Volatility Index (VXEFA) and 22.8 for the Cboe iShares EM ETF Volatility Index (VXEEM) offered ample premiums relative to the years leading up to the start of the pandemic in 2020.

**IMPLIED VOLATILITY LEVELS**

December 2020 – September 2021 (Daily)



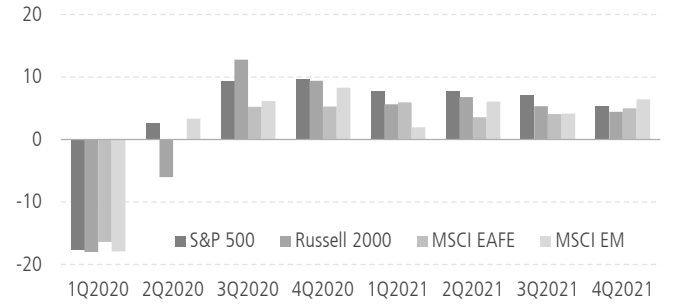

*Source: Bloomberg LP*

### *Solid Profits*

With higher revenues generally come higher profits (option implied volatility premiums), which has been the case in every quarter since a remarkable negative implied volatility premium in 1Q2020 (quarterly implied volatility premium estimates below).

**OPTION IMPLIED PREMIUMS**

Average Implied Volatility Premium Estimates (Daily)



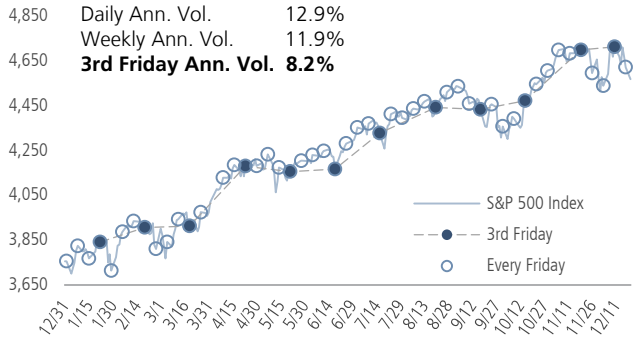

*Source: Bloomberg LP*

*Stochastic Profitability*

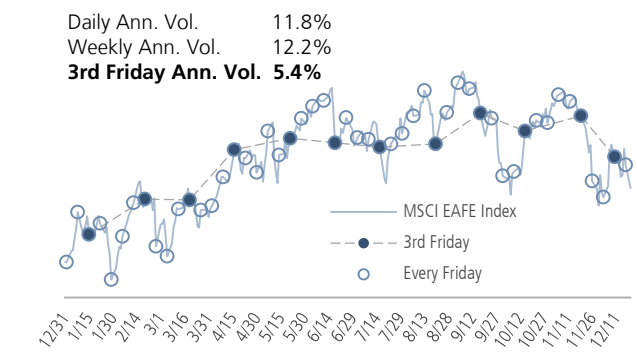
Unlike the seasonal stability or cyclicality of most businesses, option writing strategies (implied volatility premiums) tend to have stable long-term means but are subject to more variable short-term outcomes. 2021 was a year in which quick reversals in equity index price levels resulted in wide dispersions between 3rd Friday realized volatility levels and daily/weekly realized volatility levels. As a direct consequence, implied volatility premium capture was abnormally high when measured using 3rd Friday realized volatilities. The charts below attempt to illustrate this dynamic, most notably in EAFE exposure.

**2021 REALIZED VOLATILITY DISPERSION**

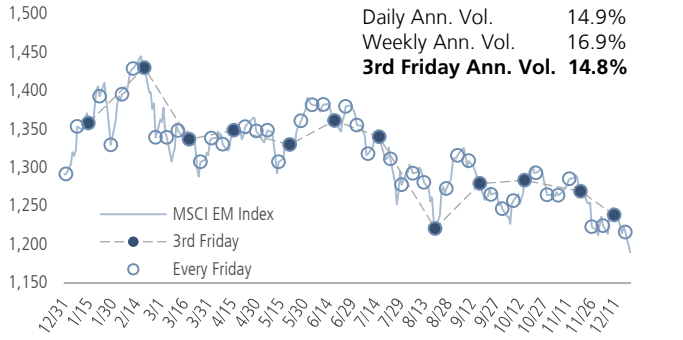
S&P 500 Index Levels 2021 (Daily)




MSCI EAFE Index Levels 2021 (Daily)




MSCI EM Index Levels 2021 (Daily)




*Source: Bloomberg LP*

The S&P 500 Index and MSCI EAFE Index realized volatility dispersions between 3rd Fridays (twelve data points) and daily/weekly volatility measures were material and significantly aided passive option strategy indexes that reset on 3rd Fridays of each month. In contrast, 3rd Friday realized volatility for the MSCI EM Index was consistent its daily realized volatility for the year. To summarize the direct impacts of the of subdued 3rd Friday realized volatility, the table below provides the return differentials of Cboe's monthly PutWrite Indexes vs. their more frequently reset counterparts.

