Paris-aligned objectives in Australian equities

Invesco Australian Equities

Introduction

Many investors remain confused with Paris Aligned Benchmarks (PAB), with off-the-shelf products requiring high Tracking Error (TE) and portfolio turnover, rendering their use a challenge for institutional investors. The challenge is exacerbated in Australia, with a concentrated equities market heavily exposed to high carbon emitting industries, whilst the *Your Future Your Super* regime demands careful spending of portfolio active risk budgets.

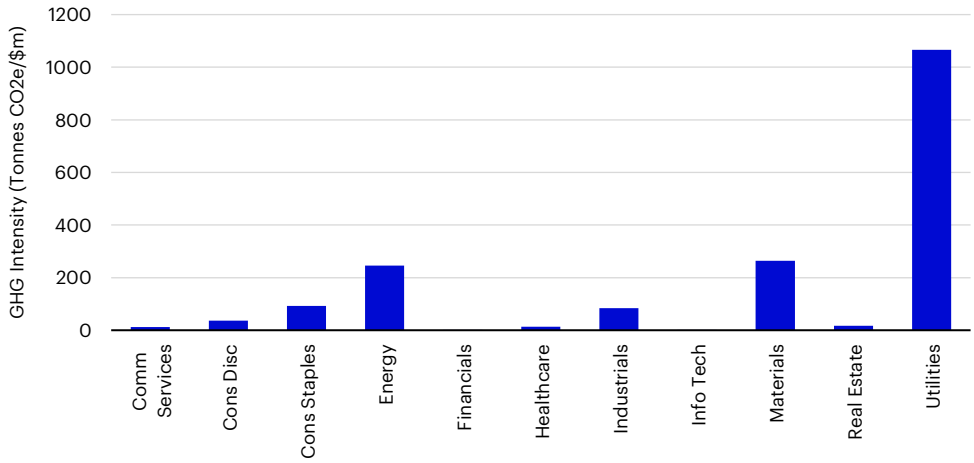
Extending a paper recently published by the Invesco Quantitative Strategies (IQS) team in 'Risk & Reward', 'Don't' be blind just because a benchmark is Paris-aligned'[1], we delve into the ASX300 universe to research the portfolio impact of following the Paris agreement guidelines in Australian equities. This supplement demonstrates for institutional Australian equities investors:

1. the key recommendations of the Paris-agreement and the corresponding portfolio tracking error required for each,
2. a strategy for investors seeking a low tracking error solution satisfying Paris-aligned outcomes and active returns objectives.

1. Decarbonisation in Australian equities

As in public equities markets globally, most greenhouse gas (GHG) emissions in Australian equities comes from companies in the Utilities and Resources sectors, making the investment challenge for reducing financed carbon emissions primarily about managing portfolio active risk associated with reducing exposure to these sectors. The Australian challenge is particularly acute, however, due to the prevalence of these industries and concentration of emissions, as shown in Figure 1.

Figure 1. Australian GHG Intensity[2] by industry averages



Source: ISS, Bloomberg, June 2023

[1] Risk & Reward, Q2 2023 Article.

