

Investing a charity's assets

- a simple example

March 2009

This article looks at the investment arrangements and process for a sample charity. The numbers have been chosen to illustrate the principles, as opposed to reflect a specific case or recommendation. The principles will, however, apply to any investor where there is a requirement for a regular cash flow. A summary of the investment process is on page 6.

Background

Assume a Trust has capital of \$100. The Trustees of the Trust invest the capital and wish to maximise the grants they make to community organisations each year. This applies for the current and future generations - intergenerational fairness is important.

Each year, the Trust incurs operational costs of \$1 and looks to make grants to community organisations of \$4. Typically the actual grants will vary between \$3 and \$5. The Trust also looks to grow its capital over time, to protect the level of the future grants from the effects of inflation and population growth (estimated to be 3.0% a year on average). The Trust therefore, needs to invest its capital to ensure liquidity of \$5 is available each year (i.e. 5%) and that growth, over time, averages 3.0% p.a..

The target annual grant level of \$4 is the "optimal" level. In years when appropriate community projects are not available, it is lower. Likewise, in years when the demand and quality of applications is high, a higher level of grants is made. The Trustees also allow small variations to occur in the grant levels, to help manage the consequences of the short-term fluctuations in the asset values and returns and operate a reserving policy to help smooth the grants. However, reduced grants for reasons of short-term asset value fluctuations are undesirable.

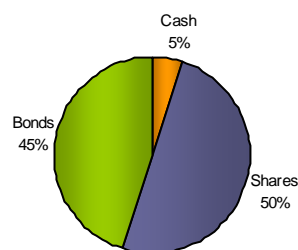
The Trustees need to determine how the \$100 capital is invested along with the appropriate investment policies, and how the grants level is managed. This involves setting an investment strategy for the objectives and responding to market events as they arise.

Investment strategy

As a rule, the starting point for trustees to determine their investment strategy is their intended cash flows for their future costs and grants (i.e. liabilities) and their ability and willingness to withstand low or negative return outcomes, short-term, relative to the intended cash flows. This latter factor is often referred to as the trustees' tolerance or willingness for risk. The investment strategy will result in an allocation of the capital to cash assets, bond assets and share/property assets that align the cash flows from the investments with the cash flows for the grants and costs. While the overall investment strategy and total return is important, the investment strategy can also be considered to allocate the capital into distinct buckets of cash, bonds and shares/property. The outcome of each bucket can therefore be evaluated independently, relative to the purpose for that bucket, and together, against the objectives of the Trust as a whole. This determines the strategy's success and "success" in this context means meeting the grants each and every year.

The current investment strategy adopted by the Trustees for the Trust to achieve the objectives is:

	\$
Cash	5
Bonds	45
Property/shares	50
	<hr/>
	100



Any reserves over and above the capital base are held in cash.

* Success is measured by the level of the grants and the growth of the capital.

* Short-term liquidity is required to meet costs and the intended grants.

* Growth is required to protect the real value of assets.

* The investment strategy can be considered to allocate the capital into buckets. Collectively they ensure success, but each bucket has its own purpose.

Investment process

The return that the Trust achieves each year will reflect the investment strategy and what happens in the markets. The return will include the actual income from interest, coupons, dividends and rent, together with growth through market movements. Under the arrangements, each year the actual income received is paid to the cash sector. This is then used to fund the operational costs and the grants.

If the investment strategy is set correctly and the assets deliver returns equal to their expected returns, the resulting total return should deliver the income and growth required and the investment policies will be successful. This will protect the capital and enable the desired distributions to be made.

In practice even if the returns are as expected on average, the returns will vary, year by year, around the average and policies to manage the consequences of this variation are required.

If the actual income return is less than \$5, i.e. less than the grants and costs, either:

- The grants have to be reduced; or
- Some of the assets have to be sold to top up the income return. Ideally if there is a shortfall, it is funded from cash. If bonds, shares or property are sold and the market is down, a permanent loss is realised. Retaining part of the capital in cash avoids being forced to sell bonds, shares or property when the market is down and the income return is below \$5.

★ The actual returns will vary around the expected and the variation may be wide.

If the income return is above \$5:

- A higher level of grants can be made, or
- The excess is held in reserves for future grants, or
- Part of the excess return is invested in bonds or shares, to increase the capital and therefore the future returns.

★ The expected returns are simple guesses about the future.

