# CIO View

Investment Traffic Lights

December 12, 2023 Marketing material



# Our monthly market analysis and positioning



Björn Jesch Global Chief Investment Officer

#### IN A NUTSHELL-

- Thanks to a stong year-end rally, most assets have delivered positive returns in 2023 so far, though with U.S. Big Tech dominating everything else.
- In its last trading days of the year, the market seems wedded to its belief in a soft-landing scenario.
- We have a generally positive outlook for the next twelve months, but high current valuations mean we expect only moderate returns.

# 1 / Market overview

So now the market has had its year-end rally after all. In hindsight, the weakness in October turned out to be a lucrative entry opportunity for all those who stubbornly stuck to their belief that typical seasonal strength would prevail. In the final few trading days of December the markets would have to take quite a dive to reverse the November rally: the MSCI World rose by 9.2%, the most since November 2020, the month in which Covid vaccine progress provoked euphoria. U.S. bonds recorded their best month since 1985, while global bonds had their best month since 2008, with a gain of over 5%. These movements reflected the market's hope that the battle against inflation has largely been won and that central banks might start to cut interest rates again in the first half of 2024.

The big rally has, of course, pleased investors. But it poses problems for professional market participants who, as is the common practice in the industry, prepare their forecasts for the coming year now. That is our case as we take a closer look at our expectations for 2024 in this issue of Investment Traffic Lights. For most asset classes the direction of our forecasts will not change, but the extent of the earnings potential we expect will. However, there are also examples where this potential has already been completely exhausted.

This is true for our home market, Germany. The DAX has climbed to a new record high just as the international media were again questioning whether Germany is once again the sick man of Europe. A resounding slap in the face from the Constitutional Court on the 2023 budget seemed to confirm the media's skepticism. The current euphoria in the markets therefore increases the potential for disappointment and corrections in German stocks early in 2024. If, for example, inflation rates do not slide downwards as consistently from now on, or the economic sneezes turn into a serious cold, the German market looks vulnerable.

Before turning to our detailed forecasts, however, we take a brief look back at the year 2023 from its final days.

9

## 1.2 The rally that began in 2022 has continued, with setbacks

#### Equities saw the positives in almost everything, and yet only a few stocks led the way

In retrospect the performance of the equity markets in 2023 was much more straightforward than that of bonds: they benefited from both good news and bad, so long as long as the bad news was about inflation and economic growth as this raises hopes of interest rates to decline. High interest rates have ultimately been the biggest enemy of equities since the beginning of 2022. The recovery in the equity markets that began in early October 2022 – fueled by hopes of overcoming the Covid crisis for good and getting on top of inflation – continued in 2023. The crisis at regional U.S. banks in the spring only put a short-term damper on the recovery. The immediate provision of fresh liquidity and guarantees by the Fed and other institutions quickly revived investors' spirits. So did the newly sparked hype about artificial intelligence.

The Artificial Intelligence hype also ensured that U.S. technology stocks far outperformed the rest of the stock market universe. More than three quarters of the increase in the market capitalization of the S&P 500 can be attributed to just seven stocks. Or, put differently, while the Dow Industrial and the Russell 2000 only gained single-digit percentages in the first eleven months of 2023, the Nasdaq 100 shot up by almost 50% – despite the simultaneous surge in interest rates, which itself only peaked at the end of October.

#### Different economic developments

What bolstered equities, and this was the other key theme of 2023, is that the U.S. economy held up much better than feared. The situation was quite different in China where the economy did not get back on to its feet as quickly as expected, even though the official growth figures for 2023 will probably show a 5 before the decimal point. But the mood in the country and its markets is not so positive, with the crisis in real estate also a factor. The Hang Seng index has lost almost a sixth of its value this year. And it has lost a quarter of its value since 2010, while the MSCI World stock index has gained 160 %.

Geographically close but in a different league in terms of performance was the Japanese market, which has risen by almost a quarter so far this year. That inflation has, after many years plagued by deflation, finally emerged, and that wages are rising, too, is helping companies, which are also making progress in their reforms. Meanwhile an extremely weak yen has helped propel the export sector. Many Japanese government bonds have also returned to positive territory in terms of total returns in the last few yards of this year thanks to the fall in bond yields (corporate bonds were already clearly in positive territory). Only one asset class did not fare too well: commodities were the big losers of 2023, with the Bloomberg Commodity Index down by around 10%. This might have been because of the exaggerated increases that occurred following the start of the war in Ukraine, economic weakness in China or headwinds from interest rates. Gold was the exception, up by around 10%. Geopolitical crises, most recently in the Middle East, high inflation, the prospect of falling real yields, and strong purchases by central banks proved to be a helpful mix for the yellow metal.

