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REGULATORY BRIEFING

EIS Fund v single company risk analysis

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EIS Fund v single company

risk analysis

With a number of high profile failures of so called lower risk diversified funds, opaque charges, conflicts of interest and disappointing investment returns, leading professional advisers have started to ask if such funds are indeed low or lower risk?

Of course, if those so called diversified funds are not quite as safe or lower risk as once promised, is the corollary that a portfolio of EIS single company EIS might in fact deliver better returns with less risk?

Warren Buffet (who hasn't done too badly for a farm boy) has three famous quotes that are frequently repeated.

"Risk comes from not knowing what you are doing."

"Diversification is protection against ignorance. It makes little sense if you know what you are doing."

and

"It's better to hang out with people better than you. Pick out associates whose behaviour is better than yours and you'll drift in that direction."

We will look at the maths in a moment, but when choosing a low risk collective fund with its myriad of agreements, charges, and pressure on managers to allocate monies in time to qualify for EIS reliefs, how many investors actually know what they are getting? As for deciding who to hang out with, how many really successful entrepreneurs and investment professionals do you see holding low risk, diversified EIS funds?

This article will suggest that the clever money doesn't just want their professional adviser to help them manage risk, but importantly, the clever money wants their adviser to understand how to measure risk.

EIS Fund v Single Company Performance

In a flight to less risky investments, many advisers have for the past few years opted for EIS funds, which are often described as "lower-risk".

We thought that it would be a useful time to review the performance of those funds. We were surprised to learn that of the thirty-two UK EIS fund providers, only three of those firms provided any fund performance data. We asked and were dismayed to find, that many firms were not willing to disclose their EIS fund performance. Please get in touch if you would like to see the details.

Now this set us thinking. Just how do you measure EIS risk and are these so-called "lower-risk, diversified" funds all they are cracked up to be?

As a starting point, we need to think about risk in a more sophisticated way than the simple success or failure of a single company EIS, although this is an important aspect of the investment decision.

When, for example, you invested your clients' pension money into a risk-managed portfolio, you didn't worry about an individual exposure to an Emerging Market equity fund, because you saw it as part of a balanced (risk-managed) portfolio where the limited overall correlations between the funds and asset classes controlled the overall risks.

Quite rightly, you view the EIS portfolio as asymmetric in its risk profile and you look at each EIS with fresh eyes. Unlike the pension portfolio, the EIS risks and returns are not as evenly distributed around a normal distribution. This is partly because of the low diversification of holding one EIS over another and partly because of the statutory downside protection from HMRC, which is such that you should never lose more than 38.5% (after 30% income tax relief upfront and the 45% loss relief after failure), yet the upside gains are uncapped.

Of course, you now have a portfolio of EIS and this is the point where it is important to think about the combined risk of these EIS taken together rather than just looking at each one in isolation. The simple maths is that as you combine the individual risks, rewards and exit timescales of each life science EIS in the portfolio, the potential probability-weighted gains, allowing for the time value of money, made by one EIS can be viewed against potential losses from another.

Without thinking about it too much, this is what you automatically do with the pension portfolio risks. As you combine the individual EIS risks, you aggregate together the expected probability-weighted returns and their timescales, and as individual EIS's are added, the diversification benefits grow with uncorrelated investments. Once you get to 5 life science EIS's, the overall chance of losing any money falls to a low percentage.

An important aspect of the combined risks is the expected return of the EIS vs the risk of failure (remember based on HMRC reliefs, failure should hedge 61.5p back for every

100p invested) – the higher the expected return, the more failure can be experienced and vice-versa.

So…. let's say that you allocated £250k to be spread across 5 allegedly higher-risk Arterial EIS equally (£50k each) and that these each had an expected potential return of 1000% (akin to our current EIS offer), but that the probability of success varied from 25% to 45%, with an exit or a failure being achieved between years 4 and 6. The due diligence performed by Arterial's scientific, commercial and core teams should result in a higher probability of success, and the nature of life science investing should mean that the returns of each EIS exhibit minimal correlation and that a success or failure becoming apparent at the conclusion of trials after 2-4 years, should result in a gain or loss being crystallised earlier.

