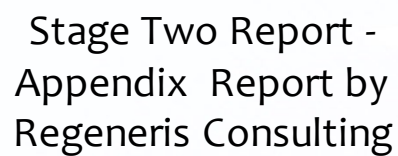


The logo for Regeneris, featuring the word "regeneris" in a white, lowercase, sans-serif font. The letter "e" is highlighted in orange. The logo is set against a black rectangular background.

ECONOMICS • RESEARCH • ANALYSIS

The main title of the report, centered in a white box. The text is in a bold, black, sans-serif font. The background of the entire cover is a blue fabric-like texture with a grid of light blue squares and yellow stars, reminiscent of the European Union flag.

Wales Ex-ante Evaluation of European Programmes 2014-20 - Financial Instruments

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Stage Two Report -
Appendix Report by
Regeneris Consulting

Wales European Funding Office

**Wales Ex-ante Evaluation
of European Programmes
2014-20 - Financial
Instruments**

June 2013

Regeneris Consulting Ltd

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1. ERDF SME Competitiveness: Finance for SMEs

Introduction

1.1 This note sets out an assessment of the market for SME finance in Wales. The section covers the following:

- A discussion of market failures in SME finance and the assessment approach
- A market assessment for SME finance in Wales, split by broad segment
- Overall conclusions and recommendations.

Assessment Approach

1.2 We have structured our assessment of the market for SME finance by examining the supply and demand for finance from different segments of the SME market, covering SMEs at various stages of development and with different requirements for finance. There is also a separate analysis of the market for finance among social enterprises. In undertaking this review of supply and demand we have drawn upon a wide range of sources, including:

- Publicly available data on the supply of loan and equity finance, both in the UK and where available, for Wales
- Contextual data on the SME business base in Wales, covering the stock of businesses and rates of new business formation
- Data from recent surveys of SMEs in Wales and the UK, covering demand for finance and the extent to which SMEs have been able to source this finance
- Data supplied by Finance Wales on the performance of its various Funds, covering the supply of finance and the returns being secured from these investments
- Recently published research and evaluation reports on Access to Finance, mainly at the UK level
- Replication of previously used methods (e.g. by the EIF) for assessing gaps in the market for SME finance.

1.3 We have supplemented this data analysis with a programme of consultations with business intermediaries, SME advisors, banks and Finance Wales. A list of consultees is provided at the end of the Stage Two Summary Report.

1.4 It should be noted that whilst we have throughout drawn upon a wide range of sources, estimating unmet demand for viable investment propositions in different market segments is inherently problematic, both given the constraints on available data and more fundamental theoretical difficulties. As set out above, the demand for finance from SMEs is theoretically limitless and depends strongly on the terms and cost of finance available. Nonetheless, publicly

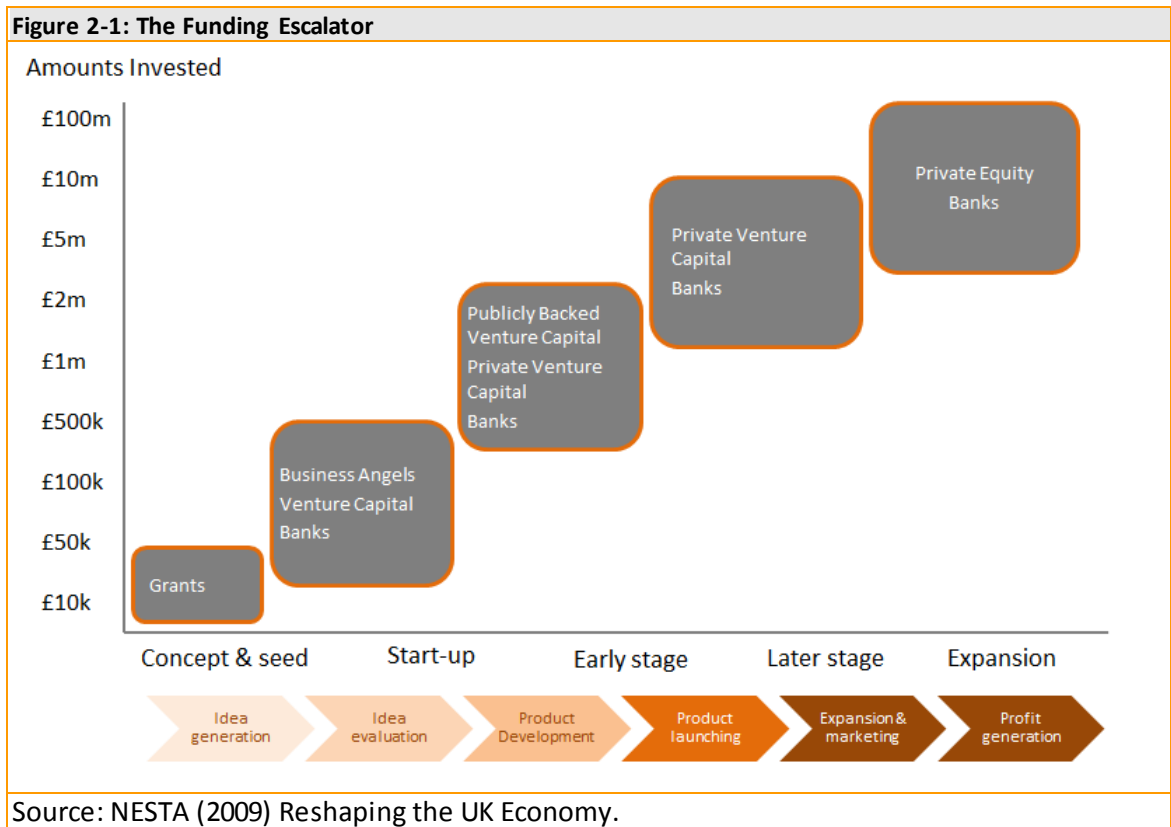
● **Wales European Programme Ex-ante Assessment – Financial Instruments Appendix** ●

available survey data provides an indication of demand and data on supply and financial returns from Finance Wales in particular has enabled us to make a reasonable assessment of future capacity for publicly backed Funds.

2. Review of Market Failures in SME Finance

Finance Needs of SMEs

- 2.1 External finance for SMEs is important in ensuring that firms can fund business investments and thus grow to their potential, and in providing funding for new business start-ups. SMEs use external finance for a variety of reasons, including for the purposes of funding working capital/cashflow, capital investments and acquisitions.
- 2.2 The concept of the “funding escalator” can be helpful in illustrating how the range of different Financial Instruments (FIs) serve various needs of SMEs, depending on their stage of development. An example of this concept is set out in Figure 2-1 below. Potential high growth firms at a pre-start stage (and therefore pre-revenue) often seek and obtain grants to fund product development before going on to seek equity finance from business angels and venture capitalists. In practice, the funding escalator is a simplification as clearly not all businesses will go through these stages.¹ Debt finance is generally more suited to firms with a lower risk profile and are therefore able to service regular loan repayments.



¹ BIS (2012) *SME Access to Finance*, Economics Paper No. 16, January 2012

The Finance Gap and Market Failures in SME Finance

- 2.4 The finance gap describes the situation where SMEs with viable investment propositions find it prohibitively difficult to obtain **debt and** equity finance from the private sector for certain types or sizes of investments. Formal research by public agencies into this phenomenon has existed for over eight decades, beginning with the report of the Macmillan Committee.² Significant research was undertaken by the Bank of England from 1991 leading to the publication of 11 consecutive annual surveys³ along with significant research on the effectiveness of various public interventions, sponsored by DCLG/SBS,⁴ the European Union and the EIF.

Equity Finance

- 2.5 The finance gap for equity finance is relatively well-defined and it is commonly accepted that there is an “equity gap” at relatively low levels of finance. The gap in venture capital finance is explained as being due to significant costs in providing equity finance – such as search costs, due diligence costs, and monitoring and transactions costs – that do not vary proportionally with the size of the investment. Therefore larger investments tend to be more commercially viable and in effect most venture capitalists tend to operate cut-off points, concentrating on these larger deals. Typical due diligence costs, for example, are between £20,000 and £50,000.⁵ As a consequence, potentially profitable investments of this scale are avoided.
- 2.6 The boundaries of the equity gap are not fixed, however, and a number of estimates of the range have been made. At the lower end, this gap is bounded by the upper limits of business angel activity and informal investment and the upper end by the lowest deal sizes commercial venture capitalists are prepared to make. The perception is that the boundaries of the equity gap have increased in recent years, with venture capitalists focussing on larger deals. The most recent assessment found that the gap lay in the region of £250,000 up to at least £2 million, although some estimates reach as high as £5 million and for complex R&D related investments the upper bound has been put at £15 million.⁶ The gap is seen as most severe for sub-£1m investments, early stages businesses and firms in regions outside London, the East and South East of England.

Debt Finance

- 2.7 The finance gap for debt (or debt-based mezzanine finance) is harder to define unambiguously. Debt finance is more limited for firms which do not have a track record, for smaller amounts, and in particular, firms seeking unsecured lending.
- 2.8 Whilst at a UK level estimates of the size of the equity gap have increased, the gap for debt finance has been more dynamic in recent years. In the years leading up to the financial crisis lenders were competing strongly on volume, taking a more favourable attitude to invest in risky, less secure propositions. Hence in this period the debt finance gap narrowed. As the credit

² *Report of the Committee on Finance and Industry 1931*

³ *Finance for Small Firms 1994-2004*

⁴ *Regeneris Consulting Study of ERDF funded venture capital and loan funds in England and Wales, June 2007*

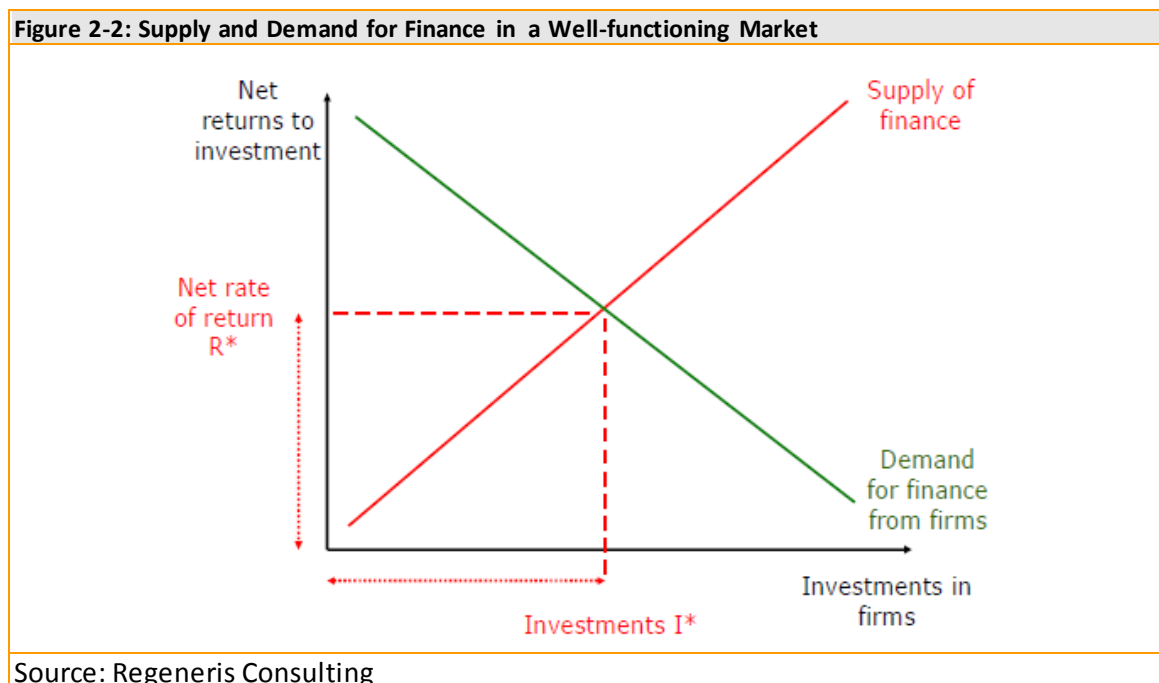
⁵ BIS (2012) *SME Access to Finance*, Economics Paper No. 16, January 2012

⁶ BIS (2012) *SME Access to Finance*, Economics Paper No. 16, January 2012, citing BIS (2009) *The Supply of Equity Finance to SMEs: Revisiting the Equity Gap*, SQW Consulting.

crunch hit, however, there has been a very sharp reversal of this trend. These issues are explored further in the market assessment below.

Market Failures

- 2.9 In undertaking an assessment of gaps in the market for SME finance, it is important to be clear on precisely what is meant by market failure in this context. Here we provide an overview of the theoretical underpinnings of market failure in SME finance.
- 2.10 Economic efficiency is achieved when nobody can be made better off without anybody being made worse off. Well-functioning markets tend to achieve efficiency – which means that there are no unexploited gains from trade. Market failure describes the general situation where, for one reason or another, the market mechanism cannot achieve economic efficiency.
- 2.11 In the case of pollution, for example, the private costs of an economic activity do not reflect the costs incurred by society as a whole and ‘too much’ of that good is produced. In access to finance the question is whether the market, without public intervention, will provide ‘too little’ debt and equity finance and as a result, business growth and wealth creation is constrained. Market failure requires that there are unexploited gains from trade – in this case that there are deals which would be profitable to both firms and investors (and wider society) that for some reason are not made.
- 2.12 Market failure in its own right does not provide a sufficient argument to intervene. Public intervention must actually do better than the market in improving outcomes for society. This is a critical consideration often overlooked in policy assessment. Intervention generally involves ‘government failure’ – some distortion of markets and reduction in welfare, not least through taxation needed to fund it – against which the benefits need to be weighed. Public intervention to raise supply may improve economic welfare, but only if the benefits outweigh the costs of the intervention.



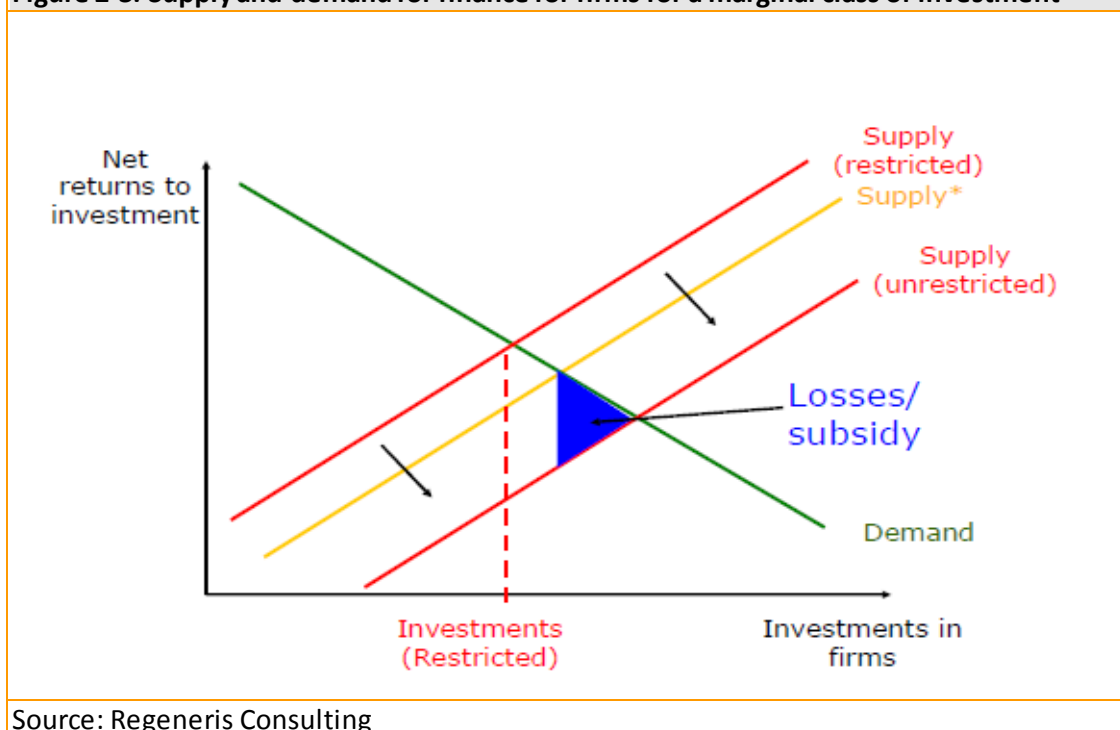
Market failure in access to finance

- 2.13 The idea of market failure in access to finance can be illustrated by a simple analysis of supply and demand. The supply curve shows that investors will invest in more firms the greater expected net returns each investment provides. Net returns include interest and capital paid to an investor, net of all costs such as due diligence, administration and costs of bad debt. The demand curve shows that as the net return required by investors falls, for example through lower interest rates, more firms will demand finance. These relationships apply equally to markets for debt and equity finance.
- 2.14 In a well-functioning market, investors will provide finance up to the point where the expected net returns required by the investor are equal to the net returns that are acceptable to the firm. This is the point where the market ‘clears’ – at any point to the right of this, the costs of extending finance would exceed the benefits to investors. At any point to the left, there would be profitable investments that would be unrealised by the market.

Lack of finance for marginal investments – the finance gap

- 2.15 Failure in the market for business finance is generally understood in terms of imperfect information: the risk of failure and write off is not known by the investor and there are costs associated with gaining the information to assess these risks. Information is not only imperfect but it is asymmetric: firms seeking finance, in general, know more about the true risks of failure than investors and can undertake actions that affect the chances of repayment which the investor cannot monitor. Imperfect and asymmetric information gives rise to scenarios where the market does not provide adequate investment for firms, even when individually they might offer a good return on investment.

