Research Institute Long View Q1





Long View Q1: The impact of country risks

Authors: Francesco Curto, Jason Chen





N A NUTSHELL

- Return forecasts have moved higher over the quarter, driven by less challenging valuations and significant increases in nominal yields
- Emerging markets debt forecasts remain above other asset classes within the fixed income universe, but our analysis suggest that investors ought to assess the potential impact that poor democratic ratings have on sovereign ratings and credit quality

1 / Summary

Within this report, we present the DWS long-term capital market assumptions as of the end of March 2022 for major asset classes.

Over the first quarter of 2022, global markets remained under pressure, impacted by persistent inflationary fears and geopolitical risks. The prospect of monetary tightening across global central banks resulted in a historically weak quarter for fixed-rate assets, as both nominal and real yields across the fixed income complex repriced significantly higher in Q1. As at the 31st of March 2022, investors anticipated in the range of 8 Fed Funds hikes for the US for the next two year, which reflected in the sharp selloff in short term US Treasury yields. Equities and other risk assets also experienced declining valuations despite what remains a fundamentally strong earnings outlook over the next year.

While these market moves have resulted in challenging investment returns, the longer -term prospect for investment returns, particularly in the fixed income space, has improved if one assumes no further deterioration in inflation. Across developed market sovereign bonds markets, real interest rates have moved back toward, and in some cases, into positive territory, becoming less of a hurdle for real income generation for fixed income investors.

Still, return expectations for the next decade remain below historical averages, and, in some cases, still face trisks of the prospective of persistently higher levels inflation, which also has the potential to deteriorate real earnings growth.

Our models now estimate a forecasted return of 5.6% from the MSCI All Country World Index ("ACWI") annually for the next decade, versus 4.6% just a quarter ago. At an aggregate level, we estimate the forecasted rate of return on a diversified portfolio of assets is now 4.9%, up 1% from the level at the beginning of the year.

For Institutional investors and Professional investors

A- In EMEA for Professional Clients (MiFID Directive 2014/65/EU Annex II) only; no distribution to private/retail customers. In Switzerland for Qualified Investors (art. 10 Para. 3 of the Swiss Federal Collective Investment Schemes Act (CISA)). In APAC for institutional investors only. Australia and New Zealand: For Wholesale Investors only. In the Americas for Institutional Client and Registered Rep use only; not for public viewing or distribution. Forecasts are not a reliable indicator of future returns. Forecasts are based on assumptions, estimates, views and hypothetical models or analyses, which might prove inaccurate or incorrect

Any hypothetical results presented in this report may have inherent limitations. Among them are the sharp differences which may exist between hypothetical and actual results which may be achieved through investment in a particular product or strategy. Hypothetical results are generally prepared with the benefit of hindsight and typically do not account for financial risk and other factors which may adversely affect actual results of a particular product or strategy. Any forward looking statements (forecasts) are based on but not limited to assumptions, estimates, projections, opinions, models and hypothetical performance analysis. All of which are subject to change at any time, based upon economic, market and other considerations and should not be construed as a recommendation. Past performance is no guarantee of future results.



