

Review of the Courts Service Spectrum Growth Fund

May 2007 to January 2009

Prepared for	The Courts Service
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Table of Contents

1 Executive Summary	1
2 Introduction	3
3 Governance Structures	5
4 Investment Strategies in Place Following 2001/2002 Review	6
5 Performance of the Spectrum Growth Fund	14
6 Conclusions	20
7 Sources and Notes	21

1 | Executive Summary

Background

In July 2015, the Public Accounts Committee ("PAC") of Dáil Éireann published a report on its examination of the management and investment of funds in respect of Wards of Court entitled *Report on Wards of Court July 2015*. One of the recommendations of the Committee was that the management and performance of the Spectrum Growth Fund in the period from May 2007 to January 2009 should be independently reviewed.

The Courts Service has requested that Aon Hewitt conduct the recommended review.

Key Findings

Aon Hewitt has considered the appropriateness of the risk profile in the Spectrum Growth Fund, its performance versus its benchmark and comparable strategies during the review period, as well as more long term performance.

Our key findings are that:-

- Any investment strategy that aims for a long term return in excess of inflation requires an exposure to equities, and will by definition, carry the risk of loss. However, if the investment time horizon is sufficiently long, short term volatility should not be a primary consideration in determining strategy.
- We believe that a prudent approach was taken in the construction of the Spectrum Growth Fund following the review undertaken by Mercer Investment Consulting in 2001/2002, with levels of risk appropriate to its stated objective. We also believe that the Spectrum Growth Fund was an appropriate investment strategy for Wards of Courts with long term care needs given their long term investment horizon. Furthermore, equity exposure was less than that of comparable funds, sheltering Courts beneficiaries from the more extreme impact of the financial crisis.
- The Spectrum Growth Fund performed in line with its benchmark and achieved better returns than that of comparable strategies and reference indices.
- It exhibited a superior risk/return profile in terms of volatility and experienced less of a loss than comparable strategies and reference indices over the period.
- While those invested in the Spectrum Growth Fund experienced a significant drop in value during the financial crisis, which was described by the International Monetary Fund (IMF) as "The Worst Financial Crisis since the Great Depression", they have experienced significant positive returns and more than recouped the drop in value experienced in the period since.
- The maximum reduction in value for any Ward invested in the Spectrum Growth Fund was -34.4%, but this would have been a temporary *unrealised loss* for any Ward that remained invested in the Spectrum Growth Fund. Only actual sales out of the fund during this time (such as to provide for ongoing care needs) could

have triggered a realised loss.

- Based on data provided by the Courts Service there were aggregate net realised gains of €554,957 from sales out of the Spectrum Growth Fund during the period April 2007 to February 2009. These sales involved 63 Wardship cases of which 87% triggered realised gains from the disposals.
 - The performance from the start of the credit crisis in April 2007* through to the end August 2016 is 3.6% per annum (or a cumulative 39.5%) while the performance since December 2003 was 5.7% per annum or a cumulative 102.7%, more than doubling an initial sum that remained invested. For the period from April 2007 through to the end August 2016, the rate of inflation as measured by the Consumer Price Index was 0.5% per annum while since December 2003 it was 1.3% per annum.
 - We believe the strategy struck the right balance between seeking reasonable long term returns while being cognisant of risk over shorter time periods.
 - There is a strong and well organised governance structure in place in respect of the management and investment of funds in court which includes external independent experienced representation. The Courts Service also uses independent investment advisors to support it in developing its investment strategies.
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* **Note:** While the PAC recommendations highlighted the period May 2007 to January 2009, to fully capture the falls in markets during the period we have measured performance from 1st April 2007 to 28th February 2009

2 | Introduction

Legal responsibility for the management and investment of court funds rests with the Court and the judge responsible for making a determination in each Court case. The Courts Service through its legal mandates to manage the courts and provide support services for judges, has day to day responsibility for putting in place arrangements and structures to support the judiciary in this regard. The Courts Service manages these funds in a fiduciary capacity on behalf of several thousand beneficiaries. These include various categories of litigant, persons who are Wards of Court and Minors who have been awarded damages by the Courts. The Courts Service has no input to the decision of the judge in the determination of any sum awarded in damages.

Court funds are required to be invested in accordance with the terms of the Trustee (Authorised Investments) Act, 1958 and the Orders made thereunder. Prior to 2003, investments were a mix of individual arrangements, made principally in cash deposits with authorised banks, government gilts, managed funds and various legacy stocks which may in some cases have come into Court with individuals. The Trustee (Authorised Investments) Order, 1998 and subsequent legislation significantly broadened the type of investments which could be made on behalf of Court beneficiaries.

The following report is a review of the management and performance of the Courts Service Spectrum Growth Fund which was impacted by equity market falls during the period from May 2007 to January 2009 ("the financial crisis") as recommended by the Public Accounts Committee in their *Report on Wards of Court July 2015*. This report also covers performance over more recent periods.

This report reviews the appropriateness of the risk profile in the Spectrum Growth Fund (previously known as Strategy 4), its performance versus its benchmark and comparable strategies during the financial crisis, as well as more long term performance, as is appropriate given its long term investment horizon. The report also reviews the governance structure that the Courts Services has in place for the management of their investment strategies.

The global financial crisis was accompanied by the onset of a global recession, negatively impacting all risk-bearing asset classes over certain periods between 2007 and 2009 and was described by the International Monetary Fund (IMF) as "The Worst Financial Crisis since the Great Depression". All the major equity indices fell by at least 40% in Euro terms during that time.

