Bert Hughes, RMNZIF, CMinstD

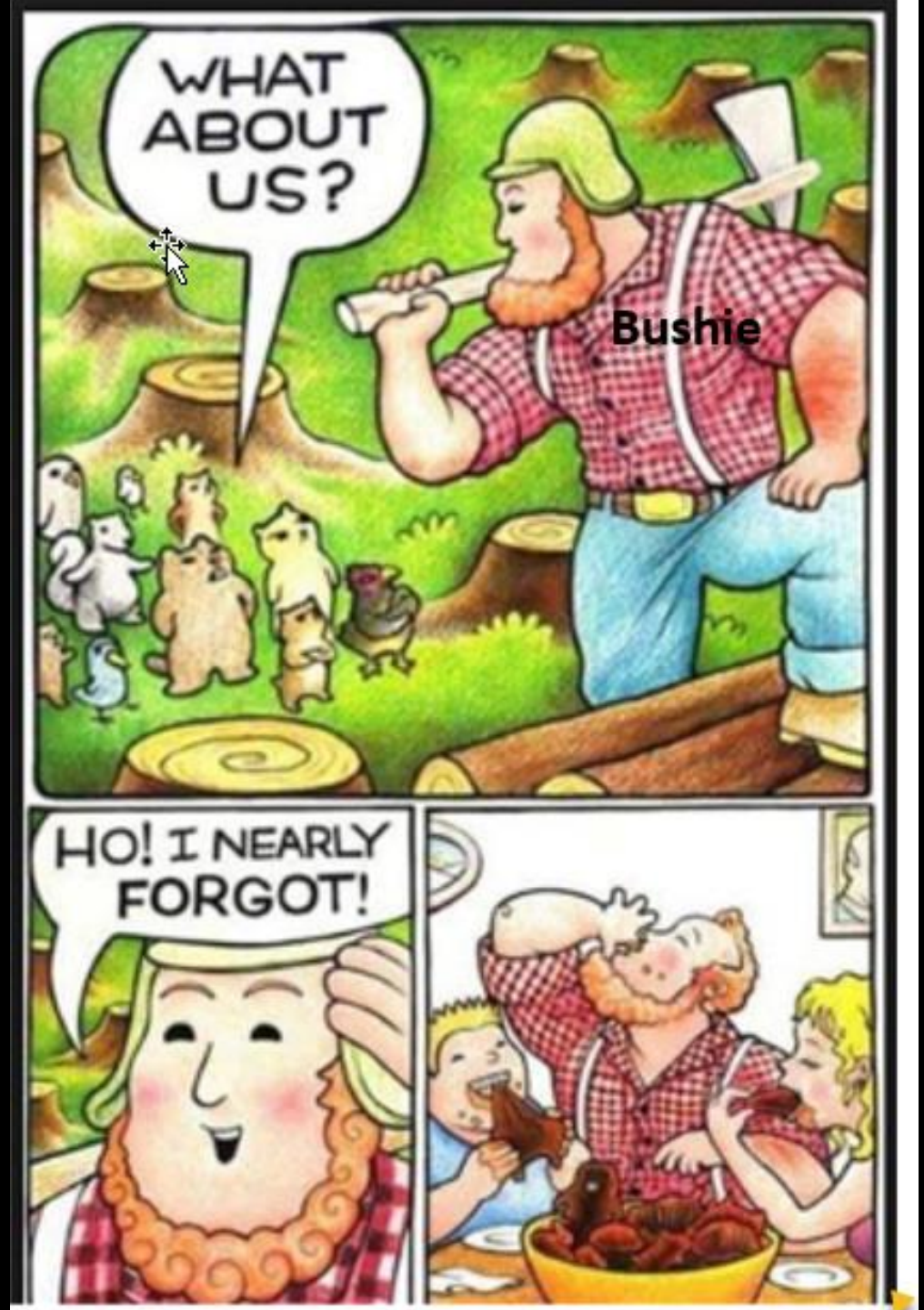
Investment in forestry, or Happiness and uncertainty.


THIS DIAGRAM EXPLAINS WHY I'M AN EXPERT IN MONEY YET I DRESS LIKE A FLOOD VICTIM.
Lottery
$
Yp=i
i
V
GNP
10³
E=MC²
NEW COKE
Luck
© 1984 United Feature Syndicate, Inc.

“Trying to be consistently not stupid” (Charlie Munger)

Avoiding screw ups pays better than continuous improvement.