FIGURE 1. DWS TEN YEARS ANNUAL FORECASTED RETURNS

World Equities 5.5% 1.1% EM Equities 6.3% 0.8% US Equities 5.7% 1.0% Europe Equities 5.3% 1.3% Germany Equities 5.7% 1.6% UK Equities 5.9% 0.0% Japan Equities 3.5% 0.3% EUR Treasury 0.3% 0.5% EUR Treasury 0.3% 1.5% EUR Corporate 1.5% 1.0% US Treasury 2.4% 1.0% US Corporate 3.1% 1.3% US High Yield 4.1% 1.1% EM USD Sovereign 5.7% 1.2% EM USD Corporate 5.5% 1.3% World REITS 3.7% -0.1% United States REITS 4.1% -0.1% United States REITS 4.1% -0.1% Global Infra. Equity 5.4% 0.3% US Infra. Equity 5.3% 0.3% Private RE Equity US 7.1% -0.4% EUR Infrastructure IG 1.6% 1.0% Private EUR Infra. IG 2		As of 31 Mar 2022	Δ since 31 Dec 2021
EM Equities 6.3% 0.8% US Equities 5.7% 1.0% Europe Equities 5.3% 1.3% Germany Equities 5.7% 1.6% UK Equities 5.9% 0.0% Japan Equities 3.5% 0.3% EUR Treasury 0.3% 0.5% EUR Treasury 0.3% 1.0% EUR High Yield 3.9% 1.5% US Treasury 2.4% 1.0% US Corporate 3.1% 1.3% US High Yield 4.1% 1.1% EM USD Sovereign 5.7% 1.2% EM USD Corporate 5.5% 1.3% Morld REITS 3.7% -0.1% United States REITS 4.1% -0.1% United States REITS 4.1% -0.1% Global Infra. Equity 5.4% 0.3% US Infra. Equity 5.3% 0.3% Private RE Equity US 7.1% -0.4% EUR Infrastructure IG 1.6% 1.0% Private EUR Infra. IG 2.7% 0.8% Hedge Funds: Composite	ACWI Equities	5.6%	1.1%
US Equities 5.7% 1.0% Europe Equities 5.3% 1.3% Germany Equities 5.7% 1.6% UK Equities 5.9% 0.0% Japan Equities 3.5% 0.3% EUR Treasury 0.3% 0.5% EUR Corporate 1.5% 1.0% EUR High Yield 3.9% 1.5% US Treasury 2.4% 1.0% US Corporate 3.1% 1.3% US High Yield 4.1% 1.1% EM USD Sovereign 5.7% 1.2% EM USD Corporate 5.5% 1.3% World REITS 3.7% -0.1% United States REITS 4.1% -0.1% Global Infra. Equity 5.4% 0.3% US Infra. Equity 5.3% 0.3% Private RE Equity US 7.1% -0.4% EUR Infrastructure IG 1.6% 1.0% Private EUR Infra. IG 2.7% 0.8% Hedge Funds: Composite 3.1% 0.6%	World Equities	5.5%	1.1%
Europe Equities 5.3% 1.3% Germany Equities 5.7% 1.6% UK Equities 5.9% 0.0% Japan Equities 3.5% 0.3% EUR Treasury 0.3% 0.5% EUR Corporate 1.5% 1.0% EUR High Yield 3.9% 1.5% US Treasury 2.4% 1.0% US Corporate 3.1% 1.3% US High Yield 4.1% 1.1% EM USD Sovereign 5.7% 1.2% EM USD Corporate 5.5% 1.3% World REITS 3.7% 0.1% United States REITS 4.1% 0.1% United States REITS 4.1% 0.3% US Infra. Equity 5.4% 0.3% US Infra. Equity 5.4% 0.3% US Infra. Equity 5.3% 0.3% Private RE Equity US 7.1% 0.4% EUR Infrastructure IG 1.6% 1.0% Private EUR Infra. IG 2.7% 0.8% Hedge Funds: Composite 3.1% 0.6%	EM Equities	6.3%	0.8%
Germany Equities 5.7% 1.6% UK Equities 5.9% 0.0% Japan Equities 3.5% 0.3% EUR Treasury 0.3% 0.5% EUR Corporate 1.5% 1.0% EUR High Yield 3.9% 1.5% US Treasury 2.4% 1.0% US Corporate 3.1% 1.3% US High Yield 4.1% 1.1% EM USD Sovereign 5.7% 1.2% EM USD Corporate 5.5% 1.3% World REITS 3.7% -0.1% United States REITS 4.1% -0.1% United States REITS 4.1% -0.1% Global Infra. Equity 5.3% 0.3% Private RE Equity US 7.1% -0.4% EUR Infrastructure IG 1.6% 1.0% Private EUR Infra. IG 2.7% 0.8% Hedge Funds: Composite 3.1% 0.6%	US Equities	5.7%	1.0%
UK Equities 5.9% 0.0% Japan Equities 3.5% 0.3% EUR Treasury 0.3% 0.5% EUR Corporate 1.5% 1.0% EUR High Yield 3.9% 1.5% US Treasury 2.4% 1.0% US Corporate 3.1% 1.3% US High Yield 4.1% 1.1% EM USD Sovereign 5.7% 1.2% EM USD Corporate 5.5% 1.3% World REITS 3.7% -0.1% United States REITS 4.1% -0.1% Global Infra. Equity 5.4% 0.3% US Infra. Equity 5.3% 0.3% Private RE Equity US 7.1% -0.4% EUR Infrastructure IG 1.6% 1.0% Private EUR Infra. IG 2.7% 0.8% Hedge Funds: Composite 3.1% 0.6%	Europe Equities	5.3%	1.3%
Japan Equities 3.5% 0.3% EUR Treasury 0.3% 0.5% EUR Corporate 1.5% 1.0% EUR High Yield 3.9% 1.5% US Treasury 2.4% 1.0% US Corporate 3.1% 1.3% US High Yield 4.1% 1.1% EM USD Sovereign 5.7% 1.2% EM USD Corporate 5.5% 1.3% World REITS 3.7% -0.1% United States REITS 4.1% -0.1% Global Infra. Equity 5.4% 0.3% US Infra. Equity 5.3% 0.3% Private RE Equity US 7.1% -0.4% EUR Infrastructure IG 1.6% 1.0% Private EUR Infra. IG 2.7% 0.8% Hedge Funds: Composite 3.1% 0.6%	Germany Equities	5.7%	1.6%
EUR Treasury 0.3% 0.5% EUR Corporate 1.5% 1.0% EUR High Yield 3.9% 1.5% US Treasury 2.4% 1.0% US Corporate 3.1% 1.3% US High Yield 4.1% 1.1% EM USD Sovereign 5.7% 1.2% EM USD Corporate 5.5% 1.3% World REITS 3.7% -0.1% United States REITS 4.1% -0.1% Global Infra. Equity 5.4% 0.3% US Infra. Equity 5.3% 0.3% Private RE Equity US 7.1% -0.4% EUR Infrastructure IG 1.6% 1.0% Private EUR Infra. IG 2.7% 0.8% Hedge Funds: Composite 3.1% 0.6%	UK Equities	5.9%	0.0%
