CIO View

Investment Traffic Lights

May 9, 2023 Marketing material



Our monthly market analysis and positioning



Bjoern JeschGlobal Chief
Investment Officer

IN A NUTSHELL-

- After a turbulent March, April offered some time to digest what had happened
- Investors used the time to rebuild some confidence but, at the beginning of May, their nervousness returned.
- Inflation, recession and the banking system are the three big worries, and not only for central bankers. "Muddling through" remains our base case

1 / Market overview

1.1 Calm April, tumultuous May

For the first time in decades, Hessen, home state of Frankfurt, granted its pupils (and thereby indirectly their parents) three weeks holiday at Easter, not just two. The timing couldn't have been any better for Frankfurt's financial community, as April proved to be very calm, and almost boring, especially compared to March. Volatility dropped in almost all asset classes, sideways trading was the name of the game and even on the political front it was a relatively calm month. And yet subtle marks from March's troubles remained visible in the markets. Although the broad equity indices, including the S&P 500, ended April significantly higher than they were just before the banking troubles started in early March, U.S. banks (as reflected, for example, in the KBW Bank index) were still trading almost one third below their pre-crisis level. Bonds, meanwhile, did not recover fully from their March woes; nor did the market implied forecasts of the main interest rates for the Fed and the ECB. And gold, a traditional safe haven, came close to a new historic high. These developments can be interpreted in three ways. First, the markets may believe that the banks' troubles will help tighten financial conditions, therefore relieving central banks of the need to do all the inflation fighting by themselves. Second, the market is becoming more worried about recession than about inflation risks. Third, the market might also be partly pricing in further systemic banking troubles that could lead to immediate central bank action - in other words, rate cuts. Given that these various scenarios are less sanguine, perhaps market participants' main scenario might still be closer to the central banks' own projections than seems the case. But, as we enter May, the discrepancy between the fairly hawkish comments from the Fed and the ECB after their latest meetings and the rather dovish market pricing of interest rates remains striking¹.

1.2 Main movers in April

April was calm in that volatility was low and many asset classes made gains. Developed market equities did especially well, with the Nikkei up 2.9%, the Stoxx 600 up 2.6% and the S&P 500 up 1.6%. Emerging markets fared less well, as the MSCI EM index lost -1.1%. Continuing tensions between China and the U.S. and less dynamic reopening in China² overshadowed new initiatives to help the economy by Beijing. In Europe sovereign bonds recorded slight losses while U.S. credit gained slightly; with U.S. HY and EUR HY each rose by more than 0.8%. Within commodities, precious metals were strong, with gold up 1.1%,

¹ In the U.S., for example, markets are pricing in almost three rate cuts á 25bps until year end, although Powell reiterated this wasn't on the agenda. ² Given the slightly better than expected 1Q23 GDP figures for China, one should probably rather say: less dynamic reopening speed than anticipated by equity markets in the past months.

silver 4.0% and platinum 8.3%, but industrial metals and energy did less well: copper lost -5.5%, Brent -0.3% and European natural gas a considerable -19%. The Japanese Yen fell -2.5% against the U.S. dollar - the worst performance among G10

2 / Outlook and changes

"Data-dependent" will be the guiding principle of the Fed for the months to come, as it told investors after its May 3rd meeting. And when the central bank isn't so sure any more about what is likely to happen next to inflation, labor markets and the economy, investors might be forgiven for taking a similar approach. For portfolios this means: remain prudent, prepared for various potential outcomes and don't commit to strong single bets. Our baseline view remains that there will be a mild recession in the U.S. and no recession in Europe and that inflation will recede and yet remain quite high, especially in Europe. The earnings reporting season has not helped to give a clear direction, so that we believe markets will go from data point to data point, assessing their inflation, recession and U.S. banking fears – as well as the noisy debt ceiling debate in the U.S. Central banks will be doing the same.

2.1 Fixed Income

currencies.

