FiveLines

Appraisal of proposed Alderley Park Investment Fund

Cheshire East Council
29 August 2014

Table of Contents

1. Important Notice 2

2. Executive Summary 3

3. Structure of Equity Investment in the Life Science Sector 6

4. Historic Venture Capital Performance in this Sector 10

5. Investment Criteria and Economic Objectives 14

6. Structure of Proposed Fund 17

7. Potential Investment Returns and Underlying Assumptions 26

8. State Aid Considerations 31

9. Fund Manager Procurement 35

10. Structure of Investee Company Investments 36

11. Potential for European and Private Sector Funding 38

Appendix 1 – Financial Illustrations 41

1. Important Notice

In accordance with our contract dated 25 July 2014, we have carried out an appraisal of the proposed Alderley Park Investment Fund ("the Fund"). Our terms of reference were limited to the matters set out in our contract and, accordingly, there may be matters which you would consider material to your assessment of the proposed investment which we will not have identified because they are outside our terms of reference. You should note that our findings do not constitute recommendations as to whether or not you should proceed with the proposed investment.

We have prepared illustrative projections for the life of the Fund and the assumptions on which these are based. Since the projections and the assumptions on which they are based relate to the future and may be affected by unforeseen events, we express no opinion as to how closely the actual results achieved will correspond to those projected.

During the course of our review, we have held discussions with the following personnel:-

- Matt O'Neill, Amy Beasley, Peter Bates, Paul Goodwin, Anne Scheland, Caroline Simpson and Councillor Peter Raynes - Cheshire East Council ("Cheshire East").
- Chris Doherty - Vice-President, AstraZeneca plc ("AstraZeneca").
- Andy Allen - Development Finance Director, Bruntwood Limited ("Bruntwood").

This appraisal is based on the information supplied by and discussions with the individuals above. Our review has not constituted an audit in accordance with Auditing Standards of either the financial or non-financial information presented to us and will not necessarily have disclosed all matters of significance. Nor have we subjected the financial or other information contained in this report to checking or verification procedures, except where otherwise stated. Accordingly, we assume no responsibility and make no representations with respect to the accuracy or completeness of this report, except as provided for in our contract.

A draft copy of the original report, excluding the Executive Summary was provided to the executives of Cheshire East for their comments, which have been incorporated as we consider appropriate in the final report.

This report has been prepared solely for the use of Cheshire East in connection with the proposed investment in the Fund. Information contained in this report is strictly private and confidential and should not be disclosed to any other party without our prior written consent and no other party should place any reliance upon the contents of this report.

This report is based on the latest information made available to us at the time of our visits during late July and early August 2014 and we accept no responsibility for events after the date of such visits, except where we have been expressly informed in writing of such events.

We do not, in preparing this report and giving the opinions stated herein, accept or assume responsibility for any other purpose or to any other person to whom it is shown or into whose hands it may come, save as expressly agreed by our prior written consent. If others choose to rely on the contents of this report, they do so entirely at their own risk.

2. Executive Summary

Introduction

This document comprises an appraisal of a proposed £10m - £20m venture capital fund to provide financial assistance to companies seeking to occupy parts of the AstraZeneca research and development facility at Alderley Park, Cheshire. This follows a strategic decision by AstraZeneca to focus all its UK research and development function in Cambridge.

The cost to the local economy has been estimated at £245m per annum, most of which will affect the area covered by Cheshire East Council. As the facilities being vacated are considered by many to be world class, a Task Force has been created to lead the conversion of the site into a research and development facility for life sciences which will have international recognition.

Cheshire East, as an important contributor to the Task Force, is keen to encourage employment on the site, not only to absorb those AstraZeneca employees not willing to relocate to Cambridge (estimated at about 80% of the scientific-grade staff), but also to create fresh employment for high grade people in order to take advantage of the superior facilities being vacated, thereby enhancing the local economy. Without the transformation of Alderley Park, the local economy is likely to shrink and, accordingly, ensuring the success of the Task Force's mission is a high priority for Cheshire East.

An economic impact study undertaken by SQW in January and February 2014 recommended, inter alia, that financial assistance, preferably by way of investment rather than grant, be used to support life science start-ups, spin-outs from AstraZeneca and inward transfers of existing businesses wishing to expand. Funding is being considered for such a fund by AstraZeneca (£5m), Manchester Science Parks (majority owned by Bruntwood and the new owner of the Alderley Park site (£5m)) and Cheshire East (£5m).

Cheshire East has requested an independent appraisal of this opportunity to invest, which this document addresses under our contract with Cheshire East, dated 25 July 2014.

Main Findings and Recommendations

Set out below is a summary of our findings etc. This should be read in conjunction with the relevant section of the report, which sets such findings etc in context.

- Investing in life sciences is a long-term commitment – early stage life science businesses usually take longer to mature and create value than other technology businesses.
- Historically, technology investment in general has only generated single digit IRR's, which accordingly compare unfavourably with general stock exchange investment, especially when the higher risk attributable to early stage life science companies is taken into account.
- A consequence of the comparatively low returns is that the public sector has been required to intervene to deal with the market failure such low returns (although still greater than those generated by risk-free cash deposits) have caused.
- As AstraZeneca's proposed contribution (which has yet to receive its final approval) is more of a grant in its nature, and as AstraZeneca's wish is to support mainly spin-outs from itself and to deploy the funds quickly, it is recommended that its investment is placed into a separate

"Incubation Fund", potentially managed by Bio City, Nottingham, which has run an incubation facility successfully for a number of years. It has already established an apparently successful incubation function at Alderley Park.

- It is recommended that the £5m investments being considered by Manchester Science Parks ("MSP") and Cheshire East, form the cornerstone investors in an "Alderley Park Fund" ("Fund"), which is a later stage fund, to provide funding into AstraZeneca spin-outs on a selective basis but also to provide funding to those businesses not in the Bio City incubation process (either other start-ups or businesses transferring into the site in order to continue their expansion). In this way, MSP and Cheshire East are sheltered from the higher risk incubation-stage investments and can provide a wider level of financial support to enhance the site's general economic objectives.

- At £10m, the proposed Fund is likely to deliver some, but not all, of the financial support likely to be required. Hence strenuous efforts should be made to bring in other private sector investors, in order to create a fund of between £15m - £20m. If none can be found, it is clearly still preferable to have a £10m Fund rather than none at all, but the investment guidelines would need to be established to encourage investment at the investee level ("co-investment"), in order to ensure the commitments of the two cornerstone investors create as much economic gain as is possible.

- Of the 2,650 jobs to be created by the end of 2019 (per SQW's Economic Impact assessment referred to earlier), less than half are likely to be generated by spin-outs from AstraZeneca, highlighting the need to target strongly inward-bound businesses.

- The economic benefits such a Fund would assist in delivering include:-

    - Retention of a highly paid workforce (£52,500 p.a. average, compared with £27,600 p.a. average in Cheshire East).

    - Greater "induced" benefits to the local economy than under AstraZeneca's ownership.

    - Recovery of rents and business rates lost on the vacation of properties by AstraZeneca.

    - Short-term economic boost caused by construction/conversion work.

    - Consolidating the North West's aspiration to become a major life science "hub" in the UK, which is a world leader in life science research.

- These economic benefits should be targeted and actual performance monitored against targets for both jobs created and GVA created.

- Cheshire East's investment is likely to be treated as State Aid and hence the EU's State Aid Regulations will need to be complied with. New rules came in on 1 July 2014.

- An experienced, competent and fully regulated fund manager should be appointed to run the Fund, such manager to have full investment, monitoring and realisation responsibility and accountability. The fund manager would need to be procured using a full OJEU process.

Conclusion

The establishment of this Fund is likely to have a significant and positive effect on both the regeneration of Alderley Park and the aspiration to create a life science centre of international renown. Other measures are, of course, also necessary and these should seek to enhance the investment return to Cheshire East.

3. Structure of Equity Investment in the Life Science Sector

A variety of financing methodologies are used in the sector, which is differentiated from most other economic sectors generally by the long-term nature of investment.

The SQW Impact Assessment Report categorises the life science sector into four broad domains, each with a subset of segments. For ease of reference, this categorisation is used in this report. The key domains and segments are set out below, along with a commentary on the implications for their financing.

Medical Technologies – consisting of:-

- Medical technology companies.
- Development, manufacture of medical devices.
- Supply of specialist services to the above.

The sub-segments are:-

- Radiotherapy equipment.
- Neurology.
- In vitro diagnostics.

Such businesses have typically a relatively modest development phase (some including clinical trials) and then a lengthy marketing phase, as market knowledge and acceptability grows, in parallel with the establishment and growth of a manufacturing capability. In the UK, SME's dominate this sector – 99% of firms employ less than 250 people.

Hence, early stage finance is usually in the form of non-yielding equity. As revenues grow and the capacity to meet interest and capital payments increases, "quasi-equity" investments are then used (these are effectively loans with an equity element to compensate for the risk the lender is taking). Later stage venture capital investments often feature both a loan and an equity element. Finally, once a business is profitable and, more importantly, cash positive, then pure loan finance (bank debt, bonds etc) can be considered.

Medical Biotechnology – consisting of:-

- New therapeutics acting on or in the human body by pharmacological, immunological or metabolic means.
- Specialist sector-specific services, including in vitro diagnostics.

This sector is also dominated in the UK by SME's, with 98% of companies having less than 250 employees and 53% less than five employees.

The development phase of these companies can be quite extended, again potentially including clinical trials, whereas their growth can be quick once market acceptability has been achieved, as often production is sub-contracted to specialist manufacturers.

In financing terms, these businesses tend to be heavier users of equity or quasi-equity funds. Service companies, including specialist manufacturers, can access debt finance if they have a good customer spread and are cash positive.

Industrial Biotechnology – consisting of:-

- Biological catalysts, materials or feedstock for use in the manufacture of industrial products.
- Support services.

This is a relatively small sector (only 80 or so businesses in the UK with a combined turnover of £438 million). Their products are typically used in the chemical, waste treatment, energy production and plastic industries.

Their fundraising profile (use of equity or debt instruments) is often more driven by the needs of the sector their products support and hence it is difficult to generalise.

Pharmaceutical – consisting of:-

- Drug development (“small molecules”).
- Specialist supplies and services.
- Therapeutic protein development.
- Contract manufacturing.

These have widely ranging financing requirements and form a major contributor to the UK economy. Alderley Park’s heritage has been heavily involved in this sector.

Drug development businesses require large amounts of equity finance over a long period. Gaining EMEA and/or FDA approval can take up to 10 years from the start of the first trials; consequently a start-up may not be revenue generating for 10-15 years. A typical funding profile is set out below:-

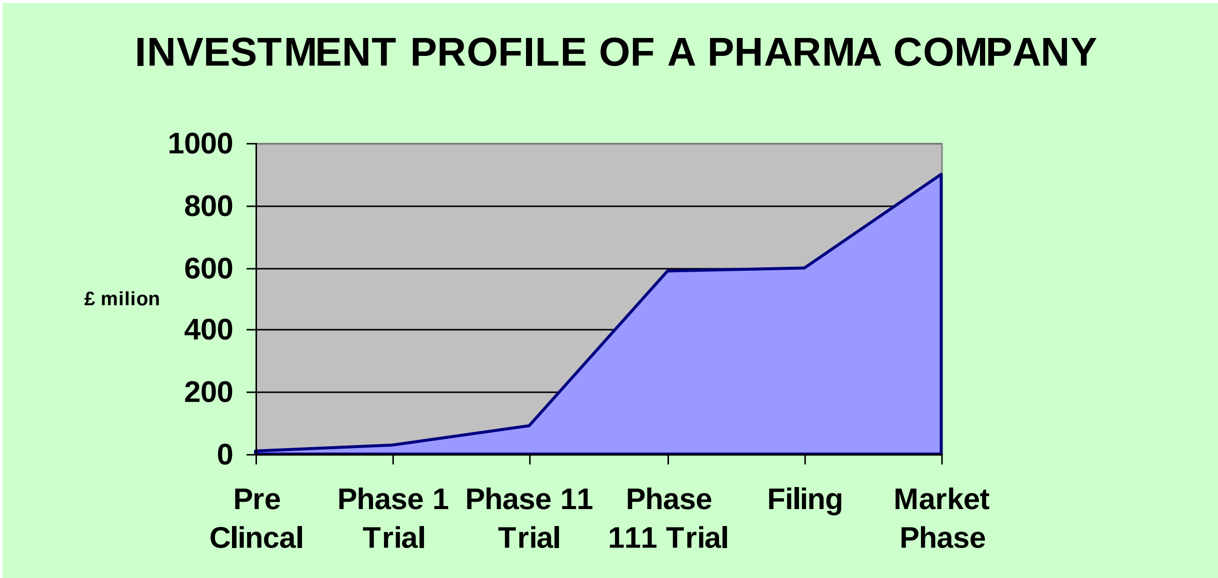

Figure 1 - Investment profile of a Pharma Co

From the diagram, it is easy to see why drug development has been almost exclusively the territory of the major multi-national pharmaceutical companies until relatively recently.