EUR Corporate 1.5% 1.0% EUR High Yield 3.9% 1.5% US Treasury 2.4% 1.0% US Corporate 3.1% 1.3% US High Yield 4.1% 1.1% EM USD Sovereign 5.7% 1.2% EM USD Corporate 5.5% 1.3% World REITS 3.7% -0.1% United States REITS 4.1% -0.1% Global Infra. Equity 5.4% 0.3% US Infra. Equity 5.3% 0.3% US Infra. Equity US 7.1% -0.4% EUR Infrastructure IG 1.6% 1.0% Private EUR Infra. IG 2.7% 0.8% Hedge Funds: Composite 3.1% 0.6%	Japan Equities	3.5%	0.3%
EUR High Yield 3.9% 1.5% US Treasury 2.4% 1.0% US Corporate 3.1% 1.3% US High Yield 4.1% 1.1% EM USD Sovereign 5.7% 1.2% EM USD Corporate 5.5% 1.3% World REITS 3.7% -0.1% United States REITS 4.1% -0.1% Global Infra. Equity 5.4% 0.3% US Infra. Equity 5.3% 0.3% Private RE Equity US 7.1% -0.4% EUR Infrastructure IG 1.6% 1.0% Private EUR Infra. IG 2.7% 0.8% Hedge Funds: Composite 3.1% 0.6%	EUR Treasury	0.3%	0.5%
US Treasury 2.4% 1.0% US Corporate 3.1% 1.3% US High Yield 4.1% 1.1% EM USD Sovereign 5.7% 1.2% EM USD Corporate 5.5% 1.3% World REITS 3.7% -0.1% United States REITS 4.1% -0.1% Global Infra. Equity 5.4% 0.3% US Infra. Equity 5.3% 0.3% Private RE Equity US 7.1% -0.4% EUR Infrastructure IG 1.6% 1.0% Private EUR Infra. IG 2.7% 0.8% Hedge Funds: Composite 3.1% 0.6%	EUR Corporate	1.5%	1.0%
US Corporate 3.1% 1.3% US High Yield 4.1% 1.1% EM USD Sovereign 5.7% 1.2% EM USD Corporate 5.5% 1.3% World REITS 3.7% -0.1% United States REITS 4.1% -0.1% Global Infra. Equity 5.4% 0.3% US Infra. Equity 5.3% 0.3% Private RE Equity US 7.1% -0.4% EUR Infrastructure IG 1.6% 1.0% Private EUR Infra. IG 2.7% 0.8% Hedge Funds: Composite 3.1% 0.6%	EUR High Yield	3.9%	1.5%
US High Yield 4.1% 1.1% EM USD Sovereign 5.7% 1.2% EM USD Corporate 5.5% 1.3% World REITS 3.7% -0.1% United States REITS 4.1% -0.1% Global Infra. Equity 5.4% 0.3% US Infra. Equity 5.3% 0.3% Private RE Equity US 7.1% -0.4% EUR Infrastructure IG 1.6% 1.0% Private EUR Infra. IG 2.7% 0.8% Hedge Funds: Composite 3.1% 0.6%	US Treasury	2.4%	1.0%
EM USD Sovereign 5.7% 1.2% EM USD Corporate 5.5% 1.3% World REITS 3.7% -0.1% United States REITS 4.1% -0.1% Global Infra. Equity 5.4% 0.3% US Infra. Equity 5.3% 0.3% Private RE Equity US 7.1% -0.4% EUR Infrastructure IG 1.6% 1.0% Private EUR Infra. IG 2.7% 0.8% Hedge Funds: Composite 3.1% 0.6%	US Corporate	3.1%	1.3%
EM USD Corporate 5.5% 1.3% World REITS 3.7% -0.1% United States REITS 4.1% -0.1% Global Infra. Equity 5.4% 0.3% US Infra. Equity 5.3% 0.3% Private RE Equity US 7.1% -0.4% EUR Infrastructure IG 1.6% 1.0% Private EUR Infra. IG 2.7% 0.8% Hedge Funds: Composite 3.1% 0.6%	US High Yield	4.1%	1.1%
World REITS 3.7% -0.1% United States REITS 4.1% -0.1% Global Infra. Equity 5.4% 0.3% US Infra. Equity 5.3% 0.3% Private RE Equity US 7.1% -0.4% EUR Infrastructure IG 1.6% 1.0% Private EUR Infra. IG 2.7% 0.8% Hedge Funds: Composite 3.1% 0.6%	EM USD Sovereign	5.7%	1.2%
United States REITS 4.1% -0.1% Global Infra. Equity 5.4% 0.3% US Infra. Equity 5.3% 0.3% Private RE Equity US 7.1% -0.4% EUR Infrastructure IG 1.6% 1.0% Private EUR Infra. IG 2.7% 0.8% Hedge Funds: Composite 3.1% 0.6%	EM USD Corporate	5.5%	1.3%
Global Infra. Equity 5.4% 0.3% US Infra. Equity 5.3% 0.3% Private RE Equity US 7.1% -0.4% EUR Infrastructure IG 1.6% 1.0% Private EUR Infra. IG 2.7% 0.8% Hedge Funds: Composite 3.1% 0.6%	World REITS	3.7%	-0.1%
US Infra. Equity 5.3% 0.3% Private RE Equity US 7.1% -0.4% EUR Infrastructure IG 1.6% 1.0% Private EUR Infra. IG 2.7% 0.8% Hedge Funds: Composite 3.1% 0.6%	United States REITS	4.1%	-0.1%
Private RE Equity US 7.1% -0.4% EUR Infrastructure IG 1.6% 1.0% Private EUR Infra. IG 2.7% 0.8% Hedge Funds: Composite 3.1% 0.6%	Global Infra. Equity	5.4%	0.3%
EUR Infrastructure IG 1.6% 1.0% Private EUR Infra. IG 2.7% 0.8% Hedge Funds: Composite 3.1% 0.6%	US Infra. Equity	5.3%	0.3%
Private EUR Infra. IG 2.7% 0.8% Hedge Funds: Composite 3.1% 0.6%	Private RE Equity US	7.1%	-0.4%
Hedge Funds: Composite 3.1% 0.6%	EUR Infrastructure IG	1.6%	1.0%
	Private EUR Infra. IG	2.7%	0.8%
Broad Commodities Futures 0.4% -0.2%	Hedge Funds: Composite	3.1%	0.6%
	Broad Commodities Futures	0.4%	-0.2%

