Long View Q2: the impact of rates on returns

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_ Return forecasts declined further in Q2, with global equities forecasted to return 4.3% annually over the next decade
_ The historical link between interest rates and equity returns is noisy, as increasing rates have historically indicated a stronger macroeconomic outlook
_ Equity earnings multiples have historically had a weak positive relationship with interest rates. However, in more recent years, high valuations have coincided with low levels on rates and even negative levels on real rates.
_ Inflation has an inverse empirical relationship with equity valuations, although high realized inflation levels were predominantly during the 1970s stagflationary period

1 / Summary

Within this report, we present the DWS long-term capital market assumptions as of the end of June 2021 for major asset classes.

As the world has continued to rebound strongly from the COVID-19 crisis, global risk markets have, unsurprisingly, reacted very positively to the strong fundamental outlook. By our estimations, global growth is on pace for 5.8% in 2021 and 5.2% in 2022, and we expect inflation to run at 2.8% for this year and 2.5% in 2022. Perhaps more surprisingly, after an initial move higher in the first quarter of the year, treasury yields have rapidly reversed course, with the 10 year treasury yield ending the second quarter below 1.5%. 10 year Treasury Inflation-Index breakeven levels ("TIPS Breakevens") have rallied modestly from 2.50% at the end of March, but more drastically, the 10 year real interest rate have declined further into negative territory.

This has naturally raised questions about the normalization of interest rates through interest rate hikes, and perhaps more importantly, through the eventual tapering of asset purchases by global central banks. The Federal Reserve's ("Fed") messaging around its plans to taper asset purchases has reduced the prospect of market volatility but has also brought to the minds of investors the question of whether real interest rates can remain persistently negative over the medium to longer term. More importantly, the question has arisen as to the implications of a persistently negative interest rate on long term financial asset returns, a topic we will explore in more detail throughout this piece.

Absent this structural negative real interest rate outlook, the strong performance in global financial markets in Q2 has reduced our base case 10 year return outlook for most asset classes. Over the past quarter, global equity markets have returned 7.1% but now present marginally more challenging valuations relative to their own history. As previously noted, the greater surprise has been the further compression in government bond yields, with the 10 year treasury yield falling from above 1.7% to below 1.5% in the second quarter.

Our models now estimate a forecasted return of 4.3% from the MSCI All Country World Index ("ACWI") annually for the next decade, less than half of what investors have received over the past decade[1]. At an aggregate level, we estimate the forecasted rate of return on a diversified portfolio of assets is now 3.8% down 40 bps from the level at the beginning of the year.

[1] MSCI ACWI generated an annualized 11.24% total return from 6/30/2011 to 6/30/2021

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FIGURE 1. DWS TEN YEARS ANNUAL FORECASTED RETURNS

	As of 30 Jun. 2021	∆ since Mar 2021
S&P 500	4.7%	-0.6%
MSCI Europe	3.8%	-0.4%
MSCI UK	5.7%	-0.6%
MSCI Germany	3.5%	-0.1%
MSCI Japan	3.1%	0.5%
MSCI World	4.3%	-0.5%
MSCI EM	4.4%	-0.4%
MSCI ACWI	4.3%	-0.5%
US Treasuries	1.3%	-0.3%
Euro Agg Treasuries	-0.3%	0.0%
US Corporates	1.6%	-0.2%
Euro Agg Corporates	0.2%	0.0%
US High Yield	2.2%	-0.6%
Pan-Euro High Yield	1.4%	-0.2%
EM Sovereigns	3.9%	-0.4%
Developed REITs	4.3%	-0.3%
US REITs	4.9%	-0.5%
Global Infrastructure	5.1%	-0.3%
Americas Infrastructure	5.3%	-0.5%
Broad Commodities Futures	0.1%	-0.6%

Source: DWS Investments UK Limited. Forecasts from of 30 June 2021 to 30 June 2031. 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.

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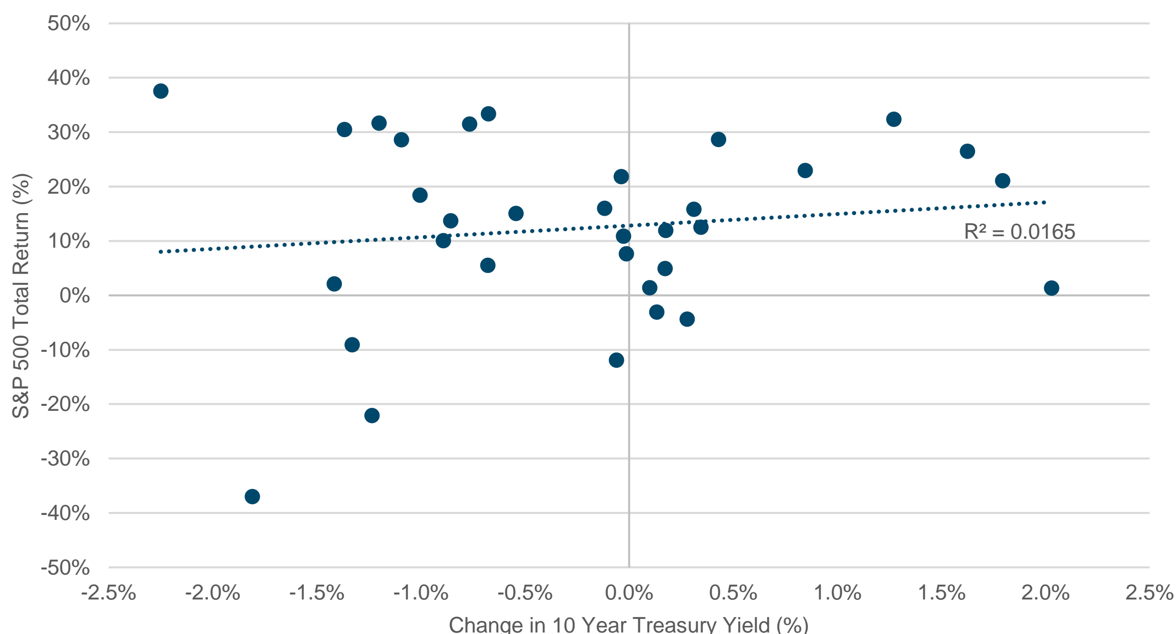
2 / Interest rates and equity returns

