GOAL POST

The name is bond — rethinking duration in balanced portfolios

- Global bond yields have risen sharply YTD, driven by stronger nominal growth, lingering inflation, fiscal concerns and increased competition for capital from AI. This follows the large bond sell-off in 2022. As a result, the past 5 years have been among the worst periods for bond investors in a century, although yields have only returned to long-run historical averages rather than exceptionally high levels.
- Are bonds becoming more attractive again for multi-asset portfolios? The optimal bond weight in a balanced portfolio will be conditioned by (1) relative return, (2) relative risk, (3) diversification benefits and (4) the return on cash. Higher yields improve carry and prospective buy-and-hold returns; they also provide a larger cushion against further yield increases and thus lower risk.
- However, the return relative to equities will be driven mostly by equities, especially in the near term. And more inflation volatility, fiscal risks and less negative equity/bond correlations suggest that duration may provide less reliable protection than before the COVID-19 crisis. Finally, while bond term premia have picked up, they remain relatively low in a long-run context, lowering the incentive to increase duration.
- We see a case for a return to more 'normal' strategic bond allocations but the tactical case for adding long-dated bonds is mixed. In the very near term energy prices and central bank policy will likely drive both bonds and equities – rates relief would support both but continued increases in yields could weigh more on equities. However, over the next few months, resilient earnings growth should continue to support risk-adjusted returns for equities vs. bonds. That said, over longer horizons, higher starting yields should lift optimal bond allocations from the unusually low levels of the past five years towards historical norms.
- There is unlikely to be an immediate return to the simple 60/40 portfolio template. Investors should favour the parts of the curve with the best carry vs. convexity – with relatively low rates volatility, selective option overlays can help. We also like bond-like equities to improve diversification with a growing number of stocks with a negative beta. On the flip side, equity-like bonds such as convertibles look more attractive to improve asymmetry.

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The name is bond — rethinking duration in balanced portfolios

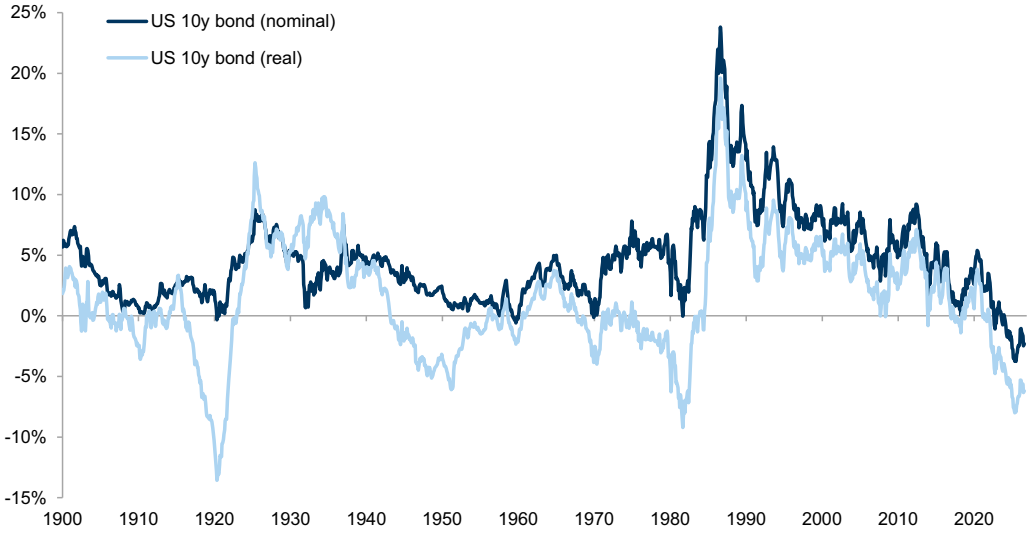
Risky bonds — YTD sell-off increases the drag since the COVID-19 crisis

Global bond yields are near or above the pre-GFC highs owing to a combination of cyclical support, rising energy prices due to the Middle East war, crowding out from AI debt issuance and fiscal concerns. Concerns about stickier inflation and FX debasement have increasingly become a speed limit for central bank easing or even forced tightening, as in the case of the BoJ. While there has been a lot of focus on long-dated bond yields, some of the largest increases have been in the front end, with US 2-year yields up 120bp YTD, and increases have been led by real yields. This indicates a different regime with higher neutral rates and more competition for capital.

The bond sell-off has extended the already prolonged period of weak bond returns that started after the COVID-19 crisis. Before the COVID-19 crisis long-dated bond yields were unusually low after years of negative rates and QE as central banks were fighting persistently low inflation and deflation risks, and they fell even further during the COVID-19 crisis. Following the sharp increase in inflation and aggressive central bank tightening, bonds had one of the largest drawdowns in history in 2022 – the 5-year rolling returns on US 10-year bonds were the worst in more than a century – in real terms they were nearly as bad as after WW1 and WW2 and in the 1970s (Exhibit 1).

Exhibit 1: US bonds recently had one of the worst 5-year rolling nominal and real returns in a century

5-year rolling return of US 10-year bonds

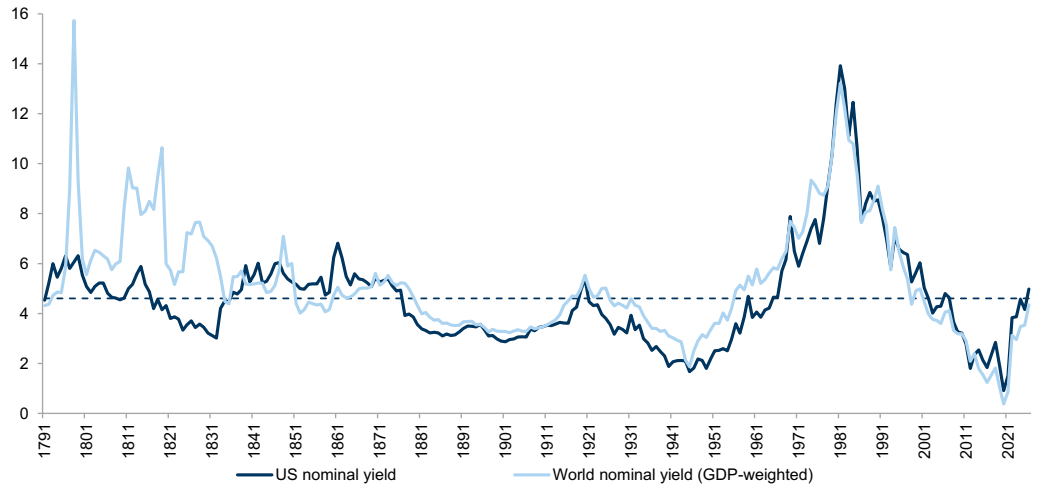


Source: Robert Shiller, Haver Analytics, Goldman Sachs Global Investment Research

However, despite the material bond sell-off, current levels of bond yields are not unusually high compared with long-run history – they were just unusually low during the post-GFC cycle. In fact, the current US 10-year yield, at 5%, is close to the average of 4.7% over the last 250 years (Exhibit 2, excluding the 1970s results in an average of 4.5% but during WW2 the Fed anchored long-dated bond yields via yield curve control, suggesting bond yields would have been much higher). Admittedly, such a long history is not comparable to now, as macro conditions have been more friendly for the current generation of bond investors. But, as mentioned earlier, the macro regime has materially

shifted, with multiple cyclical and structural headwinds for bonds.

Exhibit 2: Higher but not high - normalisation from post-GFC cycle levels
10-year government bond yields. Yearly data. Dashed line is historical average for US.

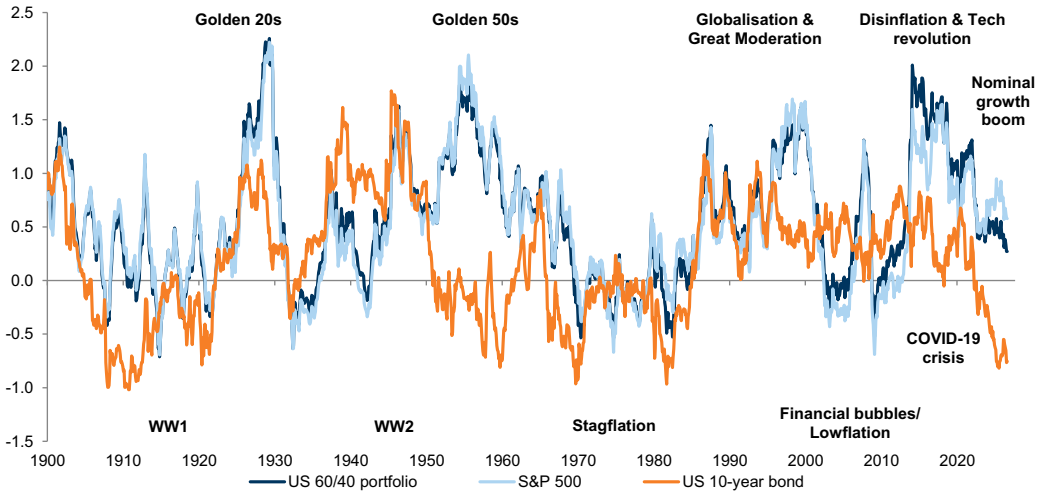


Source: Bank of England, Datastream, Goldman Sachs Global Investment Research

From balanced bull to bear — the rise and fall of the 60/40 portfolio

While simple balanced 60/40 portfolios delivered strong risk-adjusted returns for the last generation of investors, they have suffered since the COVID-19 crisis (Exhibit 3, see also our Balanced Bear research). Balanced portfolios have performed better since 2023, but this was mostly due to the strong performance of equities – bonds have been a drag on risk-adjusted returns. Indeed, since the COVID-19 crisis the diversification benefits from mixing equities and bonds have been limited, with Sharpe ratios of a US 60/40 portfolio lagging a stand-alone equity investment. In large part, this has been due to the large drawdown for both bonds and equities in 2022.