Source: DWS Investments UK Limited. Forecasts from of 31 March 2022 to 31 March 2032. Due to various risks, uncertainties and assumptions made in our analysis, actual events or results or the actual performance of the markets covered may differ materially from those described.

This information is intended for informational and educational purposes only and does not constitute investment advice, a recommendation, an offer or solicitation. The opinions and forecasts expressed are those of the authors of this report as of the date of this report and may not actually come to pass. This information is subject to change at any time, based on market and other conditions and should not be construed as a recommendation of any specific security or investment strategy.

Forecasts are not a reliable indicator of future returns. Forecasts are based on assumptions, estimates, views and hypothetical models or analyses, which might prove inaccurate or incorrect. Past performance, [actual or simulated], is not a reliable indication of future performance.

Any hypothetical results presented in this report may have inherent limitations. Among them are the sharp differences which may exist between hypothetical and actual results which may be achieved through investment in a particular product or strategy. Hypothetical results are generally prepared with the benefit of hindsight and typically do not account for financial risk and other factors which may adversely affect actual results of a particular product or strategy. Any forward looking statements (forecasts) are based on but not limited to assumptions, estimates, projections, opinions, models and hypothetical performance analysis. All of which are subject to change at any time, based upon economic, market and other considerations and should not be construed as a recommendation. Past performance is no guarantee of future results.

For Institutional investors and Professional investors



2 / Emerging markets debt forecasts

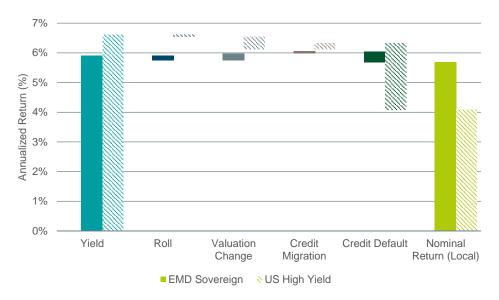
1. Emerging markets debt return pillars

Over recent quarters, key country risks have arisen across the universe of emerging markets countries. Russia's invasion of Ukraine, China's regulatory crackdown, and Qatar's human rights issues have dominated headlines. As these issues persist, investors allocating to emerging markets debt face increasing uncertainty as to the stability of these credits both fundamentally and on market sentiment. Particularly as governance becomes an increasingly important metric for asset allocators, monitoring these risks is becoming increasingly important.

Looking across our Long View forecasts, within the universe of fixed income assets, EM USD Sovereign and Corporate debt stand out as sources of healthier returns. With forecasted returns of 5.7% and 5.4%, respectively, EM hard currency fixed income forecasts outpace not only developed market sovereign bonds but also exceed US investment grade and high yield corporate securities.

This is despite better credit ratings of EM hard currency bonds versus the US High Yield bond index—the former being a blend of Investment Grade and High Yield-rated issuers—albeit with greater duration risk. Figure 2 shows the comparison of pillar contribution to 10 year forecasted returns between EMD USD Sovereigns and US High Yield.

FIGURE 2: EMD USD SOVEREIGN AND US HIGH YIELD: CONTRIBUTION TO 10 YEAR FORECASTED HYPOTHETICAL ANNUALIZED RETURNS



Source: DWS Investments UK Limited, Bloomberg Finance L.P. Data as of30 March 2022. Past performance, [actual or simulated], is not a reliable indication of future performance.

Comparing side-by-side, the most significant difference between EMD Sovereign and US High Yield forecasted returns is the credit default loss assumptions. While credit default losses are forecasted to be -2.2% per annum for US High Yield, credit default losses for Emerging Market sovereigns are forecasted at just -0.4% a year. In order to forecast default losses, we must utilize empirical data on default loss experience and combine this information with available fundamental credit ratings sourced from ratings agencies. Historical observation for emerging markets shows sovereign debt crises in Latin America in the 80s and Asia in the 90s, but predicting these outcomes going forward is a challenge without recent information.

For Institutional investors and Professional investors



Over recent years, EM economies have generally growth wealthier and less reliant on foreign financing. Sovereign and corporate borrowing behavior has also shifted toward less dependency on external debt financing. EMs have reduced their dependency on external debt, with external corporates and sovereigns now making up around 15% of the total debt stock, as shown in **Error! Reference source not found.**.

FIGURE 3: TOTAL DEBT STOCK BY ASSET CLASS (\$BN)



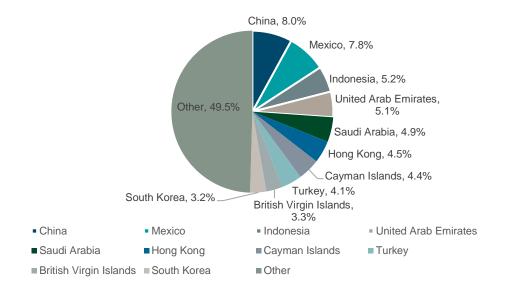
Source: DWS Investments UK Limited, JP Morgan CEMBI Monitor, April 2022. Past performance, [actual or simulated], is not a reliable indication of future performance.