Government Bonds

The Federal Reserve (Fed) delivered the 25 basis points (bps) hike expected on May 3rd. In line with our assumptions, the Fed indicated that its pause in rate rises was a "hawkish" one - ready to do more. The slope of the U.S. Treasury yield curve is expected to remain unchanged but renewed stress in the banking system might cause it to steepen. The European Central Bank (ECB) followed the Fed with a 25bps hike but indicated that this was certainly not the last step. Sentiment in Bunds swung between cyclical dampening data, continued worries about regional banks in the U.S. and positive sentiment on the Eurozone; and the market also kept a close eye on the central banks. Volatility declined. We remain neutral on 10-year German Bunds but recently reduced 2-year Bunds to underweight (-1). Yields have declined since mid-April but the ECB has reiterated that it has "more ground to cover", and that "this is a journey, we haven't arrived yet" We moved to +1 on 10-year Italian government bonds (BTP) as the government keeps on surprising positively in its economic policy. The BTP-Bund spread shows low volatility. Higher yields offer good carry but also reduce debt sustainability long term. On Spain's 10-year bond spread we remain +1. Spreads have been relatively stable, with the support of Eurozone and ECB mechanisms making government bonds more robust in general. In Japan, the outcome of the 3rd round of pay negotiations (known as the "Shunto" spring wage talks) suggests that total wages will rise by around 3.7% and that base pay will rise by around 2% year over year - the highest outcomes for around 30 years. Kazuo Ueda's new leadership of the Bank of Japan has so far been more dovish than expected. The BoJ will undertake a "broad-perspective review" of its monetary policy - but will take one to one and a half years to carry it out.

Investment Grade Credit

Euro Investment Grade (EUR IG) remains overweight (+1). Primary market activity was seasonally low in April, which helped the secondary market. Earnings from banks and the first quarter earnings season overall were solid and support an overweight recommendation on EUR IG. We remain neutral on U.S. IG. Recent market activity has begun to price in several different scenarios going forward. A good first quarter earnings season from banks but a mild recession as a base case in the U.S. is concerning, as is the debt ceiling brinkmanship.

High Yield Credit

We are overweight Euro high yield as the economy remains broadly solid. We remain neutral on U.S. HY.

³ Christine Lagarde, ECB press conference, May 4.

Emerging Markets

We have upgraded Asian Credit back to +1, as Asian credit market sentiment has improved along with the macro-outlook. China aggregate financing remains strong with new Yuan loans in March exceeding estimates, and March export data also came in stronger than expected. Liquidity in the region remains ample and with a lack of new supply, demand for bonds issued by good quality IG and HY issuers remains strong. We expect new supply to come soon as the outlook for Fed rates has stabilized.

Foreign Exchange

On Euro (EUR) vs. Dollar (USD) we are positioned EUR long (+1) because the USD has been weak across the board. Next to the economic momentum that speaks for the Eurozone, the latest central bank action also favors the euro. Market sentiment toward the **British pound sterling** (GBP) has improved remarkably. On the back of relatively good performance from the UK economy and the hawkish stance of the Bank of England (BoE) we are long the pound vs the dollar, but not versus the euro. The **Japanese yen** (JPY) weakened after the disappointing BoJ meeting; we are thus short (-1) on USD vs. JPY.

2.2 Equities

In the first quarter of 2023 the global banking industry lost two iconic brands. Yet global equity markets closed +6% up. Since outflows from deposit accounts into money market funds have slowed significantly now, we believe that a systemic crisis has been avoided. Our general view remains that European and U.S. bank balance-sheets have sufficient capital and liquidity. Given the turmoil, we expect somewhat tighter lending conditions in the second quarter. This is likely to hurt most of all the construction sector, labor market and capex plans.

The U.S. economy shows signs of slowing, pointing to a moderate recession in 2023 – allowing the Fed to conclude its hiking cycle as soon as May. Furthermore, muted growth prospects have led to a significant drop in U.S. 10-year yields, supporting broad equity market valuations, especially for long duration stocks mostly found in the IT-sector (neutral) and communication sector (outperform).

Beyond this, we see no upside for U.S. equities at current levels. Instead, we see potential downside to our 0% earnings per share (EPS) growth assumption for 2023. We confirm our unchanged relative preference for markets outside the U.S. – Europe, EM, Asia – and for the very attractive valuations of European small and mid-caps.

The MSCI AC Real Estate index includes quite a diverse set of market segments. In aggregate, current valuation levels are just in line with historical levels, but not yet below. In addition, refinancing needs at interest rates that have doubled are still not fully reflected in analysts' estimates. We remain underweight on the global listed real estate sector.