Explanation of Some Terms Used as Part of This Review

Equities (also commonly referred to as Stocks or Shares)

Equity funds are made up of shares in companies traded on stock markets. As an incentive for people to buy shares, companies offer shareholders a share of their profits, paid out as an annual dividend. Dividends can vary and are never guaranteed.

Equity funds are affected by rises and falls in stock markets; their value can go up and down significantly and suddenly. They are considered a volatile investment but generally considered necessary if real growth is required. Historically, equities have outperformed every other asset class – often ahead of price inflation.

Bonds (also commonly referred to as Fixed Interest or Gilts)

Bonds are essentially loans to companies or governments. The company or government agrees to repay the loan on an agreed date. In the meantime, they pay interest on the loan – either at a fixed or floating rate, or linked to an inflation index.

Bonds are traded on investment markets; while historically their prices are typically more stable than equity prices (although they can still fall) bonds have become increasingly more volatile of late. However the returns on bonds would not be expected to achieve the strong long-term growth that equity shares can potentially enjoy over the long term. The returns on bond funds rise and fall in line with movements in interest rates.

Cash

Cash funds are made up of cash deposits (similar to a bank account) and cash-like investments issued by financial institutions.

Cash funds are generally considered a low risk, low return investment option. Long term cash investments run the risk of losing value in 'real terms' due to the impact of inflation.

Active Investment Management

Active managers aim to outperform their benchmarks or indices by running concentrated portfolios using their skill and judgement of the relative valuation of markets and stocks. Active managers can underperform if they make the wrong choices. Expertise is required to identify and monitor managers with the skills to outperform. Fees are normally higher for active managers.

Passive Management

Indexation (or passive management) aims to achieve performance which is similar to a representative stock market index. The portfolio normally replicates all the stocks in the index and changes are made only for external reasons such as corporate activity, the reinvestment of dividends, and cashflow into and out of the Fund. Passive management reduces the risk of underperforming the index and normally carries lower fees.

The Courts Service chose to implement a passive investment strategy and has negotiated very significant discounts on what are typically already lower passive management fees. Independent investment advisors provide necessary expertise in relation to the decisions around active/passive, the selection of investment managers (subject to public tender) and ongoing strategy.

3 | Governance Structures

The Courts Service has a strong and well organised governance structure in place in respect of the management and investment of funds in court that is overseen by an Investment Committee.

The Investment Committee was established in 2002. It oversees the implementation of the arrangements approved by the Board of the Courts Service for the management and investment of court funds and to ensure compliance with best practice. The role of the Committee is advisory rather than mandatory, as ultimately it is a matter for the judge in any case to decide on the investment of court funds. The members of the Committee are comprised of representatives of the judiciary, Court officers, Court Service officials and independent external members. The Committee is chaired by the President of the High Court. The Committee meets on a regular basis to monitor the performance of the funds and to review reports from the Head of Resource Management, Investment Advisors and Investment Managers. The Courts Service Investment Advisors are in attendance for all Investment Committee meetings.

While Aon Hewitt currently provides independent investment advice to the Courts Service in relation to the management and investment of court funds and was appointed in January 2009, Mercer Investment Consulting was the investment advisor in place during the period under review. Investment Advisor appointments are subject to competitive tender.

The role of the investment advisor is to provide independent investment advice to the Investment Committee in determining appropriate investment policy and investment strategies to meet the needs of beneficiaries, and also to monitor investment performance and the performance of fund managers. The investment advisor also supports the Investment Committee in the selection and appointment of fund managers and custodians as required.

The current investment manager for the funds is State Street Global Advisors Ireland Limited (SSGA) which was re-appointed as fund manager in 2012. The re-appointment of SSGA followed the completion of a competitive EU public tender exercise during 2011. During the period under review, the investment manager was jointly Bank of Ireland Asset Management (BIAM) and State Street Global Advisors, who had been appointed in 2003 following a competitive EU procurement process. In January 2011, Street Global Advisors (SSGA), the investment management business of State Street Corporation (NYSE: STT), acquired BIAM and contracts were updated accordingly to reflect this change of ownership.

4 | Investment Strategies in Place Following 2001/2002 Review

Evolution of Investment Arrangements

In 2001/2002 the Courts Service, with the assistance of their investment advisors at the time, Mercer Investment Consulting ("Mercer"), undertook a detailed review of the arrangements in place at the time for the investment of courts' funds. This review resulted in significant change to the approach to managing and investing court funds.

The revised arrangements were designed to be sufficiently flexible to cater for the needs of the different groups of Courts beneficiaries. The prior practice of investing in a mix of individual arrangements, made principally in cash based investments and a system of individual accounts with no economies of scale, was replaced with a more standardised range of pooled funds which comprised a mix of the following investment assets:

- A diversified equity fund (shares in large established companies)
- A diversified bond fund (issued by Governments and Government backed entities)
- A diversified cash fund (cash and cash like securities issued by both financial and non-financial institutions)

Following the implementation of the new arrangements, the beneficiaries held units in a large pool of assets (funds) rather than holding a small number of individual assets with large concentration risk. The benefits of this approach included significant increases in diversification for each beneficiary (and therefore a reduction in risk) as well as significant reductions in management expenses (investment manager fees.)

Bank of Ireland Asset Management (BIAM) and State Street Global Advisors were appointed as joint fund managers in 2003, to manage the revised arrangements and reported to the Courts Service Investment Committee.

Following the financial crisis in 2007/2008, the Investment Committee together with their investment advisors Aon Hewitt, undertook a review of the investment arrangements they had in place since 2003. They reviewed the risk levels inherent in the various strategies and looked at other opportunities to enhance the management of the funds. Following this review, two funds were added. The range of funds currently used is as follows: the Growth Fund, the Diversified Fund, the Moderate Balanced Fund, the Cash and Short Term Bond Fund, the Euribor Plus Fund and the Cash Fund.

