Institutional investors’ perspective on risk in New Zealand forestry*
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Abstract

Perception of risk is highly subjective

Evidence suggests we are not as good at judging risk as we like to think. But risk exists and so we have to find ways to deal with it. Timberland is an ideal asset class for reducing risk in a balanced investment portfolio. Its popularity is limited by illiquidity and the lack of well developed benchmarks against which investment performance can be measured. Recent historical returns have been very poor in New Zealand. This period has been associated with high volatility of prices in the traded forestry sector. Relatively high risk is expected to continue going forward, driven by market factors of supply and demand and New Zealand’s comparative disadvantages. Investors should consider whether assets have now been priced down enough to offer future returns sufficient to offset the expected risk in the sector. New Zealand forests are still very attractive to investors because of country stability, high growth rates, proven plantation technology and the end-use versatility of radiata pine.

Who are our investors?

GMO Renewable Resources is a specialist forestry investment subsidiary of Boston based Grantham Mayo Van Otterloo & Co LLC. The parent firm was founded in 1977, is privately owned, and manages about US$25 billion for about 450 clients. It has a reputation for placing investment returns ahead of growth, for exceeding industry return benchmarks over most of its history and for holding to a clearly defined investment style even in adverse markets. The decision to move into forestry investment in 1997 reflected growing concern over the market pricing of traditional financial securities and a desire to offer investors an alternative in direct investment in real assets.

The principals of GMO Renewable Resources, Eric Oddleifson and Eva Greger, have fifteen years experience in institutional investment in timberland and pioneered investment in forests outside the USA in the early 1990’s. Our investors are a diverse group including tax-exempt charitable and research foundations, university endowments, corporate and public sector pension plans and taxable private wealthy individuals and family groups. We have investors both in the USA and internationally. This breadth of diversity is hard to summarize, but certain broad conclusions can be drawn about how they view risk and why they invest in timberland.

Financial risk is not measurable. It is, by definition, a function of an unknown future. We often use measures of historical volatility to estimate future risk and as a result, the two concepts are often confused. Estimating one from the other presumes the future will look like the past, which we know is not always true. “Nature has established patterns originating in the return of events, but only for the most part”, wrote Gottfried von Leibniz in 1703 (Gesammelte Werke, 1855).

The study of the judgmental component of future risk, where historical data are unavailable or not well known, reveals an inherent distortion in the way we judge risk. In 1994 a group of 120 graduate students at Stanford University were asked to predict the likelihood of death from natural and unnatural causes. Those provided with a long list of specific possible causes of death consistently overestimated the risks much more than those who were given only a short list of grouped causes (Bernstein, 1996, p. 279). Incidentally, both groups overestimated the risk of death from unnatural causes. It seems that the more we think about what can go wrong, the more we worry that it will. This is surely the origin of the invocation to “not tempt fate”.

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It explains why we prefer not to watch movies about aircraft disasters just prior to a long flight, when we know the risk is less than that of the car ride to the airport.

It is likely that participants at a conference on risk in New Zealand forestry will perceive greater risk in these assets after they leave, than before they arrived, no matter how soothing various speakers might have been about their allotted subject.

The truth is we are not very good at assessing risk. Emotion often obscures objectivity, even when we are armed with relevant historical knowledge.

**Timber as an asset class**

In a financial context, investment risk is usually considered in relation to investment return. Portfolio theory, developed and published by Harry Markowitz in 1952 (Markowitz, 1952), showed a new way of thinking about the trade-off between risk and return. Markowitz demonstrated that by diversifying among investments with different sensitivity to general market volatility, each investor could, at least in theory, maximize expected return for a given acceptable level of risk, or alternatively, minimize risk for a targeted return. While some academics and practitioners have long criticized the assumptions on which portfolio theory is based, it seems to work well in the aggregate for large liquid markets and has been an important driving force behind investment decisions for the last four decades. How does this relate to timber investment?

Returns from direct investments in timberland have historically been negatively correlated with the returns from stocks and bonds. There are numerous unpublished and published studies that variously support this claim. One of the most interesting data sets shows that timber prices seems to perform particularly strongly in major bear markets for stocks behind the belief that when stocks are down, timber is up, and vice versa.

The illiquidity of ownership in timberland is one obvious reason. Investors prefer assets that price daily and provide ready options for reallocation of their portfolio. But most institutional funds are heavily weighted toward highly liquid stock and bond investments, which should provide ample opportunity for withdrawal or re-allocation within the portfolio. We need to look for other reasons why timber is not as popular as it ought to be.