On a more positive note, we are still convinced that generative artificial intelligence (GAI) is more than just hype and expect this new technology to shape sectors and companies for a long time. The first-quarter reporting season has seen many companies mention GAI when it comes to their growth prospects.

U.S. Market

The U.S. market remains historically rather expensive and therefore interest rates matter a lot in this market. In this regard the "hawkish pause" by the Fed was not a major relief. Furthermore, while the reporting season was okay, the outlook given by many companies was uninspiring. We remain neutral.

European Market

Markets were positive till March but appear to be more positioned for negative revisions in Europe – against high expectations – than they are in other regions. China's reopening remains supportive for European equities. Valuations have rebounded somewhat from all-time lows but remain at a steep discount to U.S. equities. We remain overweight for the time being.

German Market

Solid first quarter reporting and economic growth have helped the market, assisted by reaccelerating exports and increased automobile production. Recession risk in the U.S. has created short-term uncertainty and geopolitical risks remain in place. Our view remains neutral.

Emerging Markets

Global headwinds are easing for emerging markets (EM). The dollar is weaker relative to last year and there is more visibility on the end game for the Fed's rate hike cycle. Global export weakness remains a headwind, but a lot of that has been priced in. EM valuations are now reasonable. A cyclical pick up is possible in the second half of 2023 if the forecasted U.S. recession is indeed shallow and not severe. Patience is needed. We are overweight on EM.

2.3 Alternatives

While gold came close to achieving a new historic high in early May and oil kept easing lower, another alternative asset class came to the fore. Investors have been focusing on U.S. commercial real estate (CRE) as it relies to a great extent on funding from regional banks, some of which are under heavy strain right now. We would like to stress a couple of important points with respect to U.S. CRE. One of the most troubled areas, much talked about these days, is the office sector, but it represents only a fraction (around a sixth) of the total value of real estate in the U.S. While it is the sector on which we are most negative, as we certainly prefer residential and logistics, we expect we have seen the worst of the downside in its valuation in part because we believe 10-year U.S. Treasury yields, the chief benchmark for this sector, have only limited upside potential from here (though more than the market is pricing in, according to our forecasts).

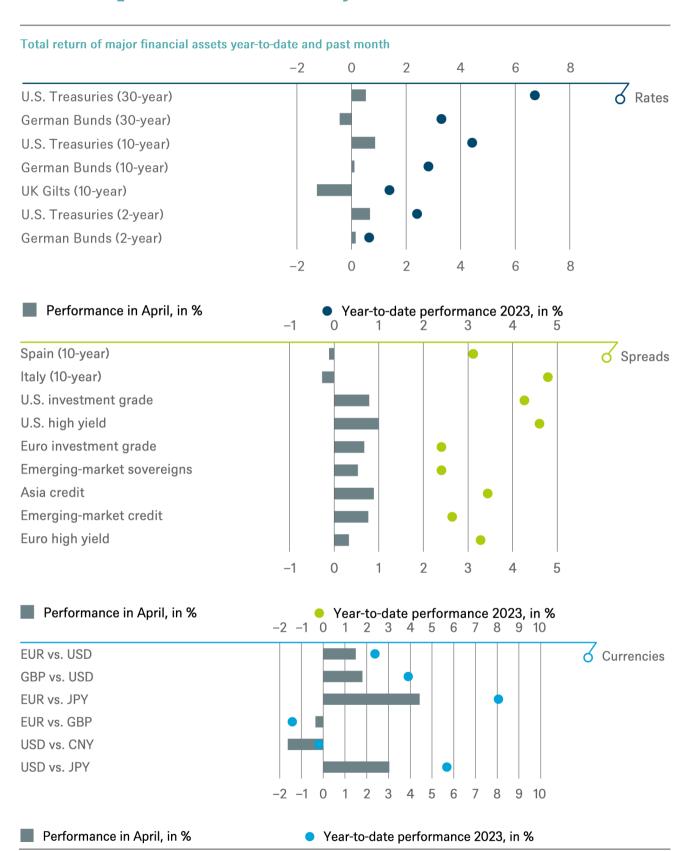
Gold

Gold remains an attractive safe haven given the recent banking turmoil and the continuing battle between elevated inflation and slowing economic growth. In fact, its price has also remained relatively stable after the Fed took rates up. While higher interest rates could remain a headwind near-term, we remain positive as several central banks are increasing their gold inventory. Furthermore, we expect more investor participation should global central banks slow the pace of rate hikes in 2023. In the medium to long term, the fundamental case for the metal remains intact as global economic uncertainty remains high. Additionally, gold could benefit should the U.S. dollar continue to weaken over the next 12-months, as we expect. As our target price is only set once per quarter we expect that the current target will be lifted during the next scheduled review.

