

# Inflation – Good, bad and ugly

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## Three tales of inflation: The Good, the Bad and the Ugly

Fuelled by the Covid recovery, monthly inflation figures have reached highs that were unheard of in the last twenty years. Combined with the extraordinary policy measures central banks have employed since the GFC, this forced central banks into a balancing act. According to the December BofA Global Fund Manager Survey, “hawkish central bank rate hikes” is the biggest tail risk for investors and market dynamics around forward shifting rate hike expectations in early 2022 confirms this.<sup>1</sup>

In this note, we remind ourselves that inflation is not always bad – in fact, inflation drives long term earnings growth.<sup>2</sup> Last year was arguably a textbook case of what could be called “good inflation”, accompanied by positive growth prospects. For 2022, investors may consider inflation becoming more of an enemy than a friend. We revisit the conventional wisdom to confirm the role of gold, global infrastructure stocks and linkers in environments with rising inflation rates. However, we also point to the importance of market sentiment to asset class performance. In our third section, we explore the hypothesis that causality between inflation risks and central bank action may be more meaningful to investor positioning than predicting the course of inflation itself. We suggest three representative scenarios, that already expressed themselves to some extent in 2021, and that could drive asset class returns against an inflationary background in the months to come. In this inflationary environment, constructive investors should not ignore carry and attractive valuations, while bearish investors should not avoid decorrelated asset classes and short duration instruments.

### 2021: A perfect storm for Linkers?

The COVID-19 recovery rally has not only been characterized by equities and higher carry fixed income, it also contributed to considerable gains in an otherwise tame asset class: Inflation Linked Bonds. With 5.4% of return in 2021 Global Inflation Linked Government Bonds continued their outperformance streak versus nominal government bonds and even outperformed Global High Yield.

**Table 1A: Inflation drivers in the spotlight**

Economic indicator	2021 year-on-year change
OECD GDP growth	+5.3%
OECD leading indicator	+1.8%
OECD consumer prices	+5.6%
US unemployment	-24.7%
Oil price	+51.4%
Freight costs	+81.3%

Source: Bloomberg, OECD Leading Indicator refers to OEOTKLAC – designed to provide early signals of turning points in business cycles; CPI refers to OEOTGABM Index (11 months to November 2021); US unemployment refers to EHUPUS Index; Freight costs refer to Shanghai Export Containerized Freight Index (SHSPSCFI Index), which reflects the spot rates of Shanghai export container transport market. Past performance is not a reliable indicator of future returns.

**Table 1B: The perfect storm for inflation linked bonds**

Index (USD Hedged)	2021 Total Return
Global Inflation-Linked Government Bonds	5.37%
Global High Yield	2.53%
Global Aggregate	-1.39%
Global Treasuries	-1.86%

Source: Bloomberg, 31/12/20 – 31/12/21, all USD hedged, refers to LF94TRUH Index, LG30TRUH Index, LEGATRUH Index, BTSYTRUH Index, respectively. Past performance is not a reliable indicator of future returns.

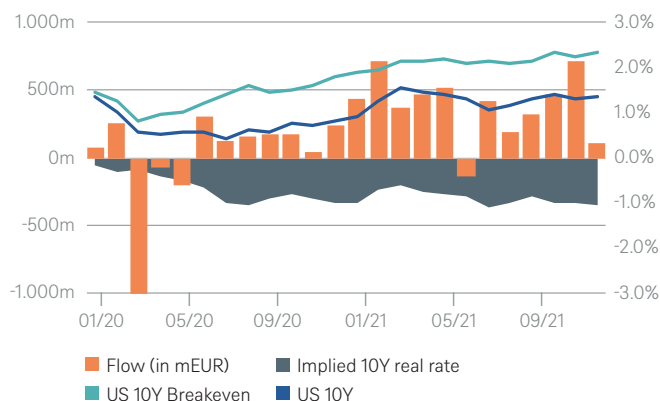
Driven by one of the steepest rises of realized inflation on records<sup>3</sup>, 2Y and 5Y breakeven rates rose significantly. Bond yields however only rose modestly on the back of the “transitory” inflation narrative. This pushed real yields lower and led to gains for inflation linked bonds (Figure 1). The perceived insufficient central bank action has contributed to record flows into the asset class, which in normal times sees mostly pensions investor demand. In total UCITS inflation linked ETFs gathered over 5bn in net new assets in 2021 alone.

