

The background of the cover features a dynamic pattern of blue light trails that curve and flow across the page. Overlaid on this are several semi-transparent white squares of various sizes, some of which are arranged in a grid-like pattern. In the top right corner, there is a black rectangular box containing the 'regeneris' logo in white and orange text, with a thin green line underneath it. Below the logo, the words 'ECONOMICS • RESEARCH • ANALYSIS' are written in a smaller, white, sans-serif font.

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Review of the Wales Life
Science Investment Fund

A Final Report by
Regeneris Consulting

Finance Wales

Review of the Wales Life Science Investment Fund

7 June 2016

Regeneris Consulting Ltd
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Executive Summary

Introduction

- i. The Wales Life Sciences Fund (WLSIF) was set up by the Welsh Government in February 2013 with the intention of investing in the life sciences sector in Wales. It has a particular focus on medical, pharmaceutical and healthcare companies currently based in Wales, as well as companies from across the UK, Europe and the rest of the world where these investments will bring meaningful sector development and economic benefits to Wales.
- ii. WLSIF was intended to be £100m fund with £50m from the Welsh Government and a further £50m raised from the private sector by the Fund Manager upon appointment. Following a procurement exercise run by Finance Wales as the Holding Fund Manager, Arthurian Life Sciences (ALS) were appointed as the Fund Manager.
- iii. As part of the Contract for Services with ALS it is stipulated that an independent review would be carried out on or around the third anniversary of the signing of the contract. Finance Wales appointed Regeneris Consulting, an independent economic consultancy, in January 2016 to undertake the review. The focus of the exercise was to review:
 - the delivery of the Fund management contract against the key objectives of the Fund
 - the investment strategy to date and fund performance up to the end of 2015
 - the systems and procedures which have been put in place by ALS to enable the implementation and management of the Fund
 - the portfolio information including consideration of relevant documentation and third party evidence
 - the progress in raising private sector investment at fund level and the likelihood of future fund raising at fund level.
- iv. Section 2 (paragraphs 2.6) sets out the approach to the review.

Delivery against the Key Objectives of the Fund

- v. The rationale for the establishment of the Fund is clearly and firmly rooted in the overall strategy for the life sciences sector in Wales which was developed through the Life Sciences Sector Panel. The proposed Fund was intended to be an important and ambitious part of an integrated suite of activities, including the establishment of a Life Sciences Hub to provide a physical focus for the sector in Wales, international promotion and more general profile raising, and the development of a vibrant Life Sciences ecosystem. There has already been substantial public sector backed investment into a range of projects to develop the research and innovation base and related supply chains within Wales over the last decade, and this proposal was seen as supporting this.
- vi. The overall progress that WLSIF has made to date against the specific objectives for the Fund is summarised briefly below (although as this is not an evaluation, there is a limit on how far we can comment critically on this progress and it is also still relatively early to judge the sector impacts), whilst sections 5 and 8 provide a fuller description of investment and economic development objectives respectively:

1) *Increase the ability of Life Sciences SMEs in Wales to access equity finance*

- The initial closing of the Fund provided £50m from Welsh Government for use in making equity and quasi equity investments, with the expectation that around £40m would be invested with Life Science businesses. By the end of March 2016, £48.8m had actually been invested.
- In practice this investment has been available to both indigenous SMEs in Wales and also inward investing businesses and this has been reflected in the investment strategy which has been pursued by ALS with targeting of both categories. A third of investee businesses were already located in Wales.
- Although there is the intention of securing an extra £50m investment from the private sector to match Welsh Government's contribution, it has not been possible to achieve this to date.

2) *Attract Life Sciences businesses into Wales*

- The Fund is intended to provide finance to both indigenous businesses in the sector in Wales, as well as companies from outside of Wales providing they are relocating all or part of their operation to Wales.
- Whilst indigenous and inward investing businesses provide different benefits and opportunities, the flexibility for the Fund to target both is in principle an advantage providing the Fund Managers have the necessary market profile to effectively target both and appropriate measures are put in place to maximise the economic development opportunities the different types of investment can bring. The national and international focus of the ALS team's networks has been important in enabling access to these potential inward investors in other parts of the UK and overseas.
- Two thirds (67%) of the investments have been in companies that did not have a presence in Wales at the point of investment, spread across businesses originating in other parts of the UK, other European countries and also the US. These inward investors have included a mix of early stage bio-tech and medical technologies, and (in the most part) established clinical research and other related service providers.

3) *Increase the rate of growth and employment in the life sciences sector in Wales*

- It is still early days to judge the economic contribution which the WLSIF portfolio companies may make to growth of the life sciences sector in Wales. Current estimates produced by PWC for the Wales Life Sciences Hub suggest that the number of jobs created or safeguarded up to the end of March 2016 by investee companies was around 150 and the annual expenditure associated with WLSIF's investment in these companies was around £27m. This is predicted to increase to around 240 jobs amongst these companies by 2020. It is important to note that the assumptions which underpin these figures have not been provided to us and so the projected impacts have not been verified.
- Unsurprisingly this is fairly modest growth in the context of the scale of the life sciences sector in Wales, which employs around 9,600 people (2014). However, it needs to be borne in mind that the companies within the portfolio will be supported by the fund management team in order to deliver long term business and capital value growth (although some may of course fail). In addition, the investments will contribute to the growth of particular parts of the sector, the development of supply chains and the raising of the sector's national and international reputation which will bring additional benefits for Wales.

4) Increase commercialisation of Life Sciences research, development and innovation

- Many but not all of the portfolio companies will have the potential to create and commercialise research and development. Whilst it is still too early to judge the success of WLSIF in terms of the development of research partnerships and the commercialisation of Intellectual Property (IP), it will be important that ALS assess this on an appropriate and robust basis. It is currently reporting some IP and partnerships which existed prior to their investment and which does not appear to reside in Wales.
- vii. The review has highlighted a number of shortcomings in the performance framework for the fund. Whilst the measurement of historic investment and financial performance is reasonably straight forward, it is more challenging to set an appropriate, robust and measurable economic development performance framework for investment funds such as WLSIF. After all the Fund is making long term investments, many of which are currently at an early stage of development and subject to significant risk, and which will deliver a mix of tangible and less tangible economic development benefits.
- viii. The approach to establishing a framework for the setting of economic development targets at the outset of the WLSIF was not as well evidenced as it should have been. Expectation about the scale of employment impact that the fund could create were raised by the appointed fund manager during the procurement process to what was, in our opinion, an unrealistic level. ALS indicated that they expected to create or safeguard twice as many jobs as required in the ITT and this was reflected in the target of 1,500 jobs which appears in the Limited Partnership Agreement (February, 2013). This target was revised down to 300 jobs created or safeguarded in the variation to the Limited Partnership Agreement (March 2014).
- ix. Performance against the KPI targets only presents a partial picture of the impact of WLSIF on the life sciences sector in Wales. The wider benefits of the Fund are difficult to determine but the potential impact on the perceptions of the sector in Wales, awareness raising amongst the investor community and its role in supporting the success of other parts of the Wales Life Sciences Strategy should not be underestimated (and it will take time to materialise).
- x. Beyond these factors, investee companies' commitments to Wales will drive how well the Fund performs against its targets and, perhaps more importantly, the longer term sustainability of the Fund's economic development benefits. Welsh Government are active in providing other forms of support to ensure that inward investing companies become fully embedded into the sector. It is too early to judge how successful these efforts will be, but there appears to be more scope for some companies to become fully embedded than others.
- xi. The full impact of the WLSIF will take time to materialise and it will be a number of years until the final net cost of these impacts to Welsh Government will become clear. If the Fund performs well commercially it is feasible that Welsh Government could recover much or possibly all their full investment in the Fund (the target net IRR set by Welsh Government for the Fund was 10%). This would make WLSIF a very low cost intervention for Welsh Government and, if there are sufficient returns, could leave further capital for reinvestment into the sector. However, the likelihood of this is too early to judge at this stage.

Review of Performance against the Investment Strategy

- xii. The LPA set out the Investment and Operating Guidelines (IOGs) for WLSIF – these are set out in Section 4 (paragraph 4.20). In addition to the IOGs, ALS set out an investment strategy based on a

risk matrix for the £40m investment pot. This included high, medium and low risk categories which covered biomed, medical technologies, and clinical research and support services respectively.

- xiii. A number of IOGs were updated in March 2014 in order to either provide more flexibility to the fund managers or better define existing IOGs. One of the changes was the removal of the requirement for investee companies to be non-listed companies, in recognition that AIMs listed Life Science companies could be suitable for equity investment through the Fund. Whilst this provides the Fund Manager with greater scope for investment, it means that these companies are far less likely to be affected by a finance market failure and hence the rationale for a public backed fund investing in them needs to be firmly rooted in some other form of market failure or securing inward investment.
- xiv. Having been announced at BioWales in February 2012, the WLSIF was behind schedule in being set-up and formally launched in February 2013, with the first investment occurring in April 2013. Various factors contributed to this delay including delays in the completion of the legal documentation and the need for ALS, a new investment company, to secure FCA approval. Despite this delay, ALS was nevertheless able to commence the promotion of the fund through an interim arrangement put in place by Finance Wales.
- xv. WLSIF is now at the point where £48.8m has been invested with companies in the portfolio. Eleven investments have been made in nine companies, securing over £250m co-investment at the deal level. The nature and the pattern of investment has raised a number of issues:
- A number of ALS's investments have been outside of the IOGs, with Welsh Government's approval having to be sought in each instance. This included the original and follow-on investment in ReNeuron, the purchase of Orion by Simbec and the investment in Proton Partners (collectively accounting for £28m of the £48.8m invested by WLSIF).
 - Whilst the rate of investment was initially steady given that ALS was establishing its operation in Wales, there was a notable acceleration in the Summer of 2015 when the Fund made three investments in quick succession (ReNeuron, CeQur and Apitope). The Fund was therefore fully invested at least 12-18 months ahead of the investment schedule set out in the LPA.
 - The final two investments (CeQur and Apitope) were made possible by a £3m term loan from the Welsh Government via Finance Wales to ALS¹, repayable in August 2016.
- xvi. Whilst the last three investments may well have been very good investments in their own right and there were in ALS's view additional reputational reasons for proceeding, this nevertheless involves a number of significant risks (in terms of meeting its short term operational costs and the ability to contribute towards any unexpected requirement for follow-on investment). In light of this, Welsh Government was closely involved in approving the investments due to them either being outside of the IOGs (i.e. the ReNeuron follow-on investment) or exceeding the available resources of the WLSIF.
- xvii. The £48.8m invested by WLSIF so far, together with the drawdown of fund management fees and other expenses (summarised in Table 4.1), give total expenditure of £52.5m. This leaves the Fund in a position where it faces a number of short to medium term cash flow challenges. These include the requirement to pay the fund management fees which are due during 2016/17, the need to service the loan from Welsh Government in August 2016 and a potential requirement for follow-on investment. In the absence of private sector fund investment being secured and the potential

¹ That is, to ALS SPV, which is the general partner, and ALS Carried Interest

for realisations from the portfolio being limited in the short term, ALS has been in negotiation with Welsh Government about an additional investment.

- xviii. In terms of the fee structure for the fund management services, this is common for the VC sector and whilst the management fees are at the upper end of the typical industry fee range (especially for the realisation period), this arguably reflects the experience of the team appointed and is of course the outcome of the commercial negotiation. The payment of additional set-up costs to ALS is in our experience unusual in the public sector and would normally be absorbed as a part of the percentage management fee.

Analysis of the Portfolio

- xix. Whilst ALS developed its original investment strategy for the Fund on the basis of a £100m fund and £80m investment pot, the inability to secure the additional private sector investors in the short to medium term resulted in ALS adjusting the investment strategy to reflect the £50m fund size and a £40m investment pot.
- xx. Section Five provides a fuller description of the portfolio. While the Fund has made far less investment with businesses in Wales (and especially early stage businesses), the relocation of UK and international firms represents a significant inward investment opportunity to help promote and develop the Welsh Life Sciences Sector. Also the investments by WLSIF should be seen alongside the early stage investments which other public sector backed funds in Wales (although there is no apparent coordination between them), in particular the JEREMIE fund which has focused more on start-up and early stage Life Science businesses in Wales.
- xxi. Compared to ALS's investment strategy the risk profile is more focussed in the higher risk (e.g. biotechnology) and lower (e.g. clinical research and other support services) ends of the risk spectrum, with far less investment in medium risk areas (e.g. medical devices). Whilst the portfolio appears to be less risky than we might expect for a public sector backed fund addressing failure in finance markets, this is partly a consequence of the Fund Manager operating in a very commercial manner and investing in a number of companies which do not appear to be adversely affected by failures in the market for business finance. Whilst this applies to many of the companies which are inward investors, the benefit to Wales is associated with the additional economic activity and sector development benefits they secure.
- xxii. The significant concentration of investment in just three companies (almost 60% of total investment has been made in Simbec-Orion, ReNeuron and Proton Partners) is unusual for a fund of this nature (and especially a public sector backed fund) and a significant risk in its own right. However, two of these investments are in companies which are operating in relatively low risk activities.
- xxiii. The IOGs were revised following discussion between ALS, the Welsh Government and Finance Wales. In spite of the revisions, a number of investments that the Fund has made are outside of the updated IOGs, with the agreement of the Welsh Government being required to enable investments outside of the revised IOGs to be made. The IOGs are a core part of the governance of the Fund which provides a clear investment framework to the Fund Manager and assurance to the investors. Whilst the flexibility which has been shown on the part of Welsh Government may have allowed ALS to make what may prove to be good investments, the resulting concentration of investment is a concern which we have already noted.
- xxiv. As set out in paragraph 5.23, there is the possibility that the initial Simbec investment was not compliant with State Aid regulations due to the nature of the deal providing convertible loan notes

(in excess of the de minimis limit) into a long established revenue generating business. It is however important to note that the State Aid position in respect of convertible loan note investments is not entirely clear. ALS are responsible for ensuring the State Aid compliance of their investments and they view the investment into Simbec as a loan and therefore fully compliant. Copies of investment agreements have not been seen by the reviewers and so this cannot be verified.

- xxv. ALS take an active approach to portfolio management, appointing at least one non-executive director to each company they have invested in and working closely with the management team. They have secured strategy and operational changes in a number of their portfolio companies, in order to drive longer term business value. Even where ALS is a minority investor in a deal, they often have significant influence with the co-investors where they have brought them into the deal, resulting in more power to influence decisions and on-going management.
- xxvi. Our review of documentation suggests the approach to portfolio valuation is appropriate and consistent with the requirements set out in the LPA. ALS's latest available estimate of the gross IRR was 44% at the end of June, significantly above the original targets (net IRR of 10% over the lifetime of the Fund). However, the estimate is heavily influenced by the timing of the valuation given the share values of the largest AIMs listed companies (ReNeuron and Verona) within the portfolio.
- xxvii. We estimate that the approximate overall investment multiple of the portfolio currently stands at around 1.09 and the gross IRR is 11%². This suggests that the Fund is broadly on target against the lifetime IRR target for the fund of 10%. To some extent the downward movement since June, which coincides with a more general drop in value in the life science sector, demonstrates how values can fluctuate in the short term. It would be unfair to conclude that the most recent valuations demonstrate underachievement against the original target as the WLSIF is a longer term investment vehicle. At this stage it is too early in the life of the fund to draw any firm conclusions on portfolio performance.

Systems and Procedures

- xxviii. The review of systems and procedures at ALS has found that the investment process implemented has generally been sound and in keeping with the discretionary nature of the Fund. The process is fluid but mostly in keeping with a small fund management operation.
- xxix. There have been a number of instances where proposed investments have been outside the IOGs and Finance Wales has informed and provided advice to Welsh Government (in its capacity as the sole investor) about what it considers to be the most appropriate course of action. However, the process for securing the approval to invest outside of the IOGs has not always been conducted through Finance Wales as the first point of contact, with ALS often engaging Welsh Government officers and the Minister directly and in parallel to discussions with Finance Wales.
- xxx. Based on the information we have seen, it is difficult to reach firm conclusions about how effectively some aspects of the investment process have worked. There is a clear commitment amongst the ALS team to securing deals which offer some clear benefit to Wales but the review suggests that the scale of the benefits on offer and the company's level of commitment to realising them could have featured more prominently in investment decisions (and potentially also in the prioritisation of prospects). The review has not found any evidence within the documentation examined that the scale of benefits offered by each investment was appraised critically in the

² The IRR estimate is only based on the discounted capital cost of the investments against their latest valuations (using the share price at May 2016 for the AIMs listed companies within the portfolio, ALS's valuations at June 2015 for non-listed companies and at costs for post June 2015 investments).

context of the investment size. Similarly, there is no evidence that the scale of the contribution of individual investments to the Fund's KPI targets is recorded in the documents relating to the investment decision (but this may have been considered by the ALS team).

- xxxi. ALS's reporting process to Finance Wales has been strengthened substantially and is now considered adequate by Regeneris bearing in mind the balance which needs to be struck between this being a public sector backed fund and its discretionary nature. Both Finance Wales' and ALS's ability to manage the pipeline of investments and the Fund's finances could have been improved with the inclusion of projected timing of requirements for follow on investment for all of the invested companies, although we appreciate that this can be difficult to predict.

Raising Private Sector Investment at Fund level

- xxxii. ALS was initially confident that they would be able to secure fund level investment and they report being active in promoting the opportunity to investors prior to the WAO investigation being launched (September 2013). ALS has not developed a formal written strategy and action plan for attracting fund level investment and hence we were not able to examine this. However, our discussions with ALS has confirmed that the overall approach and targets were discussed by the ALS team and progress regularly reviewed by them.
- xxxiii. As ALS does not use a formal CRM system which identifies and tracks prospective investors, in order to test whether ALS did undertake best endeavours to secure fund investors up to September 2013, we have reviewed their meetings with prospective investors. Whilst we have seen evidence of diary entries for a wide range of meetings with VCs and institutional investors prior to September 2013 (and the launch of the WAO investigation into WLSIF), we have not seen any other evidence which might be expected to form part of an auditable trail for these meetings (such as email exchanges). ALS has explained to us that the main reason for this trail not being available are related to the nature of the initial meetings, which have tended to be initial exploratory discussions and often more informal.
- xxxiv. With the WAO report now published and confirmation that ALS dealt with potential or actual conflicts of interest appropriately, the fund managers are now in the position to proceed fully with fund raising. It is therefore starting to warm up suitable contacts and meeting potential investors. Whilst we have not seen a written plan setting out ALS's proposed approach to targeting potential investors³, they have outlined a number of target categories of investor.
- xxxv. Whilst we have not undertaken a detailed review of the current investor prospects as part of this assessment, on the basis of our consultations with ALS and our team's experience, we believe that raising this additional investment is very challenging but not entirely unachievable. The fact that ALS has now built up the portfolio is certainly beneficial in making a case to investors.
- xxxvi. In conclusion we have seen evidence that ALS did endeavour to seek investment of £50m at the fund level. However the lack of any formal system to identify, allocate and monitor potential investment opportunities is a concern and would have been necessary to demonstrate best endeavours. On that basis we have not seen the evidence that is necessary to support the case that best endeavours were undertaken to seek the additional £50m investment at fund level.
- xxxvii. There is a need for ALS to strengthen their approach to formerly documenting their method and priorities for securing fund level investment, as well as monitoring progress over time. It is very

³ ALS has provided Regeneris with a long list of potential investors although there is no analysis of the current relationship with or prioritisation of the organisation.

important that ALS provides Finance Wales and Welsh Government with confidence that this is being progressed in a structured manner and the progress which is being made.

Recommendations

- 1.2 Whilst there have clearly been a variety of challenges for the Fund and its various partners, it has made a lot of progress in building up a portfolio with the potential to secure valuable commercial and economic development returns (notwithstanding concerns about the scale of some of these benefits and the potential loss of credibility with the sector and investors due to the current financial position of the Fund). It has also raised the profile of Wales as an investment location in which investors are active. It is important that this momentum can be maintained, but it has to be on a basis which is appropriate for the Welsh Government and Wales. The ways of doing this are reflected in the recommendations below.
- 1) **ALS should share short term financial projections for the Fund with FW over the next 12 months.** Given the current financial position of the WLSIF and the short term financial challenges it faces, it is important that ALS provides Finance Wales and the Welsh Government with quarterly financial projections for the next twelve months (we would suggest both income and expenditure and cashflow projections based upon detailed evidence and best assumptions of the current situation). This is necessary if Finance Wales and the Welsh Government are to have the confidence they require to make decisions about additional financial support for the Fund.
 - 2) **To help meet its short term cashflow requirements, the Fund Manager should be alert to potential realisations although these need to be pursued in an appropriate manner.** In the absence of ALS securing the additional £50m investment from the private sector or further Welsh Government funding, the ability of the fund to meet its fund management fee commitments, its loan repayments and the likely need for short term follow-on investment will be dependent on the realisations which could be secured. We believe this could be counterproductive in terms of driving realisations from the portfolio in a sub-optimum manner, the risk of loss of larger returns for the Welsh Government, and the damage to the reputation of the Fund. Whilst we do not believe this should be actively pursued, ALS should nevertheless be alert to reacting to potential sales when the opportunity arises from events stimulated elsewhere.
 - 3) **The Welsh Government should consider making a limited amount of additional capital available.** This should be determined by an assessment of the expected requirement for follow-on investment over a maximum of an 18 month period (coinciding with the end of the investment period). Whilst it would not be unreasonable to account for some expected realisations in this period (and beyond) contributing to the follow-on requirement, any quantification of this particular source should be prudent. However, ALS will not be entirely clear what the potential demand for follow-on investment will be and only limited information has been shared with Finance Wales and the Welsh Government. As an approximate indication the amount of follow-on could be between £5m and £10m, provided on the basis that this is the maximum available and the requirement to manage the resources in a prudent manner given the potential competing need of businesses. A cap per follow-on investment would be required well within the IOG range, say £1-£1.5m. Given the scale of this additional funding, this would need to be subject to procurement regulations.
 - 4) **Finance Wales and the Fund Manager should jointly review progress made in securing a fund investor at the end of September 2016.** It is desirable that ALS now formally sets out

its plans and implements robust systems for securing a private sector investor. Whilst we recognise that there are various challenges to achieving this (as set out in xxxv), ALS remain confident and need to have scope to achieve this. It will be important that ALS keep Finance Wales and the Welsh Government fully informed of their strategic plan for this, the activities they are undertaking and the progress they are making, providing complete clarity about the specific opportunities they are pursuing. Progress should be jointly reviewed by Finance Wales and ALS after six months (end September 2016).

- 5) **The Welsh Government should explore alternative financing options for new investments.** If ALS is not able to secure a fund investor in reasonable time, or make substantive progress towards this, it will be appropriate for Welsh Government to consider alternative financing approaches in order to enable new investments to take place and to maintain the momentum in the sector. These could include:
- (i) To invest more of its own capital into the Fund and continue to operate on the current basis
 - (ii) As an alternative to the above, procure another Fund Manager to manage the additional investment capital made available on the basis that they match this money at source from the outset
 - (iii) Provide additional finance through another existing Welsh Government investment fund, such as the Wales SME fund, with the resources ring fenced for the life sciences sector.

In our view (ii) is the least preferable or achievable. There are merits in (i) although there would need to be stricter protocols in place to ensure prudent management (and penalties if this is not the case).

However, the key consideration is that for this to be sustainable, the underpinning investment strategy has to ensure prudent planning of the investment flow and the scale of initial and follow requirement (until significant resources start to flow back from the Fund). This suggests smaller scale investments well within the IOG investment range (i.e. £1.5-£2m) and clarity around the follow-on requirement.

- 6) **Ensure that any future investment strategy includes a clear distinction between first round and follow-on investment.** The original investment strategy was in our opinion simplistic in some regards, especially in terms of the change to the strategy when it became apparent that the Fund would potentially be £50m rather than the intended £100m but also the absence of a distinction between the amount of first round investment and follow-up investment potentially required across multiple rounds. Any investment strategy prepared to underpin additional future investment needs to make this distinction much clearer.
- 7) **Ensure there is clarity about the Economic Development focus of the Fund..** Our review notes that ALS is investing in a part of the market where market failures in the provision of business finance are less significant than is normally the case for publically backed financial instruments of this type. Whilst the use of the Fund to secure inward investors does provide an important additional justification for the public sector intervening in this way, the Welsh Government should reassure itself that this balance between the use of the financial instrument to support indigenous firms and to attract inward investors is still in line with what it wishes to achieve. In the case of indigenous firms, it would seem appropriate that ALS should only invest where there is a clear market failure in the provision of business finance and they need to test for this as part of the eligibility criteria.