2. Potential impact of poor or deteriorating democracy

Pivoting toward somewhat more qualitative evaluation of the Emerging Markets sovereign universe, we can look at measures of country risk based on measures other than empirical default losses and credit ratings. To start, we can look at the issuer composition to identify countries that may introduce risks to investors. Figure 4 shows the breakdown of the Bloomberg Barclays Emerging Markets Debt Index for the ten largest country issuers.







Source: DWS Investments UK Limited, Bloomberg L.P. Data as of 31 March 2022. Past performance, [actual or simulated], is not a reliable indication of future performance.

Within the EMD USD Sovereign index, the issuer composition shows allocations to sovereignties that rank poorly on the Economist's "Democracy Index 2020". Among the 10 largest constituents in the index, Saudi Arabia and China 156 and 151, respectively, out of the list of 167 countries. Both countries are categorized as "Authoritarian", scoring far below the cutoff for the next lowest category. Both countries have been consistently in the bottom tier of the Democracy Index as far back as it goes to 2006.

Apart from the social implications of constrained individual freedoms and civil liberties, poor social governance presents risks to capital allocations. Despite there being limited empirical support for linking political democracy and economic growth, a meta-analysis found democracy to have a "robust, significant, and positive indirect effects through higher human capital, lower inflation, lower political instability, and higher levels of economic freedom".

3. Country ceilings and regulatory risks

For investors, the profitability of companies and the risks associated with their country of domicile or economic exposure are inexorably linked. Particularly in stress periods, the concept of "country ceilings" becomes relevant for asset allocators. According to Moody's ratings methodology², "foreign country ceiling intends to capture the possibility that during a foreign currency crisis a sovereign nation may choose to limit all foreign currency payments by entities subject to its legal jurisdiction". Because the national government maintains the greatest flexibility to mobilitize its foreign exchange assets within its borders, the foreign currency country ceiling "constrains the ratings of nearly all foreign-currency obligations from issuers domiciled in a country because even a highly credit-worthy borrower would not be able to make payments to investors in such a situation". This ratings ceiling applies specifically to foreign currency issues, whereas domestic currency bonds can maintain higher ratings.

For Institutional investors and Professional investors

¹ Democracy Index 2020 (2021). The Economist Intelligence Unit.

² http://globalclearinghouse.org/InfraDev/assets%5C10/documents/Moody's%20-%20Piercing%20Foreign%20Currency%20Ceiling%20(1997).pdf



Comparing the sovereign credit ratings of individual countries against their respective local bond yields, we can observe this relationship. While credit ratings may not always capture credit stress with the immediacy investors desire, they remain a useful tool for monitoring fundamentals over long term periods. Figure 5 shows this relationship.

60 50 ARGENTINA RUSSIA 40 Yield (%) 30 TURKEY 20 SOUTH AFRICA BRAZIL COLOMBIA 10 MEXICO ! CHILE POLAND **INDONESIA** CHINA • MAI AYSI 0 0 Baa2 Baa3 Caa1 Ba Ba à ൭ Bag Ł φ 8 ઢ ઢ 8 Credit Rating (Moody's)

FIGURE 5: EMERGING MARKETS COUNTRY CREDIT RATINGS AND LOCAL SOVEREIGN BOND YIELDS

Source: DWS Investments UK Limited, JP Morgan, Moody's Corporation. Data as of 30 March 2022.

Perhaps somewhat obvious is that any unforeseen deteriorating in the credit ratings of emerging markets countries poses a risk to potential returns. However, it is worth highlighting the importance of social governance and democratic freedom in maintaining economic and political stability. Without stable or improving democratic freedom, countries risk deteriorating fundamental outlooks that may result in credit ratings impairment that may ultimately pose downside risks to investment returns.

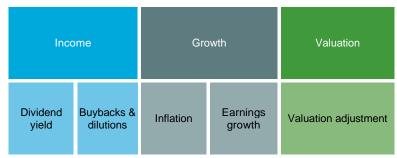


3 / Long View Forecasts

1. Equity Forecasts

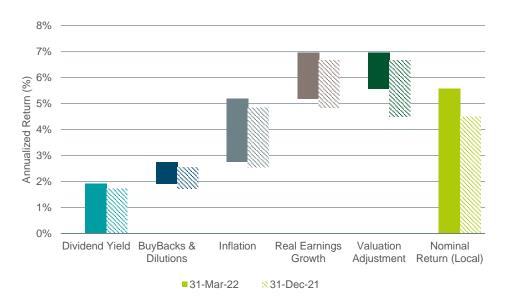
For our equity return forecasts, Figure 12 illustrates the changes to our return pillars for 10-year MSCI All Country World local currency return forecast. Our return forecast for global equities have increased to 5.6% from the 4.6% level at the end of December. The increase in the nominal return forecast is largely attributable to a reduced valuation hurdle.

FIGURE 6: PILLAR DECOMPOSITION FOR EQUITIES



Source: DWS Investments UK Limited.

