



Construction & Building Industry Super

YFYS Performance Test

-Incorporating into Attribution Model

-November 2022





About Cbus Super

**\$71 Billion¹ Funds
under management**

**818K²
Total members with
balance**

**8.88%³ Annual
return since
inception**

**200k Approx.
number of
employees**

- ✓ Established in 1984 as one of Australia's first industry funds
- ✓ Dedicated fund for the Building & Construction and adjacent industries
- ✓ Unique competitive advantage in the property sector through Cbus property
 - ✓ Top Quartile long term Investment Performance
- ✓ Whole of fund approach to responsible investment incorporating ESG principles across investment decisions
- ✓ Strong historical growth in both Membership and Funds Under Management
- ✓ Recent merger with Media Super and pending merger with EISS positioning us for future growth
- ✓ Consistently recognised as a strong performing, fund of choice through multiple award categories

APRA YFYS attribution model-agenda



- YFYS performance test background
- Asset Owner requirements
- Incorporate Performance Test into Attribution Analysis (Ortec Finance - PEARL)
- Investment Team feedback
- Our view on YFYS performance test
- Q&A

APRA YFYS Performance Test



Construction & Building Industry Super

Figure 2: APRA benchmarks and assumptions

- 8-yr annualised active return of an investment option's Net Return against APRA-defined SAA benchmark adjusted for admin fees.
 - Failed if <-50bp
- Pre-defined Fee and Tax rate assumption for each asset class
- Currently required for MySuper products. Expansion to other Choice products have been paused as the methodology is under review.

Asset class	Index	Assumed fees	Assumed effective tax rate
Australian Equity	S&P/ASX 300 Total Return Index	0.05%	0%
International Equity (hedged)	MSCI All Country World Ex-Australia Equities with Special tax (100% hedged to AUD)	0.11%	14%
International Equity (unhedged)	MSCI All Country World Ex-Australia Equities Index with Special Tax (unhedged in AUD)	0.09%	14%
Australian Property (listed)	S&P/ASX 300 A-REIT Total Return Index	0.12%	14%
International Property (listed)	FTSE EPRA/NAREIT developed ex Australia Rental 100% Hedged to AUD Net tax (Super) index	0.22%	14%
Australian / International Property (Unlisted)	MSCI/IPD Mercer IPD Australian Monthly Wholesale Property Fund Index - Post-fee Total Return (All Funds)	0.00%	14%
Australian / International Infrastructure (listed)	FTSE Developed Core Infrastructure Index 100% Hedged to AUD Net Tax (Super) index	0.26%	14%
Australian / International Infrastructure (Unlisted)	MSCI Australia Quarterly Private Infrastructure Index (unfrozen) - Post Fee Total Return (All funds)	0.00%	14%
Australian Fixed Interest	Bloomberg Ausbond Composite 0+Yr Index	0.10%	15%
International Fixed Interest	Bloomberg Barclays Global Aggregate Index (hedged to AUD)	0.10%	15%
Australian Cash	Bloomberg Ausbond Bank Bill index	0.04%	15%
International Cash	Bloomberg Ausbond Bank Bill index	0.04%	15%
Other (assets categorized as Other / commodities)	Composite of: <ul style="list-style-type: none"> • 25% of benchmark for International Equity (hedged), • 25% of benchmark for International Equity (unhedged), • 50% of benchmark for International Fixed Interest 	0.10%	0.145%

Source: Australian Federal Government: Treasury Laws Amendment (Your Future, Your Super - Addressing Underperformance in Superannuation) Regulations 2021

- To shadow APRA's calculation
- To track fund's performance against the test on more timely basis and alert internal stakeholders if the fund's performance gets close to failing the test
- To produce performance test forecast and conduct what-if and scenario analysis
- The internal model to calculate the test typically starts with Excel



Why calculate the test internally?

- To understand underlying drivers of test results:
 - Understanding the benchmark mismatch
 - Which asset class contributed/detracted
 - Which asset allocation decision contributed/detracted
 - Understanding the fund's tax efficiency/inefficiency
- Excel model is no longer sustainable



Why did we want to build an attribution?