Don’t be a dick Boris

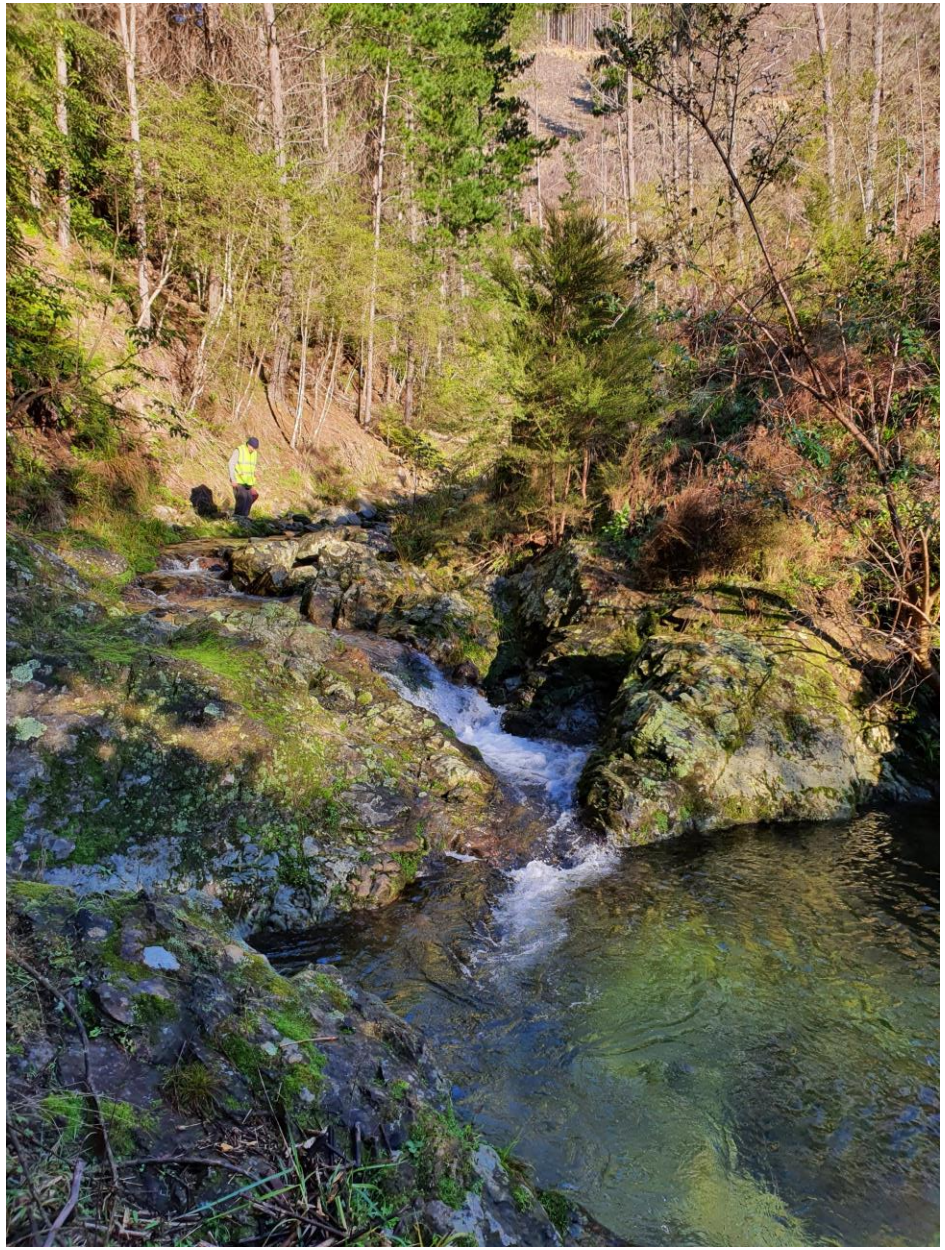



KEEP FARMS FOR FOOD
YOU CAN'T
EAT WOOL
www.50shadesofgreen.co.nz
the right tree, the right place

Wairoa City Centre

Cows like the water

Trees like water too




Local Sawmills, we love your work!

The wall of wood

What's the competition doing?

Ill just give those a quick tidy up, they'll come good. Quality matters

Behavioural economics

Why do smart people do dumb things?

Thinking fast and slow, instinct or calculation?

Bias and rules of thumb, rules reduce bias

Rational investments, herds, charts, fashion and day trading

Cut your losses, ride your wins

Super forecasters adjust their forecasts as they learn (Bayes)

FOREST INVESTMENT FOR INDIVIDUALS

Bert Hughes- Forestry Director, Gordon Wong – Legal Services Director, Forest Enterprises Limited

OUTLINE

The focus of this section is plantation forest investment in radiata pine and any tending regimes directed at the production of clear wood and sawlogs which add to investment returns or reduce risk. Radiata pine clear wood regimes were the predominant type of forestry in the previous iteration of the NZIF handbook; however, pruning is now regarded as an optional treatment subject to cost benefit analysis or investor preference.

Forestry can be classed an as alternative investment, compared with other classifications such as shares, commercial property, or bonds. Alternative investments as a category and certainly individual forest investments have opportunity for improved revenues or outcomes from application of skilled management practices. Conversely the lack of specific competency in forest and investment management will greatly increase investment risk. Investors considering forestry as an investment need to be aware of several features that distinguish it from other investment options

ADVANTAGES AND DISADVANTAGES OF FORESTRY AS AN INVESTMENT

Investors considering forestry as an investment need to be aware of a number of features that distinguish it from other investment options. The most important of these are listed below:

Advantages

- An investment with returns linked directly to international prices for forest products.
- Ethical investment classification
- Where land is purchased, an investment in rural land.
- A wide time frame over which the forest can be harvested, which allows the forest to be carried forward over periods when markets are less favourable.
- Versatility of end uses for forestry outputs which diversifies the market risk.
- Prices of logs have historically kept up with inflation. Forestry investment is still generally recognised as a hedge against inflation. The historical world demand for industrial wood is closely correlated with a combination of population and gross domestic product growth.
- There are taxation advantages, both through deductibility, and deferral of taxable income until the end of the project..
- An investment which can be professionally managed.
- Relatively free trade for forest products.
- An investment well suited to spreading risks in a balanced investment portfolio.
- A traditional investment that has not been undercut by rapid changes in technological developments.
- An environmentally sound renewable resource with low energy inputs and the capacity to reduce atmospheric carbon.
- A cashflow that suits superannuation requirements.
- The ability to be closely involved with a tangible biological investment.
- Recreation opportunities.