<sup>1</sup> December 2021 BofA Global Fund Manager Survey “hawkish central bank rate hikes” are the biggest tail risk  
Source: Bloomberg, Fund Managers’ Rush to Cash Triggers BofA’s Stock-Buying Alert – Bloomberg-

<sup>2</sup> cf. DWS Long View January 2020.

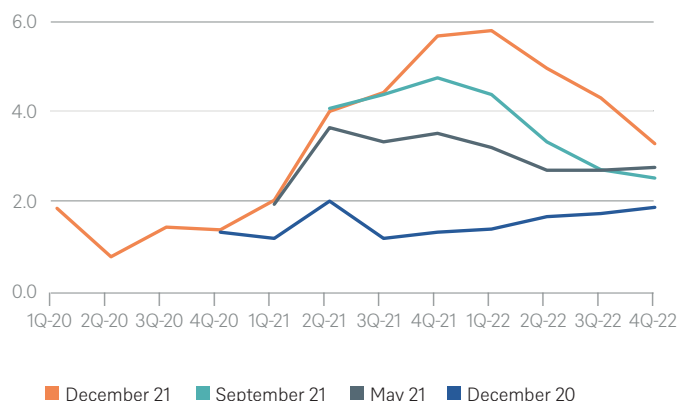
<sup>3</sup> OECD: largest CPI increase in 25 years, US: highest CPI increase since 1982; UK: 10-year high (all based on November 2021 release), Eurozone: all-time high (based on December 2021 release; first estimate by Eurostat).

**Figure 1: Investors seek inflation-protection amid dropping real yields**



Source: Bloomberg, DWS calculations, 01/2020-12/2021 based on universe of UCITS ETFs listed in the inflation-protected category. Past performance is not a reliable indicator of future returns.

**Figure 2: Not so transitory: successive OECD inflation forecasts**



Source: OECD Economic Outlook Dec 20, May 21, Sep 21, Dec 21; Private final consumption expenditure deflator growth.

Hence, one could state that “good”, i.e. pro-growth inflation prevailed in 2021. In line with the basic economic principles articulated by the Philips Curve, the rise in inflation has coincided with a swift recovery of the labour markets and overall productivity, even leading to labour shortages in certain sectors.<sup>4</sup>

In theory, the equally present supply-side and “cost-push” drivers should be destructive to global recovery and growth – the “bad” side of inflation. Commodity prices and shipping costs displayed in Table 1A are two examples. The OECD estimated that these factors alone added 1.5% to inflation in the second half of 2021.<sup>5</sup>

Looking ahead, the DWS economists expect that inflation has already reached its peak – conditional on the behaviour of oil prices. This development is also anticipated by inflation-linked bonds, as indicated by an inverted breakeven curve. The narrative of “transitory” inflation remains a base-case scenario for 2022, even after the Fed eliminated the term from its communications.

Nevertheless, market estimates remain quite conservative for medium- and long-term inflation (US 10Y breakeven trades about 75bps below 2Y breakeven)<sup>6</sup> and several demand and supply side factors could lead to further upward pressure on consumer prices, especially when they reinforce each other. Also, inflation forecasts have constantly been upgraded (Figure 2), a possible indication that more inflationary forces are at work than macroeconomic models and projections suggested. However even if higher inflation were here to stay, should it directly affect asset allocation choices?

**The macro view – do inflation evergreens exist?**

Inflation predictions alone do not suffice to guide asset allocation. A conventional approach to testing the resilience of asset classes to macroeconomics cycles and inflation can be found in a paper published by MSCI.<sup>7</sup> Based on this approach, we screened more than 20 asset classes for past performance against an inflationary background and split between two inflation regimes: Above-average realised inflation accompanied by an improving macroeconomic sentiment (“growth-oriented”) and above-average realised inflation paired with a deteriorating macro sentiment (“muted growth”).