Finally, the trends in market volatility are worth mentioning. For equities the risk index (as measured by the VIX based on the S&P500) was as low at the end of the year as before the Covid crisis. For bonds, on the other hand, it is still as high as it was during the Great Financial Crisis of 2008/09.

# 2 / Outlook and changes

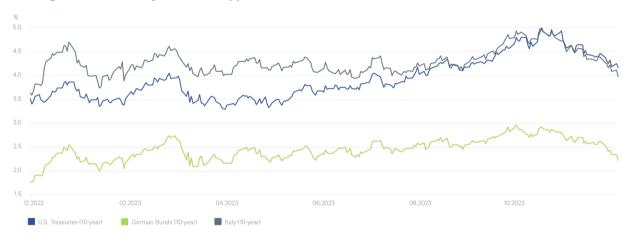
#### 2.1 Fixed Income

We see a generally benign environment, as we forecast rate cuts by the U.S. Federal Reserve (the Fed) and the European Central Bank (ECB) from the second quarter onwards. Mixed data in the U.S. leaves hope for a soft-landing intact. Coming months are likely to be characterized by the process of the Fed nearing the end of hiking cycle, but with higher rate regime, with significant fluctuations in terms of what regime markets price in.

#### **Government Bonds**

We anticipate gradual normalization of rates and steepening of curve (more pronounced in the front end), especially in the U.S. In the Eurozone, we expect less central bank-buying, but do not expect any major selloffs in the government debt of either Italy or Spain.

#### Seems like government bond yields have topped out



Sources: Bloomberg Finance L.P., DWS Investment GmbH as of 12/6/23

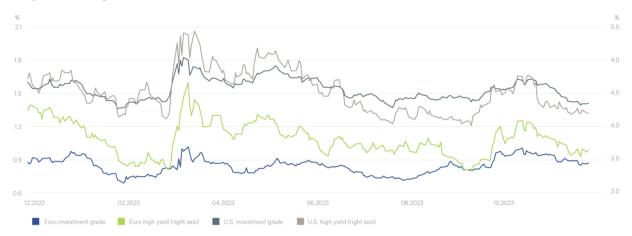
#### **Investment Grade Credit**

Low growth and receding inflation are a good environment for corporate credit. Given that corporate fundamentals stay sound, we see room for moderate spread tightening. We would consider any temporary spread widening as buying opportunities. Especially in the U.S., all in yields continue to be seen as attractive when viewed on a multi-year basis, even though spreads to Treasury yields are less attractive.

### High Yield Credit

New issue volume has modestly recovered for both U.S. and EUR high yield (HY) as more HY issuers seek to address 2024 and 2025 maturities, despite higher coupons. For U.S. HY, credit fundamentals for most issuers have remained mostly favorable in 2023, but we expect them to become more mixed, as refinancing near-term maturities has become more expensive. We expect default rates to increase from now 2.3% to 3.25% in 2024 and are Neutral this segment. For EUR HY we are more positive as they trade on higher spreads than their U.S. peers. We expect volatility to remain high, however, as the default rate could rise to 2.75% and regional geopolitical risks may produce new headwinds.

#### Credit spreads hardly indicate fear of a real recession



Sources: Bloomberg Finance L.P., DWS Investment GmbH as of 12/6/23

#### **Emerging Markets (EM)**

We expect EM sovereign spreads to move sideways (in the base case), as several risks have been priced in. We like solid "IG" issuers with attractive valuations. For EM corporates, we note that credit fundamentals by leverage and liquidity improved significantly post Covid and are the strongest in 10 years, putting them well ahead of global peers.

#### Euro vs. dollar

We expect foreign exchange markets to remain strongly focused on key economic data releases on both sides of the Atlantic, as these are key drivers are economic data, as expectations for bond yield differentials remain critical determinants to the near-term outlook of the euro versus the dollar. The refinancing needs in the US could keep the dollar strong.