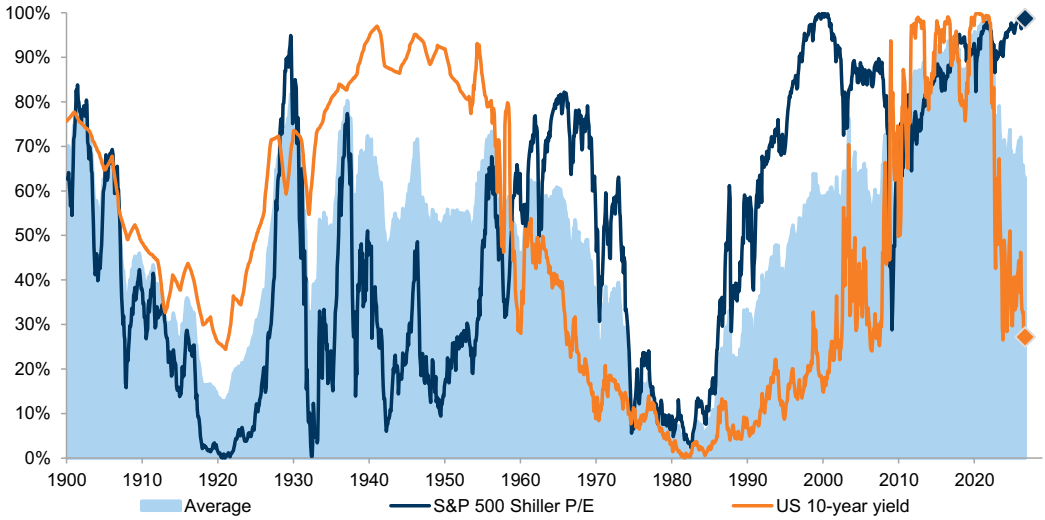
Exhibit 3: Over the past 5 years a 60/40 portfolio lagged outright equities
5-year rolling Sharpe ratio



Source: Robert Shiller, Haver Analytics, Goldman Sachs Global Investment Research

Although equities have recovered sharply since then, risk-adjusted performance of longer-dated bonds has remained poor. As we recently wrote, ex post equity risk premia in the last few years have been unusually high. Higher and more volatile inflation, as well as rising government debt/GDP ratios and fiscal spending, have supported equities relative to bonds. And more recently the higher nominal growth backdrop, boosted by the AI capex boom and higher energy prices due to the Middle East war, added further upward pressure to bond yields, while equities had tailwinds from earnings growth. As a result, from a valuation perspective bonds now look increasingly attractive relative to equities (Exhibit 4).

Exhibit 4: While equities remain relatively expensive, bond yields are now close to long-run average
Valuation percentile (since 1871). A higher percentile means valuations are more expensive

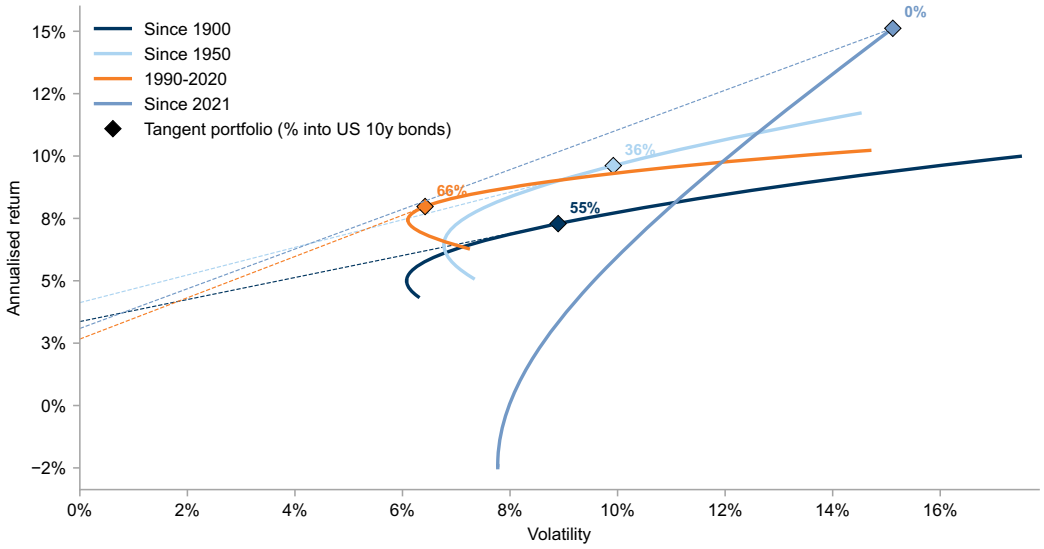


Source: Robert Shiller, Haver Analytics, Goldman Sachs Global Investment Research

Finding the right balance — drivers of the optimal bond allocation

Are bonds becoming more attractive again for multi-asset portfolios? This is where Markowitz's Modern Portfolio Theory (MPT) can help by quantifying the trade-off between return and risk while incorporating diversification. As we wrote before, even over long horizons the efficient frontier varies materially over time not only due to changing macro conditions but also to different valuation starting points. Based on an efficient frontier since 1950 combining the S&P 500 and US 10-year bonds (Exhibit 5), the tangent portfolio was close to a 60/40 portfolio (with a bond weight of c.36%) – thus a 60/40 portfolio was near the optimal asset mix. However, for the current generation of investors (1990-2020), the optimal bond weight was even larger – in the last 5 years the efficient frontier steepened materially, so there was little benefit in allocations to bonds.

Exhibit 5: The efficient frontier was very steep in the last 5 years with little benefit from allocations to bonds
Labels for the tangent portfolio indicate the optimal bond weight

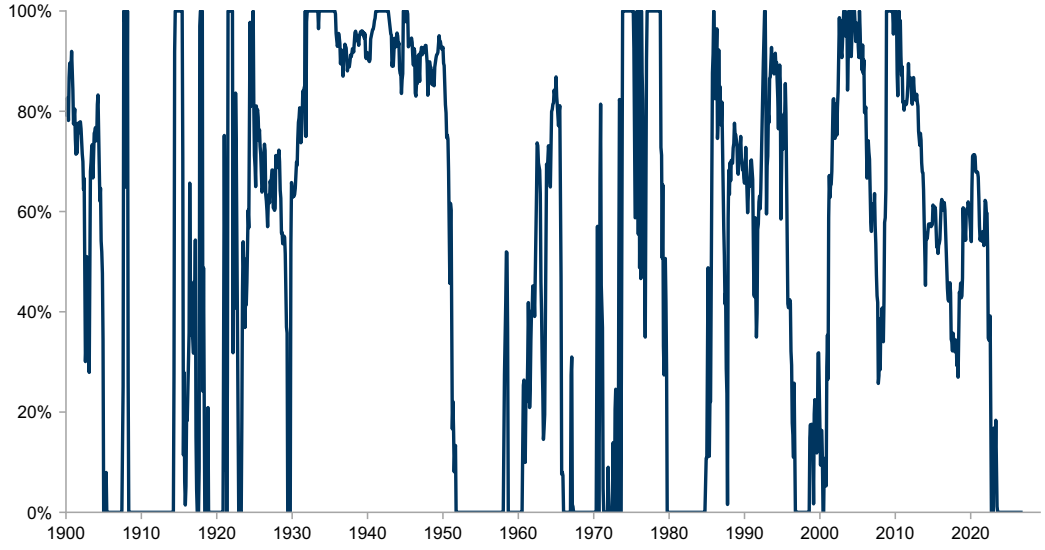


Source: Robert Shiller, Haver Analytics, Goldman Sachs Global Investment Research

As shown in Exhibit 6, the optimal asset mix varied materially with macro conditions and recently optimal bond allocations were close to zero.[1] In the periods from 1908-1922 and 1955-90, equity-only investors achieved similar or better Sharpe ratios than a balanced portfolio, including any bonds. On the flip side, in the decades ending in the 1930s and 1940s, as well as around the GFC, the optimal portfolio had close to no equities. Up until the COVID-19 crisis the optimal asset mix was actually not 60/40 but more like 40/60, similar to a risk parity portfolio with larger allocations to bonds. And after the COVID-19 crisis the optimal portfolio shifted to 100% equities – most investors would have been better off mixing cash with equities based on their risk tolerance instead of a balanced portfolio.

