

Nuffield Foundation Investment Seminars

Endowments, Volatility and Time

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Chairman: Professor Elroy Dimson, London Business School

Introduction

This seminar was arranged to explore what volatility meant in relation to two different endowments with two very different time horizons. One endowment was sensitive to market values as it realised (and consumed) its assets by 2020. The other was a perpetual (or ‘dynastic’) foundation which had no timeframe for liquidating its assets. What were the different considerations for these two endowments? How was the “fecundity” of each driven by the portfolio’s market value or its underlying earnings and dividends?

Philip Coates, The Atlantic Philanthropies

The endowment is currently valued US\$4bn. In 2002 Atlantic Philanthropies decided to wind up the endowment. The current aim is to manage the portfolio to enable grant spending of \$350m pa for the next ten years together with operating costs. It also has to meet existing undrawn commitments of \$750m. This suggests the endowment would begin winding up in 2016 with complete closure in 2018-2020.

Its objectives are:

- To generate sufficient financial resources to meet grant-making commitments and targets;
- To preserve the purchasing power of the endowment over rolling 5 year periods;
- To minimise the risk that the endowment would be exhausted after less than 7 years of steady state grant-making.

The inherent tension between seeking high returns while minimising volatility was acknowledged in this extract from Atlantic’s investment policy:

“The Foundation explicitly recognises that there is both a tension and an inter-dependency between these investment constraints and the achievement of the return objective. This is because to satisfy them all simultaneously requires a combination of high return and low volatility not normally achievable by investing in conventional asset classes. A policy that is intended to strike a reasonable balance between the return objective and the investment constraints requires judgement in both design and execution.”

He suggested that for a perpetual endowment volatility didn't matter so much but when distributing large amounts over a relatively short (and fixed) time period high volatility could force unfavourable asset sales, thereby damaging the ability to meet the grant-making targets. Atlantic believes it can generate 4.5-6.5% real returns, with the lower end of the range still enabling them to meet their grant-making targets and the higher end of the range leading to an excess over the current targets, allowing them to step-up their grant-making. If returns are higher or lower than expected the life can be extended or shortened by changing the payout rate.

These return requirements were compared to an expected range of returns on asset classes resulting in a core portfolio of primarily absolute return strategies represented by hedge funds (4-6% p.a. expected real return and expected volatility of 10%) and private equity funds (9-11% p.a. real return but with greater volatility). These two asset classes represented 70% of the asset allocation. The balance was held in cash (17%) and in a legacy operating business. The hedge fund portfolio represented a stable core of more consistent returns, while the private equity provided a longer term more illiquid and volatile return generator.

Philip Coates noted that this required careful modelling and projections of asset allocations as the winding up of the endowment approached. It also demanded a strong governance structure, sufficient back office resource and extensive, ongoing, due diligence to manage the extensive alternatives portfolio.

- *Question:* Couldn't the same objective have been obtained just as easily through the purchase of a series of 10 year annuities and so pass the risk on to others?
Answer: Yes, but the returns on an annuity would not be able to generate the returns required to meet the grant-making objectives.
- *Question:* Was the emphasis on reducing risk of 'forced selling' most important in the design of the portfolio?
Answer: No, it was the balance between risk and return which predominated.

Jim Garland, The Jeffrey Company, Ohio

Jim Garland introduced his presentation by describing how different investment institutions could be differentiated by their time horizons. He explained that this could lead to very different investment strategies (table 1).

Table 1

| Time Horizon | What Matters |
|---------------------|--------------------------|
| Immediate | Market Values |
| Intermediate | Market Values and Income |
| Perpetual | 'Income' |

Where the time horizon was perpetual, market values faded in importance, and what mattered most was income or more accurately (since income has many meanings) the 'fecundity' of the portfolio, which was defined as:

“the amount of cash the fund can provide for its current beneficiaries...without endangering the fund’s ability to provide similar amounts of cash, in inflation-adjusted terms, in perpetuity.”

Income from bonds didn’t meet the needs of perpetual endowments since it was eroded by inflation; inflation-indexed bonds should have been ideal but in most countries the inflation adjusted yields were tiny. Income in the form of dividends from (US) equities tended to grow faster than inflation, which meant that dividends alone were insufficient for current spending. One traditional solution for a long-term spend rate for endowments and long-lived trusts was to mix these two flawed sources of cash - traditional bonds and equities - in the hope that their *combined* income streams would correct the shortcomings of each on its own. However, this would force funds to allocate assets based on these assets’ cash flows rather than the outlook for long term returns.