1. Examining the empirical relationship between interest rates and returns

Even as the global economy continues down a strong reflationary path, expectations around rising interest rates have dissipated considerably. While our views around inflationary risks remain muted, particularly in the medium term, the long term impact of sustained lower interest rates on asset class returns remains at the forefront of investor considerations. As valuations remain elevated versus historical levels, questions have naturally arisen as to the link between elevated valuations and sustained low levels on interest rates, and equally importantly, materially negative levels on real interest rates across developed economies.

Global central banks, and the Federal Reserve in particular, have maintained consistent messaging around the timeline for interest rate hikes and asset purchase tapering, which has supported these historical lower interest rate levels. Even as inflationary risks have continued, a topic we discussed in our Q1 update (link), messaging around the reduction of the size of central bank balance sheets indicates no real sense of urgency around interest rate normalization. Broken down by calendar year, there has been little to no statistical relationship between the change in interest rates and the returns on the index. Perhaps unsurprisingly but nonetheless noteworthy is that the most severe negative returning calendar yields coincided with significant rallies in the 10 year yield.

FIGURE 2: S&P TOTAL RETURN VERSUS CHANGE IN 10 YEAR TREASURY YIELD BY CALENDAR YEAR



Source: DWS Investments UK Limited, Bloomberg Finance L.P. Data from 4 January 1988 to 31 December 2020. Past performance, [actual or simulated], is not a reliable indication of future performance.

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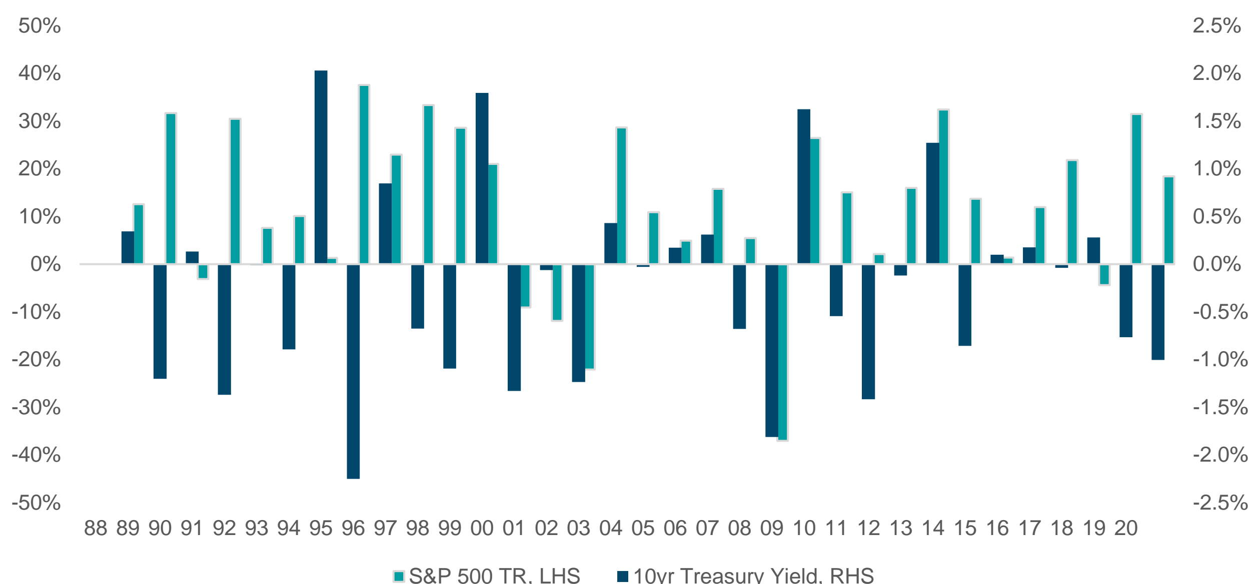
This is a reflection of interest rates often being indicative of general macroeconomic health. Within this observation window, the worst years for US equity returns were during the global financial crisis (2008) and during the tech bubble (2000-2002). Conversely, very strong calendar yield returns that at times coincided with sizeable increases in interest rates. This periods were characterized by either periods of very strong economic growth momentum (1995, 2013) or a strong rebound in both the economy and financial assets (2003, 2009). More recently, during the 2013 taper tantrum, risk assets, particularly emerging markets debt and equity markets, experienced significant volatility during a sharp period of increasing government bond yields (and real yields). However, the subsequent 6 month returns were generally very strong for all risk assets, and in particular, the US equity and credit markets.