While the number and composition of funds are reviewed and sometimes modified as part of the ongoing monitoring of investment strategies, the basic investment objectives have remained consistent from the outset in 2003. For example, in October 2013, the equity allocation in the Spectrum Growth Fund was set at 55% with a further 15% allocated to the SSGA Diversified Alternative Strategy (an actively managed multi-asset fund with equity-like properties) and an allocation to Corporate Bonds. It should be noted that the strategies are periodically reviewed and the appropriateness of including any new funds (such as the SSGA Diversified Alternative Strategy) is evaluated.

Considerations in Setting Strategy Composition

In order to decide on the initial investment objectives and risk profiles for the strategies, Mercer highlighted the need to understand the future financial needs of beneficiaries. This was dependent on:

- The amount of the award (and whether it is viewed as sufficient to meet the future needs with reasonable risk)
- The amount and timing of future cash payments (uncertain, but estimates could be used)
- The time horizon (dependent on age of the beneficiary and life expectancy or the time until a minor reaches the age of majority)
- Inflation (in particular medical inflation)
- Impact of tax

In modelling the appropriate strategy in which to invest Ward funds, assumptions for the following were utilised:

- General Inflation
- Medical Inflation
- Expected returns on asset classes

Mercer also pointed out that while the amount of the award is being considered in Court, both the plaintiff and the defendant will employ actuarial consultants and economists (experts) in order to derive an appropriate rate of return on which the present value of the award should be based. There is obvious scope for differences of opinion and a requirement for compromise between the parties, as well as other variables, such as contributory negligence, that may be taken into consideration when the value of the award is decided by the judge. Given the nature of this process, the award that is ultimately decided on may differ from what either the plaintiff or the defendant would have proposed and may be inadequate (at the outset) to provide for the Ward over their lifetime.

The starting point for the Courts Service is to adopt a "least risk" investment approach where possible. However, in some cases, the Courts Service may find, based on their analysis, that the award is not sufficiently large to meet the future expected needs of the beneficiary. This exercise is conducted by the Office of Wards of Court in consultation with representatives of the Ward of Court. This is likely to necessitate funds being invested in a strategy with sufficient growth potential to aim to meet the future expected needs but does not guarantee the funds will be sufficient in any event. Any investment strategy that did not include a significant equity weight could not be expected to provide this level of growth.

The introduction of an equity allocation to an investment strategy increases the potential for volatility and risk of loss. However, if the investment time horizon is sufficiently long, short term volatility should not be a primary consideration in determining strategy.

One of the key inputs into the expected return calculations required by the experts is an assumption for projected inflation, as any significant

increase in inflation would eat away at the buying power of the awards.

Both normal price inflation and, in particular medical price inflation, would have been (and continue to be) important to consider in setting awards and strategies. At the time, the ECB target inflation rate for Euroland was 2% p.a. However, in order to be conservative, Mercer assumed an expected rate of inflation to be circa 3.0%. We believe that this was reasonable at the time.

Estimates of medical inflation can be difficult to make. Historically, medical inflation has exceeded price inflation over time, but it is always difficult to know in advance if this will continue and, if so, what the gap may be. Mercer referenced figures published in the US at that time that showed that medical care costs had outpaced consumer price inflation by an average of 2% p.a. over the previous twenty years and felt that this was a reasonable position to assume for the future.

Taking the expected price inflation figure of 3% and adding the premium for medical inflation of 2%, the relevant inflation assumption would have been in the region of 5.0% p.a. This represents the growth rate that affected beneficiaries were anticipated to need to achieve in order to simply maintain purchasing power.

Any investment strategy that did not include a significant equity weight could not hope to achieve the returns that would be necessary to preserve the purchasing power of the initial awards, which would be needed to assist in providing for the Ward over the long term (in some cases this could exceed 30 years). Given that the award may be needed to provide for the Ward over such a potentially long period, even with an equity allocation it can be difficult to predict if the amount will be sufficient given the number of unknown variables that will affect the financial requirements of the Ward over their lifetime.

Awards that would be paid out over a shorter term (i.e. when the individual achieved the age of majority) or that were of less certain duration did not require the same long term growth rate and therefore did not require significant equity allocations (or in some cases any equity allocation at all). In many cases, these cases could be invested in Cash.

Expected Return Assumptions in Mercer Review

In addition to assumptions for future inflation, expected returns (and risk) for the major asset classes were required in order to derive strategies for the funds.

Mercer's review provided significant detail on how it arrived at the various expected returns. In summary the expected long term returns (gross of fees) used in setting the strategies were:

Asset Class	Expected Return
Cash	4.0%
Bonds	5.0%
Equities	8.5%
Property	7.0%

This is not to say that Mercer were predicting that returns would be as expected in any shorter time frame, but that these were reasonable

estimates of returns over the long term for the various asset classes for the purpose of deriving investment strategies.

Interestingly, actual equity returns for the 10 years ended 31st December 2003 exceeded these assumptions as Irish equities showed returns of 12.8% per annum while US equities showed returns of 9.6% per annum. This was in spite of the bursting of the technology bubble in 2001/2002 which saw equity markets fall precipitously over that period.

