How has the Future Fund performed?

This paper presents analysis of the Future Fund's (FF's) investment performance. Section one provides background information, section two presents absolute comparisons with the APRA-regulated superannuation system (SS), section three presents tailored benchmarking analysis, and section four concludes and details possible extensions.

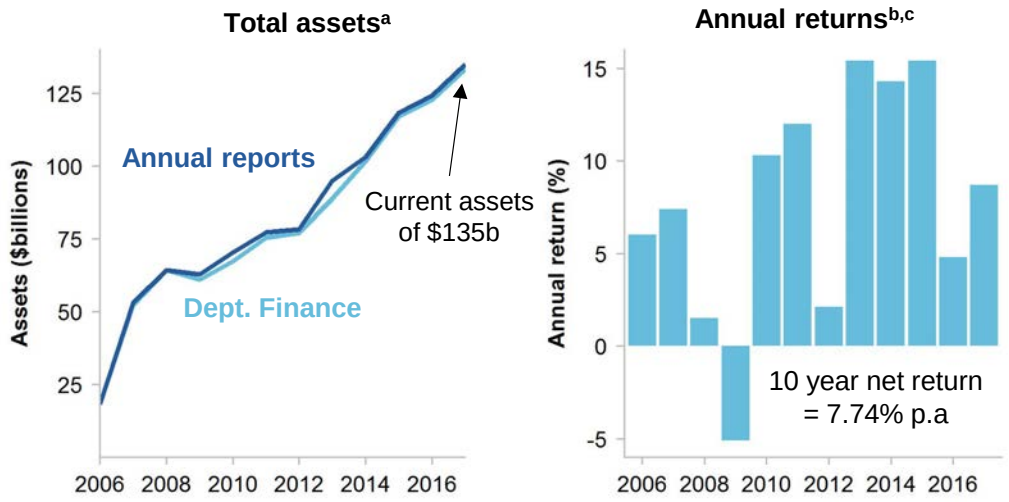
All Future Fund data used in this paper are sourced from annual reports, quarterly portfolio updates, and the Department of Finance website. APRA confidential fund-level data (2018) are used for the SS, and various financial index data providers are used for benchmarks.

Background

The FF started with about $60 billion in capital arriving in several tranches between May 2006 and November 2008. According to data provided by the Department of Finance, it has achieved a 10-year average net rate of return of 7.74 per cent per annum (figure 1).

Figure 1 **Future Fund(damentals)**

Assets and returns, 2005-06 to 2016-17



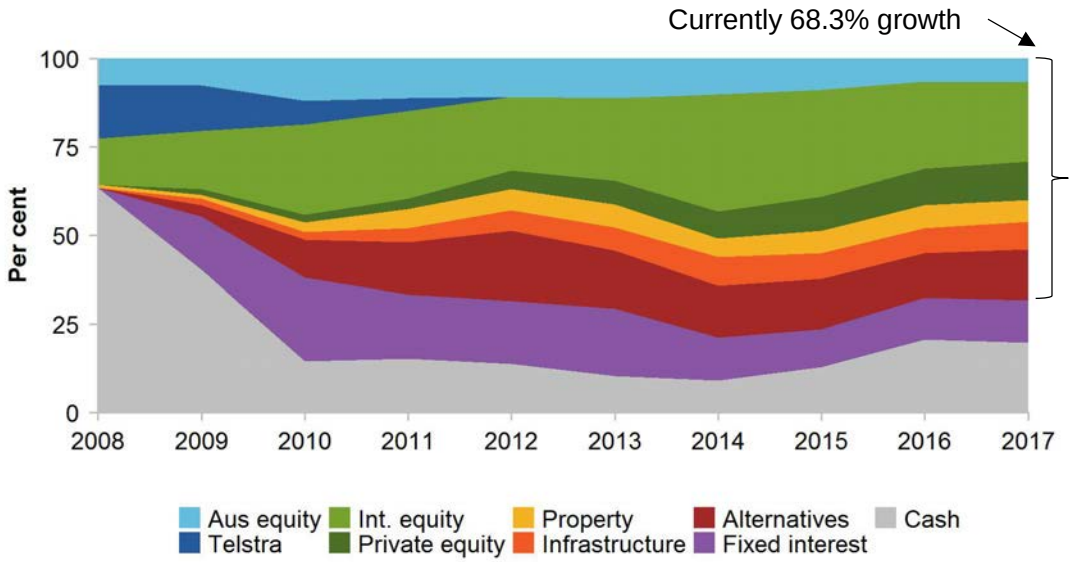
[a] The difference between these two measures is likely due to the annual reports recording investments at the end of the financial year and the Department of Finance presumably recording them earlier than this. [b] These returns are sourced from the Department of Finance, and are not stated to be explicitly net or gross. However, they match with reported net returns in annual reports from 2010-11. [c] Other (not in this figure) returns series are calculated from reported aggregate incomes and relevant expenses, with assets at the start of the year used as the denominator. These produced 10-year returns of 7.99 per cent (gross), 7.58 (net investment), 7.54 (net). See discussion below.