Figure 3 shows the breakdown by calendar year of the above scatterplot. The seeming lack of continuity in the directionality of interest rates further cautions against inferring too much from the short term (and even annual) changes in nominal rates.

FIGURE 3: S&P TOTAL RETURN VERSUS CHANGE IN 10 YEAR TREASURY YIELD BY CALENDAR YEAR



Source: DWS Investments UK Limited, Bloomberg Finance L.P. Data from 4 January 1988 to 31 December 2020. Past performance, [actual or simulated], is not a reliable indication of future performance.

2. Examining rates and equity valuations

While the empirical relationship between returns and interest rates is muddied by a multitude of factors driving equity returns, a perhaps more intuitive relationship can be identified between interest rates and individual components of equity returns. Perhaps more obviously, interest rates and equity earnings multiples should be intrinsically linked by virtue of an equity risk premium ("ERP") model. Said otherwise, holding ERP constant, a lower neutral level on interest rates implies a lower nominal earnings yield and therefore a higher Price/Equity ratio.

Utilizing a free-cash-flow ("FCF") approach, the same intuitive can be used to justify higher levels of valuations. Future FCF of corporations can be discounted to a net present value a la a discount rate or interest rate. As our CROCI colleagues illustrate in the Q2 report: ***CROCI – the impact of rising rates and inflation on equities*[2]**, we can estimate the weighted average "duration", or time when cash flows are received across the different equity sectors. Figure 4 shows our estimation of free cash flow duration for US sectors.

[2] https://www.dws.com/insights/global-research-institute/the-impact-of-rising-rates-and-inflation-on-equities/

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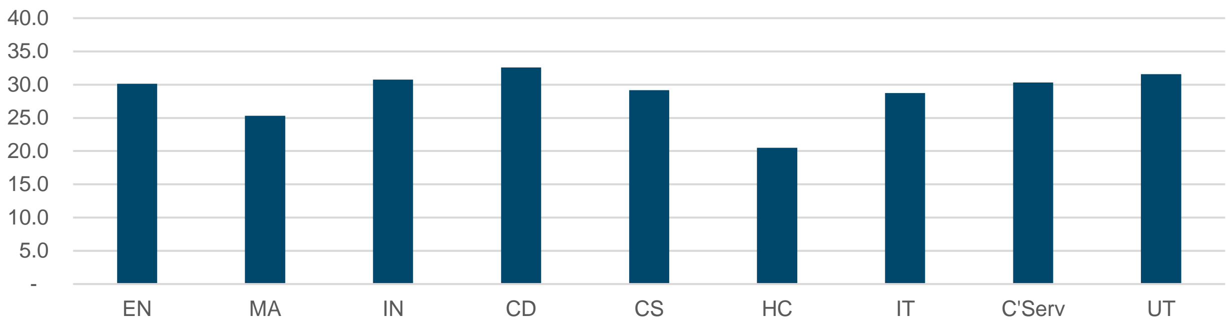
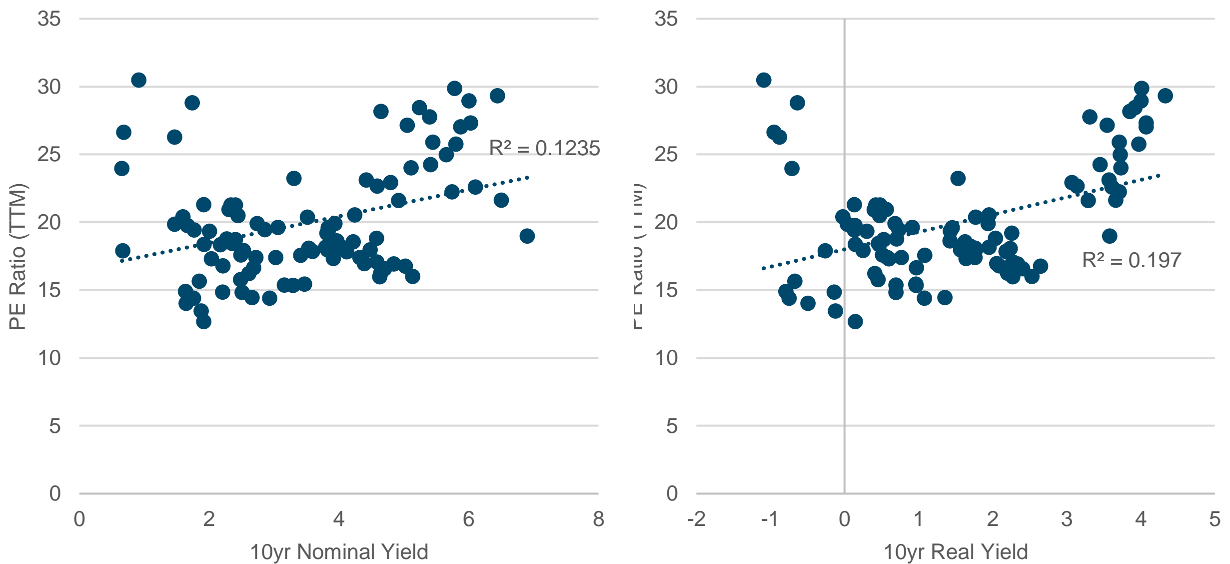
FIGURE 4: EQUITY DURATION BY SECTOR



Source: DWS CROCI, Data as available on 23 July, 2021. Past performance, [actual or simulated], is not a reliable indication of future performance.

