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The benefits of dynamic risk budgeting in a liquid, well-diversified strategy

Newton multi-asset solutions team

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In today's environment, characterised by high cash rates, low bond premiums and stretched equity valuations, investors need diversifiers more than ever, especially those that are liquid in nature.

But not all liquid diversifiers are created equal, and there is a need to be discerning. Typically, investors turn to liquid diversifiers for their potential to offer positive returns when traditional stock and bond markets do not. However, some liquid diversifiers take a single-strategy approach and/or rely on static diversification across sub-strategies. Trend following, for instance, is a singular liquid alternative strategy that over time has demonstrated low correlation to traditional markets.

Nevertheless, trend-following strategies have performed better in certain market environments than in others (for example, 2022 was favourable while 2023 was not). Accordingly, we believe it is important for investors seeking a core allocation to liquid diversifiers to focus on a robust multi-strategy solution with the following features:

- Depth and breadth of alpha drivers across and within asset classes, using a large investment opportunity set
- Thoughtful risk management that targets diversification with respect to equities as well as other asset classes
- Dynamic risk-budgeting approach that sizes underlying portfolio allocations based on conviction and the current opportunity set

Depth and breadth of alpha signals and investment opportunity set

A well-designed diversified liquid alternative strategy needs to have breadth in both the investment opportunity set and the alpha signals. For example, Newton's Dynamic Factor Premia strategy invests long and short in over 80 equity, fixed-income, foreign-exchange (FX) and commodity markets. Its robust design is centred on four distinct alpha-seeking strategies: macro relative value, cross-asset trend, equity factor long/short and commodity long/short. Within these four core strategies, there are 20+ unique alpha components. For example, macro relative value within developed-market FX is one component, and developed-market bond trend is another. This provides us with a rich opportunity set across liquid financial markets to increase diversification in the overall strategy design as well as the alpha potential. However, given the sophistication of such a strategy, it is necessary to carefully define the 20+ alpha components to which risk can be allocated.

Dynamic risk budgeting versus static diversification

The next decision, and an integral part of portfolio construction, is how to allocate risk to each alpha component. It is important to anchor risk allocations around long-term balanced targets.

However, we believe that maintaining static risk budgets to each component over time is a suboptimal approach. It ignores the fact that the alpha potential of a singular component depends on the prevailing market environment and materially varies over time.

In our view, dynamic risk budgeting is a more effective approach as it enables the portfolio to size each component's risk allocation based on the current opportunity set, which is particularly relevant in the fast-evolving, volatile backdrop that characterises the current market regime.

Proof points:
Dynamic risk budgeting case studies

Over the long term, we expect all our alpha signals to generate positive performance (although this is not guaranteed). However, that does not mean that we should hold a static allocation. As the opportunity set changes amid the prevailing market conditions, so should the risk allocation. As a proof of concept, consider carry and trend signals for global fixed income and FX. Carry is a relative-value signal and is based on the belief that you want to invest long (short) in those sovereign bond markets or currencies that offer the highest (lowest) returns if interest or FX rates do not change (i.e. you want to seek positive carry). For ease of illustration, we use a simplified signal definition: FX carry is derived from short-term (three-month) interest rates,[1] and bond carry is calculated by the slope of the yield curve (the difference between 10-year and three-month bond yields).[2]

Trend is a directional signal – meaning positioning will be net long or net short in certain markets – and invests based on the belief that upward-trending markets will continue to increase and downward-trending markets will continue to decline.