Data sources: Department of Finance, Annual Reports

The FF is well diversified (figure 2). The current investment strategy contains 68.3 per cent growth assets[1]. This is similar to the SS, which has 66.7 per cent in growth assets. However, the FF differs with relatively large allocations to private equity (10.9 per cent compared to 4.2 for the SS), infrastructure (7.9 per cent compared to 5.1), and other alternatives (14.2 per cent compared to 3.4[2]).

Figure 2 **The Future Fund is well diversified[a]**

Asset allocation, 2007-08 to 2016-17



a The Telstra holding was a 'special purpose' holding of Telstra shares on behalf of government. It was disposed of (potentially partially absorbed into the broader Australian equity portfolio, it is not clear) over several years, finishing in 2011-12.

Data source: Quarterly Portfolio Statements

The FF reports costs in a variety of forms. There are those reported in the 'comprehensive statement of income', those reported in the 'cost disclosures', and those reported as 'required by legislation'. These 'forms' appear to overlap and track each other in many cases. In any case, currently, costs (excluding tax) are probably around 0.25 per cent of assets (figure 3).

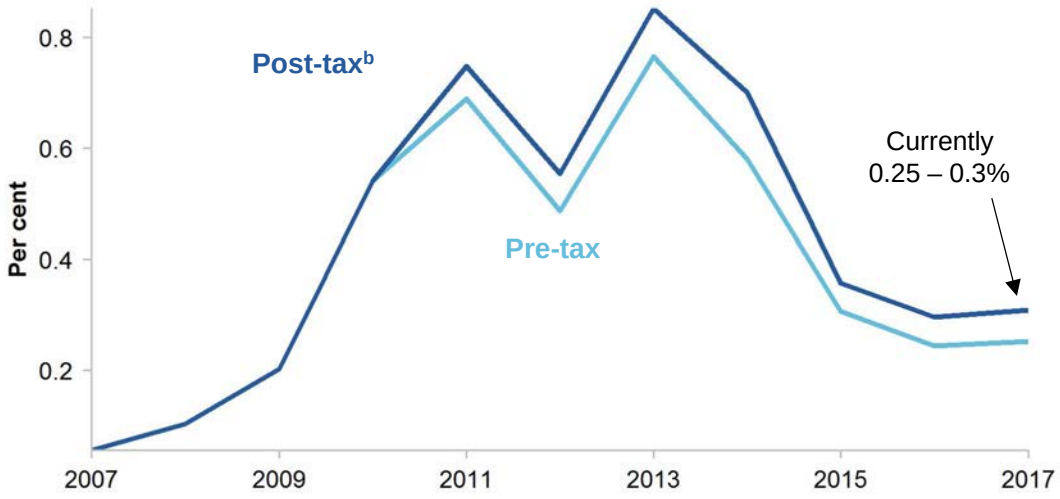
Costs rose sharply in 2009-10. This could be explained by the aggressive changes to asset allocation in that year (figure 2). Cost then fell sharply from 2013-14. This could be lots of fixed costs 'washing out' as the investment strategy was fully implemented.

1 Broadly defined as all asset classes except cash and debt/fixed interest. This abstracts from some nuance (for example, there are aggressive debt instruments that might better be classified as a growth asset).

2 The FF has a category 'alternatives', whereas the SS alternatives allocation was computed as the sum of 'other', and 'commodities'.