Our results, to a large extent, confirm the conventional view on inflationary performance but at the same time confirm the critical importance of the macroeconomic backdrop when assessing performance (Table 2). In this still simplistic model, cyclical equities like Value and EM are the best performers in rising sentiments while bonds are the best performers in falling sentiment, highlighting how relative the importance of inflation has been in the past 20 years.

Still, gold, which had a mixed track record as an inflation hedge in the 80s and 90s, partly lives up to its reputation in our results. Its performance appears tied to economic conditions, with return differences remaining sizeable. A recent analysis by Morningstar on inflation periods during the last century comes to a similar conclusion.<sup>8</sup> It is therefore insufficient for us to consider Gold as an inflation evergreen.

<sup>4</sup> In December 2021 the unemployment rate fell by another 0.3 per cent to 3.9%, compared to pre-pandemic normal of 3.5%.

<sup>5</sup> OECD Economic Outlook, Volume 2021 Issue 2.

<sup>6</sup> As of mid-January 2022.

<sup>7</sup> MSCI, Index Performance in Changing Economic Environments - A Macroeconomic Framework, April 2014.

<sup>8</sup> CNBC, Gold as an inflation hedge? History suggests otherwise (cnbc.com).

It is also worthwhile to consider the performance of inflation-linked bonds. According to the analysis, their inflation-hedging capabilities do not go beyond those of nominal bonds. However, it should be noted that the 20-year period studied captures periods of disinflationary Fed policy and falling yields at the beginning of the century and unprecedented zero interest rate since the GFC but omits the inflationary 1970s with accommodative Fed policy. Hence, this analysis is best understood as an assessment of asset-class performance in times of rising inflation rather than high inflation.

Infrastructure and real estate stocks confirmed their role relative to world equities in an inflationary regime but more when combined with falling sentiment. Factors such as Value, Quality and Momentum may benefit from an inflationary environment that coincides with growth while they record losses in the absence of growth.

One must be careful though to not mistake an imperfect inflation hedge for a subpar one. While neither equities, nor inflation-linked bonds nor gold may have been the silver bullet, they each did provide some degree of protection, especially in the context of a diversified portfolio.

Table 2 (and the corresponding appendix table) below show results for environments with a rising inflation rate. In the growth-oriented scenario, inflation as well as market sentiment see an upward trend. In a scenario of muted growth, market sentiment falls. The heatmaps shown use data from January 2000 to November 2021 and display annualized average monthly returns.<sup>9</sup>

**Table 2: Asset class performance in past in inflation regimes**

	Growth-oriented rising inflation rising sentiment	Muted growth rising inflation falling sentiment
EM EQ	39.79%	-19.25%
Listed Private Equity	39.42%	-19.13%
World Value	33.16%	-13.16%
<b>World EQ</b>	<b>28.14%</b>	<b>-13.21%</b>
Global Infrastructure EQ	27.73%	-5.47%
World Quality	27.48%	-9.21%
Global Real Estate EQ	26.75%	-8.94%
US EQ	24.53%	-9.94%
USD Gold	22.08%	5.51%
World Minimum Volatility	21.87%	-3.45%
USD HY	13.80%	-1.81%
USD EM Government	13.38%	5.28%
Broad Commodities	8.25%	-6.42%
USD Corporates	7.66%	5.49%
Global Inflation-Linked Bonds – USD Hedged	6.89%	6.75%
<b>Global Government USD-Hedged</b>	<b>3.83%</b>	<b>7.27%</b>
US Government	2.93%	8.99%
JPY Government	-4.08%	4.66%

Source: Bloomberg, DWS calculations, using monthly data from 01/2000–11/2021 where available, performance in USD.

As we go to press, inflation is at its highest level in almost forty years, which combined with the prolonged low interest rate environment as well as the impact of the COVID-19 pandemic create an unprecedented market environment, where historical macro analysis may only provide one side of the story. In the following section, we propose to further increase granularity in a forward-looking analysis that recognizes the central role of central bank guidance and policy.

### The central bank view: how good inflation can turn bad or even ugly

The first part of this paper went about how 2021 saw “good” inflation for markets overall, while already bearing more bearish aspects of “bad” inflation such as supply disruption. But focusing on central bank policy, there is also a third shade of inflation – “ugly” inflation. This is the tail risk of prolonged departures from price stability and unanchored inflation expectations, that go beyond allowable “temporary overshooting”. The rude awakening of central banks that follows could have significant implications for central bank policy and financial market performance.