Oil

There is a good chance that oil will recover its mid-April highs as energy commodities suffered a significant correction last week. However, this might take time to play out as the markets are primarily focused on the possibility of a U.S. recession which would offset positive demand trends out of Asia. Additional supply, from Nigeria and possibly Iraq, might cap any potential rebound in prices in the near-term.

3 / Past performance of major financial assets





Past performance is not indicative of future returns. Sources: Bloomberg Finance L.P., DWS Investment GmbH as of 4/30/23

4 / Tactical and strategic signals The following exhibit depicts our short-term and long-term positioning.

4.1 Fixed income

Rates	1 to 3 months	until Mar 2024
U.S. Treasuries (2-year)	•	•
U.S. Treasuries (10-year)	•	•
U.S. Treasuries (30-year)	•	•
German Bunds (2-year)	•	•
German Bunds (10-year)	•	•
German Bunds (30-year)	•	•
UK Gilts (10-year)	•	•
Japanese government bonds (2-year)	•	•
Japanese government bonds (10-year)	•	•

Spreads*	1 to 3 months	until Mar 2024
Spain (10-year)	•	•
Italy (10-year)	•	•
U.S. investment grade ⁴	•	•
U.S. high yield ⁵	•	•
Euro investment grade ⁶	•	•
Euro high yield ⁷	•	•
Asia credit ⁸	•	•
Emerging-market credit ⁹	•	•
Emerging-market sovereigns ¹⁰	•	•

Secritized / specialities	1 to 3 months	until Mar 2024
Covered bonds ^{1*}	•	•
U.S. high-yield municipal bonds ²	•	•
U.S. mortgage-backed securities ³	•	•

Currencies	1 to 3 months	until Mar 2024
EUR vs. USD	•	•
USD vs. JPY	•	•
EUR vs. JPY	•	•
EUR vs. GBP	•	•
GBP vs. USD	•	•
USD vs. CNY	•	•

4.2 Equities

Regions	1 to 3 months**	until Mar 2024
United States ¹¹	•	•
Europe ¹²	•	•
Eurozone ¹³	•	•
Germany ¹⁴	•	•
Switzerland ¹⁵	•	•
United Kingdom (UK) ¹⁶	•	•
Emerging markets ¹⁷	•	•
Asia ex Japan ¹⁸	•	•
Japan ¹⁹	•	•

Sectors	1 to 3 months**
Consumer staples ²⁰	•
Healthcare ²¹	•
Communication services ²²	•
Utilities ²³	•
Consumer discretionary ²⁴	•
Energy ²⁵	•
Financials ²⁶	•
Industrials ²⁷	•
Information technology ²⁸	•
Materials ²⁹	•

Style	1 to 3 months ^{**}
U.S. small caps ³⁰	•
European small caps ³¹	•

4.3 Alternatives

Alternatives	1 to 3 months**	until Mar 2024
Commodities ³²	•	•
Oil (Brent)	•	•
Gold	•	•
Infrastructure	•	•
Real estate (listed)	•	•
Real estate (non-listed) APAC ³³		•
Real estate (non-listed) Europe ³³		•
Real estate (non-listed) United States ³³		•

