How to use AustralianSuper Crediting Rates

Monitoring investment performance enables you to observe the returns of your retirement savings and compare performance against benchmarks. That’s why we have made daily and long-term returns easily accessible to view and download online.

Returns for Super, TTR Income and Choice Income investment options are published online regularly. You can view the returns of the investment options in the following categories:

### Annual performance:
- Daily Rates
- Cumulative Daily Rates
- Annual Rates
- Performance vs Benchmark (last financial year)
- Performance vs Benchmark Quarterly

### Financial performance
- Financial Year-to-Date (FYTD) returns
- Daily Rates
- Monthly Rates (current financial year)

To view and download our rates of return visit [australiansuper.com/performance](http://australiansuper.com/performance)

### Defining the types of returns:

**Daily rates**
These rates provide the daily returns for each investment option. The returns are displayed as percentages, so a daily rate of 1.10 reflects a return of 1.10%. Daily rates can be used to calculate returns for custom periods using the total return calculation described on page 2.

**Cumulative daily rates**
Cumulative daily rates represent a return on an investment option based on a continuous holding since 30 June 2008. For example, as at 31 December 2019, the cumulative daily rate for the Balanced investment option was 130.5666%. This means that an investment made on 30 June 2008 would have returned 130.5666% when held to 31 December 2019.

Please note that cumulative daily rates are not in the form of an index. To determine the return over a custom period between two dates, use the total return calculation described on page 2.

**Annual rates**
Annual rates provide the performance for a financial year for each of the investment options, back to their first full financial year of investment returns. Annual rates provide a way to compare how the investment options performed each financial year.

**Performance vs Benchmark**
These rates provide periodic returns for each investment option compared to their benchmark. Returns for periods greater than one year are annualised, which means that the cumulative performance is converted to per annum performance for those periods.

**FYTD Returns and Monthly Rates**
These rates provide returns for comparison over the current financial year-to-date and monthly time periods.

**Compound returns**
The returns on your investment accrue over time with each daily rate that you earn. This process is known as compounding, which means that the value of your investment is based on all the daily rates that you have received in your account. When calculating returns over custom periods a common error is to simply add the daily rates for the time period. This would not provide the correct result based on the compound returns that you receive on your investment. Calculating returns with daily rates over multiple days, months or years, requires a total return formula to provide an accurate reflection of the performance of your super.
Return calculations

When calculating returns for AustralianSuper investment options, the methods below can be used for determining an investment return over a custom time period.

**Daily rates method**

Daily rates can be used to calculate returns over multiple days, months or years. To calculate a total return over multiple days requires the compounding formula of:

\[
(1+r_1) \times (1+r_2) \ldots \times (1+r_n) - 1 = \text{total return}
\]

The variables:
- \( r \) = daily rate, where the subscripts denote each daily rate up to the total number of rates in the time period marked as “n” for the number of days.

Please note that the daily rates in the file downloaded from AustralianSuper’s website are in percent format. To use the daily rates in a mathematical formula, an adjustment is required to put the numbers into decimal format. This can be done by dividing the daily rates by 100.

Microsoft Excel can be used to calculate total return by using the following formula:

**Calculating total return over multiple days**

**The formula:**
\[
(1+r_1) \times (1+r_2) \ldots \times (1+r_n) - 1 = \text{total return}
\]

**The variables:**
- \( r \) = daily rate, where the subscripts denote each daily rate up to the total number of rates in the time period marked as “n” for the number of days.

Balanced option example calculation using downloaded daily rates data

6-month return ending 31 December 2019:

\[
30 \text{ June } 2019 \text{ cumulative daily rate} = 120.0820
\]

\[
31 \text{ December } 2019 \text{ cumulative daily rate} = 130.5666
\]

\[
\frac{(1+130.5666/100)}{(1+120.0820/100)} - 1 = 0.04764 \text{ or } 4.764\%
\]

**Calculating returns using Microsoft Excel**

For data in decimal format:

\[
\text{FVSCHEDULE}(1, \text{CELL RANGE}) - 1
\]

**The variables:**
- \( \text{CELL RANGE} \) is the daily rate data included in the custom time period for the return calculation. The answer is in decimal format.