However, “open innovation” allows innovative, entrepreneurial SME’s to participate with venture capital support, in the earlier phases of drug development. Invariably, the major pharmaceutical companies have to step in, usually before the commencement of the Phase III trials, either on a joint venture or a licensing basis. On occasions, this process has allowed the entrepreneur/early stage venture capitalist to exit, but in most cases the exit comes once the filings have been made and regulatory approval obtained.

The financing requirements of the other components of this sector largely depend upon the cost and time taken to reach cash generation, after which debt finance becomes an option and before which funding has to be in equity or quasi equity.

Sources Of Finance For The Life Science Sector

These vary, depending on the amount of finance being provided and the risk appetite of the funder.

The risk profile of a typical (non-pharmaceutical) start-up business and its funding sources are set out in the following diagram:-

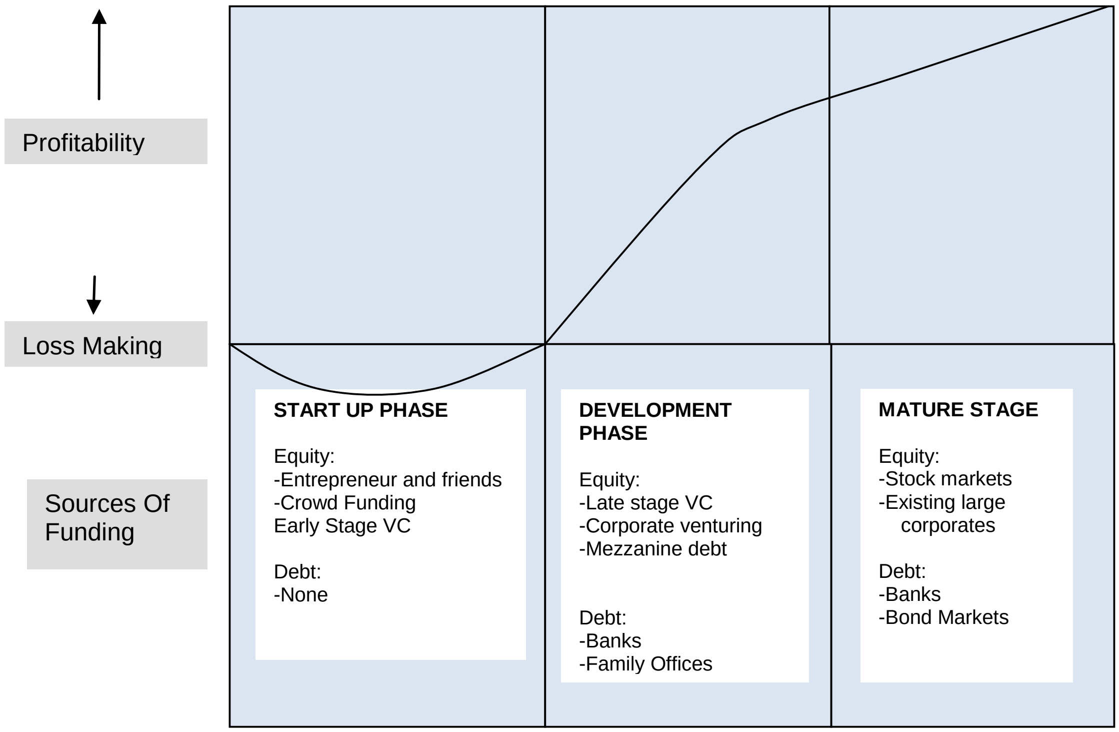

Figure 2 - Company life cycle - 'J Curve'

Clearly, each company's "J" curve will vary but virtually all businesses follow this pattern. Rarely does a start-up not have a loss-making phase.

In the Alderley Park scenario, there may well be businesses which can be spun out of AstraZeneca (which would enter into a long-term supply contract with such businesses) which could be profitable from Day 1. Such businesses are more akin to Management Buy Outs and are usually funded, at least initially, by Private Equity and bank debt.

A private equity funder has a radically different skill set and access to much larger amounts of funding, compared with their venture capital counterparts. Hence it is important to determine the nature of the funding opportunities of spin-out activities from AstraZeneca before Cheshire East commits to a particular form of investment. As will be seen later, both the risk and reward profiles (and the wider economic benefits) vary considerably between venture capital and private equity.

4. Historic Venture Capital Performance in this Sector

As mentioned in Section 3, the risk profile of private equity and venture capital varies considerably. Early stage transactions usually contain the following risk attributes:-

- **Untested Management Teams** – individually, they may be strong, but can they work as a team and are all the disciplines covered? Is there a strong experienced business person leading the team?

- **Undeveloped Product/Services** – can it be made as a prototype and does it work? Can it then be re-engineered to be produced at an economic price? Does it meet legal, ethical and regulatory requirements?

- **Unproven Market** – is there an existing market for the product/service? If so, can it economically displace the current market offering? What will be the reaction of competitors? If no market currently exists can a market be created economically?

Consequently, most early stage equity investment opportunities are at the highest levels of possible risk. To justify taking this risk, there needs to be a significant potential for a sizeable gain to be make. This is unlikely to be the case for businesses where the main purpose is to provide a livelihood for the entrepreneur and family. Hence venture capitalists need to be very selective and to carry out a high level of "due diligence".

As a result, the costs of running a venture capital fund are often disproportionately high in relation to the amount of money it can invest. This further swings the risk/reward ratio towards the higher risk end of the spectrum.

The private equity investor has a totally different risk profile. Most investments have the following attributes:-

- **Proven management team.** Not only has the team worked together successfully in the past, the members of the team already have a deep knowledge and understanding of the business. Any gaps (e.g. created by a team member wanting to retire) are more easily filled.

- **Developed product.** Existing product/service risk is very low and attention can be focussed on new product development at an economic price.

- **There is a proven market for the product/service.** It is already being sold profitably. Attention can be focussed on expected changes in the market and having products/services ready in time to meet changing market needs.

- **The acquisition price of the business is critical.** If too high a price is paid, the business will struggle to service the cost of finance used in its acquisition.

- **Provision of working capital.** This is to fund further growth, and is also a critical factor.

It can be seen that, in general, the risk profile is much lower and the investor's skill sets need to encompass financial modelling and negotiation skills. A general commercial skill and the ability to communicate effectively are skills common to both sets of investors.

From this analysis, a different type of investor is required for the Alderley Park start-up and early stage investments compared with the private equity-type investor required for some or all of the AstraZeneca spin-out investment opportunities.

The early stage venture capital investor has to maintain total objectivity at all times. Having made an investment, albeit against a convincing business plan, in every case reality will deviate from that plan and experience shows that, in the vast majority of cases, the start-up will be slower than planned and absorb more capital than originally envisaged. The venture capitalist then has a key "judgement call" to make, namely whether to provide more finance or not.

Objectivity in this decision is an absolute requirement. Often, especially in an "incubator" environment, it is very tempting to give the business the benefit of the doubt. To do so, in the majority of cases, will only lead to an even more agonising decision on a further investment in a few months time. It is important therefore, that the venture capitalist "keeps his distance" from the management of the investee company, and hence is usually <u>not</u> part of the incubation services provider.

In early stage investment, the requirement is to identify those opportunities which provide the best risk/reward profile AND the highest probability of success. This is illustrated in the following diagram:-

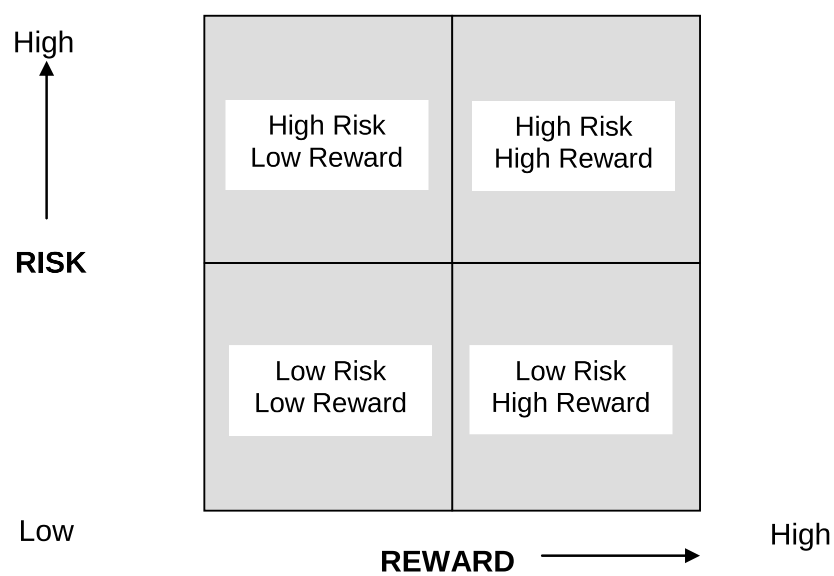

Figure 3 - Risk / Reward Profile

Investors will want to aim for those investments which can be classified in the lower right quadrant. However, in some circumstances they will look at the upper right quadrant (i.e. drug development), but only if the risk/reward ratio is sufficiently attractive. This is a highly selective process with heavy attrition rates. It is necessary, however, if the venture capital fund is to deliver a return to its investors (see later in this Section).

As previously mentioned, the cost of writing small venture capital investments is disproportionate to their size. If the cost of writing a £100,000 investment was £10,000 then the cost of writing a £1 million investment would be considerably less than £100,000. In addition there are fixed costs in running a fund (e.g. regulatory costs) which do not vary with the size of the fund. Add to this the need to have a good "spread" of investments, preferably across the various life science sectors discussed in Section 3 and it can be seen that if a fund has too small a pool of capital to invest, then the returns due to its participating investors will be disproportionately affected by the level of the fund's running cost. It is generally accepted within the venture capital industry that a fund size of less than £20 million is considered sub-optimal.

These comments need to be born in mind when considering the type and return of the public sector intervention Cheshire East is considering in relation to Alderley Park.

The British Private Equity & Venture Capital Association ("BVCA") produces performance statistics covering both the private equity and venture capital sectors. As might be expected from the differing risk profiles of these two sectors, the returns to investors (i.e. after taking into account fund management costs) from private equity funds are substantially greater than from venture capital funds.

In order to cope with the distortion caused by the "dot com" bubble at the turn of the century, the BVCA analysis is divided into three categories – funds commencing before 1996, those commencing 1997-2002 and post 2002 launched funds. Set out below is a summary, extracted from the 2013 BVCA/PWC Measurement Survey.

		Pre 1996 %IRR	**1997-02 %IRR**	**Post 02 %IRR**
Early Stage	}	9.2 }		
Development	} Venture	10.2 }	-1.3	5.9
Small Private Equity	}			16.2
Medium Private Equity	} Combined pre 1997	15.6	n/a	12.6
Large Private Equity		18.2	n/a	14.9

Figure 4 - PE and VC sector performance statistics

Some of the Post 02 funds are still "open" and hence there is likely to be some future volatility in these numbers as their remaining portfolios are sold. The numbers for the earlier periods are now "firm" numbers.

The BVCA statistics only refer to funds which are managed commercially and excludes those where investors are tax sheltered (e.g. EIS and Venture Capital Trusts). Also excluded are investors using their own balance sheet to make the investment (e.g. Banks and Corporate Venturers). These are excluded firstly to prevent double counting (they often use fund managers to run some or all of their investment portfolios) and secondly because they often have objectives which are not purely financial (e.g. a corporate venturer might want a right of first access on an exit). There are likely to be sizeable variations between the best performing and the worst performing funds, and figures quoted are the volume adjusted average returns.