^{*}Spread over German Bunds, ** Relative to the MSCI AC World Index (only for the tactical signals),¹ iBoxx Euro Covered Total Return Index, ² Municipal Bond Index Total Return Index Value Unhedged USD. ³ FNCL Spread, ⁴ UA Credit Avg OAS Index, ⁵ US Corporate High Yield Average OAS, ⁶ ICE BofA Euro Corporate Index, ² ICE BofA Euro Non-Financial High Yield Constrained Index, ⁵ J.P. Morgan Late Index, ² ICE BofA Euro Non-Financial High Yield Constrained Index, ⁵ J.P. Morgan EMBI Global Diversified Sovereign Spread, ¹¹ S&P 500, ¹² Stoxx Europe 600, ¹² Euro Stoxx 50, ¹⁴ Dax, ¹⁵ Swiss Market Index, ¹⁵ FNSE 100, ¹² MSCI Emerging Markets Index, ¹⁵ MSCI AC Sai ex Japan Index, ¹⁵ MSCI Japan Index, ²⁰ MSCI AC World Consumer Staples Index, ²⁴ MSCI AC World Lealth Care Index, ²² MSCI AC World Communication Services Index, ²⁵ MSCI AC World Utilities Index, ²⁴ MSCI AC World Consumer Discretionary Index, ²⁵ MSCI AC World Energy Index, ²⁵ MSCI AC World Information Technology Index, ²⁵ MSCI AC World Index Index, ³⁰ Russell 2000 Index relative to the S&P 500, ¹¹ Stoxx Europe Small 200 relative to the Stoxx Europe 600, ³² Relative to the Bloomberg Commodity Index, ³³ Long-term investments

Tactical view (1 to 3 months)

The focus of our tactical view for fixed income is on trends in bond prices.

- Positive view
- Neutral view
- Negative view

Strategic view until March 2024

- The focus of our strategic view for sovereign bonds is on bond prices.
- For corporates, securitized/specialties and emerging-market bonds in U.S. dollars, the signals depict the option-adjusted spread over U.S. Treasuries. For bonds denominated in euros, the illustration depicts the spread in comparison with German Bunds. Both spread and sovereign-bond-yield trends influence the bond value. For investors seeking to profit only from spread trends, a hedge against changing interest rates may be a consideration.
- The colors illustrate the return opportunities for long-only investors.
 - − Positive return potential for long-only investors
 - • Limited return opportunity as well as downside risk
 - Negative return potential for long-only investors

Glossary

The Bank of England (BoE) is the central bank of the United Kingdom.

The Bank of Japan (BoJ) is the central bank of Japan.

One basis point equals 1/100 of a percentage point.

The Bloomberg Commodity Index (BCOM) traces 23 commodities and reflects commodity futures price movements.

Bunds is a commonly used term for bonds issued by the German federal government with a maturity of 10 years.

Capital expenditure (Capex) are funds used by a company to acquire or upgrade physical assets such as property, industrial buildings or equipment.

The Dax is a blue-chip stock-market index consisting of the 40 major German companies trading on the Frankfurt Stock Exchange.

Earnings per share (EPS) is calculated as a company's net income minus dividends of preferred stock, all divided by the total number of shares outstanding.

Emerging markets (EM) are economies not yet fully developed in terms of, amongst others, market efficiency and liquidity.

The Euro Stoxx 50 is an index that tracks the performance of blue-chip stocks in the Eurozone.

The European Central Bank (ECB) is the central bank for the Eurozone.

The Eurozone is formed of 19 European Union member states that have adopted the euro as their common currency and sole legal tender.

The FTSE 100 is an index that tracks the performance of the 100 major companies trading on the London Stock Exchange.

High-yield bonds are issued by below-investment-grade-rated issuers and usually offer a relatively high yield.

Inflation is the rate at which the general level of prices for goods and services is rising and, subsequently, purchasing power is falling.

Investment grade (IG) refers to a credit rating from a rating agency that indicates that a bond has a relatively low risk of default.

The KBW Bank Index is a benchmark stock index of the banking sector, representing large U.S. national money center banks, regional banks, and thrift institutions.

The MSCI AC World Communication Services Index captures large- and mid-cap securities across 23 developed- and 26 emerging-markets classified in the Communications Services sector.

The MSCI AC World Consumer Discretionary Index captures large- and mid-cap securities across 23 developed- and 26 emerging-markets classified in the Consumer Discretionary sector.

The MSCI AC World Consumer Staples Index captures large- and mid-cap securities across 23 developed- and 26 emerging-markets classified in the Consumer Staples sector.

The MSCI AC World Energy Index captures large- and mid-cap securities across 23 developed-markets classified in the Energy sector.