Balanced option example calculation using downloaded daily rates data

6-month return ending 31 December 2019:

\[
\text{FVSCHEDULE}(1, \text{C4019:C4202}) - 1 = 0.04764 \text{ or } 4.764\%
\]

This cell range is based on
- C4019 = Balanced option at 1/07/2019 and
- C4202 = Balanced option at 31/12/2019

**Calculating returns using cumulative daily rates**

The formula:
\[
\frac{(1+\text{Cumulative Return at end of period}/100)}{(1+\text{Cumulative Return at beginning of period}/100)} - 1 = \text{total return}
\]

Balanced option example calculation for using cumulative daily rates data

6-month return ending 31 December 2019:

- 30 June 2019 cumulative daily rate = 120.0820
- 31 December 2019 cumulative daily rate = 130.5666

\[
\frac{(1+130.5666/100)}{(1+120.0820/100)} - 1 = 0.04764 \text{ or } 4.764\%
\]

**Calculating per annum returns**

The formula:
- Annualised return = \((1+\text{total return})^{\frac{1}{\text{number of years}}}-1\), or
- Annualised return = \((1+\text{total return})^{\frac{12}{\text{number of months}}}-1\)

Per annum returns

Returns greater than one year are often annualised, to enable easier analysis and comparison. To create per annum or annualised returns the following formula is used:

Balanced option example calculation for using cumulative daily rates data

6-month return ending 31 December 2019:

\[
\frac{(1+130.5666/100)}{(1+120.0820/100)} - 1 = 0.04764 \text{ or } 4.764\%
\]

Balanced option example calculation using downloaded daily rates data

6-month return ending 31 December 2019:

\[
\text{FVSCHEDULE}(1, \text{C4019:C4202}) - 1 = 0.04764 \text{ or } 4.764\%
\]

This cell range is based on
- C4019 = Balanced option at 1/07/2019 and
- C4202 = Balanced option at 31/12/2019

Balanced option example calculation using downloaded daily rates data

6-month return ending 31 December 2019:

\[
=\text{FVSCHEDULE}(1, \text{C4019:C4202}) - 1 = 0.04764 \text{ or } 4.764\%
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- C4019 = Balanced option at 1/07/2019 and
- C4202 = Balanced option at 31/12/2019

Balanced option example calculation using cumulative daily rates data

6-month return ending 31 December 2019:

\[
\frac{(1+130.5666/100)}{(1+120.0820/100)} - 1 = 0.04764 \text{ or } 4.764\%
\]

**Calculating returns using Microsoft Excel**

For data in decimal format:

\[
\text{FVSCHEDULE}(1, \text{CELL RANGE}) - 1
\]

**The variables:**
- \( \text{CELL RANGE} \) is the daily rate data included in the custom time period for the return calculation. The answer is in decimal format.

Balanced option example calculation using cumulative daily rates data

6-month return ending 31 December 2019:

\[
=\text{FVSCHEDULE}(1, \text{C4019:C4202}) - 1 = 0.04764 \text{ or } 4.764\%
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This cell range is based on
- C4019 = Balanced option at 1/07/2019 and
- C4202 = Balanced option at 31/12/2019

Balanced option example calculation using cumulative daily rates data

6-month return ending 31 December 2019:

\[
=\frac{(1+130.5666/100)}{(1+120.0820/100)} - 1 = 0.04764 \text{ or } 4.764\%
\]

This cell range is based on
- C4019 = Balanced option at 1/07/2019 and
- C4202 = Balanced option at 31/12/2019
Important items to consider:

Do I have the right investment option to perform my analysis?
Super/TTR Income options have different returns to Choice Income options, due to different taxation rates. Be sure to select the investment option that you wish to analyse.

Do I have the right time period?
Returns will vary depending on the time period you select. If you are comparing multiple investment options or between options, make sure the time periods match for each option.

Daily rates are based on investment earnings for each day that you are invested. If you are measuring the six-month period ending 31 December, you would use daily rates between and including 1 July and 31 December 2019.

To compare cumulative daily rates be sure to use the cumulative daily rates from the start of the period and the end of the period. For the six-month example, the cumulative rate on 30 June 2019 and 31 December 2019 would be used because you are calculating the return difference between the two dates.

Do I have the right formula?
The correct formula, order of operations and placement of numbers is important in any mathematical formula. Check the formula and try again if the answer is not comparable to the periodic returns provided by AustralianSuper.

Further reading:
To find out more about how crediting rates and investment returns work visit australiansuper.com/forms

We’re here to help

Call 1300 300 273 (8am to 8pm AEST/AEDT weekdays)

Email australiansuper.com/email

Web australiansuper.com

Mail GPO Box 1901, MELBOURNE VIC 3001

Investment returns are not guaranteed. Past performance is not a reliable indicator of future returns. Returns from equivalent investment options of the ARF and STA super funds are used in calculating returns for periods that begin before 1 July 2006.

This document has been prepared and issued in April 2020 by AustralianSuper Pty Ltd ABN 94 006 457 987 AFSL 233788, Trustee of AustralianSuper ABN 65 714 394 898 and may contain general financial advice that does not take into account your personal objectives, situation or needs. Before making a decision about AustralianSuper consider your financial requirements and read the Product Disclosure Statement available at australiansuper.com/pds or by calling 1300 300 273