In spite of these intuitive relationships between interest rates and equity valuations, the empirical evidence fails to draw a strong link between the two measures. Figure 5 illustrates this relationship empirically, highlighting the link between of equity earnings multiples to absolute levels of both the nominal 10 year yield and the real 10 year yield. From this comparison, we can see a weak but positive relationship between interest rates and equity multiples, with there being a modestly stronger statistical relationship between earnings multiples and real interest rates. This is a reasonable outcome if we draw a link between interest rates and macroeconomic health, with the latter clearly resulting in stronger corporate revenue and earnings and thus justifying higher multiples.

FIGURE 5: S&P 500 PRICE-TO-EARNINGS RATIOS VERSUS 10 YEAR REAL AND NOMINAL TREASURY YIELDS



Source: DWS Investments UK Limited, Bloomberg Finance L.P. Data from 31 March 1997 to 30 June 2021.

Interestingly, the seemingly most distorted datapoints all occurred in recent history. As markets have entertained the prospect of an indefinite low interest rate environment, the discount rate argument for higher valuations has become increasingly popular among investors. While the arithmetic is within reason, this runs at odds with history. Time will tell whether low interest rates and a strong macroeconomic environment (and correspondingly healthy valuations) can coexistent over a more strategic timeline.

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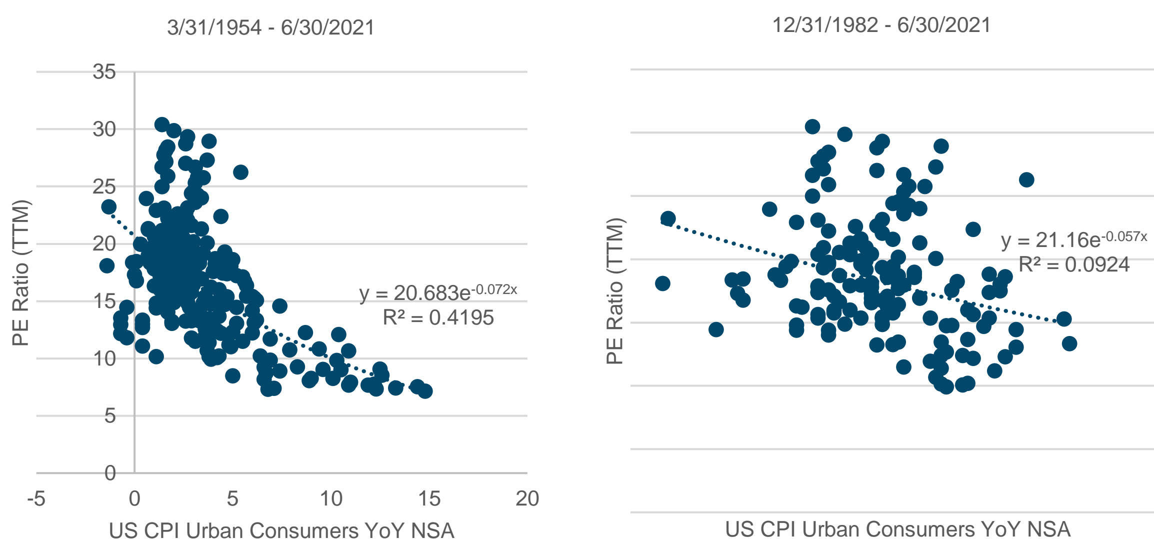
3. Inflation and equity valuations

Empirical evidence implies a somewhat stronger link between realized inflation, as measured by CPI, and equity earnings multiples, particularly at higher levels of realized inflation. As shown in Figure 6, the lowest level of earnings multiples coincided with high levels of CPI. As with our comparison of earnings multiples to interest rates, it's important to differentiate the economic growth environment that coincided with these periods. In particular, the majority of the high inflation and correspondingly low equity valuation periods occurred during the 1970s stagflationary regime and into the early 1980s. When regressing PE ratios against realized inflation in the subsequent period to present, the relationship is far less clear.

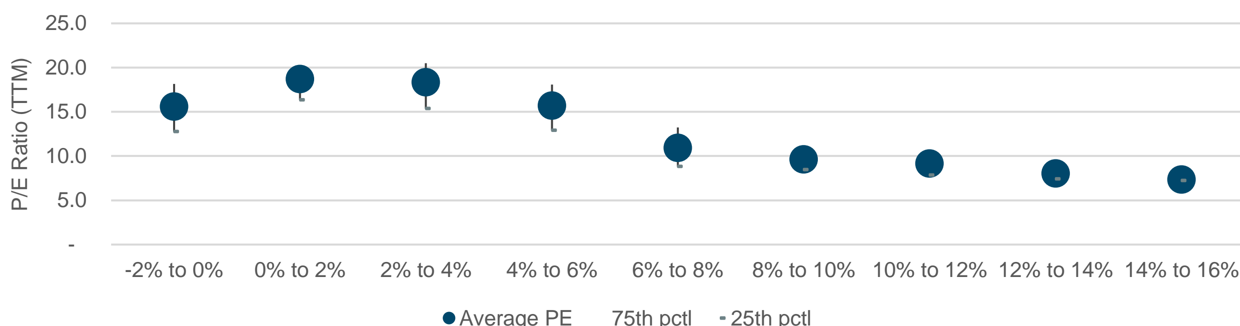
FIGURE 6: S&P 500 PRICE-TO-EARNINGS RATIO VERSUS US CPI URBAN CONSUMERS YOY (%)



Source: DWS Investments UK Limited, Bloomberg Finance L.P. Data from 31 March 1954 to 30 June 2021.