Consistent with the charts above, the indexes with more realized volatility dispersion had their monthly option strategies indexes outperform while volatility was similar or lower for the more frequently reset weekly indexes.

**OPTION STRATEGY RETURN/RISK COMPARISON**

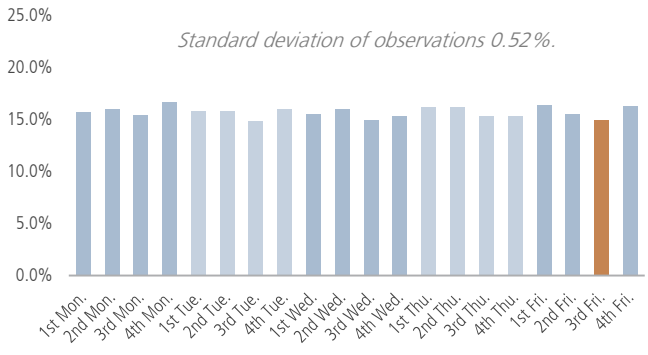
Calendar Year 2021

| | Total Return | Annual Volatility *(Monthly)* |
|---|---|---|
| Cboe S&P 500 PutWrite Index (3rd Friday) | 21.8 | 6.6 |
| Cboe S&P 500 One-Week PutWrite (Weekly) | 12.1 | 6.9 |
| Cboe R2000 PutWrite Index (3rd Friday) | 20.5 | 7.3 |
| Cboe R2000 One-Week PutWrite Index (Weekly) | -1.5 | 8.9 |
| Cboe MSCI EAFE PutWrite Index (3rd Friday) | 16.1 | 5.9 |
| NB Model: MSCI EAFE PutWrite (Weekly) | 3.9 | 7.3 |
| Cboe MSCI EM PutWrite Index (3rd Friday) | 1.8 | 7.0 |
| NB Model: MSCI EM PutWrite (Weekly) | -0.3 | 9.0 |

*Source: Bloomberg LP. PLEASE SEE "HYPOTHETICAL BACKTESTED PERFORMANCE DISCLOSURES" AT THE END OF THIS MATERIAL FOR IMPORTANT DISCLOSURES REGARDING THE HYPOTHETICAL BACKTESTED PERFORMANCE SHOWN IN THIS PRESENTATION.* ***Past performance is no guarantee of future results.***

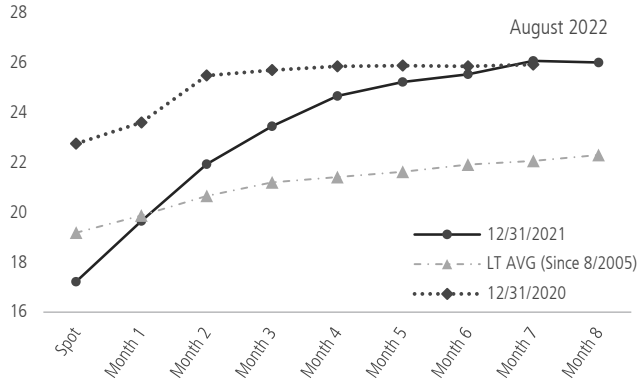
Such dispersion is not without precedent and we fully expect the advantage to mean revert. To this end, as efficient markets and simple statistics require, index volatility levels are not biased in favor of any particular days or time step over longer term periods. The chart below plots the long-term S&P 500 Index realized annual volatilities for various days of the month, e.g., 1st Monday, 2nd Monday,…, 4th Thursday, 3rd Friday, etc.