The MSCI AC World Financials Index captures large- and mid-cap securities across 23 developed- and 26 emerging-markets classified in the Financials sector.

The MSCI AC World Health Care Index captures large- and mid-cap securities across 23 developed- and 26 emerging-markets classified in the Health Care sector.

The MSCI AC World Index captures large- and mid-cap companies across 23 developed- and 24 emerging-market countries.

The MSCI AC World Industrials Index captures large- and mid-cap securities across 23 developed- and 26 emerging-markets classified in the Industrials sector.

The MSCI AC World Information Technology Index captures large- and mid-cap securities across 23 developed- and 26 emerging-markets classified in the Information Technology sector.

The MSCI AC World Materials Index captures large- and mid-cap securities across 23 developed- and 26 emerging-markets classified in the Materials sector.

The MSCI AC World Utilities Index captures large- and mid-cap securities across 23 developed- and 26 emerging-markets classified in the Utilities sector

The MSCI AC Asia ex Japan Index captures large- and mid-cap representation across 2 of 3 developed-market countries (excluding Japan) and 8 emerging-market countries in Asia.

The MSCI Emerging Markets Index captures large- and mid-cap representation across 23 emerging-market countries.

The Nikkei 225 is a price-weighted index of Japan's 225 most important listed companies.

A recession is, technically, when an economy contracts for two successive quarters but is often used in a looser way to indicate declining output.

The Russell 2000 Index is an index that captures the 2,000 smallest stocks of the Russell-3000 index, which again comprises 3,000 small- and mid-cap U.S. listed stocks.

The S&P 500 is an index that includes 500 leading U.S. companies capturing approximately 80% coverage of available U.S. market capitalization.

The spread is the difference between the quoted rates of return on two different investments, usually of different credit quality.

The Stoxx Europe 600 is an index representing the performance of 600 listed companies across 18 European countries.

The Stoxx Europe Small 200 is an index representing the performance of 200 small capitalization companies across 17 European countries.

The Swiss Market Index (SMI) is Switzerland's most important equity index, consisting of the 20 largest and most liquid large- and mid-cap stocks.

Treasuries are fixed-interest U.S. government debt securities with different maturities: Treasury bills (1 year maximum), Treasury notes (2 to 10 years), Treasury bonds (20 to 30 years) and Treasury Inflation Protected Securities (TIPS) (5, 10 and 30 years).

The U.S. Federal Reserve, often referred to as "the Fed," is the central bank of the United States.

Volatility is the degree of variation of a trading-price series over time. It can be used as a measure of an asset's risk.

Important information – EMEA, APAC & LATAM

DWS is the brand name of DWS Group GmbH & Co. KGaA and its subsidiaries under which they do business. The DWS legal entities offering products or services are specified in the relevant documentation. DWS, through DWS Group GmbH & Co. KGaA, its affiliated companies and its officers and employees (collectively "DWS") are communicating this document in good faith and on the following basis.

This document is for information/discussion purposes only and does not constitute an offer, recommendation or solicitation to conclude a transaction and should not be treated as investment advice

This document is intended to be a marketing communication, not a financial analysis. Accordingly, it may not comply with legal obligations requiring the impartiality of financial analysis or prohibiting trading prior to the publication of a financial analysis.

This document contains forward looking statements. Forward looking statements include, but are not limited to assumptions, estimates, projections, opinions, models and hypothetical performance analysis. No representation or warranty is made by DWS as to the reasonableness or completeness of such forward looking statements. Past performance is no guarantee of future results.

The information contained in this document is obtained from sources believed to be reliable. DWS does not guarantee the accuracy, completeness or fairness of such information. All third party data is copyrighted by and proprietary to the provider. DWS has no obligation to update, modify or amend this document or to otherwise notify the recipient in the event that any matter stated herein, or any opinion, projection, forecast or estimate set forth herein, changes or subse-quently becomes inaccurate.

Investments are subject to various risks. Detailed information on risks is contained in the relevant offering documents

No liability for any error or omission is accepted by DWS. Opinions and estimates may be changed without notice and involve a number of assumptions which may not prove valid. DWS does not give taxation or legal advice.

This document may not be reproduced or circulated without DWS's written authority.

