

Analysis of my investment returns

My return is the net sum of:

- capital growth (or loss) on investments net of transaction costs
- dividends
- franking credits
- interest on cash held on deposit

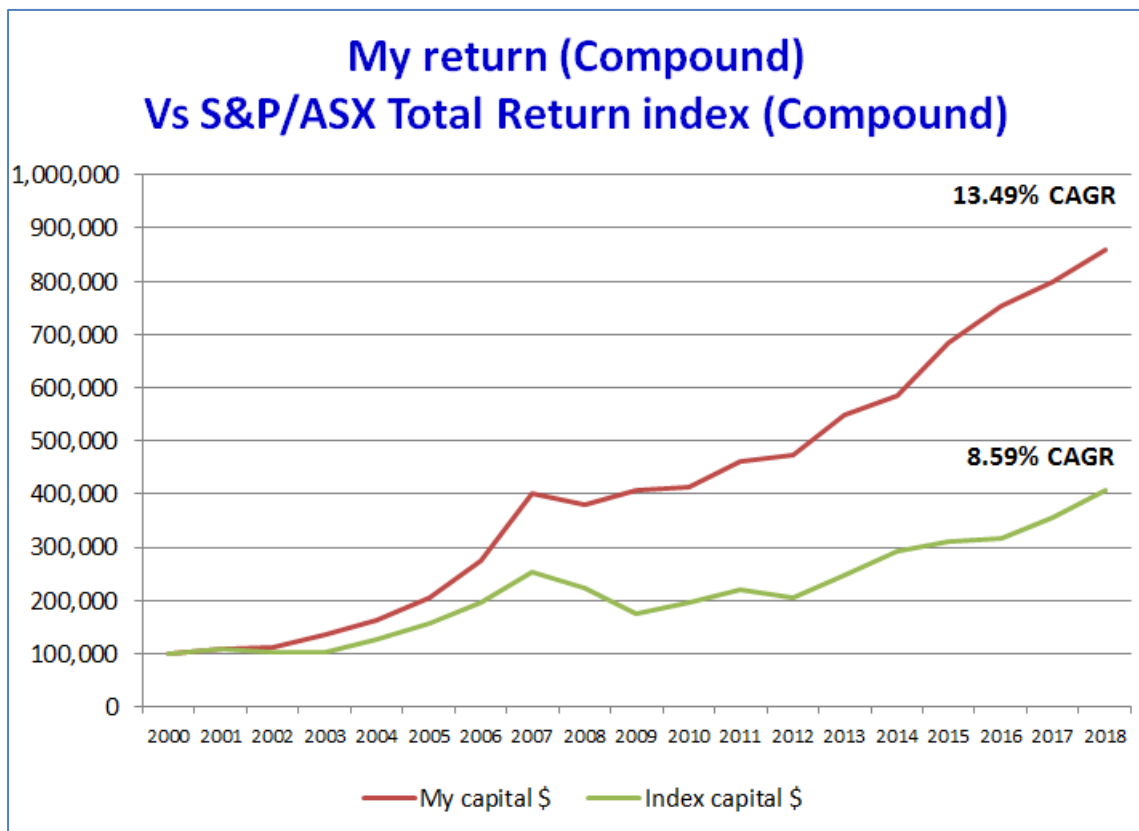
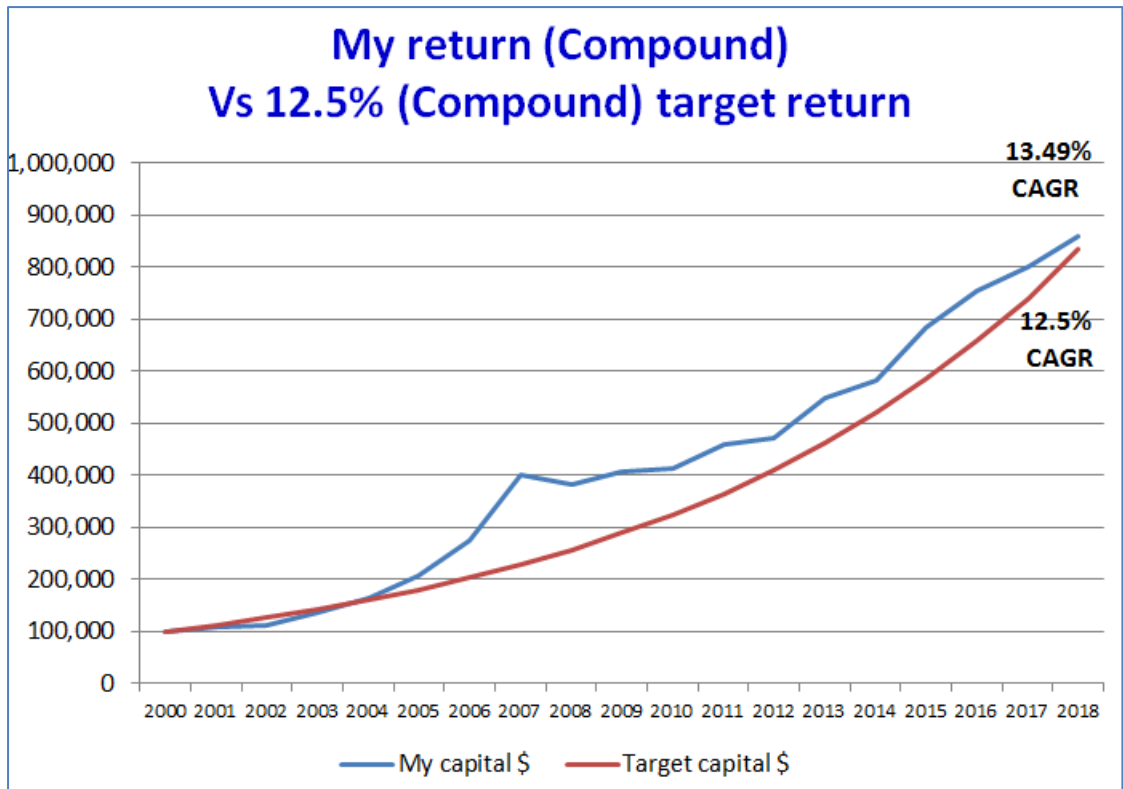
expressed as a percentage of the time weighted average capital for the year. At the end of this document there is a more detailed explanation of the way I calculate my returns, including the time weighted average capital calculation.