- 8) **Clarify protocols for ALS engagement with Finance Wales and the Welsh Government and ensure that these are implemented as per the Limited Partnership Agreement.** Where it is necessary to secure decisions to invest outside of the IOGs or to deal with other strategic matters involving the Limited Partner, this has not always been conducted through Finance Wales as the first point of contact in its role as the holding fund, with ALS often engaging Welsh Government directly. The protocols for ALS engagement with Finance Wales and Welsh Government needs to be clarified and implemented as per the Limited Partnership Agreement
- 9) **Review fund management fees when the opportunity arises.** Whilst the Fund management structure which has been put in place for the Fund is typical of investment funds of this nature, the agreed fees appear to be at the high end of the typical range for the realisation period and the upfront contribution from the Holding Fund to ALS to cover set-up fees is unusual in our experience. The retention of arrangement and management fees is unusual for a public sector backed fund, but common place for wholly private sector backed funds. Whilst these fees were agreed through commercial negotiation and should be honoured, if the opportunity arises to renegotiate the fees as a consequence of any further injection of finance from the public sector then this should be taken in order to seek better value for money for the public sector.
- 10) **Ensure future investment is consistent with the IOGs in order to achieve a balanced portfolio.** The investments which ALS has pursued have led to a significant concentration of the overall sum invested in a small number of investments. Although two of the three larger investments are relatively low risk, this is nevertheless a significant risk for the Fund which needs to be carefully monitored by ALS in order to protect the Limited Partner and the Welsh Government as the investor. In making follow-on and any potential new investments in due course, ALS should aim for a broader spread of risk across its portfolio. Also the inclusion of large scale investments where there is the likelihood of multiple follow-on investments rounds, introduces a significant risk in terms of the ability for the Fund to follow its investments and retain influence. The Fund Managers need to consider the implications of these types of investments carefully in the future.
- 11) **ALS should clarify the State Aid compliance of the Simbec investment.** The State Aid Compliance of the initial Simbec investment should be clarified by ALS, in particular whether the risk capital rules apply due to the use of convertible loan notes and, if so, if the investment is non-compliant due to Simbec being a mature revenue generating business.
- 12) **ALS should provide a clear audit trail of information about the economic development potential of inward investing portfolio companies.** . There is merit in ALS providing fuller information about the nature, scale and timing of the range of economic development benefits that the investments will realise within Wales, although this has already improved to some extent through changes to the drawdown documents. In the case of inward investing companies, there needs to be clarity about the contractual mechanisms in place to ensure companies deliver their commitments to Wales and the consequences of not doing this.
- 13) **The Fund Manager, Welsh Government and Finance Wales need to continue to work together to maximise the economic development benefits of portfolio investments.** The current projections of the direct job creation (and safeguarded) are fairly modest given the scale of investment, although it is important to recognise that there is potential for some of these investments to create much larger benefits in the future (e.g. if the manufacturing, distribution and sales activity can be captured following successful clinical trials). It is

important that ALS and the Welsh Government work together in assessing these opportunities and are ready to influence and possibly incentivise decision making when the time comes. So far, it appears that there has been effective communication and joint working to achieve this aim. It is important that this joined up approach continues. In particular:

- ALS need to continue to keep the Welsh Government's account management staff informed of developments and up-coming opportunities
- The Welsh Government should continue to invest in their account management function and make sure they develop strong relationships with these firms and, importantly, give them confidence in the availability of quality services, appropriate suppliers etc

- 14) **Reassess the Fund's KPIs as Necessary.** Although the economic output framework and targets have already been revised on a number of occasions, there is merit in considering a number of additional changes around the distinction between jobs created and safeguarded, the appropriateness of floorspace targets and the measurability of intellectual property and partnership targets.

1. Purpose and Scope of the Review

The Wales Life Sciences Fund

- 1.1 The Wales Life Sciences Fund (WLSIF) was announced by the Welsh Government in March 2012 and commenced operation in February 2013. The proposed £100m fund was initially established using £50m from the Welsh Government with an expected further private sector investment of £50m being sought by the Fund Manager upon appointment.
- 1.2 The Fund invests in the life sciences sector and related medical, pharmaceutical and healthcare companies currently based in Wales, and also in companies from across the UK, Europe and the rest of the world, where these investments will bring meaningful developmental and economic benefit to Wales.
- 1.3 Following a procurement exercise, run by Finance Wales as the Holding Fund Manager, Arthurian Life Sciences (ALS) were appointed as the Fund Manager.
- 1.4 As part of the Contract for Services with ALS it is stipulated that an independent review may be carried out on or about the third anniversary of the signing of the contract. Finance Wales appointed Regeneris Consulting, an independent economic consultancy, to undertake the review.

Purpose of the Review

- 1.5 The purpose of the review was to:
 - Assess the delivery of the Fund management contract against the key objectives of the Fund.
 - Review the investment strategy to date and fund performance up to the end of 2015.
 - Review the systems and procedures which have been put in place by ALS to enable the implementation and management of the Fund including:
 - investment generation, appraisal and approval
 - portfolio management
 - monitoring and reporting
 - strategic and operational governance.
 - Review the portfolio information including consideration of relevant documentation and third party evidence, covering:
 - investment information
 - governance
 - KPI information (current and forecast).
 - Review FCA returns and correspondence.
 - Review the progress in raising private sector investment at fund level, including consideration of relevant documentation, and comment on the likelihood of future fund raising at fund level.

Approach to the Review

- 1.6 The review has consisted of a number of research strands:
- The review of the evidence underpinning the rationale for the establishment of the WLSIF, including analysis of the life sciences sector in Wales and Welsh Government's development strategy for the sector.
 - The documentation setting out the case for the establishment, the design and the procurement of the WLSIF, as well as its actual investment and financial performance up to the end of 2015.
 - Consultations with a range stakeholders involved in the WLSIF, including Welsh Government (the main sponsor and funder of the Fund), Finance Wales (the Holding Fund Manager and a limited partner of WLSIF) and Arthurian Life Sciences (the appointed Fund Managers).
 - A review of the investment, portfolio management and strategic and operational management systems and procedures for the Fund, including testing the compliance of five investments with these systems.

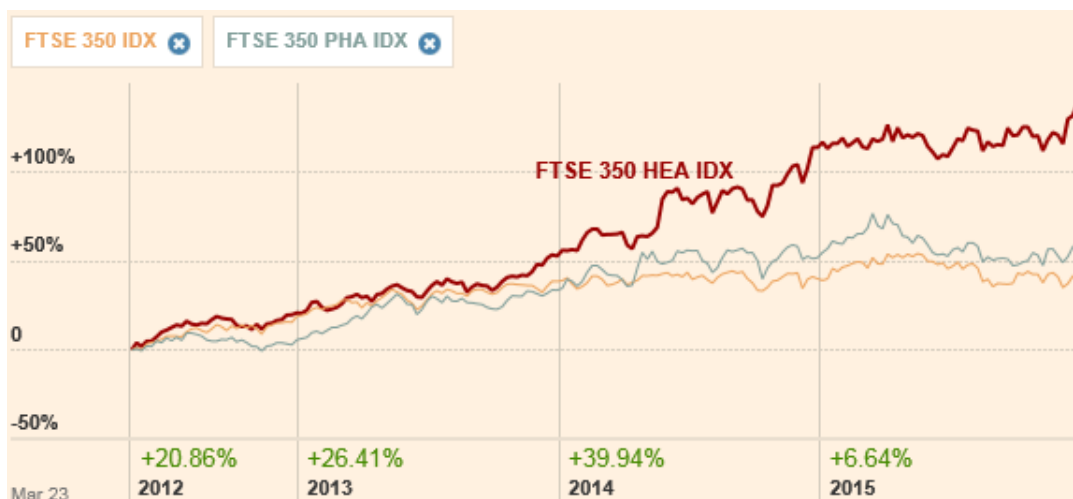
2. The Wales Life Sciences Sector

2.1 This section provides an overview of the life sciences sector, focusing on the key characteristics of the sector in Wales and the particular strengths, opportunities and challenges it faces. It also summarises the relevant UK and Wales economic development policy which led to the WLSIF being set up and considers the role envisaged for the Fund in strengthening the Life Sciences Sector in Wales.

The Life Sciences Sector

- 2.2 The life sciences sector is a dynamic and integral part of the global healthcare economy. Although there is no agreed way to define and subdivide the sector, it is widely recognised in both policy and literature that it consists of three broad sub-sectors: Pharmaceutical, Biotechnology and Medical Technology. Some definitions also include providers of healthcare services although many do not as this area is considered to be distinct from the more research and capital intensive parts of the life sciences sector in which investments tend to carry greater risk and exits can take many years.
- 2.3 Although not always included in the definition of the life sciences sector, the healthcare service sector plays an important role as a demand side driver for the rest of the life sciences sector. Growth in the life sciences sector is closely tied to the economic and demographic drivers within the broader healthcare industry and correlated with the overall level of healthcare spending in an economy. Because of this, projected increases in healthcare expenditure (particularly in Asia, Australasia, the Middle East and Africa) have positioned Life Sciences as an area of opportunity.
- 2.4 The pharmaceutical sector is by far the largest Life Sciences sub-sector. In 2014, global revenues in the pharmaceutical sector were in the region of \$1.2 trillion, compared to \$360 billion for Medical Technology and \$290 billion for Biotech.
- 2.5 Taking a broad definition of the life sciences sector (i.e. including healthcare providers), investments appear to perform well in comparison to the stock market average (see Figure 2.1). However, this trend masks some important differences by sub-sector.

Figure 2.1 Investment Performance in Healthcare and Pharmaceutical & BioTech, UK, 2012-2016



Source: The Financial Times

- 2.6 The inclusion of healthcare providers in this Index might well skew the overall performance of the sector. An ageing population, increased life expectancy and population growth have all served to improve the performance and reduce volatility in this particular part of the life sciences sector.

The UK and Welsh Life Sciences Sectors

- 2.7 The life sciences sector is an important contributor to the UK economy (appendix A provides a fuller analysis). In 2014, the OLS estimated that the UK's life sciences sector⁴:
- employed 183,000 people – 72% in companies producing products for the healthcare market and 28% in the services and supply chain
 - generated a combined estimated turnover of £56bn
 - included an estimated 4,400 companies developing, manufacturing and marketing products and services to the UK and global markets.
- 2.8 It is a highly skilled and highly productive sector, with an average gross salary of £59,000 and gross value added per worker or £74,100 (134% and 55% above the average for the UK non-financial economy respectively).
- 2.9 The available employment data shows that employment in the Life Sciences has fluctuated notably over the last five years. Between 2009 and 2014 it has reduced by around 4% (equivalent to a reduction of around 2,700 jobs), compared to a 4% increase in overall employment over same period.
- 2.10 A recent benchmarking exercise⁵ illustrates the importance of the sector in the UK to the sector globally. It ranked second after the US on Government expenditure on health R&D; it ranked third behind Germany and the US on both capital expenditure FDI (at just under £600m) and number of projects (around 50) in 2013; and it ranked first out of all European countries on total private equity investment (just over £700m in 2013).
- 2.11 Alongside these, the Life Sciences supply chain supports industry R&D, clinical and manufacturing activities both in the UK and globally. The latest estimates are that this supply chain employs 50,800 staff in 1,800 companies, generating £12bn in revenues.
- 2.12 The OLS also produce statistics at a sub-national level, with the analysis showing that in Wales the life sciences sector:
- employed 9,600 people in 2014, equivalent to just 1% of total employment in Wales
 - equivalent to around 5% of total Life Sciences employment in the UK
 - ranks 9th out of the 12 UK regions in terms of employment.

⁴ The OLS define the life sciences sector by the following four main sub-sectors: medical technology; medical biotechnology; industrial biotechnology; and pharmaceuticals

⁵ BIS, Life Science Competitiveness Indicators, 2015

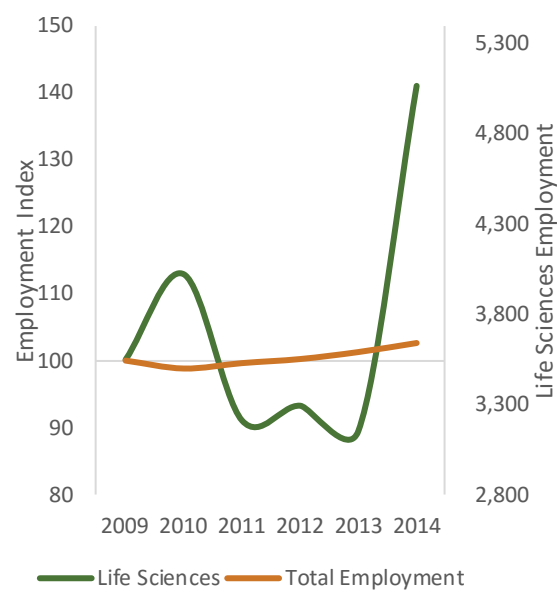
2.13 Employment in the Life Sciences has been volatile over recent years, but has fared better than overall employment particularly in the last year where there has been a substantial increase in employment in the sector. The sector also has a location quotient of 2.5 relative to Great Britain, suggesting a higher concentration of employment in the Life Sciences compared to the GB average.

2.14 Wales appears to have a particular specialism in medical technology. This sector supports around two thirds of the overall Life Sciences employment and Wales is home to some high profile companies including, for example, Zimmer Biomet UK Ltd. Although the Pharmaceutical sector does not support a large number of jobs there are a number of high profile Pharmaceutical companies in Wales including GE Healthcare, Norgine Ltd and PCI Pharmaceuticals. Although it is not evident in the data presented overleaf, Wales is also home to the UK’s largest cluster of in-vitro diagnostics companies, with firms such as Ortho Clinical Diagnostics and Siemens Healthcare Diagnostics Ltd being central to this.

2.15 These companies, together with some high profile institutions such as the Welsh Wound Innovation Centre and key knowledge assets provide notable strengths upon which Wales’ life sciences sector can build. There are concentrations of R&D activity around Cardiff, Swansea and South Wales (formerly Glamorgan) Universities. While this activity is positive, Wales underperforms relative to the rest of the UK - just 3% of spin outs from UK Universities were from Wales based institutions.

2.16 There has been a strong push to promote the Welsh life sciences sector domestically and internationally and this has resulted in a range of initiatives aiming to promote the growth of the sector. These include: *MediWales*, the Life Science network and representative body for Wales; *BioWales*, the signature life sciences conference in Wales; and the *Life Science Exchange* which seeks to link together centres of academic excellence, research facilities, industry representatives and the NHS to create a collaborative Life Sciences ecosystem.

Figure 2.2 Employment Index, Wales, 2009-2014 (2009=11)



Source: Business Register and Employment Survey

Policy Context

2.17 The WLSIF was developed at a time when both UK and Wales economic development policy was heavily focused on recovery from recession. At the UK level, the Coalition Government’s Growth Review and subsequent Plan for Growth (2010-2015) set its ambitions to achieve strong, sustainable and balanced growth.

2.18 Healthcare and Life Sciences were identified amongst eight priority sectors for economic growth and development. BIS and the Office for Life Sciences (OLS) produced a Strategy for the UK Life Sciences in late 2011. The strategy aims to strengthen the Life Sciences industry and help to build on the economic recovery. Building on the strategy, the UK Government implemented a variety of actions to develop and strengthen the life sciences sector:

- Investment in clinical and Life Sciences infrastructure was announced the following year, including £800m over 5 years for new Biomedical Research Centres and Units, the

establishment of the Cell Therapy Catapult, and the establishment of a £25 million UK Regenerative Medicine Platform.

- The concept of open data was identified as being key to the Strategy, and so new initiatives were launched. The Clinical Practice Research Datalink and Gateway, and the NHS Information Centre were launched, which provides information to researchers on clinical trials and anonymised patient data.
- The Strategy identified the need to make it easier for SMEs to get their products to market. In 2012 the £180m Biomedical Catalyst was launched, which supports SMEs to commercialise ideas and concepts.
- The UK Trade & Investment organised a number of events to promote the sector, including the Healthcare and Life Sciences Global Business Summit in London.

2.19 A range of access to finance schemes were proposed and implemented following the recession. Although not exclusively focused at businesses in the life sciences sector, they are available to them (including the £300m Enterprise Capital Fund, the £50m Business Angel Co-Investment Fund, the UK Future Technologies Fund and the UK Innovation Investment Fund). In addition, the UK Government announced in the Budget 2011 that it would offer R&D tax credits, and in 2012 the Seed Enterprise Investment Scheme was implemented, which offers 50% tax relief on investments.

2.20 The evolution of economic and sector policy in Wales largely mirrored that taking place at the UK level at the same time. In 2010 the Welsh Assembly Government published “Economic Renewal: a New Direction” which set out how the Government would enable private sector growth and recovery from recession. The report marked a shift to a more targeted sector based economic strategy in Wales and Life Sciences was among the priority sectors identified. Sector panels consisting of private sector business people were established for each of the priority sectors. These panels had a specific remit: to advise Ministers on the forthcoming opportunities in their sectors and highlight the strategic development and intervention needs in each sector.

2.21 The advice from the panel fed into the Welsh Government’s Sector Delivery Plan, which provides an overview of the strategic priorities and immediate actions for each of the nine priority sectors. The summary plans for each sector are underpinned by a more detailed strategy document for each sector.

2.22 The summary Life Sciences Sector Delivery Plan indicates that the strategy was developed around the need to address three ambitions for the sector:

- 1) A need to raise the international profile of Welsh life sciences sector
- 2) A need to attract Life Sciences research and innovation to Wales
- 3) A need to speed up the translation of innovation and research into patient benefit and commercial value.

2.23 The resultant strategy to develop the sector included four interlocking elements:

- **Establish a Wales Life Sciences Hub:** to provide a physical focus for the Life Sciences in Wales and a location in which important sector stakeholders are co-located and immediately accessible. The aspiration was for the majority of the strategy’s events and activities to be delivered through the Hub.
- **Accelerate innovation and commercialisation of Life Sciences in Wales:** the new Innovation Strategy for Wales and work with the National Institute for Social Care and Health Research to develop innovation in the health and social care sectors were identified as important elements. The need to set up the WLSIF was also highlighted as part of this priority.

- **Stepping up international activity and raising the profile of the sector in Wales:** the aspiration was to raise the international profile of the sector in Wales through increased support for international trade, attracting inward investment, improving sector branding and marketing and developing international networks and collaborations hosted from Wales.
 - **Developing a vibrant Life Sciences ecosystem with international reach:** the ecosystem approach sought to ensure that academic, business, clinical and investor communities are well connected and able to seize new opportunities more quickly in Wales than elsewhere. Developing and strengthening forums and networks was identified as an important element of this part of the strategy.
- 2.24 The strategy does not identify any particular parts of the life sciences sector as key priorities.
- 2.25 While the WLSIF is identified as part of the activities to accelerate innovation and commercialisation activity, it was expected to play a broader role in supporting progress in other parts of the strategy. Although it is not stated explicitly in any of the strategy documents, there is clear potential for WLSIF to make a contribution across all four parts of the strategy by for example, stimulating demand for space at the Hub through its investments, making high profile deals that raise the profile of the sector internationally and forming part of a package to incentivise FDI.
- 2.26 Welsh Government's most recent review of performance in the sector and progress of the strategy highlights the growth of the sector and a number of notable successes. The progress made by the WLSIF is prominent in the review of the sector strategy alongside other areas of success:
- The Life Sciences Hub was officially opened in July 2014 and has experienced strong initial demand for the workspace and been successful in engaging with high profile multinationals including Eli Lilly and Johnson and Johnson Innovation
 - The Bio Wales Event has continued to grow, with the number of delegates increasing from 350 in 2011 to 650 in 2014
 - The implementation of a trade development programme which has led to growth in the size of the Wales delegation at key exhibitions (such as the medical trade exhibition in Dusseldorf) and a range of links being developed with international businesses
 - Good progress in securing FDI into Wales, with fifteen investments secured for Wales with 1,175 jobs announced. These investments include the intention of Tissue Therapy, Kalgene Pharmaceuticals, Verona Pharmaceuticals (also a WLSIF investee company) and Cytori Therapeutics to open new facilities in Wales.

Summary

- 2.27 Although the life sciences sector in Wales is small relative to other parts of the UK, it has been growing in stature over recent years and has performed better in employment terms than other parts of the Welsh economy.
- 2.28 Wales is already home to some notable Life Sciences companies and the Welsh Government's strategy for the sector indicates that there is substantial growth potential. To realise this potential the strategy has set out a range of actions to raise the international profile of the Welsh life sciences sector, attract research and innovation and speed up the translation of innovation and research to patient benefit and commercial value. The resultant strategy includes four interlocking strands:
- establish the Wales Life Sciences Hub
 - accelerate innovation and commercialisation in Life Sciences

- step up international activity
- develop a vibrant life sciences sector with international reach.

2.29 While the WLSIF is identified as part of activities to accelerate innovation and commercialisation activity, it was expected to play a broader role in supporting progress in other parts of the strategy. Although it is not stated explicitly, there is clear potential for WLSIF to make a contribution across all four part of the strategy by, for example stimulating demand for space at the Hub through its investments, making high profile deals that raise the profile of the sector internationally and forming part of a package to incentivise FDI.

3. Purpose and Design of the Fund

- 3.1 The Wales Life Sciences Investment Fund is intended to be a £100m investment fund, initially financed through a £50m contribution from the Welsh Government. It was expected that a further £50m contribution would be secured from the private sector, with the appointed Fund Manager playing a key role in achieving this. The Fund has a ten-year operational period, consisting of an initial five-year investment period and a subsequent five-year realisation period.
- 3.2 Section Four provides an overview of the rationale for the establishment of an equity based investment fund, the main characteristics of the Fund and the approach to delivering the Fund. This has been informed by a review of the available documentation including:
- Finance Wales' Operational Development Plan for the WLSIF
 - Procurement documentation and ALS's bid and supporting documentation
 - Limited partnership and fund management agreements.
- 3.3 The review does not set out to assess the strengths and weaknesses of the underpinning evidence, the underpinning rationale or the design of WLSIF.

The Development of the WLSIF

- 3.4 The proposal for a Life Sciences fund originated in the Life Sciences Sector Panel and the WLSIF was subsequently developed by officials within the Welsh Government. An outline business case (OBC) was subsequently prepared by the Welsh Government. The OBC set out the rationale, scale, focus and preferred delivery model for the new fund, including the consideration of a range of options and funding implications for the Welsh Government.
- 3.5 The Welsh Government subsequently worked with Finance Wales, a subsidiary of the Welsh Government responsible for the delivery of public sector backed financial instruments in Wales. The design and delivery approach for the proposed fund was developed in more detail, with the specification being set out in Finance Wales' Operational Development Plan (ODP) for the WLSIF.
- 3.6 The specific objectives of the WLSIF as set out in the ODP are to:
- Increase the ability of Life Sciences SMEs in Wales to access equity finance
 - Attract Life Science businesses into Wales
 - Increase the rate of growth and employment of the life sciences sector in Wales
 - Increase the commercialisation of Life Sciences research, development and innovation in Wales.
- 3.7 Alongside other measures within the overall Life Sciences strategy, the Fund also aims to raise the profile of Life Sciences in Wales, helping to attract high quality businesses, entrepreneurs, managers and researchers.
- 3.8 The specific aspects of the Fund outlined in the project document include:
- A specific focus on the Life Sciences, defined as healthcare, pharmaceutical, diagnostic, medical technology and sector-specific software and supply chains – *this is the definition of the sector in the Life Sciences strategy*
 - Investments of between £0.25m and £2.5m, with the scope to make larger investments by exception and with the prior agreement of the Holding Fund's Board – *this is within the range for risk capital set out in the European Commission's State Aid regulations*

- A maximum investment level in any individual company of 10% of the total Fund value – *with an intended value of £100m, 10% or £10m maximum investment is still within the relevant GBER rule⁶*
- The restriction to investments that do not confer State Aid and that comply with the Market Economy Investor Principle (MEIP) i.e. they involve a substantial degree of private investment, with both the Fund and the private investors investing on an equal basis (i.e. sharing risks and rewards in equal proportion to their investments) – *these are important principles to ensure the support to SMEs does not contravene State Aid rules and does not distort the market*
- A requirement for the appointed fund management company to use their best endeavors to secure private sector investment into the Fund of at least £50m by 31st December 2015, with the terms of the investment into the Fund being agreed by Finance Wales plc as the Holding Fund and by the Welsh Government
- A five year investment period running from around October 2012 to complete September 2017, followed by a 5 year realisation period up to 2022
- A target net IRR for the Fund of 10%.