Having identified these three shades of inflation – “good”, “bad” and “ugly” – it is important to highlight that all three depend on the driving role of central banks. After all, already the 2021 DWS CIO Inflation Special concluded that it is central bank’s policy that decides to what extent inflationary pressure translates into inflation.<sup>10</sup> In the absence of a ‘one size fits all inflation’ solution, stress-testing asset class resilience to such inflation scenarios can be a helpful tool to complement historical analysis, especially since they allow deliberate “off-base case” evaluations.

<sup>9</sup> Calculation of inflation regimes follows methodology put forward in the MSCI Research Insight Paper Index performance in Changing Economic Environments (2014). Periods of rising or falling inflation defined by the difference of 3-month and 36-month moving averages OECD Consumer Price Index (CPI). Periods of rising or falling growth qualitatively defined by the month-on-month change of the OECD Composite Leading Indicator (CLI).

<sup>10</sup> DWS, The return of inflation? (dws.com), March 2021

**Table 3: The good, the bad and the ugly: Three inflation scenarios, monetary response, and market implications**

	Good inflation	Bad inflation	Ugly inflation
Macroeconomic backdrop	Demand-pull inflation fuelled by GDP growth & lower unemployment rates but supply constraints soften	Supply-driven stagflation, fuelled by commodity prices & continued COVID supply disruptions	“Intolerable” inflation driven by e.g. wage-price spiral combined with stressed public finances
Monetary response	→ “Transitory” narrative lives on; rate path remains shallow → Continued guidance of progressive rate rises	→ Growth fears are given preference over inflation control → Stop to progressive guidance of rate rises	→ Unanchored inflation expectations make policy response inevitable → Hawkish shift to stem inflation
Market implications	– Upward shift of yields as rate hikes materialise, inflation expectations move by same magnitude – Productivity boom, leading to IG spreads moving back to Summer 2021 levels	– Continued real rate compression – Dampened growth outlook affects long term rates while inflation expectations continue to rise in short and long run – Corporate bond spreads widen	– Rates rise sharply, in a bear flattening, long run inflation expectation fall – Growth expectations are limited by supply side pressure – Bond spreads widen due to uncertainty

Source: DWS calculations, please see appendix for a detailed description of scenario variables and shocks

### Scenario review

You will find a comprehensive summary of the stress testing approaches employed in Appendix 2.

#### Good inflation: Inflation in a constructive growth environment and continued central bank complacency

As inflation maintains the bullish face it showed in 2021, equities are expected to be clear winners. For bonds, gains from tighter spreads cannot offset higher rates and continued negative real yields raise the opportunity costs of bond investing. Inflation-linked bonds can partly defy this trend as the inflation adjustment offsets some losses. Similarly, higher carry and lower duration fixed income, such as USD High Yield or CDS-based credit exposure remains a feasible medium-term positioning to protect from continued high inflation.

#### Bad inflation: Moderate value destruction as inflation and growth move in opposite directions

Inflation in this scenario acts as a destructive factor and prompts more accommodative policy. Going against conventional wisdom, safe haven assets provide inflation protection in this scenario. Assuming unchanged curve steepness (still a reasonable assumption in the face of uncertainty) roll-down effects can also be a significant contributor to overall returns.<sup>11</sup> Inflation linkers in particular benefit twofold from falling rates and rising inflation.

#### Ugly inflation: A rude central bank awakening sends markets into a downward spiral

In this scenario, central banks choose price stability over economic growth and hike even in times of a clouded economic outlook. As the name suggests, ugly inflation is a worst-case scenario for financial markets. Equity markets suffer from bear market expectations while sovereign as well as corporate bonds are hit by higher rates and spreads. On a relative basis, short-maturity DM government bonds as well as increasingly decorrelated Chinese government bonds are the best bet.