Plotting this relationship into inflation ranges (see Figure 7), shows the less well-defined relationship between the two variables at more moderate (sub-6%) levels of CPI. Absent significantly higher levels on realized inflation and considering the complexities of the relationship between macroeconomic growth and inflation, making strong determinations about equity earnings multiple levels is again challenging.

FIGURE 7: S&P 500 PRICE-TO-EARNINGS RATIO IN DIFFERENT 10 YEAR TREASURY YIELD RANGES



Source: DWS Investments UK Limited, Bloomberg Finance L.P. Data from 31 March 1954 to 30 June 2021.

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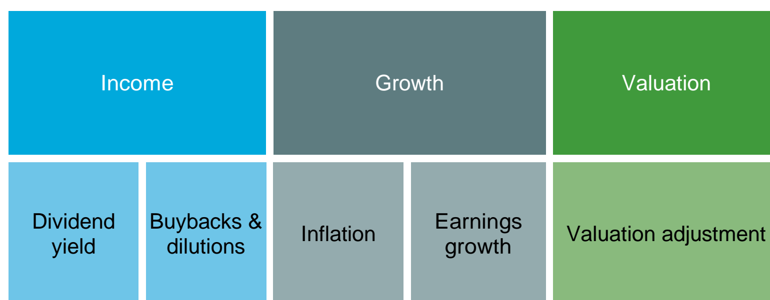
3 / Long View Forecasts

1. Equity Forecasts

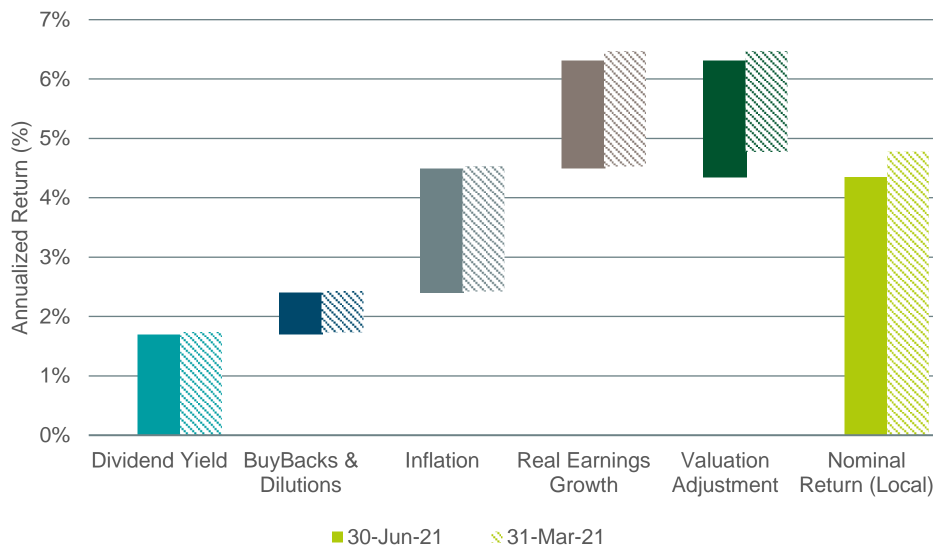
For our equity return forecasts, Figure 9 illustrates the changes to our return pillars for 10-year MSCI All Country World local currency return forecast. The return has declined to 4.3% from the 4.8% level at the end of March. The decline in nominal return forecasts is almost entirely driven by more challenging valuations. Valuation contribution to return declined from an already challenging -1.7% per annum to now -2.0% per anannum after the rally in Q2.

FIGURE 8: PILLAR DECOMPOSITION FOR EQUITIES



Source: DWS Investments UK Limited.

FIGURE 9: MSCI ALL COUNTRY WORLD: CONTRIBUTION TO 10 YEAR FORECASTED HYPOTHETICAL ANNUALIZED RETURNS



Source: DWS Investments UK Limited. Data as of 30 June 2021. 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.