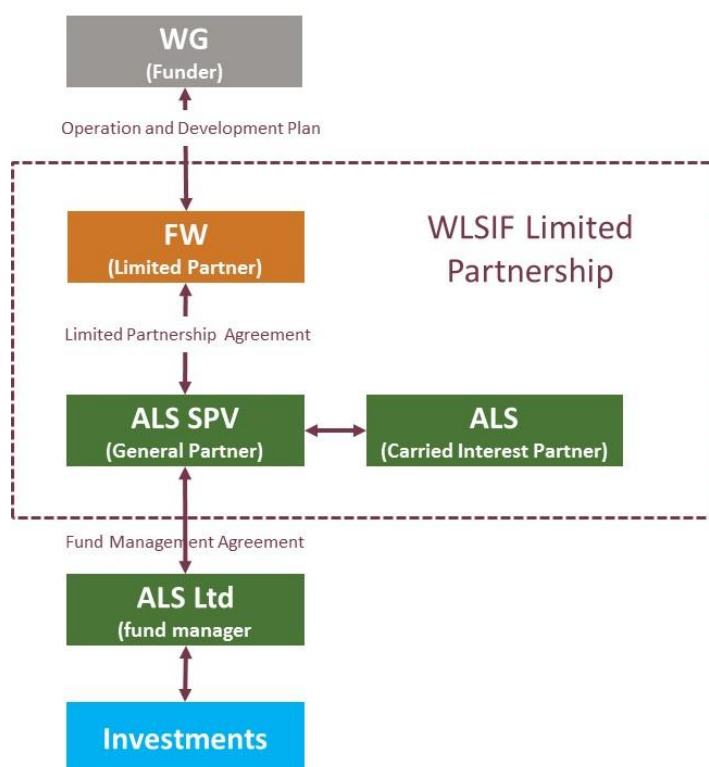
3.9 Our examination of the project documentation and consultations suggest that there was an evolution in the strategic focus of the proposed Fund at a fairly early stage and prior to procurement. That is, the focus of the Fund was broadened to specifically include Life Science companies located in other parts of the UK and overseas investment into Wales and consequently to better reflect the specific objectives of the Life Science strategy in Wales.

Fund Structure and Partners

- 3.10 The Wales Life Sciences Investment Fund was established as a ten year discretionary fund underpinned by a limited partnership (established 22nd February 2013) consisting of:
- Finance Wales Investment (9), a subsidiary of Finance Wales PLC, acting as the limited partner on behalf of Welsh Government. The subsidiary was created with the sole purpose of acting as the Holding Fund for the capital grant contribution of £50m from Welsh Government and at the time the sole limited partner to the limited partnership.
 - A professional Fund Manager appointed through a competitive tendering exercise, acting as the general partner to the limited partnership. As outlined in more detail under Fund Manager Procurement below, Arthurian Life Sciences was appointed following a competitive tendering exercise run by Finance Wales.
- 3.11 The operation of the limited partnership is overseen by the Limited Partnership Agreement between Finance Wales Investment (9) (the limited partner), Arthurian Life Sciences SPV (the general partner) and Arthurian Life Sciences Carried Interest Partner. The LPA sets out various aspects of the operation of the Fund, including the Investment Operating Guidelines (IOGs) which are outlined in detail below.
- 3.12 The appointment and operation of the Fund Managers, Arthurian Life Sciences Ltd, is set out in the Fund Management Agreement. This is an agreement between ALS SPV acting on behalf of the WLSIF Limited Partnership and ALS Ltd.

⁶ The total amount of risk finance aid that SMEs may receive, in the form of equity, quasi-equity, loans guarantees, or a mix thereof, must not exceed €15m.

Figure 3.1 WLSIF Fund Structure and Partners

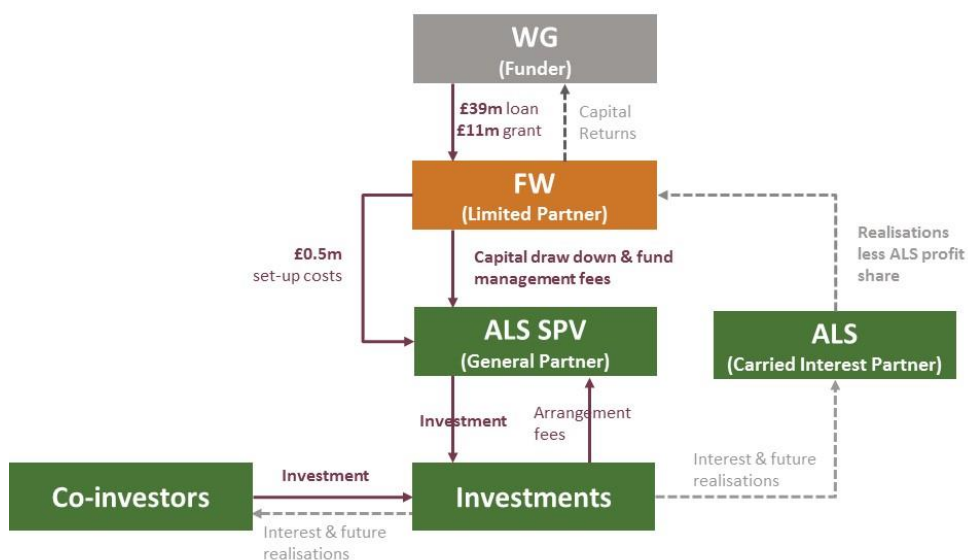


Funding Model

- 3.13 The structure of the Fund and its underlying funding and operational models was developed jointly between Welsh Government and Finance Wales, with advice from the Wales Life Sciences Sector Panel. Finance Wales, as the appointed Holding Fund Manager, received legal advice on the legal structures, documentation and procurement from DAC Beachcroft.
- 3.14 As noted earlier the original intention was for a £100m fund, funded jointly through the £50m contribution of Welsh Government matched by the private sector. The Welsh Government contributions were transferred to Finance Wales in two instalments of £25m. The Welsh Government's £50m contribution was split between grant-in-aid and a loan to Welsh Government from the HM Treasury's Financial Transaction Reserve which is repayable in due course.
- 3.15 Finance Wales releases capital to the Limited Partnership to enable ALS Ltd to make its investments in investee companies and to cover fund management fees. The fees agreed with ALS consisted of:
- £0.5m upfront payment to cover the set up costs and initial marketing activity, paid on the signing of the LPA and FMA
 - 2.5% of the Fund value (initially set at £50m) during the five-year investment period (c£6.25m over the period)
 - 2.5% of the Fund value, less any write-downs and realisations, during the realisation period
 - 20% of the profits on investments after the limited partner (Welsh Government and any additional limited partners who invest) have been repaid their original contribution plus a hurdle profit rate of 8% (i.e. the limited partners receive the first 8% of profit).

- 3.16 The fee structure is fairly standard in the venture capital sector and consistent with the State Aid requirements for Fund Manager remuneration to be at a market rate and to be performance related. Management fees of between 1.5% and 2.5% of fees under management are common in the venture capital sector, with 20% carried interest above a hurdle rate. The fee structure was reviewed by the WAO's appointed external accountants who judged the structure and levels to be consistent with industry practice. Whilst the setting of the Fund management fee at 2.5% (especially during the realisation period) may be at the upper end of this range, this is ultimately the outcome of a commercial negotiation between Finance Wales and ALS.
- 3.17 The LPA states that the general partner and Fund Manager may recover and retain fees associated with:
- corporate finance and legal advice in completing investments
 - agency, directors' fees and legal fees associated with holding investments
 - fees or commissions which are recoverable for aborted investments.
- 3.18 Whilst it is unusual for public sector backed funds to allow private sector Fund Managers to retain these costs, this is not uncommon in the private sector venture capital and private equity sector. However, the combination of the fund management fees being at the upper end of the industry standard range and the ability to retain arrangement and management fees, does raise a question about the appropriateness of the level at which the overall fees are set and the value for money this is likely to provide to Welsh Government.
- 3.19 The investment model envisages co-investment by ALS and other investors on a pari passu basis (i.e. sharing of the risks, returns and associated terms on a proportionate basis to their investments). This is discussed in more detail below under Investment and Operating Guidelines.

Figure 3.2 Funding Model and Financial Flows



Investment Operating Guidelines

- 3.20 The Investment and Operating Guidelines are intended to guide the investment activity of the Fund Manager, ensuring it is consistent with the rationale and objectives of the Fund and the rules and regulations for public sector backed risk capital instruments.
- 3.21 The LPA agreement sets out the IOGs for the Fund, with the key aspects being:
- The investee must be an SME in the healthcare, pharmaceutical, diagnostic, medical technology, and sector-specific software sector (or related supply chains).
 - Investments must be made on the Market Economy Investors Principle (MEIP) so that it does not provide any State Aid and must include a substantial element of private sector co-investment made on a pari passu basis. The investee business must be operating in Wales and where this is not the case the business must contractually commit to relocate to Wales and provide suitable evidence of doing so (if it does not then relocate, the investment and all related expenditure should be returned to the Holding Fund).
 - Investments to be made through a mix of equity, quasi-equity and convertible loan instruments, with convertible loans secured on the assets of the SME (where possible) and loans also made in conjunction with equity.
 - Investments in SMEs should be in the range of £0.25m and £5m, with any proposed investment outside of this range to be agreed with the Holding Fund and any other limited partner – *the increase to a maximum of £5m per investment reflected ALS’s desire to balance the portfolio with a number of larger investments.*
 - The maximum investment in an SME, including follow-on investment, should not exceed 10% of the total fund size.
 - Making investments which enable the achievement of the economic development targets (discussed further below).
- 3.22 The IOGs also include a set of exclusions which are standard for public sector backed investment funds, including ineligible sectors.
- 3.23 The original LPA (February 2013) was updated in March 2014, with the main changes to the IOGs or related conditions being:
- The removal of the requirement for investee companies to be non-listed companies, in recognition that AIMs listed Life Science companies could be suitable for equity investment through the Fund - *whilst this provides the Fund Manager with greater scope for investment, it is likely that these companies are not affected by finance related market failure and something which would need to be carefully monitored by ALS and Finance Wales.*
 - A requirement for SMEs relocating into Wales to do this within 12 months of the initial investment, unless there is prior approval by the Holding Fund – *this to be a sensible change given the importance of embedding companies as soon as possible after the receipt of finance*
 - A requirement for approximately 40% of investments (by monetary value) to be in seed and start-up capital and 60% in expansion capital⁷ - *the intention was to ensure a balance in the portfolio between these different stages of development of the investee companies.*

⁷ As defined by Article 28.4 and 28.5 of the State Aid Block Exemption, seed capital refers to financing provided to study, assess and develop an initial concept, preceding the start-up phase; start-up capital refers to financing provided to undertakings which

3.24 The updated LPA also included an indicative investment profile which is set out in Table 3.1 below. Whilst the original LPA did not include a profile, an annual investment profile was included in Finance Wales’ Operational Development Plan for the Fund. The revised profile reflected the need for a slightly higher annual investment rate in 2014/15 and 2015/16 due to the delay in setting up the Fund. The differences in the total investment between the ODP and the revised LPA is due to the later netting off of the expected fund management fees.

Year	2012/13	2013-14	2014-15	2015-16	2016-17
Original ODP Investment Profile	£5m	£10m	£10m	£10m	£15m
Revised LPA Investment Profile		£10m	£12.5m	£12.5m	£15m

Source: Finance Wales’ ODP and updated Limited Partnership Agreement

3.25 ALS set out their proposed investment strategy in terms of the mix of investments based on an £80m investment pot⁸ as part of their tender document and presentation to Finance Wales (August 2012) and this was subsequently reflected in Finance Wales’ updated ODP for the Fund. This clearly highlighted ALS’s confidence to secure the additional fund level investment. The indicative mix is summarised below in Table 3.2 below.

	No. of Investee Companies	WLSIF Investment	Average WLSIF Investment per Company	Co-investment
High Risk e.g. biomed	4	£27.5m	£6.88m	£50m
Medium Risk e.g. med tech	5	£27.5m	£5.5m	£60m
Low Risk e.g. other	3	£25.0m	£8.3m	£60m
Total	12	£80m	£6.67m	£170m

3.26 ALS noted in response to questions raised by Finance Wales as part of the procurement exercise that the exact number of deals would depend upon the size and purpose of the Fund, the profile of the life sciences sector in Wales and risk and reward considerations. However, based on a £100m commitment to the Fund (and c£80m invested after management fees), approximately twelve investments with SMEs would help to ensure that:

- the Fund has the ability to lead investments and attract syndicate partners
- the Fund can create sustainable assets by avoiding a ‘scattergun’ approach
- investee companies can access sufficient capital to support their continued growth as the Fund has the ability to follow its initial investment
- the risk of dilution of the Fund’s position is minimised
- investee companies are able to receive the support from the Fund’s Board and executive team.

3.27 ALS also outlined the benefits of later stage investments being included as part of the portfolio including the coverage of good investment opportunities for Wales amongst more mature

have not sold their product or service commercially and are not yet generating a profit; and expansion capital refers to means financing provided for the growth and expansion of an undertaking.

⁸ The £80m pot is based on a £100m fund overall, less fund management fees

companies, the potential to safeguard and create business growth by providing growth capital to Welsh companies and the possibility of providing capital for acquisitions.

Summary

- 3.28 The rationale for the establishment of the Wales Life Sciences Investment Fund is clearly and firmly rooted in the overall strategy for the life sciences sector in Wales which was developed through the Life Sciences Sector Panel. The proposed Fund was intended to be an important and ambitious part of an integrated suite of activities, including the establishment of a Life Sciences Hub to provide a physical focus for the sector in Wales, international promotion and more general profile raising, and the development of a vibrant Life Sciences ecosystem. There has also been substantial public sector backed investment into a range of projects to develop the research and innovation base and related supply chains within Wales over the last decade.
- 3.29 Our consultations with Welsh Government officials suggest there was a good rationale for the use of repayable finance to support the growth of indigenous life science firms and to attract inward investors rather than traditional forms of grant. That is, the discipline which the use of repayable finance requires on the part of SMEs, the attraction of specialist Fund Managers into Wales and the potential to secure the recycling of realisations back into future investment activity and support for the life sciences sector. The evaluation evidence from the experience of implementing other public sector backed financial instruments over the last decade supports this view.
- 3.30 The Fund is intended to provide finance to both indigenous businesses in the sector in Wales, as well as companies from outside of Wales providing they are relocating all or part of their operation to Wales. Whilst indigenous and inward investing businesses provide different benefits and opportunities, the flexibility for the Fund to target both is in principle an advantage providing the Fund Managers have the necessary market profile to effectively target both and appropriate measures are put in place to maximise the economic development opportunities the different types of investment can bring.
- 3.31 The detailed design of the Fund was carefully considered by Finance Wales and Welsh Government and is consistent with stated objectives for the Fund, aspects of good practice and the lessons learnt from similar types of funds, and the State Aid and other related regulatory requirements.
- 3.32 Finance Wales and the Welsh Government procured a high profile and experienced team which became the basis of ALS as a new company. The team contributed to the refinement of the underpinning investment strategy for the Fund (including a risk matrix approach to building the portfolio) at an early stage and the revision of a number of the IOGs. These amendments were mostly sensible, although the removal of the restriction on investment in publically quoted companies requires, in our opinion, the Fund Manager to be very clear about the underpinning rationale for WLSIF investment in terms of the commercial and economic development benefit.
- 3.33 The fee structure is common for the VC sector and whilst the management fees are at the upper end of the typical industry fee range (especially for the realisation period), this arguably reflects the experience of the team appointed and is of course the outcome of the commercial negotiation. The payment of additional set-up costs to ALS is in our experience unusual in the private sector and would normally be absorbed as a part of the % management fee. Also the combination of the fund management fees being at the upper end of the industry standard range and the ability of the fund manager to retain arrangement and management fees, does raise a question about the appropriateness of the level at which the overall fees are set and the value for money this is likely to provide to Welsh Government.

4. WLSIF Investment and Financial Performance

4.1 Section five considers WLSIF's investment and financial performance since its launch at the start of 2013. It considers the progress that has been made in generating deal flow, the build-up and overall level of investment, and the financial performance of the Fund. The assessment has drawn on the following documents in particular:

- ALS's proposal and presentation to Finance Wales as part of the procurement process
- Quarterly fund monitoring reports and annual fund review presentations and notes
- Drawdown documentation for individual investments
- A review of ALS's approach to generating deal flow.

Investment Performance

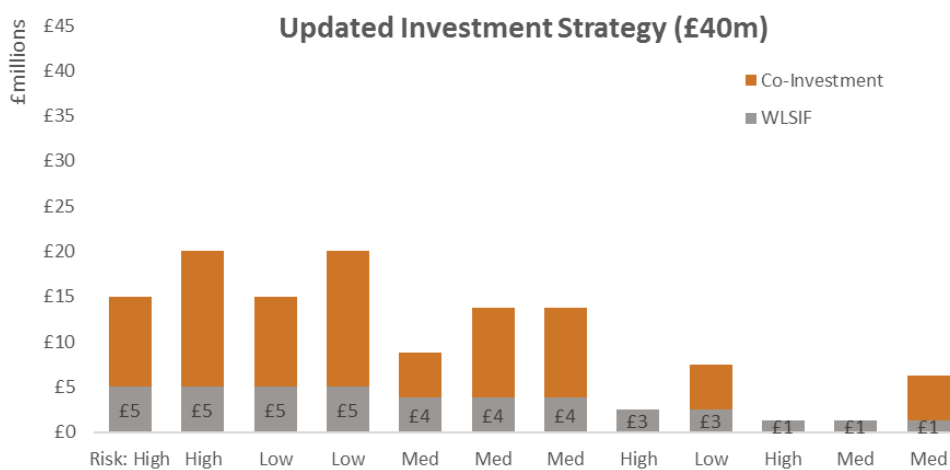
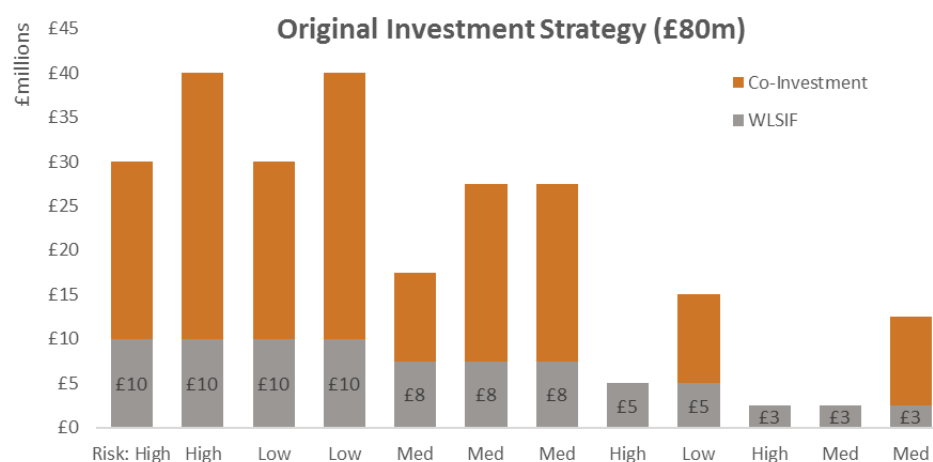
4.2 ALS planned investment profile was originally devised on the basis of a £100m fund. This would provide an investment pot of £80m with £20m reserved for fees and other overheads. When it became clear that ALS would not be able to secure the £50m co-investment in the short term⁹ (this is covered in more detail below), the investment strategy was scaled back to reflect the smaller fund size.

4.3 The original and updated investment strategies are summarised in Figure 4.1. This shows that although the investment strategy was scaled back, it did not alter materially. ALS opted to seek the same number of investments (12) but reduce the value of each of these investments by half. The same adjustment was applied to the deal level co-investment. This reduced both WLSIF investment and the overall size of each deal by half, although the rationale for the shift to smaller deals and the implications for ALS's operations is not clear.

4.4 The updated investment strategy reflects a desire on the part of ALS to continue to spread portfolio risk across a similar number of investments, rather than focus the more limited investment pot on a smaller number of investments. Taken at face value, it suggests that ALS was proposing a fairly fundamental shift towards targeting smaller investment per se, not just taking a smaller proportionate stake in the same types of deals.

⁹ ALS have explained to the review team that the launch of the Welsh Audit Office investigation significantly reduced the likelihood of securing a fund level co-investor until the outcome of the investigation was known.

Figure 4.1 Summary of Changes to ALS’s Investment Strategy

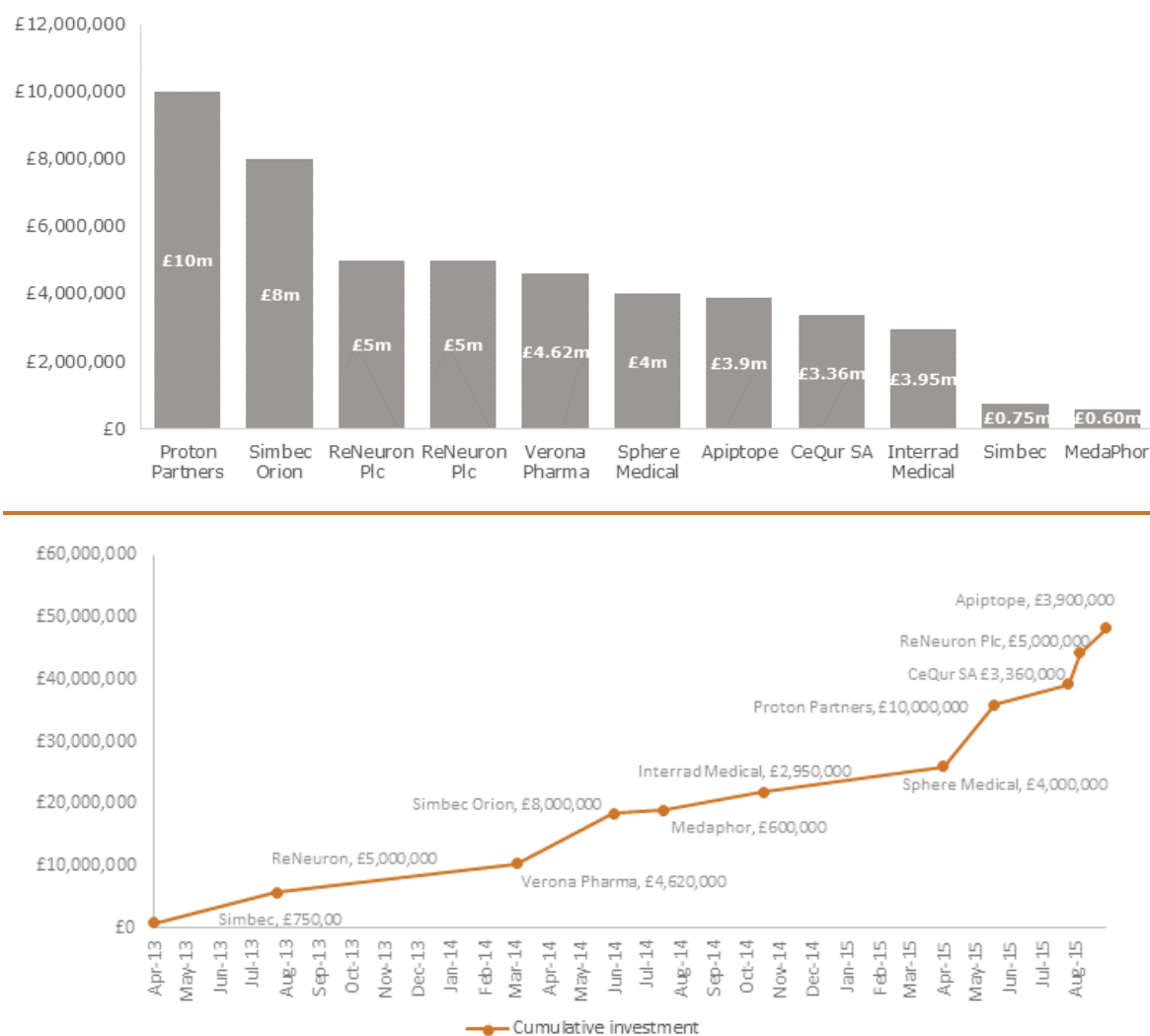


Source: ALS Presentation to Finance Wales

- 4.5 Figure 4.2 provides an overview of the phasing of WLSIF’s investments. Although the Fund got off to a slow start due to delays in securing FCA approval and the finalisation of contracts, the rate of investment ramped up during 2014. The Fund has subsequently made very good progress in securing investments, despite the WAO investigation (commencing in September 2013, with the report published in March 2016) which could have created some uncertainty in the market place. It is also worth noting that ALS has been very successful at raising co-investment at the deal level. The investment strategy indicates that whilst ALS was expecting to secure deal level co-investment in the region of £85m (x2 the Fund’s investment), the actual co-investment has been in the region of £270m to date (section six provides more detail on a company by company basis).
- 4.6 Figure 4.2 also highlights a notable acceleration in the investment rate after May 2015 when three investments were made in a relatively short period (August / September 2015). The first of these investments was the follow-on funding (£5m) provided to ReNeuron. This took WLSIF’s holding in this company above the 10% maximum set out in the IOGs. ALS indicated that the need for the follow-on investment was unexpected and arose as a result of the management team wishing to capitalise on a high share value in raising further finance rather than a short term requirement for additional funding given the reserves and burn rate. The rationale for WLSIF involvement in the funding round was made primarily on the basis of the need to avoid dilution of the Fund’s holding and the potential for reputational damage to WLSIF and ALS. The need to tie ReNeuron into the

relocation of its operation to Wales was a factor, although we understand that this had largely been achieved through the initial investment and the agreement with the Welsh Government in respect of ReNeuron’s manufacturing premises. The Investment Proposal for the follow on investment into ReNeuron states that less progress on the firm’s relocation had been made than expected but that this was largely due to a delay in approving the Welsh Government’s funding for the manufacturing facility.