Figure 2-3: Supply and demand for finance for firms for a marginal class of investment



Source: Regeneris Consulting

- 2.16 Where information on the risk of the investment is imperfect, this market clearing point may not be reached. The investor is likely to deal with imperfect information by dividing the market into classes of investment for which average failure rates are known. Marginal classes of investment, where average risks of failure are on average too high and returns too low to justify investment, will be excluded from the market.
- 2.17 There are likely to be many firms in this class who are profitable investment prospects, but imperfect information means they cannot be distinguished from other riskier investments. This situation is shown in the figure above where investors extend credit up to Supply (restricted). This is rational for investors since if they relaxed their conditions and allowed credit for the risky group of firms they would make losses equal to the area shaded blue. To dissent from the suggestions of some government literature, **we do not regard restricted finance for marginal classes of investment (as described here) as market failure**. Likewise it can be said that information failures do not equate to market failure. Moreover for the public sector to operate in these areas some element of subsidy (returns below that acceptable by private sector investors) is required.
- 2.18 This type of scenario can be used to explain why banks tend not to make unsecured loans to small start-up firms with no collateral to secure a loan, as on average these firms represent too great a risk. It can also be used to explain why venture capital is not provided in smaller quantities, given that uncertainty over risks of investment and relatively high due diligence and management costs mean that investments below a certain level become prohibitively costly.

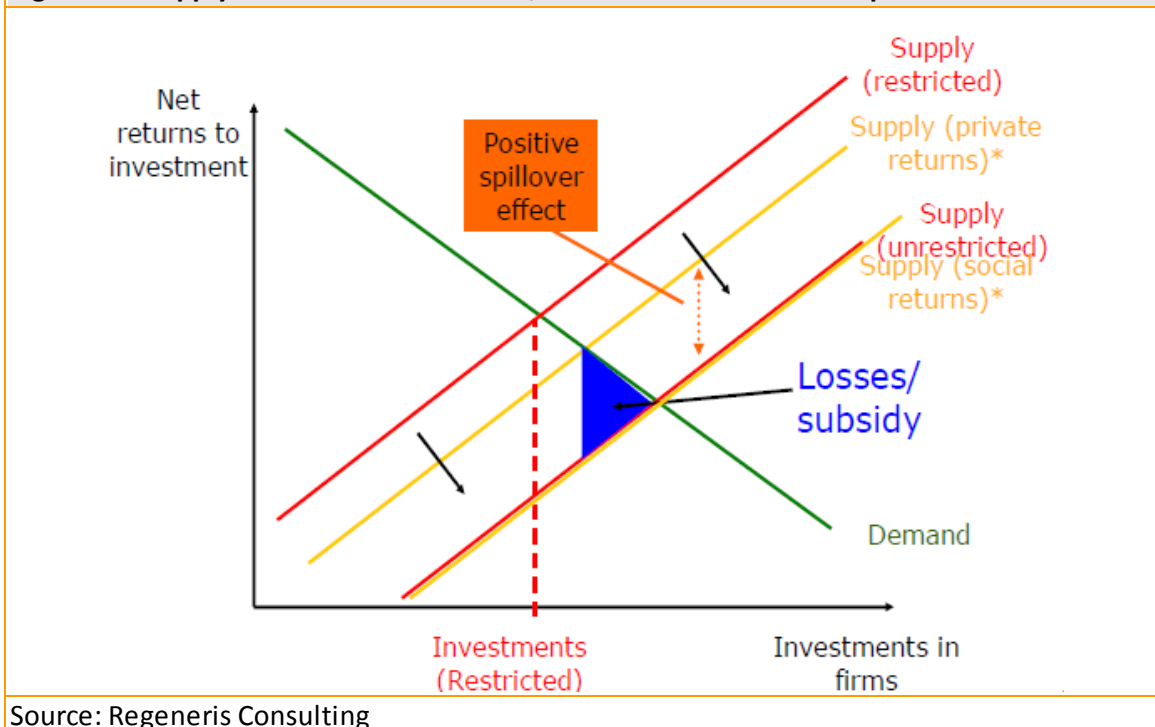
Demonstrator Effects

- 2.19 There is a second type of information failure associated with market failure in credit markets. It may take some considerable time before the net returns that can be realised from any class of investment are established by the market. While net returns are underestimated, risk-averse investors will fail to provide finance for profitable classes of investment. The public sector could in principle address this failure by working with the private sector in the short term to demonstrate that viable returns can be made from a certain class of investment.
- 2.20 This type of argument can be applied to small venture capital investments in particular. There is a high degree of uncertainty over the returns that can be expected from this market over time, in part because returns are realised over a number of years, are highly dependent on the skills of particular venture capitalists, the strength of local markets, and may themselves be highly variable by Fund. In our judgement there is probably a greater chance of the market reflecting the true situation than government. This would tend to be supported by an apparent lack of very strong net Internal Rate of Return (IRR) generated by public sector venture capital funds to date.

Economic Development Impacts

- 2.21 There are also economic development and regeneration arguments for the public sector intervening to provide additional business finance for SMEs in the finance gap. There is a generally recognised need for government support to raise levels of enterprise, research and innovation, employment and regeneration in the UK. It can be argued that investments which support these types of impacts will generate positive spillovers – benefits that accrue to the wider region, above and beyond that reaped by the fund.

Figure 2-4: Supply and demand for finance, with social returns as well private returns



2.22 These are market failures as described in the HM Treasury Green Book. Market failures are as follows:

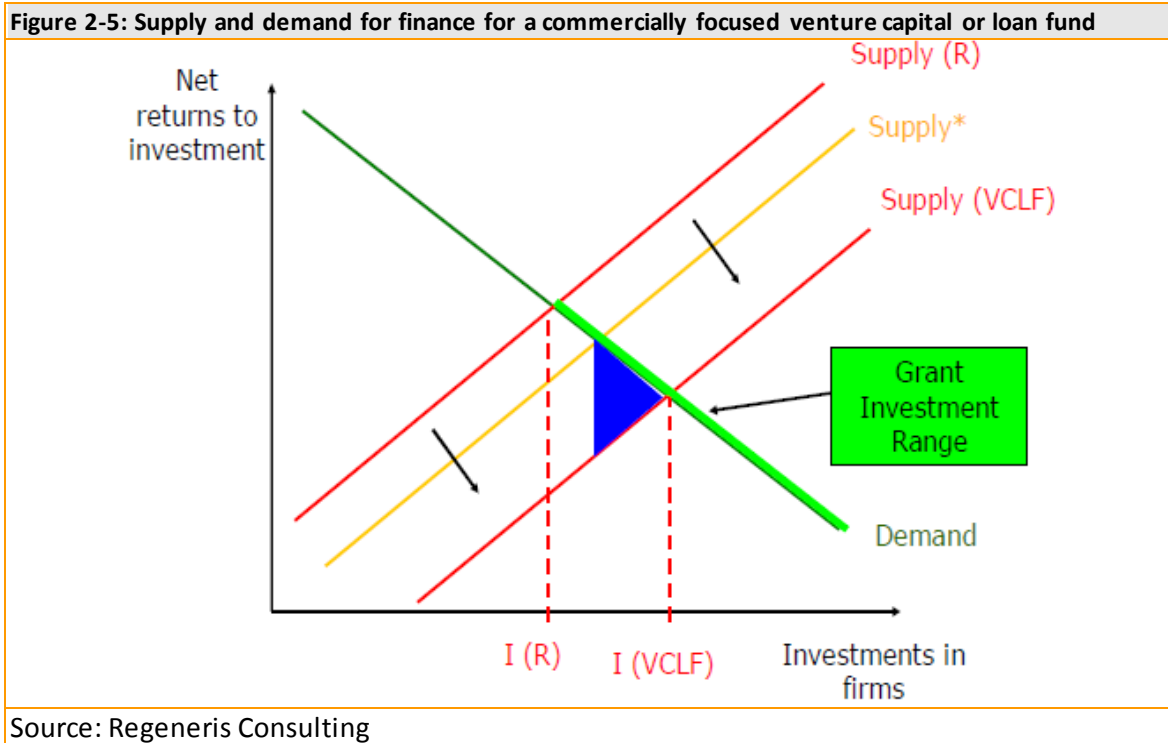
- **Technology and Innovation Spillovers** – firms which develop or commercialise new technology will tend to generate economic returns beyond the firm as the technology or innovation is imitated. There is a strong rationale for supporting new or existing firms to develop and commercialise new technology. In our experience most firms supported by equity funds are engaged in some form of innovation, and this is an important rationale for Venture Capital and Loan Funds (VCLFs) as a direct way to support innovation.
- **Enterprise Spillovers** – enterprise, through the creation of new and innovative firms, generates benefits for the regional economy beyond those reaped by the firm. This is through spurring greater productivity, innovation and creating employment.
- **Employment and Regeneration Spillovers** – in regions where there is a need to support employment, worklessness and deprivation creates negative spillovers on others in families and communities. There is a strong market failure as well as equity argument for supporting employment in relatively deprived areas. This type of argument is likely to be more important for Funds providing mezzanine or loan finance to established firms, or non-technology start-ups rather than equity funds. It is likely to be more important in a recessionary macroeconomic climate.
- **Regional Development and Lock-In Arguments** – firms and regional economies can become 'locked into' low or high growth trajectories. This is a form of market failure, since firms which contribute to a 'better' trajectory confer benefits on others in the future. Regional development policy is often predicated on the basis of developing knowledge or technology-based sectors in regions with relatively low productivity.

Publically backed funds tend to directly support the growth of these sectors and as such are potentially valuable tools of regional economic development policy.

- 2.23 In general we regard the private sector as providing finance up to the point where net returns of finance are at least as large as the net costs. In order to justify public venture capital and loan funds, economic returns need to outweigh the costs of subsidy. This means in effect that net public sector costs per job created, per firm started, turnover created or technology supported, etc, must compare favourably against other uses of these public resources.

Scope of the Finance Gap

- 2.24 Demand for finance from SMEs increases as the rate of return required decreases (e.g. as interest or equity stake demanded falls relative to risks and returns). There is in principle no effective limit to demand for finance from firms. In some instances, the public sector has sought to estimate the size of the market for finance through survey evidence of the numbers of firms seeking or rejected by mainstream finance, for example. This has sometimes been presented as an estimate of the size of the 'finance gap'. This type of analysis has only limited practical value in its own right and has the potential to be seriously misleading.
- 2.25 The size of the market for a given fund depends on the level of financial return required (or subsidy available) and target economic development returns. The size of the market can be indicated by the performance and experience of existing private and public sector backed funds in a region – but not generally by survey work. There is likely to be diminishing returns to additional deals – the first few deals a private fund will not do will yield only marginally lower financial returns and so if they produce modest social returns they are likely to deliver value for money. For deals where there are somewhat weaker financial returns, the focus should be on generating economic development returns. Whilst survey evidence can be helpful in understanding demand for finance, it has limited value in robustly and practically estimating a given level of demand – that is deals and investment per annum which will generate a given level of financial and economic return - before financial returns from existing funds are known. In conducting a market assessment it is therefore important if possible to examine the performance of existing publicly backed SME finance provided to SMEs at given rates.



2.26 Venture capital and loan funds are in principle superior to grants as a cost effective means of addressing market failure. The requirement of a return from investee firms (albeit generally at a submarket level) imposes a financial discipline on firms and investors that is absent in the case of a grant scheme. A grant scheme will typically provide finance for a range of investment propositions across the full range of investment to the right of $I(R)$, many of which offer weak returns to investment and represent a poor use of public funds. A well-run publically backed fund will only attract and select the investments across the range between $I(R)$ and $I(VCLF)$ which will offer relatively strong returns. A fund which is not selective about its investee firms and generates small levels of returns is likely to be effectively similar to a grant scheme in this respect.

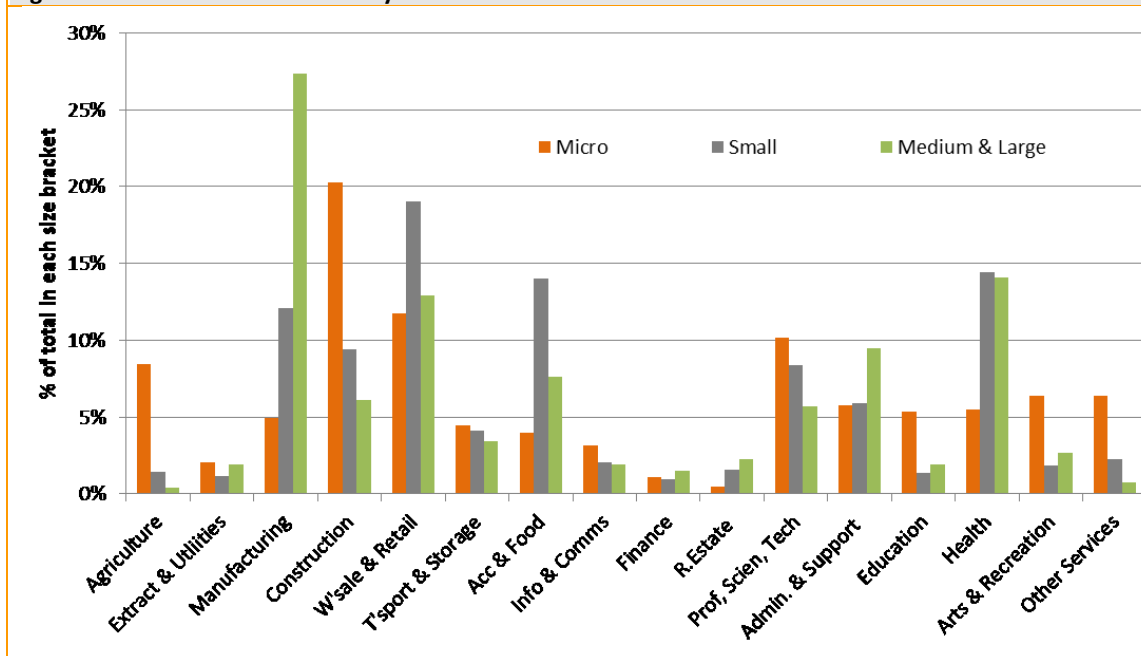
3. SME Finance Market Assessment

Microbusinesses

Demand

- 3.1 Microbusinesses are generally defined as firms that employ fewer than 10 people.⁷ There are currently around 92,000 businesses in this size category in Wales, representing 82.4% of the total business base⁸.
- 3.2 Figure 3-1 shows how the spread of business across sectors varies by size band. A disproportionate number of microbusinesses operate in lower value added sectors such as personal and leisure services which serve local markets. At the lower end of the scale, such businesses are often lifestyle businesses, without aspirations to grow significantly. A large proportion of professional firms serving local markets (42%) such as solicitors and accountants as well as construction firms (57%) are also micro businesses. Typically such firms make use of overdrafts and credit cards to finance early stages of their activity. When seeking £5k or more they then tend to seek small amounts of debt finance from external sources.

Figure 3-1: Businesses in Wales By Size and Sector



Source: BIS UK Business Population Estimates 2012

- 3.3 Survey evidence provides a useful indication of the extent to which microbusinesses seek and obtain finance. The UK Business Omnibus Survey of October 2011 reports almost half (46%) of microbusinesses identified cash flow as one of the barriers to the success of their business. 25%

⁷ The European Union defines micro-enterprises as those that meet 2 of the following 3 criteria and have done so for at least 10 years: fewer than 10 employees; balance sheet total below EUR 2 million; turnover below EUR 2 million.

⁸ ONS UK Business Activity, Size and Location, 2012; data is taken from VAT or PAYE records and so excludes those very small businesses operating below the current VAT threshold.

noted obtaining finance as a barrier⁹. Applying these figures to the current Welsh business base would imply that:

- c. 90,000 microbusinesses see cash flow as a barrier and
- c. 50,000 view obtaining finance as a barrier.

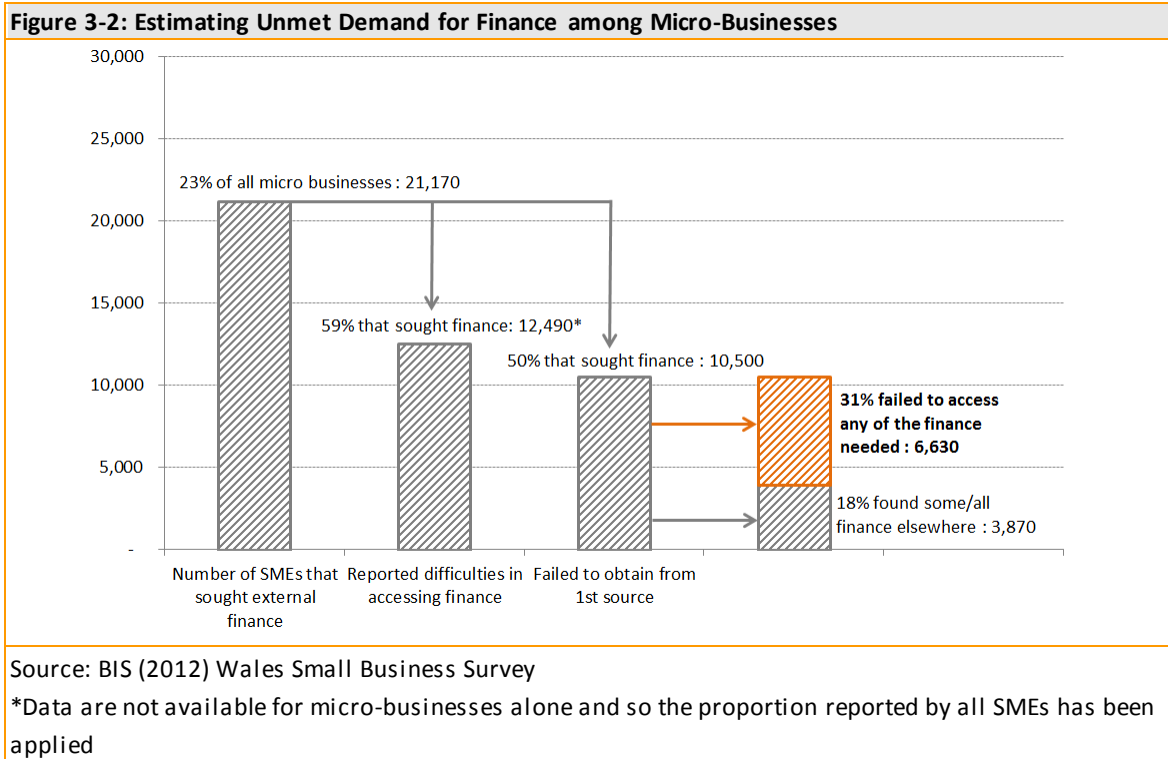
3.4 The latest survey of Welsh SMEs by BIS¹⁰ found that 23% of microbusinesses sought external finance in the last 12 months, equivalent to 26,000 businesses in 2012. On average, those seeking finance were looking for £61,000,¹¹ and the majority of microbusinesses were seeking bank finance (loans, overdrafts, mortgages). The survey found that microbusinesses encountered greater challenges than larger SMEs in gaining finance: only 53% obtained all that they needed (compared to 57% of all SMEs). A further 11% obtained some, but not all, of the finance they needed, with nearly one-third therefore failing to receive any of the finance they sought. It is important to remember that this represents the situation with Finance Wales operating in the Welsh market: it is possible that some of the firms surveyed obtained finance from Finance Wales (we discuss the performance of Finance Wales' microloans portfolio below). The survey does not report separately the purpose behind seeking finance, but the most prevalent reasons across all SMEs were financing working capital and funding the purchase of capital equipment or vehicles.