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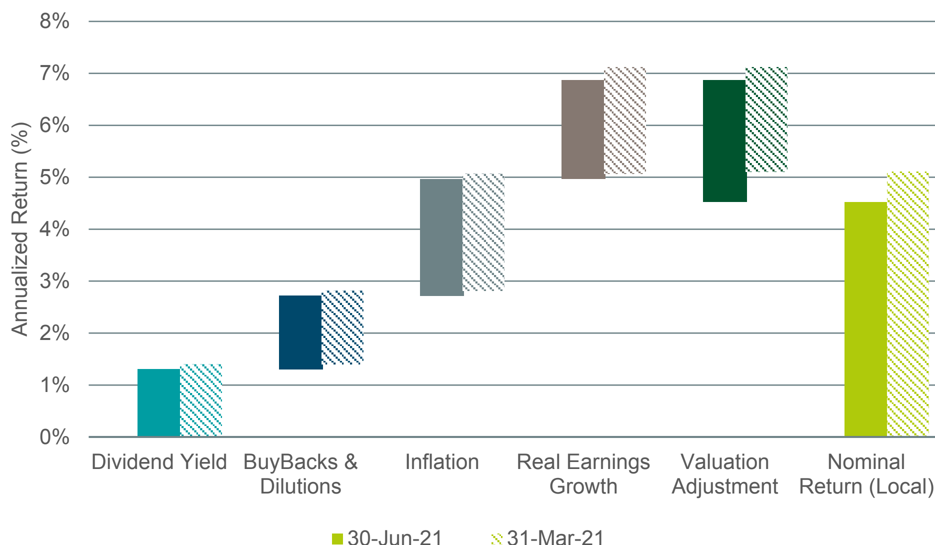
US equity markets face a similar hurdle, as the valuation adjustment has declined from -2.0% to -2.3% over the recent quarter. Modest negative adjustments also applied to both real earnings growth (-15bps) as well as dividend yields (-10bps) from the previous quarter, in part due to higher equity prices following strong price performance in Q2.

FIGURE 10: S&P 500: CONTRIBUTION TO 10 YEAR FORECASTED HYPOTHETICAL ANNUALIZED RETURNS



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2. Liquid Real Assets Forecasts

Liquid Real Assets Forecasts

While REITs and Infrastructure both leverage very similar pillars to equities (see Figure 11), returns are derived largely from income via dividend distributions as shown in Figure 12 and Figure 13.

FIGURE 11: PILLAR DECOMPOSITION FOR REITS AND INFRASTRUCTURE

Asset Class	Income	Growth		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.

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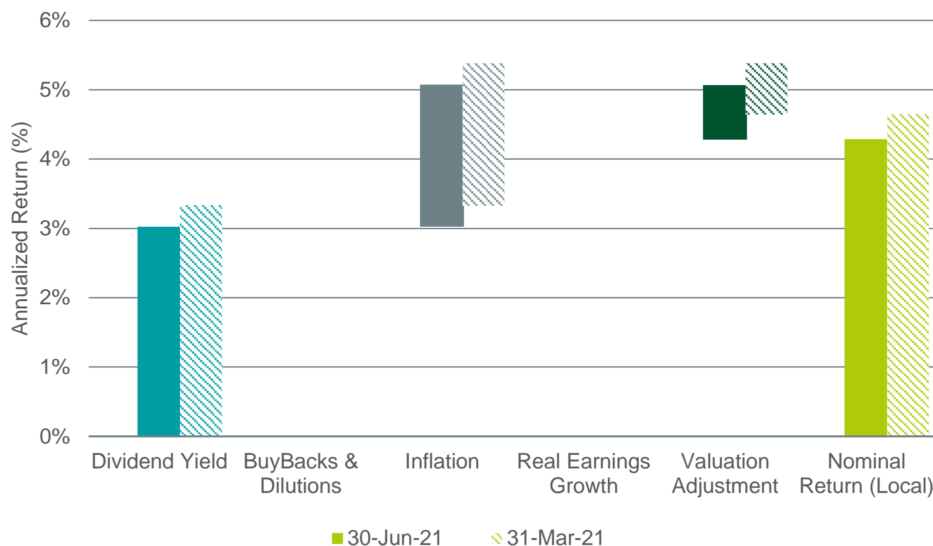
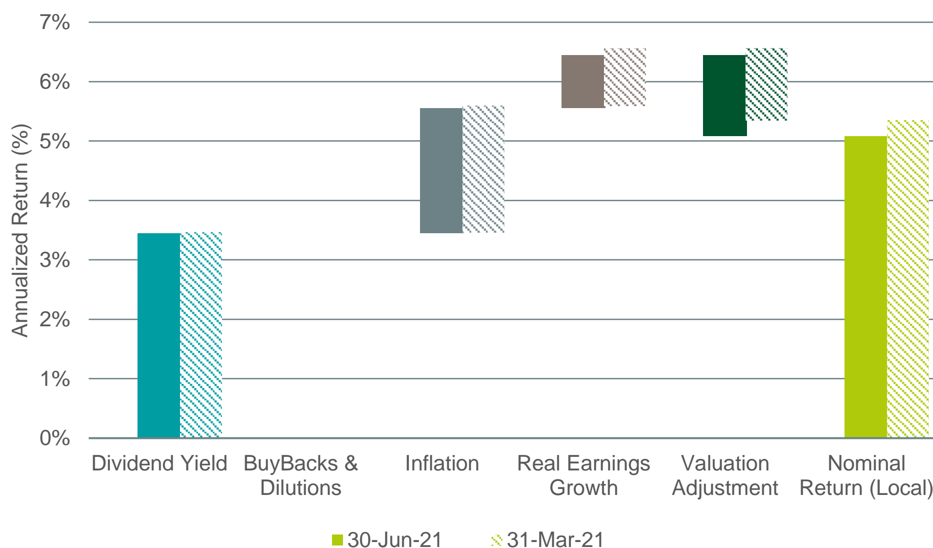
Across liquid real assets, our return forecasts indicate a somewhat more constructive outlook. While valuations remain stretched in traditional equities, REIT dividend yields are less compressed relative to longer term averages. This provides advantageous levels on income contribution but also means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