[1] These allocations should be interpreted as directional signals rather than portfolio recommendations. Unconstrained mean-variance optimisation is highly sensitive to expected-return and covariance assumptions and frequently produces corner solutions.

Exhibit 6: The optimal allocation to bonds has declined sharply since the COVID-19 crisis
5-year rolling optimal weight of US 10-year bonds in a balanced multi-asset portfolio

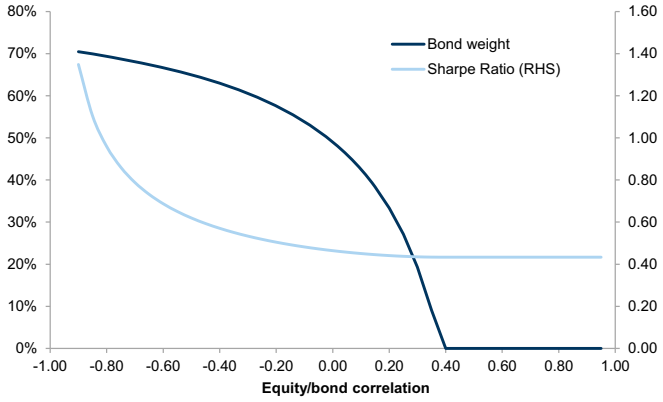


Source: Robert Shiller, Haver Analytics, Goldman Sachs Global Investment Research

Based on MPT the optimal bond weight in a balanced portfolio is a function of (1) relative return, (2) relative risk, (3) diversification benefits and (4) the return on cash. Exhibit 7 shows the optimal bond weight and portfolio Sharpe ratio at different equity/bond correlation levels.[2] With higher equity/bond correlations the optimal bond weight decreases, and that means lower Sharpe ratios and higher portfolio volatility. The optimal bond allocation also decreases with better relative equity returns vs. bonds (Exhibit 8) and higher relative risk (Exhibit 9). Higher returns on cash can also drive a higher equity allocation as bonds become less attractive vs. cash – as long as the equity risk premium is positive (Exhibit 10). Importantly, a more positive equity/bond correlation amplifies all those shifts.

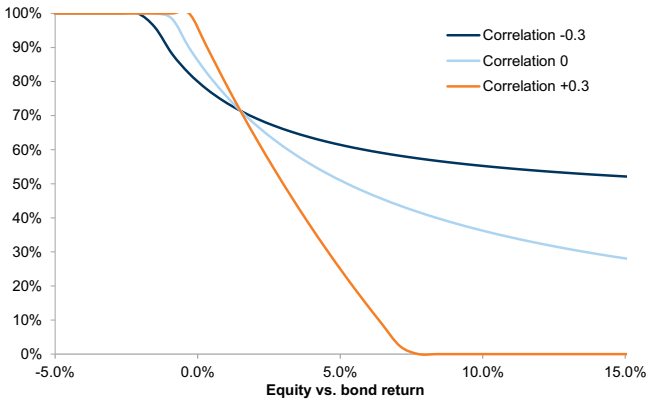
[2] Unless stated explicitly, in Exhibits 7 to 10 we assume a 10% equity return with 15% volatility, a 4.5% bond return with 6% volatility, cash return of 3.5%, and 0 equity/bond correlation.

Exhibit 7: With higher equity/bond correlations the optimal bond weight tends to decrease (and the Sharpe ratio declines)
Optimal portfolio simulation



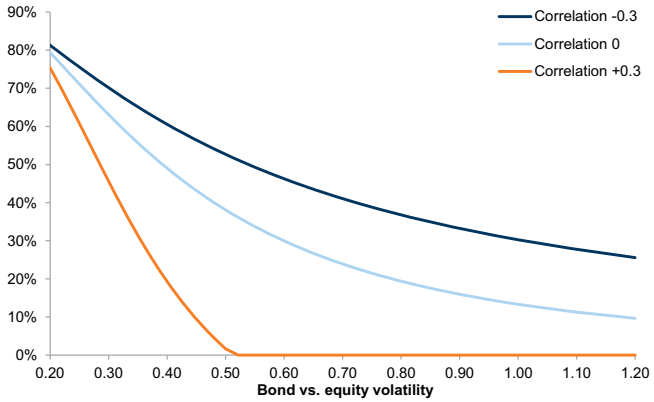
Source: Goldman Sachs Global Investment Research

Exhibit 8: Unsurprisingly, higher equity risk premia point to lower bond allocations, in particular with positive equity/bond correlations
Bond weight for optimal portfolio based on equity vs. bond return



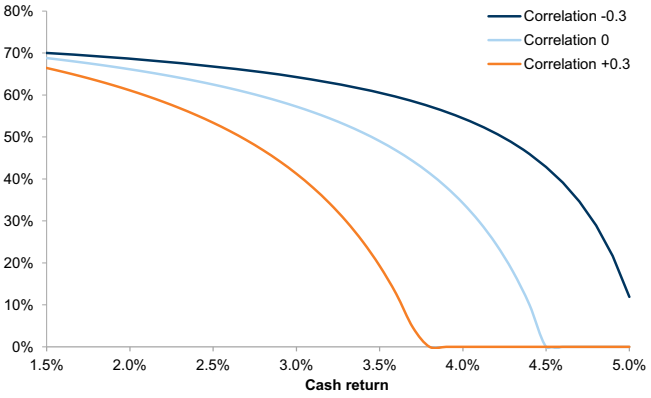
Source: Goldman Sachs Global Investment Research

Exhibit 9: Higher bond volatility also points to lower bond allocations, especially with less negative correlations
Bond weight for optimal portfolio based on bond relative to equity volatility



Source: Goldman Sachs Global Investment Research

Exhibit 10: Cash returns (vs. bonds) matter for bond allocations as well
Bond weight for optimal portfolio based on cash return

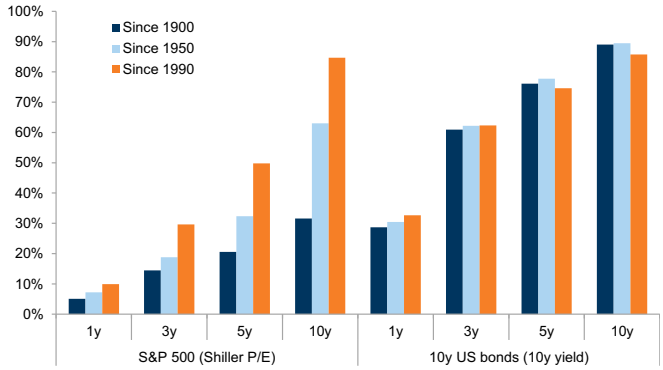


Source: Goldman Sachs Global Investment Research

(1) Relative return — carry vs. duration risk

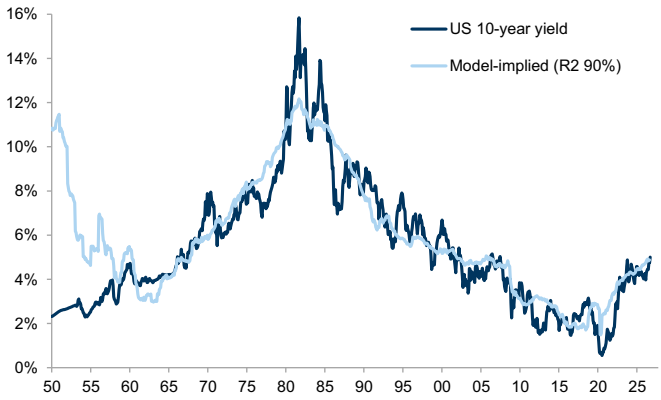
Higher 10-year bond yields mean better returns for buy-and-hold investors but the predictive power for near-term returns is mixed (Exhibit 11). Near-term changes in bond yields will be conditioned by the macro regime – as shown in Exhibit 12, a simple model using 10-year rolling annualised US real GDP growth and inflation explained most of the trend in levels of US 10-year yields since the 1960s and current levels are close to the recent long-term fair value. Of course, bond markets are forward-looking and reflect expectations for growth/inflation/policy rather than historical averages, and as a result bond yields can over- or undershoot in the near term. And other drivers, such as monetary and fiscal policy regimes, inflation volatility and expectations for productivity growth, may also play a role.