3.5 A simple application of this survey data to the current business base in Wales allows us to estimate the absolute number of firms that have sought finance but faced difficulties in obtaining that finance or that have been unsuccessful in accessing finance altogether. This analysis is shown in Figure 3-2 and suggests unmet demand for microfinance, with an estimated 6,630 microbusinesses failing to obtain any of the finance they sought. At an average level of investment sought of £61,000, this would suggest an unmet demand for finance of over **£400 million**. Clearly this is subject to significant margins of error and is only useful as an indicative order of magnitude. However, it serves to illustrate the potential scale of unmet demand for microfinance in Wales.

⁹ *Business Omnibus Survey*, cited in *Wales Government Micro Business Task and Finish Group Report*, January 2012.

¹⁰ BIS (2012) *Wales Small Business Survey*

¹¹ Whilst we do not have the data, there is likely to be significant variation around this average. Smaller microbusinesses (sole traders up to 5 employees) can be expected to require considerably less finance than this overall average.



3.6 As set out in our earlier discussion of market failures, it is not possible to discern from this analysis whether or not the businesses failing to obtain finance have done so for good reasons (i.e. they do not have viable business plans) or whether they represent viable investment propositions that have been rejected. Evidence on the supply of microfinance in Wales serves to illuminate this to some extent.

Supply

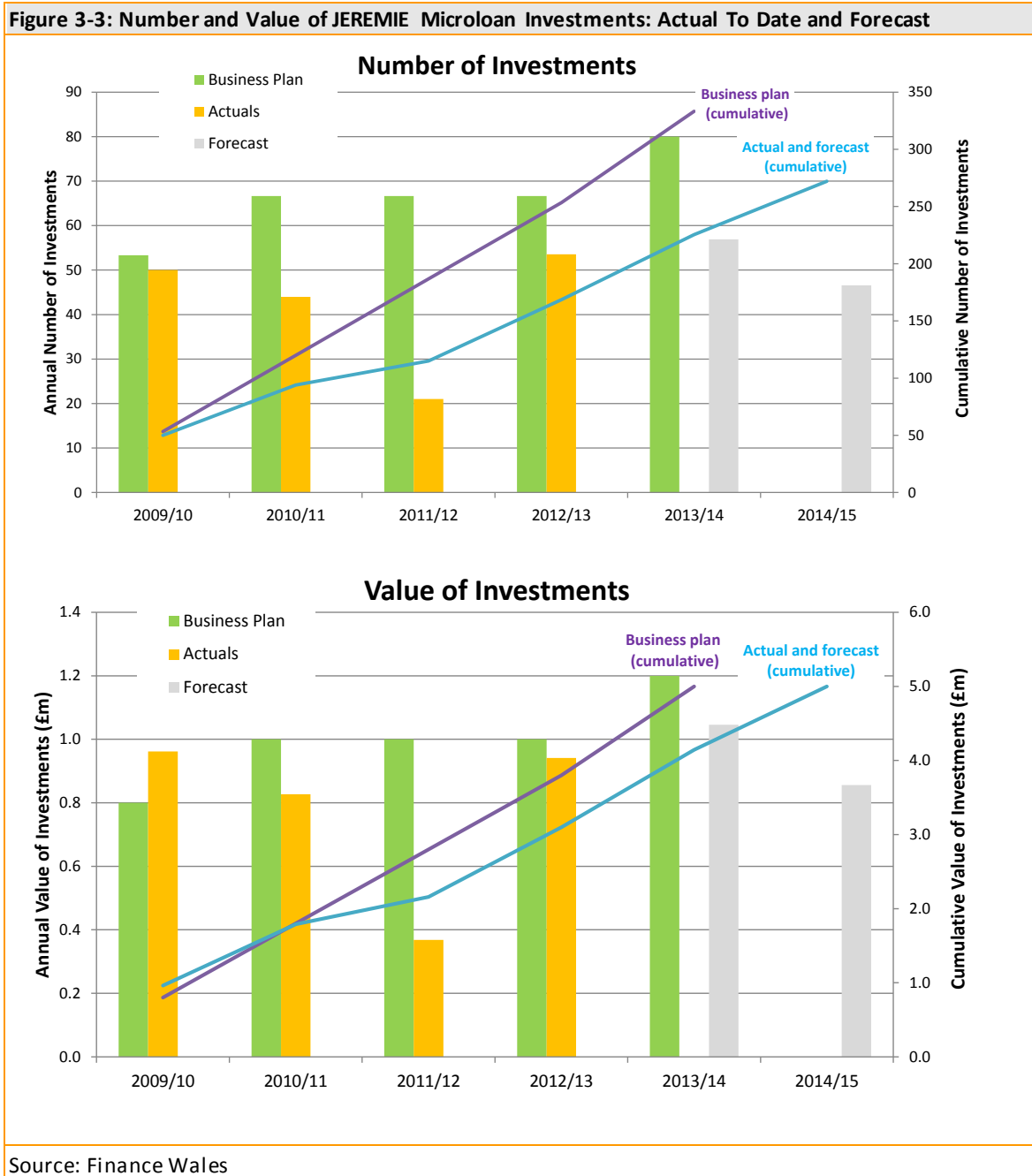
3.7 Although commercial sources of finance, such as high street banks, have been a common source of finance for microbusinesses, this is less common for smaller amounts of finance and particular types of business. The small amounts of finance sought and the higher default rates amongst these types of businesses mean that this is not, in general, a commercially attractive area for banks. Also lots of the business owners are reluctant to approach for smaller amounts of finance. Many microbusinesses make use of credit cards, money from family and friends, overdrafts and so on before seeking external finance when larger amounts of funding are required. For firms seeking £2,000 or less, credit unions are also a potential source of finance.¹²

Microloan Fund - JEREMIE

3.8 Finance Wales is a major provider of microloans to businesses in Wales. The £150 million JEREMIE Fund (funded by the European Investment Bank, ERDF, and the Welsh Government) contains a £5 million microloan fund, offering loans of between £5k and £25k to support a range of activities including start up, capital investment and stock purchases.

¹² A recent evaluation of Welsh Government's support for Credit Unions found that "there has been a healthy growth in both credit union membership and asset base in Wales as a direct result of project funding" although operating costs were often high (Oldbell13, *An Evaluation of the Access to Financial Services through Credit Unions Project Final Interim Report, 2012*).

- 3.9 Figure 3-3 sets out the latest data on the investment performance of the Microloan Fund, based on data provided by Finance Wales. As this indicates, the Fund got off to a strong start, exceeding its investment target by value for 2009/10 and roughly meeting its target for the number of investments made. Consultations with Finance Wales indicate that when the Fund was launched a large number of enquiries were received through intermediaries such as enterprise agencies. This was a driver of the strong investment volume.
- 3.10 Initially the Local Investment Fund (a locally authority managed, ERDF funded small grant scheme) was also seen as a potential source of investments – it was later clarified that this was not the case, since it was not possible to match one European funded scheme with another.
- 3.11 It subsequently also became apparent that many of the propositions referred to the Microloan Fund by a range of intermediaries were of poor quality, which led to a review of the approach with Finance Wales working to educate the intermediary base as to suitable propositions. As a consequence of these factors, the quality of referrals has increased but the quantity fell sharply.
- 3.12 These factors go some way to explaining the significant drop in 2010/11 and 2011/12, which left the Fund some way behind target. Further, microloans have traditionally not been core business for Finance Wales, so there has been a process of bedding in and establishing themselves in this market over time. As these issues have been resolved and Finance Wales has been able to increase the administrative resource to support the Fund, investment volumes have recovered significantly in 2012/13.
- 3.13 The investment period for the overall JEREMIE Fund has been extended by one year, and Finance Wales is confident that it will meet its investment targets over this period, expecting to invest just over £1m in 2013/14 and just over £0.8m of in 2014/15.
- 3.14 Overall, therefore, **Finance Wales expects to have achieved an annual average flow of investments of £0.83 million per annum over the six year investment period.**



3.15 Implicit in the above figures is the fact that the average size of investments made has been slightly greater than projected. The business plan projected average investment values of £15,000; to date the average has been around £18,000.

3.16 Finance Wales has provided data on projected returns from the Microloan portfolio. This covers Distributions to Paid In Capital (DPI – a measure of the ratio between returned and originally invested capital) and Gross Internal Rate of Return (IRR – a measure of the annual rate of return generated by the investments). The analysis has been carried out on three bases:

- 1) Based on investments made to date, and the actual realised returns to date: calculated based on a comparison of cash invested vs actual returns to 31.12.12 plus the Net Book Value of remaining investments at 31.12.12.

- 2) Based on investments made to date and forecast total returns from these investments, calculated based on a comparison of cash invested vs actual cash to date and forecast cash including current forecast realisations. Forecasts have been discounted to reflect the anticipated final default rate.
- 3) Based on forecast lifetime returns from the entire portfolio, calculated based on (2) above plus forecast future investment with forecast returns from those investments discounted to a level consistent with the assumed final default rate.

3.17 This analysis provides the most up to date view of the extent to which the investments being made in this area are likely to yield a return, and hence whether the ability of Finance Wales to make these investments indicates the existence of viable investment propositions in this area of market. On all measures, the analysis shows a modest positive return for the portfolio. On current projections, Finance Wales is expecting a gross IRR of 2.1% over the lifetime of the Fund, equivalent to DPI of 1.055. This would indicate that the capital invested in these microloans is expected to be returned, with a modest additional return in nominal terms.

Table 3-1: Projected Returns from JEREMIE Microloan Fund			
	Based on...		
	1) Investments made to date, and actual returns to date	2) Investments made to date, and forecast total returns from these investments	3) Forecast lifetime returns from all investments
DPI	1.036	1.060	1.055
Gross IRR	2.7%	2.4%	2.1%

Source: Finance Wales
 Note: Figures are gross and do not take account of administrative and other overhead costs of running the portfolio. Values not discounted for inflation.

3.18 Of course, this analysis does not provide us with a measure of the overall IRR of the Microloan Fund in net terms, as it does not take into account the administrative costs of running this portfolio or the central organisational overheads necessary to deliver the overall JEREMIE Fund. It is not possible to analyse the Microloan Fund in this way due to the way that data is held, but we do later analyse the net IRR of the overall JEREMIE Fund.

3.19 Finance Wales has encountered issues around the monitoring of data on economic outputs (e.g. jobs created and safeguarded), including securing returns from surveys of investee firms that ask about this. This data should therefore be treated with considerable caution as an indicator of performance. The data show that 183 gross jobs have been created and 488 jobs safeguarded.

Wales Microbusiness Fund

3.20 In addition to the Microloan Fund within JEREMIE, Finance Wales has also recently commenced delivery of a £6m Microbusiness Fund, funded by the Welsh Government. This was in response to a report by the Microbusiness Task and Finish Group for Wales, which identified a need for the provision of “accessible finance solutions between £1,000 and £20,000.”¹³ The Fund can

¹³ *Microbusiness Task and Finish Group Report*, January 2012

lend up to £25,000, to be repaid over five years at an interest rate of 8-10%, depending on the risk profile.

- 3.21 Finance Wales noted that it has observed significant levels of demand and referrals of businesses that operate in business-to-consumer markets. Since these firms are not eligible for support under JEREMIE due to EU regulations, there was a substantial level of unmet demand in this area. The Microbusiness Fund is able to support businesses in these sectors (such as retail, construction and personal services).
- 3.22 The Microbusiness Fund has not yet started to make investments, since the Fund management contract has only just been signed. £1m has been ring-fenced to be invested in social enterprises – this will be managed and delivered by the Wales Council for Voluntary Action.
- 3.23 There have been internal evaluations of the three LIF Funds at mid-term, although these have not examined impact issues. An overall evaluation has been commissioned which will investigate financial performance and economic impact in detail.

Social Enterprises

- 3.24 There is a clear recognition within Welsh Government policy of the importance of social enterprises to the Welsh economy and society and of the importance of maintaining the investment that will see them survive and grow. This is highlighted in the text of a number of key documents:
- The **2009 Welsh Social Enterprise Action Plan (SEAP)** suggests that *“most social enterprises are good at the social aspects of what they do, but far fewer are run as effective and viable businesses”* and that *“securing appropriate finance and funding will enable the sector to grow”*. On top of this it is recommended that *“that the performance monitoring and transparency of social enterprise be improved in order to provide stronger assurance to potential funders and investors of the case for financial support”*.
 - The **Economic Renewal Programme**¹⁴ for Wales highlights that in the current economic climate, social enterprises are likely to become increasingly important in delivering public services.
 - The **Enterprise and Learning Committee Report: The Role of Social Enterprises in the Welsh Economy (2010)** highlights:
 - the need to *“learn from other investment funds and review the financial support it provides to social enterprises so that it meets their needs more appropriately in supporting start-up and development”*
 - the *“merit in creating a bespoke finance system for the social enterprise sector in Wales”*
 - the requirement for *“a range of partners to improve the accessibility, quality*

¹⁴ Economic Renewal Programme: A New Direction (2010), Deputy First Minister for Wales.

and coverage of business support and advice for the social enterprise sector, and to ensure that financial and high-level business advice can be provided together in one place as a coherent and comprehensive package for enterprises across the whole of Wales to expedite their growth”.

- 3.25 There are barriers to finance on both the demand and supply-side however. While countless organisations rely on grant funding for survival and there is a need to maintain this flow in many cases, there has in general been an over-reliance on grants. In addition, understanding among social enterprises as to the means of accessing and managing loan and equity finance is in, our experience, limited. At the same time, providers of finance have generally presented finance on terms that are out of line with the requirements of social enterprises. These are factors which are explored in more detail below.
- 3.26 Beyond the market failure case set out for SME finance above, there is an additional market failure in the provision of finance to social enterprises. Many social enterprises fill gaps where the market has failed to provide key services or provide services that bring wider environmental or social benefits. Some of the key socio-economic benefits provided by social enterprises include:
- **Employment Opportunity:** social firms¹⁵ provide routes to mainstream sustainable employment, reach out to the economically inactive or disadvantaged.
 - **Community Benefits:** Social enterprises are often engaged in identifying and promoting the needs of local communities, contribute to community regeneration and encourage active citizenship, improve service delivery to meet local needs and ultimately retain wealth within local communities. In the case of development trusts¹⁶ these form a key rational.
 - **Social Benefits:** Social enterprise widely contributes to sectors such as Housing, Childcare, Recycling and Renewable energy.

Demand

- 3.27 In 2009 Welsh Government undertook a mapping exercise in order to survey the scale and type of social enterprises in Wales and to better understand the sectors’ needs. Just over 3,000 organisations representing 2.6% of all business turnover (£2.2 billion) were identified as undertaking social enterprise activity in Wales¹⁷.
- 3.28 Two-thirds of social enterprises described access to finance as one of the main factors that would help in their organisation’s future success, with smaller social enterprises generating less than £500,000 in revenue identifying this as their number one concern (see Table 3-4). Furthermore, when asked which areas of support and advice they would like to see expanded, 44% of social enterprises highlighted access to finance, far higher than any other area (including business and strategic planning (18% of organisations), volunteers (15%), diversification of

¹⁵ Social firms aim to reduce social exclusion and economic inactivity through labour market integration of excluded groups

¹⁶ Development trusts are owned and run by community stakeholders to bring about regeneration, socioeconomic and environmental change.

¹⁷ Welsh Government (2009). ‘Mapping Social Enterprise Activity in Wales: Understanding in order to Influence’.

income streams and partnership development (14%) and financial management and premises (13%).