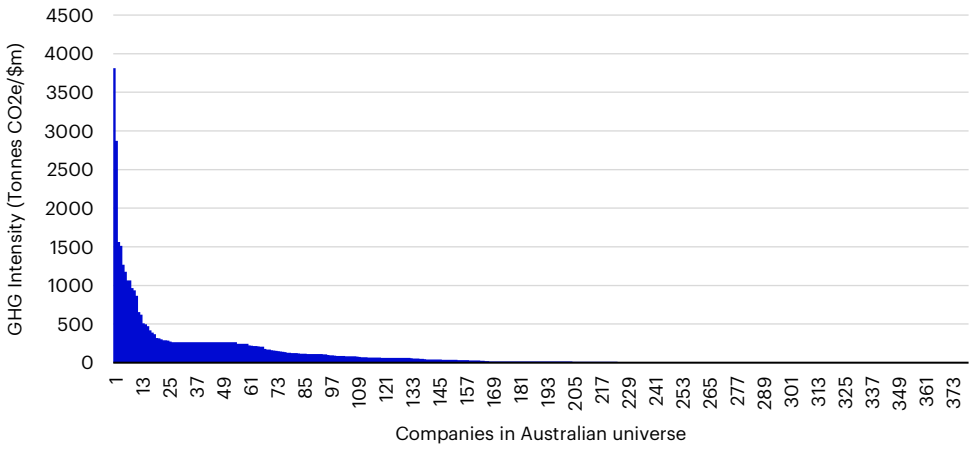
[2] Emissions intensity is measured using 'GHG Footprint', calculated as equivalent GHG emissions divided by a measure of company size. As the inflation of asset values can lead to a reduction in the GHG footprint merely by increase of the denominator, the regulations prescribe normalising it via the average change in EVIC (Enterprise Value Including Cash) of the index constituents.

Paris-aligned objectives in Australian equities

Digging deeper into the concentration of GHG intensity in ASX300 companies, Figure 2 ranks companies by GHG intensity. It is significant to note that 50% of GHG emissions intensity is from only the 20 most intensive emitters. While this implies financed emissions can be halved by simply avoiding investment in 20 names, on the other hand, it makes it challenging to reduce portfolio emissions intensity if, for whatever reason, avoiding these names is deemed undesirable. For instance:

1. the best financial interests test for members/clients deems an investment in these names compelling,
2. the investor's philosophy for emissions reduction is through engagement, requiring retained ownership of these names,
3. the active risk resulting from avoiding certain concentration of names is deemed inappropriate, as could be the case in the Australian *Your Future Your Super* regime.

Figure 2. Australian GHG Intensity, companies ranked from largest to smallest GHG intensity



Source: ISS, Bloomberg, June 2023. Missing values filled with industry averages.

In this paper we primarily explore the third option above, that the active risk resulting from avoiding certain concentration of names is deemed inappropriate, particularly in light of recommendations from the European Union around emissions reduction in the investment industry.

2. Paris-aligned benchmarks: portfolio impact in Australian equities

In 2020, the European Union set out minimum standards for Paris-aligned benchmarks (PAB) and climate transition benchmarks (CTB). The main objective of the benchmarks is to lower GHG emissions, proposing the following:

- an EU PAB requires GHG emission to be 50% below those of the parent benchmark; an EU CTB requires a difference of 30%,
- both PAB and CTB require an annual decarbonisation of 7% p.a. (geometric).
- exclusions: For CTB's, companies involved in controversial weapons or tobacco production must be excluded, as well as companies violating the UN Global Compact, the OECD guidelines for multinational enterprises or the EU environmental objectives. PABs add further restrictions in the field of fossil energies – in terms of both exploration and power generation.

As the EU guidelines are minimum standards, many vendor solutions for PAB's and CTB's go beyond the minimum and combine additional ESG outcomes, making the alternatives complex to consume and compare.

Paris-aligned objectives in Australian equities

In general, these vendor solutions come with a significant degree of active risk. As shown in Figure 2 of our recent paper, the MSCI World PAB alternatives have tracking errors ranging between 0.5% and 2.4%, with significant turnover requirements to add to the overall impact on investors.

Many investors cannot tolerate this level of impact. Australian superannuation funds need to comply with the *Your Future Your Super* performance benchmarks, which bring the active return for tracking error trade-off to the forefront. In response to member demand, many funds seek to support decarbonisation initiatives, but wrestle with the impact of PAB initiatives.