Figure 3 **Costs seem pretty low[a,c]**

Reported expenses, per cent of assets, 2006-07 to 2016-17



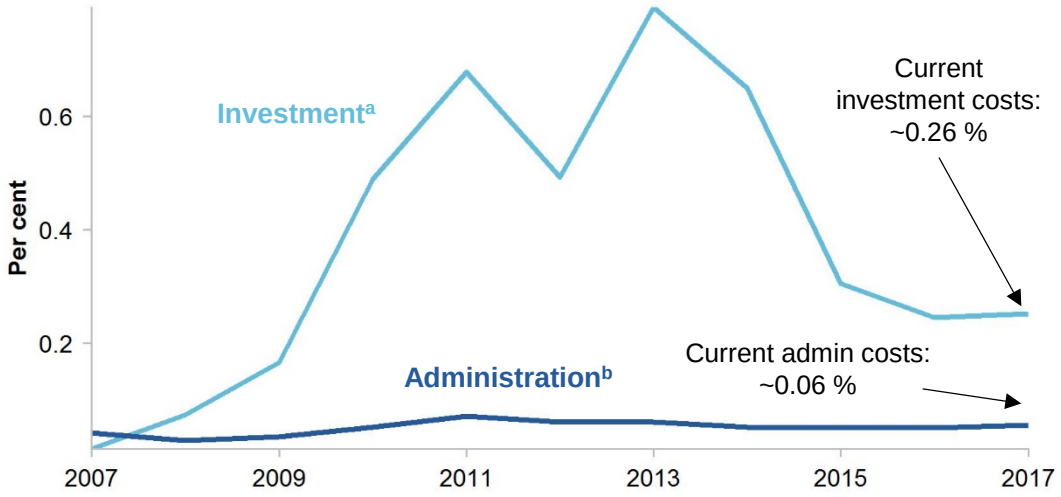
a Data come from the 'comprehensive statement of income' reported in annual reports and are calculated as a percentage of assets at the start of the year. Pre-tax expenses were not reported separately until 2010. **b** Includes 'income tax expense', which appears to be the cost of overseas taxation (the FF is exempt from Australian taxation for investment purposes). **c** Other cost data 'forms' are not included in this figure for simplicity. The 'cost disclosures' data mostly tracks the post-tax line in this figure. The 'required-by-legislation' data appears to undercount some costs and is about 0.15 per cent below the lines in this chart from 2010 to 2015 (much less so in other years, but still lower).

Data sources: Annual Reports, Department of Finance

Most of this cost is investment related (figure 4). This is to be expected, given the fund is not unitised and there are no accounts to administer.

Figure 4 **Investment costs dominate total costs[c]**

Per cent of assets, 2005-06 to 2016-17



[a] Income statement investment cost is the sum of: investment manager expenses; investment manager performance fees; custodian expenses; transaction expenses; audit expenses; brokerage, duties and other charges; other portfolio expenses; and income tax expenses. [b] Income statement administration cost is the sum of: administration expenses; departmental expenses; employee remuneration; board remuneration; depreciation and amortisation; and other expenses. [c] The 'required by legislation' investment cost includes only 'investment manager contracts' and sits below the investment cost line in this figure (more so for years 2010 to 2015). [d] The 'required by legislation' administration cost is the sum of: board remuneration, employee remuneration; consultants to the board; and operations expenses. It tracks the administration cost line in this figure closely.