Figure 3-4: Top Three Requirements for Support by per annum Turnover Bracket

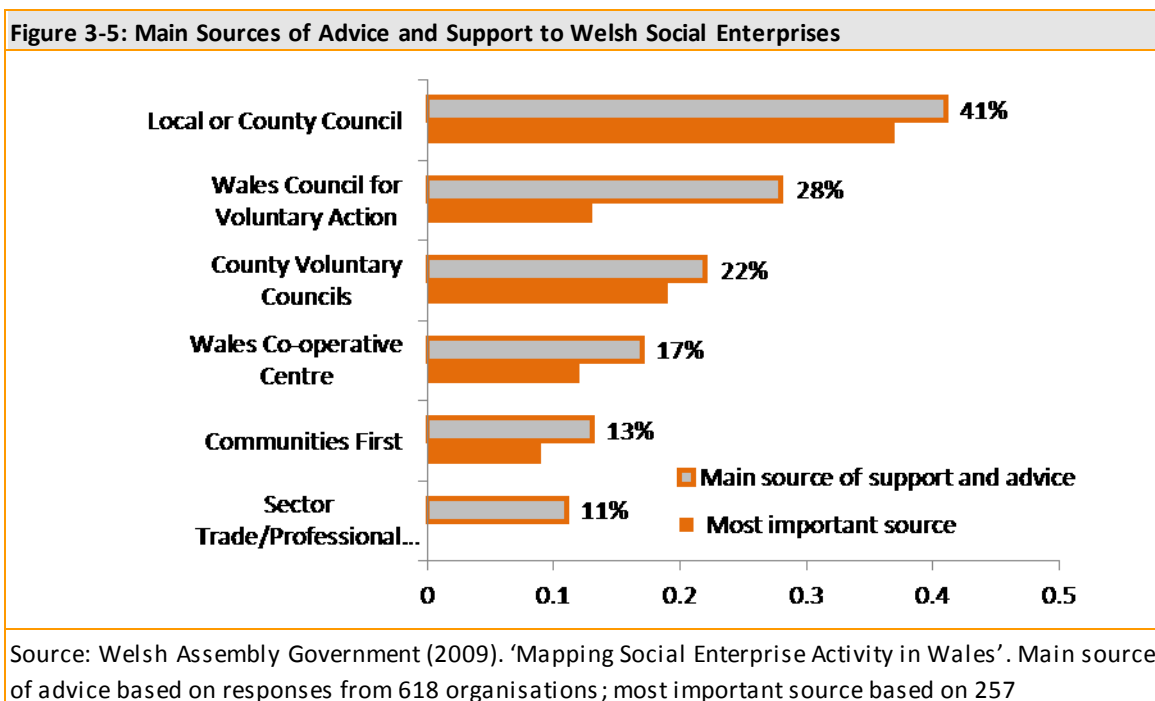
	Less than £25,000	£25,000 to £100,000	£100,000 to £500,000	£500,000+
1.	Access to finance	Access to finance	Access to finance	Strategic Planning
2.	Volunteers	Volunteers	Strategic Planning	Access to finance
3.	Premises	Partnership development	Diversification	Diversification

Source: Welsh Assembly Government (2009). 'Mapping Social Enterprise Activity in Wales'.

- 3.29 All of the social enterprises surveyed stated that grant funding would be preferable over other forms of finance, perhaps unsurprising in a sector which relies heavily on grant funding and is typically either averse to the risks associated with debt and equity finance or unable to service the costs that are associated with these form of funding. Demand for loan finance stood at 15% of organisations, compared to 39% among private SMEs at the time.
- 3.30 Demand for non-grant finance is highest among larger social enterprises; 27% of enterprises with turnover exceeding £100,000 have a need for non-grant finance (most likely a loan), compare to 7% among those with a lower turnover. Similarly, organisations that are to a greater extent self-sustaining demand more in debt finance; 20% of enterprises earning more than 75% of income through revenue had a loan versus 10% among other social enterprises. Social housing providers are particularly well placed to access loan finance given the potential to borrow against existing assets and 52% of providers had loans in 2009 against an average of 15%.
- 3.31 While social enterprises are not typically the prime targets for equity investment, a significant 8% of social enterprises saw it as having a place in the future funding of their business. However a lack of understanding and awareness of how to access risk finance and of the relative benefits of doing so often acts as a barrier to take-up.

Supply

- 3.32 Data is hard to come by where the source of finance is not specifically aimed at the social enterprise sector (for instance it is not possible to ascertain what proportion of commercial bank lending has been directed to social enterprises). Neither has it been possible to locate survey data similar to that assessed for SME finance in Figure 3-2 above which indicates the scale of demand and barriers to access finance. This section therefore focusses on providing an overview of the main sources of finance for social enterprises.
- 3.33 The 22 local authorities provide the greatest scale of support to the social enterprise sector in Wales and finance from the authorities predominantly comes in the form of grants. However, it is clear that there is a strong network of other organisations working to support the sector as well.



3.34 There remains a fundamental mismatch between a requirement for loan finance and the types of loan products available commercially which are rarely shaped by the requirements of many social enterprises. However, the **Unity Trust Bank and Charity Bank** offer loans with terms that better suit social enterprises such as favourable rates and repayment periods and limited payment holidays are available where a commercial lender might register a default. This has led to rates of default far lower than those typically seen for mainstream commercial loans; for example the Community Investment Fund (detailed later in this section) is operating under a default rate of around 12%, much lower than what is typical for commercial banks¹⁸.

3.35 In 2012 the Unity Trust Bank dispensed £19 million across the UK in social lending across three main themes:

- Settled Housing (41% of loans): including YMCAs, Registered Social Landlords (RSLs)
- Community Cohesion (41%): with 83% of this to provide new and improved space to help organisations (predominantly charities and voluntary organisations) grow or expand services.
- Community Finance (18%): making five loans to Community Development Finance Institutions (CDFIs) who in turn make finance available to SMEs and Social Enterprises that will create jobs and wealth for local economies¹⁹.

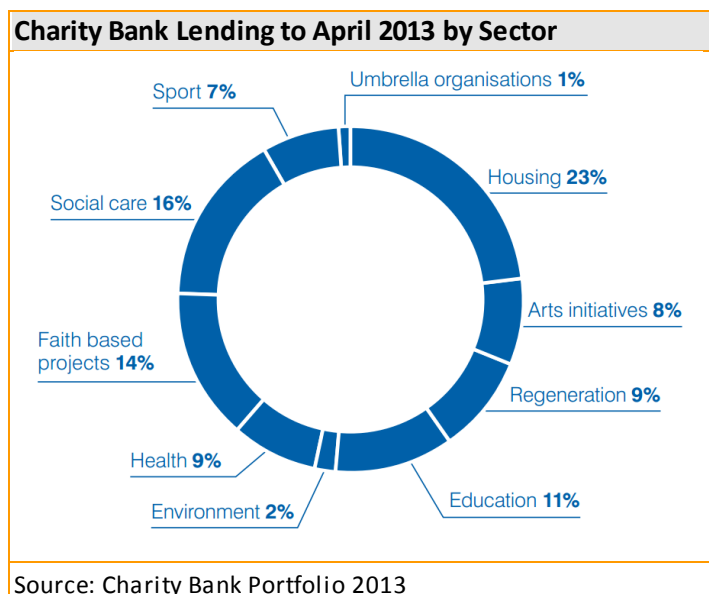
3.36 In 2012 the bank set up a £30 million loan in partnership with the WCVA fund which will run for five years and is aimed at further acquiring and developing premises for social enterprises. It matched a £30 million Regional Growth Fund grant and £15 million Co-operative Bank loan with a £15 million loan to fund the Community Development Finance Association (CDFA). As a result,

¹⁸ From Consultation with WCVA.

¹⁹ Unity Trust Bank (2012) Annual Report and Accounts

the CDFA has lent more than £5 million per annum since 2012 through CDFIs²⁰.

3.37 From 2002 to 2012, the Charity Bank has lent £177 million to more than 1,000 charities across the UK. During 2012, the Charity Bank had 604 loan enquiries for worth £197 million and created an £8 million pipeline of lending opportunities. Around £10.6 million (6%) of lending over the last ten years has been provided to Welsh organisations. The largest proportions of lending have been directed towards housing, social care faith based organisations and education.



3.38 The **Communities Investment Fund (CIF)** managed by the Welsh Council for Voluntary Action (WCVA) is a £4.7 million loan fund operating from December 2011 to March 2014. It lends up to £250,000 over a maximum term of 25 years. From January 2012 to June 2013 it received applications from 83 organisations for £5.5 million (an average of £66,000). Eighteen of these applications (22%) were approved at an average value of £89,000, a total amount loaned of £1.59 million and an average term of 10 years²¹. This alongside the rate of enquiries for Charity Bank lending, highlights a level of excess demand for loan finance but also the need to help social enterprises better prepare business plans that will see them able to secure the loans they need.

3.39 Community and education organisations account for the largest volume of CIF loans at 29 and 24% respectively, while sports (24%), community (23%) environmental (17%) and regeneration organisations (17%) account for the largest value of loans.

3.40 The 2009 Welsh SEAP stresses that social enterprises “*differ tremendously in terms of their scale, business goals and capability, culture, social aims and financing model*”. An appreciation of other forms of financing is therefore important in understanding the financial requirements of social enterprises.

3.41 **Credit Unions** for example, provide another important source of finance to social enterprises.

²⁰ *ibid*

²¹ All figures received from the Welsh Council for Voluntary Action (WCVA), July 2012

Credit unions are run as co-operatives to offer low costs loans with the interest from these loans being reinvested into the community. The Wales Co-operative Centre has managed the Access to Financial Services through Credit Unions Project, supported by Welsh Government and EU structural funding since April 2009 and provides other accompanying support. £5.4 million in loans is available for credit unions up to December 2014. 17 credit unions were being supported at the time of its 2012 evaluation²².

- 3.42 **Community share schemes** have also become a popular model for smaller scale financing of social enterprises and present a sustainable means of funding a social enterprise where other sources are short in supply or inaccessible. While the model presents a good option to maintain operation of a community resource, there is perhaps less opportunity for funding longer term enterprise growth.
- 3.43 Similarly, the **Community Asset Transfer (CAT) Fund** is funded and delivered in partnership between the Welsh Government and the BIG Lottery Fund CAT provides capital and revenue funding to support the transfer of assets, such as land and buildings, from public sector organisations to community ownership.

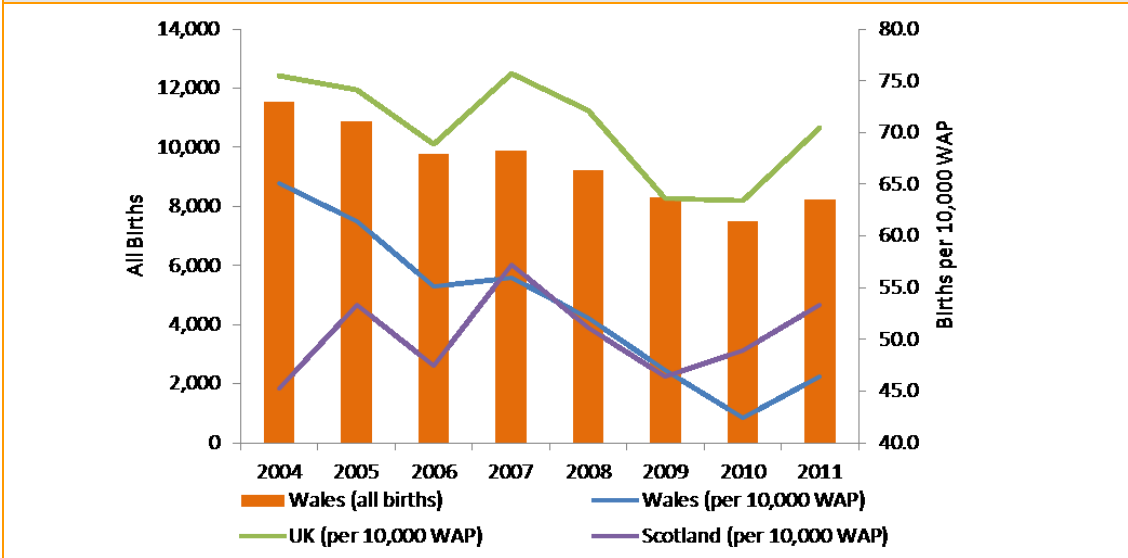
Debt Finance for Other SMEs

Demand

- 3.44 Loans can be used for a variety of purposes, including funding business start-up and expansion or re-investment activity by existing SMEs. There are no definitive sources of data on demand for debt finance. However, we consider the available data on both business start-ups and established SMEs below, along with the results of available survey data.
- 3.45 Wales has seen a steady decline in business births since 2004, falling 35.0% (4,000 fewer businesses) up to 2010, with numbers recovering by 9.5% (+720 starts) in 2011. This pattern thus pre-dates the recession but this is not mirrored in the comparator areas of Scotland and the UK as a whole. The former saw start-ups rise by 26.4% between 2004 and 2007 while starts flat lined over the period for the UK. Similarly, since the onset of recession, the decline in starts across Wales stood at 24% compared with 15% for Scotland and 16% for the UK.
- 3.46 In 2011 (the latest year for which data are available), 8,225 new businesses were formed in Wales. At 44.8 new businesses per 10,000 working age adults, this is 33% below the business birth rate in the UK as a whole of 67.1 and also some way short of the 51.7 seen in Scotland:
- If the birth rate in Wales was to close the gap on the UK, there would need to be 4,100 additional start-ups per annum (an increase of 49.9%)
 - To match the rate in Scotland, the birth rate in Wales would need to increase by 1,270 per annum (and increase of 15.4%).

²² Welsh Government (2012). 'An Evaluation of the Access to Financial Services through Credit Unions'. Old Bell 3 Ltd.

Figure 3-6: Business Births across Wales and per 10,000 of the Working Age Population across Wales, Scotland and the UK

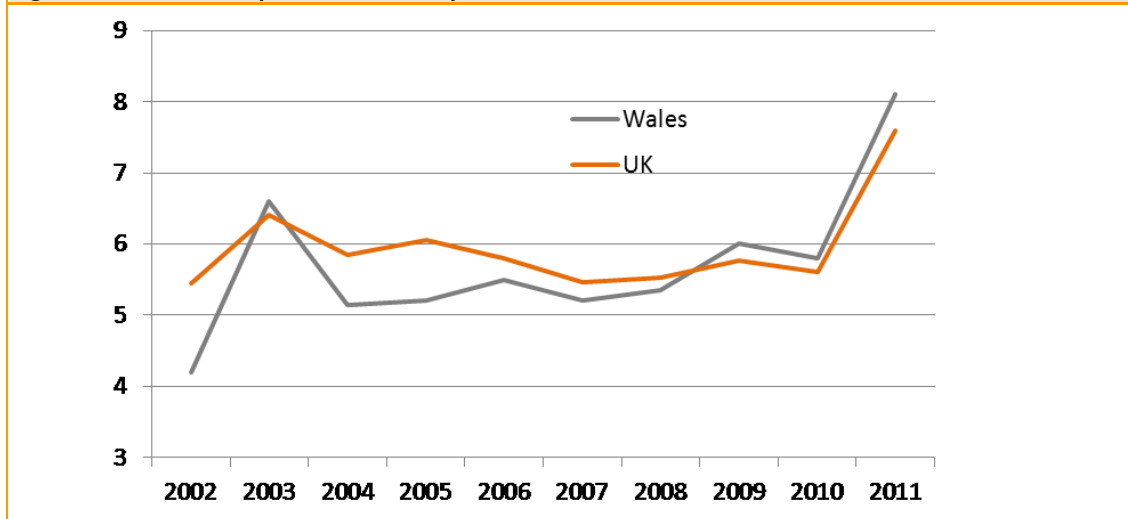


Source: ONS Business Demography 2011; ONS Mid-year Population Estimates

3.47 The Global Entrepreneurship monitor (GEM) provides annual updates on the scale of early stage business activity. It is based on a survey of 10,570 adults across the UK and 3,000 in Wales. Total Entrepreneurial Activity (TEA) measures the proportion of the working age population that is in the process of setting up a business or involved in a business which has been operational for less than 42 months (three and a half years). It is a key indicator for assessing the extent of early stage commercial activity in an economy and the potential market for finance among businesses at a point in their development where access to finance is key.

3.48 In contrast to the start-up data presented above, the latest GEM data puts Wales 6.6% ahead of the UK in terms of TEA, pointing to a relatively positive environment for new ventures. Indeed, Wales has been positioned a little above the UK on TEA from 2009 to 2011, and alongside the rest of the UK saw a marked increase in entrepreneurial activity in 2011, jumping 40%.

Figure 3-7: Total Entrepreneurial Activity 2002 to 2011: Wales and the UK



Source: Global Entrepreneurship Monitor 2011: UK Monitoring Report; GEM UK 2010: Wales Report

3.49 There appears to be a particular prevalence of nascent entrepreneurial activity in Wales (businesses having employed people for less than three months). This suggests that despite a strong entrepreneurial appetite, some businesses in the very earliest stages of growth may be struggling to survive to a point of financial sustainability.

Figure 3-8: Measures of Entrepreneurial Activity in the UK Home Nations, 2011



Source: Global Entrepreneurship Monitor 2011: UK Monitoring Report

3.50 Recent research has found that entrepreneurs who took out a loan to start their businesses borrowed an average of £84,500 to support this (66% of the total costs)²³ Assuming that the current rate of business start-ups remains the same in coming years (at c.8,000 businesses per annum), and applying this average, this would suggest a requirement for around £670m of finance per annum to support this (from both mainstream and publicly funded sources).²⁴ Should Wales start to close the gap on the UK start up rate identified above, then this figure could be expected to increase.

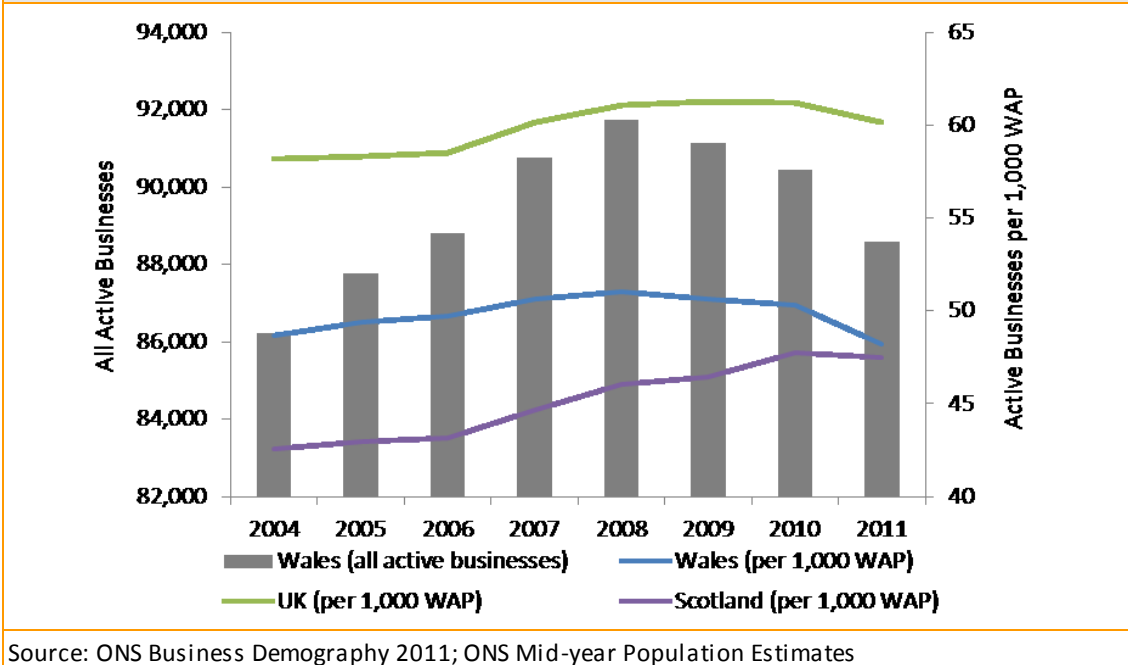
3.51 Turning to the established SME base, the number of active businesses as a proportion of the working age population fell 1.7% in Wales in 2011, a larger annual decline than has been seen over the last seven years and reflecting the 3.4% decline in absolute business numbers (-3,150 enterprises) since 2008. The number of active enterprises in the UK as a whole rose by 0.7% over the same period (+16,825 businesses) while in Scotland the business base has expanded substantially; by 4.5% or 6,650 businesses.