Disadvantages

- The investment is long term in nature. Radiata pine in New Zealand will require a rotation of around 25 – 30 years before maturity is reached.
- In most forest growing investment ventures, any income prior to forest maturity will be minor unless there are available carbon credits to sell.
- The cashflow profile of forest growing requires an ongoing funding commitment during the establishment and tending phases. The tending phase, usually from years 4 to 10, normally requires a higher level of funding than the initial establishment.
- Future markets 25 to 30 years ahead are impossible to predict. Market risks may therefore be significant. Market returns are affected by substitution from other products, input costs (including freight rates to get wood to markets), the relative long-term strength of the New Zealand currency compared with other countries, and economic growth factors.
- Biological risk exists, although New Zealand has to date shown a commitment to research and border control to mitigate the risk.
- Climatic risk including wind and drought. Insurance can partially mitigate this risk. Good establishment and silvicultural practices will reduce risk.
- Fire risk. Most forest owners insure against this risk.
- Financial risk. Changes in taxation policy, changes in financial circumstances of other investors and changes in the length of rotation because of market factors.

STATUTES RELATING TO FORESTRY INVESTMENT

The most important pieces of legislation relating to the involvement of consultants, advisors or promoters of forestry investment products are:

- Financial Markets Conduct Act 2013.
- Financial Advisers Act 2008.
- Anti-Money Laundering and Countering Financing of Terrorism Act 2009

Financial Markets Conduct Act 2013 ("FMC Act")

This Act regulates offers of "financial products", which include four discrete categories – equity securities, debt securities, managed investment products and derivatives. It ensures protections are in place, including prescriptive disclosure requirements, to support fair, efficient and transparent financial markets.

Certain disclosure obligations will apply if an offer is a "regulated offer" of financial products, essentially arising where the offer involves retail investors.

The FMC Act also implements fair dealing rules for financial products and services, which apply to both retail and wholesale clients. The Act creates registration and governing document requirements for regulated offers of debt securities and managed investment schemes; and creates a licensing regime for managers of registered managed investment schemes .

With the contributory nature of forestry investment and the longer term horizon from planting of seedlings until harvest of the tree crop, on average around 26-28 years, the most suitable structure for affordable forestry investment at the retail level is a limited partnership. This has the benefits of limited liability which a company has, but unlike a company, losses can be deducted against other income and are not trapped in the company. It also enables calls to be made, typically on an annual basis to meet the ongoing silviculture costs.

Limited partnerships fall into the category of managed investment schemes under the FMC Act. Therefore if a forestry managed investment scheme is offered to retail investors, it will need to be registered on what is known as the Disclose Register and it is subject to disclosure and

governance requirements under the FMC Act. The manager of the scheme must be licensed and an independent statutory supervisor (trustee) must be appointed.

Unless one of the exemptions in the FMC Act applies, an offer of financial products in a forestry managed investment scheme to retail investors requires a Product Disclosure Statement ("PDS"). A PDS provides a potential investor with essential information to help them decide whether to invest in a financial product. It uses clear language to explain the product, how it works and provides information about the business that is offering it. Importantly, it will give an investor an understanding of the risks and returns and the fees and charges involved in the investment.

Information on a registered forestry managed investment scheme will also be publicly available on the Disclose Register website which will include audited financial statements, governing documents of the scheme, and how the scheme is managed (for example there is a requirement for a Statement of Investment Performances and Objectives). The financial service providers must keep this information up-to-date whilst they continue to offer the financial products, so investors can check online for the latest scheme and product details.

Financial Advisers Act 2008 ("FAA")

This Act applies to a "financial adviser service" which includes giving financial advice, and providing an investment planning service or a discretionary investment management service. The FAA regulates financial advisers by requiring providers of financial adviser services or broking services to be registered, or in certain cases, authorised by the Financial Markets Authority.

There are general conduct requirements on financial advisers such as an obligation to exercise care, diligence and skill when performing services. The FAA requires disclosure by financial advisers and brokers to retail clients, ensuring that clients can make informed decisions about whether to use the financial adviser and whether to follow the advice. There are also competency requirements on certain financial advisers who deal with retail clients, so they must have the experience, expertise, and integrity to match a person to a financial product that best meets that person's needs and risk profile.

Anti-Money Laundering and Countering Financing of Terrorism Act 2009 ("AML/CFT Act")

This Act imposes obligations on "reporting entities" which includes officers of forestry investments and managers of forestry investment schemes. Reporting entities must have in place procedures and processes to detect, deter, manage and mitigate money laundering and the financing of terrorism.

One of the key obligations of the AML/CFT Act requires reporting entities to verify the identity of their clients prior to entering into a transaction. This process, known under the Act as customer due diligence, involves verification of identity, date of birth and address which needs to be confirmed by acceptable documents such as a driver's licence or birth certificate and documents showing an address. If an investor is a trust, the reporting entity will also need information about the people associated with it, such as trustees and beneficiaries. They may also need to ask the client about the nature and purpose of the investment. Information confirming the source of funds for a transaction may also be necessary to meet the legal requirements.