In Australian equities, the impact of decarbonisation – whilst somewhat different - is no less challenging. Research conducted by IQS endeavoured to decompose the tracking error impact of PAB and CTB benchmark minimum standards, boiling the answers down to two main decisions:

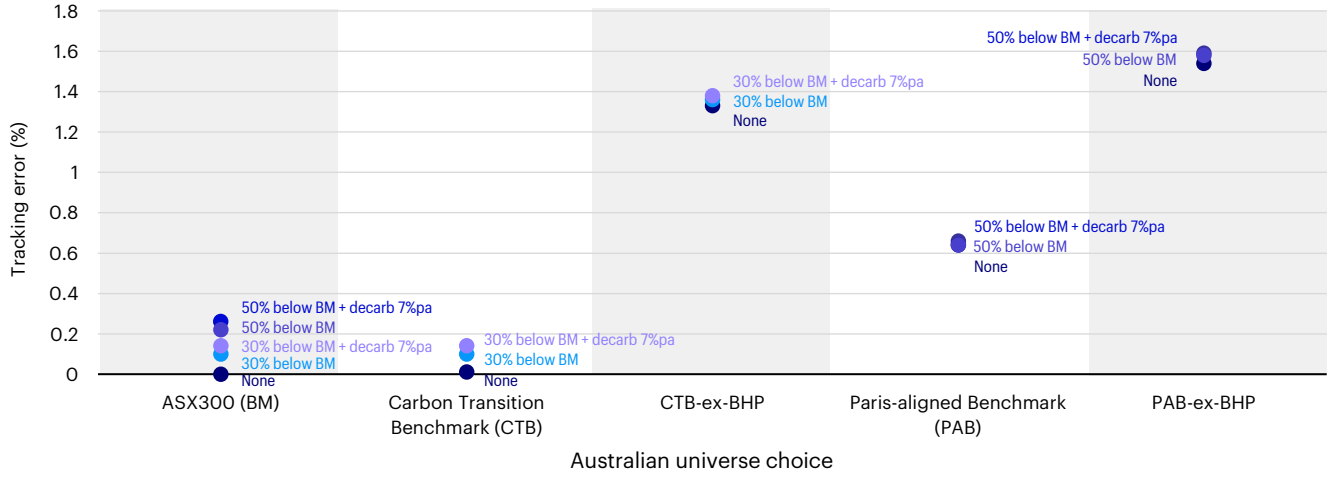
1. the resulting investment universe – where industry and other exclusions demanded by the minimum standards reduce the universe from the ASX300 broad market benchmark,
2. the level of decarbonisation sought – 30% (CTB), 50% (PAB), or the additional 7% p.a. reduction.

Figure 3 below plots the tracking errors for combinations of the above choices. Universe choice is categorised across the x-axis, while for each universe, the markers indicate the corresponding tracking error for different levels of decarbonisation.

Key observations of universe choice are:

- CTB don't require industry exclusions that are impactful in Australia. The tracking error of CTB (second universe in Figure 3) mimics that of the ASX300 (first universe in Figure 3).
- Both CTB and PAB require exclusion of companies violating UN Global Compact guidelines. In Australia, some ESG research houses have deemed BHP as failing this test. The third universe 'CTB-ex-BHP' shows the impact of removing BHP from the universe; the tracking error of excluding BHP alone is 1.33%.
- PAB require exclusion of companies breaching limits on revenue from fossil fuel exploration, extraction and distribution. This in isolation results in 0.64% tracking error, the fourth universe in Figure 3.
- PAB fossil fuels + BHP exclusion (fifth universe in Figure 3) demands 1.54% tracking error.

Figure 3. Tracking error* impact of low-carbon objectives by universe choice**



Source: Invesco. * ex-ante, based on the proprietary IQS risk model. ** Scope 1 + Scope 2 emissions.
CTB: Carbon Transition Benchmark, EU minimum standards. PAB: Paris aligned benchmark, EU minimum standards.

Choosing a higher level of decarbonisation should be an additional constraint, resulting in incremental tracking error to the impact of choosing the appropriate universe. However, as seen in Figure 3, in Australian equities this choice is second order, at least by comparison to the universe choice. The explanation is due to the emissions by Australian companies being so concentrated, as describe earlier in Figure 2. As such, emissions reduction can be achieved by avoiding investment in relatively few companies, with modest tracking error impact.