3.52 There are 92,000 SMEs in Wales, of which around 8,200 are non-micro businesses (that is, they employ between 10 and 250 employees).

²³Borro (2012). 'Enterprise Ladder Report'. Opinium Research.

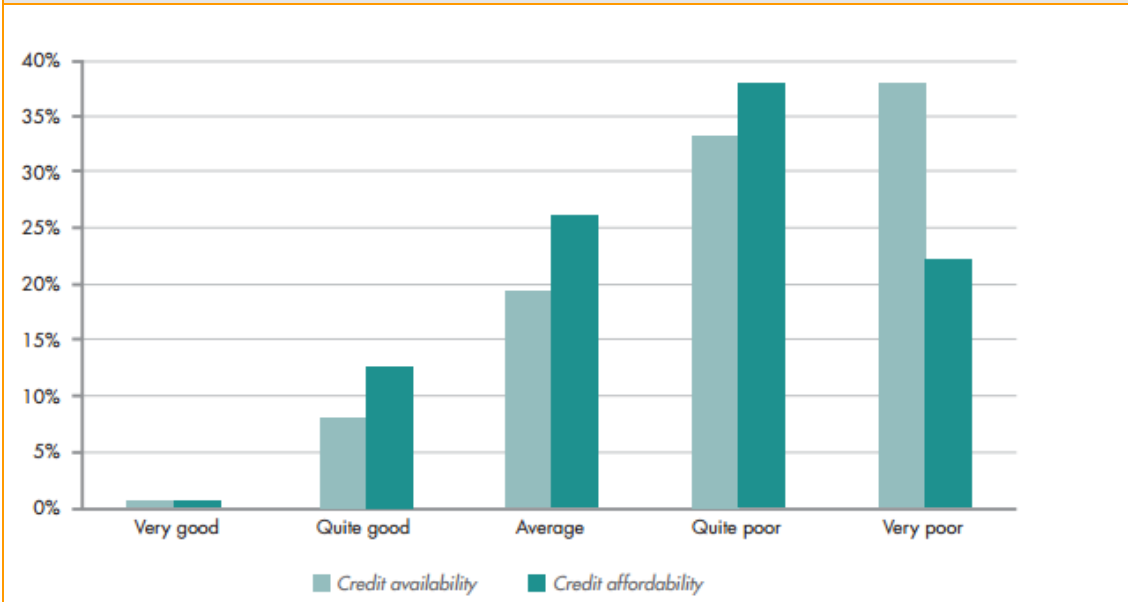
²⁴Note that this includes start up loans for microbusinesses.

Figure 3-9: Active Businesses across Wales and per 1,000 of the Working Age Population across Wales, Scotland and the UK

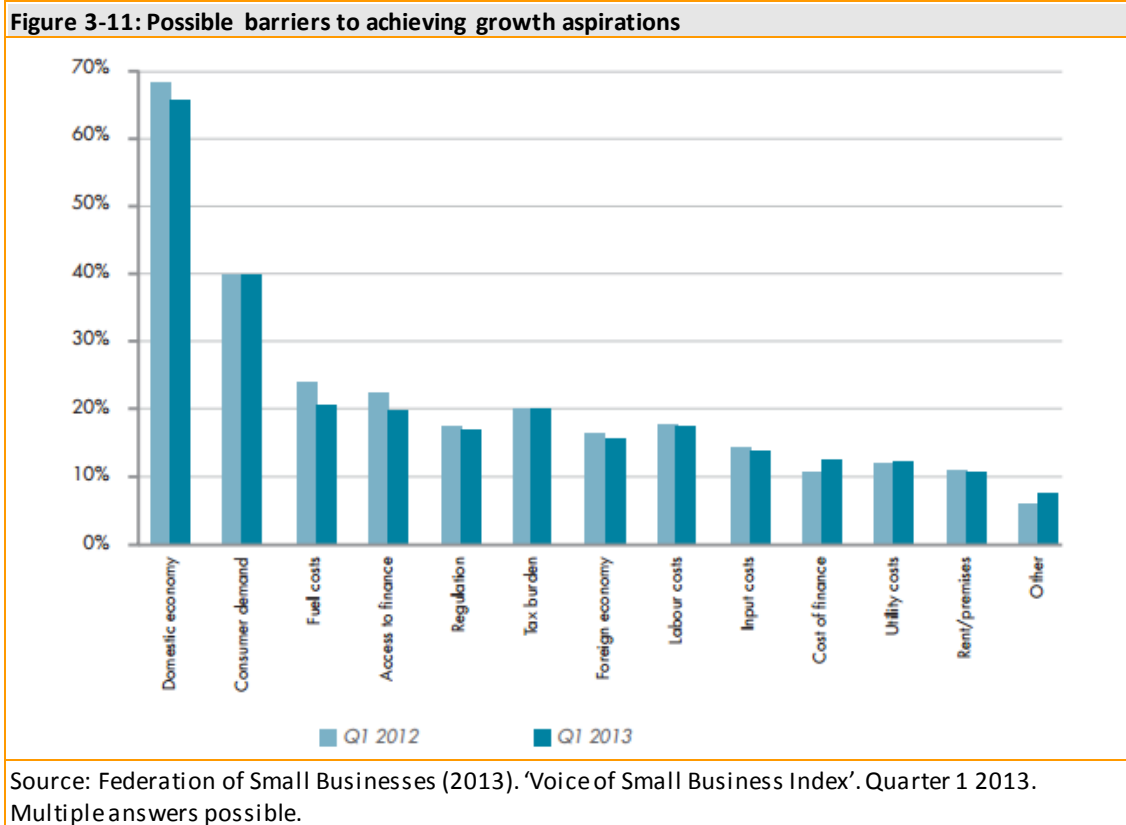


3.53 Among other issues facing small businesses, the Federation of Small Businesses’ (FSB) Quarterly ‘Voice of Small Business’ surveys provide useful material on SMEs’ perceptions of the availability of finance. The survey draws on the FSB Survey Panel and in the most recent survey gained 2,690 responses from across the UK. More than two thirds (71.4%) of small businesses surveyed view credit availability as either poor or very poor, up from 69.9% a year previously illustrating the scale of on-going market constraint.

Figure 3-10: Perceptions of Credit Availability and Affordability among Small UK Businesses, Q4 2012

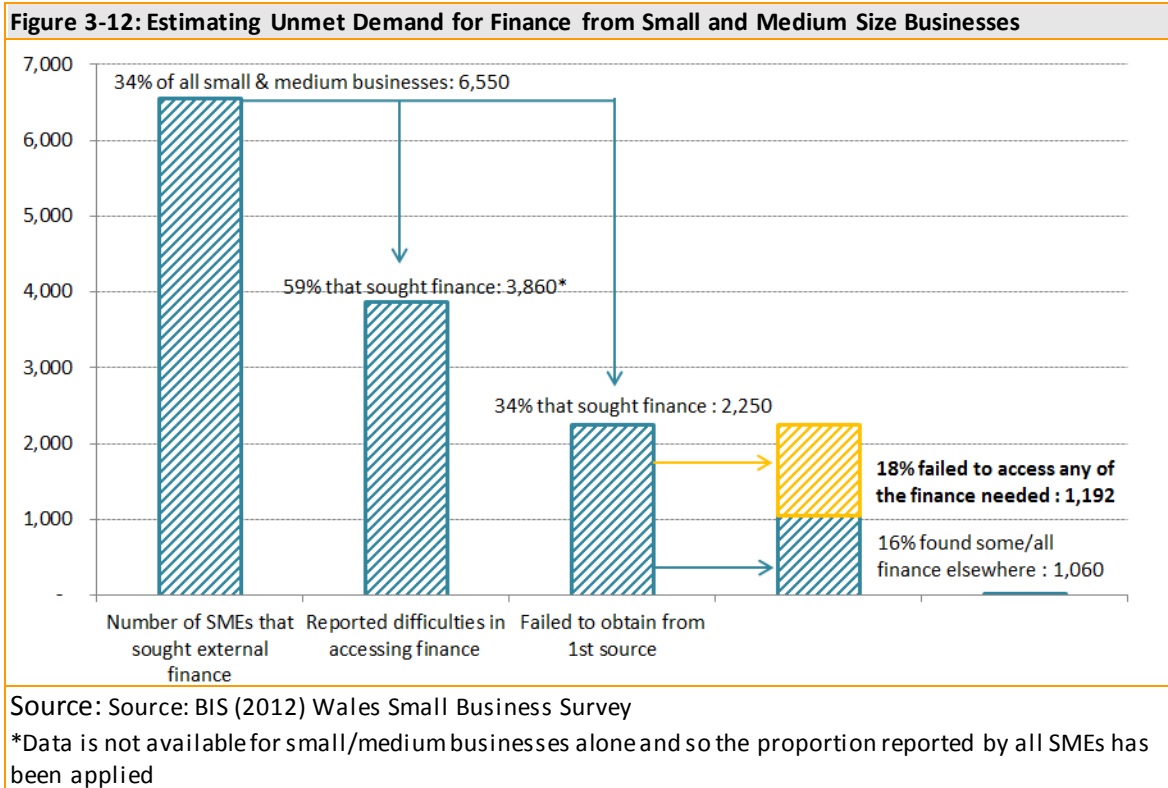


3.54 There are signs that access to finance conditions are easing for businesses, with the proportion of businesses reporting it as a barrier to growth falling from around 23% in the first quarter of 2012 to just under 20% at the start of 2013. Nonetheless small businesses still rate access to finance as the fourth highest barrier to growth while the cost of finance is of lesser concern, suggesting that overall demand is outstripping supply.



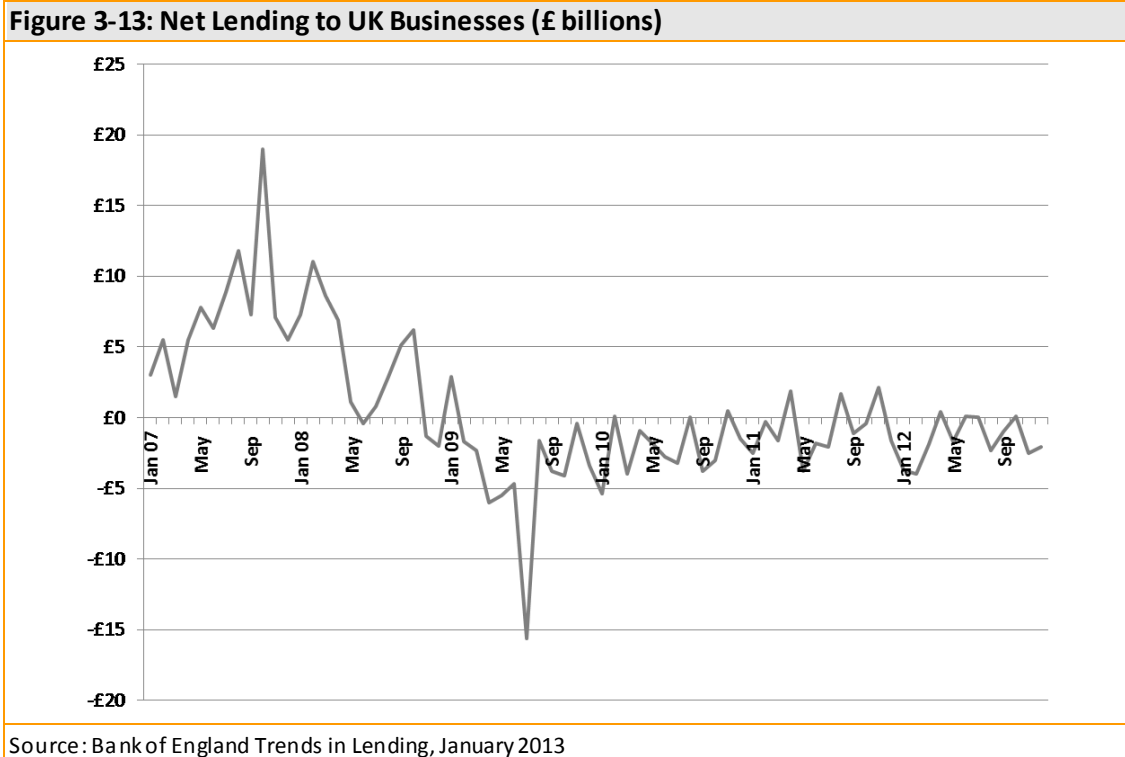
3.55 Data for Wales from the BIS 2012 Small Business Survey provides an idea of the scale of demand for business finance and the proportion of firms facing difficulties or failing in their attempt to attract that finance. Applied to the business base as a whole, this can again provide an estimate of the absolute level of unmet demand for finance amongst these more established, non-micro SMEs. This analysis is illustrated in Figure 3-12 and suggests that around 1,200 firms failed to secure any of the finance they needed in 2012. The vast majority of these are small firms (90% or 1,070) as opposed to medium size firms. It should be remembered that this again reflects the situation with Finance Wales operating in the market place, as some businesses will have accessed funding from Finance Wales.

3.56 Applying the average size of finance sought by small and medium size firms (£130,000 and £1.81 million), the potential unmet demand for finance is estimated at £139 million and £235 million respectively.



Supply

- 3.57 The financial crisis has led to a vast reduction in the provision of loan finance for businesses since late 2007. Lending to UK businesses has seen an unprecedented decline from late 2007 to mid-2009, reaching negative net lending of £15.6bn in July 2009 (in other words there was an overall net repayment of debt from firms of £15.6bn). The need for banks to repair their balance sheets, and the introduction of regulations on capital requirements (e.g. Basel III) has led to significant shifts in their lending behaviour and their appetite for risk, compared to the years leading up to the financial crisis. Whilst the early 2000s were characterised by competition between banks for volume lending and a greater degree of discretion on the part of sales teams, banks have now tightened up lending criteria, focusing on low risk proportions which are asset backed and offer higher margins. Monthly net lending has been negative in most months since early 2009, with the exception of November 2010 and April and August 2011 – see Figure 3-13.
- 3.58 In practical terms, this has led to a retrenchment from certain sectors and a move up the value chain. They have generally moved away from the provision of overdrafts to support working capital to asset based forms of finance such as invoice discounting. Moreover, certain sectors such as property, hospitality and construction have been given a prohibitively high risk profile, making it very difficult for these sectors to obtain finance.
- 3.59 A further consequence has been that banks have retreated back to their core business, and have in many cases ceased to fund specialist providers such as specialist asset financiers and sub-prime lenders. Since these specialist providers have found themselves unable to obtain funding, they have ceased to be a source of funding for SMEs.

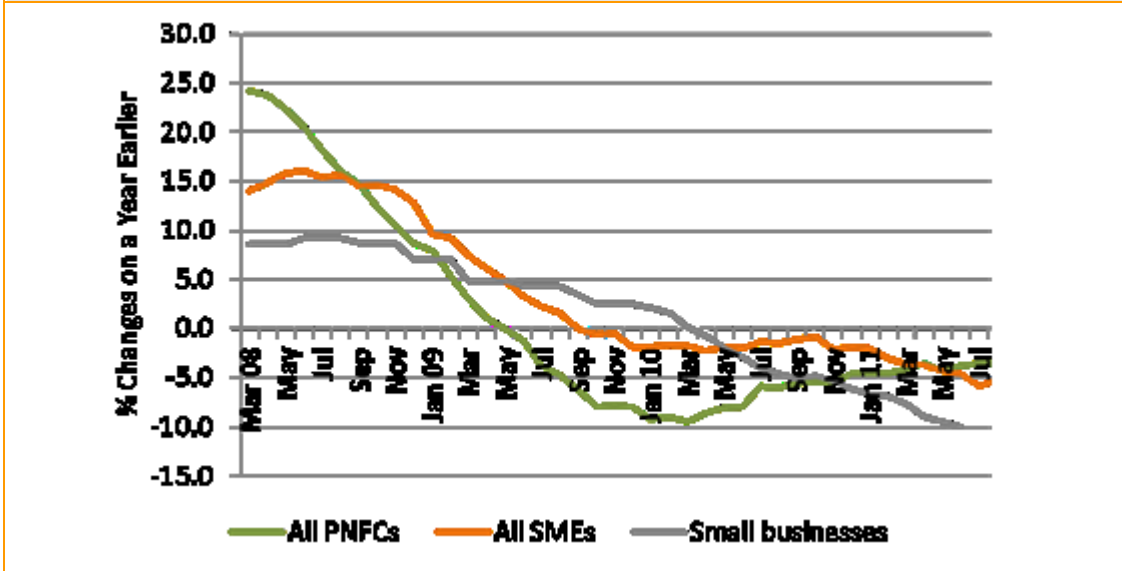


3.60 Lending to SMEs²⁵ in the UK has seen a similarly steep decline since the onset in 2008 of the credit crisis. Having recovered slightly during the first half of 2010 there was a further decline in lending to SMEs, averaging out at -3.4% over the year previous up to August 2011. The stock of lending to small businesses²⁶ has seen a steeper decline still, contracting by 10% compared to a year previous in the latest October 2011 data. Added to this, tougher terms and conditions for lending have placed a particular constraint on SMEs. Evidence from our consultations suggests that tightening of banks' credit policy has led to stricter terms and stricter covenants on loans to SMEs.