FORESTRY INVESTMENT STRUCTURES

The main types of investment structures for forestry projects, with key features, are summarised below.

Individual Ownership

This is where an individual owns the land and forest, and has direct control over the physical and financial aspects of the investment. The current taxation regime allows the individual to deduct most forestry development expenditure against income from any source.

Unincorporated Forestry Joint Ventures

Joint ventures come in a variety of formats, but in New Zealand forestry they most frequently refer to the situation where one party contributes the land and another the investment funds. The Forestry Rights Registration Act 1983 provides a relatively simple mechanism for registration of an agreement between an investor and a land-owner against the land title. Through use of this mechanism expensive survey costs can be avoided. The agreement between the parties should be carefully drafted to try and cover all matters that could arise over a 30-year rotation.

The most common situation in joint venture agreements in New Zealand is to establish at the outset the provision for sharing of income in proportion to each party's planned contribution. The current taxation regime allows each party to deduct most of its forestry development costs against income from any source. As a forestry joint venture is usually a private investment agreement between parties, and not a regulated offer, a product disclosure statement under the FMC Act is not required.

The Forestry Rights Registration Act can also be used as a mechanism for separation of the ownership of land from the ownership of the trees for an existing forest. It is possible for a land-owner to grant itself a forestry right for trees growing on its own land and then sell the land without tax being payable on the trees retained.

Ordinary Partnerships

Before the Limited Partnerships Act 2008 was passed, ordinary partnerships were the most common mechanism for forestry investment involving grouping of investment from a number of individuals. Partnerships, under the current taxation regime, allow each party to deduct most of its forestry development costs against income from any source. Partners are however personally liable for the future liabilities of the venture and this is why limited partnerships are now the preferred structure.

Limited Partnerships

The attraction of limited partnerships for investors and investment managers lies in the tax treatment and flexibility of limited partnerships when compared to other corporate structures such as companies and trusts.

A limited partnership is transparent for New Zealand tax purposes and the limited partnership itself is not taxed. Instead, the limited partners themselves are treated as carrying on the taxable activity and are taxed according to their own tax attributes and in relation to their proportionate share of the limited partnership's income. As a forestry limited partnership incurs forest establishment and development expenditure, subject to some limits, those losses can flow through to the limited partners and can be offset against their other income.

Every limited partnership must be formed with a general partner which is responsible for the management of the limited partnership. The general partner is in effect the agent of the limited partnership for the purposes of its business. The general partner is jointly and severally liable with the limited partnership for the limited partnership's unpaid debts and liabilities.

A limited partner's liability is limited to the amount that they have agreed to contribute to the capital of the limited partnership. In exchange for that protection, the Limited Partnerships Act 2008 provides that a limited partner must not take part in the management of the limited partnership. If a limited partner does so then the limited partner may be liable to the same extent as a general partner for debts and liabilities incurred while they were taking part in the management.

Limited partnerships which are managed investment schemes and which offer shares to retail investors are subject to the regulatory and disclosure regime in the Financial Markets Conduct Act.

Companies

Companies are not generally a popular choice for aggregating individual investment monies for forestry, as the tax deductibility rests with the company rather than the individual shareholders. Companies have the advantage of removing personal liability from the individual investors and can be a mechanism for relatively easy transfer of interests during the growing cycle.

Trading Trusts

A trading trust is usually a discretionary trust that carries on active business and the trustee of the trust is usually (but not always) a company. They are usually structured to limit the ability for trustees to be indemnified from the trust's fund. Trading trusts can be used to own forests. Their main advantage is in the flexibility of distributing income or capital to beneficiaries. However, losses incurred through tax deductibility remain in the trust and cannot be directly passed on to beneficiaries.

SEPARATION OF ROLES IN FORESTRY INVESTMENT

There are normally at least five main parties in any larger forestry project. To avoid conflicts of interest and adequate monitoring and accountability, there is a need to clearly distinguish between the roles of these parties. Combining more than one role in one body can undermine the ability of the investors to control the investment.

Promotors

The promoters take an initial risk to facilitate projects. Their rewards in terms of success fees ("preliminary fees", "issue expenses", "promotors fees", "brokerage" etc) should be carefully analysed. Some prefer to also take a "free" share of the project and a commission on final revenue. Carefully compare the total remuneration package of the promoter with other forestry investments on offer.

Investors

Unless investors are participants in a managed scheme registered under the FMC Act, these should be structured to have a separate management committee or directorate with investor representation to ensure that the forest is being managed in their long-term interests.

Managers

Normally managers are initially appointed by the promotors to organise operational work in accordance with a forest management plan. Remuneration is usually by way of a percentage charge on forest inputs plus separate fixed charges for accounting and administration. Powers to replace the managers, where necessary, should rest with the investors rather than the promotor.

Consultants/ Auditors

Investors should ensure that there is provision in the investment structure for independent advice and audit of both forestry management and financial reporting.

Supervisor

Where an offer of financial products is made under the FMC Act, a Supervisor (normally a trustee company) is required to act in the interests of the investors and ensure that the offer contained in the product disclosure statement and governing documents is adhered to.

LOCATION

The majority of the produce from forests in New Zealand will be exported in one form or another. The two location factors that will have the greatest impact on profitability are: a) proximity to a deep-water port, and b) proximity to a market for domestic sawlogs.

Physical access for harvesting needs to be considered carefully because forest roading costs can, in difficult topography, take a high percentage of harvesting revenue, and in extreme cases render harvesting unprofitable.