Exhibit 11: Valuations have limited predictive power, especially for near-term returns, even for bonds
R2 of valuations for subsequent returns. Valuation metric in parenthesis



Source: Robert Shiller, Goldman Sachs Global Investment Research

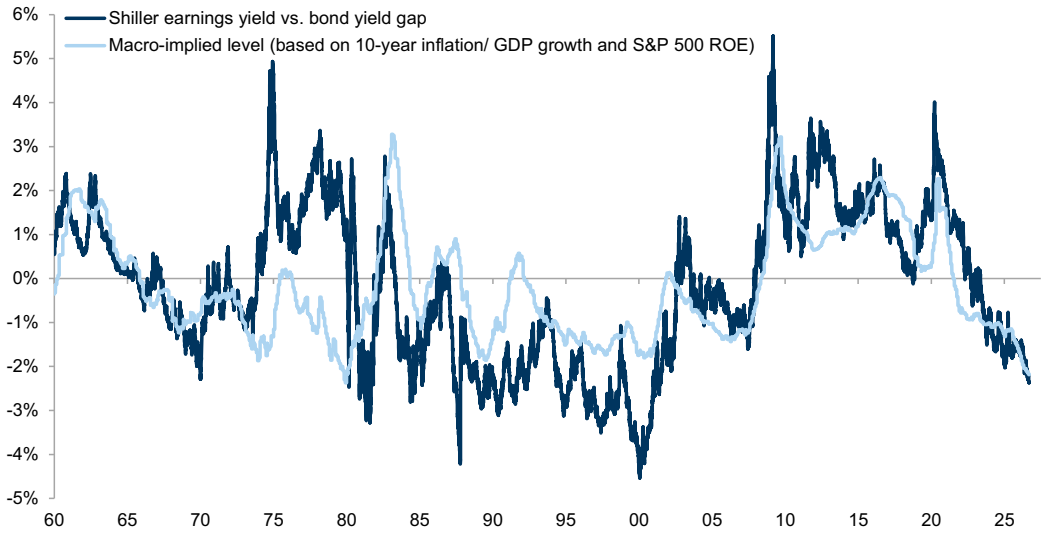
Exhibit 12: The structural growth/inflation mix explained broad trends in US 10-year bond yields



Source: Haver Analytics, Goldman Sachs Global Investment Research

More importantly, most of the variation in bond returns relative to equity is typically driven by equities. Admittedly, the equity/bond yield gap has declined in recent years owing to a combination of higher bond yields and Shiller P/Es rising to Tech Bubble levels (Exhibit 13). However, valuations are an even weaker signal for near-term equity performance. As we noted before, unlike during the Tech Bubble, today's elevated cyclically-adjusted equity valuations are supported by high corporate profitability – the equity/bond yield gap is close to its long-term fair value based on 10-year inflation and GDP growth, as well as the S&P 500 return on equity (ROE). The path for equity valuations in the coming years will likely be determined by the impact of AI on S&P 500 profitability.

Exhibit 13: US earnings/bond yield gap has declined further YTD, but is near its macro-implied level
S&P 500 Shiller P/E vs. US 10-year yield gap

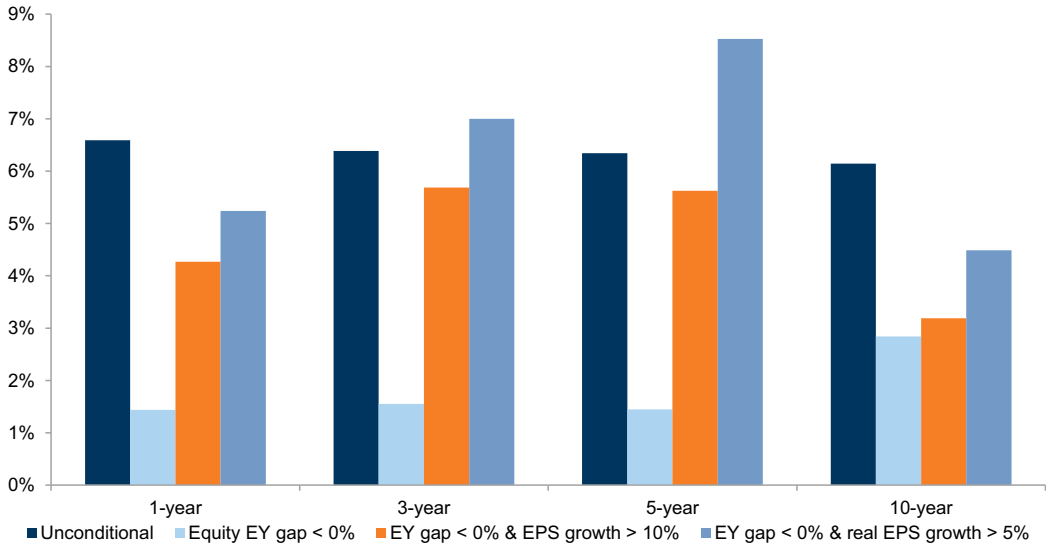


Source: Haver Analytics, Goldman Sachs Global Investment Research

In the near term, earnings growth and expectations for ROE are likely to remain the key driver of equity performance relative to bonds, more so than starting valuations. As shown in Exhibit 14, the average equity vs. bond returns tend to be lower

than the unconditional average if relative valuations for equities vs. bonds are high (the Shiller earnings/bond yield gap is below 0%, which is the bottom quartile). However, even from elevated levels of relative valuations, equities were still able to deliver strong returns vs. bonds as long as earnings growth remained strong. This was particularly true if real earnings growth was high, with equities providing exposure to better nominal growth.

Exhibit 14: As long as earnings growth remains strong, equities can outperform bonds, especially in the near term
Average subsequent monthly returns of S&P 500 vs. US 10-year bonds conditional on starting valuations and coincident EPS growth (annualised, data since 1900)

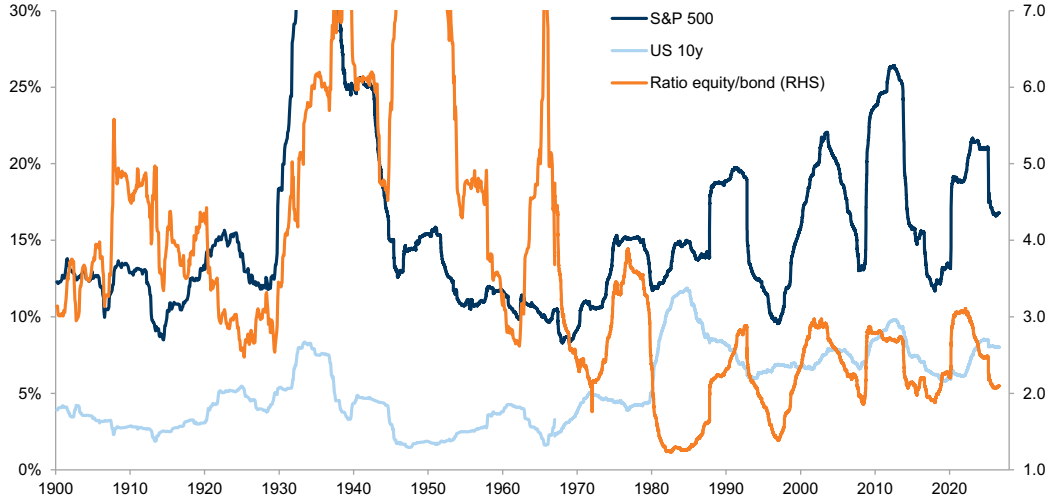


Source: Robert Shiller, Haver Analytics, Goldman Sachs Global Investment Research

(2) Relative risk — risk reversal for bonds

Higher bond yields reduce risk by improving carry, particularly for longer holding periods. Since 2022 bond volatility has been unusually high because yields were very low and duration high, making bonds more risky relative to equities – over the last 5 years equities had double the volatility of 10-year bonds and thus expected equity returns needed to be twice as high (Exhibit 15). Since the 1990s the average ratio has been closer to 2.5x, peaking around 3x during large equity drawdowns – this suggests the risk of bonds relative to equities is likely to moderate in the medium term. With higher yields total returns on bonds should become less volatile unless yields increase materially (as they did in the early 1980s). And, elevated equity valuations and uncertainty around AI increase latent risk for equities. However, near-term rates volatility could remain elevated, and as long as equities remain supported by strong earnings growth, downside should be limited.

Exhibit 15: During the 1970s bond volatility increased materially relative to equities
5-year rolling volatility



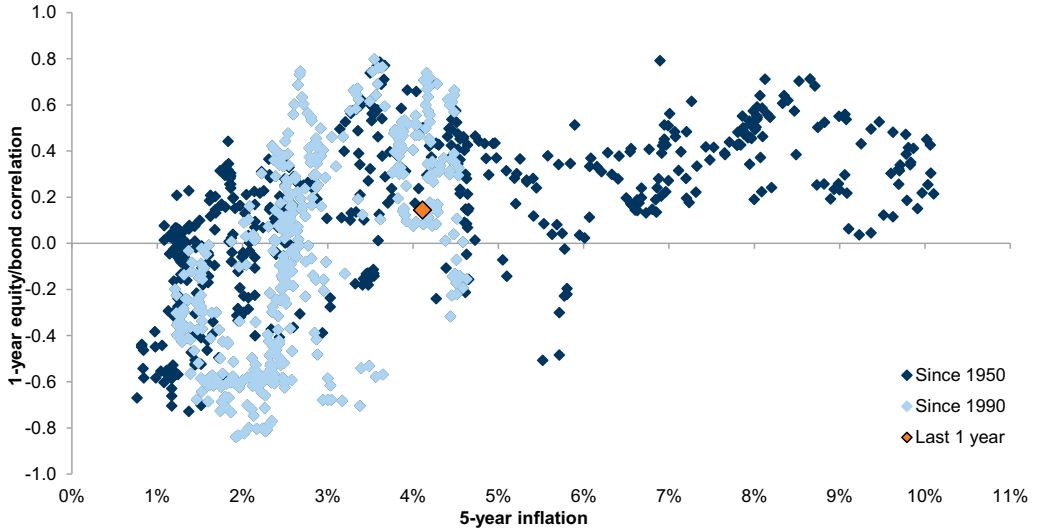
Note: for equities — daily returns since 1928, monthly returns before; for bonds — daily returns since 1962, monthly returns before.