This document is not directed to, or intended for distribution to or use by, any person or entity who is a citizen or resident of or located in any locality, state, country or other jurisdiction, including the United States, where such distribution, publication, availability or use would be contrary to law or regulation or which would subject DWS to any registration or licensing requirement within such jurisdiction not currently met within such jurisdiction. Persons into whose possession this document may come are required to inform themselves of, and to observe, such restrictions.

For institutional / professional investors in Taiwan:

This document is distributed to professional investors only and not others. Investing involves risk. The value of an investment and the income from it will fluctuate and investors may not get back the principal invested. Past performance is not indicative of future performance. This is a marketing communication. It is for informational purposes only. This document does not constitute investment advice or a recommendation to buy, sell or hold any security and shall not be deemed an offer to sell or a solicitation of an offer to buy any security. The views and opinions expressed herein, which are subject to change without notice, are those of the issuer or its affiliated companies at the time of publication. Certain data used are derived from various sources believed to be reliable, but the accuracy or completeness of the data is not guaranteed and no liability is assumed for any direct or consequential losses arising from their use. The duplication, publication, extraction or transmission of the contents, irrespective of the form, is not permitted.

© 2023 DWS Investment GmbH

Issued in the UK by DWS Investments UK Limited which is authorised and regulated in the UK by the Financial Conduct Authority. © 2023 DWS Investments UK Limited

In Hong Kong, this document is issued by DWS Investments Hong Kong Limited. The content of this document has not been reviewed by the Securities and Futures Commission. © 2023 DWS Investments Hong Kong Limited

In Singapore, this document is issued by DWS Investments Singapore Limited. The content of this document has not been reviewed by the Monetary Authority of Singapore. © 2023 DWS Investments Singapore Limited

In Australia, this document is issued by DWS Investments Australia Limited (ABN: 52 074 599 401) (AFSL 499640). The content of this document has not been reviewed by the Australian Securities and Investments Commission.

© 2023 DWS Investments Australia Limited

as of 4/30/23; 082325_26 (05/2023)

Important information - North America

The brand DWS represents DWS Group GmbH & Co. KGaA and any of its subsidiaries, such as DWS Distributors, Inc., which offers investment products, or DWS Investment Management Americas Inc. and RREEF America L.L.C., which offer advisory services.

This document has been prepared without consideration of the investment needs, objectives or financial circumstances of any investor. Before making an investment decision, investors need to consider, with or without the assistance of an investment adviser, whether the investments and strategies described or provided by DWS, are appropriate, in light of their particular investment needs, objectives and financial circumstances. Furthermore, this document is for information/discussion purposes only and does not and is not intended to constitute an offer, recommendation or solicitation to conclude a transaction or the basis for any contract to purchase or sell any security, or other instrument, or for DWS to enter into or arrange any type of transaction as a consequence of any information contained herein and should not be treated as giving investment advice. DWS, including its subsidiaries and affiliates, does not provide legal, tax or accounting advice. This communication was prepared solely in connection with the promotion or marketing, to the extent permitted by applicable law, of the transaction or matter addressed herein, and was not intended or written to be used, and cannot be relied upon, by any taxpayer for the purposes of avoiding any U.S. federal tax penalties. The recipient of this communication should seek advice from an independent tax advisor regarding any tax matters addressed herein based on its particular circumstances. Investments with DWS are not guaranteed, unless specified. Although information in this document has been obtained from sources believed to be reliable, we do not guarantee its accuracy, completeness or fairness, and it should not be relied upon as such. All opinions and estimates herein, including forecast returns, reflect our judgment on the date of this report, are subject to change without notice and involve a number of assumptions which may not prove valid.

Investments are subject to various risks, including market fluctuations, regulatory change, counterparty risk, possible delays in repayment and loss of income and principal invested. The value of investments can fall as well as rise and you may not recover the amount originally invested at any point in time. Further-more, substantial fluctuations of the value of the investment are possible even over short periods of time. Further, investment in international markets can be affected by a host of factors, including political or social conditions, diplomatic relations, limitations or removal of funds or assets or imposition of (or change in) exchange control or tax regulations in such markets. Additionally, investments denominated in an alternative currency will be subject to currency risk, changes in exchange rates which may have an adverse effect on the value, price or income of the investment. This document does not identify all the risks (direct and indirect) or other considerations which might be material to you when entering into a transaction. The terms of an investment may be exclusively subject to the detailed provisions, including risk considerations, contained in the Offering Documents. When making an investment decision, you should rely on the final documentation relating to the investment and not the summary contained in this document.