Key observations of emission reduction levels are:

- Across the ASX300:
  - reducing emissions by 30% can be achieved with 10 bps tracking error,
  - reducing emissions by 30%+7%p.a. can be achieved with 14 bps tracking error,
  - reducing emissions by 50% can be achieved with 22 bps tracking error,
  - reducing emissions by 50%+7%p.a. can be achieved with 26 bps tracking error.
- For other universes, except CTB – the second universe, the incremental tracking errors for increasing decarbonisation levels is even smaller.

The main take-away from these Australian equities observations is investors can choose a level of decarbonisation and universe exclusions corresponding to their tracking error budget.

3. Low tracking error strategy combining decarbonisation with active returns

As noted in the Risk & Reward paper on Global Equities, the above section demonstrated how the main elements of Paris alignment can be implemented in Australian equities with modest levels of active risk. This leaves room (tracking error budget) for the inclusion of return-seeking elements, using key Australian equity factors: Momentum, Quality and Value. Systematically gaining exposure to these factors can be done alongside Paris-aligned recommendations with minimal tracking error impact.

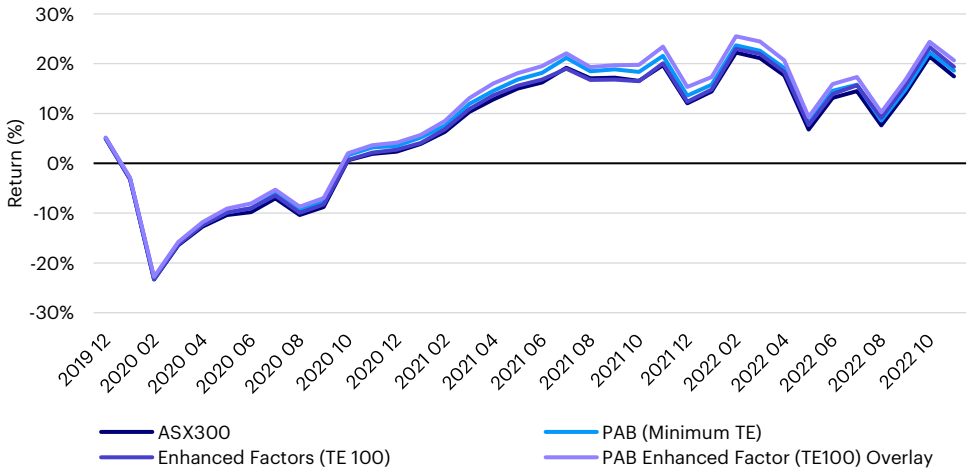
To enhance the active return of the strategy, we followed a two-step procedure:

1. a reference portfolio is constructed, applying the minimum standards used by Paris-aligned benchmarks with a minimal tracking error against the ASX300;
2. then an active multi-factor investment process is overlayed on to the PAB constructed in step one.

This layered approach has several benefits: it distinguishes between the effects of the Paris alignment criteria and the multi-factor management on the risk budget, prevents distortion of the optimal portfolio and bases the factor-focused optimisation on a benchmark that already incorporates the climate-related constraints.

Paris-aligned objectives in Australian equities

Figure 4. Cumulative performance of simulated Australian equities strategies



Source: Invesco, Axioma. All portfolios above are simulations using the proprietary IQS Multi-Factor model and CO2 Intensity data from ISS Climate Solutions. The PAB universe chosen includes BHP and decarbonises by 50%+7% p.a. Simulated performance is not a guide to future returns.

Figure 4 above shows the performance of a range of simulated active investment strategies against passive ASX300 performance. The simulated results suggest incremental performance can be achieved above the ASX300 by seeking exposure to factors while achieving decarbonisation objectives, all with a 1% tracking error budget. Figure 5b shows the tracking error and active return achieved by the respective strategies.