The returns generated from private equity are comparable with the returns that can be generated from the London Stock Market, as can be seen from the following table:-

	2013 1 year % pa	3 years % pa	5 years % pa	10 years % pa
Total VC and Private Equity	19.2	10.0	11.1	15.7
FTSE All Share Index	20.8	9.4	14.3	8.8
Total Pension Fund Assets	11.0	7.6	16.1	7.8

Figure 5 - PE returns compared to FTSE

It is important to note that the above figures are for the investment return in just the period stated (i.e. the first column is just for the calendar year 2013). The 10 year figures therefore "smooth out" to some extent the stock market cycles.

Overall therefore, if Cheshire East was evaluating an investment in the Alderley Park Investment Fund solely on financial grounds, better investment returns are likely to be found elsewhere, given that the Fund's focus is on venture capital rather than private equity, but the return is better than would be achieved if the money was left in a bank deposit account. It is for this reason that most financial institutions shun venture capital, but are still willing to invest in private equity.

Once 3i pulled back from venture capital investing, the British Government and the European Union were forced to intervene to fill the "equity gap" created by the withdrawal of commercial funds from the market. Various initiatives have been tried since the mid 1990's with varying degrees of success. Some of these are tax driven and some require the public sector investor to take the "first loss", thereby bolstering the returns available to the private sector co-investors. This led to the establishment of State Aid Rules (see Section 8) in order to provide a sensible investment framework and to provide a degree of protection for the public purse.

In conclusion, the Alderley Park Investment Fund presents an investment opportunity which is towards the high risk end of the spectrum and an investment purely on financial returns would be hard to justify based on the historic performance of both Life Science funds in particular and venture capital in general.

The investment returns, expressed as an IRR, are considerably lower than those which have been available historically from companies listed on the Stock Market, but are still ahead of those which could have been achieved on risk-free cash deposits.

Hence it is essential to also consider the socio-economic benefits of this Fund. These are discussed in Section 5.

5. Investment Criteria and Economic Objectives

As discussed in Section 4, there would be less risky investment opportunities open to Cheshire East if its participation were to be judged on purely financial considerations.

AstraZeneca's withdrawal, however, provides a unique opportunity to utilise the world class facilities they are leaving behind to create a Life Science "hub" of international importance and significance, ultimately creating far more highly skilled jobs than are being lost as a result of AstraZeneca's decision.

The withdrawal of the R&D function of AstraZeneca's activities on the Alderley Park gives rise to a specific market failure, with "knock on" effects to the local economy. These are fully evaluated in SQW's Economic Impact Assessment Report dated 29 January 2014 and, accordingly, are not repeated here. In purely quantitive terms, the pre-disinvestment economic impact of the site is assessed at £315 million pa and post-disinvestment the economic impact of the remaining 700 AstraZeneca employees is assessed at £70 million, both figures including the indirect and induced effects. Accordingly the loss to the local economy (most keenly felt in the Cheshire East local authority area – the "host" authority) is £245 million pa.

The most appropriate way of mitigating this loss, the SQW report suggests, is the creation of a Life Sciences "hub" at the Alderley Park site to take advantage of its superb facilities and highly trained workforce, 80% of whom are now not expected to transfer to AstraZeneca's new R&D facility in Cambridge.

SQW's report, in its second volume, makes certain recommendations in order to stimulate future market demand. SQW has quantified future demand mainly in relation to the space requirements of potential tenants, rather than in a more general economic and financial appraisal.

Their recommendation is that the target companies and organisations should extend to health charities and academic organisations as well as commercially driven businesses. However, it concludes that there are limited opportunities available in the health charity and academic sectors and that the main focus should be commercial organisations which can benefit from the high standard of specialist facilities and trained staff. These are likely to be:-

- Start up and spin-out businesses involving AstraZeneca staff as well as from local universities and NHS Trusts.
- SME's in Human Health Science currently located in the UK but seeking to relocate to assist in their growth paths.
- Inward investors seeking to access the UK and European markets.

As part of the infrastructure required to attract such businesses, SQW recommends the establishment of a risk finance fund, to support current incubation services provided by Bio City, and to assist with the spin out activity from AstraZeneca, as well as the provision of start-up/development capital for businesses attracted to Alderley Park.

In addition, SQW highlights the need to access large-scale venture capital to support large businesses moving into the Park. The proposed Alderley Park Investment Fund is unlikely to be of sufficient size to provide all of this funding, but the appointment of a suitably experienced and well connected fund manager (see Section 9) should provide both expertise and access to such funding.

Such a fund manager would also, through its connections, be able to assist in addressing SQW's perceived lack of highly skilled and experienced management teams currently operating within the North West Region.

Accordingly, the Alderley Park Investment Fund has a key role to play in the creation of a Life Science hub, far beyond purely the financial return. A full site will, to a large extent, mitigate the net £245 million pa loss to the local economy by:-

- Retaining highly paid staff (mean salary level £52,500 currently, compared with £27,600 in the Cheshire East area) and, if successful, creating further high quality jobs leading to more "induced" benefits to the local economy by higher than average net income.
- Provision of services to the site.
- Recovery of lost rental income and business rates following AstraZeneca's exit from most of the space currently occupied.
- Short term economic boost as a result of construction/conversion work and capital expenditure projects.
- Greater use of other locally based businesses than was the case under AstraZeneca's occupancy.
- Maintenance of a high level of Life Science skills in the North West Region to support life science operations in other locations in the region.

Taking the above analysis, and that contained in the previous sections, appropriate investment criteria can be formulated. It is considered that this should include:-

- A wide spread of activities of investee companies – whilst the historic focus has been on drug discovery, a much wider cross-section of the life science sector should be covered, in order to reduce the level of investment risk involved.
- Preference should be given (always assuming that commercial viability is not compromised) to those businesses capable of employing large numbers of ex AstraZeneca staff.
- Whilst funding start-ups is important, later stage companies should also be considered, as these represent lower risk opportunities in general.
- Businesses where IP is protectable, or which have high barriers to entry were they not able to exploit the advanced facilities available at Alderley Park.
- Strong management teams, with proven experience.
- Products/services which are market driven, not research led.

In terms of economic objectives, it is often the case with public sector-backed funds, that multiple objectives are set which invariably lead to a conflict between objectives (e.g. are jobs created more or less important than jobs safeguarded?). It is suggested that only two objectives be set:-

- Jobs created (jobs safeguarded, in addition to being difficult to measure accurately, is irrelevant in this case in view of AstraZeneca's decision to reduce its headcount on site from 3,000 down to 700).

- GVA created (these will provide a focus on growth opportunities, rather than providing financial support to "lifestyle" businesses).

These economic objectives are obviously separate from the financial objectives. As detailed earlier, it would be unrealistic, based upon past performance, to expect an IRR of in excess of 5%. In reality, achieving a full return of Cheshire East's investment monies, after fund management costs would, in our view, be an acceptable outcome, so long as the economic objectives set out above are achieved.

6. Structure of Proposed Fund

There are two primary structures used in the venture capital and private equity industries, which have evolved and been refined over the last thirty years. The objective is to be able to interpose a fund manager between the investor and the investee company in order to allow for professional expertise (which may not exist within the investor) to be utilised cost-effectively and for risk to be reduced by having a portfolio "spread" of investments, rather than a "rifle shot" approach. This can be illustrated diagrammatically as follows:-

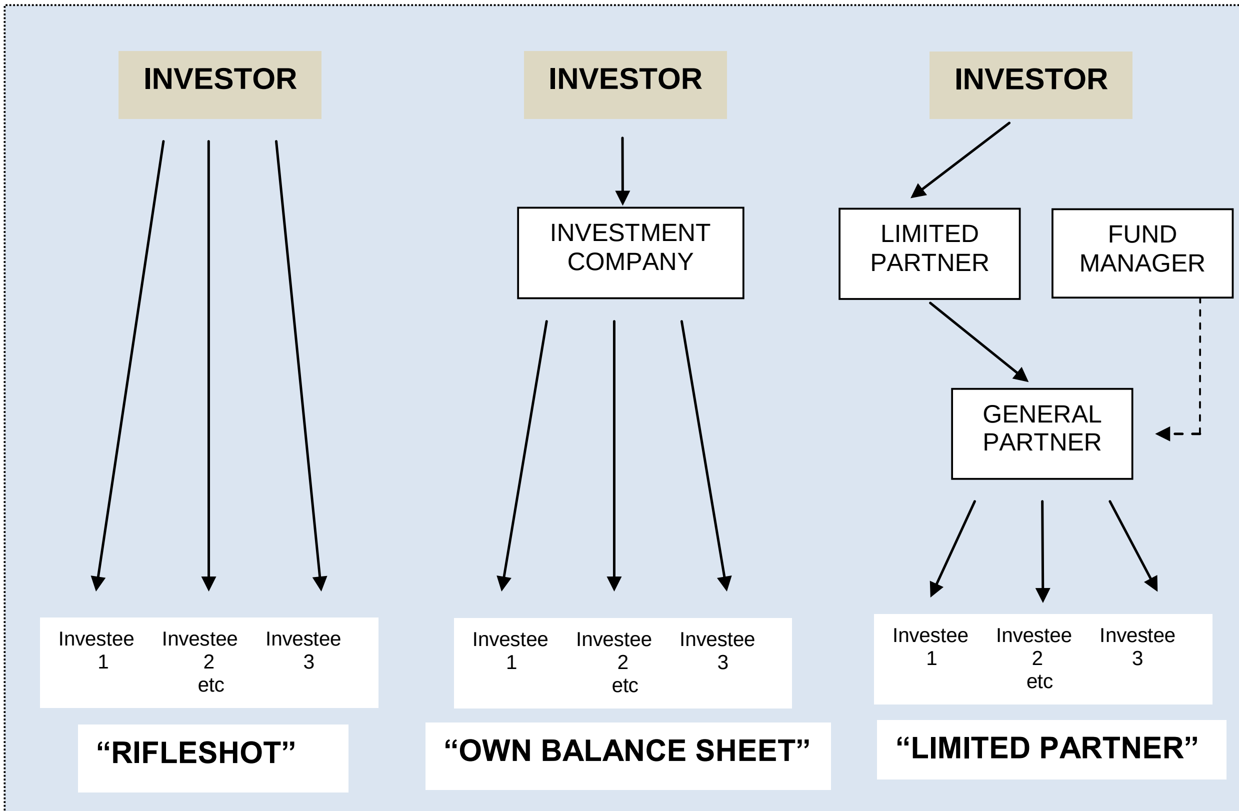

Figure 6 - Investment Structures

Each of these will be considered in turn:-

"Rifleshot"

When applied to the Alderley Park Investment project, this would entail each of AstraZeneca, Bruntwood and Cheshire East (and any other potential investors) making their own investment appraisals and investment decisions on a "case by case" basis. As it is understood that Cheshire East is exempt from capital gains tax, the whole of the proceeds from the realisation (less realisation costs) would be available on a tax free basis to be returned to Cheshire East.

The "Pro's" are:-

- Simple to set up – no start-up costs of note.

- Investment decision rests with Cheshire East – it can “cherry pick” the investments which give the best economic benefits as well as the best hope of a financial return.

- Tax neutral.

The “Cons” are:-

- Cheshire East would need to ensure it has sufficient investment and due diligence expertise to be able to select the most appropriate investment opportunities.

- Cheshire East might be the only investor in certain companies.

- Post investment, Cheshire East would need investment monitoring and exit expertise.

- Cheshire East would be responsible for all accounting matters relating to its investments.

Overall therefore, this would be an attractive option if Cheshire East was prepared to adopt a “hands on” approach, with its associated costs.

“Own Balance Sheet”

The investors would subscribe for share capital (a small amount) and provide loans to a separate investment company, whose equity would be allocated in proportion to the total commitments made by each shareholder (e.g. if each of Cheshire East, AstraZeneca and Bruntwood were to invest the same amount, they would each own 33.33% of the company). This would avoid any party having to consolidate the investment company results into its own financial statements.

The investment company would hire a professional, experienced management team who would invest the money provided by its shareholders in investee companies, monitor their performance, provide reports back to the shareholders and deal with all accounting matters and, eventually, exit the investment and repay the investor’s loan.

The “Pro’s” are:-

- The costs of running the investment portfolio are shared by the three investors.

- A professional, experienced management team can be assembled.

- Each investor is a “passive” investor, merely receiving reports and providing an overall monitoring and oversight function.

- The company does not fall to be regulated by the Financial Conduct Authority (“FCA”) as it is investing its’ own funds (i.e. out of its’ own balance sheet).

- All investors would participate in each investee company (indirectly) and so benefit from the spread of risk over a portfolio of investments.