Figure 4.2 Deal Investment Summary, March 2016



Source: Drawdown documentation provided to Finance Wales by ALS

- 4.7 At the same time, ALS had progressed two potential investments in CeQur and Apiptope to a fairly advanced stage (£3.36m and £3.9m respectively) which it expected to be able to fund through the existing headroom in the Fund. With an unexpected financing requirement for the ReNeuron follow-on investment proceeding, ALS approached Finance Wales about the scope to also invest with CeQur and Apiptope. Whilst both investments were in line with the IOGs, to invest in both would fully invest the Fund given its current size and would therefore require additional capital to be provided by the Welsh Government (there would only be £5.4m capital left after the completion of the ReNeuron follow-on investment).
- 4.8 ALS made a case to Finance Wales for additional funding from the Welsh Government to enable these deals to proceed on the basis of:

- the strength of the deals and the long term potential they offered
- the potential reputational damage of not proceeding with the investments for ALS and Wales, as well as damage to the relationship with one of ALS's long standing lead co-investors.

4.9 Following advice from Finance Wales, the Welsh Government agreed to provide ALS with an interest free term loan of £3m to enable these investments to proceed. This loan needs to be repaid in August 2016. Although the investments leave the Fund with little headroom in terms of covering future fund management fees and no headroom for further investment, Welsh Government and Finance Wales were, we believe, mindful of the potential to secure a realisation in the near future from Simbec-Orion. However, in practice it is difficult to predict the optimum timing of an exit as it is affected by a range of factors.

4.10 The pattern of these final investments pursued by ALS, and ultimately approved by the Welsh Government, has contributed in a large measure to a very challenging cashflow position for the Fund with no current capacity from the resources available to the Fund to make follow-on investments. Whatever the specific merits of each of the three investments, the result of pursuing all three upon the financial position of the Fund is clear.

Financial Performance

4.11 As of the end of quarter one 2016, total drawdown of the available funding from Finance Wales in its role as the Holding Fund was £52.5m, with the majority of this (£48.8m) accounted for by the actual investments with the investee companies.

4.12 This is made up of capital investment, fund management costs and other costs and has been covered by the Welsh Government's original £50m injection as the limited partner plus the £3m loan to ALS noted above. This now leaves very little headroom to cover ongoing fund management fee commitments and other fees (in the region of £320k per quarter with the next draw down due in June 2016. Also as things currently stand, there is also no capital currently available for follow on investments into portfolio companies.

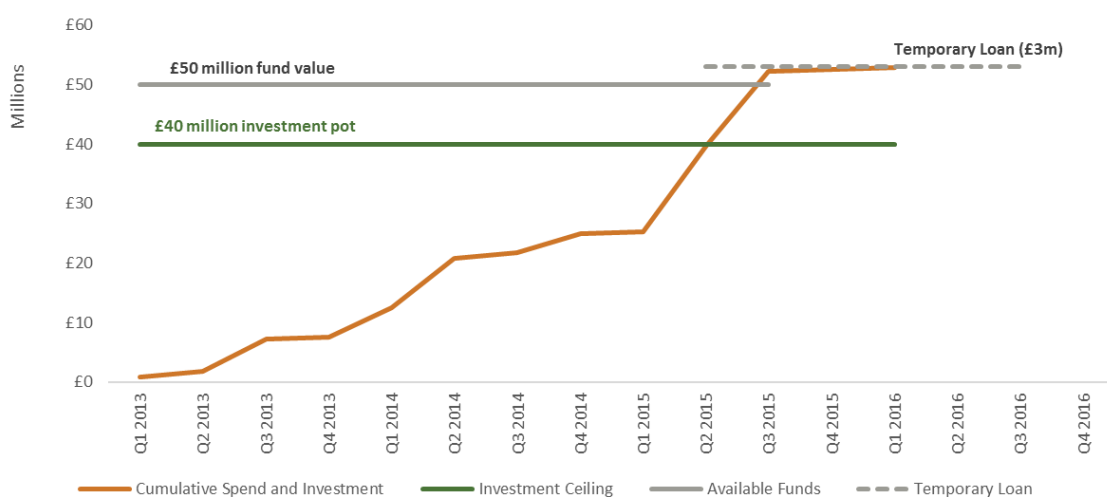
Short to Medium Term Financial Priorities for the Fund

4.13 The Fund has three short term requirements for cash in order to ensure it is able to operate on an on-going basis. These are:

- **Fund Management Fee Commitments:** based on data up to the end of Q1 2016, the Holding Fund now contains just enough funds to cover the next instalment of fund management and custodian fees that will be due at the end of Q2 2016. The fees are in the region of £320k, with a further £640k due over the remainder of 2016.
- **Loan Repayment:** the Welsh Government's £3m loan to ALS needs to be repaid in full by the end of 2016.
- **Follow on investment requirements in next 12 months:** discussions with ALS suggest that currently only Verona is expected to require follow-on investment in the next 12 months although the overall value of the funding rounds and WLSIF potential share of this is currently unknown. ALS also indicate that whilst ReNeuron, Apitope and CeQur are currently well funded, there is the potential for them to require follow on investment after two further years of development activity. The other companies in the portfolio are much less likely to require follow-on investment.

Table 4.1 Summary of ALS Drawdown from Holding Fund to Q1 2016

Type	Expenditure / Investment to Q1 2016	% of Total
Drawdown for Investment with Companies	£48,180,000	92%
FM Fee	£3,750,000	7%
Set-up costs	£500,000	1%
Custodian Fees	£57,485	0%
PWC fees	£41,970	0%
Grand Total	£52,529,455	100%



Source: Schedule of Drawdowns provided by Finance Wales, February 2016

- 4.14 This means that by the end of 2016, the Fund will need a little less than £4m to cover the on-going operational costs and loan repayment (£0.96m and £3m respectively).
- 4.15 There are various ways in which this requirement can be met, in particular a realisation from within the portfolio, an injection of further capital from Welsh Government or securing a private sector investor. In terms of the former, ALS has indicated that Simbec-Orion could be the first realisation although this would probably not be likely within the next twelve months or ideal timing in terms of maximising the potential return for WLSIF.
- 4.16 The potential for securing a fund level investor is considered below. However, this is unlikely to provide a route to meeting the WLSIF's short term financial requirements as it will take time to secure a suitable investor and negotiate and finalise the deal with them.
- 4.17 ALS is also currently in on-going negotiation with Welsh Government to secure an additional injection of longer term capital.
- 4.18 Income will also be generated from interest and dividends from the portfolio companies, although it is our understanding that these sums are fairly modest at this stage and given the early stage nature of the portfolio.

Fund Level Investment

- 4.19 As set out in Section 3, Welsh Government originally envisaged WLSIF as a £100m fund and there was a clear expectation that the appointed Fund Manager would make their best endeavours to secure £50m private sector co-investment into the Fund (or a parallel investment vehicle) by the

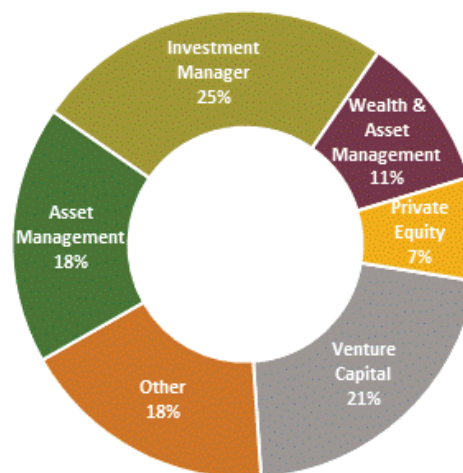
end of 2015. This model of fund level investment offered a number of benefits to Welsh Government. It would, of course, ensure that their own £50m investment would go a lot further and major institutional investment into the Fund was also expected to bolster Wales' reputation amongst potential deal level co-investors and investee companies as a location for Life Sciences investment.

- 4.20 Notwithstanding the clear commitment of the Welsh Government to proactively growing the life sciences sector in Wales, the ability of the Fund Manager to secure investors willing to match Welsh Government's £50m commitment is judged by the reviewers to be an aspect of the original design which would be challenging to achieve (but not unachievable) for a number of reasons:
- Welsh Government being the Fund sponsor and main existing investor, with a degree of uncertainty linked to potential for government and policy change
 - The focus on the life sciences sector within Wales, which is limited by scope and scale, compared to investment opportunities in much stronger Life Science sectors in other parts of the UK
 - Based on the available evidence, public sector backed financial instruments providing business finance typically achieve lower (or negative net IRRs in some cases) due to their perceived underlying focus on the part of the finance market affected by market failure.
- 4.21 ALS was initially confident that they would be able to secure fund level investment and recognised the likelihood of securing the investment increasing as the Fund established its own investment track record and built a strong portfolio. ALS was initially active in promoting the opportunity to investors and had initial discussions with a wide range of potential investors prior to the WAO investigation being launched (i.e. September 2013).
- 4.22 ALS has not developed a formal written strategy and action plan for attracting fund level investment and hence we were not able to examine this. However, our discussions with ALS has confirmed that the overall approach and targets were discussed by within the ALS team and progress regularly reviewed by them. ALS has indicated that progress with fund level investment was regularly discussed with the Board. Whilst we have seen one board paper which confirms that this topic was discussed, we have not seen a fuller set of board papers which can confirm that it was regularly discussed.
- 4.23 ALS does not use a formal Customer Relationship Management system which identifies and tracks prospective investors. In order to test whether ALS did undertake best endeavours to secure fund investors up to September 2013, we have reviewed the meetings with prospective investors which ALS undertook during the period. An overview is provided below.
- 4.24 ALS had meetings with a number of different organisations, predominantly investment managers and venture capital firms with less emphasis on typical limited partners such as pension funds, foundations and insurance companies. Of the meetings held a vast majority were a formal pitch to investors, although based on the information we have been given, there were very few follow up meetings off the back of these.

4.25 Other than copies of diary entries, we have not seen an auditable trail for these meetings (see Appendix B for a list of the meetings). ALS has explained that the reasons for this trail not being available are related to the informal nature of the initial meeting:

- As the meetings have been with known investors, the meetings are typically set up with a short phone call (hence brevity of diary entries supplied)
- The meetings usually consist of a pitch presentation and discussion of the private placement prospectus¹⁰
- An initial reaction is provided by the potential investor there and then and if these discussions get to a more advanced stage (for example requests for more information for due diligence; discussions about the portfolio specifics) that an email trail would be generated.

Figure 4.3 Type of Investor Approached by ALS



Source: ALS

4.26 Whilst ALS did not entirely cease its efforts to secure fund level investors after the launch of the WAO investigation, it was heavily curtailed although some discussions did continue after the launch of the investigation. The reason for this is that ALS perceived the investigation as a major deterrent to potential investors and this is confirmed by an ALS board paper which discussed this topic. We have seen evidence of a small sample of meetings which ALS undertook with potential investors during 2014 and 2015 (Iota Group, L&G, Kholagassi Capital and SinoPHIRDA).

Table 4.2 Selected Examples of ALS’s Investor Meetings, 2014/15

Date	Company	Specific Purpose of Meeting (i.e. introductory, formal pitch, follow-up meeting, detailed negotiation, etc)	Outcome
30/06/2015	Iota Group ME Conglomerate with presence in healthcare	Formal pitch meeting to key decision makers after considerable warming up by our introducers in the region	Quite interested. Going through their own internal strategic review process and will come back to ALS Low probability
27/05/2015	Kholagassi Capital ME Conglomerate with presence in healthcare	Formal pitch meeting to key decision makers after considerable warming up by ALS’s introducers in the region	Referred by one of ALS’s portfolio companies (as potential investor), but no interest.
30/06/2014	SinoPHIRDA Chinese trade association of pharmaceutical companies	UKTI organised visit, formal presentation made to a number of Chinese pharma companies. It appeared that the primary interest was in the elderly health care space in the UK.	Expressed interest, UKTI to follow up on our behalf to ascertain level before travelling to China

¹⁰ Private Placement Memorandum, Arthurian Life Sciences Ltd

- 4.27 The WAO report on the WLSIF was published in March 2016 and this concludes that ALS dealt appropriately with potential or actual conflicts of interest. ALS is now in the position where proceed with fund raising and able to demonstrate a strong portfolio of Life Science businesses in Wales. It is therefore starting to warm up suitable contacts and meeting potential investors. Whilst we have not seen a written plan setting out ALS's approach to targeting potential investors¹¹, they have outlined a number of target categories of investor:
- angels and other high net worth individuals
 - traditional limited partnership type investors
 - strategic investors seeking Life Sciences IP
 - major investors with a specific spatial focus and interest in Wales (e.g. public sector pension funds based in Wales)
 - major overseas investors (e.g. Chinese and Middle East sovereign wealth funds and investors).
- 4.28 Whilst we have not undertaken a detailed review of the current investor prospects as part of this assessment, on the basis of our consultations with ALS and our team's experience, we believe that raising this additional investment is very challenging but not unachievable. The fact that ALS has now built up the portfolio is certainly beneficial in making a case to investors.

Summary

- 4.29 Having been announced at BioWales in February 2012, the WLSIF was behind schedule in being formally set-up and launched in February 2013, with the first investment occurring in April 2013. There were various factors contributing to this slow start including delays in the completion of the legal documentation and the need for ALS, a new investment company, to secure FCA approval.
- 4.30 Whilst ALS developed its original investment strategy for the Fund on the basis of a £100m fund and £80m investment pot, the inability to secure the additional private sector fund investment resulted in ALS adjusting the investment strategy to reflect the current £50m fund size and a £40m investment pot. Whilst securing these private sector investors would be challenging, ALS believes that the launch of the WAO investigation made this impossible until it was satisfactorily resolved.
- 4.31 ALS has been successful in making eleven investments into nine companies and in securing over £250m co-investment at the deal level. The rate of investment was initially steady given it was establishing its operation in Wales but this picked up throughout 2014 and 2015. There was a notable acceleration in the summer of 2015 when the Fund made three investments in quick succession (ReNeuron, CeQur and Apitope). The final two investments (CeQur and Apitope) were made possible by a £3m term loan from the Welsh Government to ALS, repayable in August 2016.
- 4.32 Whilst the three investments may well have been very good investments in their own right and there were in ALS's view additional reputational reasons for proceeding, this nevertheless involves a number of significant risks. In light of this, Welsh Government approval for the investments was needed due to them either being outside of the IOGs (i.e. the ReNeuron follow-on investment) or exceeding the available resources of the WLSIF.
- 4.33 The £48.8 million invested by WLSIF so far, together with the drawdown of fund management fees and other expenses (summarised in Table 4.1), give total expenditure of £52.5 million. This leaves the Fund in a position where it faces a number of short term cash flow challenges. The main short

¹¹ ALS has provided Regeneris with a long list of potential investors although there is no analysis of the current relationship with or prioritisation of the organisation.

term requirements are payment of the Fund management fees during 2016/17, the need to service the loan from Welsh Government at the end of 2016 and a potential requirement for follow-on investment. In the absence of private sector fund investment being secured and the potential for realisations from the portfolio being limited in the short term, ALS has been in negotiation with Welsh Government about an additional investment.

- 4.34 As set out in Section 3, Welsh Government originally envisaged WLSIF as a £100m fund and there was a clear expectation that the appointed Fund Manager would make their best endeavours to secure £50m private sector co-investment into the Fund (or a parallel investment vehicle) by the end of 2015. Notwithstanding the clear commitment of the Welsh Government to proactively growing the life sciences sector in Wales, the ability of the Fund Manager to secure investors willing to match Welsh Government's £50m commitment is judged by the reviewers to be an aspect of the original design which would be challenging to achieve (but not unachievable).
- 4.35 ALS was initially confident that they would be able to secure fund level investment and they report being active in promoting the opportunity to investors prior to the WAO investigation being launched (i.e. September 2013). ALS has not developed a formal written strategy and action plan for attracting fund level investment and hence we were not able to examine this. However, our discussions with ALS has confirmed that the overall approach and targets were discussed by the ALS team and progress regularly reviewed by them.
- 4.36 As ALS does not use a formal Customer Relationships Management system which identifies and tracks prospective investors, in order to test endeavours by ALS to secure fund investors up to September 2013, we have reviewed the meetings with prospective investors. Whilst we have seen evidence of diary entries for a wide range of meetings with VCs and institutional investors, we have not seen an auditable trail for these meetings. ALS has explained that the reasons for this trail not being available are related to the informal nature of the initial meetings.
- 4.37 With the WAO report now published and confirmation that potential or actual conflicts of interest were dealt with appropriately, ALS is now in the position to proceed with fund raising. It is therefore starting to warm up suitable contacts and meeting potential investors. Whilst we have not seen a written plan setting out ALS's approach to targeting potential investors¹², they have outlined a number of target categories of investor.
- 4.38 Whilst we have not undertaken a detailed review of the current investor prospects as part of this assessment, on the basis of our consultations with ALS and our team's experience, we believe that raising this additional investment is very challenging but not entirely unachievable. The fact that ALS has now built up the portfolio is certainly beneficial in making a case to investors. In conclusion we have seen evidence that ALS did endeavour to seek investment of £50m at fund level. However the lack of any formal system to identify, allocate, and follow up and monitor potential investment opportunities is a concern and would have been necessary to demonstrate best endeavours. On that basis we have not seen the evidence that is necessary to support the case that best endeavours were undertaken to seek the additional £50m investment at fund level.

¹² ALS has provided Regeneris with a long list of potential investors although there is no analysis of the current relationship with or prioritisation of the organisation.

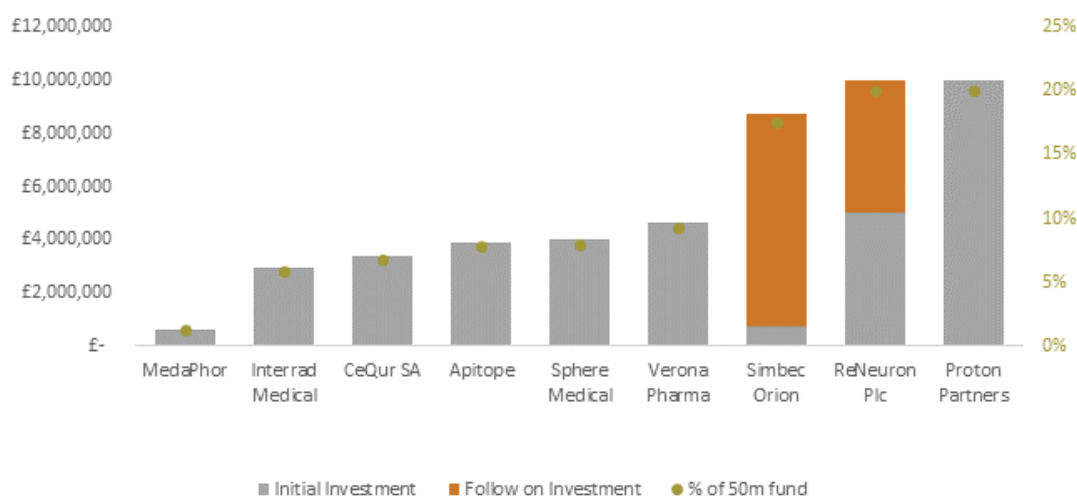
5. Portfolio Review

5.1 This section presents the findings of our review of the composition of WLSIF’s portfolio of investments. The purpose is to better understand the rationale, nature and risk profile of these investments, as well as to gain an indication of the potential further funding requirement. Whilst we have considered the long term return for the portfolio as a whole, it is not based on a detailed examination of each individual investment.

Composition of the Portfolio

5.2 As of March 2016, WLSIF has made eleven individual investments, including two follow on investments, which provided investment capital to eligible Life Science businesses. Our review has indicated that the Fund’s investments are all focussed on eligible sectors within the bio -technology, medical technology, pharmaceuticals and sector specific software and supply chains.

Figure 5.1 Size of Initial and Follow on Investments



Source: Drawdown documents received for individual investments

5.3 The eleven individual investments (across the nine businesses) vary in size from a £600,000 investment to a £10m investment. The three largest investments in Simbec-Orion, ReNeuron and Proton Partners, together make up almost 60% of the Fund investment value. These three investments were outside the relevant IOG on size of investment¹³ and required permission from Finance Wales and Welsh Government. The follow-on investment in ReNeuron also required permission from Finance Wales and Welsh Government as it involved a total investment in excess of 10% of the total fund value¹⁴ (with the £10m investment equating to 20% of the £50m fund value).

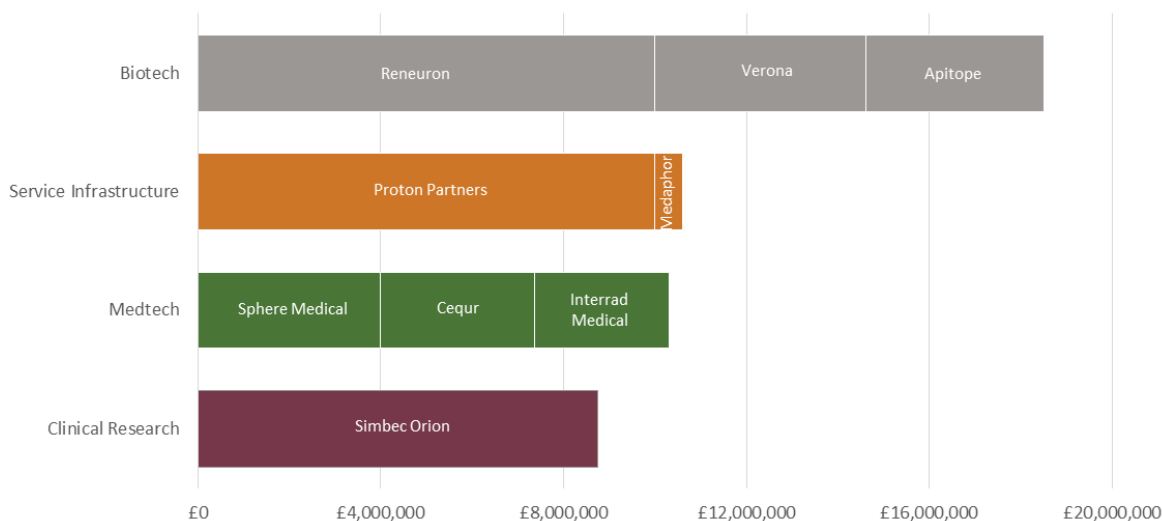
5.4 The Fund is currently in its fourth year of operation and has invested a total of £48.8m to date with the majority of investments taking place in the Fund’s third year of operation. Two thirds (65%) was invested in five separate companies between February 2015 and September 2015.

¹³ That is, investments in SMEs should be in the range of £0.25m and £5m, with any proposed investment outside of this range to be agreed with the Holding Fund and the limited partner

¹⁴ That is, the maximum investment in an SME, including follow-on investment, should not exceed 10% of the total fund size.

5.5 Almost 40% of the Fund is invested in biotechnology companies which are typically considered high risk investments in capital intensive businesses. Over 20% of the Fund is invested in companies that provide service infrastructure to the life sciences sector, with the largest single investment made in a newly established company that is developing and operating at least three proton beam therapy treatment centres in the UK. The remainder of the portfolio is composed of medium risk medical technology companies and low risk clinical research organisation investments.