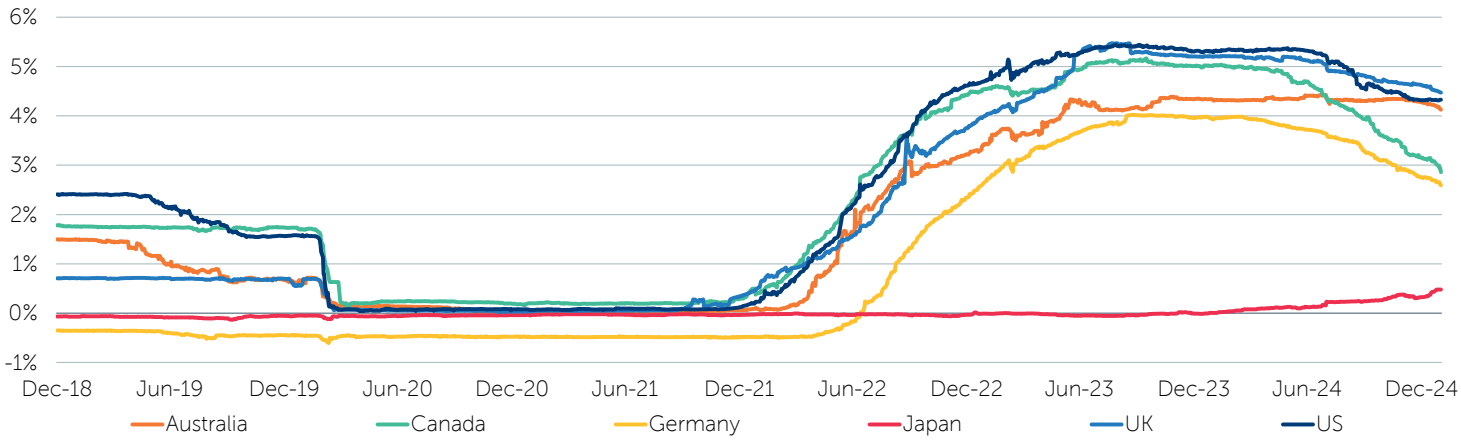
In the exhibits below, we show the evolution of the carry and trend signals since 2019 and how they have reacted to various market conditions including before the Covid pandemic, during the Covid pandemic and post the Covid pandemic until today.

FX carry

Exhibit 1 shows the evolution of global short-term interest rates for six developed markets – Australia, Canada, Germany, Japan, the UK and the US – from the end of 2018 to January 2025.

Exhibit 2 quantifies the degree of differentiation (a proxy of the opportunity set) in global short-term interest rates at each point in time as measured by their cross-sectional standard deviation. As carry is a relative-value signal (i.e. it goes long/short in a market-neutral manner), the alpha opportunity increases as dispersion across countries increases.

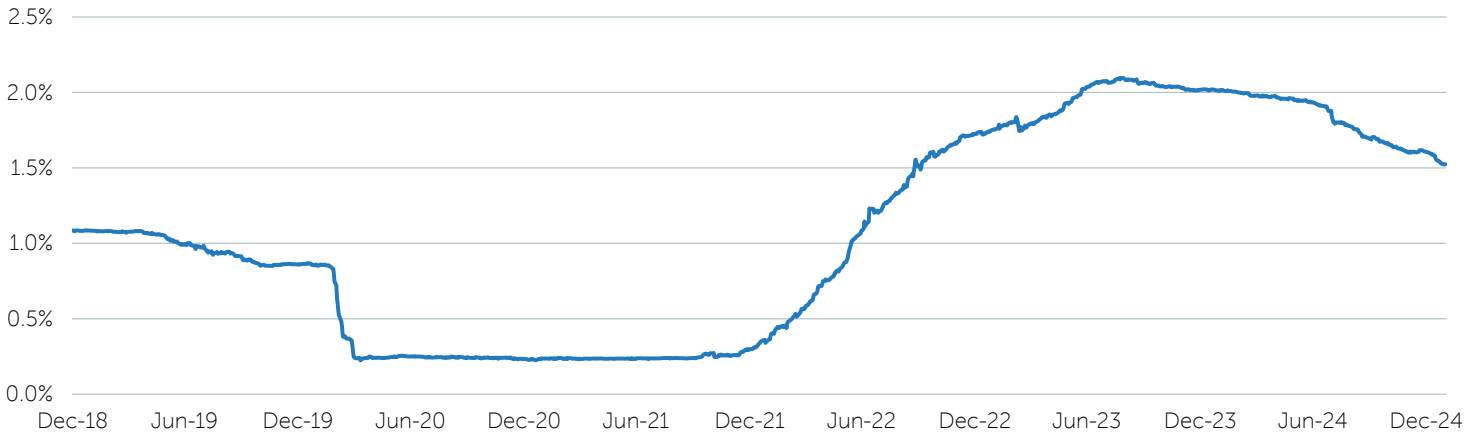
Exhibit 1: Three-month interest rates (FX carry)



Source: Newton, Bloomberg, Datastream, 31 December 2024

[1] A more sophisticated FX carry signal would derive carry from FX forward curves.
[2] A more sophisticated bond carry signal would use the yield of the bond actually tracked by the bond future and include the roll down component to capture the shape of the yield curve.