This publication contains forward looking statements. Forward looking statements include, but are not limited to assumptions, estimates, projections, opin-ions, models and hypothetical performance analysis. The forward looking statements expressed constitute the author's judgment as of the date of this mate-rial. Forward looking statements involve significant elements of subjective judgments and analyses and changes thereto and/or consideration of different or additional factors could have a material impact on the results indicated. Therefore, actual results may vary, perhaps materially, from the results contained herein. No representation or warranty is made by DWS as to the reasonableness or completeness of such forward looking statements or to any other finan-cial information contained herein. We assume no responsibility to advise the recipients of this document with regard to changes in our views.

No assurance can be given that any investment described herein would yield favorable investment results or that the investment objectives will be achieved. Any securities or financial instruments presented herein are not insured by the Federal Deposit Insurance Corporation ("FDIC") unless specifically noted, and are not guaranteed by or obligations of DWS or its affiliates. We or our affiliates or persons associated with us may act upon or use material in this report prior to publication. DB may engage in transactions in a manner inconsistent with the views discussed herein. Opinions expressed herein may differ from the opinions expressed by departments or other divisions or affiliates of DWS. This document may not be reproduced or circulated without our written authority. The manner of circulation and distribution of this document may be restricted by law or regulation in certain countries. This document is not directed to, or intended for distribution to or use by, any person or entity who is a citizen or resident of or located in any locality, state, country or other jurisdiction, including the United

States, where such distribution, publication, availability or use would be contrary to law or regulation or which would subject DWS to any registra-tion or licensing requirement within such jurisdiction not currently met within such jurisdiction. Persons into whose possession this document may come are required to inform themselves of, and to observe, such restrictions.

Past performance is no guarantee of future results; nothing contained herein shall constitute any representation or warranty as to future performance. Further information is available upon investor's request. All third party data (such as MSCI, S&P & Bloomberg) are copyrighted by and proprietary to the provider.

For Investors in Canada: No securities commission or similar authority in Canada has reviewed or in any way passed upon this document or the merits of the securities described herein and any representation to the contrary is an offence. This document is intended for discussion purposes only and does not create any legally binding obligations on the part of DWS Group. Without limitation, this document does not constitute an offer, an invitation to offer or a recommendation to enter into any transaction. When making an investment decision, you should rely solely on the final documentation relating to the transaction you are considering, and not the [document – may need to identify] contained herein. DWS Group is not acting as your financial adviser or in any other fiduciary capacity with respect to any transaction presented to you. Any transaction(s) or products(s) mentioned herein may not be appropriate for all investors and before entering into any transaction you should take steps to ensure that you fully understand such transaction(s) and have made an independent assessment of the appropriateness of the transaction(s) in the light of your own objectives and circumstances, including the possible risks and benefits of entering into such transaction. You should also consider seeking advice from your own advisers in making this assessment. If you decide to enter into a transaction with DWS Group you do so in reliance on your own judgment. The information contained in this document is based on material we believe to be reliable; however, we do not represent that it is accurate, current, complete, or error free. Assumptions, estimates and opinions contained in this document constitute our judgment as of the date of the document and are subject to change without notice. Any projections are based on a number of assumptions as to market conditions and there can be no guarantee that any projected results will be achieved. Past performance is not a guarantee of future results. The distribution of this document and avail

For investors in Bermuda: This is not an offering of securities or interests in any product. Such securities may be offered or sold in Bermuda only in compliance with the provisions of the Investment Business Act of 2003 of Bermuda which regulates the sale of securities in Bermuda. Additionally, non-Bermudian persons (including companies) may not carry on or engage in any trade or business in Bermuda unless such persons are permitted to do so under applicable Bermuda legislation.

© 2023 DWS Investment GmbH, Mainzer Landstraße 11-17, 60329 Frankfurt am Main, Germany. All rights reserved.

as of 4/30/23; 082326 26 (05/2023)