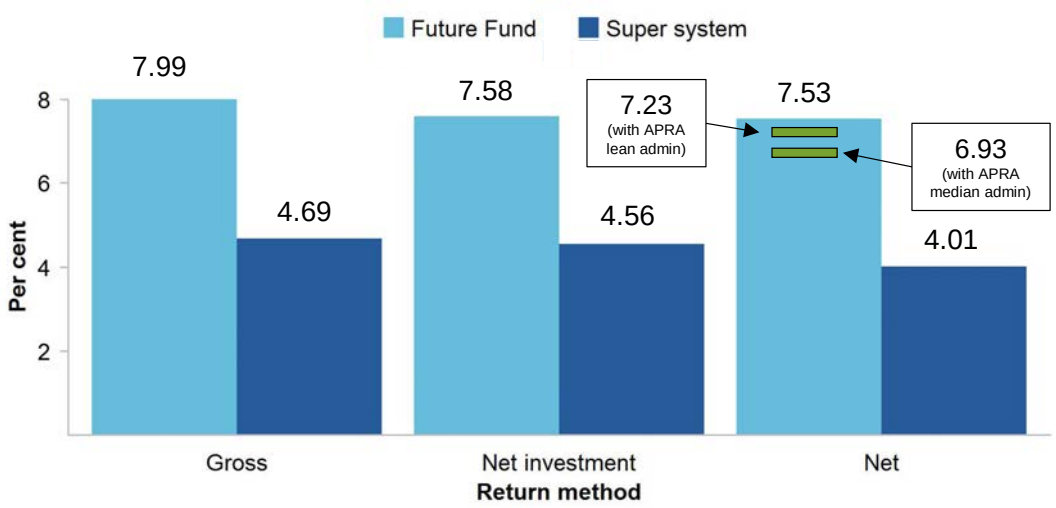
Data source: Annual Reports

Absolute comparisons

Over the 10 years to 2016-17 the FF has outperformed the SS by 3.3 percentage points per annum in gross terms, 3.02 in net investment terms and 3.52 in net terms (less so if APRA-regulated fund administration expenses are assumed) (figure 5).

Figure 5 **The Future Fund has been far superior over 10 years[a,b,c]**

Future Fund and superannuation system returns, 2008-2017



[a] Super system (SS) and Future Fund (FF) net investment returns are post-tax. However, the Future Fund is exempt from Australian investment taxation, so the only tax netted out of the FF return is foreign tax. Using a pre-tax net investment return for the FF lifts the net investment return to 7.63 per cent. Using a pre-tax net investment return for the SS drops the net investment return to 4.48 per cent (i.e. the SS received a tax credit over this time period). [b] The Future Fund net return is calculated from aggregate data, to best ensure consistency with the APRA calculation method for the super system. Using net returns as reported to the Department of Finance lifts the Future Fund net return to 7.74 per cent. [c] 'APRA lean admin' is the 25th percentile fund administration expense in each year. Similarly, 'APRA median admin' is the median.

Data source: Annual reports, APRA confidential fund-level statistics (2018)

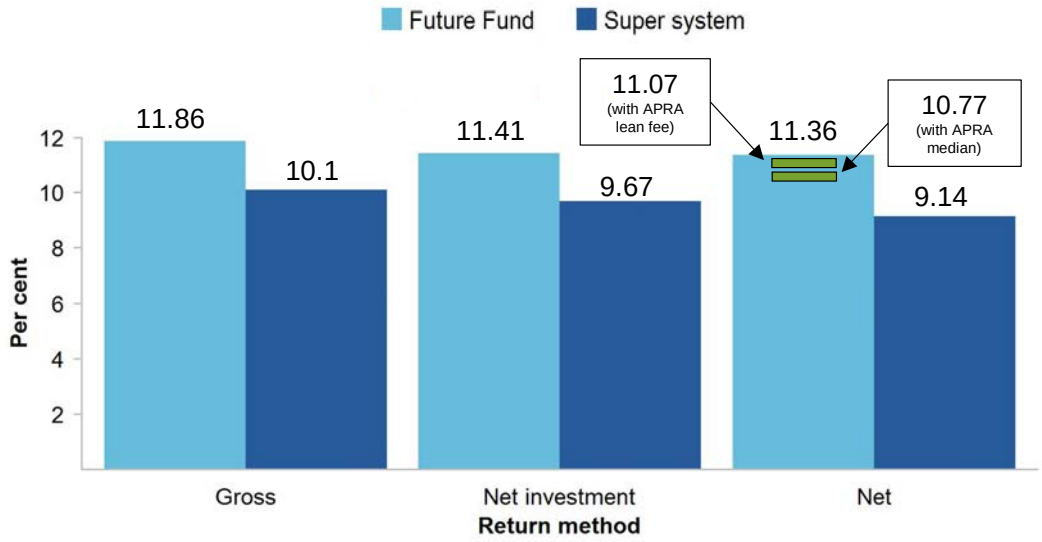
However, absolute comparisons between the FF and the SS are sensitive to time periods. The FF had 63.5 per cent of assets in cash just before the GFC, compared to 12.36 per cent for the superannuation system (default assets only). This meant the FF was largely insulated from the worst impacts of the GFC, before adopting a more growth-orientated strategy in the post-GFC era.

Over the medium term (five years), the performance gap closes to 1.76 percentage points per annum in gross terms, 1.74 in net investment terms and 2.22 in net terms (again, less if APRA-regulated fund administration expenses are assumed) (figure 6).

A large portion of this remaining discrepancy is likely explained by the FF's larger allocation to alternative assets, as detailed above.