Compared to the results of the historical analysis shown above, some of the results differ markedly. The biggest difference, beyond granularity of the scenarios, is the deliberate choice to put central bank responses front and center, which overcomes the limitations of a traditional business cycle approach. Finally, the attentive reader will notice that the historical analysis is based on historical, realised CPI figures, while we discuss forward-looking breakeven inflation yields to proxy inflation expectations for the stress tests. These two variables do not necessarily move in unison: Over the last twenty years, the two-year U.S. breakeven inflation yields and month-on-month changes in U.S. CPI (seasonally adjusted) exhibited a correlation of 0.45.<sup>12</sup>

**Table 4: Positioning for different inflationary scenarios**

	Good inflation	Bad inflation	Ugly inflation
Driving forces	Companies’ earnings growth	COVID-19 winners, Carry and Roll down	Cash and De-correlation
Potential opportunities	Europe, Value and Financials, Inflation linked bonds, lower duration, higher credit risk assets such as High Yield	IT, consumer disc., Quality Inflation linked bonds, US, Australian Government bonds	Min Vol, Short duration bonds, JPY and CNY bonds
At risk	IT, “high duration” Equities and nominal bonds	EM stocks, financials	Equities; esp. Momentum, EM

Source: DWS International GmbH, January 2021, 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.

<sup>11</sup> Under the assumption of unchanged yield curve curvature World Government Bonds for example earn about 33bps of roll-down return, which is an extra 50% return to their YTM of about 65bps and offers additional buffer if rates rise.

<sup>12</sup> Source: Bloomberg. Bloomberg tickers: USGGBE02 Index, CPICNG Index

**Table 5: Key inflation performance highlights**

	Good inflation	Bad inflation	Ugly inflation		Good inflation	Bad inflation	Ugly inflation
US Government Short Duration	-0.9%	0.0%	-1.6%	Global Infrastructure	4.9%	-1.3%	-17.3%
US Government	-3.2%	3.4%	-3.5%	Emerging Markets EQ	5.4%	-0.1%	-20.1%
Global Government – USD Hedged	-2.2%	2.6%	-2.3%	World Sector Neutral Quality	6.0%	0.6%	-18.8%
Global Inflation-Linked Bonds – USD Hedged	-0.6%	7.2%	-12.7%	World Information Technology	6.3%	1.2%	-18.2%
USD Corporates	-3.2%	2.7%	-9.0%	World EQ	6.5%	0.2%	-19.0%
USD High Yield	0.0%	-0.6%	-5.6%	US EQ	6.6%	-0.3%	-17.7%
Chinese Government 1-10Y	-0.4%	0.0%	-1.5%	Europe EQ	6.8%	1.6%	-22.8%
EM Government	0.2%	2.4%	-11.0%	World Enhanced Value	7.1%	-0.9%	-18.6%
World Utilities	2.4%	-0.9%	-17.5%	US EQ Equal Weight	7.2%	-1.5%	-18.2%
World Consumer Staples	2.8%	0.2%	-14.3%	World Momentum	7.5%	1.6%	-22.0%
World Minimum Volatility	3.7%	0.7%	-16.2%	World Financials	9.3%	-2.4%	-19.6%
				World Energy	12.7%	1.3%	-25.7%

Source: DWS calculations, Aladdin BRS, as of 31/12/2021, all returns in USD. 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.

## Inflation in 2022: Friend or foe?

With hindsight, inflation has been a symptom of recovery in 2021. In 2022, investors may worry that it causes market demise. Equity markets with high valuations (and higher susceptibility to future discount rates) could be exposed, especially in sectors where healthy margins may not be able to offset some of these effects. The quality factor or the consumer staples sector, for example, may offer an appealing combination of low leverage, robust cash generation and the necessary pricing power to pass on inflation.

For rates and credit, inflation remains a natural risk as the real value of income streams is most eroded. Our findings align with the text-book answer: investors may offset these effects by reducing bond exposure, looking for shorter duration and switching into inflation-protected bonds. Likewise, considering roll-down returns becomes increasingly relevant with real rates reaching new lows.

While linkers remain preferable to nominal government bonds across inflation scenarios, readers should be reminded that linkers are most responsive to breakeven inflation (i.e. market consensus of forward inflation rates), which highly depends on central bank policy. Moreover, their higher duration (vs. nominal government bond indices) provides an additional feedback link to the path of nominal rates, a trait often underestimated by investors.