FIGURE 12: GLOBAL REITS: CONTRIBUTION TO 10 YEAR FORECASTED HYPOTHETICAL ANNUALIZED RETURNS



Source: DWS Investments UK Limited. Data as of 30 June 2021. 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 13: GLOBAL INFRASTRUCTURE: CONTRIBUTION TO 10 YEAR FORECASTED HYPOTHETICAL ANNUALIZED RETURNS



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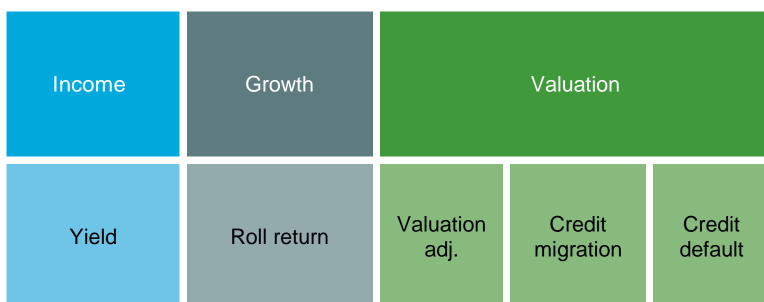
3. Fixed Income Forecasts

Fixed Income Forecasts

The fundamental return outlook across fixed income looks challenged for the next 10 years. The combination of low starting yields, increasing government deficits, and persistent fundamental risk across corporates detract from the pillars of return contribution we utilize in Figure 14.

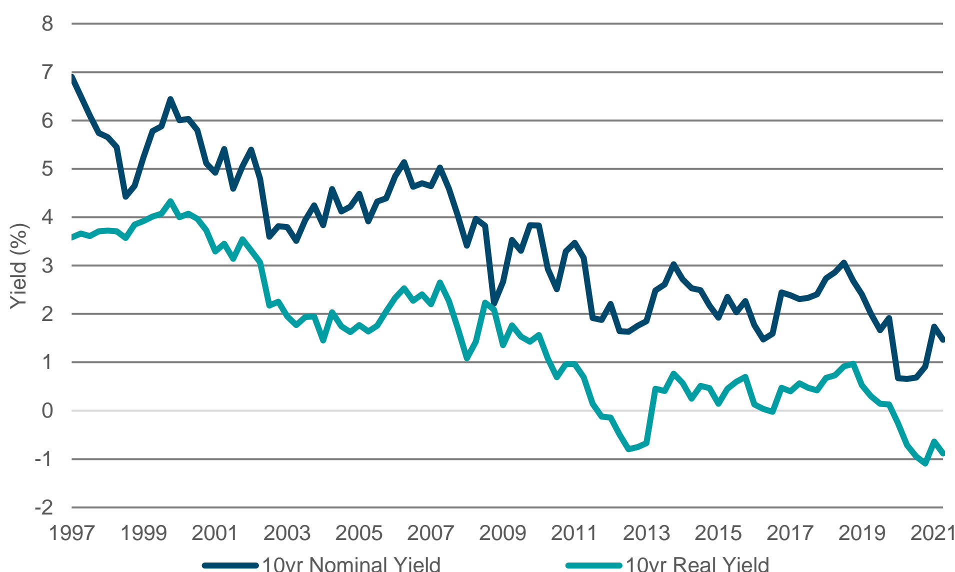
FIGURE 14: PILLAR DECOMPOSITION FOR FIXED INCOME



Source: DWS Investments UK Limited.

The downward bias in nominal and real government bond yields in recent decades has presented a challenging outlook to yield investors. Real interest rate in particular have remained in negative territory for a number of years now, which has naturally raised questions as to when and if interest rates will ever move back toward pre-crisis levels.

FIGURE 15: US 10 YEAR TREASURY NOMINAL AND REAL YIELDS (%)



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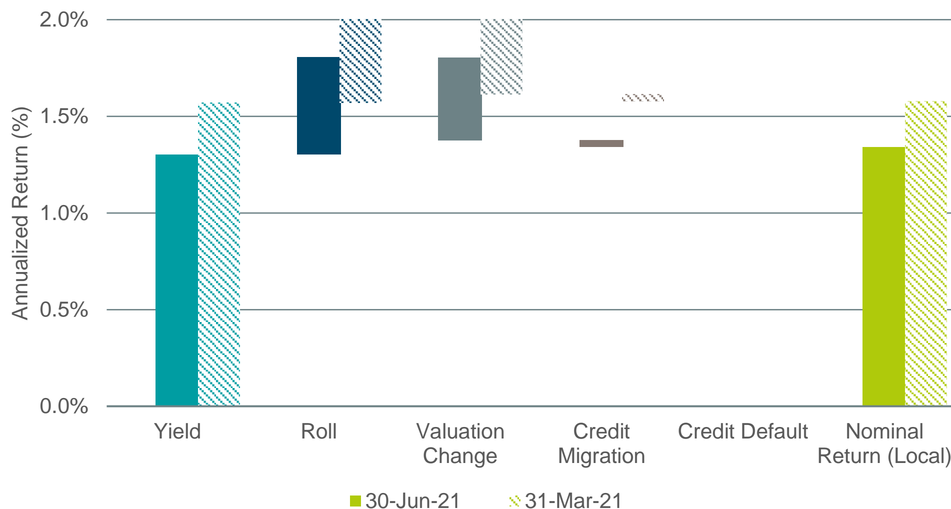
Following the Q1 selloff in treasury yields, interest rates across the entire yield curve have again continued their downward bias on the back of dovish commentary from global central banks and the Fed in particular. As a result, yield contribution from our US Treasury forecasts declined from 1.6% to 1.3% at the end of June.