The analysis firstly considers my investment returns against my target investment return of an average annual 12.5%pa. *That does not mean that I will make 12.5 per cent or more every year. That is not possible in some years. In other years I will exceed it significantly. (Building Wealth in the Stock Market page 42).* Therefore, although I show the year-by-year result against the target investment return, the key comparison is to my cumulative investment return compared to the cumulative target investment return.

The analysis then considers my investment returns against the ASX All Ordinaries Total Return (accumulation) index. This is not a pure comparison, because the index notionally reinvests dividends on the ex-dividend date instead of the payment date. Also, the index also does not notionally reinvest franking credits, but I do from the ex-dividend date. Nevertheless, it is the best available benchmark for an investor. As with the target investment return analysis, it is unrealistic to expect that I will be able to match or beat the market index in any individual year. Therefore, although I show the year-by-year result against the index, the key comparison is to my cumulative investment return compared to the cumulative index return.

With these considerations in mind, I have only shown charts of my cumulative return versus my target return and against the Total Return index return. However, following the charts are the detailed tables of results and analyses of the returns.

Members of my website who may be interested in some of the detail behind these summaries will find further schedules on the members' website www.bwts.com.au at Building Wealth Resources/Portfolio Details: [Click here](#). Members will need to log in before accessing this page.



If this page is difficult to read, use the zooming tool in Adobe Reader.