Figure 5.2 Sector Breakdown by Investment Size



Source: Drawdown documents received for individual investments

- 5.6 In order to maintain a diversified portfolio and spread of risk, ALS proposed to ensure its investments vary by risk profile and sub-sector by implementing a matrix approach to risk management as set out in the table below.
- 5.7 In terms of the extent to which the portfolio meets the IOG on stage of company development, the balance is more heavily concentrated on start and early stage companies than expansion. These represent 59% of the investment compared to the IOG target¹⁵ of 40%. This has potential implications for the risk profile of the portfolio and the scale of the requirement for follow-on finance.
- 5.8 In practice, the actual investments have been more focussed in the higher and lower ends of the risk spectrum than originally forecast in the risk matrix, but nevertheless with a reasonable spread overall. The lower risk investments made in service infrastructure companies are expected to act as an attractor for other prospective Life Sciences companies to Wales, although the direct economic development and commercialisation benefits attributable to these investments are likely to be less significant.

¹⁵ That is, a requirement for approximately 40% of investments (by monetary value) to be in seed and start-up capital and 60% in expansion capital. We have included Proton, ReNeuron, Verona Pharma and Apitope as start-up or early stage businesses.

Subsector	Profile	Capital Allocation Forecasts	Investments to date	Business Stage
High Risk	Highly capital intensive businesses and very early stage investment. Exit is likely to be before revenue is generated.	Target returns 10x+ 35%	ReNeuron Group PLC Verona Pharma Apitope £18.5m invested	Early stage Early stage Early stage
Medium Risk	Capital intensive, early stage and often pre-revenue or pre-cash generation stage. Risks include a combination of product development risks and commercialisation risks.	Target returns 5x+ 32%	MedaPhor Interaad Sphere Medical CeQur £10.9m invested	Later stage Later stage Later stage Later stage
Low Risk	Risks are more commercial than IP dependent. These may include growth or acquisition capital/divestment opportunities.	Target returns 3x+ 32%	Simbec Orion Proton Partners £18.8m invested	Later stage Later stage Start-up

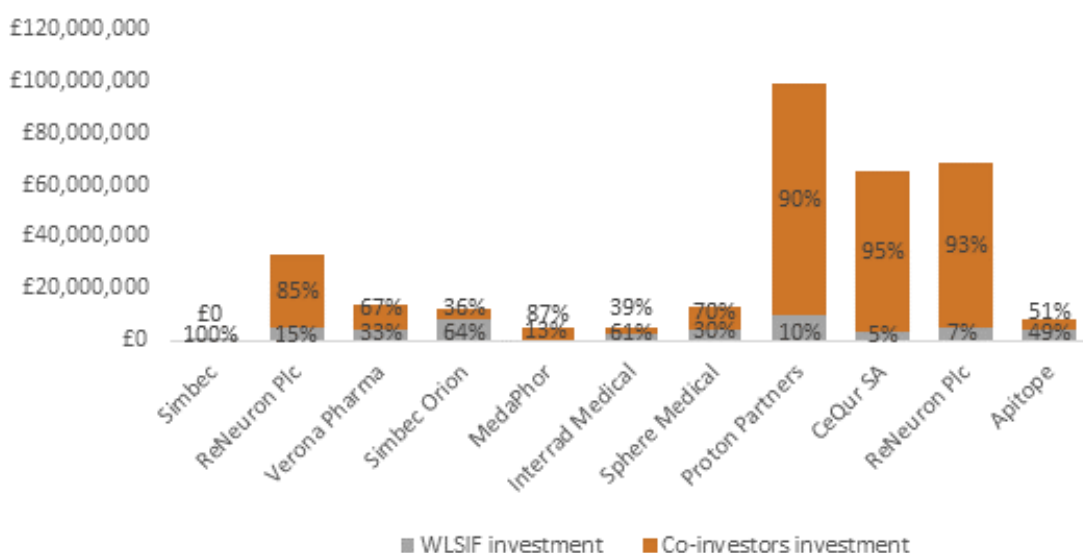
Source: Fund Monitoring Portfolio Risk Table, March 2015

- 5.9 The concentration of a significant proportion of the overall investment in three companies is however a potentially significant risk (i.e. Simbec-Orion, ReNeuron and Proton Partners together make up almost 60% of the investment value). This would be an unusual degree of concentration for most equity based investments funds, but especially for a public sector backed fund where there is a greater incentive to spread investment more widely to achieve desirable economic development benefits. However, two of these investments are considered to be relatively low risk:
- Proton Partners – due to there being no particular regulatory risks and the prospect of service supply into the NHS;
 - Simbec-Orion – the merged company, specialising in early and later stage clinical trials, has an established track record and the scope to build a strong market presence following the acquisition of Orion by Simbec.
- 5.10 Four of the nine investee companies were AIM listed at the time of investment, contributing to 45% of the overall portfolio. While the IOGs were amended in March 2014 to allow the Fund to invest in publically listed companies, such a large investment in AIM listed companies does raise the question as to the precise extent to which some of these WLSIF investments were addressing identified market failure in provision of finance in these cases. However, even if the investment is not addressing a market failure, there can be justification on the basis of the economic development benefits they can secure (for example, as is the case with ReNeuron).
- 5.11 We would not expect see WLSIF investing in AIMs listed companies which are already operating in Wales as this would indicate the absence of both a finance market failure and an inward investment rationale. A review of the investments confirms that this has not been the case.
- 5.12 Two thirds (67%) of the investments have been in companies that did not have a presence in Wales at the point of investment. Our discussions with ALS suggest that there has been no shortage of

good quality investment propositions from companies within Wales but a number have fallen at the final hurdle. ALS does not believe there are any systematic reasons for this, although a lack of realism around the company value was cited as being common place. There is of course the potential for suitable local seed and early stage companies to receive investment in the future should additional private sector investment to the Fund be secured. Also, it is important to note that the attraction of UK and international firms to Wales represents a significant inward investment opportunity to help promote and develop the Welsh Life Sciences Sector.

- 5.13 While the Fund has been unsuccessful in attracting co-investment at the overall fund level to date for the reasons outlined in Section 4, ALS has been very successful in attracting co-investors at the individual deal level. Ten of the eleven individual investments have been made in conjunction with private sector co-investors (see the figure below). The original investment in Simbec did not include private sector investment at the level of the deal and the State Aid implications of this are explored further in Section 5(paragraph 5.23).

Figure 5.3 Balance of WLSIF and Co-investment on a Deal Basis



Source: Drawdown documentation for individual investments

- 5.14 In the smaller sized deals (less than £15m in terms of total investment), the Fund’s investment typically makes up more than 30% of the overall deal size. The rationale given for WLSIF providing a higher proportion of the total deal investment, typically in the smaller deals in this instance, is to ensure ALS has greater influence and hence control over its investment including ensuring the delivery of economic development commitments to Wales. In the larger deals, the WLSIF investment as a percentage of overall deal size is much lower, in the range of 5% to 15%. This is much lower than is typical for public backed financial instruments providing business finance and raises a potential issue over the additionality of the finance being provided in some instances, in particular where it is not linked to securing an inward investment.
- 5.15 Where the proportionate level of WLSIF’s investment in the deal is much lower, direct influence is typically lower although this in practice depends on the specific composition of the deal, the precise interests of other investors and cooperation between investors.

Rationale for Individual Investments

- 5.16 Details on the eleven individual investments are outlined in the table below together with an indication of the commercial, economic development and market failure rationales given for the individual deals. This information has been gathered through analysis of term sheets, investment proposal documentation and performance reports provided by ALS and Finance Wales.
- 5.17 The analysis suggests that many of the investments appear to perform well on the basis of all three criteria. In a number of cases (e.g. Interrad and Verona) the extent of market failure affecting the ability of these companies to secure business finance from the market is questionable. However, the provision of finance through WLSIF was important in securing their investments into Wales (although we have not directly tested this as part of this review).
- 5.18 Further details on the eleven individual investments are outlined below, together with an assessment of the appropriateness of each investment in terms of meeting the Fund's IOGs, ensuring market failure was addressed and the commercial and economic development rationale.

Simbec and Simbec-Orion

- 5.19 Summary statistics for Simbec, a contract research organisation (CRO) specialising in early stage clinical research services, are outlined in the table below. An initial investment of £750,000 was made in Simbec in April 2013 followed by a second investment of £8,000,000 fourteen months later to fund the acquisition of Orion, a specialist in late stage clinical development.

Table 5.2 Company and Deal Information

Company Information		
Business Activities	Early stage clinical studies and trials in therapeutics. Since merging with Orion it now does both early and late stage trials.	
Sector	Clinical research	
Year established	Simbec research founded in 1976. Simbec-Orion formed in 2013.	
Turnover (at deal date)	£6,900,000	
Latest Turnover	£13,200,000. Following merger with Orion it is expected that FY15 turnover will be in the region of £25m	
Location of head office	Merthyr Tydfil, Wales. Orion has locations in Paris and Oxford	
Deal Information	Initial Deal	Follow On
Date	Apr-13	Jun-14
Total Deal Size	£750,000	£12,500,000
WLSIF Investment	£750,000 (100%)	£8,000,000 (64%)
Significant Co-investors	None	HSBC

- 5.20 The initial Simbec investment was as a result of a quick fire sale by its parent company Kilmer Capital Partners, a private equity firm based in Ontario, Canada. Simbec former owners acquired the company with an equity and loan note investment from the Wales Life Science Investment Fund.
- 5.21 Although the company was already operating in Wales, the deal was seen as an opportunity to bring the ownership of the company back to Wales and safeguard jobs in Merthyr Tydfil. It was also seen as attractive from a commercial perspective given the growth opportunities it represented through the leverage of ALS's networks.

Review of the Wales Life Science Investment Fund

Table 5.3 Investment Summary

Company	Date of Investment	Amount	Total Deal Size	IOGs met?	Commercial Rationale	Economic Development & Wales Rationale	Market Failure Rationale
Simbec	Apr-13	£750,000	£750,000	Yes.	Attractive growth opportunity. Aim of an exit in c5 years via a trade sale.	Bringing ownership of company back to Wales. Safeguarding jobs.	Unclear as company already had bank loan in place, pointing to availability of finance from public sector.
ReNeuron Plc	Aug-13	£5,000,000	£33,200,000	Not at time as AIM listed before IOGs were amended in March 2014. But Welsh Govt approved variation from IOG.	Attractive growth opportunity. Exit via public sale at attractive valuations.	Bringing an existing business to Wales. Head office and operations to move to Wales creating jobs.	AIM listed suggesting tried and tested access to commercial finance markets. But case on basis of inward investment into Wales.
Verona Pharma	Mar-14	£4,620,000	£14,000,000	Yes	Attractive growth opportunity. Attractive valuations.	Bringing an existing business to Wales. Head office to move to Wales and clinical trials to be carried out in Wales.	AIM listing suggests tried and tested access to commercial finance markets. But case made on basis of inward investment into Wales.
Simbec-Orion	Jun-14	£8,000,000	£12,500,000	No. Overall investment including follow-on more than 10% of existing fund size. But Welsh Govt approved deviation from IOG.	Attractive acquisition opportunity for Simbec. Opportunity to expand into new markets and achieve new efficiencies.	Potential growth benefits in Wales from merged company extending service offer and client base. Scope for relocation of jobs from other Orion locations is unclear.	Non-listed company. Evidence of difficulties in attracting private sector investment.
MedaPhor	Aug-14	£600,000	£4,700,000	Yes	Attractive valuations. Investment to support floatation on AIM.	Growth of an existing Welsh business. Safeguarding jobs and creating new jobs.	Focus on pre-IPO funding suggest ability to source necessary finance from commercial finance markets. But earlier FW investment points to finance market failures.

Review of the Wales Life Science Investment Fund

Interrad Medical	Nov-14	£2,950,000	£4,687,500	Yes	Exit expected in 5 years' time. Capable management.	Enabling the establishment of an established US company in Wales, but limited short to medium term job creation.	Successful private placement demonstrates the company's ability to access finance from capital markets. But case for investment on basis of inward investment into Wales.
Sphere Medical	Apr-15	£4,000,000	£13,200,000	Yes	Attractive valuations. Opportunity for scale up of operations to support growth.	Bringing an existing business to Wales. Manufacturing to move to Wales creating employment.	AIM listed company suggesting tried and tested access to commercial finance markets. But case made on basis of inward investment into Wales.
Proton Partners	Jun-15	£10,000,000	£99,000,000	No. Greater than £5m and more than 10% of existing fund size. But Welsh Govt approved variation from IOG.	Potential for significant margins. Acquisition potential. List the company in 2-3 years and exit through the public market.	Proton therapy centre to be built in Newport creating jobs, as well as establishment of the main HQ and related support functions locally.	Given potential for securing service contracts with the NHS, good potential to secure private sector funding.
CeQur SA	Aug-15	£3,360,000	£66,666,667	Yes	Exit expected in 2-3 years' time via a trade sale or potential PE takeover.	Securing the investment of an existing business into Wales.	Non-listed company.
ReNeuron Plc	Aug-15	£5,000,000	£68,400,000	No. Overall investment including follow-on more than 10% of existing fund size. But Welsh Govt approved variation from IOG.	Case made on the basis of need for WLSIF to invest in follow-on deal to prevent share dilution and ensure influence is maintained.	Unclear additional economic development benefits over and above initial investment round and WAG grant assisted investment in manufacturing facility.	Clear indication of likelihood of company receiving full investment sought in absence of WLSIF involvement.
Apitope	Sep-15	3,900,000	£8,000,000	Yes	Attractive growth opportunity as company progresses trials. Exit via IPO.	Securing the investment of an existing business into Wales.	Non-listed company.

- 5.22 From our review of the documentation, we understand that Simbec already had a bank loan in place to complete the deal with Kilmer Capital Partners. ALS had to actively negotiate their way into the deal by promoting the benefits of their extensive network of expertise. This raises the question as to the extent to which the deal addressed finance market failure (a key underpinning rationale for investments in Wales based companies), given the public sector funded a deal that the private sector was willing to take forward in the form of a loan.
- 5.23 There is also a possibility that this investment was not compliant with State Aid regulations. If the investment is considered State Aid we do not believe it meets any of the criteria for an exemption to apply. The investment is above the de minimis limit (200,000 euros) and the form of investment was in convertible loan notes rather than straight debt, therefore it is our understanding that the risk capital guidelines would apply. If this interpretation is correct, the investment would not be compliant as Simbec had been operating as a revenue generating business for longer than seven years and there is no evidence that the investment resulted in a significant expansion into new products or geographies. ALS are responsible for ensuring the State Aid compliance of their investments and they view the investment into Simbec as a loan and therefore fully compliant. Investment agreements have not been made available to us as part of the review and so this cannot be verified.
- 5.24 The second investment which was used to fund the acquisition of Orion, resulted in the WLSIF share of the company increasing from 33.3% to 87%. The £8 million investment exceeded the £5 million investment cap set in the IOGs for any one investment round. Additional concerns were raised regarding the lack of interest from other investment houses in funding this deal.
- 5.25 The follow-on deal was justified on the ability for the merged company to be a leader in both early stage and late stage clinical development and was focussed on supporting growth opportunities for Simbec. However, although the merged company would remain headquartered in Wales, the number of former Orion employees transferring to Wales as a result of the deal is unclear.

ReNeuron

- 5.26 Summary statistics for ReNeuron, a clinical stage stem cell business, are outlined in the table below. An original equity investment was made in ReNeuron of £5 million followed by a second investment of £5 million 24 months later.

Table 5.4 Company and Deal Information

Company Information		
Business Activities	A clinical-stage stem cell business. Primary activity is the development of novel stem cell therapies.	
Sector	Biotech	
Year established	1997	
Turnover (at deal date)	£17,000	
Latest Turnover	£30,000	
Location of head office	Surrey	
Deal Information	Initial Deal	Follow On
Date	Aug 13	Aug 15
Total Deal Size	£33,200,000	£68,400,00
WLSIF Investment	£5,000,000 (15%)	£5,000,000 (7%)
Significant Co-investors	Invesco, Abingworth, Welsh govt	Woodford, Aviva, Abingworth

- 5.27 The ReNeuron deal was initially made to help progress the development of the company's lead product through clinical trial phasing. The deal was classified as high risk and had to receive additional approval since it was an AIM listed company at a time when the IOGs stated that investments could only be made in non-listed companies.
- 5.28 The initial investment in ReNeuron was supported by other co-investors, as well as through a Welsh Government grant of £7.8 million to enable the completion of new offices and lab space (to be leased back by ReNeuron). The combination of a loan and grant resulted in very strong economic development benefits for Wales through the commitment to move ReNeuron's principle operations and head offices to Wales. The nature of ReNeuron's business also supports the commercialisation of IP in Wales and the possibility to create international partnerships.
- 5.29 Our documentation review suggests that the initial funding round was deemed enough to progress all R&D programmes and that if trials were unsuccessful, there would still be sufficient funds to move other programmes forward. Despite this position, an additional £5 million was requested for ReNeuron two years after the original deal was completed. This resulted in the overall investment being outside the scope of the IOG covering the maximum level of investment in a single company (i.e. max 10% of fund value).
- 5.30 The origin of the need for follow on funding is not entirely clear. ALS has indicated that this arose largely as the management team at ReNeuron wished to capitalise on a high share value by raising further finance (rather than responding to depleting cash reserves). The Investment Proposal for this follow on investment puts forward a case for further WLSIF investment on the basis that there was a need to avoid dilution and a requirement to demonstrate the Fund's credibility and to show support for ReNeuron as well as Woodford Investment Management, ALS's main co-investor. It was suggested that without the follow-on investment, the WLSIF's shareholding would be diluted and ALS's ability to influence the company's development and geographical location could be weakened.
- 5.31 The extent to which the follow-on investment was influenced by Woodford Investment Management is unclear as is the extent to which it ensured the Welsh commitments were adhered to, given the company had already stated their commitments to Wales in the initial funding round. Considering the limited investment capacity of the Fund and the lack of private sector co-investment at the Fund level, the communication of the potential requirement for future follow-on investment to the Holding Fund was poor, resulting in a rushed decision to participate in the second round of funding.

Verona Pharma

- 5.32 Summary statistics for Verona Pharma, a respiratory disease drug development company, are outlined in the table below. An investment of £4.6 million was made in Verona giving the Fund a 20.8% share in the company post investment.

Table 5.5 Company and Deal Information

Company Information	
Business Activities	Developing innovative prescription medicines to treat respiratory diseases with significant unmet medical needs, such as COPD, asthma and cystic fibrosis.
Sector	Biotech
Year established	2005
Location of head office	Wales
Other locations	London
Deal Information	
Date	Mar 14
Total Deal Size	£14,000,000
WLSIF Investment	£4,620,000 (33%)
Significant Co-investors	Aviva, Vivo Capital

- 5.33 Our documentation review and consultation evidence suggest that the investment had strong commercial and economic development rationale, bringing the opportunity to carry out clinical trials in Wales as well as creating new jobs and supporting the commercialisation of IP.
- 5.34 The investment was within the scope of the IOGs, although the market failure rationale for the investment may be questionable given the company was AIM listed.

MedaPhor

- 5.35 Summary statistics for MedaPhor, a company responsible for the manufacture of virtual simulation training for medical imaging, are outlined in the table below. A small investment of £600,000 was made in MedaPhor to help fund the flotation of the company on AIM.

Table 5.6 Company and Deal Information

Company Information	
Business Activities	Manufacture virtual simulation training for medical imaging
SIC Code	72190
Sector	Medical technology
Year established	2004
Turnover (at deal date)	£1,000,000
Latest Turnover	£1,800,000
Location of head office	Cardiff
Other locations	San Diego, US
Deal Information	
Date	Aug 14
Total Deal Size	£4,700,000
WLSIF Investment	£600,000 (13%)
Significant Co-investors	Finance Wales, IP Group

- 5.36 The MedaPhor investment was used to fund the flotation of the company on AIM. It was classified as a medium risk investment by ALS with the company focussed on providing service infrastructure

to support the Life Sciences industry. However, in the context of the portfolio, this would seem to be one of the lower risk investments.

- 5.37 While it is reasonable to assume that the expansion of MedaPhor may act as an attractor for other prospective Life Sciences companies, the direct economic development benefits and commercialisation of IP are likely to be less significant than in other companies dedicated to clinical trials and drug development. Moreover, it seems reasonable that the company could attract private sector investment and the rationale for public sector intervention is weaker than for other investments.

Interrad Medical

- 5.38 Summary statistics for Interrad Medical, a US company responsible for the development and manufacture of medical devices, are outlined in the table below. An investment of £3 million was made in Interrad to help fund the establishment of a European headquarters in Wales.

Table 5.7 Company and Deal Information	
Company Information	
Business Activities	Developer and manufacturer of SecurAcath, a medical device used for the insertion catheters.
Sector	Medtech
Year established	2004
Turnover (at deal date)	£500,000
Location of head office	Minneapolis
Deal Information	
Date	Nov 14
Total Deal Size	£4,807,692 ¹⁶
WLSIF Investment	£2,950,000 (61%)
Significant Co-investors	Undisclosed

- 5.39 The US based company committed to lease office space in the Wales Life Science Hub which was viewed as confirming the position of the Hub at the centre of the growing and prosperous Life Science sector in Wales. It was also viewed as improving the perception of the Life Science sector in Wales more generally and illustrating its global reach.
- 5.40 The IOGs were adhered to for this investment although the market failure rationale for the investment is once again questionable given the company successfully raised finance from capital markets at the time of investment.
- 5.41 From our documentation review, the economic development commitments to Wales were vague in wording and not explicitly committal, leaving room for negotiation and later push backs. While the investment can be viewed positively from a promotional perspective, the commitment to appoint just one member of staff to work from the Hub, with additional commitments unclear, makes the £3 million investment questionable in economic development terms on the basis of the evidence we have seen and heard.

¹⁶ \$7,500,000 converted @ GBP/USD 1.56

Sphere Medical

- 5.42 Summary statistics on Sphere Medical, a UK based medical devices firm, are outlined in the table below. An investment of £4 million was made in Sphere Medical to help fund the commercial exploitation of the company's lead product.
- 5.43 Our documentation review suggests that the deal was commercially attractive. The IOGs were adhered to for this investment although the finance market failure rationale for the investment is once again questionable given the company was AIM listed at the time of investment. However, the prospect of substantial economic development benefits given its headquarters and manufacturing facilities would be relocating to Wales as a result of the deal was a strong justification.

Table 5.8 Company and Deal Information	
Company Information	
Business Activities	Development of medical monitoring and diagnostic equipment
Sector	Medtech
Year established	2001
Turnover (at deal date)	£10,000
Latest Turnover	£10,000
Location of head office	Cambridge
Other locations	St Asaph Wales (post investment)
Deal Information	
Date	Apr 15
Total Deal Size	£13,200,000
WLSIF Investment	£4,000,000 (30%)
Significant Co-investors	LSP Life Sciences fund, Ortho Clinical Diagnostics, Herald Investment Management

Proton Partners

- 5.44 Summary statistics on Proton Partners, the owner of private proton therapy centres for cancer treatments, are outlined in the table below. An investment of £10 million was made in Proton Partners, a company originally founded by Professor Karol Sikora, former head of the World Health Organisation's cancer programme, Sir Chris Evans, and Neil Woodford, founding partner of Woodford Investment Management.

Table 5.9 Company and Deal Information

Company Information	
Business Activities	Operation of private Proton therapy centres for cancer treatments. Chemo and radiotherapy will also be offered.
Sector	Medtech
Year established	2015
Location of head office	Cardiff, Wales
Other locations	Three proton beam centres to be built in Wales, Newcastle and London
Deal Information	
Date	Jun 15
Total Deal Size	£99,000,000
WLSIF Investment	£10,000,000 (10%)
Significant Co-investors	Woodford Investment Management, Polygon Global

- 5.45 The investment in Proton Partners was made to support the construction of new proton beam therapy centres in the UK, one of which would be located in Wales.
- 5.46 The £10 million investment was outside of the £5 million cap outlined in the IOGs with the advantages of investing the full £10 million questioned by Finance Wales. Our documentation review suggests that if only £5 million was to be invested in the deal, the therapy centre would still be located in Wales but commitment to locate the company HQ in Wales would not be secured. In addition, the training and education opportunities associated with the deal would be lost resulting in less job creation.
- 5.47 From a commercial perspective, our documentation review suggests that the investment rationale is strong with potential for significant margins to be made in a fast growing market with acquisition potential. However, given the nature of the market the company is operating in, the need for public sector funding to address market failure is questionable given the possibility of the NHS providing the facilities in the absence of private sector investment.

CeQur

- 5.48 Summary statistics on CeQur, a developer of drug delivery services for diabetics, are outlined in the table below. A £3.4 million investment was made in CeQur to scale up the manufacturing capacity, ready for a commercial product launch.