Source: Robert Shiller, Goldman Sachs Global Investment Research

(3) Diversification benefits — from desperation to normalisation

Equity/bond correlations are likely to be less negative compared with the post-GFC cycle but should start to decline from the elevated levels over the last 5 years. In the past 100 years negative equity/bond correlations have been the exception rather than the norm: only during the 1920s, the 1950/60s and since the late 1990s were equity/bond correlations consistently negative, as inflation was generally anchored (Exhibit 16). As a result, growth shocks were a more important driver of monetary policy. In the last 5 years equities and bonds have moved more in tandem, especially during the large combined drawdown in 2022. As we wrote before, with more inflation volatility and fiscal risks, we think equity/bond correlations will be closer to zero – we think bonds are increasingly becoming a tool for income generation but less for risk mitigation, similar to the 100 years before the late 1990s.

Exhibit 16: Equity/bond correlations turned positive after the COVID crisis
S&P 500 vs. US 10-year bond correlation (daily frequency where available, otherwise monthly)



Source: Haver Analytics, Goldman Sachs Global Investment Research

While we expect inflation to normalise into 2027, which should support more negative equity/bond correlations, bonds may offer less protection than they have over the past 30 years. At the start of S&P 500 bear markets since 1950, the median nominal yield was about 4.7%, real yields were 2.3%, and breakeven inflation was around 2.5% (Exhibit 17). Both after the Tech Bubble burst and during the GFC, US 10-year yields fell by c.200bp. Current US 10-year yields are still below Tech Bubble peaks, implying a smaller potential buffer. And while yields during the GFC were similar to current levels, breakeven inflation then fell sharply on deflation fears. Higher nominal growth could limit declines in long-dated yields in the next recession, unless the growth or inflation outlook deteriorates materially. The next crisis may also involve more fiscal spending and less central bank QE, limiting potential bond yield declines.

Exhibit 17: The buffer from bonds is larger but still relatively small, especially considering elevated inflation
Largest S&P 500 sell-offs since 1950 and bond response

S&P 500 bear markets			Total return			Level of US 10Y yields at peak			Level of US 10Y yields at trough			Change in US 10Y yields (bps)		
Peak	Trough	Months	S&P 500	US 10Y	60/40	Nominal	Real	Breakeven	Nominal	Real	Breakeven	Nominal	Real	Breakeven
Aug-56	Oct-57	15	-18%	4%	-12%	3.1%			4.0%			86		
Dec-61	Jun-62	7	-27%	2%	-16%	3.9%	2.8%	1.1%	4.0%	2.1%	1.8%	3	-69	66
Feb-66	Oct-66	8	-20%	1%	-12%	4.7%	2.4%	2.2%	5.0%	2.6%	2.6%	28	18	39
Nov-68	May-70	18	-33%	-7%	-23%	5.8%	2.4%	3.3%	8.2%	4.5%	3.4%	244	216	5
Jan-73	Oct-74	21	-45%	1%	-29%	6.4%	3.4%	2.9%	8.0%	2.3%	5.7%	161	-112	280
Sep-76	Mar-78	18	-14%	7%	-6%	7.5%	1.9%	5.7%	8.1%	2.0%	6.1%	54	6	38
Nov-80	Aug-82	21	-20%	20%	-6%	12.7%	3.7%	9.0%	13.6%	5.4%	8.6%	83	167	-40
Oct-87	Dec-87	2	-31%	6%	-17%	9.7%	3.0%	6.4%	8.9%	2.7%	6.1%	-75	-28	-28
Jul-90	Oct-90	3	-19%	-1%	-12%	8.4%	2.1%	6.4%	8.9%	1.9%	7.0%	48	-21	63
Jul-98	Aug-98	2	-19%	4%	-10%	5.5%	3.8%	1.7%	5.1%	3.8%	1.2%	-46	2	-53
Mar-00	Oct-02	31	-47%	39%	-21%	6.2%	4.1%	2.1%	3.6%	2.2%	1.3%	-259	-186	-76
Oct-07	Mar-09	17	-55%	21%	-32%	4.7%	2.3%	2.3%	2.9%	2.0%	0.8%	-178	-31	-148
Apr-11	Oct-11	5	-19%	15%	-6%	3.3%	0.7%	2.6%	1.8%	0.0%	1.7%	-152	-70	-83
Sep-18	Dec-18	3	-19%	3%	-10%	3.1%	0.9%	2.1%	2.7%	1.0%	1.8%	-33	8	-40
Feb-20	Mar-20	1	-29%	4%	-17%	1.6%	-0.1%	1.7%	1.2%	0.6%	0.6%	-38	67	-105
Jan-22	Oct-22	9	-24%	-14%	-21%	1.6%	-1.0%	2.6%	3.9%	1.6%	2.3%	228	263	-35
Feb-25	Apr-25	2	-19%	3%	-11%	4.5%	2.1%	2.5%	4.3%	2.1%	2.2%	-27	-1	-23
Average			**-27%**	**6.0%**	**-15%**	**5.5%**	**2.2%**	**3.4%**	**5.5%**	**2.3%**	**3.3%**	**7.5**	**14.3**	**-8.8**
Median			**-20%**	**2.7%**	**-12%**	**4.7%**	**2.3%**	**2.5%**	**4.3%**	**2.1%**	**2.3%**	**3.0**	**0.7**	**-31.7**

Real rate and breakevens based on a monthly backcast before 1997. See "Global Rates Notes: Introducing a backcast history of traded inflation", 26 August 2020.

Source: Haver Analytics, Bloomberg, Datastream, Goldman Sachs Global Investment Research

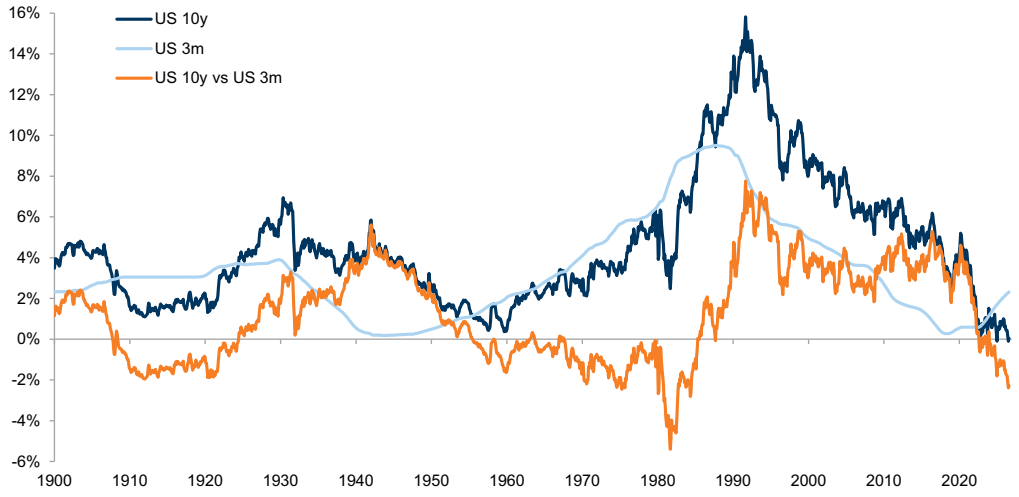
(4) Return vs. cash — cash is no longer trash

The return on cash represents the opportunity cost of investing in both equities and

bonds. When cash returns are higher, cash can dominate bonds, making it optimal for investors to pair equities with cash according to their risk tolerance, as has been the case over the past 5 years. This shift is closely tied to equity/bond correlations: when correlations are positive, bonds tend to offer less diversification benefit; when they are negative, required bond returns tend to fall below cash returns due to the additional diversification value bonds provide.

Returns on cash relative to bonds have varied materially since 1900 – in the last 5 years long-dated bonds have underperformed cash materially (Exhibit 18). In the 1910s and the 1960-80s and post the COVID-19 crisis bonds underperformed cash for prolonged periods, which boosted the optimal equity weight. On the flip side, for the previous generation of investors, up until the COVID-19 crisis, bonds generally outperformed vs. cash, and with negative equity/bond correlations since the late 1990s there has generally been a case for higher bond allocations.