**S&P 500 ANNUAL REALIZED VOLATILTY ACROSS DAY(S) OF THE MONTH**
December 1960 – December 2021




*Source: Bloomberg LP*

**WHAT VOLATILITY FUTURES MARKETS SAY**
VIX Futures Curves




*Source: Bloomberg LP*

### *The Middle Innings*

While the 2020 pandemic proved to be a catalyst for higher implied volatility levels, market and economic risks have manifested such that we continue to believe implied volatility/risk levels are likely to remain near or above long-term averages for the foreseeable future. Looking at the VIX futures market (below), investors continue to price mid-to-longer dated VIX futures at levels well above long-term averages. While spot and shorter-dated futures are near or below long-term averages, they have been quick to adjust at the first sign of market sentiment around macro conditions. Hence, we believe we are squarely in the middle innings of the current volatility regime.

### *What Will Matter in 2022*

As a relatively narrowly focused investment team, i.e., the Option Group, we generally abstain from building macro views and rely on those at Neuberger Berman who construct broader investment frameworks. To this end, we would like to draw your attention to a piece recently published by Robert Surgent, a Senior Portfolio Manager in the Multi-Asset group. The piece lays out his views on the challenges that may be in store for 2022 (complex concepts made coherent).

*"In our minds, real rates are the most important rates in the whole wide world."*

– Robert Surgent
*The Most Important Rate in the Whole Wide World*

We hope to see many of you in 2022!

| | | |
|---|---|---|
| Derek Devens, CFA | Rory Ewing | Eric Zhou |
| Senior Portfolio Manager | Portfolio Manager | Portfolio Manager |
| Beryl Lou | Rachel White, CFA | |
| Research Analyst | Portfolio Specialist | |

## *Fund Performance and Commentary(s)*

### NEUBERGER BERMAN U.S. Equity Index PutWrite Fund

| | MTD Ret. | QTD Ret. | YTD Ret. | 1-Yr. Ret. | Since Incep. Ret. | Since Incep. Vol. |
|---|---|---|---|---|---|---|
| **Neuberger Berman U.S. Equity Index PutWrite Fund** | **2.95** | **5.28** | **18.36** | **18.36** | **8.93** | **9.59** |
| *U.S. PutWrite Benchmark* | *2.53* | *4.79* | *15.69* | *15.69* | *4.53* | *10.57* |
| *85% S&P 500 / 15% Russell 2000* | *4.14* | *9.66* | *26.63* | *26.63* | *17.56* | *15.87* |
| *HFRX Equity Hedge Index (USD, Net)* | *1.70* | *2.65* | *12.14* | *12.14* | *5.29* | *7.64* |

*Inception December 31, 2016*

*Equity Markets*

In December, markets rallied to end the year on a strong note making 2021 the third consecutive year of stellar performance in equity markets. Despite the prevalence of the Omicron variant and an overall seasonal increase in infections, markets were buoyed by initial studies out of South Africa and the UK that indicated a reduced severity compared to previous variants of COVID-19. While many companies posted strong earnings for the quarter, small caps underperformed large cap stocks amid growing uncertainty of future performance.

In December, the S&P 500 Index ("S&P 500") earned an attractive 4.48%, the CBOE S&P 500 PutWrite ("PUT") gained 3.69%, and the CBOE Russell 2000 PutWrite ("PUTR") returned a modest 0.49%. Over the Quarter, the S&P 500 soared 11.03%, the PUT jumped 6.96%, and the PUTR gained 0.53%. Year-to-date, the S&P 500, PUT, and PUTR have rallied 28.71%, 21.79%, and 20.50%, respectively.

*U.S. Treasury Markets*

During the quarter the Fed developed a hawkish stance as inflationary pressures mounted and the labor market continued to tighten. While the federal funds rate remained stable during the quarter, the Fed announced they would increase the rate of tapering in January which likely indicates more rate hikes in 2022. During December, the U.S. Treasury yield curve continued to flatten as short-term 2-Year U.S. yields increased by 31bps and 10-Year U.S. yields increased 28bps ending the period at 0.83 and 1.71, respectively. Over the month, short-term U.S. Treasury Rates (3M U.S. T-Bill) fell -1 bps while the long-term rates (10Y U.S. Treasury) were up 6 bps. Moreover, on the quarter, short-term U.S. rates were up 1 bps and 10Y U.S. rates gained 2 bps. Likewise, year-to-date, short-term U.S. rates decreased -3 bps and 10Y U.S. rates rallied 60 bps.