Table 5.10 Company and Deal Information

Company Information	
Business Activities	Developing and commercialising drug delivery devices for people with type II diabetes
Sector	Biotechnology
Year established	2008
Location of head office	Switzerland
Other locations	USA, Denmark
Structure	Swiss headquartered company with subsidiaries in Denmark and Massachusetts
Deal Information	
Date	Aug 15
Total Deal Size	£65,400,000 ¹⁷
WLSIF Investment	£3,360,000 (5%)
Significant Co-investors	Woodford Investment Management, Endeavour II LP

- 5.49 The investment was within the IOGs and appeared to be attractive from a commercial and promotional perspective, offering the potential to bring clinical trials to Wales.
- 5.50 However, given the Fund was almost fully invested at the time of the deal (August 2015), questions were raised by Finance Wales regarding the appropriateness of the investment and whether or not additional funds would need to be committed to allow the investment to go ahead. From our documentation review it appears that the deal was strongly promoted by ALS on basis of negative implications for the relationship with one of the Fund's main co-investor, Woodford Investment Management.

Apitope

- 5.51 Summary statistics on Apitope, a drug development company for autoimmune conditions are summarised below. A £3.9 million investment was made in Apitope to enable the company to progress work on its therapies and fund clinical trials.

Table 5.11 Company and Deal Information

Company Information	
Business Activities	Drug development and clinical trials for autoimmune conditions
SIC Code	72110
Sector	Biotech
Year established	2002
Location of head office	International HQ Belgium, UK HQ in Bristol
Deal Information	
Date	Jun 15
Total Deal Size	£8,000,000
WLSIF Investment	£3,900,000 (49%)
Significant Co-investors	Vesalius Biocapital, LRM, PMV, Wyvern

¹⁷ \$100m converted @ GBP/USD 1.5

- 5.52 The commercial rationale for the deal was strong given the drug’s tangible benefits over current market standards. The company would be required to move its Bristol operations to Wales as a result of the deal which would enable it to partner with Simbec to conduct up-coming clinical trials.
- 5.53 Our documentation review suggests a need for additional follow on investment with the proposed funding capital only expected to last 30 months. The need for follow on investment is discussed in more detail below.
- 5.54 As was the case with the Apitope deal, given the Fund was almost fully invested at the time of the deal (August 2015), questions were raised by Finance Wales regarding the appropriateness of the investment and whether or not additional funds would need to be committed to allow the investment to go ahead. Once again it appears that the deal was pushed through on fears of reputational damage to Arthurian and the WLSIF and potential negative implications for relationship between Arthurian and Woodford Investment Management.

Portfolio Performance and Valuation Method

- 5.55 The target net IRR set in Finance Wales’ ODP was 10% whilst the target set out in ALS’s proposal was 21-26%. The following table outlines the Gross IRR as of 31 March 2015 based on audited accounts and 30 June 2015 based on unaudited accounts. The individual IRRs for Apitope and CeQur are unavailable given the more recent investment into these companies. The gross IRR was calculated as 24% at the end of March and 43% at the end of June, exceeding the original lifetime targets. The most successful investments to date include two of the high risk investments in ReNeuron and Verona and in the lower risk Simbec investment.

Table 5.12 Valuations of the Portfolio

Name	Audited performance to 31 March 2015				Unaudited performance to 31 June 2015			
	Investment	Fair Value	Multiple	Gross IRR	Investment	Fair Value	Multiple	Gross IRR
ReNeuron	£5m	£7.2m	1.4x	24%	£5m	£10.3m	2.1x	44%
Verona	£4.6m	£6.2m	1.3x	31%	£4.6m	£10.9m	2.4x	92%
Interrad	£2.9m	£3.3m	1.1x	49%	£2.9m	£3.1m	1.1x	15%
Sphere					£4m	£4.4m	1.1x	72%
MedaPhor	£0.6m	£0.7m	1.2x	26%	£0.6m	£0.7m	1.2x	20%
Proton					£10m	£10m	1.0x	0%
Simbec	£0.8m	£1.6m	2.1x	47%	£0.8m	£1.6m	2.1x	41%
Orion	£8m	£8.6m	1.1x	10%	£8m	£8.8m	1.1x	10%

- 5.56 Since the last available valuation there has been some movement in the value of investments and indeed in the life sciences sector as a whole. For the purpose of this review we do not have the information available to run a full valuation of the portfolio. The table above shows the valuation of listed companies as of 31st March 2016.
- 5.57 For investments made in non-listed companies we have not completed a valuation as part of this review. However, given that we are unaware of any material changes since the last valuation undertaken by ALS we assume that the valuations made as part of that exercise are not substantially different. For the subsequent investments in CeQur SA and Apitope we have assumed that the value of these companies has stayed constant since initial investment. If this is the case, the overall investment multiple of the portfolio would currently stand at around 1.09x and the IRR at 11%. Given the availability of information a simplistic method has been used to calculate IRR that only considers the initial capital cost of the investment and the valuation as of March 2016 as described above. No account has been taken for any operational costs or any cash flows that may have occurred since the investment.

Table 5.13 IRR of the Portfolio

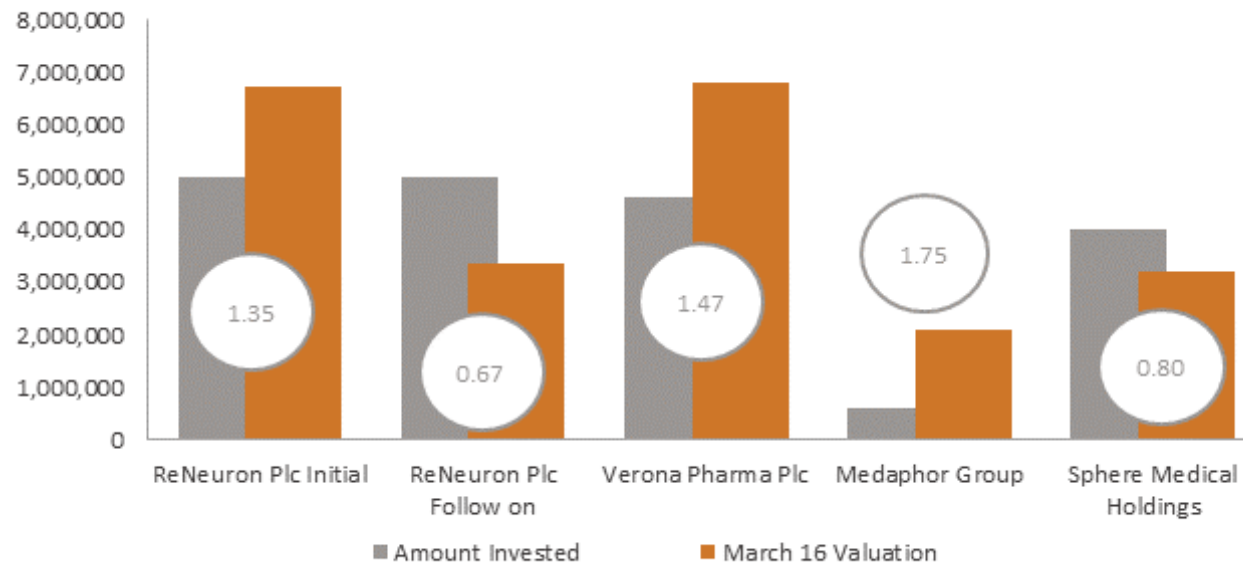
	AIM Listed	2013	2014	2015	2016	IRR
Simbec	No	-£0.75m	-	-	£1.58m	28%
ReNeuron Plc Initial	Yes	-£5m	-	-	£6.73m	10%
ReNeuron Plc Follow On	Yes	-	-	-£5m	£3.37m	-33%
Verona Pharma Plc	Yes	-	-£4.62m	-	£10.79m	53%
Simbec Orion	No	-	-£8m	-	£8.79m	5%
Medaphor Plc	Yes	-	-£0.6m	-	£2.1m	87%
Sphere Medical Holdings	Yes	-	-	-£4m	£3.19m	-20%
Interrad Medical Inc	No	-	-£2.89m	-	£3.16m	5%
Proton Partners International Ltd	No	-	-	-£10m	£10m	0%
CeQur	No	-	-	-£3.38m	£3.38m	0%
Apitope	No	-	-	-£3.9m	£3.9m	0%
Portfolio		-£5.75m	-£16.11m	-£26.28m	£26.28m	11%

- 5.58 This suggests that the Fund is broadly on target against the lifetime IRR target for the fund of 10% but significantly below the IRR of 44% reported by ALS at the end of June 2015. To some extent the downward movement since June, which coincides with a more general drop in value in the life science sector, demonstrates how values can fluctuate in the short term. It would be unfair to conclude that the most recent valuations demonstrate underachievement against the original target as the WLSIF is a longer term investment vehicle. At this stage it is too early in the life of the fund to draw any firm conclusions on portfolio performance.
- 5.59 The LPA agreement sets out the valuation procedures that should be used in valuing the portfolio. It states that investments are to be valued by reference to the British Venture Capital Association guidelines. Where an investment is not-listed, various methods of valuation can be used including price to earning valuations, recent transaction values, net asset valuations, yield basis and impending exit. For listed investments, a mid-market price is suggested but it is acknowledged that sometimes there may be a necessity to discount this price.
- 5.60 A documentation review of the annual report and financial statements for the year ending 31 March 2015 confirms that in the opinion of the appointed independent auditors (PWC), the Wales Life Science Investment Funds financial statements adhered to these valuation methods. The financial statements are confirmed to:
- give a true and fair view of the state of the limited partnerships affairs as at 31 March 2015 and of its profit and cash flows for the year there ended
 - have been properly prepared in accordance with the United Kingdom's Generally Accepted Accounting Practice
 - have been prepared in accordance with the requirements of the Limited Partnership Agreement.

Review of the Wales Life Science Investment Fund

Table 5.14 Valuation of Listed Companies Within WLSIF Portfolio

Investee	Amount invested £m	Shares Purchased	March 15 Valuation £m	Investment Multiple	June 15 Valuation £m	Investment Multiple	March 16 Valuation £m	Investment Multiple
ReNeuron Plc – Initial	5.00	2,000,000	7.20	1.44	10.26	2.05	6.73	1.35
ReNeuron Plc – follow-on	5.00	1,000,000	N/A		N/A		3.37	0.67
Verona Pharma Plc	4.62	210,000,000	6.17	1.34	10.79	2.34		
		207,500,000 ¹⁸					6.80	1.47
Medaphor Group	0.60	1,200,000	0.71	1.18	0.68	1.14	2.10	1.75
Sphere Medical Holdings	4.00	25,000,000			4.34	1.09	3.19	0.80
Totals	19.22		14.08	1.38	26.08	1.83	22.18	1.15



¹⁸ Since making their initial investment, the ALS sold 2.5m shares in the company therefore the latest shareholding is 207.5m as opposed to the original 210m.

Approach to Maximising Returns

Arthurian take an active approach to portfolio management, appointing at least one non-executive director to each company they have invested in. The director often has an active role in the company (at least in the context of their NED role), and depending on the WLSIF shareholding can have the power to reappoint senior management and influence strategic decisions within the company. It is worth noting that our consultation evidence suggests that even when ALS is not the largest shareholder, they often have significant influence with the co-investors they brought into the deal, resulting in more power to influence decisions and on-going management. The appointed NED from the ALS executive team and investment committee are outlined in the table below on a company by company basis.

Table 5.15 ALS Non-Executive Director Appointments to Investee Company Boards

Investee Company	ALS- appointed director
Simbec/Orion	Sir Chris Evans Prof Trevor Jones (Chair) Brenig Preest (Observer)
ReNeuron plc	Sir Chris Evans
Verona Pharma plc	Prof Trevor Jones Sir Chris Evans (observer)
MedaPhor plc	David Baynes
Interrad Inc	Martin Walton
Sphere Medical Holdings	Brenig Preest
Proton Partners	Sir Chris Evans
CeQur	Brenig Preest
Apitope	Brenig Preest

Source: ALS

- 5.61 An example of where ALS has actively exerted their influence over an investee company is in ReNeuron. The decision was taken to restructure the executive and non-executive teams as the company evolved into its next stage of development. Four members of senior management were reappointed and three changes were made at the executive management level.

Follow-on Investment Requirement

- 5.62 As of September 2015, the Fund had fully invested the £50 million commitment provided by the Welsh Government at the launch of the Fund. An additional £3 million loan was also provided in August 2015, to help finance the investments in CeQur and Apitope, given the cash flow constraints of the Fund as it was nearing investment capacity.
- 5.63 Our documentation review suggests that many of start-up and early stage companies within the portfolio are likely to require follow-on investment in the future as they continue to develop products through clinical trials, expand into new markets and grow through acquisitions.
- 5.64 In the short term, the documentation review suggests that CeQur may require additional funding in 2017 once regulatory approval has been sought for its product and Apitope and ReNeuron may require additional funding in 2018.
- 5.65 Our documentation review of previous requests for follow-on investments suggest that Arthurian believe that if no further money is available to fund follow-on investors, Arthurian

will lose its ability to actively maintain the position of ‘lead investor’ and the ability to exercise any power over other co-investors. The argument is made that with a diluted shareholding, the ability to influence the company’s direction and strategic developments and maintain the geographical links with Wales would be weakened.

Summary

- 5.66 Key characteristics of the portfolio include:
- Eleven investments in nine companies, varying in size from a £600,000 investment to two £10m investments.
 - The three largest investments have been in Simbec-Orion, ReNeuron and Proton Partners, which together make up almost 60% of total investment.
 - Two thirds (65%) of the total investment to date was invested in five separate companies between February 2015 and September 2015.
 - Four of the nine investee companies were AIM listed at the time of investment, contributing to 45% of the overall portfolio.
 - Two thirds (67%) of the investments have been in companies that did not have a presence in Wales at the point of investment.
- 5.67 An analysis of the commercial, economic development and market failure rationales for the individual deals suggests that many of the investments appear to perform well on the basis of all three criteria. In a number of cases there was probably no or very limited market failure affecting the ability of these companies to secure business finance from the market, with the AIMs listed companies illustrates this. Nevertheless, the provision of finance through WLSIF appears to have been very important in securing these investments for Wales (although we have not directly tested this as part of this review). This does however need to be examined in more detail in order to provide Welsh Government with the reassurance that the Fund is operating in a way that provides additionality and hence value for money.
- 5.68 Compared to ALS’s initial investment strategy the risk profile is more focussed in the higher (e.g. biotechnology) and lower (e.g. clinical research and other support services) ends of the risk spectrum, with less investment in medium risk areas (e.g. medical devices). Whilst the portfolio appears to be less risky than we might expect for a public sector backed fund addressing failure in finance markets, this is partly a consequence of the Fund Manager operating in a very commercial manner and investing in a number of companies which do not appear to be adversely affected by failures in the market for business finance.
- 5.69 The Fund’s IOGs were initially defined quite narrowly to ensure the Fund Manager invested in line with the objectives of the Fund. They have subsequently been revised as some of the investments that ALS wished to make were outside of the original IOGs. The IOGs were revised following discussion between ALS, the Welsh Government and Finance Wales. In spite of the revisions, a number of investments that the Fund has made are outside of the updated IOGs. This is primarily associated with the size investment (in excess of £5m and concentration of the investment being more than 10% of fund value). The agreement of the Welsh Government was required to enable these investments which are outside of the revised IOGs. The IOGs are a core part of the governance of the Fund which provides a clear investment framework to the Fund Manager and assurance to the investors. Whilst the flexibility which has been shown on the part of Welsh Government may have allowed ALS to make what may prove to be good investments, it has led to a very high concentration of the overall investment in just three companies (although two of these investments are in companies which are operating in relatively low risk activities).

- 5.70 As set out in paragraph 5.23, there is the possibility that the initial Simbec investment was not compliant with State Aid regulations due to the nature of the deal providing convertible loans into a long established business. The State Aid position in respect of convertible loan note investments is not entirely clear. ALS are responsible for ensuring the State Aid compliance of their investments and they view the investment into Simbec as a loan and therefore compliant. The position needs to be clarified by ALS.
- 5.71 Our review of documentation suggests the approach to portfolio valuation is appropriate and consistent with the requirements set out in LPA. ALS's latest available estimate of the gross IRR was 44% at the end of June, significantly above the original targets. However, the estimate is heavily influenced by the timing of the valuation given the share values of the largest AIMs listed companies (ReNeuron and Verona) within the portfolio. We estimate that the overall investment multiple of the portfolio currently stand at around 1.09x and the IRR at 11%.
- 5.72 This suggests that the Fund is broadly target against the lifetime IRR for the fund of 10% but significantly below the IRR of 44% reported by ALS at the end of June 2015. To some extent the downward movement since June, which coincides with a more general drop in value in the life science sector, demonstrates how values can fluctuate in the short term. It would be unfair to conclude that the most recent valuations demonstrate underachievement against the original target as the WLSIF is a longer term investment vehicle. At this stage it is too early in the life of the fund to draw any firm conclusions on portfolio performance.
- 5.73 ALS take an active approach to fund management, appointing at least one non-executive director to each company they have invested in and working closely with the management team. They have secured strategy and operational changes in a number of their portfolio companies, in order to drive longer term business value. Even where ALS is a minority investor in a deal, they often have significant influence with the co-investors where they have brought them into the deal, resulting in more power to influence decisions and on-going management.

6. Review of Systems and Procedures

- 6.1 This section provides an overview of the review of the systems and procedures ALS has put in place to guide the investment and processes. This draws upon the following research strands:
- A desk based review of the Fund documents which set out the design of the systems and procedures underpinning the investment process.
 - Discussions with various members of the ALS team to clarify how the various aspects of the investment process have worked in practice.
 - Review of documents for a sample of investments to understand the nature of information collected and held at different stages in the investment process. This covered the initial and follow on investment into ReNeuron, the original Simbec and subsequent Simbec-Orion deal and the investments in Proton Partners, Interrad and Apitope.
- 6.2 The review sought to understand how the investment process works in practice and the various procedures that ALS follow to identify and develop deals, make investment decisions and subsequently manage and monitor the progress of investments. Given that ALS is a relatively small organisation, and bearing in mind that the WLSIF was never expected to make a large number of investments, we would not expect there to be a rigid set of procedures, guidelines and objective criteria in place to guide the investment process. In line with this, the processes that ALS has put in place rely on the industry experience and professional judgement of their executive team and effective communication within ALS and external stakeholders.
- 6.3 Given that the process is a relatively fluid one, we have not described each stage of the process in detail here. The analysis presented in this section seeks to highlight the areas of the process which could be strengthened for the benefit of the Fund's operation and impact.

Identification and Shortlisting of Prospects

- 6.4 ALS report that their work to promote the Fund and generate a flow of potential deals has led them to receive a regular flow of investment proposals and business plans. The two-stage process that ALS describe to narrow these down into a manageable number of propositions appear sensible. An initial screening process serves to quickly remove prospects that do not have an obvious fit with the Fund's objectives and IOGs. The second more detailed stage, often involving some initial dialogue with potential investees, allows the team to delve more deeply into some proposals to more fully assess their merits and test how amenable companies might be to investment conditions relating to realising benefits in Wales.
- 6.5 The initial filtering and evaluation process is critical in ensuring that time spent developing potential deals is challenged towards those deals with the strongest fit to the Fund's objectives. This two stage process appears effective in guiding ALS to potentially investable propositions, although there are a number of areas in which the approach might be strengthened.
- 6.6 The relative weight attached to commercial and economic development benefits within the filtering process is not wholly clear. We understand that prospects do not proceed without a clear indication that their might be *some* benefit to Wales but the extent to which the scale of this potential benefit has been a factor how proposals have been prioritised is not clear.
- 6.7 The role that the IOGs and State Aid rules have played in the filtering process is also unclear. We would expect an initial screening process to automatically remove most prospects which

do not obviously fit with the Fund's objectives, where the deal would lie outside of the IOGs (although there would be some instances where this is not clear at the time or even if they are there might be merit in considering further) or are inconsistent with State Aid rules. The eventual spread of investments made and the need to request authorisation from the Welsh Government to make investments outside of the IOGs suggests that the initial filtering and evaluation process was not applied rigidly in this regard. While it is important to note that it may only become clearer later in the process that an investment is outside the scope of the IOGs, the compliance of prospective deals with State Aid rules is likely to be more clear cut early in the process. We have noted elsewhere the possibility that a deal was not State Aid compliant.

Deal Development

- 6.8 Once a prospect is deemed to have a potential fit with the objectives of the Fund, ALS has proceeded to negotiate and build the deals whilst conducting their technical and commercial due diligence in parallel. These two streams of activity, when successful, culminate in the preparation of an Investment Proposal, which is circulated amongst the Investment Committee for consideration.
- 6.9 As part of the negotiation process, ALS seek to secure firm commitments from investing companies to provide reassurance about the scale of Welsh benefit that the investments will provide. Evidence from the review indicates that ALS has had mixed results in this regard. Although Investment proposals contain an overview of the potential benefits that each deal offers to Wales, the focal points are the technical and commercial aspects of the investments. The commercial and technical elements of the deal are rightly at the centre of the investment decision but given the nature of the Fund's objectives, the potential benefits to Wales should have equal weight within the investment decision. The sample of Investment Proposals reviewed suggests that the strength and scale of the commitments to Wales varies substantially in relation to:
- **Strength of Commitment:** on the one hand, the Welsh benefits are a large focus point for ReNeuron, whilst other investments (such as Interrad) contain light touch (and potentially challenging to enforce) commitments to Wales.
 - **Scale of Commitment:** the Investment proposals suggest that all investments into Wales have equal merits. The approach would benefit from an assessment of the scale of the benefits on offer to Wales in the context of the size of the WLSIF investment being proposed.
- 6.10 At the same time, and given that WLSIF is a public sector backed fund, it is important to carefully consider the case for *public sector backed* investment into these companies. This aspect of the case for investment has not received as much attention in the documentation as it might have. While each business case outlines the potential benefits to Wales the analysis would benefit from a more carefully considered and evidenced assessment of the specific role that the WLSIF investment would play in bringing these benefits to Wales and the extent to which these investments would bring benefits to Wales that would otherwise not materialise. This is particularly important for the investee businesses already located in Wales, where the existence of a finance market failure should be a pre-requisite for these investment.

Investment Decision

- 6.11 Once complete, the Investment Proposals are circulated to the Investment Committee. Although the formal process is for the Committee to meet to discuss and agree the proposal, this is not always possible. ALS report that decisions on Investment Proposals are often

needed quickly and it is not always practical to convene a face to face meeting. In many cases the investments are agreed following discussion via email in which members of the committee raise specific questions or queries and make their recommendations. This is a practical solution to the challenge of convening senior and busy individuals at short notice but it is important to note that reviewing proposals in writing rather than verbally might constrain the depth and rigour of the analysis and discussion this enables.

- 6.12 The review indicates that Investment Committee members have been consistent in identifying potential conflicts of interest and ensuring that conflicted members of the committee do not vote on particular investments.
- 6.13 As a discretionary fund, ALS has a high level of autonomy in the investment decisions that they make. The Drawdown Requests that ALS make to the Holding Fund act as the primary mechanism for the Welsh Government (through Finance Wales) to influence the implementation of the Fund. Finance Wales cannot agree to a drawdown request for investments that are outside of the IOGs although as noted elsewhere the application of the IOGs has been complex, not least as they have evolved throughout the Fund's implementation. Finance Wales, acting as the Holding Fund, have an important role in ensuring that the Fund invests in a way that is consistent with the IOGs.
- 6.14 In the instances where proposed investments have been outside the IOGs, Finance Wales has informed and provided advice to Welsh Government (in its capacity as the sole investor) about what it considers to be the most appropriate course of action. Whilst there were merits in all of these particular investments (and a number had to be made at short notice), a number have involved significant potential downsides in terms of the concentration of overall fund investment in a small number of companies in the portfolio and the loss of headroom for follow-on investment.
- 6.15 The process for securing the approval to invest outside of the IOGs has not always been conducted through Finance Wales in its role as the Holding Fund, with ALS often engaging Welsh Government officers and the Minister directly and in parallel to discussions with Finance Wales.