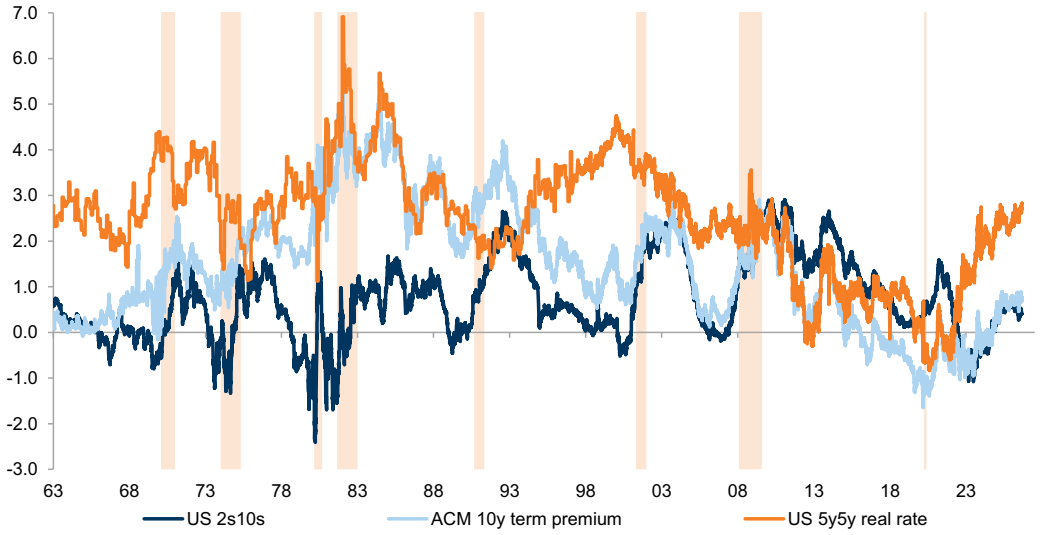
Exhibit 18: US 10-year bonds have materially underperformed vs. cash in the last 5 years
5-year rolling performance



Source: Haver Analytics, Goldman Sachs Global Investment Research

Bond markets have started to adjust to the new macro and monetary policy regime with higher neutral rates and steeper global yield curves. US 5y5y forward real yields are near their average since 1960, suggesting markets are already pricing a higher 'neutral rate' equilibrium (Exhibit 19). But although bond term premia have picked up, they remain low compared with the long-run history. Our rates team argues that the rise in G10 term premium in recent years has been closely tied to shifts in key macro drivers over the past 5 years, including cyclical risk, the rise in inflation risk, the rise in the level and volatility of interest rates, high bond supply and a reversal of central bank balance sheet expansion.

Exhibit 19: Yield curves are relatively flat while expectations for the neutral rate have shifted higher
US bond yields



Source: Bloomberg, Haver Analytics, Goldman Sachs Global Investment Research

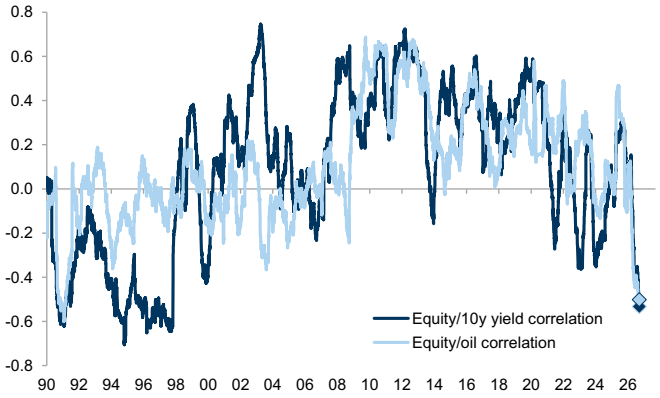
How to yield — asset allocation implications from rising bond yields

The tactical and strategic case for higher bond allocations

Higher bond yields support risk-adjusted returns for bonds in the medium term, but they are a less strong signal for near-term performance, especially relative to equities. On a tactical horizon the main drivers of optimal bond allocations are likely to be inflation momentum, the Middle East conflict and central bank policy, on the one hand, and the evolution of the AI boom with less of an earnings tailwind from AI capex, on the other. For longer investment horizons most of the variation of the bond vs. equity returns is still driven by equities – the increase in bond yields YTD is strengthening the case for higher strategic bond allocations compared to the last 5 years, when bonds had little value in portfolios, but this is mostly a normalisation back to the long-run optimal bond allocation range of 35-55%.

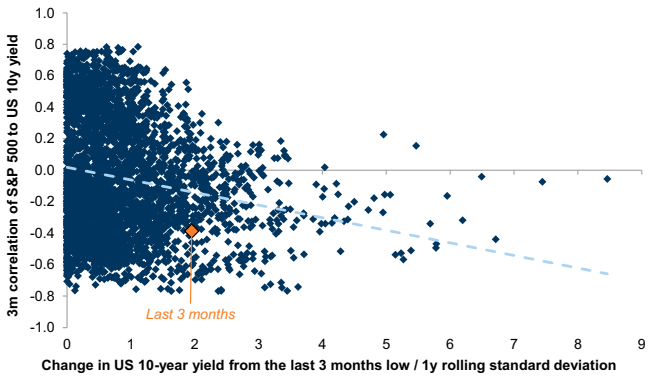
In the near term, monetary policy and higher energy prices are likely to remain the key driver of both equities and bonds (Exhibit 20). As a result, higher bond allocations have added volatility rather than buffering portfolios. Further increases in bond yields are likely to weigh more on equities than bonds, in particular sharp ones due to energy prices or more aggressive central bank tightening – increases above 2sd over 3 months start to weigh more on equities (Exhibit 21). On the flip side, falling energy prices, continued core inflation normalisation and less hawkish central banks – consistent with our economists' macro baseline – should help bonds stabilise into year-end and also support equities. We are Neutral across assets in our tactical (3m) asset allocation. Our rates team forecasts modest relief in long-dated yields by year-end, with German 10-year yields at 3.25%, US 10-year yields at 4.75%, UK 10-year yields at 5% and Japan 10-year yields at 3%.

Exhibit 20: Energy prices and bond yields have become a key driver of equities
6m rolling correlation (weekly returns)



Source: Datastream, Haver Analytics, Goldman Sachs Global Investment Research

Exhibit 21: A continued sharp increase in bond yields could put pressure on equities
Data since 1962

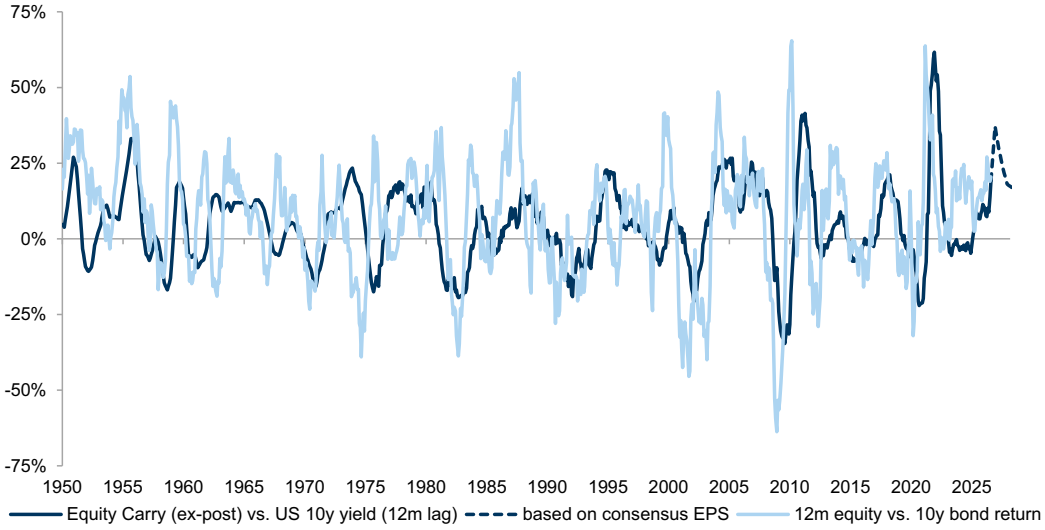


Source: Datastream, Goldman Sachs Global Investment Research

On a 6-12m horizon the case for higher bond allocations would strengthen in the event of a material growth slowdown, including fading earnings tailwinds from the AI boom. Historically, equities have tended to outperform bonds when earnings growth was strong (Exhibit 22). Prospective global equity carry – approximated by the starting dividend yield plus the subsequent change in earnings – has increased sharply YTD,

supported by positive revisions due to the AI capex boom. In 2027 our equity strategists still expect double-digit, albeit slower, earnings growth, broadly in line with consensus, which should continue to drive attractive risk-adjusted equity returns compared with bonds. As a result, we remain OW equities, N bonds, UW credit for a 12m horizon in our asset allocation, even though we think relative returns for equities should moderate with less strong earnings tailwinds.