*Index Option Implied Volatility*

With data around the severity of the Omicron variant solidifying, volatility fell from November levels in both U.S. and non-U.S. markets. Longer dated volatility index futures continue to remain elevated well into 2022 signaling that market makers and investors still have plenty of concerns about equity markets over the coming year. For the month, the Cboe S&P 500 Volatility Index ("VIX") was down -10.0 pts with an average 30-day implied volatility premium of 1.3. Suffering the same fate, the Cboe R2000 Volatility Index ("RVX") was down -13.0 pts with an average implied volatility premium of 0.4. For the Quarter, VIX fell -5.9 pts yielding an average 30-day implied volatility premium of 5.4. In a like manner, RVX declined -5.3 pts resulting in an average implied volatility premium of 4.4. On the year, VIX is down -5.5 pts with an average 30-day implied volatility premium of 6.7. In addition, RVX is lower by -7.0 pts with an average 30-day implied volatility premium of 5.4.

*NB U.S. Equity Index PutWrite (Class I, Net)*

For the month, the Fund's return of 2.95% gained slightly more than its PutWrite Benchmark ("Benchmark") return of 2.53% by 43 bps but struggled relative to the Blended U.S. Equity Index ("Blended Equity Index")'s 4.14%. Over the Quarter, the Fund posted an attractive 5.28%, which ended ahead of the Benchmark's return of 4.79% but lacked the gearing to keep pace with the Blended Equity Index's return of 9.66%. On the year, the Fund's 18.36% return has surpassed its Benchmark return of 15.69% by 267 bps but is notably trailing the Blended Equity Index return of 26.63%.

*U.S. Large Cap Equity Index PutWrite Strategy*

In December, the S&P 500 PutWrite Strategy jumped 2.94%, ending the period behind the PUT return of 3.69% by -75 bps and lagging the S&P 500 return of 4.48%. Weekly putwriting, as measured by the Cboe S&P 500 One-Week PutWrite ("WPUT"), rallied 1.88% which fell well behind the monthly rolling of the PUT by -181 bps. Over the Quarter, the S&P 500 PutWrite Strategy's 5.81% return failed to keep pace with the PUT return of 6.96% and ended well behind the S&P 500 return of 11.03%. The WPUT climbed 4.49% which struggled to match the monthly rolling of the PUT by -247 bps. Year-to-date, the S&P 500 PutWrite Strategy has posted a significant gain of 19.29% but has failed to match the PUT return of 21.79% by -249 bps and is notably trailing the S&P 500 return of 28.71%. Over the same period, the WPUT's weekly rolling strategy is notably trailing the monthly rolling of the PUT by -968 bps.

*U.S. Small Cap Equity Index PutWrite Strategy*

In December, the Russell 2000 PutWrite Strategy jumped 3.11%, significantly outpacing the PUTR return of 0.49% by 262 bps and eclipsing the R2000 return of 2.23%. For the same period, the Cboe Russell 2000 One-Week PutWrite ("WPTR")'s 1.64% return exceeded the PUTR by 115bps. Over the Quarter, the Russell 2000 PutWrite Strategy gained 2.50% as it exceeded the PUTR return of 0.53% by 197 bps and surpassed the R2000 return of 2.14%. At the same time, WPTR's -1.39% return underperformed the PUTR by -192bps. Year-to-date, the Russell 2000 PutWrite Strategy failed to keep pace with the PUTR return of 20.50% by posting a return of 17.09% but has appreciated more than the R2000 return of 14.82%. During this period WPTR's -1.45% return drastically underperformed the PUTR by -2,195bps.

*Collateral Portfolio*

For the month, the Collateral Portfolio finished modestly lower by -0.09%, which declined slightly more than the ICE BofA 0-3M U.S. T-Bill Index ("T-Bill Index") return of 0.01%. Over the Quarter, the Collateral Portfolio's -0.17% return suffered modestly versus the T-Bill Index return of 0.02%. Year-to-date, the Collateral Portfolio declined an unremarkable -0.06% versus the T-Bill Index's modest return of 0.05%.

Blended PutWrite Benchmark is 42.5% CBOE S&P 500 One-Week PutWrite Index, 42.5% CBOE S&P 500 PutWrite Index, 7.5% CBOE Russell 2000 One-Week PutWrite Index, 7.5% CBOE Russell 2000 PutWrite Index.

Blended Equity Benchmark is 85% S&P 500 Index and 15% Russell 2000 Index.

All index returns are gross of fees unless stated otherwise.

The fund fully complies with the Sustainable Finance Disclosure Regulation (the "SFDR"). Neuberger Berman take sustainability and the promotion of Environmental, Social, Governance ("ESG") very seriously. Consideration is given to the ESG risks within the selection of securities, but they are not primary consideration for selection. For more information on sustainability-related aspects pursuant to SFDR please visit ESG Investing section on www.nb.com/europe/. When making the decision to invest in the fund, investors should take into account all the characteristics or objectives of the promoted fund as described in the legal documents.

