Tax Shields and Negative Gearing

Consider the following interesting scenario which shows how the value of negative gearing is from the benefit of tax shields.

A working person earns $100,000 per year and buys a $1m apartment funded using a 30-year 6% interest-only mortgage. The total expected return of the property is 8% and the rental yield is 5%. For simplicity, assume that the person paid no deposit on the mortgage, so the value of the property is equal to the value of the mortgage (there is a 100% loan to valuation ratio, LVR). The apartment building has lots of similar apartments on the same level.

In this scenario, rather than living in his apartment, this person is actually better off renting his apartment out to a tenant, and renting the apartment next door for himself.

This is because when the person rents his property out, the apartment becomes an investment property and mortgage payments are then tax-deductible. The interest expense will be more than the rent, so the loss on the investment property will reduce the person's taxable income, causing a tax saving.

This strategy of investing in an asset which has a negative income return is called 'negative gearing'. It may seem like a foolish idea since the investor makes an income loss, but the investor hopes that the capital gain on the property will outweigh the income loss. Negative gearing creates value because of the benefit of the tax shield.

We can calculate the tax saving from renting the apartment next door compared with staying in his own apartment. Assume the following:

- The person's personal marginal tax rate is 38.5%.
- All rates are given as annualised percentage rates (APR's) compounding per month, including the mortgage rate and the property's total expected return and rental yield.

For the monthly interest expense,
$IntExp = r_D \times D$

$$IntExp = \frac{0.06}{12} \times 1{,}000{,}000 = 5{,}000$$

For the monthly rental income,
$Rev = r_{income} \times V_{asset}$

$$Rev = \frac{0.05}{12} \times 1{,}000{,}000 = 4{,}166.67$$

The net income before tax from the investment property will be:

$$\begin{aligned}\text{Pre-tax } NI &= Rev - IntExp \\ &= 4{,}166.67 - 5{,}000.00 \\ &= -833.33\end{aligned}$$

Which is a loss of $833.33. This can be subtracted from the person's taxable income of $100,000, which means that he will pay less tax:

$$\text{Tax saving} = \$833.33 \times 0.385$$
$$= \$320.83 \text{ per month.}$$

Since the rent he receives on his apartment is the same amount he pays to rent the apartment next door, these amounts net out so this tax saving is the total gain per month.

Now of course the person is making a pre-tax loss on his investment property of \$833.33 per month. After tax, the monthly loss is \$512.50 $(= 833.33 \times (1 - 0.385))$.

The whole idea of buying the apartment might seem like a bad idea. But the apartment is expected to have a total return of 8% pa and the rental (income) yield is 5% so the capital return must be 3%. Therefore the monthly dollar capital gain (before tax) is expected to be:

$$CapitalGainBeforeTax = \frac{0.03}{12} \times 1{,}000{,}000 = 2{,}500$$

If the person holds the property for more than one year then the 50% CGT discount applies and then the after-tax capital gain will be:

$$CapitalGainAfterTax = 2{,}500 \times (1 - 0.5 \times 0.385)$$
$$= \$2{,}018.75 \text{ per month}$$

So the person expects a total monthly dollar gain of \$1,506.25 $(= 2{,}018.75 - 512.50)$ when he rents the apartment next door.

If he stays in his own apartment he will expect a gain of \$1,185.42 $(= 2{,}018.75 - 833.33)$ since there's no tax saving of \$320.83 per month.

Note:

- the after-tax capital gain is under-estimated since the tax on a capital gain is not paid until it is realised and the property is sold, which may not be for a long time so the time value of the money from not paying the tax immediately is gained.

- the total required return on the apartment (8%) is higher than the total required return on the mortgage (6%) since the apartment is a more risky investment. That is why borrowing to buy the apartment generates a positive **expected** cash flow. In fact, if the capital return on the apartment is negative because house prices fall then the person will make a capital loss ***and*** an income loss (since the rent doesn't cover the interest).