Portfolio Monitoring and Management

- 6.16 ALS has appointed a NED to the board of each investee company. This provides an opportunity to influence the strategy and operations of investee companies to maximise the performance of their investment and, ideally, ensure that potential benefits to Wales are realised.
- 6.17 The board representatives also have a central role in gathering intelligence needed to monitor the performance of ALS investment. The appointed NED gathers intelligence on performance, challenges and any forthcoming requirements for follow on during the flow of regular company board meetings and analysis of the board materials that are supplied. This intelligence is not routinely disseminated in a structured way throughout the wider ALS team, although ALS report that, as a small organisation, intelligence on the progress of each company is shared in an informal way amongst the ALS executive team. If companies are experiencing particular challenges or moving in a direction that the NED is unhappy with, this would trigger discussion amongst the ALS team and agreement on actions that need to be taken.
- 6.18 This seems like a sensible and balanced approach to managing a portfolio of the size of WLSIF's. Given the importance of cash-flow in fund management, we might expect there to be a more structured process for collating some of this intelligence (particularly relating to the timing and scale of upcoming follow on requirements or opportunities for exits) to support wider monitoring of cash-flow and other risks at the Fund level. Our discussions with

ALS suggest that this type of analysis is undertaken and informed by the informal information sharing set out above.

Fund Level Investment

- 6.19 As outlined in Section Six, we have reviewed whether the fund manager has undertaken best endeavours to secure the additional £50m fund level investment. We have also considered the process through which ALS has managed and monitored this process. The main conclusions are that whilst the approach may be adequate, ALS would benefit from:
- A formal written plan for securing the investment – this will help with communicating the focus of ALS’s efforts with its Board, Finance Wales and Welsh Government, as well as monitoring progress over time
 - A more formalised system for identifying and monitoring progress with potential investors – whilst we appreciate that the expense of investing in a specific CRM system may not be merited; there are accessible ways of using commonplace software programmes such as Excel and Outlook which can provide much of the functionality which ALS will need to monitor progress with potential investors.
- 6.20 These are important points for ALS given the importance of securing the additional private sector investment and need to for them to demonstrate their ‘best endeavours’ as part the fund management agreement.

Reporting

- 6.21 We understand that the early monitoring reports provided by ALS were deemed inadequate by Finance Wales but that ALS subsequently changed their approach to provide all of the information that was required in the LPA.
- 6.22 The more recent quarterly monitoring reports that ALS provide to Finance Wales provide adequate information to understand the financial status of the Fund, the type of activities that have been undertaken and the cash flows into and out of the Holding Fund. This is appropriate in light of the discretionary nature of the Fund.
- 6.23 It is however important to note that the information provided in respect of the achieved and expected economic development benefits of the investments is less detailed than it would ideally be. Given the objectives of the Fund, quarterly monitoring reports should provide sufficient information to understand the scale of benefits already provided by each investment and expected in future. Importantly, future projections should set out the important dependencies in realising projected benefits (e.g. movement of particular functions into Wales, outcome of trials etc). This more detailed information would help Finance Wales to keep an up to date view on the progress of the investments in creating economic development benefits but, more importantly, it would allow Finance Wales to identify opportunities for other agencies to work alongside the investee companies to support the realisation of future benefits.
- 6.24 The review indicates that ALS is meeting its reporting requirements to the FCA.

Summary

- 6.25 The review of systems and procedures at ALS has found that the investment process implemented has generally been sound and in keeping with the discretionary nature of the Fund. The process is fluid but mostly in keeping with a small fund management operation.

- 6.26 There have been a number of instances where proposed investments have been outside the IOGs and Finance Wales has informed and provided advice to Welsh Government (in its capacity as the sole investor) about what it considers to be the most appropriate course of action. However, the process for securing the approval to invest outside of the IOGs has not always been conducted through Finance Wales as the first point of contact, with ALS often engaging Welsh Government officers and the Minister directly and in parallel to discussions with Finance Wales.
- 6.27 Based on the information we have seen, it is difficult to reach firm conclusions about how effectively some aspects of the investment process have worked. There is a clear commitment amongst the ALS team to securing deals which offer some clear benefit to Wales but the review suggests that the scale of the benefits on offer and the company's level of commitment to realising them could have featured more prominently in investment decisions (and potentially also in the prioritisation of prospects). The review has not found any evidence that the scale of benefits offered by each investment was appraised critically in the context of the investment size. Similarly, there is no evidence within the investment proposition that the contribution of individual investments to the Fund's KPI targets was considered as part of the investment decision.
- 6.28 The reporting process to Finance Wales has been strengthened substantially and is now considered adequate by Regeneris bearing in mind the balance which needs to be struck between this being a public sector backed fund and its discretionary nature. Both Finance Wales' and ALS's ability to manage the pipeline of investments and the Fund's finances could have been improved with the inclusion of projected timing of requirements for follow on for all of the invested companies, although we appreciate that this can be difficult to predict.
- 6.29 There is a need for ALS to strengthen their approach to formerly documenting their approach and priorities for securing fund level investment, as well as monitoring progress over time. It is very important that ALS provides Finance Wales and Welsh Government with confidence that this is being progressed in a structured manner and the progress which is being made.

7. Economic Development Benefits

7.1 This section provides an analysis of the economic development framework for WLSIF including the range of indicators and targets, as well as considering the nature of the economic development benefits that the portfolio of investments has already and is likely to create in Wales. It draws in particular upon the following sources of information:

- Fund level KPI targets set out in the original and updated LPA
- Fund KPI monitoring reports
- An assessment of future economic benefits the current portfolio might achieve prepared by PWC on behalf of ALS¹⁹.

Economic Development Performance Framework

Original Targets

- 7.2 Like some other aspects of the Fund, the economic performance framework for WLSIF has evolved as it has been implemented. The targets are summarised in Table 7.1.
- 7.3 The Welsh Governments' original aspiration as set out in the ODP (June 2012) was for the Fund to create 750 jobs and 100 new items of Intellectual Property. These targets were based on the expectation that WLSIF would be a £100m fund. If the expected level of employment impact was realised, this would have translated into a gross public sector investment per job of £67,000. While this is at the higher end of the spectrum, the high value nature of these jobs together with the Fund's wider strategic aspirations mean that, set at this level, the WLSIF would offer relatively poor value for money²⁰ on the basis of this particular indicator. However, the possibility of securing financial returns from the Fund to the Welsh Government the net cost per job could be significantly lower.
- 7.4 Expectations about the scale of impact that the Fund might be able to achieve were raised during the procurement process. In their proposal, ALS indicated that they expected to create or safeguard twice as many jobs and IP registrations required by the ITT and broadened the KPIs out to include targets relating to new laboratories and international partnerships.

¹⁹ It is important to note that the assumptions underpinning the projected future economic benefits of the current portfolio have not been made available to the review. It has therefore not been possible to verify the estimated spend and employment impacts contained within the PWC report.

²⁰ By way of comparison, the final evaluation of the Wales JEREMIE Fund estimates the gross cost per job created to be between £20-£22,000.

	Fund ITT and Original ODP (June / July 2012)		ALS Presentation and LPA (February 2013)		LPA Variation (March, 2014)	
	Target	Gross Public Sector Unit Cost ²¹	Target	Gross Public Sector Unit Cost	Target	Gross Public Sector Unit Cost
Jobs Created	750	£66,667	1,500	£33,333	300	£166,667
New IP	100	£500,000	200	£250,000	100	£500,000
New Labs	-	-	75	£666,667	-	-
Partnerships	-	-	50	£1,000,000	-	-

Job Creation Targets

- 7.5 The twelve deals included in the ALS proposed investment strategy were used as the basis for the target to create 1,500 jobs. This figure was derived using the following method:
- For low and medium risk deals ALS estimated projected revenues using a target Exit Market Capitalisation (Mcap) value and Mcap/Revenue ratio for each deal. A turnover to employment ratio of £200k per job was applied to the projected revenue for each deal to estimate the number of jobs that would be supported by each investee business.
 - For high risk deals, the calculations suggest that there was an implicit assumption that one of the four investments would create 50 jobs (or that between them the four higher risk investments would create 50 jobs). The basis of this assumption is not clear although the assumption that not all of the higher risk investments would be successful in creating employment within the timescales set out in the LPA was a sensible one.
- 7.6 These calculations resulted in an estimated employment impact of 1,630 jobs. This figure appears to be the basis for the job creation target of 1,500 included in the Limited Partnership Agreement (February 2013). Based on our experience this was a very stretching target for an investment fund focused on the life sciences sector. The method that ALS used to derive their employment impact figures was flawed in so far as it made an implicit assumption that all of the revenues created by low and medium risk investments would support employment within Wales.
- 7.7 The estimates are based on projected capital returns from each deal, the relationship between capital returns and company revenue and, in turn, the number of employees that company revenues support. This type of method is appropriate for investments into companies that operate entirely in Wales or that are proposing to move their entire operation into Wales. It would however always overestimate the potential employment impact of deals where the investee company is only relocating part of their operations into Wales. For these companies, a substantial proportion of activity (and employment) that drives capital values would still take place outside of Wales.

²¹ The gross public sector unit cost is based on the public sector's total financial contribution. It doesn't allow for deadweight, displacement or multiplier effects, nor the financial return which the public sector secures at the end of the fund's life.

Wider Targets

- 7.8 As for the employment targets, revenue projections were used as the basis for the wider targets relating to new intellectual property, new laboratories and international partnerships. The targets suggest that each planned investment in the strategy was expected to create, on average, 17 new IP registrations, 6 new laboratories, and 4 new international partnerships. The underlying logic for the setting of these targets is not clear and the resultant estimates are judged to be high bearing in mind that not all of the investments would support the achievement of these outputs.
- 7.9 Although the Fund had a relatively narrow set of quantified economic development related targets, there was an expectation that it would have much broader benefits for the life sciences sector in Wales. The investments made by the Fund were expected to work alongside the other activities supported through Welsh Government's Strategy for Life Sciences to make a wider contribution to the aspiration to develop the Life Sciences Ecosystem in Wales. For example, the Fund's investments could stimulate a range of wider benefits including:
- Formation and growth of clusters in particular specialist fields by adding to the critical mass of companies trading or conducting research in particular fields. It is feasible that further growth in clusters could also be supported by the role that WLSIF plays in supporting the development of networks within the sector and broadening these out to include investors and firms that had previously not engaged with the sector in Wales.
 - Indirect growth in companies in the Life Sciences supply chain could be supported through investee firms' requirements for particular goods and services. If Wales based firms were able to access new opportunities created by investee companies, this could lead to wider growth in, and development of, the Life Sciences supply chain in Wales.
 - Improvements in the relevant skills base through workforce development practices of investee and supply chain firms.
 - Greater awareness of and confidence in Welsh opportunities amongst investors and companies outside of Wales.
- 7.10 Outcomes such as these are difficult to measure and directly attribute to the activities of the Fund and so there were no formal KPIs to capture benefits of this type. Nonetheless, these wider benefits were always expected to form an important part of the longer term economic development benefits of the Fund.
- 7.11 Given the objective of the Fund to secure inward investments, it would have been appropriate to include an indicator which measures the value of new investment into Wales, distinguishing between any capital expenditure (both sites/premises and R&D) and expected annual operating expenditure.

Updated Targets

- 7.12 The LPA variation which was agreed in March 2014 details a substantial reduction in the main KPIs for the Fund. Finance Wales had developed a different methodology for projecting KPIs since the original targets were agreed with ALS. Their updated approach used actual performance in previous years to estimate likely achievements and as Finance Wales were rolling their new approach out across all of their funds, they decided to change the KPIs in the LPA when the March 2014 variation was agreed.

- 7.13 This change reduced the Fund's jobs target from 1,500 to 300 jobs created or safeguarded and the target for new items of IP was also reduced from 200 to 100 at this time. These changes represent a substantial reduction in the level of economic development benefit that the Fund is expected to deliver in Wales.
- 7.14 The reduction of the jobs target is particularly notable here. The upshot of this change is that the Welsh Government's investment of £50m into the Fund was now expected to create or safeguard in the region of 300 jobs. This would represent a WLSIF investment of some £170k per job created or safeguarded. This order of magnitude of cost per job metric compares poorly to other types of intervention that could be used to create the type of benefits WLSIF aspires to. For example, a £50m inward investment focused grant programme would normally be expected to offer a far greater number of jobs than that targeted for WLSIF but in the case of a grant there would be no financial returns.
- 7.15 The two types of interventions are, of course, not directly comparable. The eventual public sector cost of WLSIF should in practice be far lower than the £50m investment that the Welsh Government has made so far (once investment exits and financial returns to Welsh Government are taken into account). The actual value for money that the Fund creates will depend on both the jobs and commercial returns created by investee businesses, with both subject to significant uncertainty at this stage.
- 7.16 Although this makes it very difficult to draw any firm conclusions at this stage about the potential value for money that WLSIF will provide based on these few indicators, it is helpful to consider the potential for the portfolio to generate economic development benefits and the scale and type of impact already secured.

Progress against Targets

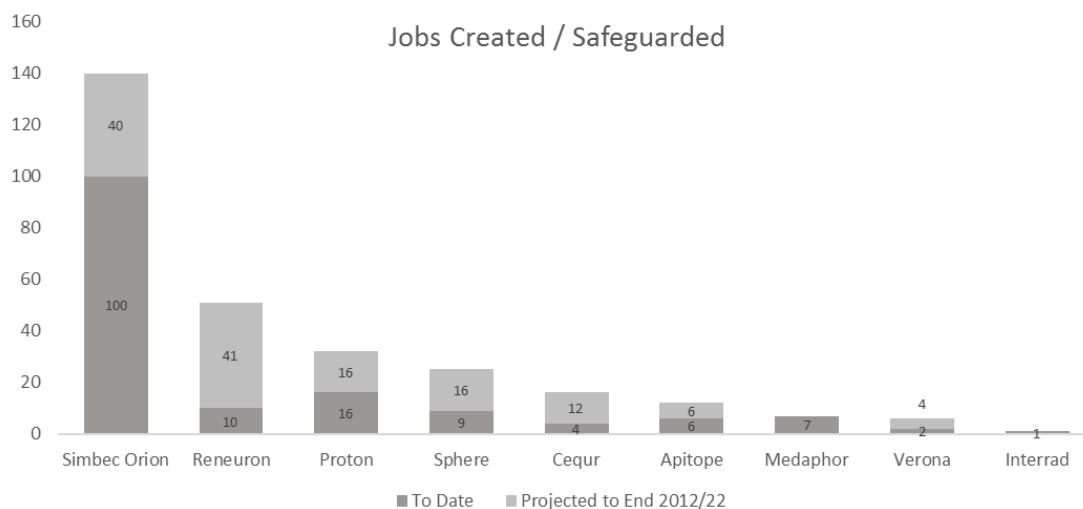
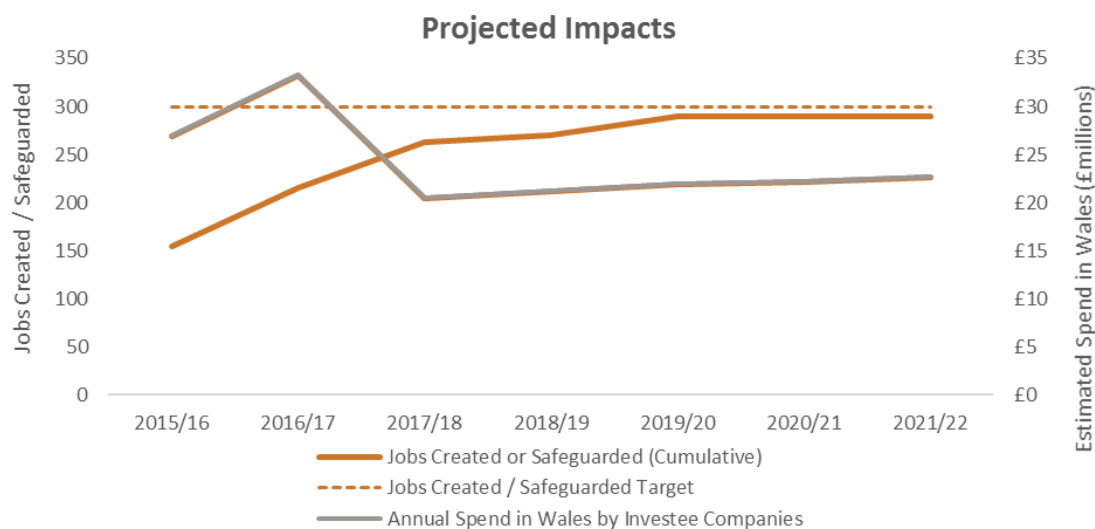
Employment

- 7.17 ALS has projected employment impacts for each of the investments in each year to 2021/22. The methodology used is not clear but conversations with ALS suggest that the projections are based on their intelligence on company performance and plans and expectations of the employment potential associated with known plans for each of the companies.
- 7.18 The projections were prepared prior to the end of 2015/16 so the review has not been able to confirm whether all of the projected employment impacts for the 2015/16 financial year have materialised. The data indicates that investments are expected to create or safeguard 155 jobs by the end of 2015/16. ALS has not reported separately on the number of jobs created or safeguarded. This probably reflects the nature of the target to which ALS is reporting and the fact that the updated LPA does not identify a desired split between jobs created or safeguarded. This limits the scope to comment in full on the employment impacts that the Fund has supported.
- 7.19 While we are unable to comment on the actual split between achieved jobs created and safeguarded, we do note that two thirds of the 155 expected to the end of 2015/16 are linked to the Simbec-Orion investments. KPI monitoring (December 2014) indicates that 86 of the 100 jobs associated with this deal were safeguarded positions. This suggests that a substantial proportion of jobs expected by the end of 2015/16 (55% at least) are not newly created.
- 7.20 Although this points to limited job creation to date, there is clear potential for some investments at least to create new employment in future. ALS's own projections suggest that further employment creation is expected from all but two of the portfolio companies. Overall, the portfolio is expected to create or safeguard a further 135 jobs by 2019/20. Given

the nature of the portfolio we would expect the emphasis here to be on jobs created, rather than safeguarded.

- 7.21 If these projections are realised, it would mean that the Fund will create or safeguard a total of 290 jobs by 2019/20. This is broadly in line with the updated fund target, although it is worth noting that this is still substantially below the Welsh Government’s original aspiration for the Fund.

Figure 7.1 Summary of Projected Employment Impacts in Wales



Source: PWC Analysis of Estimated Spend in Wales and Employment Impacts (2016). Note: the assumptions underpinning the projected future economic benefits of the current portfolio have not been made available to the review. It has therefore not been possible to verify the estimated spend and employment impacts contained within the PWC report.

- 7.22 It is important to note that employment projections are always subject to uncertainty, even when based on good knowledge and insights into a company’s plans. There is no guarantee that the Fund’s investments will go on to perform as projected. While there is a risk that job creation could be lower than expected, there is also the possibility that some of these investments could exceed current expectations and this would not be unusual for early stage companies.
- 7.23 We understand that Welsh Government are currently reviewing the economic and employment potential of the portfolio but the results of their analysis are not yet available.

New Items of Intellectual Property

- 7.24 The latest KPI monitoring report that deals with the target for Intellectual Property is dated December 2014. This indicates that the five investee businesses at this point had created 70 items of Intellectual Property. Although it is not stated clearly in the KPI report, the totals appear to include items of IP that pre-date the WLSIF investment. As the report does not separately highlight new IP registrations since the investment it is not clear whether WLSIF investment has resulted in the creation of new items of IP.
- 7.25 The IP within Welsh investee companies and those moving their headquarters into Wales as part of the deal with WLSIF will now reside within Wales. This is the case for 52 of the 70 reported items of IP. The 18 items of IP associated with Interrad might not reside in Wales as the company is headquartered in the USA.
- 7.26 By including pre-existing IP and that which is not registered in Wales, the KPI monitoring data over-estimates the effect of the Fund's investments on new IP registrations. To provide a more relevant insight, future estimates should differentiate between pre-existing and newly registered IP and provide some assessment of the extent to which any new IP registrations are attributable to the WLSIF investment.

Future Potential

- 7.27 Table 7.2 summarises source and nature of projected employment impacts for each of WLSIF's investments.

Table 7.2 Summary of Impact Types by Investment.

Investment	Projected Employment Impact	Overview of Nature and Scale of Impact and Future Potential
Simbec-Orion (£8.8 million WLSIF Investment)	100 jobs to date Further 40 jobs projected by end 2019/20	<p>Safeguarding performance and supporting growth of indigenous firm</p> <ul style="list-style-type: none"> • Employment estimate includes a substantial number of safeguarded jobs. Fund monitoring data suggests 86 of the 140 jobs were safeguarded by the original investment into Simbec. • The employment profile suggests that future growth in employment is expected. It is not clear if this is linked to company growth or if Orion are expecting to relocate functions or transfer employees to Wales.
ReNeuron (£10m WLSIF Investment)	10 jobs to date Further 41 projected by end 2017/18	<p>Bringing functions and associated employment into Wales</p> <ul style="list-style-type: none"> • Current employment impacts are limited as ReNeuron has not yet moved its entire operation to Wales as expected. This most likely reflects delays to the construction of Welsh Government funded manufacturing facility. • Monitoring reports (Dec 2014) suggest that the total could rise to 51 jobs in total when operations move to Wales. All of these jobs will be new to Wales. • There may be potential for larger impacts over and above those projected if the outcome of later stage trials is positive and manufacturing scales up in Wales. • Employment impacts are attributable to both Welsh Government grant and WLSIF investment.
Verona (£4.6 m)	2 jobs to date	<p>Bringing functions and associated employment into Wales</p>

	Further 4 jobs projected by end 2016/17	<ul style="list-style-type: none"> Projected employment impacts reflect the relocation of Verona's HQ to Wales and the intention to conduct clinical trials in Wales. Further employment impacts in addition to those projected could materialise if the trials are successful and the drugs proceed to manufacture and distribution. The likelihood of this and the extent to which benefits would be realised in Wales is currently unknown.
MedaPhor (£0.6m)	7 jobs to date No further jobs projected	<p>Supporting growth of indigenous Welsh Company</p> <ul style="list-style-type: none"> Monitoring reports suggest that employment impact is linked to new jobs in R&D and sales. Future growth potential of these and other functions is currently unknown.
Interrad (£2.9m)	1 job to date No further jobs projected	<p>Bringing functions and associated employment into Wales</p> <ul style="list-style-type: none"> Employment impact is based on the appointment of a Senior Business Development Director at the newly established European HQ at the Wales Life Sciences Hub. KPI monitoring highlights an aspiration to grow the HQ to 10 clinically skilled business development staff in Wales operating across Europe. Progress against this aim is unknown. There does not appear to be any clear plans to move other functions to Wales at this stage.
Sphere Medical (£4m)	9 by end 2015/16 Further 16 jobs projected at end 2018/19	<p>Bringing functions and associated employment into Wales</p> <ul style="list-style-type: none"> Employment impact based on moving HQ and manufacturing facilities into Wales. It is not known whether this move has yet taken place. It is not clear to what extent the projected jobs are based on the success of lead product.
Proton Partners	16 jobs by end 2015/16 Further 16 projected at end 2016/17	<p>Bringing functions and associated employment into Wales</p> <ul style="list-style-type: none"> Employment impacts are based on bringing HQ function, training centre and one proton therapy centre to Wales. It is not clear from monitoring data whether this is now operational and if the jobs are in place. Projected employment linked to the operation of the facilities. Scope for additional impacts over and above those projected is likely to be limited unless HQ function grows substantially.
CeQur (£3.3m)	4 jobs by end 2015/16 Further 12 projected at end of 2017/18	<p>Bringing functions and associated employment into Wales</p> <ul style="list-style-type: none"> Employment impact projected to end of 2015/16 is based on bringing clinical trials to Wales. It is not clear from monitoring data whether these jobs are now in place. Investment is linked to commercial product launch and manufacturing and we assume that the realisation of projected jobs will be linked to the success of this and the extent to which these functions grow in Wales.
Apitope (£3.9m)	6 jobs by end of 2015/16 Further 6 at end of 2017/18	<p>Bringing functions and associated employment into Wales</p> <ul style="list-style-type: none"> Employment impact is associated with movement of HQ from Bristol to Cardiff. This move has now taken place. Future employment projection appears to be linked to growth of this function in Cardiff. Additional potential beyond this is unknown.

7.28 This brief overview suggests that while the projected employment impacts will always be subject to some uncertainty, there appears to be a clear underpinning rationale for the

numbers put forward. It also indicates that, for some investments at least, there may be potential to realise additional impacts over and above those highlighted in the projections.

Investments into Existing Welsh Companies

- 7.29 The Simbec-Orion and MedaPhor investments represent the Fund's only investments into firms already based in Wales. Together, these investments are expected to create or safeguard 147 jobs (around half of the projected total). The longevity of these impacts depends on the survival of these companies and the strength of their ongoing commitment to Wales.
- 7.30 The additionality of this employment creation depends in part on the extent to which the WLSIF investment addressed a finance market failure. Although not conclusive, our review of these investments suggests that there may have been limited or no market failure in the provision of business finance in these instances.
- 7.31 There might well be scope for further impacts over and above those which are projected for both of these companies if they continue to grow and be successful. In particular for the Simbec-Orion deal further impacts could materialise if Orion relocate some functions to Wales (and this would indeed provide a rationale for the provision of finance in the absence of any finance market failures), but it is not clear whether there are any expectations in this regard.