FIGURE 7: MSCI ALL COUNTRY WORLD: CONTRIBUTION TO 10 YEAR FORECASTED HYPOTHETICAL ANNUALIZED RETURNS



Source: DWS Investments UK Limited. Data as of 31 March 2022. Hypothetical performance is not an indicator of future actual results. Hypothetical performance results have many inherent limitations. No representation is made that actual profits or losses will be similar to those shown. Past performance, [actual or simulated], is not a reliable indication of future performance.

For Institutional investors and Professional investors



In the US, we see similar adjustments, with our return forecast for MSCI USA increasing from 4.4% to 5.6% in Q1. As with global equities, valuation adjustment, going from -2.6% to -1.7%, was the most significant driver of this increase in forecasted returns.

7% 6% Annualized Return (%) 5% 4% 3% 2% 1% 0% Dividend Yield BuyBacks & Inflation Real Earnings Valuation Nominal **Dilutions** Adjustment Return (Local) Growth

FIGURE 8: MSCI USA: CONTRIBUTION TO 10 YEAR FORECASTED HYPOTHETICAL ANNUALIZED RETURNS

Source: DWS Investments UK Limited. Data as of 31 March 2022. Hypothetical performance is not an indicator of future actual results. Hypothetical performance results have many inherent limitations. No representation is made that actual profits or losses will be similar to those shown. Past performance, [actual or simulated], is not a reliable indication of future performance.

31-Dec-21

2. Liquid Real Assets Forecasts

Liquid Real Assets Forecasts

While REITs and Infrastructure both leverage very similar pillars to equities (see Figure 9), returns are derived largely from income via dividend distributions as shown in Figure 14 and Figure 15.

FIGURE 9: PILLAR DECOMPOSITION FOR REITS AND INFRASTRUCTURE

■31-Mar-22

Asset Class	Income	Gro	wth	Valuation
Listed real estate equity	Dividend yield	Inflation	Earnings growth	Valuation adjustment
Listed infrastructure	Dividend yield	Inflation	Earnings growth	Valuation adjustment

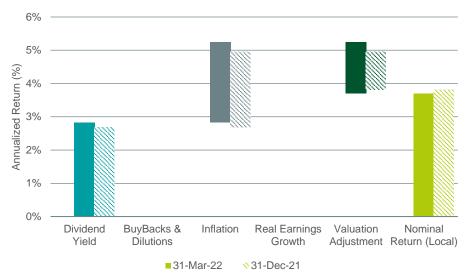
Source: DWS Investments UK Limited.

For Institutional investors and Professional investors



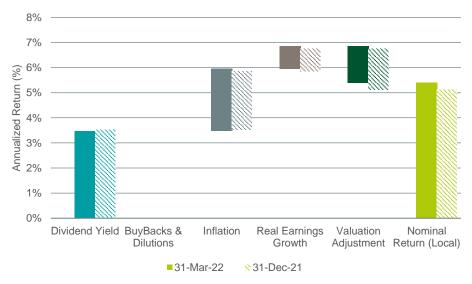
Across liquid real assets, our return forecasts indicate a somewhat more constructive outlook. While valuations remain stretched in traditional equities, REIT dividend yields are less compressed relative to longer term averages. This provides advantageous levels on income contribution but also means a lesser headwind in terms of valuation normalization. Similarly, infrastructure returns embed a favorable income stream.

FIGURE 10: GLOBAL REITS: CONTRIBUTION TO 10 YEAR FORECASTED HYPOTHETICAL ANNUALIZED RETURNS



Source: DWS Investments UK Limited. Data as of 31 March 2022. Hypothetical performance is not an indicator of future actual results. Hypothetical performance results have many inherent limitations. No representation is made that actual profits or losses will be similar to those shown. Past performance, [actual or simulated], is not a reliable indication of future performance.

FIGURE 11: GLOBAL INFRASTRUCTURE: CONTRIBUTION TO 10 YEAR FORECASTED HYPOTHETICAL ANNUALIZED RETURNS



Source: DWS Investments UK Limited. Data as of 31 March 2022. Hypothetical performance is not an indicator of future actual results. Hypothetical performance results have many inherent limitations. No representation is made that actual profits or losses will be similar to those shown. Past performance, [actual or simulated], is not a reliable indication of future performance.

For Institutional investors and Professional investors

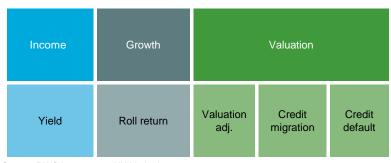


3. Fixed Income Forecasts

Fixed Income Forecasts

Since the beginning of the year, the fundamental return outlook across fixed income has changed materially. While structural issues remain (growing government deficits, elevated inflation expectations), the backup in fixed income yield and spread levels has increased starting yield levels significantly, both in nominal and real terms. Starting yield is by far the most important driver of return contribution in our building blocks shown in Figure 12.

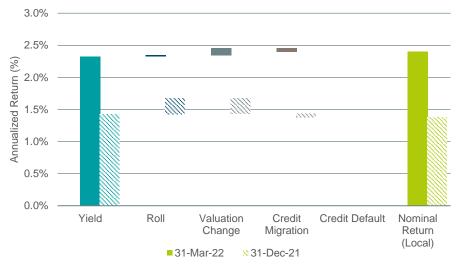
FIGURE 12: PILLAR DECOMPOSITION FOR FIXED INCOME



Source: DWS Investments UK Limited.