#### 2.2 Equities

The base case is a soft-landing. Our economists forecast that the Fed and ECB are done with hiking. We believe inflation should approach targets levels by the end of 2025. This will allow central banks to enter the loosening cycle in June 2024. The drags of high central bank rates on inventory levels and the real estate market have become visible during recent months. However, some of the effects on the real economy are yet to arrive. Activity is expected to slow during the coming two quarters, however, without causing a severe recession, as labor markets remain tight and therefore consumer spending should stay robust. We stress the fine difference in our assumption that central banks start cutting because they "can cut" (clear progress on fighting inflation) and not because they "have to cut" (to prevent a looming recession). The latter motivation to cut would clearly be bad for equity markets. Equity investors have started to focus at the "light at the end of the tunnel" in recent weeks, as the prospects of falling central bank rates could start a moderate GDP re-acceleration from H2 2024 in the US and Europe.

We believe that the above macro scenario warrants a constructive equity outlook, while acknowledging recent market strength limits further return potential for global equities. We currently have little conviction to call out a strong regional return-differentiation. The diminishing equity risk premium (ERP) has been a key driver for equity markets in 2023, reflecting dis-inflation, fading recession-fears and Al-euphoria.

Without valuation support, most of the expected return will therefore have to come from dividends and earnings growth. The good news is that - following 3 years of flat EPS of the MSCI AC World - we expect an earnings re-acceleration towards 8% in 2024 and beyond. Cloud computing, progress in Al and a recovery in the semi-conductor cycle could support at least midteens EPS growth for IT (neutral, expensive), communication services; health care (neutral, pending US-election) could benefit from the launch of anti-obesity drugs. Elsewhere, EPS growth in-line with nominal GDP (less price increases than 2023, but

better volumes) are our key assumptions. Our estimates are approx. 3% below consensus, as the latter might still have to reflect the drag from high central bank interest rates.

"When and how to position portfolios towards the entry in the monetary loosening cycle?" should become the key tactical decision of fund managers in 2024. Re-positioning is likely to start ahead of the expected first rate cut in June 2024. Stock performance patterns following the release of low US CPI numbers for October could be indicative of the playbook. As such, listed real estate, small caps, "Value", Europe, unprofitable biotechnology and other disregarded market segments could make it back to the PM buy-list.

What if we are wrong and experience a hard landing? Obviously, earnings projections would fall, and the ERP would rise dragging down equity indices. Fortunately, bond yields have normalized since their lows in 2020. As a result, they have regained some of their traditional ability to "buffer" equity losses in a diversified portfolio, limiting the need to reduce equity investment for pessimistic investors. While bonds might offer a better risk-return in 2024 than equities, investors will remember that in 2023 stocks have proven again to offer superior inflation protection, strong participation in innovation and offer exposure to economic growth. As such, long-term investors will stick to equities in 2024 as a core position in their portfolios even if they are not yet willing to bet on the light at the end of the tunnel.

#### Equity markets enjoyed a decent year-end rally



Sources: Bloomberg Finance L.P., DWS Investment GmbH as of 12/6/23

#### U.S. Market

We look negative on the U.S. market. Our December 2024 index target for the S&P 500 is 4.700. With respect to valuation, we expect US bond yields (DWS forecast US10y 4.2%) to cap the trailing-PE just below 20x for the S&P. For 2024 we see no further valuation support from additional shrinking of the US equity risk premium, as it already reflects "soft-landing euphoria" and indicates limited risk awareness of investors.

#### European Market

For Europe we remain positive. The Stoxx profits from the yearend rally. We are especially positive on European SMID caps, companies which are delivering solid EPS growth. However, there is a better global GDP required as trigger for further gains.

#### German Market

We remain neutral on German equities. Overweight profitable growth stocks with attractive earnings growth and recovery potential and solid balance sheets. We focus on companies with greater pricing power and defensive characteristics and remain underexposed to sectors with structural problems and companies with weak balance sheets.

#### Japan

Japan remains attractively priced. We have no recession fears and are positive on the inflation outlook. The cheap Yen is sort of a foreign exchange tailwind, which benefits earnings. Furthermore, Japanese equity is an alternative to Chinese equities for Asian investors.

#### **Emerging Markets**

We are positive on emerging markets. Our focus is on selected Asian consumer and technology stocks. The rebounding semiconductor cycle is expected to be the main driver of EM earnings per share growth in 2024, and we like Asian semi-stocks. Within Indian equities, we highlight banking stocks as an opportunity to participate in the growth of the world's most populous country.