Exhibit 2: Standard deviation of three-month interest rates (i.e. dispersion in FX carry)



Source: Newton, Bloomberg, Datastream, 31 December 2024

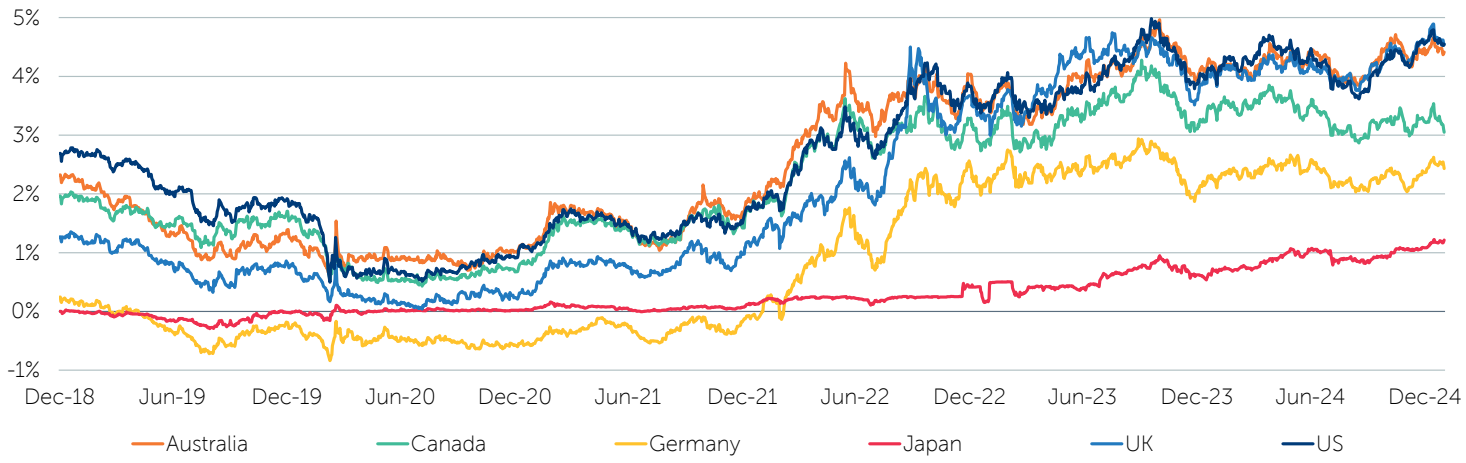
In this simplified[3] example of FX carry, both exhibits 1 and 2 illustrate the need for a dynamic risk-budgeting process. Prior to the outbreak of the pandemic, global short-term interest rates were relatively low for all countries, with some differentiation as US three-month Treasury Bill rates were close to 2% and German three-month cash rates were negative. However, once Covid broke out in early 2020, short-term rates dropped to around zero across all six countries, which virtually eliminated any carry opportunity and thus alpha potential, implying this signal should be given a very low risk allocation. In the aftermath of Covid (2022 onwards), however, the environment changed markedly. Most global interest rates started to rise quickly, and the carry alpha opportunity also increased as central banks took different monetary-policy actions. For instance, the Bank of Japan kept target rates near zero and did not begin hiking until 2024, while the US Federal Reserve (Fed) hiked seven times between September 2022 and July 2023. Over this time frame (2022-2023), the US dollar offered meaningful carry over the Japanese yen and the yen depreciated by approximately 18%.

As illustrated in exhibit 2, there is currently a relatively rich opportunity set in our FX carry signal – and thus this component should warrant a larger risk allocation than there was in 2020 and 2021 when yields were compressed.