In Q1 alone, both shorter term and longer-term US Treasury yields repriced materially higher. The 10-year US Treasury yield moved from 1.51% to 2.34% to end March, which has significantly increased yield contribution to our nominal return forecasts shown in Figure 12.

FIGURE 13: US TREASURY BOND INDEX: CONTRIBUTION TO 10 YEAR FORECASTED HYPOTHETICAL ANNUALIZED RETURNS



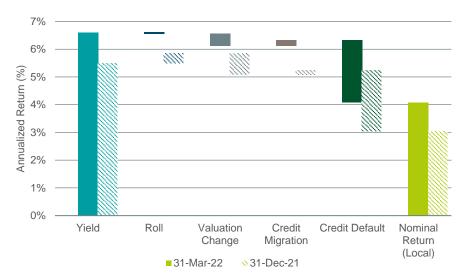
Source: DWS Investments UK Limited. Data as of 31 March 2022. Hypothetical performance is not an indicator of future actual results. Hypothetical performance results have many inherent limitations. No representation is made that actual profits or losses will be similar to those shown. Past performance, [actual or simulated], is not a reliable indication of future performance.

Corporate bond returns have similarly benefited from higher starting yield levels versus the previous quarter. Corporate credit spreads across both high yield (42bps increase) and high grade (24bps increase). Valuations commensurately look less expensive versus their history than they did to start the year. Figure 19 shows US High Yield return forecasts.

For Institutional investors and Professional investors



FIGURE 14: US HY BOND INDEX: CONTRIBUTION TO 10 YEAR FORECASTED HYPOTHETICAL ANNUALIZED RETURNS



Source: DWS Investments UK Limited. Data as of 31 March 2022. Hypothetical performance is not an indicator of future actual results. Hypothetical performance results have many inherent limitations. No representation is made that actual profits or losses will be similar to those shown. Past performance, [actual or simulated], is not a reliable indication of future performance.

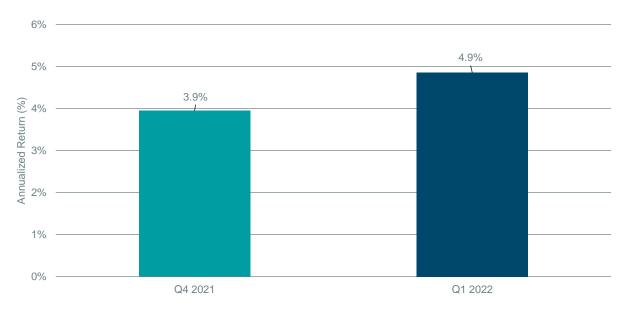
For Institutional investors and Professional investors



Conclusion

Macroeconomic turmoil throughout the first quarter of 2022 has repriced financial markets in a somewhat material way. Relative to the beginning of the year, equity and credit valuations are now less challenging relative to history, and more significantly, longer term interest rates are materially higher in both nominal and real terms. Inflationary risks remain; however, real interest rates have moved back toward, and some cases, into positive territory for the first time in years. As a result, despite shorter term market risks, our 10-year return forecasts have moved notably higher. Figure 15 shows how our 10-year return forecasts for a moderate strategic asset allocation multi-asset³ have changed over the most recent quarter.

FIGURE 15: 10-YEAR FORECASTED HYPOTHETICAL ANNUALIZED RETURNS OF MODERATE STRATEGIC ASSET



Source: DWS Investments UK Limited. Data as of 31 March 2022. Hypothetical performance is not an indicator of future actual results. Hypothetical performance results have many inherent limitations. No representation is made that actual profits or losses will be similar to those shown. Past performance, [actual or simulated], is not a reliable indication of future performance.

Any hypothetical results presented in this report may have inherent limitations. Among them are the sharp differences which may exist between hypothetical and actual results which may be achieved through investment in a particular product or strategy. Hypothetical results are generally prepared with the benefit of hindsight and typically do not account for financial risk and other factors which may adversely affect actual results of a particular product or strategy. Any forward looking statements (forecasts) are based on but not limited to assumptions, estimates, projections, opinions, models and hypothetical performance analysis. All of which are subject to change at any time, based upon economic, market and other considerations and should not be construed as a recommendation. Past performance is no guarantee of future results.

For Institutional investors and Professional investors

³ Moderate strategic asset allocation refers to a portfolio that targets annualized volatility of roughly 10%