The “Cons” are:-

- There are costs involved in setting up the investment company.

- All investors would face a reduced return because of the costs of running the company and its management team.
- All investors would face a further reduced return because the company would be subject to Corporation Tax (current small companies rate: 20%).

"Limited Partner"

This apparently complex structure has become established as the "norm" for venture capital and private equity funds alike.

In a limited partnership, the exposure of the investors is limited to the amount they commit to invest by way of partnership capital and loans, unlike in a normal partnership where each partner is jointly and severally liable for all the liabilities of the partnership. A small amount of fixed capital is invested at the beginning, and the overwhelming amount of money is then advanced by way of loans to the Limited Partnership on an "as needed" basis. Since AstraZeneca wishes to invest its £5 million on commencement of the fund, it would provide all its loans at the beginning, but 33% of each investment into an investee company would be drawn from that loan, the remaining 66% being drawn down from the Cheshire East and Bruntwood as required.

The only partner with unlimited liability is the General Partner. In line with the taxation treatment of ordinary partnerships any tax liability of the partners falls on those partners directly. Accordingly, if Cheshire East has a tax exempt status, then it would not be taxed on any possible returns generated by the limited partnership.

Typically, the General Partner is a company with no assets other than its investments in investee companies and no liabilities other than the loans mentioned above from its investors.

Fund management is undertaken by an FCA regulated fund management company, which charges the General Partner a fee for its services. As that fee attracts VAT (currently at the 20% rate), this VAT would negate some of the attractiveness of the transparent partnership for other tax purposes. In order that VAT is not chargeable on the management fee, the General Partner is usually owned by a company which is within the same VAT group as the fund manager. Hence the fee is an "intra group charge" within the VAT group and no VAT is due to be paid over.

The "Pro's" are:-

- Well used and understood within the industry and a well established structure.
- Limited Partners exposure is limited to their Commitment.
- Differing requirements of investors can be accommodated.
- The fund has a defined lifespan after which it can be wound up.
- Completely tax transparent, thereby boosting net investment returns to investors.

The "Cons" are:-

- Fund manager has to be FCA regulated.

- Relatively costly to establish.

Position of Potential Alderley Park Investors

AstraZeneca has already contracted with the Bio City Nottingham Group to provide an “incubation” service on the Alderley Park site, and the “Bio Hub” project is well established and appears successful. By March 2014, 24 companies, employing around 200 scientific posts, had been attracted to the Bio Hub (press release dated 6 March 2014). Apparently, 5 spin-outs and start-ups are already established and Bio City is working on 10 more. Overall, AstraZeneca estimates that there could be 25-30 such spin-outs.

The incubation function is in this case, crucial, as none of the spin-outs are likely to have complete management teams. They will be strong on the technical skills but sales, marketing and finance skills will be in short supply as these were provided centrally by AstraZeneca. Similarly, establishing whether the team has enough of the entrepreneurial skills and general leadership qualities is often difficult to assess. Hence the incubator’s function is to address these issues, establish whether the proposition’s product/service would have a market outside of AstraZeneca, prepare a business plan (including realistic projections) and generally ensure that the proposition is “investor ready”.

Separately, Bio City has proposed an “incubation fund”, which it would manage, to invest in businesses going through the incubation process. The criteria for the fund are stated to be:-

- All proceeds of sales of investments to be recycled.
- No return to potential investors.
- Willing to accept higher degrees of risk than venture capitalists would consider.
- Investment to be in the range of £50,000-£250,000 with no more than 10% of the fund in any one investment.
- Initial investment (not yet finally approved) of £5 million from AstraZeneca, to be fully invested within 5 years – future investments then being financed thereafter through exit proceeds.

AstraZeneca believes that the combination of a proven incubation services provider and a dedicated source of finance for early stage businesses undergoing the incubation process greatly enhances the chances of success, thereby mitigating the perceived “high risk” nature of such investments.

A company limited by guarantee is suggested. As the company would be investing off its own balance sheet, it would not need to be FCA regulated.

It has been suggested that Manchester Science Park (or its parent company, Bruntwood Limited) and Cheshire East co-invest in this fund, each investing £5 million and that a further private sector investor provide a further £5 million, to make a £20 million fund overall.

Bio City Nottingham Limited is a company limited to guarantee, whose members were not disclosed at 22 September 2013 (the date of the last Annual Return) but, in the audited accounts for the year to 31 December 2013, are stated to include Nottingham Trent University and the University of Nottingham. It has a number of subsidiaries:-

- Mobius Technology Ventures Limited, a BVCA member and which invests in early stage life science companies off its own balance sheet and provides facilities and business support.

- Bio City Scotland Limited, which runs the former MSD Research facility in Scotland.

- Bio Ascent Discovery Limited, which runs a key component logistics service to the European Lead Factory project and is based in Scotland.

The Alderley Park site activities are run through Bio City Nottingham Limited, although there is a dormant subsidiary, Bio City Alderley Limited, which is owned by Bio City Group Limited, another dormant company which is owned by Bio City Nottingham Limited.

The audited accounts for Bio City Nottingham Limited for the year ended 31 December 2013 show a turnover of £3.95 million and an operating loss of £1.27 million, due apparently to the set-up costs in Scotland and at Alderley Park. It's net loss attributable to its members was £768,000. It's members' funds were £7.87 million.

AstraZeneca is keen to progress rapidly with its "investment" in this proposed Incubation Fund.

Discussions held with both Manchester Science Parks/Bruntwood and with Cheshire East reveal a different position from that taken by AstraZeneca. Both parties aspire to receive a return on their investment. In view of the relatively low return historically generated by life science venture capital funds (see Section 4), investing in an even earlier stage incubation fund with its inherent higher risk profile, looks unattractive.

Other concerns include:-

- A company limited by guarantee is not exempt from tax if it were to make profits. AstraZeneca is not concerned about this.

- AstraZeneca wish to "grant" the money, rather than make an investment. There are no plans for it to monitor the performance of the fund and the evergreen nature of the fund means that it will continue while it still has funds to invest. This is a very different approach from that required by Manchester Science Parks/Bruntwood and Cheshire East.

- AstraZeneca wishes to complete this transaction within the next few weeks.

AstraZeneca's approach to spin-outs, whilst prima facie appearing to be benign, also raises issues:-

- The timescales are uncertain, as staff appear to be being made redundant well ahead of replacement (and much smaller) facilities coming on stream in Cambridge – the interim period being covered by supply contracts to the spin-out businesses, although AstraZeneca is not contractually undertaking to provide such supply contracts in every case. However, there is no certainty over the timing of when such contracts would end, by which time each spin-out must have sourced and converted non-AstraZeneca businesses in order to survive the contract suddenly terminating.

- Of the larger, non plant, equipment, only a small percentage will remain at Alderley Park (presumably the oldest of each type). Clean-room infrastructure will of course remain. Those remaining items have been pre-sold to Manchester Science Parks and each spin-out will have to lease them back.

- There has been little or no focus by AZ historically in sourcing and securing businesses currently located elsewhere, both in the UK and internationally, willing to move onto the Alderley Park site to facilitate their growth by taking advantage of its facilities. If the site is to realise its potential as an internationally significant life science facility, this is a very important consideration – a point that is recognised by the MSP team.

Our Proposals

Taking all these factors into consideration, our proposals are as follows:-

- An Incubation Stage Fund is established utilising solely AstraZeneca's £5 million (plus any third party money Bio City is able to attract) and run by Bio City. The advantages are:-

  - It protects Manchester Science Park/Bruntwood and Cheshire East from an investment of high risk.

  - It "uncouples" the investment from that of Manchester Science Park/Bruntwood and Cheshire East, allowing the AstraZeneca investment to proceed at a speed which is more sensible.

  - It removes the State Aid requirement for the fund manager to be appointed through a competitive process.

The structure of this fund is set out diagrammatically below:-

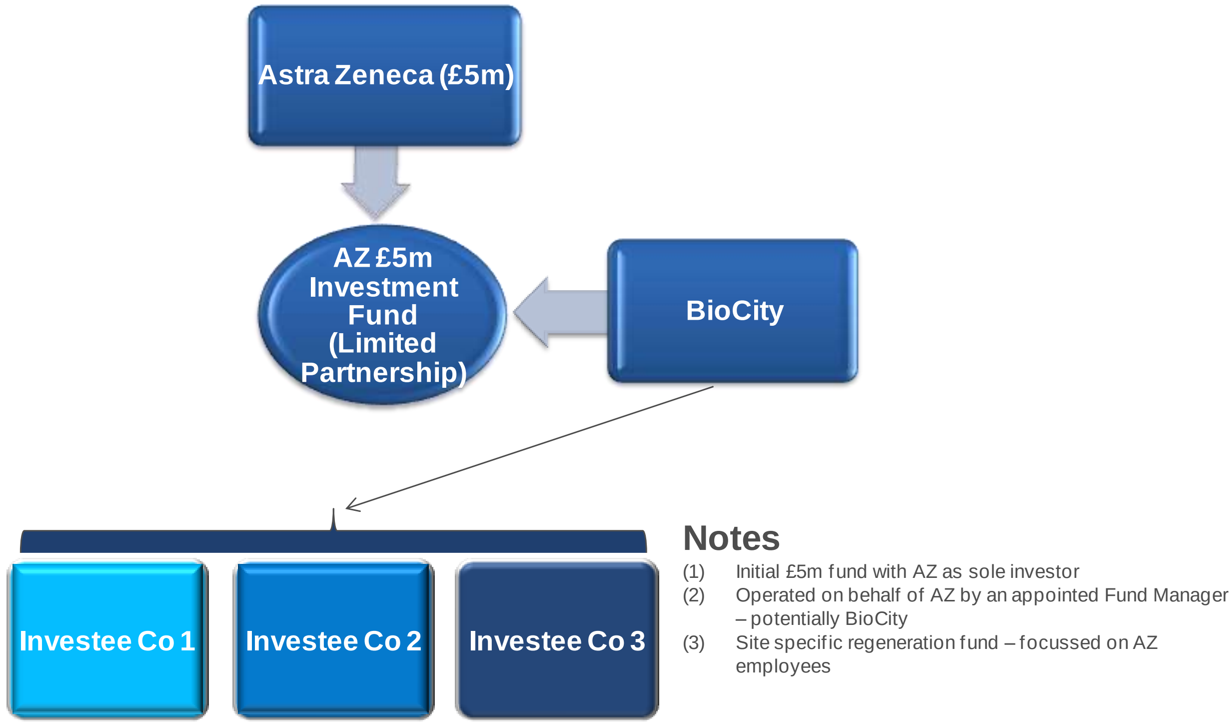

Figure 7 - Step 1 £5m Incubation Stage Fund

- A Venture Capital fund is set up initially utilising the £5 million each from Manchester Science Park/Bruntwood and Cheshire East and, preferably, securing up to £10 million of private sector funding, to bring the Fund up to an optimal size. A £20 million fund would greatly enhance the likelihood of achieving a commercial return because the level of fund management costs, as a percentage of the amount invested, becomes more realistic, a wider "spread" of investment/risk is possible and finally, successful investee companies can be supported for longer (in terms of later rounds of funding), thereby enhancing the fund's overall returns.

- Other advantages of this "later stage" fund are:-

  - It can invest in businesses which do not need to go through the incubation process – e.g. businesses moving onto the site from elsewhere.

  - The fund can choose the more attractive opportunities coming out of the Bio City incubator – there would be no automatic presumption of follow-on funding.

  - If the proposed limited partner structure is utilised, the fund will be completely tax transparent, enhancing returns to Cheshire East as a tax-exempt body.

  - EIS and SEIS investment could be attracted, not into the fund, but at the investee level, to allow greater leverage of Cheshire East's investment (See Section 11).

  - The fund can be established at a timescale which would allow for "due process" to be followed (e.g. OJEU-compliant fund manager recruitment process), as it is "uncoupled" from the proposed AstraZeneca investment.