Our company



Expert provider of investment decision technology and solutions



Founded in 1981, 300+ employees, offices in Rotterdam, Amsterdam, Toronto, London, Zurich, New York and Melbourne



Independent – 100% owned by employees



Global and long-standing clients manage over €3 trillion in assets



Innovative & strong ties to academic world

What is your challenge?

Solutions provided

Insurance companies

Pension funds

Sovereign wealth funds

Wealth management & banks

Asset managers

GLASS

ALM and Strategic Risk Management



OPAL

Wealth and retirement planning & monitoring



PEARL

Performance measurement & attribution



Economic Scenario Generator

Realistic stochastic risk & return scenarios



Climate & ESG solutions

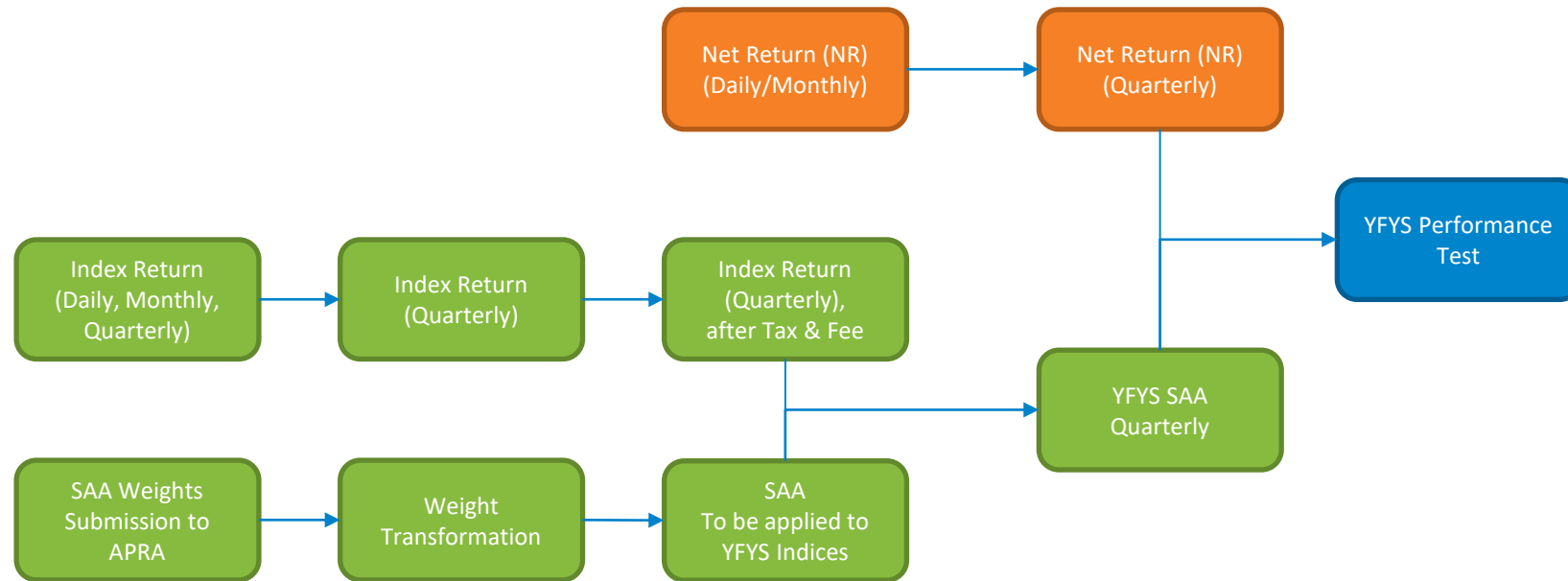
Climate resilient investment decision-making