Contributors

Bhavesh Warlyani

DWS Research House

Vivek Dinni

DWS Research House

Ajay Chaurasia

DWS Research House

Mital Parekh

DWS Research House

The authors



Francesco Curto
Global Head of Research
francesco.curto@dws.com



Jason Chen

DWS Research Institute
jason.chen@dws.com



Dirk Schlueter

DWS Research House
dirk.schlueter@dws.com

For Institutional investors and Professional investors



Appendix

Representative indices

TABLE 1: EACH ASSET CLASS IN THIS PUBLICATION IS FORECASTED AS PER ITS CORRESPONDING REPRESENTATIVE INDEX

Broad Asset Class	Asset Class	Representative Index
Equities	ACWI Equities	MSCI All Country World Index
Equities	World Equities	MSCI World
Equities	EM Equities	MSCI Emerging Markets
Equities	US Equities	MSCI USA
Equities	Europe Equities	MSCI Europe
Equities	Germany Equities	MSCI Germany
Equities	UK Equities	MSCI United Kingdom
Equities	Japan Equities	MSCI Japan
Fixed Income	US Treasuries	Bbg Barclays US Treasury
Fixed Income	Euro Agg Treasuries	Bbg Barclays Euro Treasury
Fixed Income	US Corporates	Bbg Barclays US Corporate
Fixed Income	Euro Agg Corporates	Bbg Barclays Euro Corporate
Fixed Income	US High Yield	Bbg Barclays Euro Aggregate Corporate
Fixed Income	Pan-Euro High Yield	Bbg Barclays Pan-European High Yield
Fixed Income	EM Sovereigns	Bbg Barclays Emerging Markets USD Sovereign
Alternatives	Developed REITs	S&P Developed REIT
Alternatives	US REITs	S&P USA REIT
Alternatives	Global Infrastructure	Dow Jones Brookfield Global Infrastructure
Alternatives	Americas Infrastructure	Dow Jones Brookfield Americas Infrastructure
Alternatives	Broad Commodities Futures	Bbg Commodity

Source: Bloomberg Finance L.P., DWS Investments UK Limited. As 30 September 2021.

For Institutional investors and Professional investors



IMPORTANT INFORMATION - EMEA, APAC & LATAM

This marketing communication is intended for professional clients only.

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.

© 2021 DWS International GmbH /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.

© 2021 DWS Investments UK Limited

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

© 2021 DWS Investments Hong Kong Limited

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

© 2021 DWS Investments Singapore Limited

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

© 2021 DWS Investments Australia Limited

IMPORTANT INFORMATION - U.S. AND CANADA

For institutional investors only. In the U.S. and Canada for Institutional Client and Registered Representative Use Only. Not for public viewing or distribution.

DWS is the brand name of DWS Group GmbH & Co. KGaA and its subsidiaries under which they operate their business activities. The respective legal entities offering products or services under the DWS brand are specified in the respective contracts, sales materials and other product information documents. 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 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 Group, 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 constitute an offer, recommendation or solicitation to conclude a transaction and should not be treated as giving investment advice.

The document was not produced, reviewed or edited by any research department within DWS and is not investment research. Therefore, laws and regulations relating to investment research do not apply to it. Any opinions expressed herein may differ from the opinions expressed by other legal entities of DWS or their departments including research departments.

The information contained in this document does not constitute a financial analysis but qualifies as marketing communication. This marketing communication is neither subject to all legal provisions ensuring the impartiality of financial analysis nor to any prohibition on trading prior to the publication of financial analyses.

This document 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 document. 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 in this document. Past performance is not guarantee of future results.

We have gathered the information contained in this document from sources we believe to be reliable; but we do not guarantee the accuracy, completeness or fairness of such information. All third party data are 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.

For Institutional investors and Professional investors



Investments are subject to various risks, including market fluctuations, regulatory change, possible delays in repayment and loss of income and principal invested. The value of investments can fall as well as rise and you might not get back the amount originally invested at any point in time. Furthermore, substantial fluctuations of the value of any investment are possible even over short periods of time. The terms of any investment will 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 any transaction.

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 or persons associated with it may (i) maintain a long or short position in securities referred to herein, or in related futures or options, and (ii) purchase or sell, make a market in, or engage in any other transaction involving such securities, and earn brokerage or other compensation.

DWS does not give taxation or legal advice. Prospective investors should seek advice from their own taxation agents and lawyers regarding the tax consequences on the purchase, ownership, disposal, redemption or transfer of the investments and strategies suggested by DWS. The relevant tax laws or regulations of the tax authorities may change at any time. DWS is not responsible for and has no obligation with respect to any tax implications on the investment suggested.

This document may not be reproduced or circulated without DWS written authority. The manner of circulation and distribution of this document may be restricted by law or regulation in certain countries, including the United States.

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.

Any hypothetical results presented in this report may have inherent limitations. Among them are the sharp differences which may exist between hypothetical and actual results which may be achieved through investment in a particular product or strategy. Hypothetical results are generally prepared with the benefit of hindsight and typically do not account for financial risk and other factors which may adversely affect actual results of a particular product or strategy. Any forward looking statements (forecasts) are based on but not limited to assumptions, estimates, projections, opinions, models and hypothetical performance analysis. All of which are subject to change at any time, based upon economic, market and other considerations and should not be construed as a recommendation.

No assurance can be given that any forecast, target or opinion will materialise. Past performance is not a reliable indicator of future returns.

War, terrorism, economic uncertainty, trade disputes, public health crises (including the recent pandemic spread of the novel coronavirus) and related geopolitical events could lead to increased market volatility, disruption to US and world economies and markets and may have significant adverse effects on investments.

For Investors in the United States:

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 and not the summary contained herein. DWS Group is not acting as your financial adviser or in any other fiduciary capacity with respect to this proposed transaction. The 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 the transaction and have made an independent assessment of the appropriateness of the transaction 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 availability of these products and services in certain jurisdictions may be restricted by law. You may not distribute this document, in whole or in part, without our express written permission.

For Institutional Use and Registered Rep Use Only. Not for Public Viewing or Distribution.

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 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.

© 2021 DWS Investment GmbH, Mainzer Landstraße 11-17, 60329 Frankfurt am Main, Germany.

All rights reserved.

as of 5/11/22 089910 (5/2022)

For Institutional investors and Professional investors