Assuming that the recommended limited partner structure is adopted, the structure of the fund is set out diagrammatically below:-

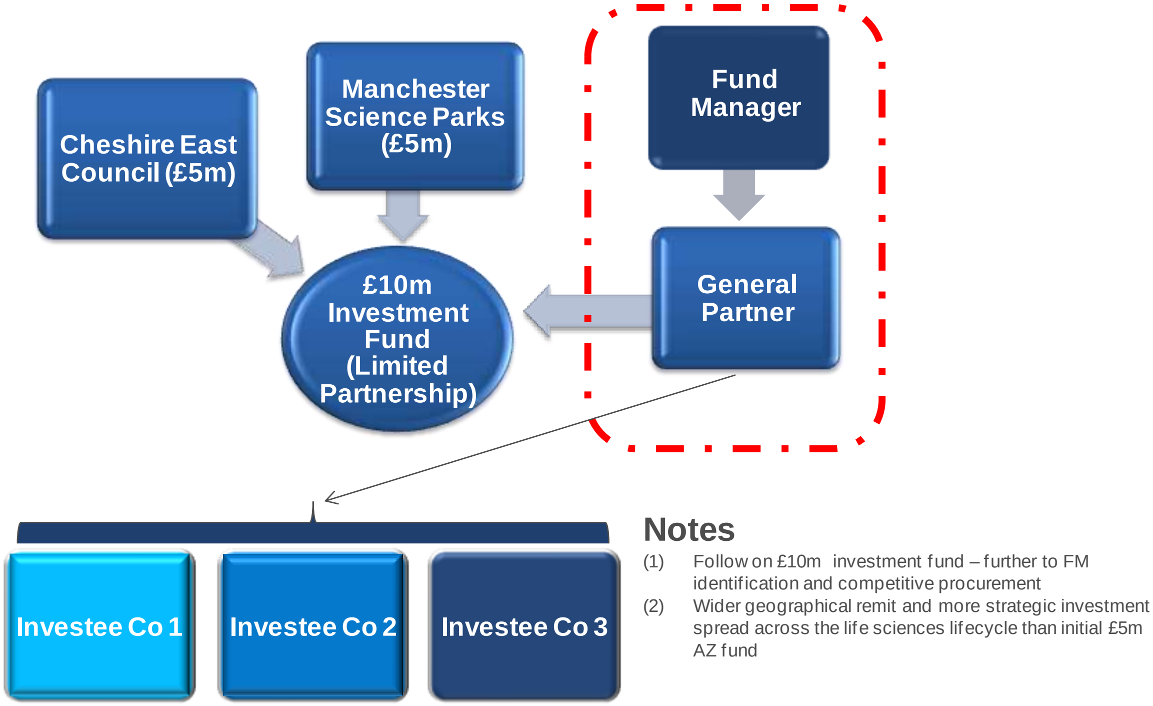

Figure 8 - Follow-on Venture Capital Fund

The main issues associated with these recommendations are:-

- As Cheshire East's investment is likely to constitute State Aid, the State Aid Rules need to be followed (see Section 8).
- The size of the fund will, to a significant degree, dictate both the likelihood and the quantum of a commercial return. Hence, strenuous efforts should be made to secure third party investment alongside the Manchester Science Park/Bruntwood and Cheshire East's investment.
- Finally, it is recommended that the length of life of the limited partnership be 15 years, rather than the more usual 10 years. The investment phase would still be 5 years (as in a 10 year fund), as this would cover the AstraZeneca withdrawal from the site, including a reasonable allowance for slippage. The period in which the Fund is actually invested in a portfolio company (the "hold period") is the key driver behind the 10 year realisation phase.

The principal reasons are as follows:-

- In general, partly due to the prolonged recent recession, the hold period has been elongated throughout the VC sector, but especially amongst publicly-funded VC funds. This reflects the difficulty in arranging exits at times and valuations advantageous to the investors.
- In life sciences, the time required to achieve increasing profitability (the most advantageous timing of an exit) is longer than in most other industries. In other words, the length of time a

business spends in the early loss-making phase of the "J" curve as illustrated in the diagram in Figure 2 can be many years.

- In life science investments and especially in drug development, the valuations only start to rise dramatically in the later years, and hence being forced to exit early, because the fund is nearing the end of its life, is detrimental to achieving a commercial return which fairly reflects the risk taken.

It is recognised that the additional fund management fees (see Section 9) involved in an extended realisation phase would have to be offset by the additional realisation proceeds but, on balance, it is expected that the potential uplift in value would more than compensate for this additional cost.

7. Potential Investment Returns and Underlying Assumptions

In order to assess these, 3 different fund sizes have been modelled. The detailed worksheets are attached in Appendix 1.

The 3 sizes are:-

- £10 million, which assumes the only investors are Cheshire East and Bruntwood/Manchester Science Parks, each contributing £5 million.
- £15 million, as above, but with an additional private sector investor, again at £5 million.
- £20 million, as above, but with additional private sector funding of £10 million.

Supply Side Constraints

In SQW's document "The impact of the disinvestment by AstraZeneca at Alderley Park, Cheshire", Volume 2, issued on 11 February 2014, SQW estimates that the site could support 3,460 non AstraZeneca jobs over the next decade, of which 2,640 would be created by the end of 2019, the proposed 5 year investment period for the Fund. Over a 15 year time frame (to 2030) the space demand is for 22k square metres of "office space" and 45k square metres of "Laboratory and Office" space. This compares with 90k square metres of office and laboratory currently. Not all of this will become available as AstraZeneca intends to retain 700 staff, mainly in office space.

Prima facie there appears to be a reasonable balance in SQW's view of supply and demand for space at the Alderley Park facility. However, the broadening of the range of life sciences likely to be provided by the incoming businesses will mean some reconfiguring of the available space, which historically has been focused on drug discovery and development.

The Fund's Target Investee Companies

The number of jobs "created" at Alderley Park per company can be highly variable. Most start-ups usually employ less than 5 people in their first year post investment, with the successful ones rising to between 20-50 people within a 5 year period, and the unsuccessful ones either not growing or, at worst, reducing to nil, following closure. The spin out companies, AstraZeneca believes, will commence with between 5-35 employees, with the capacity to grow if they are successful in diversifying their customer base away from AstraZeneca. Finally, businesses transferring from elsewhere to Alderley Park are likely to vary in size from 5-100 employees, depending on their stage of development upon transfer. Some of the key personnel will need to relocate with those businesses, so not all these posts will be available to ex AstraZeneca staff. It has been assumed that only 80% of these businesses' personnel will be recruited locally, to allow for 20% to move in with the businesses.

Consequently, calculating the number of companies which could potentially benefit from an investment by the Fund is difficult to forecast accurately. Not all inward-bound businesses will require the Fund's money, whilst the Fund might choose not to provide financial support for all of the AstraZeneca spin outs, if they appear to have a limited growth potential. Later increases in numbers employed are often selffunded, so for the purposes of these calculations, SQW's estimate of jobs created by the end of 2019, of 2,640 is used (rounded up to 2,650).

Set out below is a table showing the likely "minimum" and "maximum" employment numbers per potential investee company, and these then compared with the number of companies potentially supportable by a £10m fund, a £15m fund and a £20m fund:-

	Minimum Employment			Maximum Employment		
	Jobs per Co	No. of Co's	Total Jobs	Jobs per Co	No. of Co's	Total Jobs
Start-ups	5	40	200	20	20	400
AstraZeneca Spin Outs	10	25	250	30	25	750
Inward Transfers (nett)	20	110	2,200	60	25	1,500
		175	2,650		70	2,650

Figure 9 - Estimated Minimum and Maximum Employment Profiles

- % supported by a £10m Fund – 27 Co's, 15.4% Min, 38.6% Max
- % supported by a £15m Fund – 45 Co's, 25.7% Min, 64.3% Max
- % supported by a £20m Fund – 62 Co's, 35.4% Min, 88.6% Max

There are, of course, infinite permutations on the number of companies needed to generate 2,650 net jobs, depending not only on their position in their individual life cycle but also whether they are in labour-intensive sectors of the life sciences industry. The examples used are intended to demonstrate the possible extremities of these permutations.

The table demonstrates the importance of attracting existing businesses to Alderley Park, since the number of jobs created by the combination of start-ups and AstraZeneca-sourced spin outs accounts for 17% of the number of jobs needed on the "Minimum" Employment" scenario, and only rising to 43% on the "Maximum Employment" scenario. Since the lead-time on businesses relocating tends to be long, it emphasises the need for rapid acceleration of marketing activities for the Alderley Park site.

Scale of Fund

From the table above, at the "Minimum Employment" extremes, the £10m fund size would only be capable of providing support to 15% of the companies on the site, rising to 39% of the "Maximum Employment" extreme is used. Whilst it is accepted that not all companies will need (or accept) venture capital funding from the Fund, it is likely that most of the spin outs and start-ups will require its' support, along with a reasonable proportion of those transferring on to the site. This reinforces the comments made in "Our Proposals" sub-section of Section 6 of the Appraisal about the need for a larger fund size.

The likely level of demand from incoming life science businesses is very hard to predict, as it will vary on a company-by-company basis. As start-ups will have very few alternative sources of funds available to them, as will the AstraZeneca spin outs once the Incubation Fund money has been exhausted, demand from these two types of applicants is clearer to establish.

At an average investment size of £269,037 in the £10m fund, on the "Minimum Employment" extreme, only 42% of these two categories could be funded, with no funds available to support the inward transfer category. At the “Maximum Employment” extreme this percentage rises to 60%, again with no funding available for inward transfers.

Using the £20m fund size, 95% of start-ups and AstraZeneca spin outs could be funded at the “Minimum Employment” extreme (still with no funds available for inward transfer), and at the “Maximum Employment” extreme, these two categories could again be fully funded, with £5.06m available to support inward transfers (17 companies – 68% of total).

This analysis seeks to define the extremes of the levels of funding support required. Not all start-ups or spin outs will require finance from the Fund and it is to be hoped that a reasonably large percentage of inward transfer companies would not need finance from the Fund either. Hence, a £20m fund should provide no “supply side” constraints in achieving SQW’s jobs created 5 year target for the site. A £10 million size fund clearly would provide a supply side constraint, but the extent of the constraint is difficult to determine, given the variation in “mix” between the 3 types of applicant, the wide variation in the numbers employed per company and the amount of finance each applicant would require from the Fund.

Investor Returns

Attached in Appendix 1 are three illustrative projections for a £10 million fund, a £15 million fund and a £20 million fund. The costs of running each fund over the 15 year proposed life of the fund, assuming there is no alternative source from which to pay for the running of the fund, have to be met out of the funds invested, resulting in a much lower figure actually being available for investment purposes, as set out below:-

“Gross” Fund £m	Fund Management Fees £m	Available for Investment £m
10.0	2.7	7.3
15.0	3.4	11.6
20.0	3.6	16.4

Figure 10 - Estimated Fund Management fees by Fund Size

It can be seen that the size of the management fee does not increase proportionately with the size of the fund, for the reasons set out in Section 9.

The three models use the following key assumptions consistently:-

Initial investment size

	£	%
- small	50,000	70%
- medium	200,000	15%
- large	400,000	15%

25% of the available fund size is used in making initial investments.

"Follow on" investment size

	£	%
- small	50,000	-
- medium	200,000	50%
- large	400,000	50%

n.b. not all investments have a "follow on" requirement. 75% of the available fund size is used in making follow on investments. This is a much larger percentage than is the case across the whole venture capital industry and highlights the long term nature of investment in this sector.

Fund Term

All investment monies are utilised in the first 5 years of the fund. The remaining 10 years are to allow the investee companies to mature and to achieve an exit for the fund.

Success/failure rates out of every 10 investments

- Number which fail	4
- Number where only the original investment is recovered	4
- Number exited at a 7 times cost of investment multiple	2
	10

Fund Management Fees

The 3 models use the differing assumptions set out below:-

	£10m Fund	£15m Fund	£20m Fund
Fund management fee (investment phase)			
(as a % of the funds raised)	4.00%	3.25%	2.50%
Fund management fee (realisation phase)			
(as a % of the net book value of remaining investments, subject to a "floor" fee in the last 3 years)	2.75%	2.25%	1.75%
Total fund management fee	£2.736m	£3.397m	3.558m
- % of funds raised	27.4%	22.6%	17.8%

Figure 11 - Fund Management Fee Assumptions

Utilising these fixed and variable assumptions, the illustrative financial models show the following IRR's:

	£10m Fund	£15m Fund	£20m Fund
Net IRR to investor (over 15 years)	3.0%	3.9%	4.7%

Figure 12 - Estimated IRR by Fund Size

These illustrative IRR's are somewhat lower than the historic life science fund performance detailed in Section 4. Those funds have, in general, a 10 year life, compared with the 15 years life proposed here, and hence have benefited from the shorter periods that historic investments have typically been held in the fund. As the IRR is a function of the time cost of money, maintaining a high IRR over a longer fund life is more challenging, but there is little practical alternative unless it proves possible to achieve exits in a shorter time scale in the future.