Expected investment returns

In terms of the investments, the expected income return that will be received each year is

	Expected (\$)	Guess about the future	Typical range (\$)
Cash	\$0.30	6.0% p.a. on average	\$0.25 to \$0.45
Bonds	\$3.49	7.25% p.a. on average	\$2.92 to \$3.83
Property/shares	<u>\$1.75</u>	3.5% p.a. on average	<u>\$1.00 to \$2.50</u>
	\$5.54		\$4.17 to \$6.78

★ Variations will occur in both the income received and the change in asset values.

The expected return is the likely average return over time and the “typical range” reflects the likely variation around the average that will be experienced. The \$5.54, \$4.17 and \$6.78 compare to the required income of \$5.

The income return is only part of the picture. The value of the assets, particularly shares, will also fluctuate. The change in the values of the investments is expected to generate market movements of:

	Expected (\$)	Guess about the future	Typical range (\$)
Cash	\$0.00		\$0.00
Bonds	\$0.00		-\$2.00 to +\$2.00
Property/shares	<u>\$2.75</u>	5.5% p.a. on average	<u>-\$7.00 to \$12.50</u>
	\$2.75		-\$9.00 to \$14.50

On average, the change in the market value is expected to trend upwards at 2.75% p.a. but fluctuate around this level and the year-on-year fluctuations will be significant (-9% to +14.5%). This raises a few questions. When the value goes down, should the investor top up the allocation to shares to maintain the overall investment strategy at \$50 (i.e.50%), or should they wait patiently for the markets to go back up by themselves? Likewise, when it goes up by more than expected, should the investor sell some to take the profit, or ignore it, knowing that it is just a natural fluctuation around the average?

Expected annual outcome

If the markets perform to the level they are expected to on average, then, after 1 year, the position is:

		Actual		Ideal	
		Assets	Strategy	Assets	Strategy
Cash	$\$5 + \$5.54 - \$4.0 - \$1 =$	\$5.54	5.3%	\$5.16	5.0%
Bonds		\$45.00	43.6%	\$46.48	45.0%
Property/shares	$\$50 + \$2.75 =$	<u>\$52.75</u>	<u>51.1%</u>	<u>\$51.65</u>	<u>50.0%</u>
		\$103.29	100.0%	\$103.29	100.0%

The above highlights that in a “normal” year (i.e. a year where the return is equal to the average), the Trust will end up with more cash and property/shares than it requires, and less bonds. It will therefore look to sell shares to buy bonds. It may also look to transfer some of the cash to bonds, to maintain the overall investment strategy equal to the benchmark. It is also noted that the end assets of \$103.29 is above the inflation adjusted target of \$103.00 (i.e. $\$100 + 3.0\%$). There is therefore a small margin for error, but it is small in the context of the potential variation.

But not all years will be normal. In fact, few years, if any, will be. In some years, the market movement will be at the bottom of the range and in some years at the high end of the range. The extreme outcomes are:

		Income low	Income high
Growth high	Cash	\$4.17 (3.7%)	\$6.78 (5.8%)
	Bonds	\$47.00 (41.3%)	\$47.00 (40.4%)
	Shares	<u>\$62.50 (55.0%)</u>	<u>\$62.50 (53.8%)</u>
		\$113.67	\$116.28
Growth low	Cash	\$4.17 (4.6%)	\$6.78 (7.4%)
	Bonds	\$43.00 (47.7%)	\$43.00 (46.3%)
	Shares	<u>\$43.00 (47.7%)</u>	<u>\$43.00 (45.3%)</u>
		\$90.17	\$92.78

The above shows that with what are normal market fluctuations around the average, the end-of-year position will vary widely. There will also be a few years when the growth is outside the ranges indicated. Therefore, several investment policy questions arise. What should be the Trustees' policy when:

- The total income return is less than the target of \$5?
- The market movement of shares is above average?
- The market movement of shares is below average?
- The market movement of bonds is above or below average?

Also, what happens if the guesses about the future prove to be too optimistic?

Reduced income return

The Trust has target expenditure each year of \$5m. On average, the investment strategy and the returns of the markets are expected to produce such income, plus a small margin. In reality, the income is expected to vary between \$4.17 and \$6.78. No specific problems arise if a particular year is above average. The excess can be held in reserve for a future below average year, or reinvested to boost the capital - a decision simply needs to be made. The important question is what happens to grants when the actual income generated is nearer the \$4.17? In part, this also depends on what happens to the growth return; is it above or below average? As the growth return is expected to be in the range -\$9.00 to \$14.50, different actions should occur if it is below \$2.75 versus above \$2.75.