Bond carry

Exhibit 3 shows the evolution of 10-year global bond yields for the same six developed markets since late 2018, and exhibit 4 shows the corresponding evolution of the difference between 10-year and three-month global bond yields (or the 'slope'). The slope is a simplified proxy for our bond carry signal.

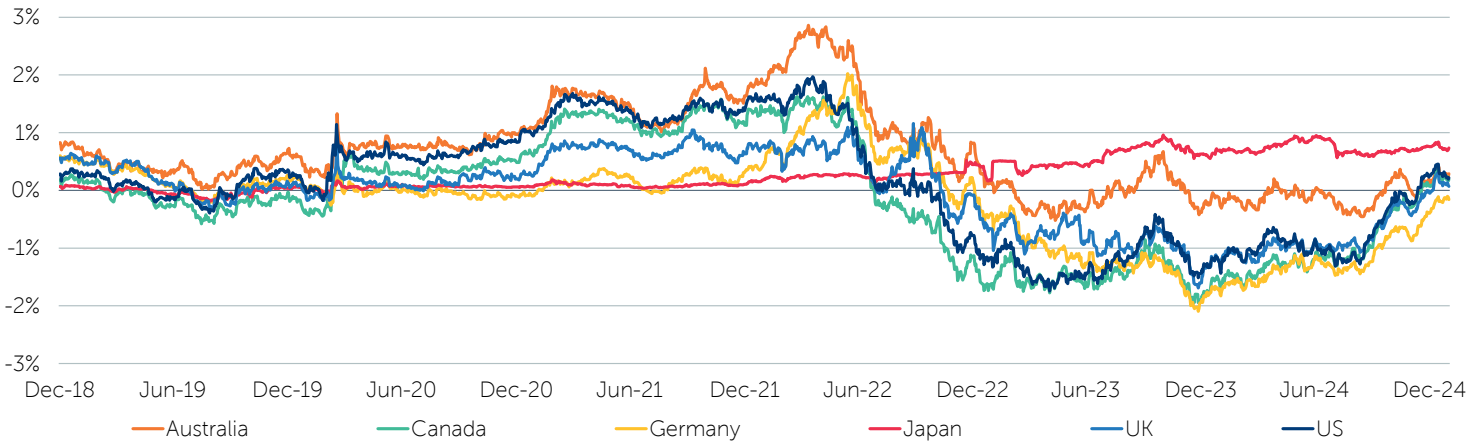
Exhibit 3: 10-year bond yields



Source: Newton, Bloomberg, Datastream, 31 December 2024

[3] A more sophisticated approach would also consider an asset's volatility when determining the opportunity set for carry.

Exhibit 4: Bond yield slope – 10-year minus three-month (bond carry)



Source: Newton, Bloomberg, Datastream, 31 December 2024

Exhibit 5 quantifies the differentiation or dispersion in this slope signal by measuring its cross-sectional standard deviation.

Exhibit 5: Standard deviation of bond yield slope – 10-year minus three-month (bond carry dispersion)

Source: Newton, Bloomberg, Datastream, 31 December 2024

The dynamics for bond carry are quite different to FX carry over this time frame. Before the Covid pandemic, while the opportunity set for FX carry was moderately attractive, global bond yield slopes were compressed with very little differentiation, warranting a low risk allocation. Then, while the onset of the pandemic brought nearly all global short-term rates to zero, not all 10-year bond yields followed suit. For example, Australian, Canadian and US 10-year bond yields remained appreciably above zero, generating moderate differentiation in bond yield slopes. This represented a moderate alpha opportunity, implying a moderate risk allocation.

During the first half of 2022, as inflation became a major concern, global central banks began a hiking cycle which caused short-term rates to converge to 10-year bond yields, reducing any differentiation in the bond yield slope. This resulted in fewer alpha opportunities, implying less risk allocation to bond carry.

From the second half of 2022 to the end of 2023, we saw the acceleration and stabilisation of central bank rate hikes. During this period, there were different reactions from different countries' 10-year bond yields, increasing differentiation in the bond yield slopes. This increased alpha opportunities, favouring greater risk allocation during this period.