Investments to Bring Functions and Associated Employment into Wales

- 7.32 The majority of WLSIF's investments (80% of capital invested) fall into this category. These investments are currently expected to create 143 jobs by 2021/22. As noted earlier, the projections appear to be based on current agreements relating to the particular functions that will be (or have already been) moved into Wales.
- 7.33 The analysis indicates that the projected employment impact of some of these investments is currently quite limited. It is however feasible that some of these investments could result in impacts over and above those currently projected. This depends on a range of factors, namely:
- **The outcome of trials:** further opportunities could arise in ReNeuron, Verona, Apitope and CeQur if products progress through early and later stage trials and manufacturing and other functions scale up. Successful trials could result in expansion in the Welsh HQ functions of these companies and there might also be new sales, manufacturing and distribution opportunities.
 - **Movement of additional functions into Wales:** for Interrad and Sphere Medical future impacts over and above those projected could flow into Wales if additional functions are moved.
- 7.34 In both cases, the extent to which any opportunities might have a benefit for Wales and the timeline over which this could take place is currently unknown. The likelihood of realising additional benefits in Wales depends entirely on the level of commitment to Wales shown by each investee.
- 7.35 This is difficult to judge, particularly as we have not engaged with these companies as part of this review. Some companies have already shown a willingness to move substantial operations into Wales (ReNeuron Sphere Medical, CeQur, Verona, Apitope) and while there are no guarantees, this bodes well for the future. For others companies (Interrad in particular) the existing level of commitment is limited.

- 7.36 This highlights the importance of Welsh Government’s role in building and deepening relationships with these companies. The work of the Life Sciences Account Managers is essential here in helping to embed these companies into the Welsh economy by signposting to key suppliers, research institutions etc.

Employment Impacts by Sector

- 7.37 The table below summarises the projected impacts of WLSIF investments by Life Sciences sub sector. It indicates that by far the largest, employment impact is expected in the clinical research sector (as a result of Simbec-Orion). Although it is important to note that a large number of these jobs are likely to be safeguarded rather than new jobs so the total and WLSIF investment per job could be misleading.

Category	Number of Investments	Total Invested (£m)	Projected Jobs Created / Safeguarded	WLSIF Investment (to date) per Projected Job
Clinical Research	1	£8.8	140	£63,000
Medical Technology	3	£7.5	83	£90,000
Biotech	4	£21.7	35	£620,000
Medical Services	1	£10	32	£310,000
Grand Total	9	£48	290	£165,000

- 7.38 In the context of existing employment in the Welsh life sciences sector, the projected gross employment impacts are relatively modest, particularly given the projected employment impacts contains a mixture of created and safeguarded employment.

Wider Benefits

- 7.39 The full economic development benefits of the WLSIF’s investments cannot be captured by looking at potential employment impacts alone. There are a range of wider impacts that need to be considered. In particular:

Supply Chain Benefits

- 7.40 The WLSIF KPIs focus on the direct employment impacts supported by investments, that is the employment created by growth in indigenous firms or supported by functions moved into Wales. In addition to these direct impacts, the investee companies will create opportunities in their supply chain for Welsh firms. In the upper reaches of the supply chain these opportunities could go on to support further growth in the sector.
- 7.41 The review has not sought to quantify these benefits but they are an important element of the Fund’s potential impact.

Sector Image and Perceptions

- 7.42 WLSIF has been very successful in leading high profile deals involving major firms and large institutional investors. The Fund can clearly demonstrate a positive effect on the level of private sector investment activity into the sector in Wales and has been instrumental in getting some major private sector investors active in the Welsh life sciences sector for the first time. While we cannot tell whether this will lead on to further private sector investment from these institutions in future, it should be recognised as a major achievement for WLSIF.

- 7.43 WLSIF's ability to attract major private sector co-investment into the sector has led to some high profile deals of the type that have potential to increase the national and international profile of the Welsh life sciences sector and influence how Wales is perceived as an area of opportunity for investment.
- 7.44 WLSIF has also been actively promoted alongside other areas of the Wales Life Sciences Strategy (such as the Life Sciences Hub) and real efforts have been made to ensure that investee companies are linked into the growing Life Sciences ecosystem that is central to the strategy. For example, a number of investees have taken up space at the Life Sciences Hub and all investees have been referred to Welsh Government Life Sciences Account Managers who will seek to work with investee businesses to further embed them into the Welsh economy. This type of integrated approach has potential to maximise the return on the Welsh Government's investment in each part of the strategy and further bolster perceptions of Wales as an attractive area for investment.
- 7.45 It is too early to say whether the PR value generated will lead to further investment activity (either in the form of investment into Welsh companies or new FDI into Wales) but it is feasible that the impact of the Fund on the sector's image and standing internationally could be a source of longer term benefit for the sector.

Summary

- 7.46 The approach to establishing a framework for setting economic development targets of the WLSIF was not strong at the outset. Welsh Government set out an ambitious expectation for the impact that the Fund could have on employment in the sector and ALS's analysis of the potential employment impact and other forms of sector development (eg IP, facilities) of their investments introduced targets that were in our opinion unrealistic and poorly evidenced. The change to the LPA in March 2014 included the revision of the targets to a more realistic level and ALS's analysis indicates that the Fund is now expected to create or safeguard just short of its target 300 jobs.
- 7.47 Performance against the KPI targets only presents a partial picture of the impact of WLSIF on the life sciences sector in Wales. The wider benefits of the Fund are difficult to determine but the potential impact on the perceptions of the sector in Wales, awareness raising amongst the investor community and its role in supporting the success of other parts of the Wales Life Sciences Strategy should not be underestimated.
- 7.48 The full impact of the Fund's investments on the sector's image and performance will take time to materialise and there are no guarantees that the Fund's investments will support the projected level of employment. It is important to note that current uncertainty about the future impact of the Fund's investments runs two ways; there might be scope for the impact of some investments to exceed expectations. This will depend on factors which are largely outside of the Welsh Government's or ALS's control (such as the outcome of trials and the commercial success of products and services).
- 7.49 Beyond these factors, investee companies' commitments to Wales will drive how well the Fund performs against its targets and, perhaps more importantly, the longer term sustainability of the Fund's economic development benefits. Welsh Government are active in providing other forms of support to ensure that inward investing companies become fully embedded into the sector. It is too early to judge how successful these efforts will be, but there appears to be more scope for some companies to become fully embedded than others.
- 7.50 The full impact of the WLSIF will take time to materialise and it will be a number of years until the final net cost of these impacts to Welsh Government will become clear. If the Fund performs well commercially it is feasible that Welsh Government could recover much or possibly all their full investment in the Fund (the target net IRR set by Welsh Government for

the Fund was 10%). This would make WLSIF a very low cost intervention for Welsh Government and, if there are sufficient returns, could leave further capital for reinvestment into the sector. However, the likelihood of this is too early to judge at this stage.

7.51 Although the economic output framework and targets have already been revised on a number of occasions, there is merit in considering a number of additional changes:

- A requirement for ALS to report jobs created and safeguarded separately, making a clear distinction in their reports between jobs (both created and safeguarded) which have been actually realised and those which are expected in the future.
- Monitor and report the actual investment (i.e. expenditure) occurring in Wales as a consequence of the Fund's investment and the associated co-investment, clearly distinguishing between direct capital investment and ongoing operational investment, and expected the timing of these expenditure flows²².
- Withdraw any targets associated with floorspace created or laboratories created as this is an indirect consequence of the Fund rather than a core objective (although it is necessary to monitor them where they arise).
- Ensure that the measurement of IP and partnerships created are only counted where they are both new to Wales and a direct consequence of the investment.

²² ALS has used PWC to compile a similar company by company profile although the exact scope and basis of the assumptions are unclear and would benefit from further clarification.

Appendix A - UK & Welsh Life Sciences Sectors

The UK's Life Sciences Sector

Life Science is a vital sector for the UK

- A.1 The life sciences sector is an important contributor to the UK economy. The Office for Life Sciences (OLS), which is part of the Department of Business and Innovation (BIS) and the Department of Health (DoH), produces an annual report on the UK's life sciences sector (Strength & Opportunity), with their most recent report published for 2014.
- A.2 The report's findings are based upon analysis of data within the OLS Bioscience and Health Technology database. The database draws on both government and private sector datasets to provide a comprehensive picture of the current scale and composition of UK's life sciences sector and its sub-sectors, as well as recent trends.
- A.3 The OLS define the life sciences sector by the following four main sub-sectors:
- medical technology
 - medical biotechnology
 - industrial biotechnology
 - Pharmaceutical.
- A.4 In 2014, the OLS estimated that the UK's life sciences sector:
- employed 183,000 people – 72% in companies producing products for the healthcare market and 28% in the service and supply chain
 - generated a combined estimated turnover of £56bn
 - had an estimated 4,400 companies developing, manufacturing and marketing products and services to the UK and global markets.
- A.5 It is a highly skilled and highly productive sector, with an average gross salary of £59,000 and gross value added per worker of £74,100 (134% and 55% above the average for the UK on-financial economy respectively).

Volatile Employment Trend

A.6 Applying this OLS definition to public available employment data allows us to assess changes over time and draw comparisons to the UK economy.

A.7 The data shows that employment in the Life Sciences has fluctuated notably over the last five years. Between 2009 and 2014 it has reduced by around 4% (equivalent to a reduction of around 2,700 jobs), compared to a 4% increase in overall employment over same period.

UK performs well on international benchmark indicators

A.8 Data from a recent benchmarking exercise²³ illustrates the importance of the sector in the UK to the sector globally. The indicators show that the UK performs well compared to other countries, but operates in a highly competitive international environment and so lags behind on a number of indicators:

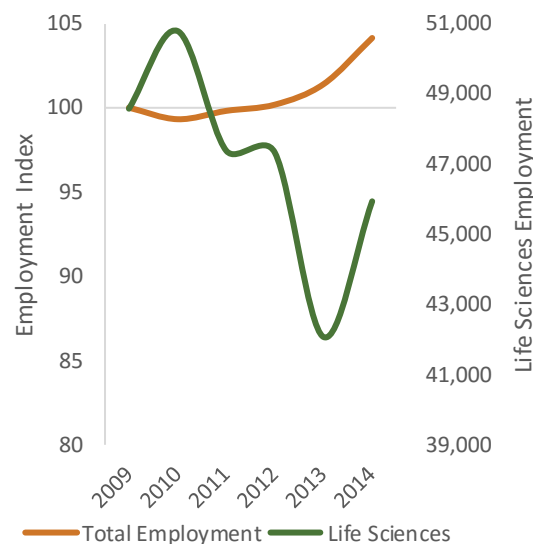
- Ranks 2nd to the US on Government expenditure on health R&D
- Ranks 3rd behind Germany and the US on both capital expenditure FDI (at just under £600m) and number of projects (around 50) in 2013.
- Ranks 1st out of all European countries on total private equity investment (just over £700m in 2013).
- Had the 2nd highest number of science graduates in 2012 (around 100,000).

The UK has strengths in research institutions, Life Science ecosystem and is home to globally significant employers

A.9 The Life Science sector in the UK has a range of specific strengths that means the sector is globally significant.

- *Higher Education and Research Strengths.* The UK has a strong history and reputation of world class universities, meaning there is large supply of skilled labour for Life Sciences. *The Golden Triangle* group of universities are located in Cambridge, London and Oxford. These universities have the highest research incomes of all British Universities, and collaborate closely through a variety of initiatives, one of which is the *Global Medical Excellence Cluster*. This initiative, the largest Life Science bio-cluster in the world, aims to collaborate both with other higher education institutions and the private sector in order to deliver medical innovation.
- *Private Sector Ecosystem.* Given the quality and number of medical related research institutions, there are organisations designed to assist new and start-up companies to succeed in the sector. One of the largest networks of Life Science business in the

Figure A1 Life Sciences Employment & Employment Index, GB, 2009-2014 (2009=100)



Source: Business Register and Employment Survey

²³ BIS, Life Science Competitiveness Indicators, 2015

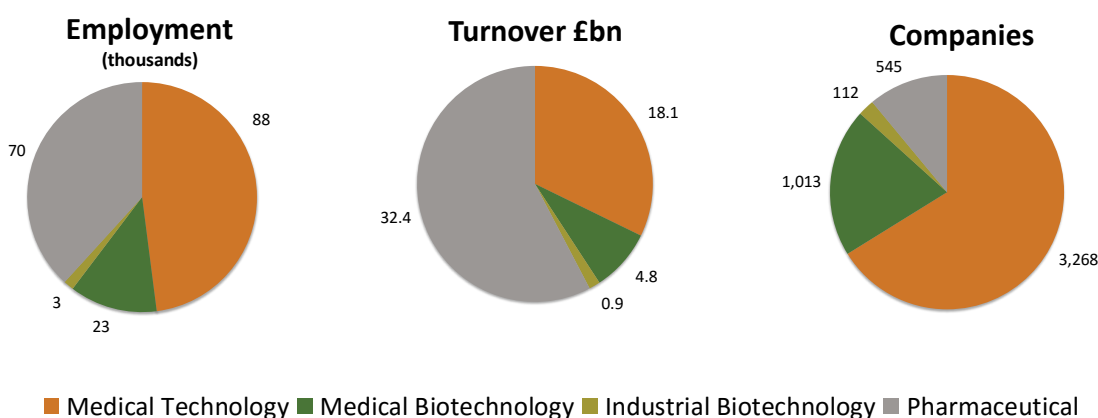
UK is the *BioHub* group. BioHub provides space for Life Sciences companies as well as business support including access to finance, regulatory advice, and access to high end equipment.

- *Globally Significant Employers.* There are a number of significant Life Science employers that are located in the UK. Notably, both GlaxoSmithKline and AstraZeneca have their headquarters in the UK. AstraZeneca in particular has strengthened its commitment to the UK by announcing the construction of a new global R&D centre in Cambridge.

Sub-Sector strengths, including extended supply chain, makes the UK attractive for the Life Sciences

- A.10 The figure below breaks down Life Sciences employment, turnover and companies across the four sub-sectors in the UK. It shows that medical technologies accounts for around three quarters of all Life Sciences businesses and nearly half of all employment, but contributes just under a fifth of all Life Sciences turnover.
- A.11 This reflects the high number of smaller and medium sized companies operating in this area of Life Sciences. It also suggests that the turnover that can be generated by Pharmaceutical companies from a lower employment base is higher than the other sub-sectors, given the high turnover from this sub-sector relative to the size of the business base.

Figure A2 Comparison of Employment, Turnover and Companies in the UK Life Sciences Sector



Source: BIS & OLS -Strength and Opportunity 2014

- A.12 In terms of growth, over the last five years all sub-sectors have experienced a positive compound annual growth rate (CAGR)²⁴ in turnover and employment, with only Pharmaceuticals experiencing a negative CAGR in employment. Looking specifically at the medical technology sub-sector, the three largest product segments accounting for around a third of all non-service and supply chain sector employment/turnover were:

- single use technology (e.g. syringes, medical gloves)

²⁴ CAGR measures the mean annual growth rate over a specified period of time.

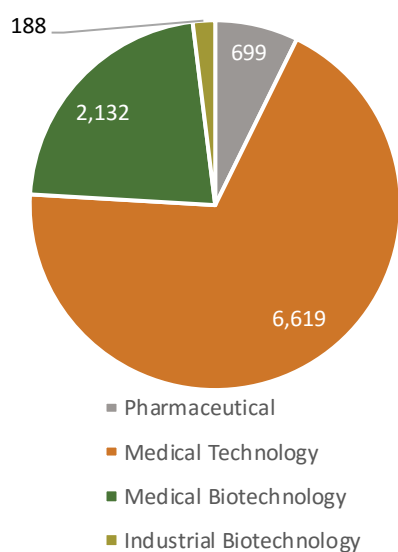
- in-vitro diagnostics (e.g. instruments and reagents for immunology, microbiology and genetic testing)
 - orthopaedic devices (e.g. hip replacements, implants).
- A.13 All sectors outsource a significant proportion of activity to large supply chain networks. The service and supply chain segment of medical technologies accounted for the largest proportion of the sub-sectors' employment and turnover. It is therefore one of the key attractors of the UK as a location for Life Sciences companies.
- A.14 Alongside these activities, the Life Sciences supply chain supports industry R&D, clinical and manufacturing activities both in the UK and globally. The latest estimates are that this supply chain employs 50,800 staff in 1,800 companies, generating £12bn in revenues.

The Life Sciences Sector in Wales

Underperforming relative to UK, but potential for growth

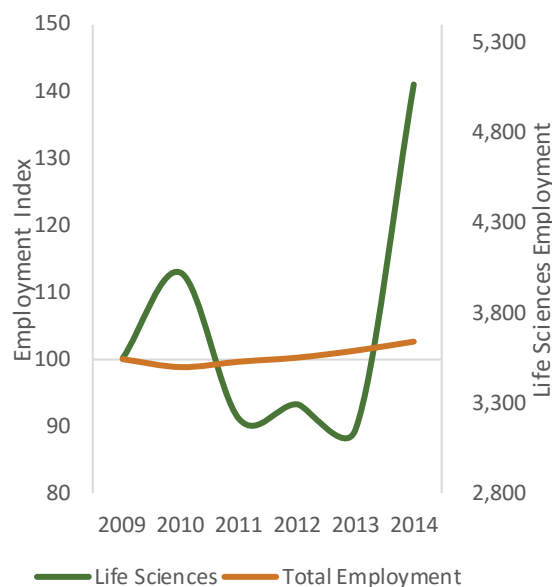
- A.15 The OLS also produce statistics at a sub-national level. The data shows that in Wales the life sciences sector:
- employed 9,600 people in 2014, equivalent to just 1% of total employment in Wales
 - equivalent to around 5% of total Life Sciences employment in the UK
 - ranks 9th out of the 12 UK regions in terms of employment.
- A.16 Replicating the above analysis for Wales (applying the OLS definition to publicly available datasets) indicates that although Wales' Life Science sector is small relative to other UK regions, it is growing in stature and has the potential to become a key sector for the Welsh economy.
- A.17 Employment in the Life Sciences has been volatile over recent years, but has fared better than overall employment particularly in the last year where there has been a substantial increase in employment in the sector. The sector also has a location quotient of 2.5 relative to Great Britain, suggesting a higher concentration of employment in the Life Sciences compared to the GB average.
- A.18 Wales appears to have a particular specialism in medical technology. This sector supports around two thirds of the overall Life Sciences employment and Wales is home to some high profile companies including, for example, Biomet UK Ltd. Although the Pharmaceutical sector does not support a large number of jobs there are a number of high profile Pharmaceutical companies in Wales including GE Healthcare, Norgine Ltd and Penn Pharmaceuticals. Although it is not evident in the data presented overleaf, Wales is also home to the UK's largest cluster of in-vitro diagnostics companies, with firms such as Ortho Clinical Diagnostics and Siemens Healthcare Diagnostics Ltd being central to this.

Figure A3 Life Sciences Employment by Sub-Sector 2014



Source: BIS & OLS -Strength and Opportunity 2014

Figure A4 Employment Index, Wales, 2009-2014 (2009=11)



Source: Business Register and Employment Survey

- A.19 These companies, together with some high profile institutions such as the Welsh Wound Innovation Centre and key knowledge assets provide notable assets upon which Wales' life sciences sector can build.
- A.20 There are concentrations of R&D activity around Cardiff, Swansea and South Wales (formerly Galmorgan) Universities. Cardiff University in particular has a range of relevant research specialisms and a track record of producing spinouts. Data from Spinouts UK indicates that since 2000 there have been 41 spin-outs from HEIs in Wales. It is not possible to identify which of these are Life Sciences related but the majority of these are from Cardiff University (20) and The University of South Wales (14).
- A.21 While this activity is promising, Wales underperforms relative to the rest of the UK. Just 3% of spin outs from UK Universities were from Wales based institutions.
- A.22 There has been a strong recent push to promote the Welsh life sciences sector domestically and internationally and this has resulted in a range of initiatives aiming to promote the growth of the sector. These include:
- *MediWales*: Founded in 1992, MediWales is the Life Science network and representative body for Wales. It runs an events programme, publications, and supports its 180 members with advice, finance and funding, access to facilities.
 - *BioWales*: The signature event of the sector in Wales, attendance has grown year on year from 250 attendees in 2011 to 650 in 2014, as well as hosting over 1,000 partnering meetings.
 - *The Life Science Exchange*: Led by Swansea University in partner with a number of organisations, it is responsible for managing the Welsh Government funded Life Science Wales project. It aims to link together centres of academic excellence, research facilities, industry representatives and the NHS to create a collaborative Life Sciences ecosystem.

Appendix B - ALS Meetings with Perspective Investors

Overview of ALS Meeting Prospective Fund Investors, June 2012 to September 2013

Date	Company	Nature of Business	Potential co-investor at fund level	Specific Purpose of Meeting (i.e. introductory, formal pitch, follow-up mtg, detailed negotiation, etc)	Outcome
20/09/2013	Johnson & Johnson innovation	Venture Capital	yes	Formal pitch	Will watch portfolio development
06/09/2013	Chang' An Trust	Chinese Trust Company	yes	Formal pitch	Need to tie in with strategic goals
26/06/2013	Pinebridge Investments	Asset Management - fund of funds	yes	Formal pitch	Longer track record needed
24/06/2013	Lexington Partners	Investment Manager - fund of funds	yes	Introductory	Longer track record needed
19/06/2013	LGT Capital Partners	Asset Management	yes	Formal pitch	Government involvement a concern
17/06/2013	Fondinvest	Investment Management	Yes	Formal pitch	Longer track record needed
17/06/2013	Capital Dynamics	Asset Manager- fund of funds	Yes	Formal pitch	Longer track record needed
15/05/2013	CQS	Asset Manager - hedge fund	Yes	Formal pitch	Unsure about VC at this time
02/05/2013	Blackstone	Investment Manager	Yes	Formal pitch	Currently fully allocated to sector, will watch
02/05/2013	Isomer Capital	Venture Capital	Yes	Formal pitch	Unsure about biotech
25/03/2013	Channel Capital	Investment Management	Yes	Follow-up after client interest	Not comfortable with onshore structure
06/03/2013	Capital Dynamics	Asset Manager - fund of funds	Yes	Formal pitch	Interested – need to see portfolio / track record
24/01/2013	Edmond de Rothschild Investment Partners	Investment Management	Yes	Formal pitch	Interested – need to see portfolio / track record
17/01/2013	Taurus Asset Finance	Venture Capital	Yes	Formal pitch	Interested – need to see portfolio / track record
08/01/2013	BarCap	Investment Bank	Yes – for clients	Formal pitch	Interested – need to see portfolio / track record

Review of the Wales Life Science Investment Fund

07/12/2012	JPM Wealth Management	Wealth Management	Yes – for clients	Formal pitch	Interested – need to see portfolio / track record
15/11/2012	Pictet Private Bank	Wealth and Asset Management	Yes – discretionary and for clients	Formal pitch	Interested – need to see portfolio / track record
15/11/2012	Sofinnova	Venture Capital fund of funds arm	Yes	Formal pitch	Interested – need to see portfolio / track record
15/11/2012	Baxter Ventures	Venture Capital (Health and Innovation)	Yes	Formal pitch	Interested – need to see portfolio / track record
05/11/2012	Reliance Capital	Wealth and Asset Management	Yes	Formal pitch	Interested – need to see structure
02/11/2012	IPGL	Family office (Michael Spencer)	Yes	Formal pitch	Interested – need to see structure
23/10/2012	Sapeno Partners LLP	Asset Placement	Yes – for HNW clients	Formal pitch	Interested – need to see portfolio / track record
05/10/2012	Taurus Asset Finance	Venture Capital	Yes	Formal pitch	Interested – need to see structure
21/09/2012	Channel Capital	Investment Management	Yes – for bank clients	Formal pitch	Think banks will have an appetite, esp where debt possible
03/09/2012	Valiance	Specialist Investment Firm	Yes	Formal pitch	Interested – need to see structure
09/07/2012	LJ Capital	Family office	Yes	Introductory	Interested – need to see portfolio / track record
20/06/2012	MaxCap	Private Equity	Yes	Introductory	Interested – need to see portfolio / track record
14/06/2012	Partners Group	Investment Management	Yes	Introductory	Interested – need to see portfolio / track record
12/06/2012	LDC	Private Equity	Yes	Introductory	Interested – need to see structure



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