YFYS Perf. Test Attribution

Additional data points are required for Attribution



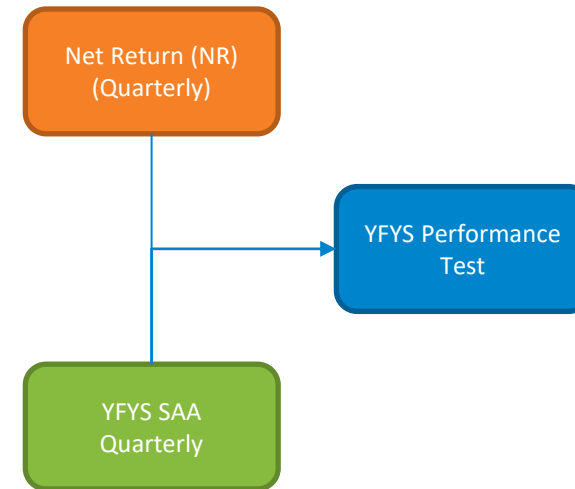
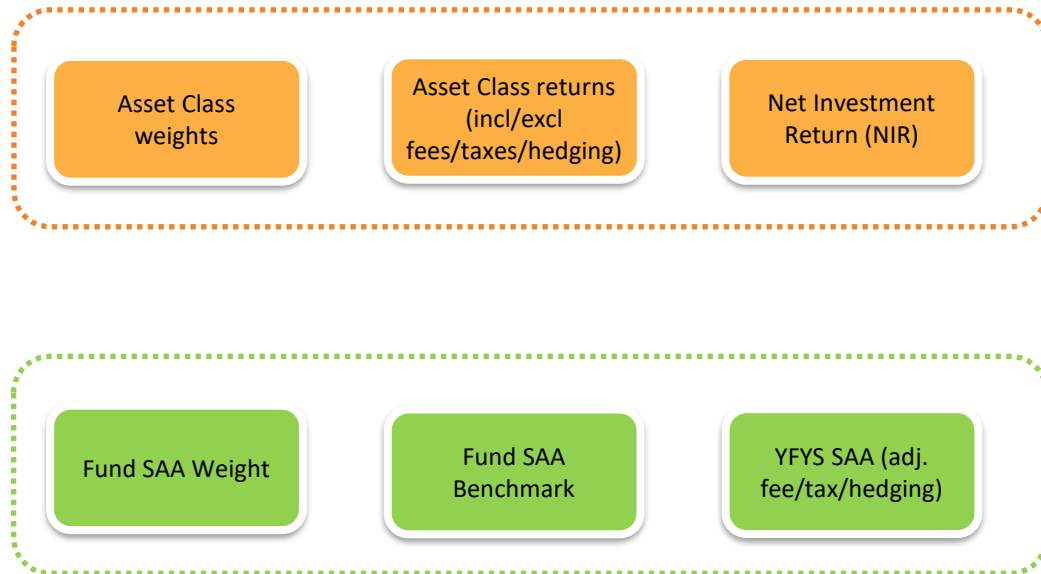
Fund:

- Net Returns (NR)

SAA Benchmark:

- SAA weights for YFYS asset classes
- Strategic hedging ratio: International Equities
- YFYS assumptions (weights, taxes, fees)
- BRAFE rate

Additional data points are required for Attribution



Fund:

- Net Returns (NR)
- Net Investment Returns (NIR)
- Asset class level mv/weights
- Asset class level returns (multiple flavours)

SAA Benchmark:

- SAA weights for YFYS asset classes
- Strategic hedging ratio: International Equities
- YFYS assumptions (weights, taxes, fees)
- BRAFE rate
- Variation of benchmark structures for attribution purposes
 - Include/exclude BRAFE rate
 - Include/exclude Taxes
 - Include/exclude strat. hedging policy