	Share market movement		
	Down	Neutral	Up
Income return more than \$5	Allocate excess income to top up the shares	Keep excess in cash and hold in reserves	Sell shares to maintain the benchmark strategy

If the actual income return is below the expected level, which it will be in about half of the years, the Trustees need to supplement the income to enable the target distributions to be made, or cut the distributions. In this case, the starting position is for the cash assets to be used to fund the shortfall and the Trustees to work out how to then top up the cash assets. If the actual income was at the lower end of the range (i.e. at \$4.17) the shortfall is \$0.83. At this level the cash assets could meet the shortfall for several years without causing any embarrassment. This gives the Trustees plenty of time to sell other assets (e.g. shares) to top up the cash holdings and to give the shares an opportunity to rise. The presence of cash (and bonds) means that the Trustees can wait for the growth return to be above average before they sell the shares.

	Share market movement		
	Down	Neutral	Up
Income return less than \$5	Fund grant shortfall out of cash and wait patiently for shares to recover	Sell shares down to 50% of "target capital" to top up cash	Sell shares to top up income

The Trustees, in an extreme case, could also consider lowering the grants by \$0.5, or even \$1.0, but this should be avoided if possible.

If the income was low but the capital movement was as expected, the position at the end of the year is:

		Actual	Target	
Cash	5 + 4.17 - 5.0 =	\$4.17	\$5.15	5%
Bonds		\$45.00	\$46.35	45%
Property/shares		<u>\$52.75</u>	<u>\$51.50</u>	50%
		\$101.92	\$103.00	

In this case, some shares could be sold to top up the cash and bonds. However, there will still be a shortage in the total assets relative to the fully inflation adjusted position. Therefore, the Trustees should probably not sell the shares down below the target level (i.e. \$51.50) as this is what is needed to stay on track to achieve the long-term average growth. This will mean, after the sale, that the allocation to shares is 50% of the target capital but 50.5% of the actual. It is however the dollar level that is more important than the percentage.

Market movements of shares above average

If the market movement of shares is above average, then the Trustees' policy is to realise the additional profit and hold it in cash (or bonds) in reserve for future distributions.

This reflects the principle that share markets rise and fall and if no action is taken when the market rises, particularly above its normal level, the additional market movement will be lost for the use by the Trust when the markets return to their fair value. It is better to take the extra as a windfall gain and hold it safe in cash, even if it is then reinvested when the markets fall back to their normal level.

Market movements of shares below average

If the market movement of shares is below average, which it will be half the time, it will normally mean that the remaining allocation to shares is now below its target level. The question is whether cash/bonds should be sold and used to top up the shares back to the expected level.

In most cases, the answer is no, but the decision should depend on the level of the total assets relative to the target inflation adjusted level. If the level of cash/bond assets is above the theoretical target level if the capital was fully inflation proofed, the answer may be yes.

If cash/bonds are sold, then for the immediate future, the income return will reduce placing more pressure on the cash levels should there be a bad year. Bonds and cash should therefore, only be sold to top up shares if, after the sale, there remains sufficient cash and bonds at least equal to the target level to generate income and to be able to cope with a continued bad period.

★ Profits should be taken when shares are up.

★ Patience should be shown when shares are down.

★ Market movements in bonds should be ignored unless current cash returns are higher than bond returns.

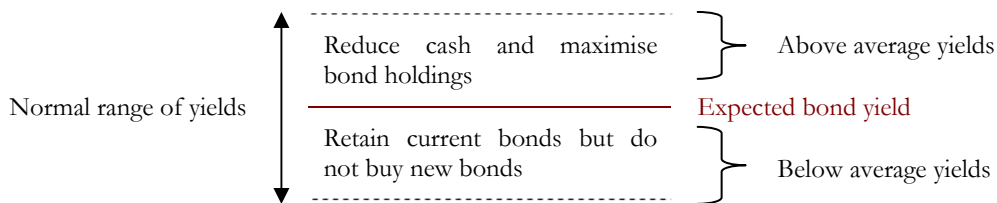
Market movements of bonds

Like shares, the value of the bonds goes up and down around the average but doesn't trend up or down. The value goes up when yields fall and goes down when yields rise. These are normally short-term events. However, unlike shares, ultimately the yield returns to normal and the bond values return to their nominal value.

Therefore, any short-term gain or loss experienced with a bond, automatically reduces to nil as the bond approaches maturity. For this reason, there is an argument for doing nothing, when bond values have fallen, because yields have fallen. The main exception is when the yields have fallen and are below the average expected bond yield level and are below the rates of return on cash.