Composition of Investment Strategies following 2003 Review

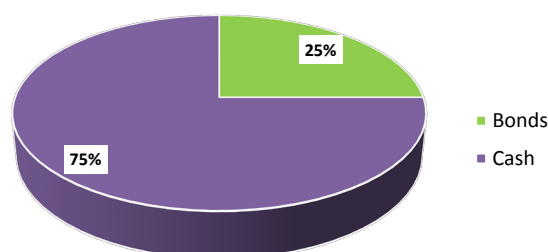
Following the 2001/2002 review, the following four strategies were identified as prudent investment strategies in which beneficiary assets could be placed, with varying allocations to the three main asset classes as shown below. It was decided not to include an allocation to property.

The strategies

Strategy	1	2	3	4
Equities	0%	30%	48%	65%
Bonds	25%	30%	32%	35%
Cash	75%	40%	20%	0%
Total	100%	100%	100%	100%

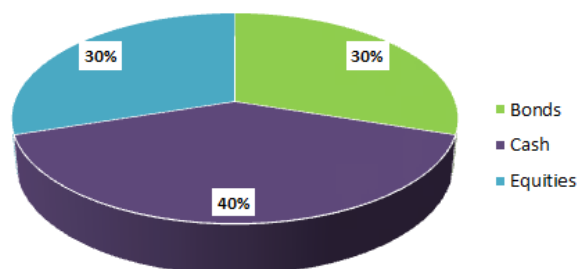
Strategy 1 (Cash Plus Fund)

A low risk strategy aimed primarily at maintaining the invested capital.



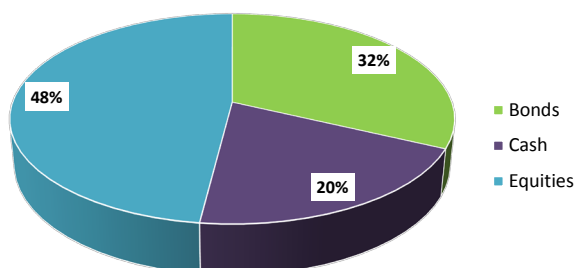
Strategy 2 (Bond Plus Fund)

The objective of this strategy was to ensure the stability of the capital sum, and to provide a moderate level of income for the beneficiary



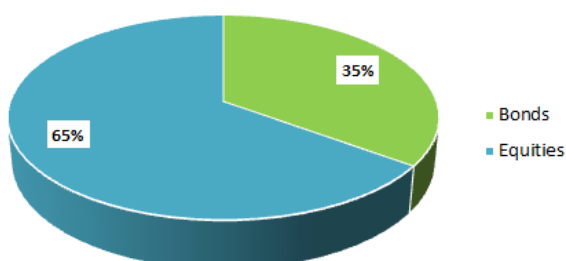
Strategy 3 (Balanced Fund)

Designed to achieve a combination of reasonable income and sound capital growth



Strategy 4 (Growth Fund)

The emphasis in this strategy was on achieving a stronger level of capital growth, in order to provide for expenditure over the lifetime of the beneficiary



Separately, Mercer created a projection tool for the Courts Service in order to facilitate the allocation of each beneficiary's funds to one of the above strategies, based on that beneficiary's particular circumstances.

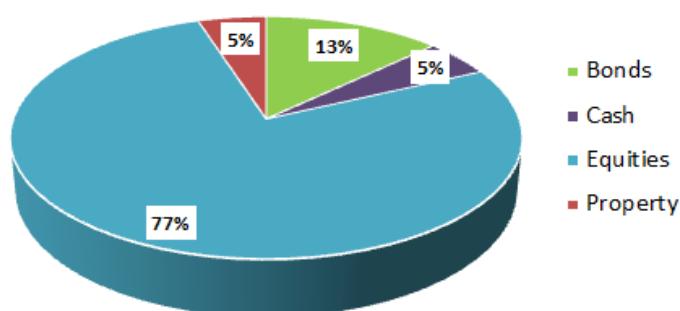
The chosen strategy was dependent on:

- the age of the beneficiary
- the sum to be invested and
- the level of anticipated expenditure, both recurring and once-off

In contrasting the asset allocation of the Spectrum Growth Fund to comparable investment funds, a member of a Defined Contribution pension scheme saving to provide for an adequate income in retirement would have typically invested in strategies with similar allocations to the Spectrum Growth Fund. It was (and remains) the norm for most pension scheme members with at least a ten year time horizon to have had the majority of their assets invested in equities.

Therefore, we would consider the asset allocation of the average Irish pension fund to be a relevant comparator for the Spectrum Growth Fund.

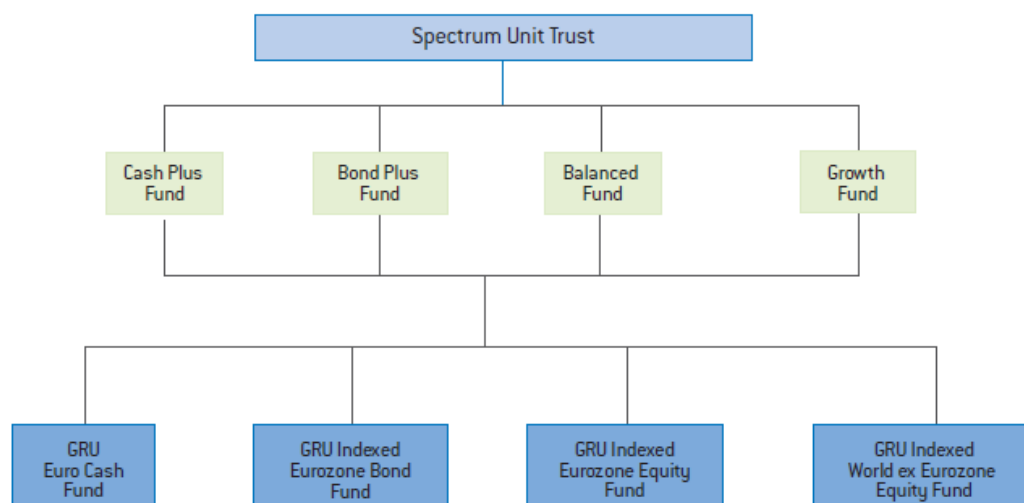
For reference, the average Irish pension fund in Ireland had an asset allocation at the start of the financial crisis (Q4 2007) as follows:



As can be seen, the Growth Fund was significantly less risky than the average Irish pension fund, even though both were intended to provide for individuals over the long term.

