How will a buyer value my forest?

Fundamentals

A single forest purchase is unlikely to be considered on its own. Most purchases will be considered against other investment opportunities with the same investment horizon. In selecting an investment an astute purchaser will maximise the ratio of benefits to costs, seeking the highest ratio adjusted for relative risk.

The benefit component of the ratio is generally valued as net benefits after operational expenses in achieving them. The cost component of the ratio is usually the upfront capital cost of making the investment but can include deferred settlement.

Given the time value of money, benefits and costs over successive years need to be adjusted so that amounts in early years carry a greater importance than amounts in later years. The process of adjustment is called discounting. It is important that the rate at which the discounting is calculated is risk adjusted for risk specific to the investment opportunity.

Discounted value of net benefits

The benefits of forest ownership will typically include carbon unit accumulation, timber value and the value of cut-over land after harvest. The net benefit will be these items after the costs of establishment, maintenance and harvest. Land and existing tree crop at the time of purchase are not benefits but are instead the costs of the investment.

In working out what a buyer might be prepared to pay for a forest the discounted value of net benefits is established. This value is often referred to as the net present value of cashflows.

Buyers can be expected to invest this amount but will seek to pay less, improving the ratio of benefit to cost or the return on their investment.

The above approach is called the income approach under the International Valuation Standard. There are generally two exceptions to the income approach in local forestry. The cost approach under the Standard is usually used for young immature forests not eligible for carbon. The market approach is usually used for bush land that is difficult to clear.

Purchase price expectation

In our experience the ratio of net discounted benefits to purchase price will be in the region of 1.15. This is to say that in our experience buyers will generally expect net discounted benefits to exceed purchase price by 15 percent.

To arrive at the expected purchase price we find the price at which what is paid, is less than the net present value of cashflows by 15 percent. A more technical way of saying this is we estimate likely price by calculating the price to achieve a risk adjusted internal rate of return of 15 percent.

Discount rates

International buyers of New Zealand forests have until recently been using a discount rate of 6 percent. With recent rises in interest rates here and overseas, the time value of money is increasing with money today worth much more than money in the future. We are currently tending to use a discount rate of 8 percent and conducting sensitivity analysis of the results at a discount rate of 10 percent.

Lease

Lease is an alternative to purchase. An annual lease amount can be calculated as an annuity of the discounted value of purchase price expectation.