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Compounding interest – how small amounts add up over time

What is compounding interest?

Compounding interest is when interest is paid on the principal (the amount you invest) **and** on the accumulated interest you already earned in previous periods. This is different from simple interest, where you earn interest only on the amount you invest.

Compounding interest can result in an astonishing accumulation of wealth, even with modest investment amounts, when invested over a long time or at a good rate of return.

For example, say you have $50 to invest each month and your yearly return on your investment is 10% pa, compounded monthly. At the end of the first year you will have added $600 from your own pocket to your investment. The interest earned on the $600 you put in will add an extra $83.51, so that your total balance at the end of the first year is $683.51. In the second year you will earn another $83.51 interest on the next $600 you invest in the second year, as well as earning $99.86 interest on last year's balance of $683.51. The total balance of your investment at the end of the second year is now $1,383.37. Each year, you continue to earn interest not just on what you put in, but also on the previous balance of your investment. After 30 years of investing just $50 per month, you will have a balance of $114,016.27.

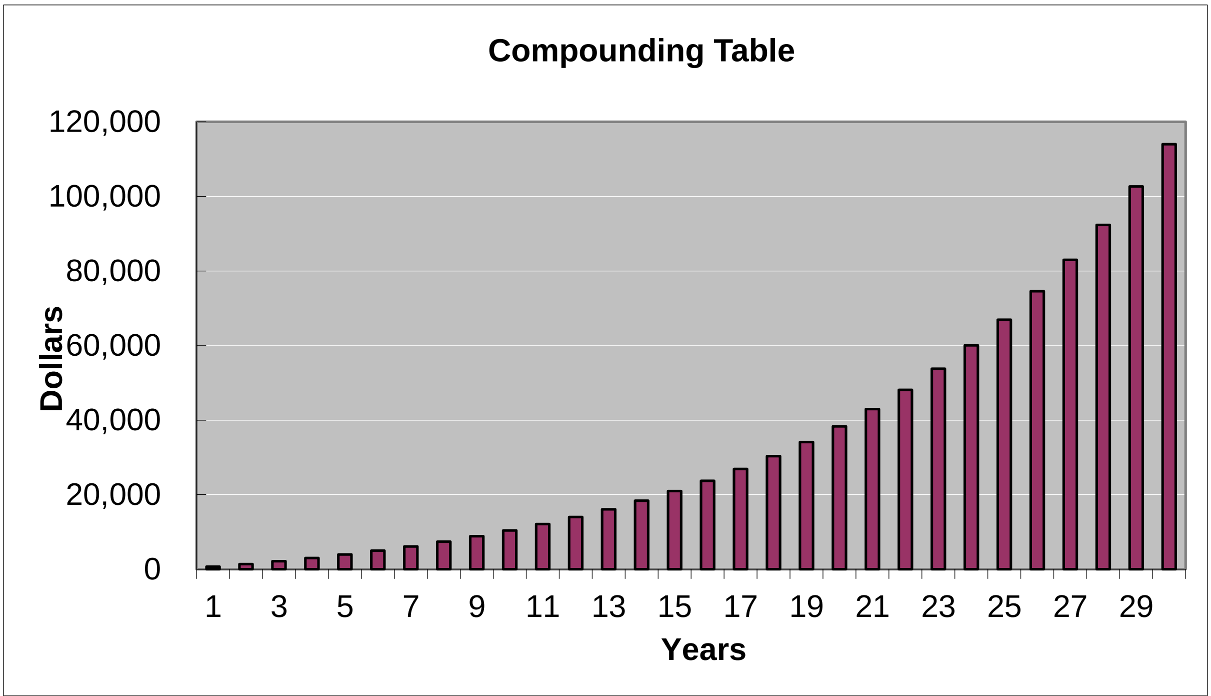

Figure 1: End of year balances after investing $50 per month at 10%, compounded monthly.

These spectacular returns, however, are in today's money. In 30 years' time the buying power of $114,000 will probably be closer to what $80,000 would buy today, but this is still a significant accumulation for a small monthly amount.

What is a good return on investment?

Generally the higher the potential return, the riskier the investment. Examples of low risk investments yielding low returns are term deposit accounts, where you invest above a certain amount ($1,000 is usually the least you can invest) and have almost zero chance of your losing money, but usually earn not much more than 1-2% above the Reserve Bank's cash rate. By contrast, the average return over the last 37 years to 2007 from the Australian sharemarket has been 13.80%, but it is much riskier than term deposit accounts, and many investors have lost money investing in the sharemarket.

How much risk you are willing to bear depends on many factors, such as:

- How much you have to invest
- How long you can afford to keep your cash tied up in investments
- Economic conditions
- How diversified your portfolio of other investments is
- How much fluctuation in value you can tolerate