SITE CONDITIONS

Consideration needs to be given to:

- Topography – steep and difficult topography will reduce the profitability of a forestry investment, mainly through the higher roading and harvesting costs incurred.
- Soils – check that the depth and fertility are similar to other good forest areas in the locality. Ensure that adequate allowance has been made for swamps, stony soils, highly mineralised soil, and other poor soil types. Roading costs are highly correlated to soil types as forest roading requires large quantities of sufficiently hard rock to construct adequate pavements for forest roads. Where rock is not available locally substantial costs arise from transporting material for use as pavement base course or traction surface. Certain soil types require higher levels of construction cost for practices such as: end hauling unsuitable material to dumpsites, stabilising unconsolidated fills, and controlling storm water flows. A prudent investor should get specific advice from a person skilled in civil engineering regarding erosion susceptibility, roading costs and risks and best practice guidelines on specific sites
- Rainfall – the normal minimum annual rainfall for optimum growth is 800mm per annum. Where rainfall is between 600 and 800mm per annum, check that the forecast yields reflect the lower availability of rain.
- Altitude and temperature – Radiata pine grows faster and produces stronger wood in the warmer and lower altitude parts of New Zealand.
- Other climatic factors – check for wind exposure, snow, and erosion potential. Radiata pine should not be planted as a commercial crop in areas subject to risk of significant or extended snowfall.

- Weed cover – difficult weeds such as gorse and broom can substantially increase establishment and tending costs, and directly affect profitability.

GROWTH AND YIELD CONSIDERATIONS

Tree growth is related to the site factors discussed above, to the genetic quality of the growing stock, and to the forest management regime applied.

A range of growth and log cut-turn models has been developed by the industry which apply to different stages of growth, and to different geographical regions and different silvicultural options. Project growth and yield assumptions should be supported by verifiable growth model runs and log grade cut-turn runs. The quality of such modelling is dependent on the use of appropriate input data and assumptions. Yield projections should also take into account potential losses from wind, soil erosion, mortality and animal damage. Advice from an independent consultant on growth and yield assumptions should be sought if an investor has any concerns about the applicability of assumptions made for the project.

Optimal rotation lengths will typically be in the range of 25 to 33 years and total projected merchantable cleanfell volumes typically should be in the range of 450 to 750 m3 per stocked hectare. Rotation length has been reducing historically particularly in periods of high log prices, where investors take opportunities to crystallise relatively high log price into returns.

FOREST MANAGEMENT PLAN: REVENUE AND COSTS

Cashflow Forecast

The forest management plan for an investment project should include a cash flow analysis setting out the annual operations and costs through the duration of the growing of the forest crop. Projected costs and returns should be expressed in current-day real dollars to remove the effects of inflation.

Costs

Costs should be realistic for the work envisaged, and take into account direct operational costs, field supervision, management and other overheads. Contingencies should be provided to cover unexpected costs such as dealing with tree toppling, and additional weed control, nutrient deficiency or anti-fungal spraying.

The schedule of the pruning and thinning operations should set out the target pruned height for each pruning lift, and the target stockings for thinning operations..

Most forestry costs are expressed on a per-hectare basis which allows comparisons to be made with other past and planned forestry investment opportunities in the area.

The costs of set-up, promotion, audit, commission, consultant reports and legal advice will be associated with most forestry investment ventures. These costs will vary widely depending on the size of the project and the investment structure. Again prospective investors should compare these costs carefully with other past and planned forestry investment opportunities..

Revenue

Projected revenue returns should reflect what is currently being achieved for the respective log grades. As mentioned above, projected log grade cut-turns should be supported by export system modelling runs with experience-based adjustments. The schedule of projected log grade cut-turns should be consistent with the silvicultural management proposed for the crop.

Generally forestry investment projects are evaluated on a single rotation basis with a residual land value at the end of the rotation if the project involves land purchase. Most commonly the residual land value will be assumed to equate to the purchase value, or the value adopted for the beginning of the project.

Forestry land values are generally stable for long periods and intermittently increase at unknown time intervals. Poor quality land may lose value and high-quality land usually gains value. Some existing forest land class areas may have no cash flow or tree crop return, for example land in high snowfall risk areas, high erosion susceptibility or high environmental sensitivity. Land value plays a part in the returns to forest investments but is generally of lower specific return than the crop return unless the land can be sold to a higher or better use at the end of the investment period.

The land should be described with respect to characteristics which have direct impacts on site productivity and operating costs. Factors affecting productivity will have substantial impact on value and risk as the volumes of log products by grade are the major driver of revenues. These factors are mostly related to soil type, rainfall, wind speed, and wind run and average or extremes of temperature. Factors affecting cost are climate, location, aspect, slope, soil stability, underlying rock type. These factors affect travel cost, transport cost, machine configuration requirements for harvest and roading, and risk of adverse events from erosion susceptibility, flooding, windstorm or fire risk. It has become increasingly apparent to informed investors that risk in forest schemes is highly correlated to land quality. Steep, remote, inaccessible land has additional risks arising from health and safety compliance management due to the nature of the terrain, as well as greatly increased environmental risk on steep or erodible soil types. Some land currently in commercial forestry is unfit for purposes and this increases in risk coupled with a focus on directors' liability is resulting in such land being retired from prudent commercial use. High quality forests with good management have considerably less risk than average, or poor-quality forests, this is of major importance to the prospective forest investor.