#### 2.3 Alternatives

#### Real Estate

Relative to listed markets, it typically takes 6 to 12 months longer for price trends to be fully reflected into real estate transaction valuations. At this stage, it is unclear when exactly "higher for longer" nominal interest rates might be fully reflected in real estate valuations. Despite some moderation in demand, fundamentals remain solid, with low vacancy rates and heathy rent growth across most sectors and regions. Recession might dampen leasing, but construction has also been falling amid repricing prices and tighter financing. "Flight-to-quality" of tenants toward energy- and water efficient buildings with good air quality supports office refurbishment, especially in Europe.

#### EU carbon allowances

We see the price of EU carbon allowances at EUR 95/tonne in 12 months' time. Falling natural gas prices are enabling European utilities to shift more power generation away from coal, reducing demand for EU allowances. However, policymakers continue to tighten the rules governing the emissions trading market, which will support increases in the EU carbon price in the short to medium term. In addition, we continue to expect the prices may consolidate towards the end of the year partly due to milder than usual weather lowering demand.

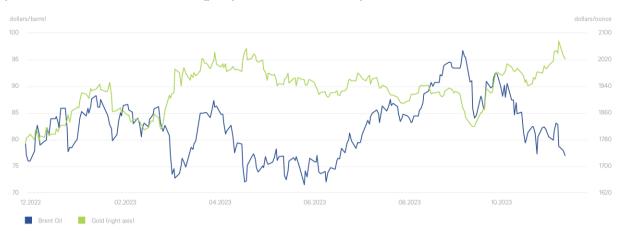
#### Gold

Gold rallied after the Fed signaled that rate hikes could end soon and has performed well throughout 2023. We expect a further rally if the Fed signals possible cuts, so we remain unchanged at \$2,300/oz for 4Q23 and our 12-month forecast is \$2,250/oz. The geopolitical risk premium has offset the headwinds from tighter financial conditions. However, we expect both to reverse over time and it appears that elevated central bank buying will continue, supporting gold through 2024. For deferred gold, we believe the fair value is around USD 2,000/oz and we prefer gold exposure for December 2024.

#### Oil

Our 12-month forecast for Brent is \$88 per barrel. We increased our forecast to account for updated fundamental drivers. Our forecast reflects ample supply near term and undersupply towards the end of 2024. Our base case assumes Saudi Arabia and Russia will remove the additional, voluntary cuts in supply in 2024. We also incorporate moderate growth in crude demand, consistent with the global GDP path envisioned by our macroeconomists. Recent inventory draw-down has helped support Brent price recovery, and the Israel – Hamas conflict has added to significant uncertainty to near term supply. We have not priced in significant changes to supply from Iran as of now. Furthermore, the energy market continues to price out immediate risk of the Israel-Hamas conflict expanding into wider regional hostilities. The ongoing demand weakness may require Saudi Arabia to maintain the current production level well into 1Q24. Despite negative headwind across the crude complex, we favor WTI over gasoline and diesel.

#### Geopolitical risks seem reflected in the gold price but not in the oil price



Sources: Bloomberg Finance L.P., DWS Investment GmbH as of 12/6/23

# 2.4 DWS High Conviction

We remain positive on investment grade credit and high-quality Covered Bonds. In emerging market sovereign, we focus on a basket of Europe investment grade names. In high-yield, we selectively favour rising stars and event-driven names. Overall, yields remain attractive on a multi-year basis. While spreads are less compelling, investors seem reluctant to sell given the yield levels. On the equity side, our main growth calls are global communication services and global consumer discretionary. The communications sector has real Al exposure, a reasonable valuation, and solid EPS growth. The consumer discretionary sector, on the other hand, is supported by robust labor markets. In real estate, we like logistics. As e-commerce drives demand, markets for distribution capacity are tightening around the world. Residential real estate is benefiting from housing shortages in most major markets. Higher interest rates are also shifting demand to rental. In infrastructure, in EMEA, greenfield project to boost the energy transition and refinancings of transportation assets look attractive, while in the US, more traditional assets and infrastructure sub-sectors such as power, renewables, digital, rail and waste are interesting. Direct lending could take the lead in 2024, focusing on recession-resistant sectors with stable recurring cash flows, high profitability and the ability to pass on costs to customers, such as healthcare, IT, software and business-to-business services.