Fund Structure

In response to the investment requirements of the Court funds and with the approval of the Irish Financial Services Regulatory Authority, Bank of Ireland Asset Management established the following investment structure:



Source: The Courts Service – Report on the Financial Statements of the Office of the Accountant of the Courts of Justice 2003 – 2004

In the structure above, the beneficiaries invested in the Spectrum Funds (highlighted in green). These funds subsequently invested in the underlying market specific funds (highlighted in blue) in the proportions outlined above.

Investment Management Approach

As stated previously, the Courts Service chose to invest in passively (or indexed) managed investment funds. This has enabled the Court Service to negotiate significantly lower fees than would be the case with an active investment manager.

Many active investment managers will market their ability to predict market events, however, choosing one who can do so is not an easy task and the fees charged by these managers are multiples of what the Courts beneficiaries are subject to (with no guarantee of superior results).

Another option would have been to adjust the equity allocations higher or lower depending on market events. However, predicting market events such as the credit crisis is notoriously difficult to do, even for professional active investment managers.

Separately, the danger in reacting during market events such as the credit crisis is that investors would be exited from equity markets following severe falls, removing the ability to catch the eventual upswing.

**Aon Hewitt Findings
on the Investment
Strategies Put in Place**

Having reviewed the investment strategies initially put in place we believe that:-

- The strategies covered the volatility/return spectrum (from low volatility/low return to high volatility/high return)
 - Were distinguishable from one another
 - There was a sufficient number to allow beneficiaries with different investment needs be catered for
 - A prudent approach was taken in their construction with levels of risk appropriate to their stated objectives.
 - The decision to invest in passively managed investment funds enabled the Court Service to negotiate significantly lower fees than would be the case with an active investment manager
 - The Spectrum Growth Fund was an appropriate investment strategy for Wards of Courts with long term care needs given their long term investment horizon.
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5 | Performance of the Spectrum Growth Fund

Introduction

In examining the performance of the Spectrum Growth Fund during the period in question we have compared it not only to its benchmark but also to what we believe were comparable funds that would have been available at the time, as well as a proxy for the equity market in general. We have also considered the risk that was contained in the fund, the peak to trough falls that were experienced and also the longer term performance.

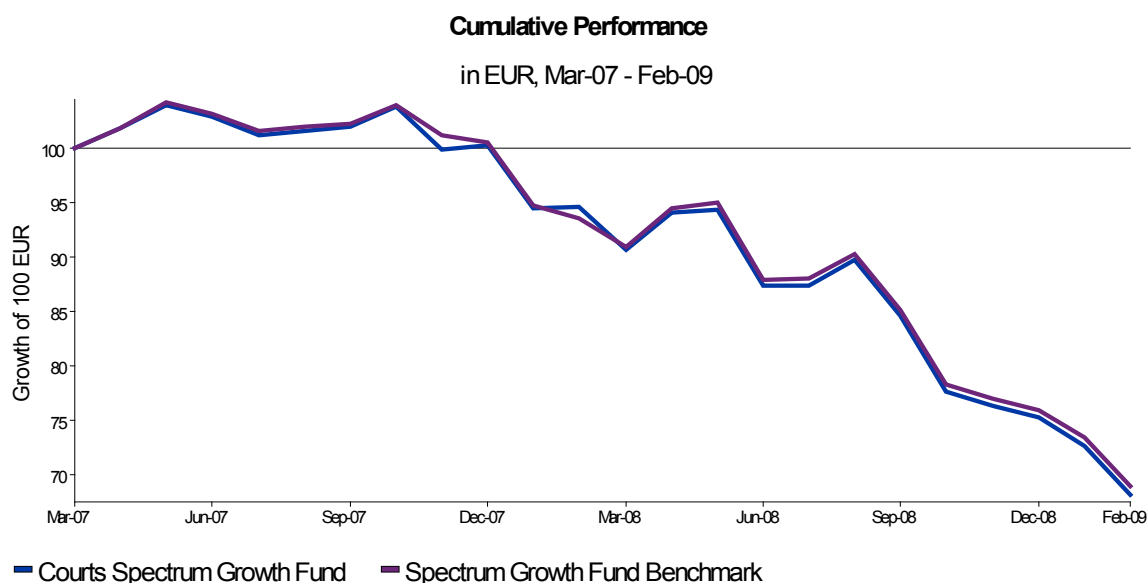
Performance versus Benchmark

As can be seen from the tables below, the Spectrum Growth Fund performed in line with its benchmark after allowing for fees of 0.25% per annum and non-recoverable withholding tax on the Spectrum Growth Fund of typically 0.1% - 0.3% per annum. As the Spectrum Growth Fund is passively rather than actively managed, its benchmark is simply comprised of the relevant market indices.

Any Ward invested in the fund would have experienced **unrealised** losses to this extent. Only actual sales out of the fund during this time (such as to provide for ongoing care needs) could have triggered a realised loss.

However, based on data provided by the Courts Service there was in fact aggregate net realised gains of €554,957 from sales out of the Spectrum Growth Fund during the period April 2007 to February 2009. These sales involved 63 Wardship cases of which 87% triggered realised gains from the disposals.