As mentioned earlier, these models are purely for illustrative purposes. Actual performance will differ from these projections, which could also be used for "benchmarking" purposes to compare against those projections prepared by prospective fund managers during the tendering process.

These illustrative projections will, it is hoped, prove to be conservative when compared with the eventual outcome. The success of the fund will largely be a result of the experience and judgement of the fund manager appointed, together with the degree of success achieved in attracting existing life science businesses to the Alderley Park site.

8. State Aid Considerations

Introduction

New State Aid Rules came into force on 1 July 2014. These are contained in Commission Regulation (EU) No. 651/2014, which was issued on 17 June 2014. This has re-written the rules considerably and, accordingly, it is not considered to be useful to examine how government and other public sector bodies have historically dealt with State Aid.

Impact on SME Risk Capital Interventions

State Aid has the propensity to interact with venture capital investments at three different levels:

Investor Level

The Fund will include both private sector and public sector investors. So long as the public sector investors (principally Cheshire East) invest on terms no WORSE than private sector investors, then they are investing using the “Market Economy Investor Principle” (see later in this section) and hence no State Aid issues should arise.

There is potentially a need to adopt a fully open, transparent and fair procurement process, although this would appear to conflict with FSMA and subsequent regulations. This will need to be resolved in the next stage of the process, should Cheshire East decide to continue with its investment.

Fund Manager Level

A fully open, transparent and fair recruitment/procurement process would provide sufficient evidence of a lack of State Aid at this level as set out later in this section. In effect, a full OJEU-compliant procurement will be required. The timing implications of this are considered elsewhere in this Appraisal.

Investee Level

In order to prevent the EU being inundated with thousands of State Aid Notifications in respect of relatively small investments, so long as these investments comply with the terms of the General Block Exemptions Regulations – GBER (as amended by the regulation 651/2014 referred to above) under Article 21, then no State Aid Notification is required for investments made by the Fund into qualifying SME’s. The limits relating to the applications of GBER are considered below.

GBER Limits on SME Investments

Size of SME

A Small or Medium Enterprise (“SME”) is defined as follows (all three criteria need to be met):-

- Less than 250 employees or full time equivalent (FTE).
- Less than €50 million turnover.
- Less than €43 million balance sheet total (i.e. Capital and Liabilities).

It is quite possible, therefore, for an investee company to cease to be an SME either through natural organic growth or through growth by acquisition. The investee company has to meet the criteria of the time of EACH investment. It can also cease to be an SME through movements in the £:€ exchange rate.

Location

Alderley Park does NOT fall within an Assisted Area as defined for the period 2014-2020. Several other forms of State Aid are accordingly not available, but Risk Finance Aid (Article 21) is not restricted to the re-defined Assisted Areas.

Type of Investment into SME

This covers equity, quasi-equity ("mezzanine" type investments, designed to deliver a return between those required of equity and debt), loans or guarantees and mixes thereof. In venture capital, guarantees are rarely used in the UK.

Eligible SMEs

These are ones which:

- are not listed on a stock market, and:
- have not yet operated in any market (i.e. before the first commercial product/services sale), or:
- have been operating for less than seven years after the business's first commercial sale (for drug discovery/development companies, this could be up to seventeen years, unless "incidental" sales are made during that time), or:
- must have a sensible business plan which demonstrates an increase of 50% in turnover compared with the preceding five years as a result of selling a new product/entering a new market, and:
- at least 50% of the finance required is to stay in the business to support growth (i.e. up to 50% can be used a "replacement" capital – the purchase of existing shares in a business from an earlier investor or shareholder).

Investment Limits

Up to €15 million may be invested per investee company during the company's lifetime. This limit, however, applies across ALL risk finance measures, not just those covered by Article 21. So, if an investee company has received other forms of State-Aided support (not just investment) this has to be included in calculating whether the €15 million limit is to be breached. If it is, then an individual State Aid Notification will be required.

Follow on Investments

These are permitted, on the same basis as initial investments, so long as the combined investments do not breach any of the State Aid limits.

Private Sector Leverage

The minimum levels of private sector co-investment depends upon the stage of the SME's evolution:-

- Pre first commercial sale of its product/service : 10%
- For those within seven years following their first commercial sale : 40%
- For those launching a new product or entering a new market and can demonstrate an income of at least 50% in turnover : 60%

Very importantly, the private sector leverage can be measured either at the individual investee level (i.e. co-investors invest alongside the Fund into the investee company – see later) or at the Fund Level. In the latter case, it is the aggregate (on a weighted average basis) of the volume of investments under the three percentage categories set out above, which applies.

In the case of a Fund of £15 million, the private sector investment into the Fund of £10 million compares with the public sector investment of £5 million (assuming one other private sector investor is brought in alongside Manchester Science Parks/Bruntwood) – i.e. the private sector leverage inherent in the Fund itself is 66.67% and hence all three categories are met. If the public sector funding were to increase to 50% of the total Fund, (e.g. if there is no private sector investor other than the Manchester Science Parks/Bruntwood) the first two categories (likely to be by far the largest elements in the "mix" of investments) would still be covered and, in the case of the third category, the additional 10% could be accommodated from private sector investors co-investing alongside the Fund.

In any case, in order to ensure maximum economic value for the public sector contribution, fund managers are usually given a "matched funding" target to encourage them to access and attract private sector funding (often using EIS or, where appropriate, SEIS tax-sheltered investment) at the investee level. However, EIS and SEIS money is State-Aided and hence would NOT count towards the private sector co-investment levels set out above.

Risk Sharing

In general, it is expected that public and private sector investors within the Fund would share the risk of losses pro rata to their commitments to the Fund (known as the "Market Economy Investor Principle"). Whilst GBER allows for the possibility of the public sector investor assuming a "first loss" position of up to 25% of its total investment, it is not recommended that Cheshire East Council offer this, in this instance.

Profit Driven Decisions

GBER makes an overriding assumption that all funds operating under its remit, operate on a fully commercial basis. This has to be demonstrated by:-

- The Fund being established according to the applicable English laws.
- A commercially sound investment strategy being specified, to include economic viability, sufficient scale in terms of size and spread of portfolio investments.
- Each applicant producing a detailed, viable business plan, demonstrating product sales and profitability development.
- A clear and realistic exit strategy for the Fund's investment from each successful applicant.

Fund Management

State Aid Rules state that the Fund must be managed on a commercial basis. The Fund manager must act in a professional manner, in good faith, avoiding conflicts of interest, using best practice and complying with all FSMA 2000 (and subsequent) regulatory requirements. Their remuneration should be in line with market practice and they are to be selected through an open, transparent and non-discriminatory process, with criteria linked to experience, expertise, operational and financial capacity.

The fund manager's remuneration also has to include remuneration linked to performance (usually through a "carry" device, or occasionally by co-investing – there are potential conflicts with the latter however), in order to ensure that their interests are aligned to those of Cheshire East.

Details of the fund manager's investment strategy, criteria and proposed timing of investments need to be set out and agreed before the Fund starts investing. These are usually set out as part of the tender process and are detailed in the fund management agreement. Investors are allowed to be represented in the governance structure of the Fund, usually by being a member of its supervisory board or advisory committee, but not to participate in fund investment decisions.

Undertakings in Difficulty

The Fund must NOT invest in "undertakings in difficulty". This is meant to prevent "lame ducks" being kept alive with State Aided investment, but the terms of the definition of "undertakings in difficulty" are very widely drawn and encompass situations, especially in start-up and early stage investments, where losses are budgeted to occur, but are a natural part of the process of establishing the business. This predicates that an investment structure be adopted in order to ensure that the investee company does not fall into any of the prohibited categories.

An SME undertaking is defined as being in difficulty:-

- Where accumulated losses exceed 50% of the company's issued share capital and premium account. The test is not applied in the first three years from the date of its formation.
- Where the company is subject to formal or informal insolvency proceedings.
- Where it has been in receipt of a rescue loan or guarantee and has yet to pay off the loan or remove the guarantee.

9. Fund Manager Procurement

The process will vary depending on which of the three structures set out in Section 6 is adopted. There are some common themes, however.

Firstly, there are only eight full members of the BVCA with a life sciences focus. Additionally, research has identified between 25-50 fund management businesses with a life science sector involvement in the UK. It is believed, however, that very few of these potential fund managers would be interested in running the Fund, due to its location and relatively small size.

Hence the available pool of fund managers, with the relevant experience and track record to either run a fund or to invest off the Fund's own balance sheet, is not large. The relatively small proposed size of the fund would make it unattractive for an overseas-based fund manager to get involved.

If Cheshire East invests, then in order to comply with State Aid requirements, as mentioned in Section 8 above, a full open and transparent procurement process is required.

In view of the relatively small number of possibly interested partners (most of whom are heavily London/Cambridge centric) the procurement process can be accelerated, by combining the PQQ and ITT stages into one stage. However the process, including the Alcatel "standstill" period, will still take a number of months to complete. Consequently, it is recommended that the process is commenced at the earliest possible date.

Fund management fees (which are usually quoted as a %age of the fund size during the investment phase and a percentage of the "book value" (i.e. cost of investment, less write-offs and write-downs) during the realisation phase) will vary depending upon the size of the fund.

For a £20 million fund, the management fee would be expected to be around 2.5% (£500,000 p.a.) during the investment phase, reducing to between 1.5% and 2.0% of book value during the realisation phase. Whilst this level of fees might appear to be expensive, the team would consist of a full time investment director and 2 full time investment executives.

In addition, a "back office" and compliance capabilities (preferably shared with the fund managers' other funds) have to be included. Given that salary levels for people with a proven track record are not low, and the need to budget for a marketing activity (principally focussed on in-bound companies) it is easy to conclude that this level of fees is realistic. The fund manager should be able to make a modest profit from its activities, whilst its participation in the capital growth value of the fund is usually through a "carried interest" mechanism which has the objective of aligning the manager's interest as closely as possible with those of the investor.

The level of fees chargeable for a £10 million fund are likely to be in the order of 4% p.a. (£400,000 p.a.) and 2.5%-3.0% of the book value during the investment and realisation phases respectively. The costs of running the fund are not directly proportionate to the size of the fund as, for example, the back office and compliance functions are required whatever the size of the fund. This level of fees would allow for an investment director and one investment executive to work full time on the fund.

10. Structure of Investee Company Investments

As discussed in Section 3.5, the form an investment takes varies during a company's journey along the "J" curve. Hence its position in its life cycle will be a major determining factor in deciding on the most appropriate form of investment.

With early stage investments (typically when the company is pre-revenue and loss making) there is no point in providing debt finance. The company at that stage is not cash generating, and hence has no means of servicing its debt, either for the payment of interest or repayment of capital.

Equity can be provided in permanent form by a subscription for ordinary shares or in redeemable form by a subscription for preference shares. Dividends on either ordinary or preference shares can only be paid if all the company's trading losses have been extinguished, regardless of whether the company is cash generative at an earlier stage.

Debt is provided usually in the form of a loan, but can also be in the form of a bank overdraft or asset backed finance (e.g. hire purchase, invoice discounting stock or letters of credit finance). Interest is expected to be paid regularly and capital repaid by an agreed schedule of dates. Hence this form of finance is only suitable for those businesses which are either cash generative already or where there is a strong likelihood that they will be so in the very near future. A further advantage, from the lender's perspective is that the lender can take a charge over the company's assets and/or take personal guarantees from the controlling shareholders of the company by way of security.

The third category of funding is "quasi equity". Quasi equity is defined in the State Aid Regulations as:-

- "a type of financing that ranks between equity and debt, having a higher risk than senior debt and a lower risk than common equity and whose return for the holder is predominantly based on the profit or losses of the underlying target undertaking and which are unsecured in the event of default."

As its name implies, it is in effect a "middle ground" between pure equity and loan finance and is often called mezzanine. It usually takes the form of a loan and, in order to recognise the possibility/probability that the borrower will not be able to meet its contractual obligations to pay interest and make capital repayments on the prescribed dates, the finance provider takes a small equity position, so as to provide sufficient of a reward to justify taking the risk.

This equity position is usually in the form of either conversion rights (to convert some or all of its loan into equity at some time in the future at a pre-determined price), or an option to subscribe for new equity, again at some time in the future and usually at a pre-determined price. The loan element can be secured by a charge over the borrowing company's assets and, if the borrower survives but does not grow sufficiently to make exercising the option or conversion of some or all of the loan into equity (such businesses are often referred to as "zombie" companies or the "living dead"), then the loan and interest payments can still be made in full.