Historical analysis needs, more than ever, to be complemented by forward looking scenario analysis. Whether traditional inflation hedges play out will depend on the economic trajectory and perhaps even more so on monetary policy. A complacent stance or even mildly accommodative actions could remain supportive for the winners of 2021. A stronger reaction, especially in the absence of supportive economic fundamentals, could create an environment of value destruction where only deleveraging and clear risk diversification could help.

## Related Readings

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<sup>11</sup> Under the assumption of unchanged yield curve curvature World Government Bonds for example earn about 33bps of roll-down return, which is an extra 50% return to their YTM of about 65bps and offers additional buffer if rates rise.

<sup>12</sup> Source: Bloomberg. Bloomberg tickers: USGGBE02 Index, CPICING Index

## Appendix 1:

The displayed results follow the methodology proposed by MSCI. The definition of environments is based on the OECD Composite Leading Indicator (CLI), which mirrors the general economic conditions, and the Consumer Price Index (CPI) to measure price developments. Indicators are transformed (CLI: month-on-month change, CPI: 3-month moving average vs 3-year moving average, where 3M>3Y MA indicates rising inflation) to determine the following environments.

		CPI	
		Rising	Falling
CLI	Rising	Inflation	Reflation
	Falling	Stagflation	Recession

## Detailed historical analysis (based on monthly data, annualized)

	Growth-oriented rising inflation rising sentiment	Muted growth rising inflation falling sentiment		Growth-oriented rising inflation rising sentiment	Muted growth rising inflation falling sentiment
MSCI China	44.01%	-21.28%	FTSE EM USD Gov and Gov-Rel	13.38%	5.28%
MSCI Emerging Markets	39.79%	-19.25%	Bloomberg EM USD Corporate	12.33%	0.11%
PLX Listed Private EQ	39.42%	-19.13%	Bloomberg World Gov. Inflation-Linked	9.78%	3.03%
MSCI EMU	36.28%	-17.52%	Bloomberg Commodity	8.25%	-6.42%
MSCI World Enhanced Value	33.16%	-13.16%	Global Convertibles	8.24%	-11.63%
MSCI World Momentum	29.47%	-9.74%	Bloomberg US Corporate	7.66%	5.49%
MSCI Europe ex EMU	28.98%	-15.92%	Bloomberg World Gov. Inflation- Linked – USD Hedged	6.89%	6.75%
MSCI World Real Estate	28.36%	-8.94%	Bloomberg Euro Corporate Bond	5.35%	3.16%
<b>MSCI World</b>	<b>28.14%</b>	<b>-13.21%</b>	iBoxx Euro Sovereigns Eurozone	4.33%	6.10%
S&P Global Infrastructure	27.73%	-5.47%	FTSE World Government DM	4.11%	4.70%
MSCI World Sector Neutral Quality	27.48%	-9.21%	<b>FTSE World Government DM – USD Hedged</b>	<b>3.83%</b>	<b>7.27%</b>
MSCI Japan	25.65%	-19.62%	iBoxx US Treasuries	2.93%	8.99%
MSCI USA	24.53%	-9.94%	FTSE Japanese Government Bond Index	-4.08%	4.66%
Gold (in USD)	22.08%	5.51%			
MSCI World Minimum Volatility	21.87%	-3.45%			
Bloomberg European High Yield	16.90%	-10.05%			
Bloomberg EM Local Government	15.01%	-4.93%			
Bloomberg US High Yield Very Liquid	13.80%	-1.81%			

Source: Bloomberg, DWS calculations, using monthly data from 01/2000–11/2021 where available, performance in USD except for EUR fixed income indices (performance in EUR).

## Appendix 2:

Inputs to the model used in this analysis are as follows: (i) Changes in the U.S. yield curve, proxied by two-year and ten-year yields, (ii) changes in inflation expectations, proxied by two-year and ten-year breakeven inflation yields and (iii) changes in economic sentiment, proxied by IG corporate bond spreads.

Using the below shocks the analysis employs an established risk model to propagate effects through the asset classes. This includes interpolation of other rates, currency effects and the impact on other bond spreads as well as sectors. Effects are then reconstituted to assess overall performance at the index level.