²⁵ Businesses with a turnover of less than £25 million.

²⁶ Businesses with a turnover of less than £1 million.

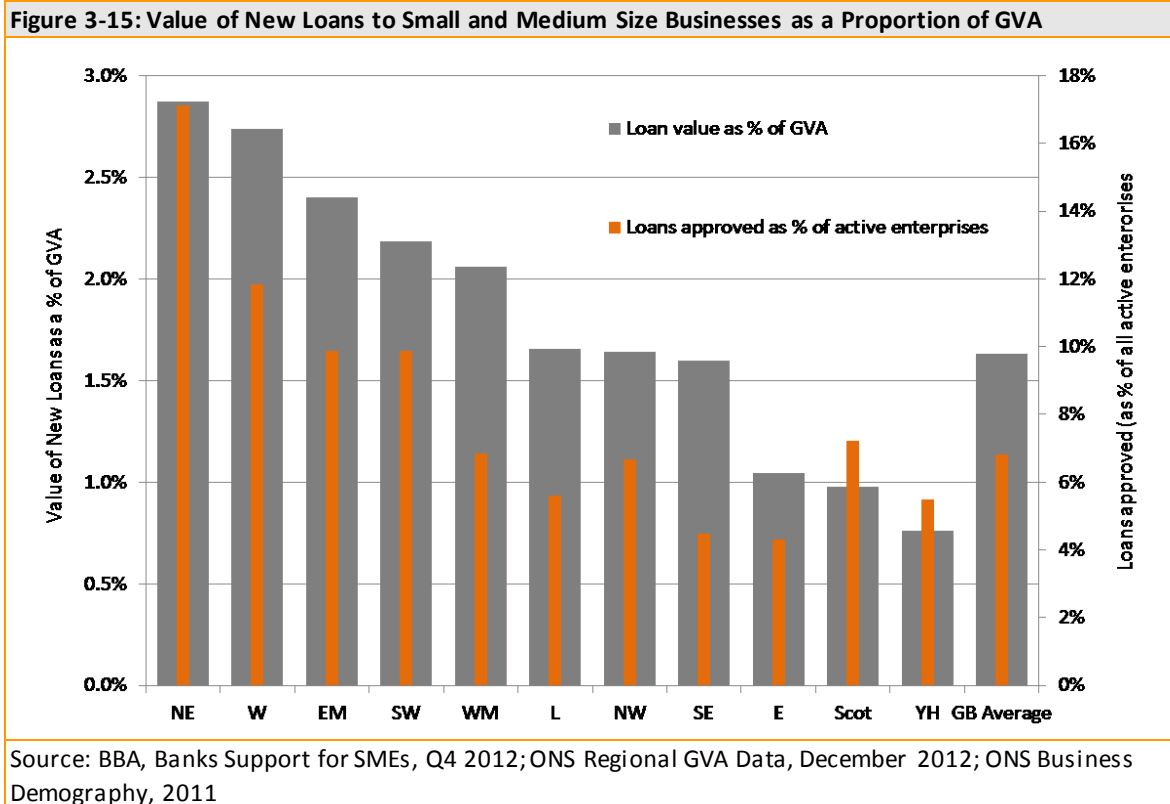
Figure 3-14: Annual Percentage Rate of Change in Lending to UK SMEs and Small Businesses (calculated on a monthly basis)



Source: Bank of England Trends in Lending, October 2011 drawing on SME data from BIS and BBA

- 3.61 The only data on lending to business in Wales is provided by the British Banking Association (BBA), based on returns from the banks involved in Project Merlin, the HM Treasury initiative introduced in February 2011 to encourage lending to SMEs.²⁷ The data provided commences from the last quarter of 2011 to the end of 2012. An effective time series assessment of loan supply across Wales is not therefore possible.
- 3.62 Total lending to Welsh SMEs was £1.3 billion in 2012, higher than in the North East, East of England, Yorkshire and Humber and Scotland. However, loan value as a proportion of GVA and approved loans as a percentage of the total business base place Wales SMEs as the second most supply active market in Great Britain at 2.7%, behind only the North East.
- 3.63 In addition to Project Merlin there has been considerable effort on the part of the UK Government to attempt to increase the flow of debt finance to SMEs, in recognition of the critical role that SME finance plays in economic growth and the constraints experienced in recent years. These interventions have taken a variety of forms, including loan guarantees by the Government and reductions in the cost of borrowing for banks.

²⁷ Project Merlin is an agreement between the UK Government and four major high street banks (Barclays, Lloyds Banking Group, the Royal Bank of Scotland and HSBC) on a number of matters including lending to British businesses, which includes lending targets.



3.64 The key interventions are as follows:

- **Enterprise Finance Guarantee (EFG) Scheme.** Commencing in January 2009, the scheme provides a 75% loan guarantee for lending to SMEs lacking the security or track record for a commercial loan. It is available to SMEs with less than £41 million in turnover on loans between £1,000 and £1m repayable between 3 months and 10 years. The business pays a 2% p.a. pro-rata premium to BIS towards the cost of providing the guarantee and is responsible for 100% of the loan. It is delivered through 46 accredited lenders (including all the UK’s high street banks, Community Development Finance Institutions and invoice finance providers). At its inception the EFG scheme was expected to account for 1-2% of all lending to SMEs. An evaluation has recently been carried out. The key findings were as follows:
 - **Additionality:** The vast majority (83%) of users indicated that they would not have been able to obtain a loan without EFG, indicating limited duplication of provision elsewhere and a high level of overall additionality. This compares with 70% and 76% found within the 1999 and 2006 evaluations of the EFG predecessor, the Small Firms Loan Guarantee scheme. Survey analysis and use of control groups show that business receiving finance generated employment and sales growth comparable to other borrowers, indicating that the scheme had the desired effect of removing the barrier to growth presented by poor access to finance.
 - **Economic Effectiveness:** over two to three years the scheme contributed strongly to the local economy, creating 6,500 net additional jobs (around one

job per business supported) and £567 million (£84,400 per business) against an operating cost of £178 million²⁸. This equates to a £3.20 return on every £1 spent.

- **National Loan Guarantee Scheme.** Introduced in March 2012 and now finished, this took the form of Government guarantees on unsecured borrowing by banks, enabling them to borrow at a cheaper rate. Banks were expected to pass on the entire benefit to small businesses by offering cheaper loans. Participating banks included Bank of Scotland, Barclays, Lloyds TSB, Lombard, NatWest, RBS, Santander and Ulster Bank. The scheme was eligible to small businesses, defined as those with a turnover of £250m or below. Loan recipients could not be in financial difficulty.
- **Funding for Lending.** Introduced in August 2012 following the National Loan Guarantee Scheme, FLS is aimed at reducing the cost of credit and boosting the demand for finance among both households and businesses. It allows banks and building societies to borrow at cheaper rates from the Bank of England for periods of up to four years. Participating banks can borrow up to 5% of their stock of existing lending to the real economy. That is, for every pound of additional lending an institution advances, an additional pound of access to the scheme will be permitted for that institution. For institutions maintaining or expanding their lending the fee will be 0.25% on the amount borrowed.
 - Evidence that we have picked up from consultations with banks and with Finance Wales suggests that whilst the scheme has enabled cheaper loans to be made, the bulk of this has benefited firms that banks would have invested in anyway – it has not had a fundamental impact in opening up loan finance to other firms. Thus the funding has been used as a price discounter, enabling banks to keep existing business, rather than to open up lending to firms on the margin.
 - Furthermore, the Federation of Small Business in their 2013 Q1 ‘Voice of Small Business’ survey conclude that although millions has been lent to thousands of small firms in the first six months of the scheme, survey findings (See Figure 3-10 above) suggest that the impact is not great enough to change business perceptions. Indeed, reports from businesses seem to highlight the positive impact of Funding for Lending in the mortgage market and a slower flow in the business lending arena.

JEREMIE Loan Fund

²⁸ including the opportunity cost of finance.

- 3.65 Finance Wales is a major provider of loan finance to SMEs in Wales, primarily through the JEREMIE Fund, but also through the recently introduced SME Fund (see below). The JEREMIE Fund has a £55m loan sub-fund (in addition to the microloan portfolio). It offers loans of between £25k and £2 million with an interest only period for first three months followed by 5 year repayment period at a 10% interest rate.
- 3.66 Figure 3-16 sets out the progress to date in terms of number and value of investments made in the loan portfolio. It is evident from the first year that substantial progress has been made in providing loans to Welsh SMEs: £15m of loans were made in 2009/10 against a business plan target of £9m, and £12.6m was issued against a target of £11m in 2010/11. This put the sub-fund 40% ahead of target by this point. 2011/12 saw a reduction in loans issued, mainly as a result of efforts to rebalance across the equity and mezzanine portfolios, rather than through falling demand.
- 3.67 Consultations with Finance Wales confirm that they experienced a much greater demand for loans than they originally anticipated, principally due to the retreat of the banks from riskier propositions lending and the tightening of credit conditions (the Fund had been designed before the full onset of the credit crunch). Finance Wales has traditionally been a gap funder, providing finance as part of syndicated deals in order to close a funding gap that cannot be provided by the private sector. The original expectation was that this role would continue through JEREMIE, and the demand assessment underlying JEREMIE was made on this basis. However, as the banks have stepped back, Finance Wales has increasingly played the role of primary lender, providing prime debt. Those private sector finance providers that we have spoken to see this largely as a positive thing and an inevitable consequence of the tightening of lending behaviour by banks.
- 3.68 In this respect it is clear that the tightening of private sector supply has led to considerable excess demand for loans from Finance Wales, even at a time of economic stagnation, which, all things being equal, would tend to dampen the rate of business start-up and expansion.
- 3.69 Overall, therefore, **Finance Wales expects to have achieved an annual average flow of investments of £9.2 million per annum over the six year investment period.**



3.70 Finance Wales has supplied latest projections on the returns from these investments, on the same basis as was done for Microloans earlier. Overall returns are expected to be relatively strong, with a 7.7% gross IRR on investments made to date, and an overall projection of 6.8% over the fund lifetime. This chimes with findings of the mid-term evaluation, which noted that the loan portfolio was an important source of returns for Finance Wales to enable them to pay back their loan from the European Investment Bank. This is supported by the latest data on default rates. The original lifetime projection was for a default rate of 20% by value. The current lifetime projection is for the default rate to be just 10%. The data therefore suggests that there has been a steady flow of viable loan propositions in Wales.

Table 3-2: Projected Returns from JEREMIE Loan Fund			
	Based on...		
	1) Investments made to date, and actual returns to date	2) Investments made to date, and forecast total returns from these investments	3) Forecast lifetime returns from all investments
DPI	1.112	1.173	1.182
Gross IRR	7.7%	6.6%	6.8%

Source: Finance Wales
 Note: Figures are gross and do not take account of administrative and other overhead costs of running the portfolio. Calculated in outturn price terms.

- 3.71 The data on economic outputs is subject to the same caveats as for microloans. However, it is worth noting that to date the Fund has reported to have safeguarded over 4,000 jobs and to have created 665 jobs (note that there is a one year time lag on this data, so actual jobs created by investments to date are likely to be greater).
- 3.72 In addition to JEREMIE, Finance Wales now offers loans through the £40m SME Fund, funded by the Welsh Government. The Fund was developed partly in response to some of the eligibility restrictions within the JEREMIE Fund noted earlier in Microloans. The SME Fund is able to invest in sectors such as property development, from which banks have retreated but where Finance Wales sees a large number of viable propositions. The SME Fund can also finance MBOs/MBIs²⁹. Finance Wales has also experienced demand for these types of deals – which are excluded from JEREMIE by EU rules - and views them as an underserved market at present. The Fund will operate from 2012 to 2020, with an investment period up to the end of 2015/16 followed by a five year repayment and realisation period.
- 3.73 £20 million of the total SME fund is in the form of debt finance. The Fund commenced operation in September 2012 and by the end of December it had lent a total of £1.07 million to Welsh SMEs, the majority to Accommodation and Food Service related establishments. It is of course too early to comment on the performance of the Fund.

Risk Capital

Demand

- 3.74 Equity finance tends to be suitable for a small minority of firms that have high growth potential but a high level of risk associated with their business plans. There is very little direct evidence on the level of demand for equity finance in Wales. Overall, according to the 2012 Small Business Survey in Wales, 24% of SMEs in Wales sought finance of some sort. There is no data in this survey on the extent to which equity finance is sought, although data from the UK-wide 2010 ONS Access to Finance Survey confirms that equity finance is only suitable for a very small minority of SMEs: just 1% of SMEs seeking finance were looking for equity finance in 2010. Applying this to the Welsh SME base would equate to around 450 firms in Wales seeking equity finance.

²⁹ That is, management buy outs and management buy in

- 3.75 As only a very small proportion of businesses report that they have sought equity finance (1% of firms responding to the 2010 ONS Access to Finance Survey reported positively), there are no reliable data on the extent to which these firms are successful in securing this finance, or whether they represent viable propositions. It should also be borne in mind that there is anecdotal evidence from our consultations and other evaluation evidence³⁰ that Welsh entrepreneurs tend to have less awareness, and in some cases are suspicious, of equity finance as an option for financing their business.
- 3.76 Given the relative paucity of evidence on demand, it is more illuminating to look at trends in the supply of equity finance and returns being secured from these investments.

Supply

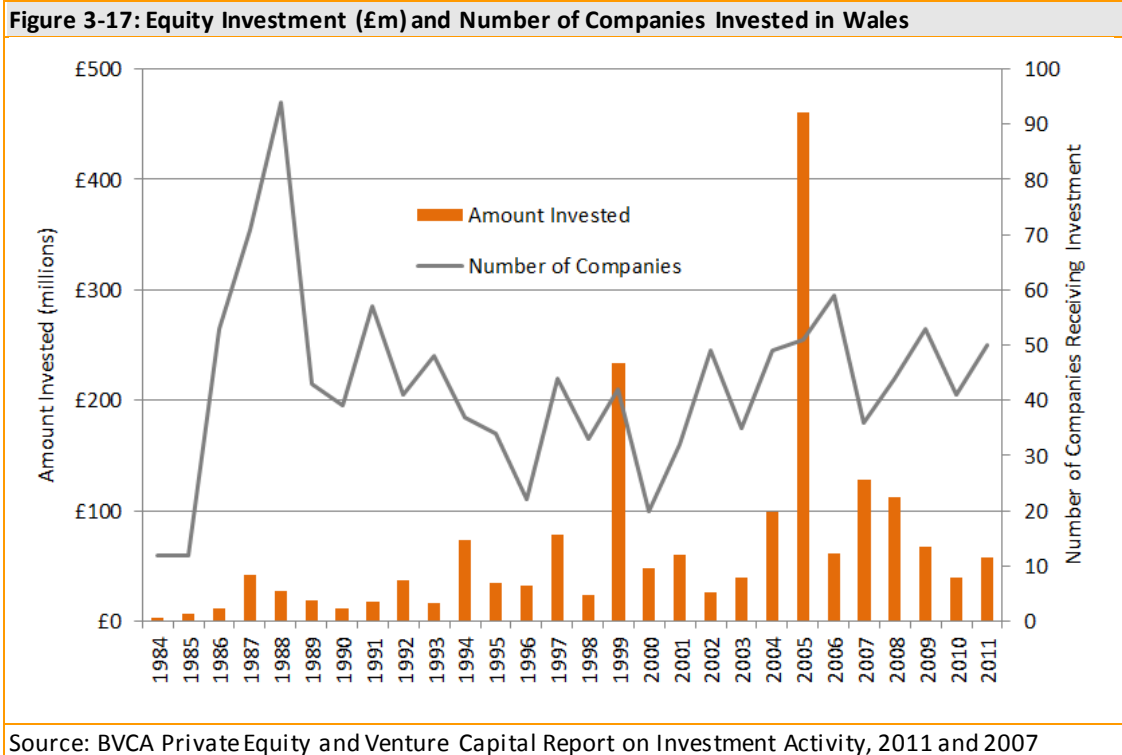
- 3.77 British Private Equity and Venture Capital Association (BVCA) provides a useful summary of the range of different uses for equity finance – see Table 3-3.

Venture Capital	Seed	Financing that allows a business concept to be developed, perhaps involving the production of a business plan, prototypes and additional research, prior to bringing a product to market and commencing large-scale manufacturing.
	Start-up	Financing provided to companies for use in product development and initial marketing. Companies may be in the process of being setup or may have been in business for a short time, but have not yet sold their product commercially.
	Other Early Stage	Financing provided to companies that have completed the product development stage and require further funds to initiate commercial manufacturing and sales. They may not yet be generating profits.
	Late Stage Venture	Financing provided to companies that have reached a fairly stable growth rate; that is, not growing as fast as the rates attained in the early stage. These companies may or may not be profitable, but are more likely to be than in previous stages of development.
Expansion	Expansion	Sometimes known as 'development' or 'growth' capital, provided for the growth and expansion of an operating company which is trading profitably. Capital may be used to finance increased production capacity, market or product development, and/or to provide additional working capital.
	Bridge Financing	Financing made available to a company in the period of transition from being privately owned to being publicly quoted.
Replacement Capital	Replacement Capital	Minority stake purchase from another private equity investment organisation or from another shareholder or shareholders.
	Refinancing Bank Debt	Funds provided to enable a company to repay existing bank debt.
MBO/MBI	Management Buy Out (MBO)	Funds provided to enable current operating management and investors to acquire an existing product line or business. Institutional buyouts (IBOs), leveraged buyouts (LBOs) and other types of similar financing are included under MBOs for the purposes of this report.
	Management Buy In (MBI)	Funds provided to enable an external manager or group of managers to buy into a company.

³⁰ See Regeneris Consulting and OldBell13 (2012). 'Mid-term Evaluation of the Wales JEREMIE Fund'. P66.