# 3 / Past performance of major financial assets

#### Total return of major financial assets year-to-date and past month



German Bunds (30-year)

U.S. Treasuries (10-year)

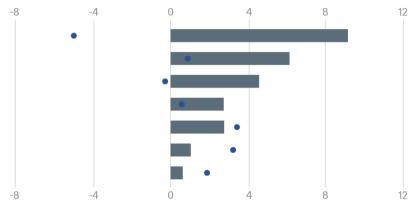
UK Gilts (10-year)

German Bunds (10-year)

U.S. Treasuries (2-year)

German Bunds (2-year)

■ Performance in November, in %



• Year-to-date performance 2023, in %



Emerging-market sovereigns

U.S. high yield

Italy (10-year)

Asia credit

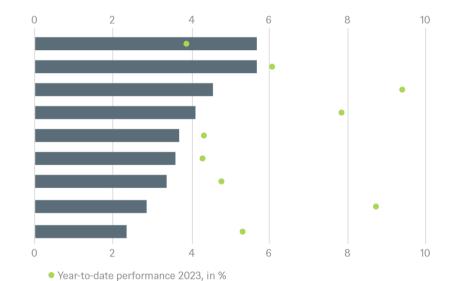
Emerging-market credit

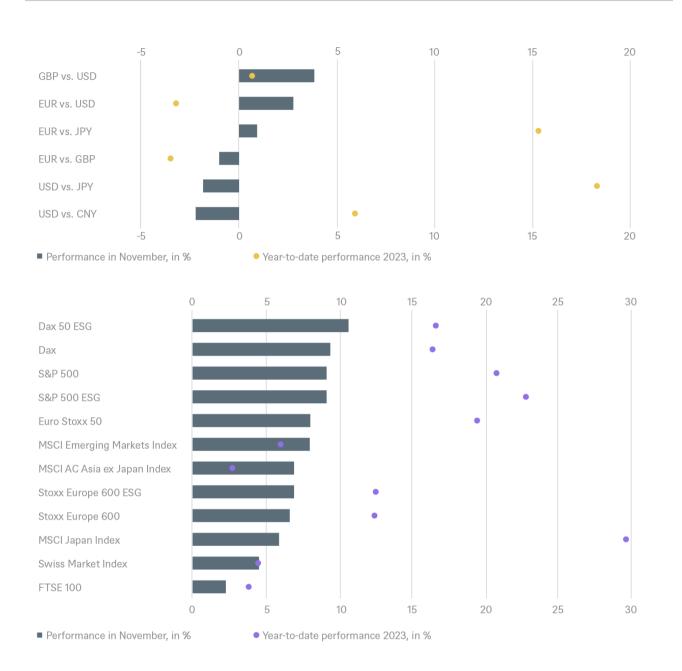
Spain (10-year)

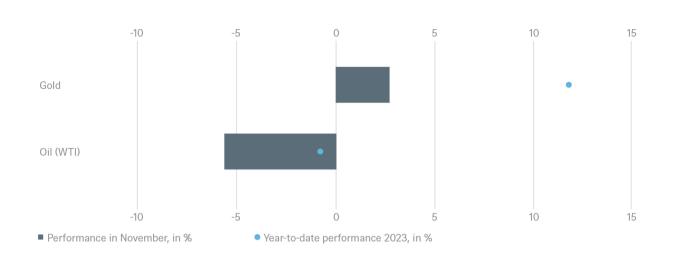
Euro high yield

Euro investment grade

■ Performance in November, in %







Past performance is not indicative of future returns. Sources: Bloomberg Finance L.P., DWS Investment GmbH as of 11/30/23

# 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 Dec 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)	•	•

Secritized / specialities	1 to 3 months	until Dec 2024
Covered bonds <sup>1</sup>	•	•
U.S. municipal bonds	•	•
U.S. mortgage-backed securities	•	•

Spreads	1 to 3 months	until Dec 2024
Spain (10-year) <sup>1</sup>	•	•
Italy (10-year) <sup>1</sup>	•	•
U.S. investment grade	•	•
U.S. high yield	•	•
Euro investment grade <sup>1</sup>	•	•
Euro high yield <sup>1</sup>	•	•
Asia credit	•	•
Emerging-market credit	•	•
Emerging-market sovereigns	•	•