Year summaries of investment returns																				
Financial year to June	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	
Returns for year																				
Capital gain/loss		23,786	3,016	57,907	91,979	158,439	299,941	561,133	-201,394	28,235	-56,268	85,931	-35,486	210,044	39,974	245,912	142,858	45,308	64,801	
Dividends		3,764	2,774	7,989	26,654	53,163	49,872	53,455	19,195	0	44,447	70,217	27,252	54,373	56,022	92,655	77,314	72,380	87,008	
Interest		NA*	NA*	NA*	34,753	17,756	10,386	41,746	84,733	89,581	24,367	22,873	52,759	30,954	17,537	2,926	7,232	4,743	1,628	
Franking credits		1,645	1,147	3,054	10,808	20,355	20,155	20,631	7,415	0	18,310	28,701	11,186	22,108	20,281	29,643	24,402	21,887	28,725	
Fees														-203	-120	-120	-120	-120	-120	
Total return		29,196	6,937	68,950	164,194	249,712	380,354	676,966	-90,051	117,816	30,856	207,721	55,711	317,278	133,694	371,017	251,686	144,198	182,043	
* In these three years the capital gain amount was calculated including interest and I no longer have records to separate them.																				
TWAC		301,168	328,718	334,508	800,000	929,019	1,131,472	1,490,633	1,761,579	1,788,719	1,837,062	1,812,800	1,967,351	1,953,832	2,173,117	2,180,845	2,384,785	2,424,881	2,433,085	
Return for year %		9.69	2.11	20.61	20.52	26.88	33.62	45.41	-5.11	6.59	1.68	11.46	2.83	16.24	6.15	17.01	10.55	5.95	7.48	
Index change																				
Total Return index open		15,384	16,745	15,991	15,818	19,356	24,146	29,989	39,070	34,336	26,732	30,415	34,118	31,714	38,270	45,021	47,575	48,530	54,897	54,897
Total Return index close		16,745	15,991	15,818	19,356	24,146	29,989	39,070	34,336	26,732	30,415	34,118	31,714	38,270	45,021	47,575	48,530	54,897	63,435	
% Change		8.85	-4.50	-1.08	22.37	24.75	24.20	30.28	-12.12	-22.15	13.78	12.17	-7.04	20.67	17.64	5.67	2.01	13.12	13.73	
Analyses of investment returns																				
Financial year to June	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	
My returns annually Vs 12.5% target return annually																				
My return %		9.69	2.11	20.61	20.52	26.88	33.62	45.41	-5.11	6.59	1.68	11.46	2.83	16.24	6.15	17.01	10.55	5.95	7.48	
Target return %		12.5	12.5	12.5	12.5	12.5	12.5	12.5	12.5	12.5	12.5	12.5	12.5	12.5	12.5	12.5	12.5	12.5	12.5	
Difference		-2.81	-10.39	8.11	8.02	14.38	21.12	32.91	-17.61	-5.91	-10.82	-1.04	-9.67	3.74	-6.35	4.51	-1.95	-6.55	-5.02	
My return (Compounded) Vs 12.5% Compound target return																				
Assumes \$100,000 invested 1 July 2000																				
My capital \$	100,000	109,694	112,009	135,097	162,824	206,590	276,037	401,398	380,879	405,966	412,785	460,084	473,112	549,940	583,761	683,059	755,122	800,052	859,895	
Target capital \$	100,000	112,500	126,563	142,383	160,181	180,203	202,729	228,070	256,578	288,651	324,732	365,324	410,989	462,363	520,158	585,178	658,325	740,616	833,193	
Difference \$	0	-2,806	-14,554	-7,286	2,644	26,387	73,308	173,328	124,300	117,315	88,052	94,760	62,123	87,577	63,603	97,881	96,797	59,436	26,703	
My returns annually Vs total return index return annually																				
My return %		9.69	2.11	20.61	20.52	26.88	33.62	45.41	-5.11	6.59	1.68	11.46	2.83	16.24	6.15	17.01	10.55	5.95	7.48	
Index return %		8.85	-4.50	-1.08	22.37	24.75	24.20	30.28	-12.12	-22.15	13.78	12.17	-7.04	20.67	17.64	5.67	2.01	13.12	13.73	
Difference		0.85	6.61	21.70	-1.85	2.13	9.42	15.13	7.00	28.73	-12.10	-0.71	9.88	-4.43	-11.49	11.34	8.54	-7.17	-6.25	
My return (Compounded) Vs total return index (Compounded)																				
My capital \$	100,000	109,694	112,009	135,097	162,824	206,590	276,037	401,398	380,879	405,966	412,785	460,084	473,112	549,940	583,761	683,059	755,122	800,052	859,895	
Index capital \$	100,000	108,845	103,946	102,818	125,819	156,955	194,932	253,961	223,193	173,765	197,704	221,770	206,148	248,764	292,646	309,239	315,454	356,842	405,837	
Difference \$	0	849	8,063	32,278	37,006	49,635	81,104	147,437	157,686	232,201	215,080	238,314	266,964	301,176	291,116	373,820	439,667	443,209	454,059	
Compound Annual Growth Rate																				
My Capital CAGR%		9.69	5.83	10.55	12.96	15.62	18.44	21.96	18.19	16.84	15.23	14.88	13.83	14.01	13.43	13.67	13.47	13.01	13.49	
Index capital CAGR%		8.85	1.95	0.93	5.91	9.43	11.77	14.24	10.56	6.33	7.05	7.51	6.21	7.26	7.93	7.82	7.44	7.77	8.59	

Calculation of my Returns

The following section is a discussion of the technical issue of how I have gone about calculating my return. I have included it because, whenever I have mentioned it in the past, I have received many questions. Hopefully, I will now address those questions for those readers who are interested.