Source: BVCA Investment Activity Report 2011

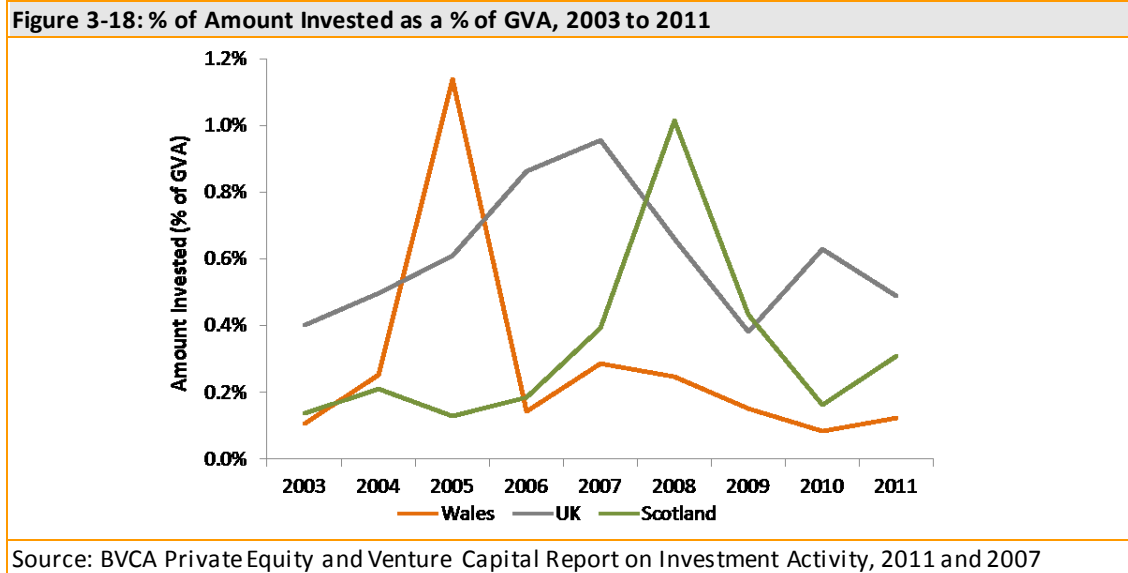
- 3.78 Below we provide contextual evidence on the Venture Capital market in general in Wales, before turning specifically to equity finance for expansion purposes.
- 3.79 The BVCA collects data on investments made by its members and records the number and value of equity investments by UK region³¹. These figures include both public sector sponsored funds and private equity.
- 3.80 Looking at all equity investment activity in Wales over the last two and half decades shows steady and significant long term growth albeit with shorter term fluctuations. This said, the number of companies receiving investment annually has not seen a corresponding growth since the 1980s. Before the recession, there had been a notable uplift in the overall level of investment over time in Wales; mirroring the case across the UK. During the 1990s average investment per annum was £36 million. From 2000 up to 2009 this rose to an average of £71 million even once the major outlying result in 2005 is removed.
- 3.81 Equity investment in Wales has fallen by 55% (£70 million per annum) from a peak in 2007 of £128 million to £39 million in 2010. However, the most recent data point to some signs of recovery, with investment levels having risen by around £49 million or 19% in 2011. Also clearly evident is the ability of a small number of very large equity deals to skew the overall data; the scale of investment in 2005 rising 366% (£462 million) over the previous year with a corresponding rise in the number of companies invested in of just two.



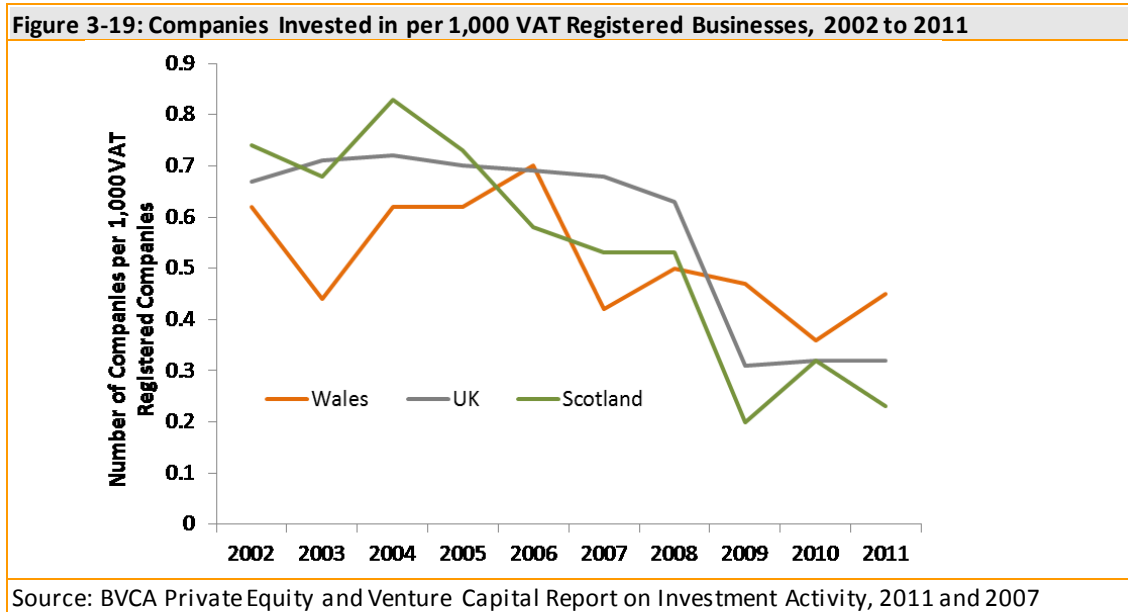
- 3.82 Looking at the scale of investment against the scale of the wider economy, the level of equity

³¹ The BVCA has over 500 member firms and represents a large proportion of the UK's private equity and venture capital providers.

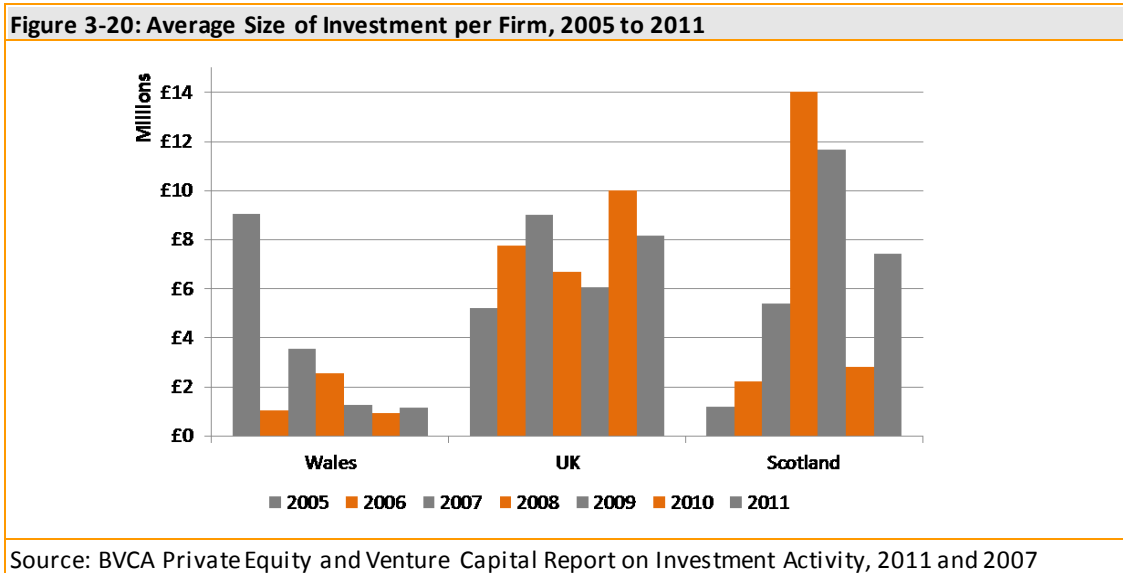
investment is lower in Wales compared to the whole of the UK and Scotland. Outside of 2005, the gap versus the UK on this indicator has moved between 0.2 and 0.7 percentage points since 2003.



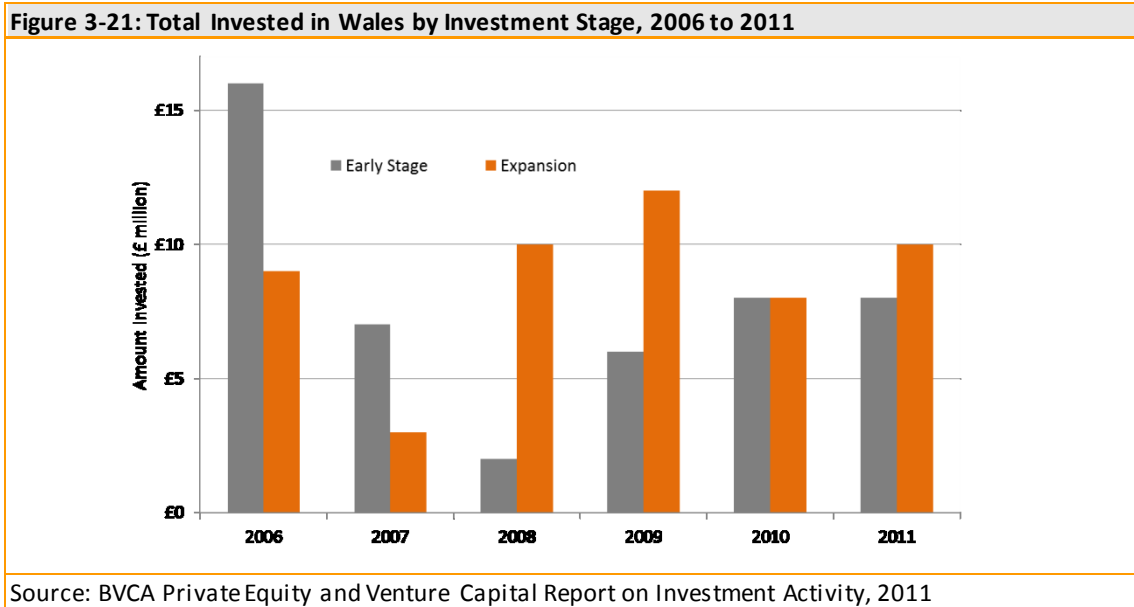
3.83 While the value of investment has dropped notably over the course of recent years, equity investment in Welsh companies has been more volatile as compared to the UK and Scotland, which have seen more steady falls. In Wales, the number of firms receiving investment relative to the total VAT registered business stock registered a fall of 27% between 2002 and 2011 versus 52% for the UK and 69% for Scotland putting Wales above both comparator areas.



3.84 This has required that the average size of investment declines whereas across the UK it has fluctuated but not seen sustained decline. Average deal size in 2011 stood at £1.16 million, 67% below the average for 2007 and 84% below the current average across the UK. We expect that this is shaped in part by the contribution that Finance Wales makes and its focus on smaller deal sizes, as well as the absence of many large or very large private equity investments.



- 3.85 Figure 3-21 sets out the value of investment, split between Early Stage and Expansion equity investment (MBO, MBI and replacement capital financing deals are excluded). Early stage venture capital investment has been seen a drop off over the course of the recession but has recovered over the last three years. In comparison investment at expansion stage has – outside of a two thirds fall in 2007 – maintained at between £8 and £12 million a year. Overall investment in early stage ventures has been 10% lower than for expansion over the last five years. However, overall early stage investment accounts for 10% of all equity activity in Wales compared to 6% across the UK and 4% in Scotland. Conversely, at 11% of the total, expansion investment stands eight percentage points below the UK equivalent.
- 3.86 On average over the last six years of available data early stage and expansion stages have accounted for 21% of all venture capital investment in Wales; this compares to 24% across the UK and 14% in Scotland. Management buy-ins/outs accounted for 63%, replacement capital 1% and other stages 15%.



3.87 As well as intervening in the debt market, the UK Government has developed schemes to boost the level of equity investment in the UK. The relevant schemes include:

- **Enterprise Investment Scheme.** Also launched in April 2012, this offers tax relief to individual investors to buy equity in small companies. A small company is defined as having fewer than 250 employees and less than £15 million of assets. Individuals can invest up to £1 million in shares and receive up to 30% of the investment as relief against income tax. Capital gains tax liability on disposal of an existing asset can be deferred if reinvested in EIS shares. Profit on the sales of shares can be exempt from capital gains tax. Losses arising on disposal of shares can be set against income tax as an alternative to being relieved against capital gains tax.
- **Venture Capital Trust Scheme.** This helps small companies (defined as above) to raise equity indirectly through the acquisition of shares in a VCT. Investors in VCTs are eligible for tax relief. Maximum investment in VCT shares is £200,000 per annum. Investors qualify for relief against tax income at 30% of the level invested. Shares must be held by the VCT for at least five years. Dividends from shares are exempt from income tax and there is an exemption from capital gains tax on disposal of shares

3.88 In 2008 The Institute for Employment Studies (IES) undertook econometric analysis on behalf of HMRC³² to test the effect of both of these schemes on a number of areas of business performance while controlling for other external influences. The results are summarised below:

- **Business Type:** Investments from VCT in Business Services firms were associated with higher fixed asset formation while both schemes generate higher employment in the sector, while firms operating across multiple sectors generate both higher sales and employment as a result of support received. Firms in 'other services' performed poorly in comparison. Older firms have been better placed to generate higher asset

³² |

accumulation, employment and profit margins.

- Productivity: EIS investments tended to be associated with lower gearing and higher labour productivity, while significant effect on labour productivity was found among VCT investments.
- Profitability: No significant impact on profits was evident although testing was subject to data limitations
- Capacity Building: VCT scheme and especially EIS are associated with growth in fixed assets, employment and sales

3.89 There are other UK level interventions in the early stage equity market, notably the UK Innovation Investment Fund and the Regional Growth Funded Business Angel Co-investment Fund and Wales Life Sciences Investment Fund – these are covered in the Research and Innovation paper.

JEREMIE Equity Fund

3.90 Risk Capital is offered through the Wales JEREMIE Fund, providing funds of up to £2 million primarily to SMEs with high growth potential and that have already begun trading. Equity finance is also offered specifically for technology ventures – this is also covered separately in the Research and Innovation paper. The original business plan allocated £65 million to the Risk Capital Fund. Figure 3-22 below summarises the investment performance to date and forecasts for the remainder of the investment period.

3.91 The fund was able to make a large number of investments in the first two years of its operation, making 76 investments, compared to the business plan target of 32. Average deal sizes were however lower than originally anticipated: after these two years the fund had invested £24.5 million compared to £23.9 million in the business plan. Since then in 2012/13 a large number of risk capital investments have been made, but the average value of these investments has been substantially below the business plan target. The average size of investment to date stands at around £320,000 compared to the £750,000 envisaged. However, Finance Wales has indicated that there is substantial variation around this overall average. Furthermore, there has been a significant level of repeat investment in a large number of ventures as they progress for concept to the market. The scale of follow-on investment is covered below under paragraphs 4.158 and 4.175.

3.92 It should be noted that owing to the levels of demand experienced in the Technology Ventures (co-investment and technology transfer) side of the JEREMIE Fund, the decision was taken to vire £7m from the Risk Capital to the Technology Ventures portfolio.

3.93 Overall, therefore, **Finance Wales expects to have achieved an annual average flow of risk capital investments of £9.7 million per annum over the six year investment period.**



3.94 Data supplied by Finance Wales on expected returns are shown below. This shows a negative return based on actual returns to date, which is not surprising given that many of these investments will not have generated returns to date. The lifetime forecast is for a gross IRR of 7.7%, equivalent to DPI of 1.265. Perhaps to an even greater extent than for other portfolios, this is based on judgements on the expected future performance of all investments made and is therefore subject to error. However, overall this is a reasonably strong rate of return. As is generally the case with funds of this sort, this performance is driven by a few particularly strong performers in the portfolio.

	Based on...		
	1) Investments made to date, and actual returns to date	2) Investments made to date, and forecast total returns from these investments	3) Forecast lifetime returns from all investments
DPI	0.958	1.297	1.265
Gross IRR	-2.8%	8.2%	7.7%

Source: Finance Wales
 Note: Figures are gross and do not take account of administrative and other overhead costs of running the portfolio. Values not discounted for inflation.

- 3.95 Data on jobs created/safeguarded is subject to the same caveats as above. The available data suggests that the risk capital investments made are generating positive economic development impacts. 681 jobs are reported to have been created to date, along with 1,281 jobs safeguarded.
- 3.96 The £40 million SME Fund also includes an equity element. £8m is expected to be invested over the life of the Fund. As discussed earlier, the Fund commenced operation in September 2012. There has been one equity investment to date, worth £450k as part of a £1.7m investment package. It is clearly too early to say how this investment will perform.

Conclusions

Micro-Finance

- 3.97 The available evidence strongly points towards a significant level of demand for microfinance in Wales. Survey evidence suggests that a notable number of microbusinesses are seeking but failing to obtain finance, implying of the order of £400m in unmet demand, although estimates from survey data need to be treated with a great deal of caution.
- 3.98 Data on the supply of microfinance in Wales and the return being made provides us with a pointer on the size of the market for viable microfinance propositions in Wales. Whilst some issues were encountered in sourcing viable propositions in this area, these appear to have been resolved and investment levels are recovering. Finance Wales expects to have made over £800k of microloans per annum on average by the end of the investment period. In addition, in response to a Government Taskforce report, a £6m microbusiness fund has been established, which can invest in sectors that are ineligible for EU support (these restrictions are not expected to change).
- 3.99 Overall the evidence suggests that there are a significant number of viable investment propositions in this area of the market in Wales. However, it should be noted that these investments are not likely to yield a net positive financial return, given the typical default rates and once administrative costs are accounted for. Balanced against this, there is some evidence that positive economic outputs are being achieved although the value and longevity of these is still fairly unclear.
- 3.100 There is therefore a case for continued support for microfinance in Wales, **of at least £0.8-£1m per annum over a 5 year period if offered on similar terms to that offered by JEREMIE.**

Discussions about whether this amount of finance is too low or too high need to take account of the supply of good or reasonable quality propositions, the overall financial returns sought and the economic development benefits which can be secured and sustained by these investments.