YFYS Attribution – an example

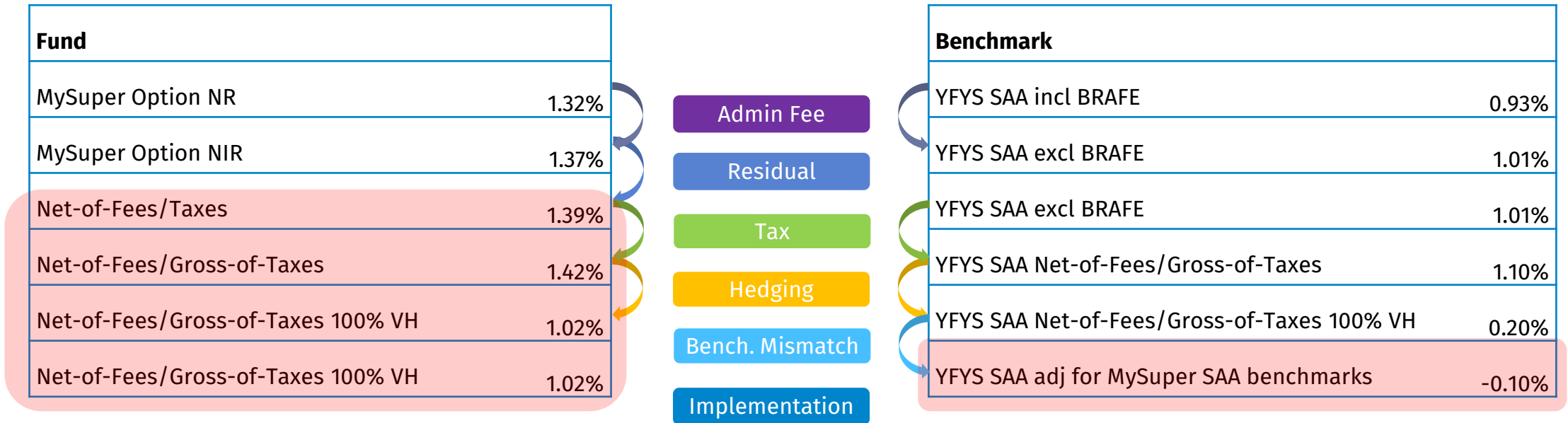
- MySuper Option
 - Fixed Income
 - Equity
 - Australian Equities
 - International Equities
 - Alternative Investments
 - Cash
 - Currency Hedging via Overlay on total fund level
- 1-Year history only
- Outperform by YFYS SAA by 39bps
- All data are dummy data

Strategic Asset Allocation	100.00%
Fixed Income	40.00%
Equity	40.00%
Australian Equities	8.00%
International Equities	32.00%
Alternatives Investments	20.00%
Cash	0.00%

YFYS Performance Test	
MySuper Option NR	1.32%
YFYS SAA (incl BRAFE)	0.93%
Over/Underperformance	0.39%

YFYS Attribution – an example

More data/benchmark structures are introduced



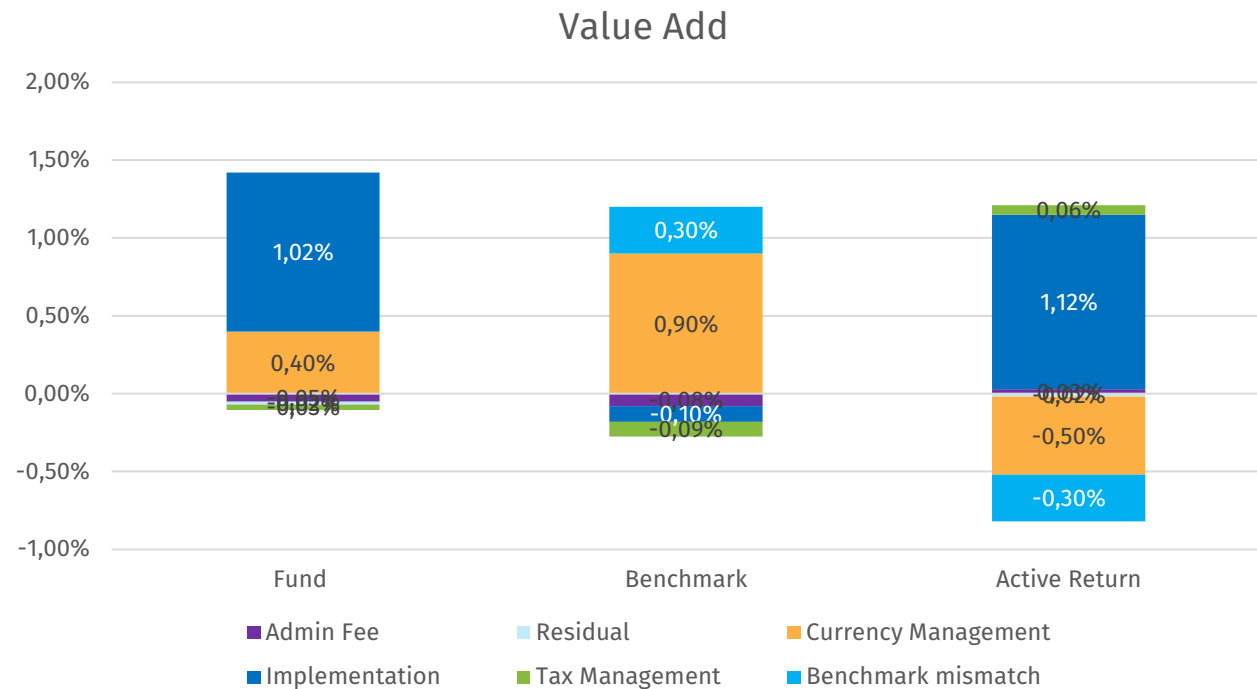
Bottom-up calculated, allowing breaking down to asset class/sector level for attribution preparation