The "blended" return, expressed as an IRR (Internal Rate of Return) per annum, is a composite of the yield (interest/dividend) and the equity return (growth in value above the conversion/subscription price).

Typical returns sought by venture capitalists and loan providers to the SME market are:-

- Equity 17%-30% p.a. depending upon degree of risk accepted.
- Quasi equity 10%-15% p.a.
- Debt Bank base + 3-6% p.a.

Despite the loan element being unsecured at the time of issue, if a charge over the investee company's assets is taken and it grows even modestly, the underlying assets of the investee company may well grow sufficiently to ensure that the debt is fully secured by its maturity date. Nevertheless, the equity "upside" is still required to reflect the initial unsecured nature of the loan and also the risk that growth may be insufficient (or non-existent) to enable the loan to become secured.

Finally, taking a charge over the investee company's assets enables the investor to gain security over any Intellectual Property ("IP") involved, which, in the event of the failure of the business might still have a realisable value, since the business may have failed because of poor management rather than any problems with its IP.

11. Potential for European and Private Sector Funding

As discussed in Section 6, and illustrated by the financial models reviewed in Section 7, the larger the size of the fund overall, the better the likely return to investors. Hence it is important to assess the potential to attract additional funding.

This broadly falls into three categories:-

- Private investors, utilising UK government tax shelters.
- Funding from Europe.
- Other institutional/high net worth investors.

Private Investors Utilising UK Government Tax Shelters

The most widely used and appropriate for the needs of the Alderley Park Fund are EIS and SEIS schemes. Under the Enterprise Investment Scheme (EIS), the investor receives income tax relief at 30% of the amount invested in the year of investment, and can invest up to £1m in any one tax year. The shares in the investee company need to be held for a period of three years from the later of the date of investment or when a qualifying trade commences. Additionally, the investment is generally free from any Capital Gains Tax liability on realisation. Any loss on a sale of an investment (often taking into account any income tax relief already claimed), can be set off against the investor's income in the year of disposal/liquidation. There are other, less important, tax benefits as well.

The Seed Enterprise Investment Scheme goes further in terms of the income tax relief offered. Relief is given at 50% of the cost of the shares, up to a maximum of £100,000. Again, the tax relief applies in the tax year in which the investment is made, and the investor benefits from Capital Gains relief and other less significant tax breaks.

Both Schemes require the investment to be made into a qualifying trade. Financial activities do not constitute a qualifying trade and hence EIS and SEIS tax relief would <u>not</u> be available if invested in an Investment Company (as described in Section 6). There are a number of EIS "Funds", with appropriately regulated fund managers, but each tax year is a separate fund (in order for investors to claim the tax relief in the year of the investment). Hence this structure is incompatible with the 15 year-life limited partner structure discussed in Section 6. The other non-qualifying trades set out in the legislation generally have no relevance for a life science fund, except that a company whose main source of revenue was royalty receipts or licence fees is not considered to be a qualifying trade.

Investors willing to subscribe under the EIS and/or SEIS schemes should not be discounted however. Their investment would need to be made directly into an investee company (co-investment), alongside the Fund's investment. This potentially reduces the amount of finance required from the Fund, enabling a larger number of businesses to be supported and generating a larger overall "private sector match" for Cheshire East's investment. Please note, however, that EIS and SEIS are both deemed to be "State Aided" funding and so do <u>not</u> constitute private sector funding for State Aid purposes (see Section 8).

Funding from Europe

This is delivered mainly under the auspices of the European Union 7th Framework Programme, which provides financial support for a wide variety of research sectors, including biotechnology. It operates in the UK through the British Bioscience Scientific Research Council (BBSRC). Its main focus is on “blue sky” research, rather than the “applied science” research which might give rise to commercially viable opportunities. Its work in the commercialisation field encompasses collaborative research, business skills training and start-ups.

These are delivered through Industrial Partnership Awards (“IPA’s”), the LINK programme for stand-alone research funded 50:50 with industrial partners, the Technology Strategy Board (”TSB”), Research & Technology clubs focused on strategic priority areas (one of which is the Bioprocessing Research Industry Club – including research underpinning the manufacture of biopharmaceuticals) and collaborative programmes of research in strategically important areas of research which include chemical biology networks.

The important point to note is that these are all grant programmes, rather than investment programmes.

The only investment programme of relevance that we are aware of is that operated by the European Regional Development Fund (“ERDF”). This is one of two relevant EU Structural Funds (the other being the European Social Fund (“ESF”)). The EU is seen as having an increasing focus on investment (through Financially Engineered Instruments (“FEI’s”)) rather than grants. If an investment can eventually be sold at cost or at a profit, then the “cost” to the public sector is NIL, whereas the cost of a grant is the full value of the grant. Hence in the long term, FEI’s are seen as delivering a greater benefit economically than grants, based upon the amount invested/granted.

The North West of England has in the past benefited from ERDF funding, especially in “Assisted Areas”. Alderley Park is not located in any of the current or proposed Assisted Areas. In the current programme (2007-13), ERDF funding (matched by European Investment Bank money which is deemed to be private sector funding for the purposes of this programme) is made available across the North West via the Biomedical Fund of the North West Fund. This Biomedical Fund is likely to invest between £27.5m and £30m in a 5 year period ending on 31 December 2015, 40% of that sum needing to be invested in the Merseyside area. As most of its non-Merseyside allocation is now committed (both for first applications and for follow-on funding), its impact on assisting Alderley Park’s regeneration is likely to be minimal, especially as its investment period runs out before most of the current Astra Zeneca activity is due to transfer to Cambridge.

There is to be a further ERDF programme in which the UK will benefit. This will run from 2014-2020 and, for investment purposes, it will need to be fully invested by 31 December 2022. Whilst the UK government (via DCLG) organised the distribution of ERDF money via regional bodies in the 2007-2013 programme, it has been decided that for the next programme, funds are to be distributed via Local Enterprise Partnerships. If each LEP (there are 5 in the North West) were to set up its own FEI investment vehicle, each vehicle would be sub-optimal and also below the level at which the EIB would consider investing. Accordingly, efforts are currently being made to delegate each LEP’s FEI allocation to a regionally based body which would bring the advantage of scale and the possibility of attracting EIB matched funding. Discussions on this subject are on-going and no firm agreement is yet in place. It is believed that some LEP’s were considering having a Biotech fund as part of the deployment of their ERDF FEI allocation.

Other Institutional/High Net Worth Investors

As noted in Section 4, the historic performance levels of life science funds is considerably below the levels achieved by investment funds focussing on quoted securities. Whilst Cheshire East and Manchester Science Parks both have other non-financial objectives to help justify their investment case, other institutions and high net worth individuals will be usually be looking solely at the financial return. As these historically have not been great (and past performance is not necessarily a reliable guide to future performance) a way would need to be found to provide other non-financial benefits to an incoming investor (e.g. sponsorship, building naming rights, “first refusal” rights on exit etc). These would need to be evaluated carefully, in order to ensure that they would not impact adversely upon the returns available to Cheshire East and Manchester Science Parks.

The importance of enlarging the Fund to an economically optimal size is clearly demonstrated by the illustrative models discussed in Section 7. Additionally however, a large fund should be able to deliver larger social-economic benefits for the region, since it is considered important that the lack of supply of suitable risk finance should not provide an impediment to the full utilisation of the Alderley Park site’s facilities. Accordingly, we strongly recommend that serious consideration be given to establishing how potential co-investors could be compensated for the comparatively low returns the Fund (based on the historical record) might achieve.

If the proposed Incubation Fund and Later Stage Fund are adopted, as set out in Section 6, then the time pressure caused by the need for AstraZeneca to provide the funding quickly is removed. This then allows more time to elapse during which to attract other funding to the Later Stage Fund, as this could be undertaken contemporaneously with the OJEU process to recruit the fund manager.

Appendix 1 – Financial Illustrations

Illustration A - £10m Fund

Illustration B - £15m Fund

Illustration C - £20m Fund

FiveLines

A - Fund balance sheet, cash flow and profit and loss (£10M)

Alderley Investment Fund

Year (dated)	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	Total
BALANCE SHEET																
Fixed Assets																
Investments (net of provisions)	544,796	1,598,067	2,723,978	3,432,212	5,338,996	4,325,676	4,216,717	3,993,351	3,650,130	3,094,439	2,459,752	1,735,174	1,078,695	523,004	147,095	
Current Assets																
Cash at Bank	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Current Liabilities	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Net Current Assets	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Net Assets	544,796	1,598,067	2,723,978	3,432,212	5,338,996	4,325,676	4,216,717	3,993,351	3,650,130	3,094,439	2,459,752	1,735,174	1,078,695	523,004	147,095	
Profit and loss account	(400,000)	(1,017,918)	(1,926,394)	(2,980,149)	(3,924,944)	(4,959,157)	(4,858,696)	(4,521,781)	(3,935,718)	(2,909,432)	(1,707,701)	(306,262)	977,031	2,058,749	2,780,903	
Holding fund loan account - mgt charge	400,000	800,000	1,200,000	1,600,000	2,000,000	2,118,956	2,236,414	2,346,231	2,446,610	2,531,707	2,599,350	2,647,067	2,676,731	2,706,396	2,736,060	
Holding fund investment	544,796	1,815,985	3,450,372	4,812,361	7,263,940	7,165,877	6,839,000	6,168,901	5,139,238	3,472,164	1,568,103	(605,631)	(2,575,067)	(4,242,141)	(5,369,868)	
Total	544,796	1,598,067	2,723,978	3,432,212	5,338,996	4,325,676	4,216,717	3,993,351	3,650,130	3,094,439	2,459,752	1,735,174	1,078,695	523,004	147,095	

	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	
CASH FLOW																
Capital receipts from Investment Partners	544,796	1,271,190	1,634,387	1,361,989	2,451,580	-	-	-	-	-	-	-	-	-	-	7,263,940
Project loan account	400,000	400,000	400,000	400,000	400,000	118,956	117,458	109,817	100,379	85,097	67,643	47,717	29,664	29,664	29,664	2,736,060
Dividend income	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Realisation proceeds	-	-	-	-	-	98,063	326,877	670,099	1,029,664	1,667,074	1,904,060	2,173,734	1,969,436	1,667,074	1,127,727	12,633,808
Loan repayments (net of write offs) - capital	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Loan repayments (net of write offs) - interest	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total inflow	944,796	1,671,190	2,034,387	1,761,989	2,851,580	217,019	444,335	779,916	1,130,042	1,752,171	1,971,704	2,221,451	1,999,100	1,696,738	1,157,391	22,633,808
Management charge (priority profit share)	400,000	400,000	400,000	400,000	400,000	118,956	117,458	109,817	100,379	85,097	67,643	47,717	29,664	29,664	29,664	2,736,060
Investments	544,796	1,271,190	1,634,387	1,361,989	2,451,580	-	-	-	-	-	-	-	-	-	-	7,263,940
Distributions to investors	-	-	-	-	-	98,063	326,877	670,099	1,029,664	1,667,074	1,904,060	2,173,734	1,969,436	1,667,074	1,127,727	12,633,808
Total outflow	944,796	1,671,190	2,034,387	1,761,989	2,851,580	217,019	444,335	779,916	1,130,042	1,752,171	1,971,704	2,221,451	1,999,100	1,696,738	1,157,391	22,633,808
Opening balance	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Net flow	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Closing balance	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	
PROFIT & LOSS ACCOUNT																
Income																
Profit on realisations (Before write-offs)	-	-	-	-	-	65,375	217,918	446,732	686,442	1,111,383	1,269,374	1,449,156	1,312,957	1,111,383	751,818	8,422,539
Dividend income	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Interest received on loans	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total Income	-	-	-	-	-	65,375	217,918	446,732	686,442	1,111,383	1,269,374	1,449,156	1,312,957	1,111,383	751,818	8,422,539
Expenditure																
Provisions/failures	-	217,918	508,476	653,755	544,796	980,632	-	-	-	-	-	-	-	-	-	2,905,576
Management charge	400,000	400,000	400,000	400,000	400,000	118,956	117,458	109,817	100,379	85,097	67,643	47,717	29,664	29,664	29,664	2,736,060
Total Expenditure	400,000	617,918	908,476	1,053,755	944,796	1,099,588	117,458	109,817	100,379	85,097	67,643	47,717	29,664	29,664	29,664	5,641,636
Profit/ (Loss)	(400,000)	(617,918)	(908,476)	(1,053,755)	(944,796)	(1,034,213)	100,460	336,915	586,064	1,026,286	1,201,730	1,401,439	1,283,293	1,081,719	722,154	2,780,903
Net income pre carry	(944,796)	(1,671,190)	(2,034,387)	(1,761,989)	(2,851,580)	(20,893)	209,419	560,281	929,285	1,581,977	1,836,417	2,126,017	1,939,772	1,637,410	1,098,063	2,633,808
Hurdle net income	(944,796)	(1,671,190)	(2,034,387)	(1,761,989)	(2,851,580)	(20,893)	209,419	560,281	929,285	1,581,977	1,836,417	2,126,017	1,939,772	1,637,410	1,098,063	2,633,808
Carry																-
Net income post carry	(944,796)	(1,671,190)	(2,034,387)	(1,761,989)	(2,851,580)	(20,893)	209,419	560,281	929,285	1,581,977	1,836,417	2,126,017	1,939,772	1,637,410	1,098,063	2,633,808