What does this mean? If we take a hypothetical EIS fund with 10 EIS qualifying shareholding's and a probability of success of each of these being between 5% and 25%, with an exit or failure being achieved between years 2 and 11, a "diversified investment" of £250k would have a probability-weighted, post-tax return of -22% (after allowing for the time value of money at 20% per year). This compares to a +105% probability-weighted, post-tax return (after allowing for the time value of money at 20% per year) with a portfolio of Arterial life science EIS if the same £250k was spread across five investee firms.

Putting it another way, if all 5 Arterial qualifying shareholding's should fail, you'd lose £96k after tax (ignoring time value of money for a minute), but if all 5 succeed, you'd make £2,325,000.

We are not in any way wishing to under-estimate the risks of an Arterial life science portfolio of 5 EIS holdings, but the real aggregate risk is less than you might at first think.

It might also be worth pointing out that unlike 29 of the aforementioned 32 EIS "diversified funds", the track records of the Arterial team is of having consistently delivered shareholder and investor value at the very highest level, over a period of four decades.

Example of EIS Fund vs. Arterial Investment Portfolio

EIS FUND

Underlying Investment	Amount Invested	Post-Tax Amount Invested	Probability of Success	Return if Successful	Return if No Success	Exit / Termination Year	Cost of Capital	PV of Probability-Weighted Return
Company 1	£25,000	£17,500	5%	£125,000	£9,625	3	20%	£8,908
Company 2	£25,000	£17,500	10%	£125,000	£9,625	4	20%	£10,206
Company 3	£25,000	£17,500	15%	£125,000	£9,625	5	20%	£10,823
Company 4	£25,000	£17,500	20%	£125,000	£9,625	6	20%	£10,951
Company 5	£25,000	£17,500	25%	£125,000	£9,625	7	20%	£10,736
Company 6	£25,000	£17,500	5%	£125,000	£9,625	8	20%	£3,580
Company 7	£25,000	£17,500	10%	£125,000	£9,625	9	20%	£4,101
Company 8	£25,000	£17,500	15%	£125,000	£9,625	10	20%	£4,350
Company 9	£25,000	£17,500	20%	£125,000	£9,625	11	20%	£4,401
Company 10	£25,000	£17,500	25%	£125,000	£9,625	12	20%	£4,315
TOTAL	£250,000	£175,000						£72,371
Post-Tax Return on Investment								-71%

PORTFOLIO OF ARTERIAL INVESTMENTS

Underlying Investment	Amount Invested	Post-Tax Amount Invested	Probability of Success	Return if Successful	Return if No Success	Exit / Termination Year	Cost of Capital	PV of Probability-Weighted Return
Med. Device / Pharma Co. 1	£50,000	£35,000	25%	£500,000	£19,250	4	20%	£67,244
Med. Device / Pharma Co. 2	£50,000	£35,000	35%	£500,000	£19,250	5	20%	£75,357
Med. Device / Pharma Co. 3	£50,000	£35,000	45%	£500,000	£19,250	5	20%	£94,677
Med. Device / Pharma Co. 4	£50,000	£35,000	35%	£500,000	£19,250	5	20%	£75,357
Med. Device / Pharma Co. 5	£50,000	£35,000	25%	£500,000	£19,250	4	20%	£67,244
TOTAL	£250,000	£175,000						£379,880
Post-Tax Return on Investment								+52%

HEALTH WARNING:
The aforementioned tables are purely to act as the catalyst for a conversation point. Collective EIS funds may or may not have 10 holdings, a single company holding may or may not have similar upside and holding periods can differ. No warranty or guarantee is either given nor implied and past performance cannot be any indicator of future performance. Life science investments may completely fail and provide a nil return. Investors should only invest money they can afford to completely lose.

arterial

ARTERIAL CAPITAL MANAGEMENT

e: info@artcapman.com
w: www.artcapman.com

Main Office
Suite 15, 1st Floor
Oliaji Trade Centre
Francis Rachel Street
Victoria
Mahe
Seychelles