Adjusted for benchmark selection difference between fund SAA and YFYS SAA

YFYS Attribution – an example

YFYS Performance Test	
MySuper Option NR	1.32%
YFYS SAA (incl BRAFE)	0.93%
Over/Underperformance	0.39%

Active Return Breakdown	
Admin Fee	0.03%
Residual	-0.02%
Tax Management	0.06%
Currency Management	-0.50%
Benchmark mismatch	-0.30%
Implementation	1.12%
Over/Underperformance	0.39%



YFYS Attribution – an example

Further breakdown implementation by asset class via a Brinson style attribution

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Benchmark mismatch	-0.30%
Implementation	1.12%
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Attribution report, Implementation Breakdown						
Description	PF Return	BM Return	XS return	Allocation	Selection	Total Effect
MySuper Option	1.0205%	-0.1000%	1.1205%	0.7535%	0.3670%	1.1205%
Alternative Investments	0.6391%	0.8461%	-0.2070%	0.0168%	0.0458%	-0.0290%
Australian Equity	-10.8592%	-16.7586%	5.8995%	0.4886%	0.3460%	0.8345%
Cash	-6.8602%	0.0000%	-6.8602%	-0.0283%	0.0000%	-0.0283%
Fixed Income	4.7258%	6.7761%	-2.0502%	0.1194%	-0.8350%	-0.7156%
International Equity	-2.8701%	-5.6306%	2.7605%	0.1570%	0.9019%	1.0589%

- Interaction is combined with the selection effect
- Both PF and BM return are 100% virtually hedged to ensure a fair comparison
- Allocation/Selection breaking down to asset class levels provides additional insights



YFYS Attribution – Reflection

- Multiple variations of YFYS SAA benchmarks are introduced
 - Constructed with PEARL’s benchmark composite tooling
 - Allows for more frequent YFYS SAA returns (daily/monthly) with tax/fee assumption applied in consistent with APRA assumptions
- Various flavours of asset class level returns are required for the attribution model
 - Net-of-fee, Net/Gross-of-tax, notionally hedged return
 - These are calculated directly in PEARL and fed straight to the attribution model → much less maintenance
- Reconciliation between bottom-up asset class returns v.s. NIR
 - Quality of data would drive the size of residuals
 - Residual is quantified in the attribution analysis
- Overlays at Option level, such as currency overlay
 - Taking currency impact out from the market implementation
- Historical changes in asset class structures, currency hedging strategies are taken into consideration in the model
- Attribution allows for more frequent analysis than quarterly over since-inception horizon

From Performance team:

- Accuracy is very high, results in line with the official published outcome
- Maintenance is very low
- Timely and Production ready reporting

From investment team:

- Enough level of granularity
- Attribution helped the investment team understanding drivers of the test results
- Provides meaningful input into SAA construction and Asset Class benchmark selection review



Feedback from Cbus teams

- The test should be longer (ideally at least 10 years).
- More asset classes should be used – for example including emerging market equities that is a standard SAA component for many funds
- SAA data should be collected more frequently than quarterly to capture SAA changes that don't occur exactly on quarter end
- The test should capture the SAA construction. SAA drives the vast majority of returns over the long-term, but is ignored in this test.



Our view on YFYS Test Performance Methodology

Q&A





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