As noted previously, to fully capture the falls in markets during the period, and in response to the PAC recommendations, we have measured performance from 1st April 2007 to 28th February 2009.



Annualised Return, %

	23 Months
Courts Spectrum Growth Fund	-18.1
Spectrum Growth Fund Benchmark	-17.6

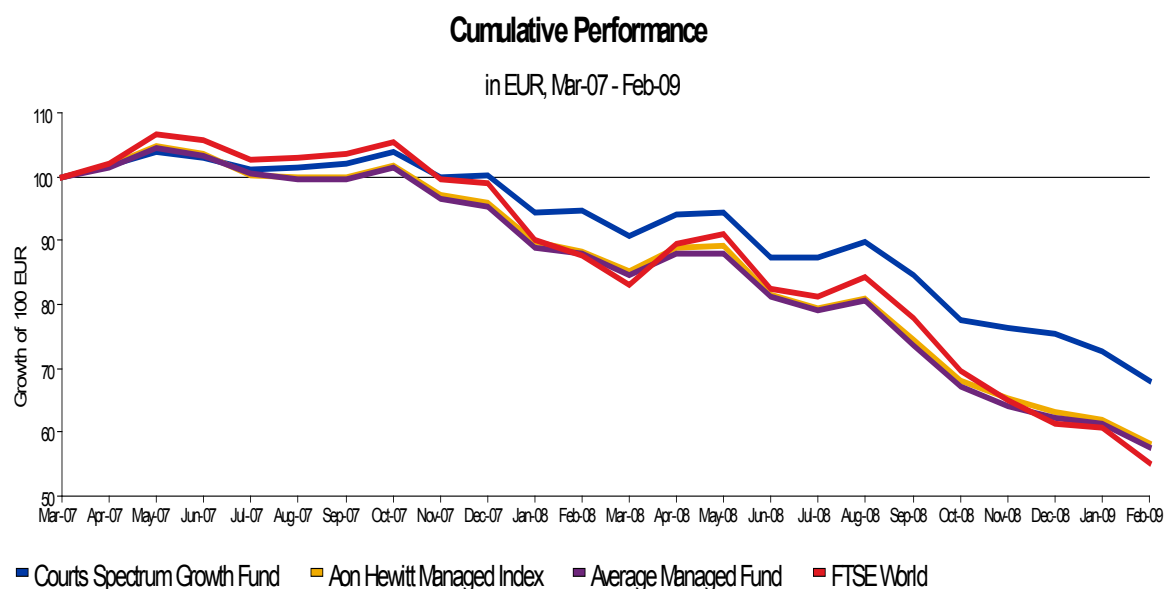
Performance versus Comparable Funds or Indices

The Spectrum Growth Fund (Strategy 4) had the highest equity allocation of the four Courts strategies available at the time. This was to enable it to achieve its objective of strong capital growth in order to aim to provide for beneficiaries' expenditure over the long term (notwithstanding previous comments about the possible inadequacy of the initial award). It was exclusively used for Wardship cases. Accordingly, it was most negatively affected of the four Court Service investment strategies by the equity market falls that occurred during the period.

In the performance of comparable funds, we would consider the average Irish pension fund as measured by Aon Hewitt to be a relevant comparator for the Spectrum Growth Fund as the long term growth objectives would have been similar. In addition, the Aon Hewitt Managed Fund Index was created by Aon Hewitt to evaluate the performance of Irish managed funds and is comprised of the most commonly used regional equity indices in Ireland. It is a second objective measure of Managed Fund performance. Specifically, it is a notional basket of publicly quoted indices - combined in the same proportions as the average asset allocation used by managers of Irish pension funds.

We are also satisfied most managers in Ireland offering ethically managed funds typically used by charities, would have had similar asset allocations to those used for pension investing.

As can be seen below, the Spectrum Growth Fund outperformed the Average Managed Fund and the Aon Hewitt Managed Fund Index over the period under consideration. Also shown below is the FTSE World Equity Index which represents how equities in general would have performed.