Figure 6 **The super system gets closer over 5 years[a,b]**

Future Fund and superannuation system returns, 2013-2017



[a] Super system (SS) and Future Fund (FF) net investment returns are post-tax. However, the Future Fund is exempt from Australian investment taxation, so the only tax netted out of the FF return is foreign tax. Using a pre-tax net investment return for the FF lifts the net investment return to 11.49 per cent. Using a pre-tax net investment return for the SS lifts the net investment return to 9.87 per cent. [b] The Future Fund net return is calculated from aggregate data, to best ensure consistency with the APRA calculation method for the super system. Using net returns as reported to the Department of Finance lifts the Future Fund net return to 11.64 per cent.

Data source: Annual reports, APRA confidential fund-level statistics (2018)

Portfolio benchmarking

The FF has broadly tracked gross and net investment tailored blended benchmark portfolios (BP2s) (figure 7).

The BP2s presented in this section leave out administration fees given there is little external sources to draw a 'benchmark' administration expense ratio for the FF from, and including the FF's administration expense ratio is simply subtracting a constant from each side.

The BP2s are also not subject to portfolio-level tax adjustments. This is because the FF is exempt from Australian taxation (given the existence of franking credits, this could have a positive or negative impact). The FF does pay international tax, but the international equities index is already net of tax, and international equities should account for a significant portion of the FF's foreign tax expense[3].

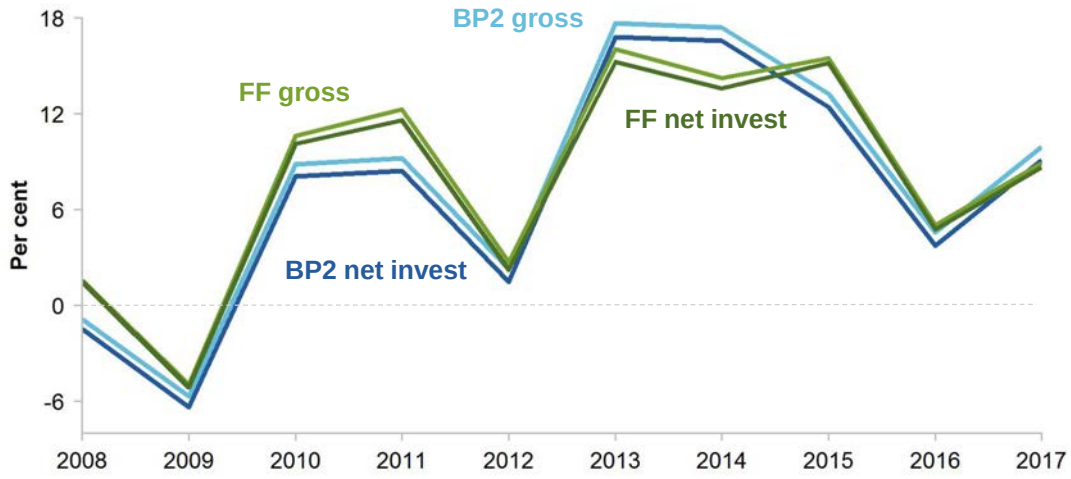
3 This means that the 'gross' benchmarking comparison is essentially more of a post-tax, but pre-investment expenses, comparison.

A key problem in designing BP2s is that the available FF data does not offer listed and unlisted breakdowns for property and infrastructure. The relevant breakdown for the SS is used, with averages used to impute missing data (as per the method in the draft report). The unlisted shares of these asset classes range from 57 to 77 per cent for property, and 70 to 78 for infrastructure. While these appear high, the language in the infrastructure and property 'sector review' sections of the FF annual reports talks heavily about direct investment and unlisted assets. And further, the BP2s appear to track the FF returns reasonably well (figure 7). These suggest the assumptions cannot be too far wrong.

A further (less severe) problem relates to domicile breakdowns for fixed interest, property and infrastructure. These breakdowns were only available for (roughly) the latter half of the time series[4]. The average of the available years is taken as the assumed breakdown for the preceding years.

