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Compound the Pound

Blog Post, March 2023

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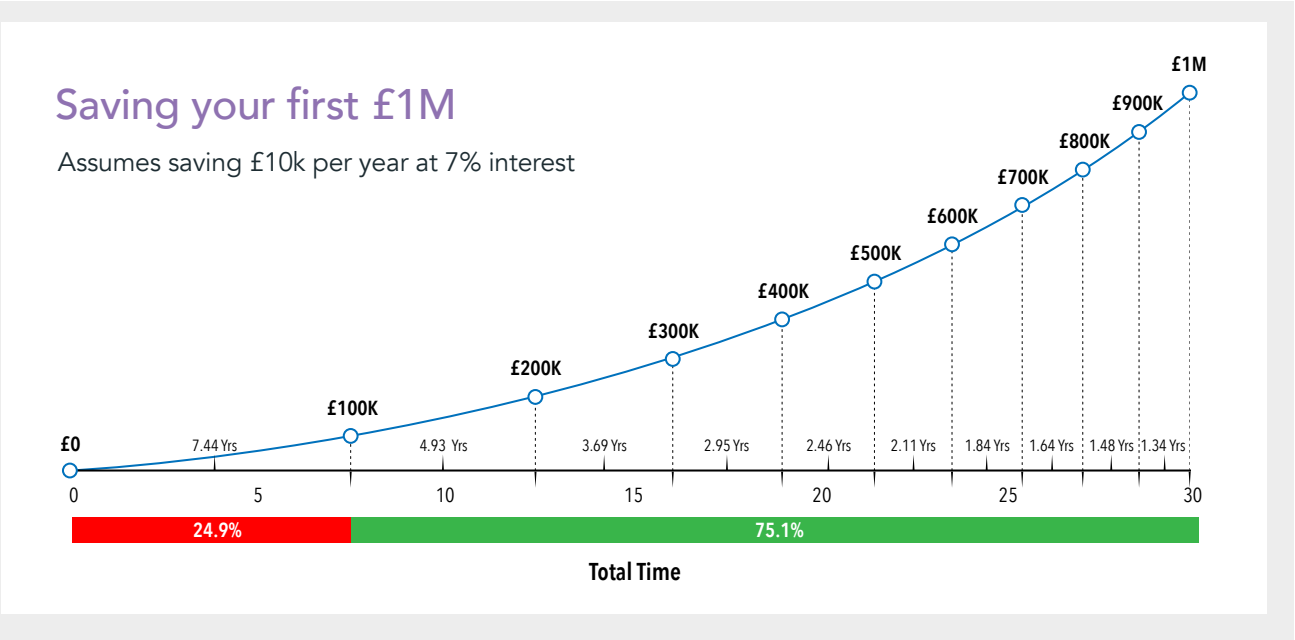
Introduction

Put simply, compound interest is the interest you earn on interest.

As compound interest includes interest accumulated in previous periods, it grows at an ever-accelerating rate. For example, a £10,000 investment which returns 5% per year (compounded annually), will be valued at £10,500 at the end of year 1, £11,025 at the end of year 2, and £11,576.25 at the end of year 3. Thus, the value of interest accrued increases year-on-year, with year 1 generating £500 in interest, year 2 generating £525, and year 3 generating £551.25. There is no secret to compound growth - if you get started and stay invested over the long-term, it takes care of itself. The longer you remain invested, the greater the potential returns on what you've already invested.

Example: £10,000 per year invested at 7% interest

As shown in the example below, the power of compound interest is unequivocal - the longer you remain invested, the quicker your money grows. On the road to £1million, your first £100k would take 7.44 years to save, however the final £100k (going from £900k to £1million) would only take 1.34 years. This is attributable to compounding, the interest you earn on interest, helping your portfolio grow at an increasing rate year to year.



Net Worth Change	Years To Achieve (Next £100k)	% of total time
£0-100k	7.44	24.9%
£100-200k	4.93	16.5%
£200-300k	3.69	12.3%
£300-400k	2.95	9.9%
£400-500k	2.46	8.2%
£500-600k	2.11	7.1%
£600-700k	1.84	6.2%
£700-800k	1.64	5.5%
£800-900k	1.48	4.9%
£900k-1M	1.34	4.5%
Total Time:	29.86	100.0%

Assumes investing £10k per year at 7% interest

Assumptions:

1. Returns

It is also important to consider the impact of your return assumptions. As your returns increase, the time it takes to save the next £100k will decrease. For example, starting on £0, at 2% per year it would take 9.04 years to save the first £100k. Alternatively, if we assumed a return of 12% per year, the time taken to save the first £100k falls to 6.43 years.

2. Portfolio Value

Similarly, the portfolio size will play its part. Lets assume a return of 2% per year; when starting on £0, the first £100k will take 9.04 years to save, however, if we started with £1 million, the first £100k would only take 3.24 years to save.

3. Compounding frequency

Our assumptions have assumed annual compounding (and £10k invested at the end of each year), however the frequency of interest payments may be monthly, quarterly or biannually. If the interest period is not annual, then the total amount of interest paid across the year will be higher, due to interest being paid on the interest accumulated in those smaller periods.

	Rate					
Portfolio Starting Value	2%	4%	6%	8%	10%	12%
£0	9.04	8.30	7.70	7.20	6.79	6.43
£100,000	7.67	6.25	5.30	4.61	4.09	3.68
£200,000	6.65	5.02	4.04	3.39	2.93	2.59
£300,000	5.88	4.19	3.27	2.69	2.29	2.00
£400,000	5.27	3.60	2.74	2.23	1.88	1.63
£500,000	4.77	3.15	2.37	1.90	1.59	1.37
£600,000	4.36	2.80	2.08	1.66	1.38	1.19
£700,000	4.01	2.53	1.85	1.47	1.22	1.05
£800,000	3.71	2.30	1.67	1.32	1.09	0.94
£900,000	3.46	2.11	1.52	1.20	0.99	0.85
£1,000,000	3.24	1.95	1.40	1.10	0.91	0.77
£1,100,000	3.04	1.81	1.29	1.01	0.83	0.71
£1,200,000	2.87	1.69	1.20	0.94	0.77	0.66
£1,300,000	2.72	1.58	1.12	0.88	0.72	0.61
£1,400,000	2.58	1.49	1.06	0.82	0.67	0.57
£1,500,000	2.45	1.41	0.99	0.77	0.63	0.54
£1,600,000	2.34	1.34	0.94	0.73	0.60	0.51
£1,700,000	2.23	1.27	0.89	0.69	0.56	0.48
£1,800,000	2.14	1.21	0.85	0.65	0.54	0.45
£1,900,000	2.05	1.15	0.81	0.62	0.51	0.43
£2,000,000	1.97	1.10	0.77	0.59	0.49	0.41

Assumes investing £10k per year

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EBI23-052