FINANCIAL PERFORMANCE OF A FORESTRY PROJECT

Cash flow projections for forest investments should match the forest management planned events as the costs and revenues arise from the application of the plan. The forest plan should describe the planting and tending operations in detail as the tending operations are intended to add value to the tree crop or reduce risk. Events such as pruning, and thinning are major cost items and need to have clear value and quality outcomes planned to justify the investment expense incurred.

Forest cashflows typically are expenditure of capital for land, annual expenses of management, rates, insurance, maintenance, security and periodic expenses of tending and mapping, stand records or measurement events. Income cashflows are normally at the end of the investment as harvesting occurs over several years followed by a land sale to close out the investment. Investment promotors normally plan for revenue to recover costs from this promotions and marketing process.

The projected financial performance of a forestry project will generally be expressed as the internal rate of return (IRR). The IRR of an investment is defined as that discount rate where the discounted costs and revenues sum to zero. Put another way it is the maximum projected rate of interest (before inflation) than an investor could afford to pay on a loan to fund the whole investment, and break even at the end.

Provided that all costs and returns are expressed in current day dollars, and costs and returns move similarly with inflation, then the rate of return (IRR) is a real rate – i.e. the rate which is expected to be achieved over and above inflation.

IRRs can be expressed as pre-tax or post-tax. For simplicity, because future taxation policy is uncertain, and because different individuals have different tax liabilities, pre-tax IRRs are most commonly used as the benchmark for comparison purposes. A well set-out product disclosure statement should allow an investor to adjust, or sensitivity test, the calculated rate of return under differing assumptions or circumstances. IRRs are particularly sensitive to:

- log prices;
- log yields by grade
- total log volumes; and
- Costs such as harvesting and road construction.

A forestry investment should be well described to investors with quality mapping and land descriptions, systematic crop or stand records, a forest and land management plan extending for the entire investment period, and detailed cash flow projections. Professionally managed investments should include annual audit of financial and physical assets of the scheme as well as comprehensive annual accounts and reporting..

FOREST INVESTMENT FOR INDIVIDUALS

Bert Hughes, Gordon Wong – Legal Services Director,

ADVANTAGES AND DISADVANTAGES OF FORESTRY AS AN INVESTMENT

Advantages

- returns linked to international prices for forest products.
- Ethical investment, clean water, sustainability
- Environmentally sound renewable resource with low energy inputs, reduces CO2
- investment in rural land.
- wide time frame for harvest,
- Versatility of end uses for forestry outputs diversifies risk.
- Price of logs historically kept up with inflation.
- demand for industrial wood is correlated with population and GDP growth.
- taxation advantages, deductibility, and deferral of taxable income.
- can be professionally managed.
- Relatively free trade for forest products.
- spreading risks in a balanced portfolio, with long duration.
- Traditional investment, has not been undercut by rapid changes in technology
- cashflow suits superannuation requirements.
- tangible biological investment.
- Recreation opportunities.

Disadvantages

- long term
- income prior to maturity minor unless there are carbon credits.
- requires expenditure during the establishment and tending phases. tending normally requires higher funding than establishment.
- markets 25 to 30 years ahead are unpredictable. Market risks may be significant. Market returns are affected by demographics, substitution, input costs (including freight), forex, and economic growth factors.
- Biological risk , New Zealand has research and border control to mitigate the risk.
- Climatic risk, wind, snow and drought. Insurance can partially mitigate this risk.
- Fire risk. Can insure against this risk.
- Safety and enviro risk must be managed
- Financial risk. taxation policy, financial circumstances of other investors and changes in the length of rotation due to market factors.

STATUTES RELATING TO FORESTRY INVESTMENT

The most important pieces of legislation relating to the involvement of consultants, advisors or promoters of forestry investment products are:

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Anti-Money Laundering and Countering Financing of Terrorism Act 2009 (“AML/CFT Act”)

FORESTRY INVESTMENT STRUCTURES

Individual Ownership

Unincorporated Forestry Joint Ventures

Ordinary Partnerships

Limited Partnerships

Companies

Trading Trusts

SEPARATION OF ROLES IN FORESTRY INVESTMENT

Promoters

Investors

Managers

Consultants/ Auditors

Supervisor

LOCATION

SITE CONDITIONS

- Topography
- Soils
- Rainfall
- Travel cost

GROWTH AND YIELD CONSIDERATIONS

G*E

Growth models

Yield prediction.

Optimal rotation lengths

Regime

FOREST MANAGEMENT PLAN: REVENUE AND COSTS

Cashflow Forecast

Projected costs and returns conventionally expressed in current-day real dollars to remove the effects of inflation, changes from FMA now.

Costs

Revenue

Generally, forestry investment projects evaluated on single rotation basis with residual land value at the end of the rotation if land purchased.

The land should be described with characteristics which impact site productivity and operating costs.

Some land currently in commercial forestry is unfit for purpose and the increase in risk coupled with a focus on directors' liability is resulting in such land being retired from prudent commercial use.

High quality forests with good management have less risk than average, while poor-quality forests are extremely risky.

FINANCIAL PERFORMANCE OF A FORESTRY PROJECT

Cash flow projections

Forest cashflows typically include;

Promoters' fees

capital for land,

annual expenses, management, rates, insurance, maintenance, security

periodic expenses, tending, mapping, stand records or measurement events.