If, when yields have fallen and the market value has risen, the profit is taken (i.e. bonds sold down) the proceeds have to be reinvested. If they are invested in similar bonds, they are invested at the same lower yields they were sold for and the resulting income returns will be proportionally lower – nothing is gained. It therefore only makes sense to sell down the bonds when the expected return from cash is higher than bonds and will be for a period, or if bonds of a different duration have higher yields and can be bought. Therefore, when bond yields are low, it normally makes sense to maintain the current bonds, but recognise that it does not make sense to buy new bonds until yields have risen.

If the market movement of bonds is negative, this means that yields have risen. There is therefore an advantage in buying more bonds at the higher yields particularly if the yields are above their expected average. Therefore, when bond yields are high, it makes sense to reduce cash levels to the lowest level that will not jeopardise the grant making over the immediate 2 to 3 years, should the markets have a sustained period of below average returns, and invest the excess cash in higher yielding bonds.



Assumptions too optimistic

If the above policies are adopted, there is minimal investment risk in making grants at the optimal level, even when the share markets are down. The real risk therefore, is that the assumptions or guesses about future returns are too high. If this is the case, it will not be known for many years.

If the income return is \$4.17, the question arises as to whether this is normal and part of a typical pattern of returns that will average \$5.54, or is it because \$5.54 was too optimistic and the expected return should have been lower? Even if the return the next year is above \$5.54, it is still not known.

The answer is unknown and will only emerge over time. Trustees therefore need to be cautious in years when the return is below average in one year, until it is clear that it is normal market volatility. A cautious approach might result in a small reduction in the budgeted grants and could also result in a cautious approach to rebalancing from lower risk assets to higher risk assets, but it should not result in a dramatic cut in grant levels.

Also relevant is the expected growth return. Should this assumption prove to be optimistic, the capital may not be fully protected against the effects of inflation. However, it will take several years for this to emerge because of the wide year-by-year fluctuations expected.

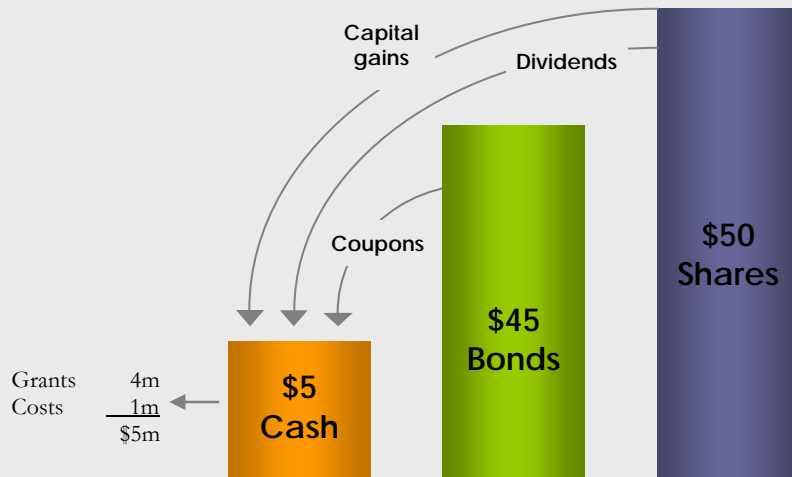
If the growth assumption proves to be too optimistic, ultimately grant levels have to be reduced and part of the income reinvested, so that the capital value can be maintained in real terms. Any reduction however, need only occur over time as the need for protecting the capital is a medium to long term objective and not a short term requirement.

A summary of the investment process is:

The \$100 assets can be considered to be in three buckets; cash, bonds and shares. Each year the dividends from the shares and the coupons from bonds go to the cash bucket, along with the interests earned on the cash itself. The grants and costs, i.e. all payments, come out of the cash bucket.

When cash gets too high – above 5% of the capital base, it is available to rebalance the shares and bonds. When it gets too low, opportunities are taken to realise bonds and shares, as appropriate, to top up the cash.

Separate to the income return received, the shares will go up and down. When the shares are up, they are sold to top up the cash/bonds to keep the overall strategy in balance. When shares are down, they are held until they recover. Auto rebalancing away from shares applies when shares are up. Auto rebalancing to shares, only applies when the total assets are up more than the target capital level and only then if the excess is not held in reserve for future grants. Lastly, the \$3.5 growth from shares, on average, equates to overall growth of 3.5% required. When this emerges, it provides the capital protection required. There is no requirement for it to be received each and every year.



Expected income	\$5.5	\$0.3	\$3.5	\$1.7
Range of income	\$4.2 to \$6.8	\$0.2 to \$0.5	\$2.9 to \$3.8	\$1.0 to \$2.5
Expected growth	\$2.8	\$0	\$0	\$2.8
Range of growth	-\$9.0 to \$14.5	-	-\$2.0 to \$2.0	-\$7 to \$12.5

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