Finally, during the central bank easing cycle that started in 2024, global short rates started to converge towards 10-year bond yields once again, reducing differentiation in the bond yield slope. This has reduced alpha opportunities and implies a lower risk allocation to bond carry today.

These contrasting periods show how it makes sense to take less risk in bond carry strategies today than during the pandemic when global bond slopes were more differentiated, which created a more attractive opportunity to capture carry.

Bond trend

Exhibit 6 shows a simplified US bond trend alpha signal, which is an exponentially weighted moving average with a six-month half-life using daily returns of the US 10-year Treasury future.

Exhibit 6: US bond trend signal

Source: Newton, Bloomberg, 31 December 2024

Similar to the above examples of FX carry and bond carry, the attractiveness of US Treasury bond trend has varied significantly since the end of 2018. The bond trend signal was strongest on the positive side in early 2020 as bond yields were falling in reaction to the pandemic. Conversely, the signal was very negative on bonds during the inflationary period of 2022, which put strong pressure on bond yields to rise. Currently, the bond trend is more muted and only implies a small risk allocation.

FX trend

Exhibit 7 shows a simplified US-dollar trend alpha signal, which is an exponentially weighted moving average with a six-month half-life using daily returns of the US dollar (DXY) index.

Exhibit 7: US-dollar trend signal

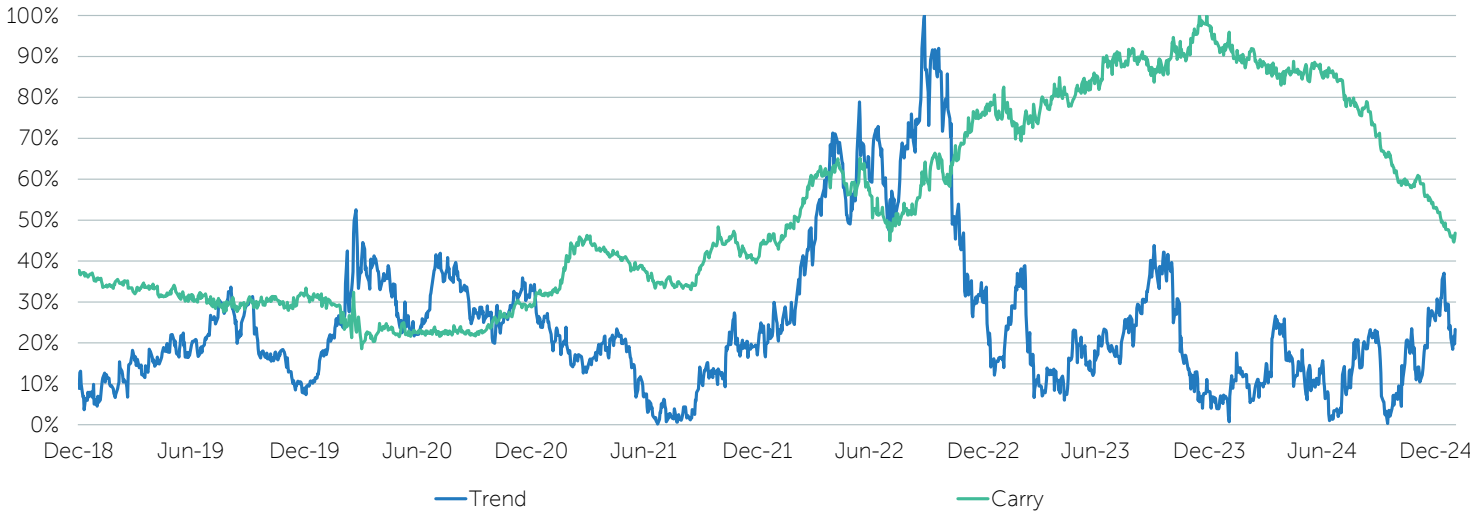
Source: Newton, Bloomberg, 31 December 2024

The strongest US-dollar trend signal was during 2022 as the Fed was raising rates to combat inflation and investors flocked to safety due to turbulence caused by Russia's invasion of Ukraine. Today, the US-dollar trend signal is positive but much weaker than during 2022. This implies that less risk budget should be given to US-dollar trend today than during 2022.