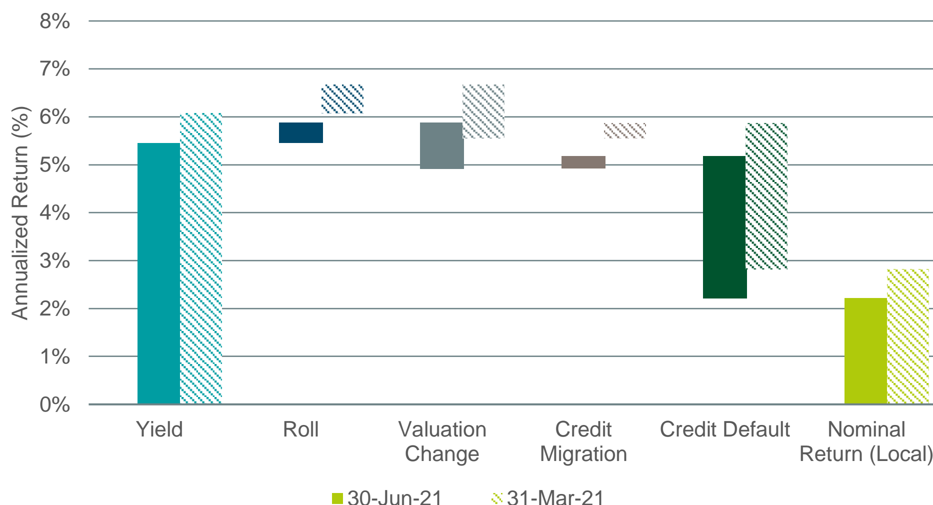
FIGURE 16: US TREASURY BOND INDEX: CONTRIBUTION TO 10 YEAR FORECASTED HYPOTHETICAL ANNUALIZED RETURNS



Source: DWS Investments UK Limited. Data as of 30 June 2021. 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 credit spreads also continued to rally alongside other risk assets in Q2. US High Yield options adjusted spreads declined from 3.19% to 2.68% at the end of June. This reflects a strong macroeconomic outlook but nonetheless is an impediment to the strategic return outlook of these nominal yielding assets.

FIGURE 17: US HY BOND INDEX: CONTRIBUTION TO 10 YEAR FORECASTED HYPOTHETICAL ANNUALIZED RETURNS



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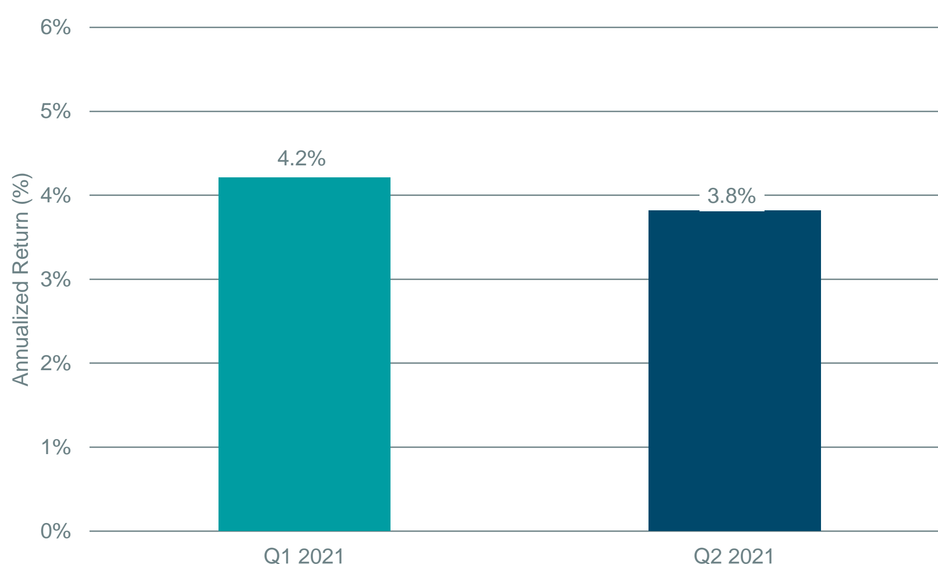
Conclusion

As global asset prices continue to move higher and rates have continued their downward trajectory, we are facing an increasingly challenging and unprecented regime in financial markets. Historically negative real interest rates and elevated equity multiples bring about questions as to the viability of these market dynamics over the long run, particularly if macroeconomic growth continues to rebound strongly. What we do know is that these elevated levels on valuations across risk-off and risk-on assets alike is likey to the detriment of forecasted returns from traditional multi-asset portfolios. Figure 18 shows how our 10-year return forecasts for a moderate strategic asset allocation multi-asset3 have changed over the most recent quarter.

FIGURE 18: 10-YEAR FORECASTED HYPOTHETICAL ANNUALIZED RETURNS OF MODERATE STRATEGIC ASSET ALLOCATION



Source: DWS Investments UK Limited. Data as of 30 June 2021. 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.

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

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