Figure 7 **The Future Fund broadly tracks a tailored BP2**

Annual gross and net investment returns, 2007-08 to 2016-17



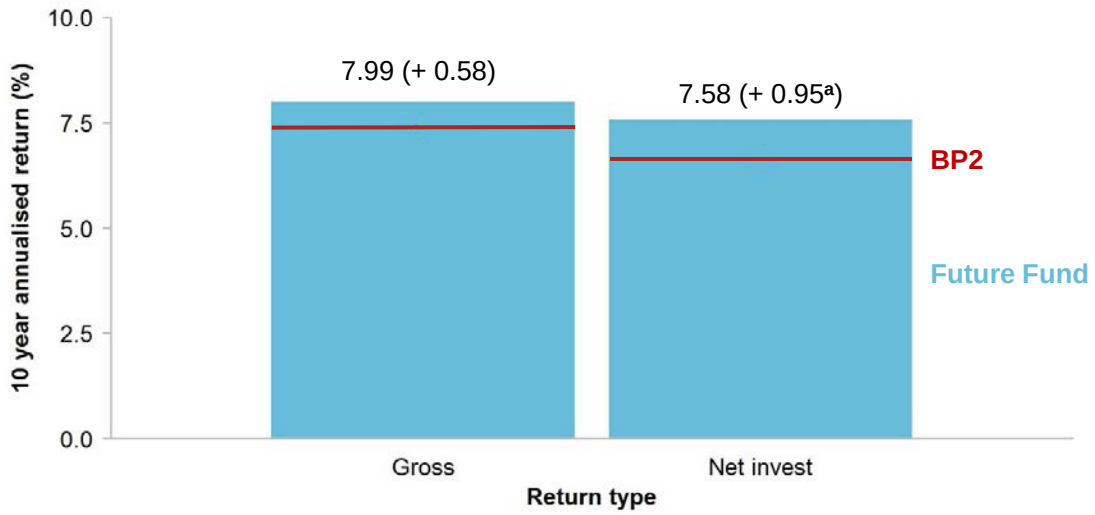
Data sources: Annual reports, Quarterly portfolio updates, APRA confidential fund-level data (2018), financial index providers (various)

The FF outperforms a 10-year annualised average tailored BP2 return on a gross and net investment basis (figure 8).

4 For fixed interest, these breakdowns are from 2011 onwards. For infrastructure, they are from 2010 onwards. For property, they are from 2012 onwards. As a note of interest, a private equity domicile breakdown is given from 2015 and hovers around 97 per cent international. This suggests the AVCAL index, which is domestic only, is not representative for the Future Fund.

Figure 8 **The Future Fund outperforms over 10 years**

Gross and net investment annualised average returns, 2007-08 to 2016-17



a If the 0.4 per cent valuation and custody cost is excluded from the net investment BP2 return, the outperformance falls to 0.55 per cent.

Data sources: Annual reports, Quarterly portfolio updates, APRA confidential fund-level data (2018), financial index providers (various)

The FF returns used in figure 8 are calculated from aggregates (total income divided by assets at the start of the period, with expenses subtracted from the numerator for net investment returns). As mentioned earlier, the returns reported to the Department of Finance produce a 10-year annual average *net* return of 7.74 per cent. There is no available data to make the denominator smaller, which means the Department of Finance series must be netting off fewer expense than our estimate[5]. Using this return, the net investment outperformance grows to at least 1.11 per cent (and it would be larger if administration were netted off the BP2).

Conclusions

The FF has outperformed the SS over the 10 years to 2016-17 by over 3 percentage points per annum. A large portion of this outperformance is likely due a conservative asset allocation leading into the GFC. The outperformance gap narrows to about 1.75 percentage points per annum when measured over the medium term (five years). A large portion of this

5 Although the returns series from the Department of Finance matches returns reported in annual reports from 2011-12 onwards, which are reported next to total net income figures that match the net income figures in the comprehensive statement of income. So in sum, it is not clear what is driving the discrepancy.

remaining gap is likely attributable to a higher allocation to alternative asset classes (private equity etc.) for the FF.

These factors aside, the FF's performance is clearly still strong. When measured against a tailored BP2 over the 10 years to 2016-17, the FF outperforms by 0.58 percentage points in gross terms, and 0.95 percentage points in net investment terms (net of investment fees and taxes but gross of administration fees).

Next steps

These results are preliminary. And at this stage we have not done any work comparing the FF to the default segment.

If we wanted to publish anything, we would need to test our method, ideally by talking directly to the FF. In particular, we would want to mitigate at least two key risks:

- some data may have been misinterpreted and used incorrectly
- the asset allocation assumptions may be wide of the mark.

Talking with the FF would also mean that:

- we may get access to better data, thus reducing our reliance on assumptions and ameliorating the risk of a transcription error (as data was scraped from reports)
- we may get good feedback on the suitability of indexes. The FF is heavy towards alternatives, and where information is available it suggests these may have an international bent. This means our domestic-only unlisted infrastructure and property, and private equity indexes may be unrepresentative.