Income cashflows normally at the end of the investment as harvesting occurs followed by land sale.

Projected financial performance of a forestry project generally expressed as the internal rate of return (IRR). The IRR of an investment is defined as that discount rate where the discounted costs and revenues sum to zero. It is the maximum projected rate of interest (before inflation) than you could afford to pay on a loan to fund the whole investment and break even. New FMA rules include inflation now!

Provided all costs and returns are expressed in current day dollars, and costs and returns move similarly with inflation, then the rate of return (IRR) is a real rate – i.e. the rate which is expected to be achieved over and above inflation.

IRRs can be expressed pre-tax or post-tax. Pre-tax IRRs are commonly used for comparison purposes. A product disclosure statement should allow an investor to sensitivity test the IRR under differing assumptions. IRRs are sensitive to:

- log prices;
- log yields by grade
- total log volumes; and
- Costs such as harvesting and road construction.

A forestry investment should be well described with mapping and land descriptions, crop or stand records, a forest and land management plan, and detailed cash flow projections.

Professionally managed investments should include annual audit of financial and physical assets as well as comprehensive annual accounts and reporting.

FE Indicative Investment Cashflow

This from an existing MIS, but not intended as advice, just for purpose of this description

Internal Rate of Return (IRR)

The percentage return on a forestry investment is the calculated Internal Rate of Return (IRR). The IRR is the discount rate at which discounted costs equal discounted revenues – i.e. the discount rate at which present value cash flows equal zero. Provided all other factors are equal, the IRR provides a basis to compare forestry investments.

Based on the assumptions set out, assuming 2018 log prices:

Gross IRR based on past 36-month log prices	6.44%
Gross IRR based on June 2018 spot prices	7.61%
Gross IRR based on inflation adjusted 36-month log prices	8.53%

CASHFLOW PROJECTION - Wairarapa Group Forest Investment

No.Investment Units (200 Shares)

Financial Year ending March 2019	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	TOTAL
Hectares Planted	55.9	49.4													5.9				2.3				129.4	99.9	83.9	267.8	275.3		970.0
Total Hectares Harvested														5.8				2.3				126.8	98.0	82.2	262.5	269.7	54.8	48.4	950.6
EXPENDITURE																													
Capital Expenditure																													
Non Depreciable																													
Land and Improvements	4367736	90000																											$4,457,736
Preliminary Expenses	232264																												$232,264
Mortgage Repayment		120000	50000					250000	275000	125000																			$820,000
Deductible Expenditure																													
Forestry Expenditure																													
Establishment	102610	87400	1877												11500	303			4873	129			293539	238653	203830	649664	692057	157184	$2,443,619
Tending	65430	187610	331745	492005	479783	588302	606935	113810	102566											9269		15900		3927		6739	591	237006	$3,241,618
Maintenance	27830	27830	28387	28954	29533	30124	30727	31341	31968	32607	33259	33925	34603	35295	36001	36721	37456	38205	38969	39748	40543	41354	42181	43025	43885	44763	45658	46571	$1,011,463
Protection	1390	1460	1489	1519	1549	1580	1612	1644	1677	1711	1745	1780	1815	1839	1889	1926	1965	2004	2044	2085	2127	1887	1986	2056	1672	1689	2264	2326	$50,731
Inventory											15668			11871						18724			14187						$60,449
Mapping	3000	1820	2734	2872	594	541									78				126				2001	1546	1325	4311	6644	2611	$30,201
Insurance	12870	13960	14729	15523	16343	17189	18052	18953	19884	20844	21822	22844	23898	24794	26001	27142	28331	29474	30777	32064	33405	29868	29722	29636	21793	16953	21279	21537	$639,685
Rates	5130	6840	6977	7116	7259	7404	7552	7703	7857	8014	8174	8338	8505	8675	8848	9025	9206	9390	9578	9769	9965	10164	10367	10575	10786	11002	11222	11446	$246,885
Other Expenditure																													
Management	25780	27170	27713	28268	28833	29410	29998	30598	31210	31834	32471	33120	33782	34458	35147	35850	36567	37299	38045	38805	39582	40373	41181	42004	42844	43685	44575	45467	$986,069
Investor Admin Fee																													
Supervisor Fees	4250	4250	4335	4422	4510	4600	4692	4786	4882	4980	5079	5181	5284	5390	5498	5608	5720	5834	5951	6070	6191	6315	6442	6570	6702	6836	6973	7112	$154,463
Audit Fees	4500	4500	4590	4682	4775	4871	4968	5068	5169	5272	5378	5485	5595	5707	5821	5938	6056	6178	6301	6427	6556	6687	6820	6957	7096	7238	7383	7530	$163,549
Investment Update & Valuation	5500	5500	5610	5722	5837	5953	6072	6194	6318	6444	6573	6704	6839	6975	7115	7257	7402	7550	7701	7855	8012	8173	8336	8503	8673	8846	9023	9204	$199,894
Legal & Other Professional Fees																				39291									$39,291
Borrowing Costs & Bank Fees	12310	10580	6540	10100	14900	25050	37050	28700	12570	2850	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	$178,650
Industry Subscriptions & Levies	3000	3000	3060	3121	3184	3247	3312	3378	3446	3515	3585	3657	3730	5136	3881	3958	4038	4695	4201	4285	4370	38337	31238	27488	79113	82802	21098	19579	$377,456
Disbursements	5000	5000	5100	5202	5306	5412	5520	5631	5743	5858	5975	6095	6217	6341	6468	6597	6729	6864	7001	7141	7284	7430	7578	7730	7884	8042	8203	8367	$181,722
Investor Meeting Costs		5000	510	520	531	541	5520	563	574	586	598	6095	622	634	647	660	6729	686	700	714	728	7430	758	773	788	804	8203	837	$52,752
Contingency	5000	5000	5100	5202	5306	5412	5520	5631	5743																				$47,915
TOTAL EXPENDITURE	4883600	606920	500495	615228	608243	729638	767532	514000	514608	249515	141328	134224	131890	148116	149894	141986	151199	149178	157267	223378	159763	214917	497335	430442	437391	894374	886173	577777	$15,616,411