Key risk-return observations of these strategies are:

- The pure PAB simulation took 0.66% tracking error and produced 0.4% active return.
- The pure Enhanced Factor simulation took 0.8% tracking error and produced 0.65% active return.
- The combined simulation took 0.95% tracking error and produced 1.07% active return.

Figure 5a. Active factor exposures of simulated portfolios

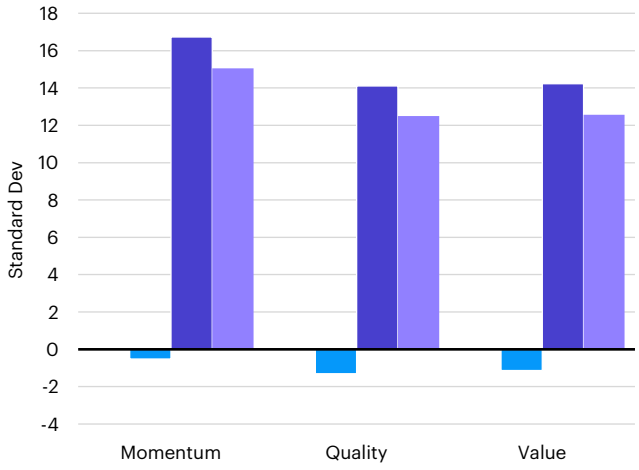
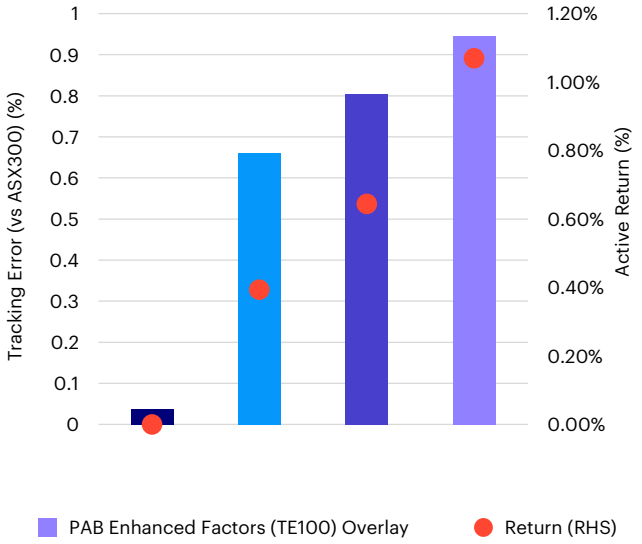


Figure 5b. Active risk and return of simulated portfolios



Source: Invesco, Axioma. All portfolios above are simulations using the proprietary IQS Multi-Factor model and CO2 Intensity data from ISS Climate Solutions. Simulated performance is not a guide to future returns.

Paris-aligned objectives in Australian equities

While it appears during this 3-year period[3] there was some positive return associated with PAB universe simulation,

1. the pure factor simulation produces active returns in line with expectation (information ratio 0.8), and
2. the combined simulation met expectations, generating active returns and reducing carbon in line with Paris-aligned guidelines, within the budgeted tracking error.

Importantly, as shown in Figure 5a, there is a stark contrast between the poor active factor exposure to the desirable Momentum, Quality and Value factors achieved in the pure PAB strategy and the superior exposure achieved in both factor-enhanced strategies. Combining decarbonisation with factor enhancement can meet the best financial interests test for investors, while meeting climate-awareness needs.

Conclusion

While tackling the decarbonisation and exclusion criteria of Paris-aligned guidelines can be complex, it is possible to deliver investment strategies meeting the goals of PABs in Australian equities within the modest tracking error budgets of investors using a layered approach to portfolio construction. More so, Paris alignment can be made compatible with financial objectives to produce portfolios that fulfil the key criteria of the Paris Agreement without compromising on investment return.

[3] Time horizon was chosen as decarbonisation base year in 2019, with an immediate 50% reduction in January 2020 plus 7% p.a. since then.