Currencies	1 to 3 months	until Dec 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 <sup>2</sup>	until Dec 2024
United States <sup>3</sup>	•	•
Europe <sup>4</sup>	•	•
Eurozone <sup>5</sup>	•	•
Germany	•	•
Switzerland <sup>7</sup>	•	•
United Kingdom (UK) <sup>8</sup>	•	•
Emerging markets <sup>9</sup>	•	•
Asia ex Japan <sup>10</sup>	•	•
Japan <sup>11</sup>	•	•

Style	1 to 3 months
U.S. small caps <sup>22</sup>	•
European small caps <sup>23</sup>	•

Sectors	1 to 3 months <sup>2</sup>
Consumer staples <sup>12</sup>	•
Healthcare <sup>13</sup>	•
Communication services <sup>14</sup>	•
Utilities <sup>15</sup>	•
Consumer discretionary <sup>16</sup>	•
Energy <sup>17</sup>	•
Financials <sup>18</sup>	•
Industrials <sup>19</sup>	•
Information technology <sup>20</sup>	•
Materials <sup>21</sup>	•

#### 4.3 Alternatives

Alternatives	1 to 3 months <sup>2</sup>	until Dec 2024
Commodities <sup>24</sup>	•	•
Oil (WTI)	•	•
Gold	•	•
Infrastructure (listed)	•	•
Infrastructure (non-listed)		•
Real estate (listed)	•	•
Real estate (non-listed) APAC <sup>25</sup>		•
Real estate (non-listed) Europe <sup>25</sup>		•
Real estate (non-listed) United States <sup>25</sup>		•

<sup>1</sup>Spread over German Bunds. <sup>2</sup> Relative to the MSCI AC World Index (only for the tactical signals), <sup>3</sup> S&P 500, <sup>4</sup> Stoxx Europe 600, <sup>5</sup> Euro Stoxx 50, <sup>6</sup> Dax, <sup>7</sup> Swiss Market Index, <sup>8</sup> FTSE 100, <sup>9</sup> MSCI Emerging Markets Index, <sup>10</sup> MSCI AC Asia ex Japan Index, <sup>11</sup> MSCI Japan Index, <sup>12</sup> MSCI AC World Consumer Staples Index, <sup>13</sup> MSCI AC World Health Care Index, <sup>14</sup> MSCI AC World Communication Services Index, <sup>18</sup> MSCI AC World Utilities Index, <sup>18</sup> MSCI AC World Consumer Discretionary Index, <sup>17</sup> MSCI AC World Energy Index, <sup>18</sup> MSCI AC World Index, <sup>18</sup> MSCI AC World Industrials Index, <sup>28</sup> MSCI AC World Information Technology Index, <sup>28</sup> MSCI AC World Materials Index, <sup>28</sup> Russell 2000 Index relative to the S&P 500, <sup>29</sup> Stoxx Europe Small 200 relative to the Stoxx Europe 600, <sup>24</sup> Relative to the Bloomberg Commodity Index, <sup>28</sup> Long-term investments.

Past performance is not indicative of future returns. Sources: DWS Investment GmbH as of 12/08/23

#### 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 December 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

**DWS Glossary** 

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

The CBOE Volatility Index (Vix) is a trademarked ticker symbol for the Chicago Board Options Exchange Market Volatility Index. It is a popular measure of the volatility of the S&P 500 as implied in the short term option prices on the index. describes a slowing of the pace of price inflation.

The Dow Jones Industrial Average (DJIA) is a price-weighted equity index that aims to track the development of the U.S. equity market.

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.

Equity risk premium is an excess return earned by an investor when they invest in the stock markt over a risk-free rate. This return compensates investors for taking on the higher risk of equity investing.

The euro (EUR) is the common currency of states participating in the Economic and Monetary Union and is the second most held reserve currency in the world after the dollar.

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

The gross domestic product (GDP) is the monetary value of all the finished goods and services produced within a country's borders in a specific time period.

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

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

The Nasdaq-100 is an equity index which contains the 100 biggest common stocks listed on the Nasdaq Stock Market.

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.

A soft landing is when an economy's rate of growth slows in a controlled fashion without major disruptive effects on employment, external balances etc.

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

The U.S. dollar (USD) is the official currency of the United States and its overseas territories.

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

•

## 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 subsequently 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 12/8/23; 082325\_33 (12/2023)

## 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 taxapyer 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, opinions, models and hypothetical performance analysis. The forward looking statements expressed constitute the author's judgment as of the date of this material. 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 financial 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 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.

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 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 availability of these products and services in certain juris

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 12/8/23: 082326 33 (12/2023)