CASHFLOW PROJECTION - Wairarapa Group Forest Investment

No.Investment Units (200 Shares)																													
Financial Year ending March 2019	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	TOTAL
Hectares Planted	55.9	49.4													5.9				2.3				129.4	99.9	83.9	267.8	275.3		970.0
Total Hectares Harvested														5.8				2.3				126.8	98.0	82.2	262.5	269.7	54.8	48.4	950.6
TOTAL EXPENDITURE	4883600	606920	500495	615228	608243	729638	767532	514000	514608	249515	141328	134224	131890	148116	149894	141986	151199	149178	157267	223378	159763	214917	497335	430442	437391	894374	886173	577777	$15,616,411
RECEIPTS																													
Capital Receipts																													
Net Current Assets	-20600	20600												-123212	73272	49940		-75000	25000	50000									
Sale of Land & Improvements																												4286151	$4,286,151
Borrowings	250000			95000	75000	200000	200000																						$820,000
Income Receipts																													
Forestry Right	54200	91575																											$145,775
Grazing																													
Interest																													
Harvest														271328				117208				6926610	5456338	4671811	15211669	15945725	3305591	2976726	$54,883,008
Sale of Second Rotation Trees																												2923102	$2,923,102
TOTAL RECEIPTS	283600	112175		95000	75000	200000	200000							148116	73272	49940		42208	25000	50000		6926610	5456338	4671811	15211669	15945725	3305591	10185980	$63,058,036
NET CASHFLOW	-4600000	-494745	-500495	-520228	-533243	-529638	-567532	-514000	-514608	-249515	-141328	-134224	-131890		-76622	-92046	-151199	-106970	-132267	-173378	-159763	6711693	4959003	4241369	14774278	15051351	2419419	9608203	$47,441,625

CASHFLOW FOR EACH INVESTMENT UNIT (200 Share parcel)																													
Calendar Year of Call Payment	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	TOTALS
Cash Payable per Unit per Annum	-9200	-989	-1001	-1040	-1066	-1059	-1135	-1028	-1029	-499	-283	-268	-264		-153	-184	-302	-214	-265	-347	-320								-$20,647
Payable on Application	-9200																												
Payable 30 June		-989	-1001	-1040	-1066	-1059	-1135	-1028	-1029	-499	-283	-268	-264		-153	-184	-302	-214	-265	-347	-320								
Cash Receivable per Unit per Annum																						13423	9918	8483	29549	30103	4839	19216	$115,531

TAX ANALYSIS FOR EACH INVESTMENT UNIT																													
Tax Year ending March	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	TOTALS
Cashflow per Unit before Tax	-9200	-989	-1001	-1040	-1066	-1059	-1135	-1028	-1029	-499	-283	-268	-264		-153	-184	-302	-214	-265	-347	-320	13423	9918	8483	29549	30103	4839	19216	$94,885
Taxation Benefit at 33%	163	285	365	461	446	518	536	198	178	98	105	89	87	-75	99	94	100	24	104	147	105								$4,126
Taxation Payable at 33%																						-4291	-3166	-2710	-9465	-9640	-1537	-3460	-$34,268
Cash Payable per Unit after Tax	-9037	-704	-636	-579	-620	-541	-599	-830	-851	-401	-178	-179	-177	-75	-54	-90	-202	-190	-161	-200	-215								-$16,520
Cash Receivable per Unit after Tax																						9132	6752	5773	20084	20463	3302	15756	$81,263
	-9037	-704	-636	-579	-620	-541	-599	-830	-851	-401	-178	-179	-177	-75	-54	-90	-202	-190	-161	-200	-215	9132	6752	5773	20084	20463	3302	15756	

What else can you do in your investment?

(Catch and release, let him go now boy)


Log price negotiation

Control of commodity supply and sales.
Local markets are critical for added value, risk reduction
Have a range of customers, in a range of markets
Service export customers on ship or at their ports.
You don't need your customers in your supply chain.
Maintain our competency, and information flows
there are worse jobs out there……..

Sun Tzu, All men **can see the tactics** whereby I conquer, but what none **can see** is **the strategy** …

- Adam Smith,

“People of the same trade seldom meet together, even for merriment and diversion, but the conversation ends in a conspiracy against the public, or in some contrivance to raise prices.”

Zen and the art of forestry

- First become a better person, then you will be a better forester
- Fed Farmers are a great advocacy group because they have skin in the game
- When farms get into trouble someone loses their house
- How much do you have invested (not much?)
- How much do you care (not enough)
- Invest, you will care more, work harder, become a better person


advice for those who haven't invested;
Don’t get sick
Don’t get old