Annualised Return, %

	23 Months
Courts Spectrum Growth Fund	-18.1
Aon Hewitt Managed Index	-24.5
Average Managed Fund	-24.9
FTSE World	-26.6

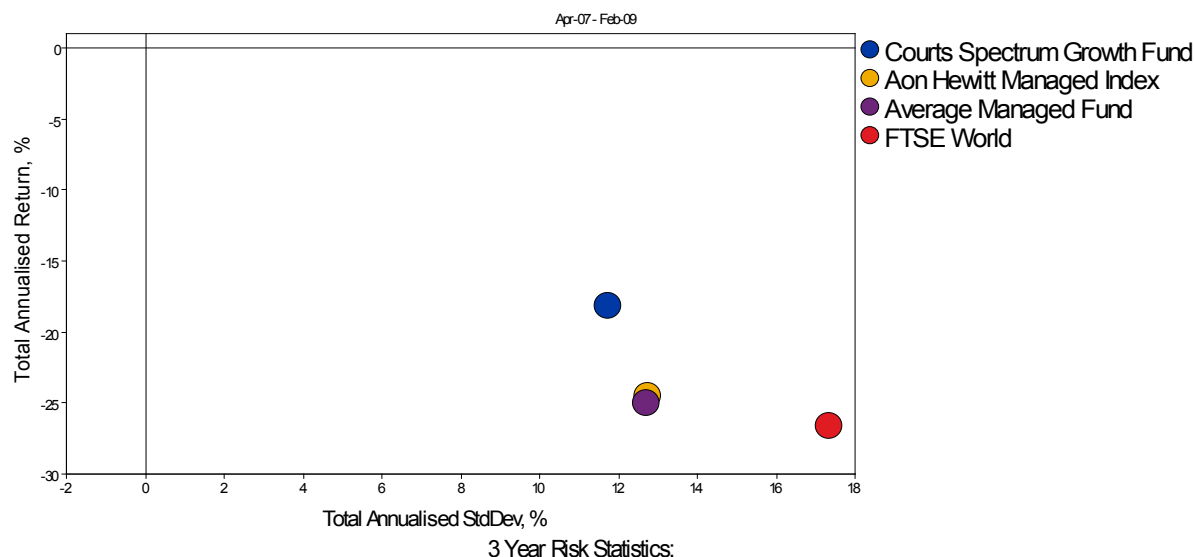
Performance and Risk

When reviewing investment strategies, another key area that must be considered is the level of risk in a given strategy.

Risk can be measured in a number of ways. One method is the *annualized standard deviation* of return over the specified time period. This is a measure of the extent to which observations in a series vary from the arithmetic mean of the series on an annual basis – the annual volatility. It is an industry accepted way of measuring risk - the higher the standard deviation the higher the variability of returns (or risk), and vice versa.

The following charts show the annualised risk as well as the annualised return for the period 1st April 2007 to 28th February 2009. In this chart, the higher and more to the left that the funds are, the better the risk/return profile of the fund is. Funds that are closest to the top left corner have the best returns with the least risk. Funds in the bottom right corner have the lowest returns with the highest risk.

Return v Risk: 3 Years



As can be seen from the chart above, not only did the Spectrum Growth Fund produce better performance but it also exhibited lower volatility (risk)

than the Average Managed Fund, the Aon Hewitt Managed Fund Index and the global equity index (FTSE World) over the period. This is evidence of more prudent investment strategy of the Spectrum Growth Fund.

Maximum Drawdown Experienced and Performance Extremes

Maximum Drawdown is a statistic used in evaluating investment funds and measures the 'worst case scenario' of investing in a portfolio at the worst possible time. This is the maximum loss (from a peak to a trough) incurred by a portfolio during a specified time period, in this case between 1st April 2007 to 28th February 2009.

	Performance Extremes		
	Max Drawdown Period	Max Drawdown Return, %	Max Drawdown Duration (Month)
Courts Spectrum Growth Fund	Jun-07 - Feb-09	-34.4	21.0
Aon Hewitt Managed Index	Jun-07 - Feb-09	-44.4	21.0
Average Managed Fund	Jun-07 - Feb-09	-44.7	21.0
FTSE World	Jun-07 - Feb-09	-48.2	21.0

The Spectrum Growth Fund exhibited significantly better Maximum Drawdowns than the comparators. In other words, a beneficiary who invested at the worst possible time during the crisis would have been less disadvantaged than a comparable pension scheme investor in a similar fund. For example, an individual invested in the average Irish pension fund (as measured by the Average Managed Fund) or its index (the Aon Hewitt Managed Index) would have seen the value of their investment fall by 44.7% and 44.4% respectively from peak to trough and it would have taken 21 months to reach the trough. In contrast, a Courts beneficiary in the Spectrum Growth Fund would have seen the value of their investment fall by 34.4%. The smaller fall in value relative to a comparable pension scheme investor in a similar fund means that a smaller subsequent recovery is required to return to positive returns.

The following charts show the best and worst monthly return as well as the best and worst quarterly (3 month) return over the specified time period.

	Performance Extremes		Performance Extremes	
	Best Month	Best Monthly Return, %	Worst Month	Worst Monthly Return, %
Courts Spectrum Growth Fund	Apr-08	3.8	Oct-08	-8.2
Aon Hewitt Managed Index	Apr-08	4.5	Oct-08	-8.7
Average Managed Fund	Apr-08	4.2	Oct-08	-8.8
FTSE World	Apr-08	7.5	Oct-08	-10.8

	Performance Extremes		Performance Extremes	
	Best 3 Months	Best 3 Month Return, %	Worst 3 Months	Worst 3 Month Return, %
Courts Spectrum Growth Fund	Apr-07 - Jun-07	2.9	Sep-08 - Nov-08	-14.9
Aon Hewitt Managed Index	Apr-07 - Jun-07	3.7	Sep-08 - Nov-08	-19.5
Average Managed Fund	Apr-07 - Jun-07	3.3	Sep-08 - Nov-08	-20.4
FTSE World	Apr-07 - Jun-07	5.8	Sep-08 - Nov-08	-23.2

As can be seen in the above tables, the returns (both best and worst) are more extreme as the expected return (and riskiness) increases amongst the funds. In other words, the Spectrum Growth Fund, having the lowest equity weighting above, would have had the lowest expected return of the four funds/Indices and the lowest risk (as measured by volatility – see page 16). As the expected return and risk increase fund by fund/index, the "Best 3 month Return" increases and the "Worst 3 month return" worsens.

As expected (due to its lower risk profile), the "Best 3 month return" for the Spectrum Growth Fund is the lowest in the table and its "Worst 3 month return" is superior to the others.

This is evidence that the Spectrum Growth Fund was considerably less risky than other commonly used funds with long term investment strategies, and that its results are commensurate with its risk profile.

Longer Term Performance

While the period under review was specifically requested as May 2007 to January 2009, we believe it is also very important to consider the longer term performance of these funds given the long term investment horizon of the beneficiaries who are invested in the funds.

While those invested in the Spectrum Growth Fund experienced considerable unrealised losses during the financial crisis, in the period since then they have experienced significant positive returns and more than recouped the drop in value experienced.