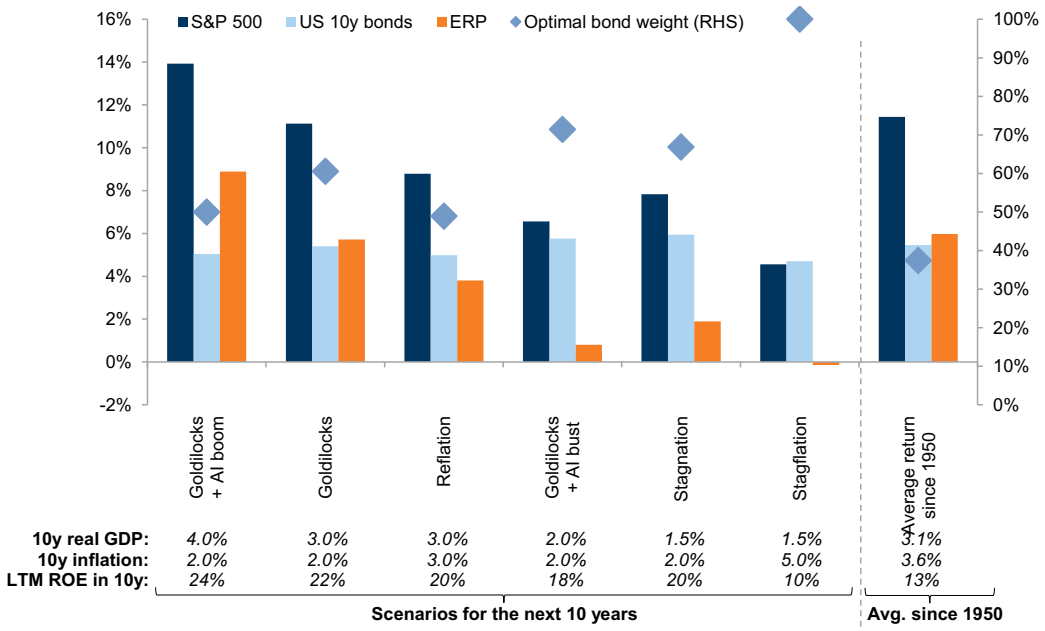
Exhibit 22: Global equities tend to do well over 12m horizons (vs. bonds) if earnings growth supports prospective carry
MSCI AC World vs. US 10-year bonds; equity Carry (ex-post) = dividend yield + ex-post 12m EPS growth



Source: Haver Analytics, Datastream, I/B/E/S, Goldman Sachs Global Investment Research

Over the coming years the optimal bond allocations should be higher than in the last 5 years but will likely be closely linked to the AI boom and risks from inflation and fiscal policy. The current AI capex boom increases the risk that falling profitability for mega-cap Tech stocks materially drags on equity returns before benefits from AI adoption show up. Higher inflation volatility and fiscal risks also create headwinds for balanced portfolios with less of a buffer from bonds and risk of rate shocks. We derive scenarios using our macro-based long-term return framework from Global Strategy Paper: The Strategic Balanced Bear (Exhibit 23): (1) Goldilocks + AI boom, with continued ROE expansion and strong GDP growth, (2) Goldilocks, but with stable ROE, (3) Reflation, with strong nominal growth but lower ROE and (4) Goldilocks + AI bust, in which ROE declines and GDP growth weakens, (5) Stagnation, with weaker growth but ROE somewhat in line with its 5-year average and (6) Stagflation, similar to the 1970s. **In all scenarios optimal bond allocations are higher than in the last 5 years and modestly above the optimal allocation since 1950; however, even over 10-year horizons most of the variation across scenarios is driven by equities, similar to the near term.**

Exhibit 23: Structural regimes point to very different long-term return forecasts
10-year return scenarios in function of different structural scenarios

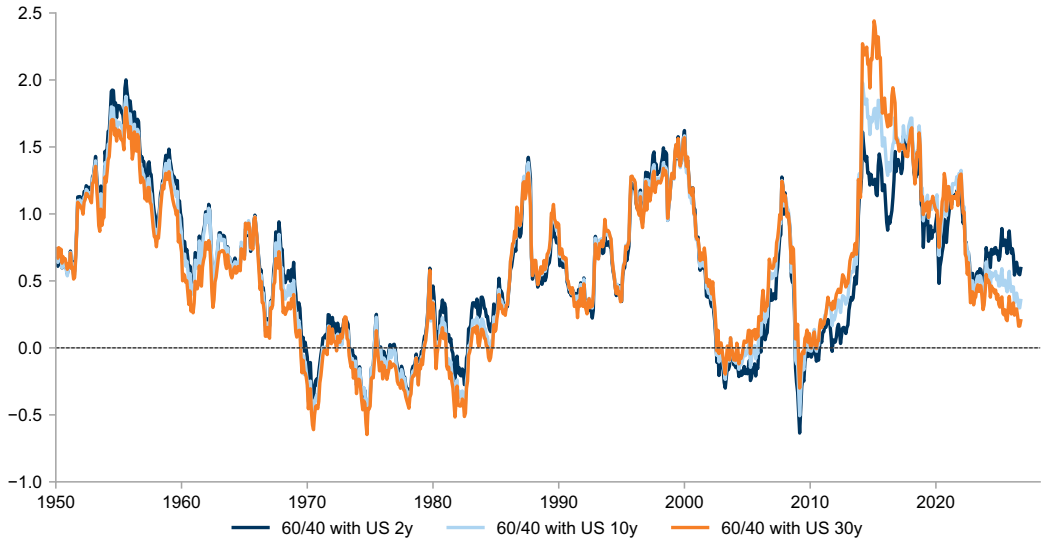


Source: Haver Analytics, Robert Shiller, Goldman Sachs Global Investment Research

Managing duration risk and convexity in bond portfolios

In the last 5 years, with rising bond yields and positive equity/bond correlations, reducing fixed income duration in multi-asset portfolios improved risk-adjusted returns (Exhibit 24). As we recently reiterated, in the coming years we believe investors need to maintain exposure to innovation, protect against inflation and improve risk mitigation in portfolios. Longer duration bonds tend to provide more convexity during recessions and large 'risk off' periods – for example, a 60/40 portfolio with US 10-year or 30-year bonds would have outperformed both when the Tech Bubble burst and during the GFC. However, as mentioned earlier, the potential for large declines in long-dated bond yields might be more limited in the next crisis, and near-term rates volatility could remain somewhat elevated. Our rates strategists see the largest potential for rates relief in the front end vs. forwards, pointing to positions in the belly of the yield curve – that said, those would offer less convexity.

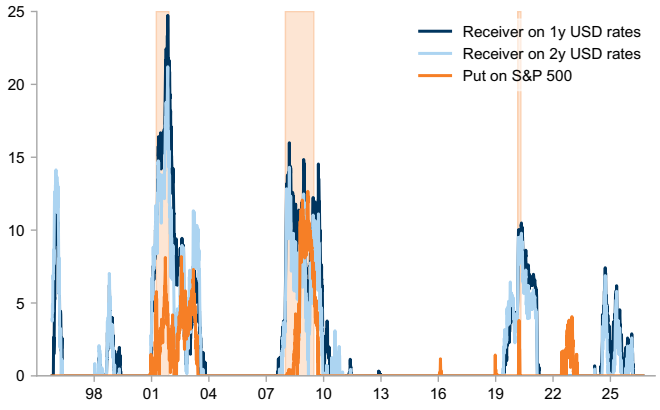
Exhibit 24: Longer duration in balanced portfolios has been a drag in the last 5 years
5-year rolling Sharpe ratio



Source: Haver Analytics, Datastream, Goldman Sachs Global Investment Research

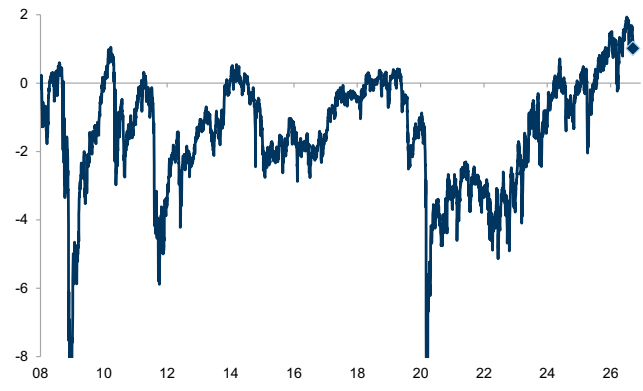
Relatively low rates volatility allows for selective overlay hedges for bond portfolios to improve near-term risk vs. latent convexity. Rates receiver swaptions on shorter-dated rates can provide a more convex hedge for a recession, with central banks likely to remain very responsive (Exhibit 25). With front-end forward rates having increased strongly YTD but rates volatility being somewhat anchored, the entry point for front-end receiver swaptions appears attractive. This is both due to the central bank put in the event of growth risks but also near-term potential rates relief in the event of lower energy prices – during previous recessions, a receiver swaption on short-dated rates offered higher payoffs than S&P 500 OTM puts (based on current pricing). On the flip side, 3m put options on longer-dated bonds (TLT) could help protect fixed income portfolios that have already more duration risk – higher 30-year yields allow investors to better fund put protection strategies (Exhibit 26). Long curve vol expressions can hedge against the more extreme growth/policy tails.