Combining carry and trend

Thus far we have shown examples of how the alpha opportunity, and hence risk budget, for different alpha components has varied throughout time. Since we take a diversified, multi-strategy approach, we need to aggregate carry and trend opportunities across asset classes. This gives us a better gauge of the overall alpha 'intensity'[4] at a strategy level for both carry and trend.

Exhibit 8: Carry and trend 'intensity' score



Source: Newton, Bloomberg, Datastream, 31 December 2024

Since the end of 2018, the largest alpha opportunity, and hence largest risk allocation to carry, was at the end of 2023/beginning of 2024 when there was wide dispersion in both short-term interest rates (FX carry signal) and bond yield slopes (bond carry signal).

On the other hand, since the end of 2018, the largest alpha opportunity, and hence largest risk allocation for trend, was the middle of 2022 when bond yields were materially falling and the US dollar was significantly strengthening.

A multi-strategy approach with dynamic risk budgeting could take advantage of this differentiated opportunity set appropriately by placing a larger emphasis on trend alpha components in 2022 and then shifting towards the carry alpha components in 2023 and early 2024.

[4] Since carry is cross-sectional alpha and trend is directional alpha, each component must have its own 'intensity' definition. Carry 'intensity' in each period is defined as the aggregate of dispersion of FX and bond carry signals measured by cross-sectional standard deviation, normalised by FX and bond carry respective time series standard deviation of these cross-sectional standard deviations. Trend 'intensity' at each point in time is defined as the aggregate of strength or absolute value of FX trend's and bond trend's signal, normalised by FX and bond trend respective signal time series standard deviations. Both 'intensity' metrics in the chart are normalised to be between 0% and 100%, by dividing each metric by its maximum.

Dynamic risk budgeting can lead to greater alpha potential

In conclusion, applying a dynamic risk-budgeting approach can add value to an investment strategy. The alpha-generating potential of different strategies can wax and wane based on the evolution of the market backdrop, and dynamic risk budgeting will be alive to this and calibrate exposure to align with where the highest-conviction opportunities are. The more alpha components, the more impactful dynamic risk budgeting should be, and thus a multi-strategy approach with a wide array of alpha components should materially benefit from dynamic risk budgeting. It is worth noting that in our proprietary historical simulations,[5] dynamic risk budgeting tends to increase a diversified portfolio's risk-adjusted returns by approximately 15% over the long term compared to a static risk-budgeting approach. This favours dynamic, nimble strategies rather than rigid, formulaic approaches.

Want to find out more?

Newton Investment Management Limited
Registered office: 160 Queen Victoria Street,
London EC4V 4LA
Registered in England No. 01371973
Tel: 020 7163 9000
newtonim.com

institutional@newtonim.com
Newton Investment Management

[5] Historical simulations based on simulated past performance. Past performance is not a reliable indicator of future performance.

Newton Dynamic Factor Premia strategy - key investment risks

- **Objective/performance risk:** There is no guarantee that the strategy will achieve its objectives.
- **Derivatives risk:** Derivatives are highly sensitive to changes in the value of the asset from which their value is derived. A small movement in the value of the underlying asset can cause a large movement in the value of the derivative. This can increase the sizes of losses and gains, causing the value of your investment to fluctuate. When using derivatives, the strategy can lose significantly more than the amount it has invested in derivatives.
- **Changes in interest rates & inflation risk:** Investments in bonds/money market securities are affected by interest rates and inflation trends which may negatively affect the value of the strategy.
- **Credit ratings and unrated securities risk:** Bonds with a low credit rating or unrated bonds have a greater risk of default. These investments may negatively affect the value of the strategy.
- **Credit risk:** The issuer of a security held by the strategy may not pay income or repay capital to the strategy when due.
- **Emerging markets risk:** Emerging markets have additional risks due to less developed market practices.
- **New strategy liquidity risk:** This strategy is not expected to hold investments which would be considered illiquid; however, while the strategy is being established, it is possible that the liquidity profile of the strategy may fluctuate.
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- **Counterparty risk:** The insolvency of any institutions providing services such as custody of assets or acting as a counterparty to derivatives or other contractual arrangements, may expose the strategy to financial loss.

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