Jim Garland described two alternative ways of deciding on distribution levels. One common approach from the early 1960’s was to adopt a policy of distributing a fixed percentage of the endowment’s market value and to increase the allocation of equities, but only distributing based on an averaged market value to smooth out short term volatility. However, the 50% decline in real market values in the US between 1968 and 1978 showed that spending 5% in a prolonged downturn produced very unpleasant results. The fundamental problem with basing spending on market values, whatever the asset mix, was that it was not as stable as endowments might wish; it might work for a few years, but it wouldn’t work for longer periods.

Another approach was to base distributions on either earnings or dividends - or some combination of both. Over the longer term, earnings and dividends were more stable than market values. Earnings could form the basis of a distribution policy by spending dividends and also liquidating a portion of the investment equivalent to the retained earnings. However this would result in *too high* a spend rate partly because: a) earnings have been overstated in the past (partly due to under-depreciating assets); and b) managements have sometimes done a poor job reinvesting retained earnings.

On the other hand, spending dividends resulted in *too low* a spend rate since US dividends have grown slightly faster than inflation. Jim Garland’s proposition was that a spend rate of 130% of dividends (based on 100% US equity portfolio) appears to be the current best fit for US endowments to produce a stable, equitable, long term distribution rate.

Using this methodology if the current yield on the S&P 500 was 1.8%, the fecundity of the index was 130% of that number, or 2.3% (130% of 1.8). Even if it were slightly larger or slightly smaller the exact number for enduring long term distribution would be a lot less than the more widespread number of 5% of market value used by many to determine their spend rate. Jim Garland went on to explain that this hypothesis was dependent on certain conditions such as a healthy economy supported by good legal, political and social institutions and a culture of paying stable dividends.

If an endowment or trust’s objectives were to preserve real market values, provide stable payouts *and* maintain inter-generational equity in spending, then the fecundity and not the price of the assets became paramount.

Jim Garland noted that the Nuffield Foundation and the Jeffrey Company had similar financial objectives but where Nuffield listed capital preservation first and spending stability second the Jeffrey Company listed spending stability first. What did perpetual endowments want? Surely their priority was to maximise their stable sustainable cashflows; stable capital for its own sake was far less significant.

A response by Robert Hayes, Strategic Advice, Blackrock

Comparing the two different approaches it was clear that an investment policy must be determined by time horizon and the need for financial security. The equity 'fecundity' rate was likely to vary between different markets (such as the US and the UK). This was demonstrated by the FTSE over the period 1965-2006 which showed that using 130% of dividends (annex 1) would not have been a particularly stable basis on which to base spending, although 110% might have been better (annex 2).

Endowments could be genuinely long term in their investment approach (unlike many pension funds) since they could take advantage of 'liquidity risk' by investing in long term asset classes such as private equity and property. If the preservation of the corpus in real terms was what was important, 'active management risk' might be irrelevant for endowments. Hedge funds (which show correlation with equity markets) could then become an expensive exposure to equities without the return.

Endowments had to consider two fundamental questions: first, what was expected of the money, and second, what was an appropriate definition of risk (eg volatility of total return, loss of capital, spending impairment etc). What was the trustees' approach to protecting the distributions against that risk?

- *Question:* If an endowment moved away from using market values to a fecundity model to determine spending policy was there an implication that the markets were inefficient, and therefore could be exploited, particularly since most portfolios were managed against a market capitalisation benchmark?
Answer: It was not felt to be possible to beat the market in the long term.
- *Question:* Using retained earnings and dividend payouts as a basis for spending raised some significant corporate governance issues.
Answer: Certainly there were differences in the structures of the corporate sector in different markets that had to be factored in. UK companies might have a tendency to over distribute or may manipulate the dividend payout for other reasons. There might be more equity leakage and more share buy-backs in the US that could distort the picture. It was possible that companies could adopt a dividend policy that led to long term over distribution.
- *Question:* Were investment models developed for the pension industry always appropriate to endowments?
Answer: Not necessarily. The maximum time horizon for many pension funds was increasingly short (often only one year) because of the obligation to produce predictable asset values for annual solvency tests.

Summary

The chairman summed up the meeting as one that had been both interesting and thought provoking. Whatever approach an endowment took to its distributions diversification against risks that were specific to its objectives would always be a central tenet. This applied equally to an all equity fund and to a multi asset class portfolio.

Any comments & enquiries on this seminar should be made to:

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