Calculate Carry

IRR		3.0%

B - Fund balance sheet, cash flow and profit and loss (£15m)

Alderley Investment Fund

Year (dated)	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	Total
BALANCE SHEET																
Fixed Assets																
Investments (net of provisions)	870,190	2,552,556	4,350,948	5,482,195	8,527,858	6,909,306	6,735,268	6,378,490	5,830,271	4,942,677	3,928,906	2,771,554	1,722,975	835,382	234,951	
Current Assets																
Cash at Bank	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Current Liabilities	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Net Current Assets	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Net Assets	870,190	2,552,556	4,350,948	5,482,195	8,527,858	6,909,306	6,735,268	6,378,490	5,830,271	4,942,677	3,928,906	2,771,554	1,722,975	835,382	234,951	
Profit and loss account	(487,500)	(1,323,076)	(2,622,753)	(4,154,480)	(5,512,170)	(7,129,548)	(6,933,016)	(6,362,976)	(5,397,718)	(3,733,742)	(1,794,600)	457,744	2,516,134	4,252,554	5,414,649	
Holding fund loan account - mgt charge	487,500	975,000	1,462,500	1,950,000	2,437,500	2,592,959	2,744,503	2,888,019	3,019,200	3,130,410	3,218,811	3,281,171	3,319,938	3,358,705	3,397,471	
Holding fund investment	870,190	2,900,632	5,511,201	7,686,675	11,602,529	11,445,894	10,923,781	9,853,447	8,208,789	5,546,009	2,504,696	(967,361)	(4,113,096)	(6,775,877)	(8,577,169)	
Total	870,190	2,552,556	4,350,948	5,482,195	8,527,858	6,909,306	6,735,268	6,378,490	5,830,271	4,942,677	3,928,906	2,771,554	1,722,975	835,382	234,951	

	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	
CASH FLOW																
Capital receipts from Investment Partners	870,190	2,030,442	2,610,569	2,175,474	3,915,853	-	-	-	-	-	-	-	-	-	-	11,602,529
Project loan account	487,500	487,500	487,500	487,500	487,500	155,459	151,544	143,516	131,181	111,210	88,400	62,360	38,767	38,767	38,767	3,397,471
Dividend income	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Realisation proceeds	-	-	-	-	-	156,634	522,114	1,070,333	1,644,658	2,662,780	3,041,313	3,472,057	3,145,736	2,662,780	1,801,293	20,179,698
Loan repayments (net of write offs) - capital	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Loan repayments (net of write offs) - interest	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total inflow	1,357,690	2,517,942	3,098,069	2,662,974	4,403,353	312,094	673,657	1,213,849	1,775,840	2,773,991	3,129,713	3,534,417	3,184,502	2,701,547	1,840,060	35,179,698
Management charge (priority profit share)	487,500	487,500	487,500	487,500	487,500	155,459	151,544	143,516	131,181	111,210	88,400	62,360	38,767	38,767	38,767	3,397,471
Investments	870,190	2,030,442	2,610,569	2,175,474	3,915,853	-	-	-	-	-	-	-	-	-	-	11,602,529
Distributions to investors	-	-	-	-	-	156,634	522,114	1,070,333	1,644,658	2,662,780	3,041,313	3,472,057	3,145,736	2,662,780	1,801,293	20,179,698
Total outflow	1,357,690	2,517,942	3,098,069	2,662,974	4,403,353	312,094	673,657	1,213,849	1,775,840	2,773,991	3,129,713	3,534,417	3,184,502	2,701,547	1,840,060	35,179,698
Opening balance	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Net flow	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Closing balance	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	
PROFIT & LOSS ACCOUNT																
Income																
Profit on realisations (Before write-offs)	-	-	-	-	-	104,423	348,076	713,556	1,096,439	1,775,187	2,027,542	2,314,704	2,097,157	1,775,187	1,200,862	13,453,132
Dividend income	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Interest received on loans	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total Income	-	-	-	-	-	104,423	348,076	713,556	1,096,439	1,775,187	2,027,542	2,314,704	2,097,157	1,775,187	1,200,862	13,453,132
Expenditure																
Provisions/failures	-	348,076	812,177	1,044,228	870,190	1,566,341	-	-	-	-	-	-	-	-	-	4,641,011
Management charge	487,500	487,500	487,500	487,500	487,500	155,459	151,544	143,516	131,181	111,210	88,400	62,360	38,767	38,767	38,767	3,397,471
Total Expenditure	487,500	835,576	1,299,677	1,531,728	1,357,690	1,721,801	151,544	143,516	131,181	111,210	88,400	62,360	38,767	38,767	38,767	8,038,483
Profit/ (Loss)	(487,500)	(835,576)	(1,299,677)	(1,531,728)	(1,357,690)	(1,617,378)	196,532	570,039	965,258	1,663,977	1,939,141	2,252,344	2,058,390	1,736,420	1,162,095	5,414,649
Net income pre carry	(1,357,690)	(2,517,942)	(3,098,069)	(2,662,974)	(4,403,353)	1,175	370,570	926,817	1,513,477	2,551,570	2,952,912	3,409,697	3,106,969	2,624,013	1,762,526	5,179,698
Hurdle net income	(1,357,690)	(2,517,942)	(3,098,069)	(2,662,974)	(4,403,353)	1,175	370,570	926,817	1,513,477	2,551,570	2,952,912	3,409,697	3,106,969	2,624,013	1,762,526	5,179,698
Carry																-
Net income post carry	(1,357,690)	(2,517,942)	(3,098,069)	(2,662,974)	(4,403,353)	1,175	370,570	926,817	1,513,477	2,551,570	2,952,912	3,409,697	3,106,969	2,624,013	1,762,526	5,179,698

Calculate Carry

IRR 3.9%

C - Fund balance sheet, cash flow and profit and loss (£20m)

Alderley Investment Fund

Year (dated)	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	Total
BALANCE SHEET																
Fixed Assets																
Investments (net of provisions)	1,233,145	3,617,225	6,165,724	7,768,812	12,084,819	9,791,170	9,544,541	9,038,952	8,262,070	7,004,263	5,567,649	3,927,566	2,441,627	1,183,819	332,949	
Current Assets																
Cash at Bank	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Current Liabilities	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Net Current Assets	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Net Assets	1,233,145	3,617,225	6,165,724	7,768,812	12,084,819	9,791,170	9,544,541	9,038,952	8,262,070	7,004,263	5,567,649	3,927,566	2,441,627	1,183,819	332,949	
Profit and loss account	(500,000)	(1,493,258)	(3,144,193)	(5,123,967)	(6,857,112)	(9,100,140)	(8,773,912)	(7,920,915)	(6,511,739)	(4,118,698)	(1,342,904)	1,868,529	4,797,679	7,270,566	8,929,577	
Holding fund loan account - mgt charge	500,000	1,000,000	1,500,000	2,000,000	2,500,000	2,671,345	2,838,375	2,996,557	3,141,143	3,263,717	3,361,151	3,429,884	3,472,612	3,515,341	3,558,069	
Holding fund investment	1,233,145	4,110,483	7,809,917	10,892,779	16,441,931	16,219,965	15,480,078	13,963,310	11,632,666	7,859,243	3,549,402	(1,370,846)	(5,828,665)	(9,602,088)	(12,154,697)	
Total	1,233,145	3,617,225	6,165,724	7,768,812	12,084,819	9,791,170	9,544,541	9,038,952	8,262,070	7,004,263	5,567,649	3,927,566	2,441,627	1,183,819	332,949	

	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	
CASH FLOW																
Capital receipts from Investment Partners	1,233,145	2,877,338	3,699,434	3,082,862	5,549,152	-	-	-	-	-	-	-	-	-	-	16,441,931
Project loan account	500,000	500,000	500,000	500,000	500,000	171,345	167,029	158,182	144,586	122,575	97,434	68,732	42,728	42,728	42,728	3,558,069
Dividend income	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Realisation proceeds	-	-	-	-	-	221,966	739,887	1,516,768	2,330,644	3,773,423	4,309,841	4,920,248	4,457,819	3,773,423	2,552,610	28,596,628
Loan repayments (net of write offs) - capital	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Loan repayments (net of write offs) - interest	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total inflow	1,733,145	3,377,338	4,199,434	3,582,862	6,049,152	393,312	906,916	1,674,950	2,475,230	3,895,998	4,407,275	4,988,980	4,500,547	3,816,152	2,595,338	48,596,628
Management charge (priority profit share)	500,000	500,000	500,000	500,000	500,000	171,345	167,029	158,182	144,586	122,575	97,434	68,732	42,728	42,728	42,728	3,558,069
Investments	1,233,145	2,877,338	3,699,434	3,082,862	5,549,152	-	-	-	-	-	-	-	-	-	-	16,441,931
Distributions to investors	-	-	-	-	-	221,966	739,887	1,516,768	2,330,644	3,773,423	4,309,841	4,920,248	4,457,819	3,773,423	2,552,610	28,596,628
Total outflow	1,733,145	3,377,338	4,199,434	3,582,862	6,049,152	393,312	906,916	1,674,950	2,475,230	3,895,998	4,407,275	4,988,980	4,500,547	3,816,152	2,595,338	48,596,628
Opening balance	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Net flow	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Closing balance	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	
PROFIT & LOSS ACCOUNT																
Income																
Profit on realisations (Before write-offs)	-	-	-	-	-	147,977	493,258	1,011,179	1,553,762	2,515,615	2,873,227	3,280,165	2,971,879	2,515,615	1,701,740	19,064,419
Dividend income	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Interest received on loans	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total Income	-	-	-	-	-	147,977	493,258	1,011,179	1,553,762	2,515,615	2,873,227	3,280,165	2,971,879	2,515,615	1,701,740	19,064,419
Expenditure																
Provisions/failures	-	493,258	1,150,935	1,479,774	1,233,145	2,219,661	-	-	-	-	-	-	-	-	-	6,576,772
Management charge	500,000	500,000	500,000	500,000	500,000	171,345	167,029	158,182	144,586	122,575	97,434	68,732	42,728	42,728	42,728	3,558,069
Total Expenditure	500,000	993,258	1,650,935	1,979,774	1,733,145	2,391,006	167,029	158,182	144,586	122,575	97,434	68,732	42,728	42,728	42,728	10,134,841
Profit/ (Loss)	(500,000)	(993,258)	(1,650,935)	(1,979,774)	(1,733,145)	(2,243,029)	326,228	852,997	1,409,176	2,393,041	2,775,794	3,211,433	2,929,151	2,472,887	1,659,011	8,929,577
Net income pre carry	(1,733,145)	(3,377,338)	(4,199,434)	(3,582,862)	(6,049,152)	50,621	572,857	1,358,586	2,186,057	3,650,849	4,212,407	4,851,515	4,415,090	3,730,695	2,509,881	8,596,628
Hurdle net income	(1,733,145)	(3,377,338)	(4,199,434)	(3,582,862)	(6,049,152)	50,621	572,857	1,358,586	2,186,057	3,650,849	4,212,407	4,851,515	4,415,090	3,730,695	2,509,881	8,596,628
Carry																-
Net income post carry	(1,733,145)	(3,377,338)	(4,199,434)	(3,582,862)	(6,049,152)	50,621	572,857	1,358,586	2,186,057	3,650,849	4,212,407	4,851,515	4,415,090	3,730,695	2,509,881	8,596,628

Calculate Carry

IRR 4.7%