## DISCLAIMER

**This information is directed solely at persons in jurisdictions where the funds and relevant share classes are registered or who may otherwise lawfully receive it. Before investing, investors should review the fund's full prospectus, together with the applicable Key Investor Information Document (KIID) and the most recent financial statements. The Fund's securities have not been registered under the Securities Act of 1933, as amended, and may only be offered or sold to investors that are not deemed U.S. Persons in an offshore transaction in accordance with Regulation S. Copies of these documents, including the latest annual report and, if issued thereafter, the latest semi-annual report, may be obtained free of charge from Neuberger Berman Europe Limited, by visiting www.nb.com or in printed form by contacting the local distributor in the jurisdictions in which the funds are authorized for distribution. Any entity responsible for forwarding this material to other parties takes responsibility for ensuring compliance with applicable securities laws.**

This fund is a sub-fund of Neuberger Berman Investment Funds PLC, authorised by the Central Bank of Ireland pursuant to the European Communities (Undertaking for Collective Investment in Transferable Securities) Regulations 2011, as amended. The information in this document does not constitute investment advice or an investment recommendation and is only a brief summary of certain key aspects of the fund. Investors should read the prospectus and the key investor information document (KIID) which are available on our website: www.nb.com/europe/literature. Further risk information, investment objectives, fees and expenses and other important information about the fund can be found in the prospectus. The KIID may be obtained free of charge in Danish, Dutch, English, Finnish, French, German, Greek, Icelandic, Italian, Norwegian, Portuguese, Spanish and Swedish (depending on where the relevant sub-fund has been registered for marketing), and the prospectus and prospectus supplements may be obtained free of charge in English, French, German, Italian and Spanish, from www.nb.com/europe/literature, from local paying agents (a list of which can be found in Annex III of the prospectus), or by writing to Neuberger Berman Investment Funds plc, c/o Brown Brothers Harriman Fund Administration Service (Ireland) Ltd, 30 Herbert Street, Dublin 2, Ireland.

Neuberger Berman Asset Management Ireland Limited may decide to terminate the arrangements made for the marketing of its funds in all or a particular country.

A summary of the investors' rights is available in English on: www.nb.com/europe/literature

This document is presented solely for information purposes and nothing herein constitutes investment, legal, accounting or tax advice, or a recommendation to buy, sell or hold a security.

We do not represent that this information, including any third-party information, is complete and it should not be relied upon as such.

No recommendation or advice is being given as to whether any investment or strategy is suitable for a particular investor. Each recipient of this document should make such investigations as it deems necessary to arrive at an independent evaluation of any investment, and should consult its own legal counsel and financial, actuarial, accounting, regulatory and tax advisers to evaluate any such investment.

It should not be assumed that any investments in securities, companies, sectors or markets identified and described were or will be profitable. Investors may not get back the full amount invested.

Any views or opinions expressed may not reflect those of the firm as a whole.

All information is current as of the date of this material and is subject to change without notice.

The fund described in this document may only be offered for sale or sold in jurisdictions in which or to persons to which such an offer or sale is permitted. The fund can only be promoted if such promotion is made in compliance with the applicable jurisdictional rules and regulations. This document and the information contained therein may not be distributed in the US. Indices are unmanaged and not available for direct investment.

An investment in the fund involves risks, with the potential for above average risk, and is only suitable for people who are in a position to take such risks. For more information please read the prospectus which can be found on our website at: www.nb.com/europe/literature.

Past performance is not a reliable indicator of current or future results. The value of investments may go down as well as up and investors may not get back any of the amount invested. The performance data does not take account of the commissions and costs incurred by investors when subscribing for or redeeming shares.

The value of investments designated in another currency may rise and fall due to exchange rate fluctuations in respect of the relevant currencies. Adverse movements in currency exchange rates can result in a decrease in return and a loss of capital.

Tax treatment depends on the individual circumstances of each investor and may be subject to change, investors are therefore recommended to seek independent tax advice.

Investment in the fund should not constitute a substantial proportion of an investor's portfolio and may not be appropriate for all investors. Diversification and asset class allocation do not guarantee profit or protect against loss.

No part of this document may be reproduced in any manner without prior written permission of Neuberger Berman.

The "Neuberger Berman" name and logo are registered service marks of Neuberger Berman Group LLC.

© 2022 Neuberger Berman Group LLC. All rights reserved. 899903