**Absolute risk or benchmark risk**

Most of the larger institutional clients employ professional investment managers who report to a board or investment committee. Duration of employment can be very short for managers who fail to perform, and for better or worse, performance is usually measured quarterly and annually against industry benchmarks such as, for example, the Standard and Poors 500 stock index, or the Russell 2000 stock index. Managers who slip behind the index for successive periods might expect to lose their jobs, and even their reputation and prospects in the industry. Managers who outperform the index for successive periods might receive a bonus. This asymmetry of cause and effect tends to cause a convergence towards indexed stock funds and away from any asset classes that are considered unusual, or have poorly developed benchmarks, such as timberland. There is safety in numbers. Beating the benchmarks, or relative return, becomes more important than absolute return from a more diversified portfolio over longer time periods.

This emphasis on benchmark risk helps to explain two phenomena. Most obviously it suggests a contributing factor behind the unprecedented run-up in value of the US stock markets in the last decade. Fear of a bear market is overshadowed by fear of being
the fund manager who missed out on yet another year of double digit returns in stocks. But it also helps to explain why the obvious portfolio diversifying benefits of timber are ignored or underutilized by so many investors. Incidentally, those fund managers who have had the courage to diversify into direct timber investment have almost all done well as a result, even against the recent, gravity-defying performance of US stocks.

New Zealand's recent record is poor

By comparison with the performance of US equities, New Zealand markets in the last decade have done poorly, and the forestry sector especially so. In a summary of market performance in the 1990's, out of 51 country stock indices, the NZSE 40 came in 40th, rising only 10.6% over the ten years to the end of 1999 (see Figure 2). The weighted average world index, expressed in US$ terms, rose 137% over the same period (Financial Times, 2000). The traded forestry sector in New Zealand has performed very poorly in the past three years.

What can we conclude about the future from this backward-looking data? It is a reasonable conclusion that investors in traded forestry securities expect the volatility of the recent past to continue into the future. Stock prices have been marked down so that expected returns are high enough to offset that expected risk. Privately held timber investments do not suffer from the same degree of volatility as traded stocks because they are not subject to the fickle sentiment of the public markets. But they still have to be operated for profit in the same markets that are producing the volatile results of the traded sector and so the same general conclusions can be fairly drawn.

Is the expectation of continued high risk reasonable and if so, what are the sources of the uncertainty? Broadly speaking, New Zealand does not stand out from the pack with respect to physical risks to its plantation assets. Politically and economically, it stands close to Australia, Europe and the USA and ahead of any country in South America, South East Asia and Africa in terms of perceived risk. The source of uncertainty about future returns in New Zealand is market risk. Rapidly rising supply, a small domestic market, long distance from export markets, substitution of solid-wood products by engineered wood products and lagging investment in manufacturing, combine to create an uncertain future. None of these factors are new discoveries, but the Asian economic crisis crystallized the impact they can have on investor returns and the experience will not be forgotten quickly.

The disappointments of the last few years also lay the foundation for a stronger performance in the future. Lower commodity prices have reduced the New Zealand exchange rate and ocean freight costs. Lower log prices are now feeding through to accelerated manufacturing and growing market share of lumber and other wood products. When assets are priced to allow for market risk, New Zealand plantations remain among the best investments in timberland worldwide. Strong biological growth, proven plantation technology and versatility of end-use combine to offer a product to investors that is very attractive, at the right price.

Diversification among species, countries and end-use markets can also be used effectively to manage the risk in any timberland resource. During the Asian economic crisis, pine forests in the US South were enjoying close-to-record lumber prices driven by the strong US economy. Over the same period, mixed hardwood forests in the North East of the country were seeing a continuation of a long run-up in prices for high quality cherry and maple lumber. These cycles will turn again in due course and provide emphatic support for a diversified timber investment strategy.

Summary

Evidence suggests we are not very good at judging risk in an objective manner. With a carefully constructed, diversified portfolio, investors can be safe in the knowledge that they have defrayed much of the risk inherent in any single investment. Recent history indicates that a higher risk premium is being applied to investments in the forestry sector. Fundamental characteristics of the industry support the view that this risk premium is justified for the foreseeable future, but that at appropriately risk-adjusted prices, and as part of a diversified pool of timberland, direct ownership of New Zealand forest assets is an excellent investment for institutional investors.

References