### Overview of stress test shocks

	Good inflation	Bad inflation	Ugly inflation
US Treasury 2Y	+50bps	+0bps	+100bps
US Treasury 10Y	+50bps	-50bps	+50bps
US Breakeven 2Y	+50bps	+50bps	+0bps
US Breakeven 10Y	+50bps	+50bps	-100bps
US Investment Grade spreads	-10bps	+25bps	+50bps

Source: DWS, Aladdin BRS, as of 31/12/2021, all returns in USD. Forecasts are based on assumptions, estimates, views and hypothetical models or analyses, which might prove inaccurate or incorrect.

### Detailed stress test analysis (all returns in USD)

	Good inflation	Bad inflation	Ugly inflation		Good inflation	Bad inflation	Ugly inflation
EUR / USD	-2.8%	-0.5%	-8.0%	Bloomberg US High Yield Very Liquid	0.0%	-0.6%	-5.6%
JPY / USD	-5.3%	-0.2%	-4.4%	FTSE EM USD Gov and Gov-Rel	0.2%	2.4%	-11.0%
FTSE Japanese Government Bond Index	-5.4%	1.1%	-5.6%	MSCI World Utilities	2.4%	-0.9%	-17.5%
FTSE World Government DM – Unhedged	-3.4%	2.4%	-6.2%	MSCI World Consumer Staples	2.8%	0.2%	-14.3%
Bloomberg USD Corporate	-3.2%	2.7%	-9.0%	MSCI World Health Care	3.3%	-0.3%	-15.6%
iBoxx US Treasuries	-3.2%	3.4%	-3.5%	MSCI World Minimum Volatility	3.7%	0.7%	-16.2%
iBoxx Euro Sovereigns Eurozone	-3.0%	1.5%	-8.6%	S&P Global Infrastructure	4.9%	-1.3%	-17.3%
<b>FTSE World Government DM – USD Hedged</b>	<b>-2.2%</b>	<b>2.6%</b>	<b>-2.3%</b>	MSCI Emerging Markets	5.4%	-0.1%	-20.1%
Bloomberg Euro Corporate Bond	-2.0%	-0.2%	-9.0%	MSCI World Sector Neutral Quality	6.0%	0.6%	-18.8%
iBoxx EUR Corporates Yield Plus	-1.8%	-0.3%	-9.4%	MSCI World Information Technology	6.3%	1.2%	-18.2%
Gold (in USD)	-1.7%	13.5%	-21.0%	<b>MSCI World</b>	<b>6.5%</b>	<b>0.2%</b>	<b>-19.0%</b>
Bloomberg MSCI EUR IG ESG 0-5	-1.5%	-0.6%	-8.0%	MSCI USA	6.6%	-0.3%	-17.7%
FTSE Australian Government Bond Index	-1.2%	3.2%	-10.2%	MSCI World Communication Services	6.7%	1.4%	-19.5%
iBoxx US Treasuries 1-3	-0.9%	0.0%	-1.6%	MSCI Europe	6.8%	1.6%	-22.8%
iBoxx MSCI ESG USD EM Sovereigns Quality Weighted	-0.7%	3.2%	-10.2%	MSCI World Enhanced Value	7.1%	-0.9%	-18.6%
Bloomberg World Gov. Inflation-Linked – USD Hedged	-0.6%	7.2%	-12.7%	S&P 500 Equal Weight	7.2%	-1.5%	-18.2%
FTSE Chinese Government & PB 1-10Y	-0.4%	0.0%	-1.5%	MSCI World Momentum Index	7.5%	1.6%	-22.0%
Bloomberg World Gov. Inflation-Linked	-0.4%	7.6%	-8.5%	MSCI World Consumer Discretionary	8.2%	1.6%	-22.4%
iBoxx EUR Liquid High Yield	-0.4%	-1.2%	-10.7%	MSCI Europe Enhanced Value	8.3%	0.6%	-22.6%
				MSCI World Financials	9.3%	-2.4%	-19.6%
				MSCI World Energy	12.7%	1.3%	-25.7%

Source: DWS, Aladdin BRS, as of 31/12/2021, all returns in USD. Forecasts are based on assumptions, estimates, views and hypothetical models or analyses, which might prove inaccurate or incorrect.



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