As can be seen in the table on the following page, beneficiaries invested in the Spectrum Growth Fund would have earned after fee returns of 8.8% per annum over the last 3 years, 7.9% per annum over the last 5 years and 3.6% per annum since the start of the credit crisis. Over the same period the rate of inflation as measured by the Consumer Price Index was 0.5% per annum.

While strategies with higher equity allocations (i.e. the average Irish pension fund) would have fared better since the start of the credit crisis, the magnitude of the fall in value during 2007-2009 would have been significantly greater. This is due to the lower risk strategy in the Spectrum Growth Fund.

For the period since December 2003, beneficiaries invested in the Spectrum Growth Fund would have earned after fee returns of 5.7% per annum. This equates to a cumulative return of 102.7%, more than doubling an initial sum that remained invested. Again alternative strategies with higher equity would have produced even higher returns for the period but would have been exposed to higher equity risk in the interim. This is a very strong performance for a period that included what the IMF called "The Worst Financial Crisis since the Great Depression".

We believe the strategies struck the right balance between seeking reasonable long term returns while being cognisant of risk over shorter time periods.

	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
Courts Spectrum Growth Fund	9.4	19.0	8.1	1.6	-24.9	18.3	8.9	0.7	7.5	8.9	13.1	4.5	3.5
Aon Hewitt Managed Index	13.0	22.1	13.9	-2.5	-34.1	20.6	12.0	-2.3	14.7	16.4	17.0	10.4	2.7
Average Managed Fund	10.6	21.1	13.1	-3.4	-34.8	21.0	11.7	-3.2	14.5	16.2	15.8	9.5	2.0
FTSE World	7.7	28.3	8.6	0.4	-37.8	30.2	20.6	-3.4	15.2	19.3	19.3	9.9	3.6
Consumer Price Index	3.4	2.4	4.9	4.7	1.1	-5.0	1.3	2.5	1.2	0.2	-0.3	0.1	1.0

Annualised Return, %

	1 Year	3 Years	5 Years	Since 1 Apr 07	10 Years	Since 1 Dec 03
Courts Spectrum Growth Fund	5.2	8.8	7.9	3.6	4.1	5.7
Aon Hewitt Managed Index	6.7	12.4	13.3	4.2	5.0	7.1
Average Managed Fund	5.4	11.5	12.7	3.6	4.3	6.3
FTSE World	8.4	13.7	15.1	6.0	6.6	8.0
Consumer Price Index	-0.1	0.1	0.5	0.5	0.8	1.3

Note: For the period September 2011 to October 2013, any assets that were invested in the Growth Fund were transferred into the Balanced Fund. For the purposes of the above tables, we have included the performance of the Balanced Fund for that period

Aon Hewitt Findings on the Performance of the Growth Strategy

Having reviewed the performance of the Spectrum Growth Fund for the period April 2007 to February 2009, we have found that:-

- The Spectrum Growth Fund performed in line with its benchmark and achieved better returns than that of comparable strategies and reference indices during the crisis.
- The Spectrum Growth Fund composition was more conservative than other long term savings vehicles, such as pension funds.
- The Spectrum Growth Fund exhibited a superior risk/return profile in terms of volatility and maximum drawdown experienced than comparable strategies and reference indices during the period under review.

6 | Conclusions

Any investment strategy that aims for a long term return in excess of inflation requires an exposure to equities, and will by definition, carry the risk of loss. The higher the long term return expectation the higher the risk of loss in the short term. The generally accepted thesis is that, so long as the time horizon is long, short term volatility should not be a major concern.

Of course with hindsight, if the Investment Advisor at the time, the Investment Manager or the Investment Committee could have foreseen the credit crisis, it would have been possible to reduce equity weights prior to the market falls, thus protecting beneficiaries. However, predicting market events such as the credit crisis is notoriously difficult to do, even for professional active investment managers. As the analysis in this paper shows, most long term investors (such as Irish pension fund investors) were affected in a similar, if not more extreme way.

Many active investment managers will market their ability to predict market events, however, choosing one who can do so is not an easy task and the fees charged by these managers are multiples of what the Courts beneficiaries are subject to (with no guarantee of superior results).

Separately, the danger in reacting during market events such as the credit crisis is that investors would be exited from equity markets following severe falls, removing the ability to catch the eventual upswing.

We believe that a prudent approach was taken in the construction of the Spectrum Growth Fund following the 2001/2002 review with levels of risk appropriate to its stated objectives.

We have found that the strategy performed in line with its benchmark and achieved better returns than that of comparable strategies and reference indices.

The strategy exhibited a superior risk/return profile in terms of volatility and maximum drawdown experienced than comparable strategies and reference indices during the period under review.

A strong and well organised governance structure is in place in respect of the management and investment of funds in court. This structure has ensured that the investment strategies have continued to evolve and remain fit for purpose.

7 | Sources and Notes

- All performance charts contained in this report are produced through Markov Processes International, Inc.
 - The Aon Hewitt Managed Fund Index is calculated by Aon Hewitt and is a notional basket of publicly quoted indices - combined in the same proportions as the average asset allocation used by managers of Irish pension managed funds
 - The Average Managed Fund was calculated by Aon Hewitt and comprises the peer group of Irish Managed Funds over the period.
 - All performance data is sourced from Aon Hewitt Global Asset Allocation, Aon Hewitt InVision Survey, Bloomberg, Datastream and the Central Statistics Office
 - Mercer - Report on Fund Governance, Investment, Accounting, Administration and Related Issues
 - The Courts Service – Report on the Financial Statements of the Office of the Accountant of the Courts of Justice 2003 – 2004
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