Exhibit 25: Front-end receivers look attractive as medium-term recession hedges
Simulated PnL of a 12m 25-delta receiver on 1y or 2y USD rates and put on S&P 500 (current market price). Shaded area= US recession



Source: Goldman Sachs FICC and Equities, Haver Analytics, Goldman Sachs Global Investment Research

Exhibit 26: Tactically long maturity bonds with TLT puts appear attractive with the option-price adjusted yield close to the highs
US 30y yield - annualised price of a 3m put on 20y+ USTs (TLT)

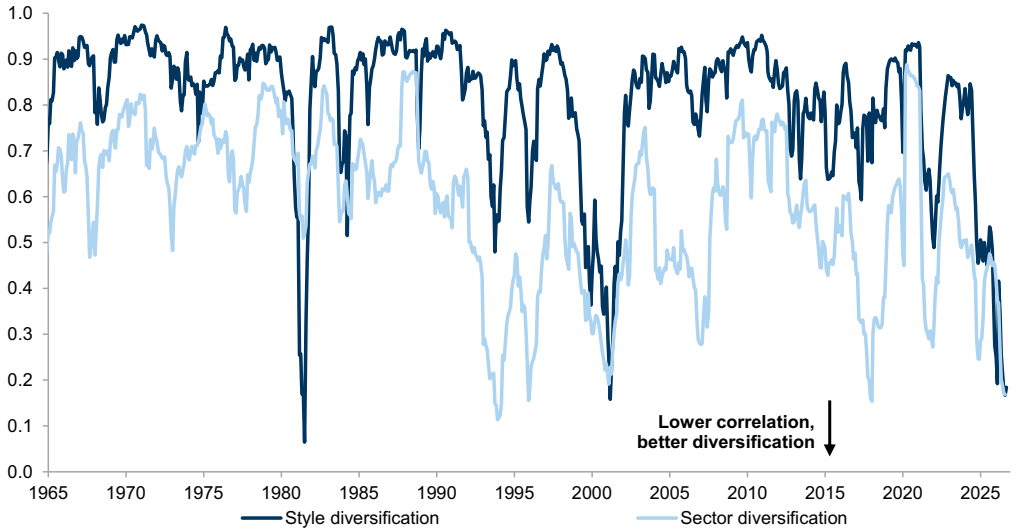


Source: Goldman Sachs FICC and Equities, Haver Analytics, Goldman Sachs Global Investment Research

Bond-like equities and the negative beta anomaly

With bonds providing less of a buffer, diversification within equities is becoming more important for risk mitigation. A new diversification opportunity may now be with bond-like equities: correlations between the S&P 500 and both low-volatility and high-dividend stocks have fallen sharply, similar to during the Tech Bubble (Exhibit 27). This has also supported Europe, which has relatively less Tech exposure, although it faces other headwinds from higher gas prices and politics from here. We like a barbell strategy of a well-diversified portfolio of global AI-exposed stocks and high-dividend, low-volatility stocks.

Exhibit 27: Style diversification has become more helpful, also relative to regional diversification
Average 1-year rolling correlation

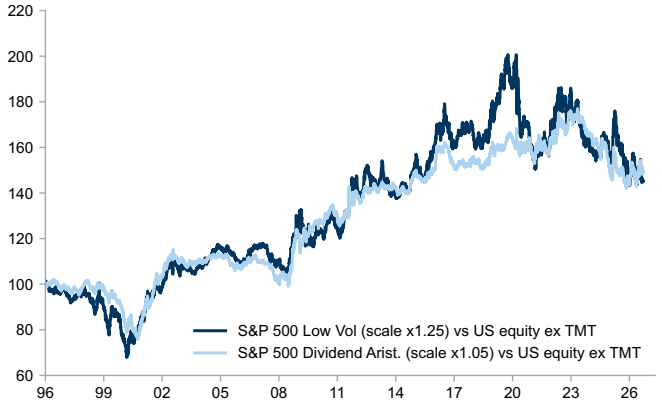


Style diversification: correlation of US equity with low volatility and high DY stocks. Sector diversification: average pairwise correlation between US sectors.

Source: Bloomberg, Haver Analytics, Kenneth French, Goldman Sachs Global Investment Research

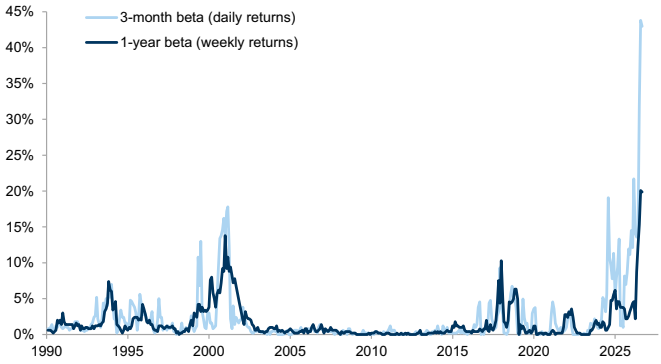
While low-volatility and high-dividend stocks have lagged the broad market since the COVID-19 crisis, they have performed better relative to the market excluding Tech (Exhibit 28). And in Tech-driven equity drawdowns, like the Deepseek sell-off in Q1 2025 and the momentum unwind in July 2026, they materially outperformed. In fact, the proportion of stocks with a negative beta to the market has increased sharply, very similar to the Tech Bubble (Exhibit 29). As we recently wrote, this is in large part due to the growing Tech and AI dominance in equity benchmarks – after the Tech Bubble burst, low volatility and high dividend yield stocks were also up, with S&P 500 down 46% and the TMT sector down 79%. This was in part because they benefited from lower bond yields, but even during the 2022 drawdown without a large decline in bond yields, they managed to outperform materially.

Exhibit 28: Low vol and high dividend yield stocks can outperform the market ex Tech on a risk-adjusted basis
Relative excess return scaled to match the volatility of US equity ex TMT



Source: Datastream, Haver Analytics, Goldman Sachs Global Investment Research

Exhibit 29: Similar to during the Tech Bubble, the proportion of stocks with a negative beta has increased
Proportion of S&P 500 stocks with a negative beta

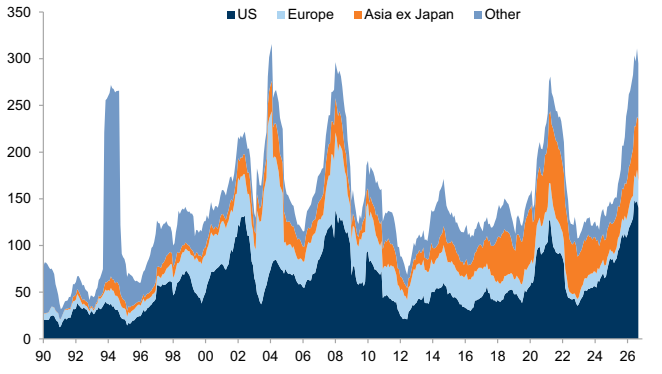


Source: Datastream, Goldman Sachs Global Investment Research

Equity-like bonds and the value of optionality

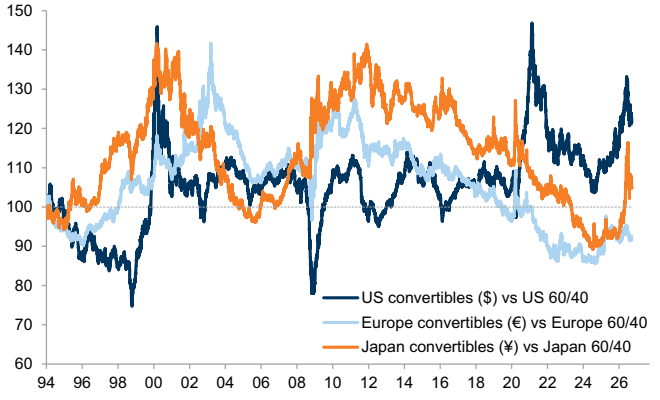
Equity-like bonds such as convertibles can provide upside exposure to equity through their embedded call option while having relatively low duration. As our credit strategy team highlighted, there has been a material pick-up in convertible issuance due to AI funding needs (Exhibit 30). Both during the late 1990s and around the GFC, convertibles outperformed vs. a 60/40 portfolio (Exhibit 31). They can outperform equities late cycle as they have an element of downside protection and rising volatility acts as a tailwind for convertible valuations because it may increase the value of the embedded option. As we recently illustrated, long-dated equity calls can be a very effective tool to tailor the risk/reward and manage equity exposure late cycle.

Exhibit 30: The issuance of convertibles has increased due to AI funding needs
12-month rolling convertible bond issuance (US$ bn)



Source: Bloomberg, Goldman Sachs Global Investment Research

Exhibit 31: Convertibles tend to outperform in late-cycle backdrops
Total return relative performance (rebased to 100)



Source: Datastream, Goldman Sachs Global Investment Research

Disclosure Appendix

Reg AC

We, Christian Mueller-Glissmann, CFA, Andrea Ferrario, Alessandro Giglio, Elena Porfidia and Peter Oppenheimer, hereby certify that all of the views expressed in this report accurately reflect our personal views, which have not been influenced by considerations of the firm's business or client relationships.

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