The discussion which follows is entirely a pre-tax calculation. It includes franking credits, because they are a part of the pre-tax return in the Australian taxation system. Overseas investors may simply disregard them.

At the start of the year and at the end of every day through the year, I value my stocks at the last or closing prices for that day. I also deduct the known transaction costs assuming that I realised the holdings at those prices. I do not make any allowance for slippage. Slippage is a jargon term in most markets for the difference between the last or quoted price in the market and the actual price achieved when the transaction is actually executed.

These are six **components in calculating my return** at any point through the year:

1. The total unrealised gain/loss for stocks currently in my portfolio.
2. The total realised gain/loss for stocks I have sold during the year.
3. The total of franked dividends, unfranked dividends paid so far in the year.
4. Franking credits attached to dividends paid during the year.
5. Interest received on the cash reserve so far in the year.
6. Costs of software, data and communications, but see Note 8 below.

Note 1	The purchase and sale price of all stocks that are, or have been, in my portfolio is net of brokerage commission and GST. GST may not apply to investors who are not Australian residents for tax purposes.
Note 2	The original cost of a stock holding is reduced for any capital returns by the company.
Note 3	At the start of the year and at the end of every day through the year, I value my stocks at the last or closing prices for that day.
Note 4	In valuing the stocks held at the end of every day through the year, I also deduct the anticipated transaction costs assuming that I had realised the holdings at the closing prices.
Note 5	In valuing the stocks held at the end of every day through the year, I do not make any allowance for slippage. Slippage is a jargon term in most markets for the difference between the last or quoted price in the market and the actual price achieved when the transaction is actually executed.
Note 6	A franking credit is the notional tax already paid by the company on the profit from which the dividend has been paid. This is not relevant for investors who are not Australian residents.
Note 7	I record interest earned on the cash reserve when I receive a bank statement after the end of each month. These bank statements are now available in real time very close to the end of the month.
Note 8	I also have some costs for software, data feed and communications. These are paid out of my other income, which is separate to the investment return calculation. Readers who are in a different situation should deduct these costs from their portfolio total return before calculating the rate. These costs are not material for me, so they would not impact on my return if I included them.

The calculation of the rate of return is easy if there are no additions to or subtractions from capital during the course of the year, other than from investment activity. However:

- In some years, there will be a few additions if more capital becomes available for investment.
- There will also be some capital withdrawn for taxation, SMSF administration costs and pensions taken from the SMSF.

This can make things very complicated. There are several ways to work out the return, but as a practical person, I have opted for a fairly simple procedure.

In working out the return, I take the net total of the **components in calculating my return** listed before the table of notes above. I then calculate the return not on the starting capital, but on the time weighted average capital (TWAC). The calculation of TWAC is very simple. I work out how much capital I had to invest for how many days and weight it by the fraction of the year for which it was available. Here is a simple example to illustrate the method, using an Australian financial year:

Facts

On 1 July, I start with \$1,000,000.

On 5 September, I withdraw \$50,000.

On 17 March, I add \$160,000.

Calculations shown on the next page...

TWAC Calculation

Period	Days	Capital Available	Calculation	Time Weighted Capital
1 July – 4 September	66	1,000,000	$1,000,000 \times 66 \div 365$	180,822
5 September – 16 March	193	950,000	$950,000 \times 193 \div 365$	502,329
17 March – 30 June	106	1,110,000	$1,110,000 \times 106 \div 365$	322,356
TWAC	365			1,005,507

Note: in a financial year that includes February 29 (occurs in a leap year), use 366, not 365 days.

Return Calculation

So, if the net total of the **components in calculating my return** listed above was \$185,500, my return for the year would be calculated as follows:

$$\text{Return} \div \text{TWAC} \times 100 = \text{Return\%}$$

$$185,500 \div 1,005,507 \times 100 = 18.45\%$$

This is the before tax return and is roughly comparable to the ASX Accumulation index, which assumes reinvestment of dividends.