Finance for Social Enterprises

- 3.101 Financial backing for social enterprises via public funding should cover a range of finance types available to a diverse set of organisations operating across the social enterprise sector.
- 3.102 There remains a strong case to maintain grant funding where social enterprises are in their infancy or where they are providing vital services and are unable to cover the on-going costs of operation. There is a case in particular for grants spanning multi-annual periods as opposed to shorter terms grants for specific projects. However, in the context of reduced local authority and other public funding this has become increasingly difficult to maintain.
- 3.103 As is the case with SME finance, future public sector investment should be directed toward supporting a transition from grant finance to loans and risk finance for some social enterprises. Expansion of equity-type finance or royalty based loans which demand repayment once an enterprise reaches an agreed turnover or profit marker forms a strong means for delivering more non-grant finance on terms which would be more favourable to many social enterprises.
- 3.104 There is a distinct need to improve the knowledge among social enterprises of non-grant funding, in order to make them investment ready and to facilitate a move away from dependency on grants.
- 3.105 It will also be important to clearly communicate the financial support on offer to social enterprises which are too often in need of finance but unaware of all of the options available to them and of the associated costs and risks. Awareness raising will be especially important given the likely reduction in funding from local authorities in light of the public sector budget cuts.
- 3.106 What is clear is that there is already in place a network of organisations operating across Wales that are well positioned to deliver this range of support. The Wales Council for Voluntary Action and County Voluntary Councils who work with the sector at district level, and Wales Co-operative Centre alongside the Unity Trust Bank and Charity Bank, are together managing significant levels of social enterprise finance. They also fulfil important roles in signposting to appropriate sources of finance and providing the organisational support needed to put social enterprises in the best position to access finance and invest appropriately after having done so.
- 3.107 Through the 2007-13 structural funding period, there has been less than £3 million directed specifically towards channelling non-grant finance to social enterprises, through the Community Investment Fund. Given the greater policy focus on social enterprises and fundamental mismatch between supply and demand set out above, we suggest that the scale of future funding be set to allow for organisations like the WCVA and Wales Co-operative Centre to expand upon the non-grant offer already provided within the next round of structural funds. However, this is in the absence of any evaluation evidence of the effectiveness and value for money provided by the existing ERDRF backed schemes in Wales – these are very important considerations in assessing the scale of finance which is both needed and justified.
- 3.108 With this in mind, more in-depth research will be needed in order to establish the exact balance of funding needed. Specifically survey work to understand better the demand for finance and

barriers faced by social enterprises would provide a better basis on which to judge the scale of intervention, as well as evaluation evidence on the existing ERDF backed schemes.

Debt Finance

- 3.109 Whilst there is no definitive data on demand for debt finance, analysis of survey and business count data suggests potentially significant levels of unmet demand for debt finance. Since the credit crunch the supply of debt finance from mainstream sources has contracted very sharply, with banks focussing on lower risk propositions and demanding more security. This is reflected in data on overall net lending and has also had a significant impact on the demand for debt finance from Finance Wales, both through the JEREMIE Fund and through the recently launched SME Fund.
- 3.110 Finance Wales has been able to make a significant volume of loans through JEREMIE, and the latest expectations on returns are healthy. This suggests the existence of a significant flow of viable propositions that are unable to source debt finance from elsewhere. The JEREMIE loan fund has been supplemented with a further £20m in loans offered through the SME Fund. It is too early to make judgements on the performance of this Fund.
- 3.111 Looking ahead, the size of gaps in the debt finance market will depend on a range of factors, most notably the macroeconomic environment and the behaviour of banks and other finance providers. Should macroeconomic conditions become more benign in coming years, this can be expected to increase demand for loans to finance business growth, reinvestment in capital and business start-up. Our consultations and analysis suggest that on the balance of probabilities, banks' lending practices are unlikely to become more liberal in coming years, given the pressure to repair balance sheets and continuing regulatory pressures on capital ratios. Banks are highly unlikely to return to their lending behaviour in the pre credit crunch period. Should UK economic growth pick up, there is therefore the potential for excess demand for loans in Wales to increase and for Finance Wales to continue to be seen as picking up the slack left by the private sector. It is possible that new private providers may step in to fill this gap, but in light of the evidence we view any major increase in private sector lending to be unlikely and therefore expect significant gaps to persist.
- 3.112 The scale of the gap in the market is therefore subject to considerable uncertainty, given the uncertainty in the future path of demand and supply drivers. However, our analysis certainly suggests a continuing need for publicly backed provision of debt finance in the period 2014-2020. Given the experience of JEREMIE, we would expect there to be capacity for at least the level of debt finance within the current JEREMIE Fund. More likely than not, there is capacity for more than this. This suggests of the order of **at least £10m per annum of loans in Wales over a five year period, equating to a £50m Fund, if offered on similar terms to those offered at present by JEREMIE.**³³

Equity Finance

- 3.113 Our analysis and consultations confirm that the mainstream venture capital market in Wales is

³³ It should be noted that if any future JEREMIE Fund successor is to be part funded by the European Investment Bank (EIB) or other senior debt funder as match funding for EU Structural Funds, then a loan fund of sufficient scale will be needed in order to service the debt repayments to the EIB.

very thin, and that the equity gap in Wales has persisted, especially in light of the credit crunch. As a consequence, Finance Wales acts a major provider of risk capital to SMEs in Wales.

- 3.114 Estimating demand for risk capital investment from SMEs is inherently difficult given that equity investment is only suitable for a relatively small number of SMEs. Moreover, even once a Fund is established it is extremely difficult to predict at the outset likely rates of return, given the inherently risky nature of the investments. As for debt finance, demand for risk capital investment can be expected to be higher in more benign macroeconomic conditions, but there is significant uncertainty
- 3.115 Analysis of the performance of the existing JEREMIE Fund helps to provide an indication of the equity gap in Wales. Finance Wales expects to have been able to make around £10m of risk capital investments per annum through JEREMIE, allowing for a viring of £7m to early stage portfolios. Current expectations are for healthy positive returns (although these are still subject to judgements on the likely realisations from these investments).
- 3.116 Our analysis therefore suggests a continuing need for publicly backed provision of risk capital in the period 2014-2020. Given the experience of JEREMIE, we would expect there to be capacity for **£45-55 million of risk capital investments, if offered on similar terms to those offered at present by JEREMIE.**³⁴
- 3.117 Again, discussions about whether this amount of finance is too low or too high need to take account of the supply of good or reasonable quality propositions, the overall financial returns sought and the economic development benefits which can be secured and sustained by these investments.

³⁴ It should be noted that if any future JEREMIE Fund successor is to be part funded by the European Investment Bank (EIB) or other senior debt funder as match funding for EU Structural Funds, then a loan fund of sufficient scale will be needed in order to service the debt repayments to the EIB.

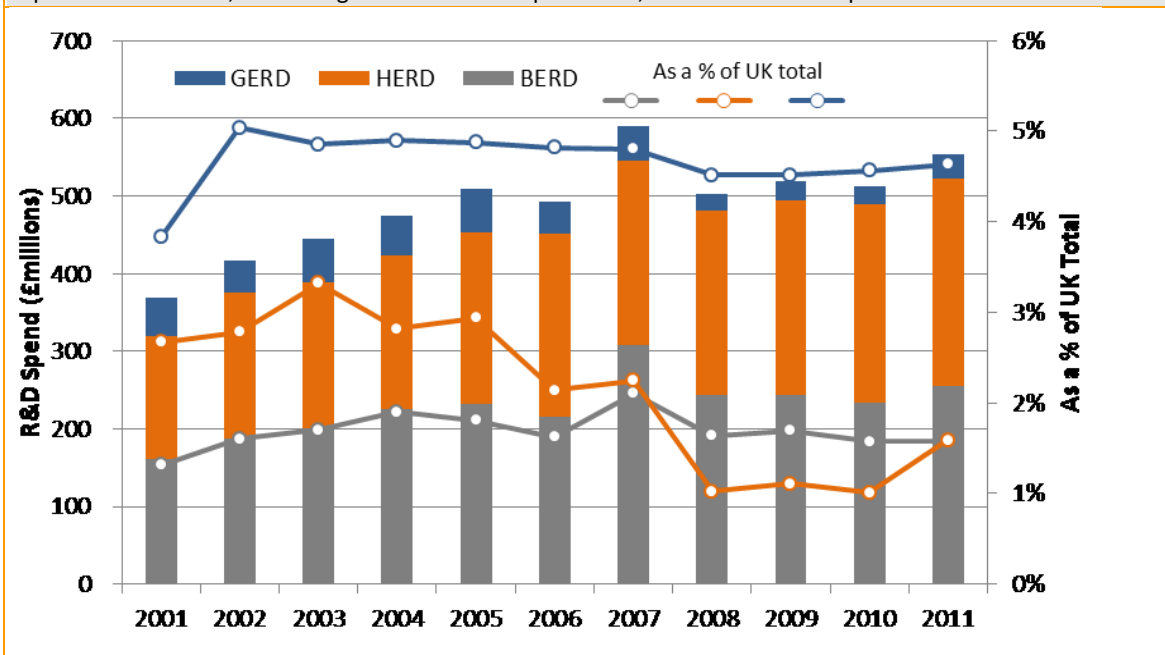
4. Research & Innovation Finance Assessment

R&D and Innovation in Wales

Aggregate R&D Spend

- 4.118 In Wales, an estimated £556 million was spent on R&D in 2011. This represented 2.0% of the UK total and 1.2% of Wales GVA. Business R&D accounted for 46% of the total, with higher education accounting for 50% and government making up the remaining 4%³⁵.
- 4.119 R&D spend across the UK and Wales has seen steady and resilient growth through a tough economic climate; seeing a 4.5% per annum increase from 2001 to 2011, broadly in line with the picture nationally. This is despite a 43% (£24 million) decline in government spending on R&D.
- 4.120 However, despite concentrations of activity around Cardiff and Swansea Universities, there is limited commercialisation of R&D in Wales overall (at least in comparative terms) and hence a relatively modest demand for finance to support this. Furthermore, higher education spending has fallen behind as a percentage of the UK total. Despite seeing a nominal 68% (£108 million) rise over the period, HE spend on R&D as a percentage of the UK total dipped from a 3.3% peak in 2003 to 1.0% in 2010, recovering to 1.6% in 2011.

Figure 4-1: Wales Research and Development Expenditure, 2001 to 2011. GERD=Government Expenditure on R&D, HERD=Higher Education Expenditure, BERD=Business Expenditure

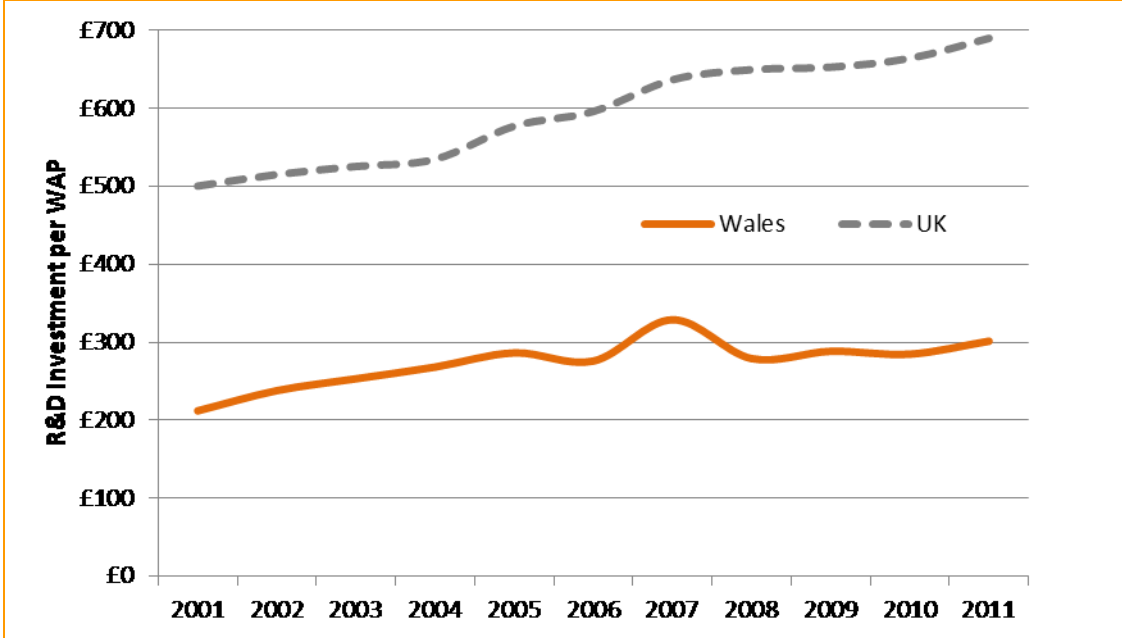


Source: ONS Gross Domestic Expenditure on Research and Development Regional Tables

³⁵ Welsh Government (2012). Innovation Wales: Evidence and Analysis Paper. Excludes the circa. 0.4% contribution to R&D spend from Private Non-Profit Organisations

4.121 The decline in Wales’ contribution to UK wide R&D investment is shown more clearly by the rising gap between investment per head of working age population, particularly since 2007/8. The gap already stood at £290 per head in 2001 and has risen 35% to £390 in 2011.

Figure 4-2: Total R&D Investment Per Head of Working Age Population: Wales Vs the UK, 2001 to 2011



Source: ONS Gross Domestic Expenditure on Research and Development Regional Tables; ONS Mid-Year Population Estimates

Innovation in SMEs

4.122 Nonetheless, there is a clear propensity among Welsh SMEs towards innovation. The proportion of Welsh businesses defined as innovation active³⁶ by the BIS Innovation Survey (2011) stands at 40.6%. This is 3.8 percentage points higher than across the UK while at 43.3%, the proportion defined as broader innovators³⁷ is 4.7 percentage points higher (although there is the need for caution due to the reliance on self-reported evidence from SMEs).

4.123 Almost half (46%) of Welsh SMEs introduced new or significantly improved products or services in the year to 2012, with 34% introducing new process. This marks a 6 and 13 percentage point rise since 2010 respectively and puts Welsh SMEs 3 and 1 percentage points ahead of UK SMEs on these innovation measures. Younger businesses (49% of those aged less than three years) and those aiming for growth (39%) were most likely to implement new processes.

³⁶ Engaged in either 1) introduction of a new or significantly improved product or process 2) innovation projects not yet complete 3) new and significantly improved forms of organisation, business structures or practices and marketing concepts or strategies

³⁷ Engaged in any of the activities included under innovation active above or in areas such as internal R&D, training, acquisition of external knowledge or machinery and equipment linked to innovation activities

SWOT Assessment

4.124 The Evidence and Analysis Paper produced by the Welsh Government in preparation for its upcoming Innovation Wales strategy provides analysis on the strengths, weaknesses, opportunities and threats facing Welsh businesses and higher education to innovate, be it in terms of commercialising university research, developing new products and services or implanting new business or production processes. Table 4-1 provides a summary of this analysis focusing on factors affecting access to finance for R&D and innovation in Wales currently.

Table 4-1: Wales Innovation SWOT	
<p>Strengths</p> <ul style="list-style-type: none"> • Pockets of world class expertise in academia in areas with commercial potential, although lacking in global scale • A number of key multi-national ‘anchor’ companies, such as EADS and Tata, and clusters of smaller companies in niche areas such as optoelectronics and medical instrumentation • Previous Welsh Government investments in major infrastructure projects/R&D facilities e.g. Institute of Life Sciences (ILS) • Positive engagement of the Welsh Government with business through the nine sector teams 	<p>Weaknesses</p> <ul style="list-style-type: none"> • Low business and academic investment in R&D and poor representation in some areas such as pharmaceuticals • Lack of PLCs and company HQs in Wales • Possible under representation in STEM subjects in Welsh HEIs and difficulty attracting top level researchers • Lack of government R&D institutions • Lack of international trade • Improvement needed on the quality of engagement between academia and industry • Poor graduate retention
<p>Opportunities</p> <ul style="list-style-type: none"> • Adopt a more risk based approach to supporting R&D with commercial potential in key sectors. To include funding projects via WG / Finance Wales loans rather than grants and consider creating a match equity fund similar to mechanisms used in Scotland 	<p>Threats</p> <ul style="list-style-type: none"> • Diminishing resources as a result of public sector budget reductions and continuing recession • Shortage of finances for businesses to invest • Reduction of funding of Universities could damage the research base and the opportunities for commercialisation, especially in STEM subjects • Increased competition between HEIs for diminishing resources could damage existing collaborations and threaten sustainability of collaborative research centres

Source: Innovation Wales Evidence & Analysis Paper (2011)

Sector Focus

4.125 The Welsh Government’s nine Sector Panels are made up from business representatives across each of the Government’s priority sectors and work to identify business needs and opportunities. The advice delivered by Sector Panels informs the Sector Delivery Plan. **Table 4-2** summarises those short, medium and long-term priorities which relate to accessing finance for research and innovation in particular³⁸.

³⁸ Financial and professional services, food and farming and tourism make up the remaining three of Wales’ nine priority sectors, for which there are no research or innovation related priorities set out.

4.126 Life sciences stand out as having collaborative research, innovation and commercialisation positioned as central tenets of the plan for future growth, not least signalled by the commitment to a new £100m sector focused fund. There are also clear messages for putting research and innovation at the centre of plans for growth across the creative industries, advanced manufacturing, energy and environment and ICT.

Table 4-2: Welsh Government Sectors Development Plan	
Life Sciences	<p>The Sectors Delivery Plan sets out a strategy for life sciences spanning four elements, three of which are relevant to research and innovation:</p> <ul style="list-style-type: none"> • Developing an ecosystem for Life Sciences in Wales in which academic, business, clinical and investor communities are well connected and able to seize new opportunities more quickly in Wales than elsewhere • Create a central Hub location for Life Sciences in Wales where key stakeholders are co-located, which will act as a gateway for accessing finance, collaborating with clinical and academic partners, and for inward investment • Accelerating innovation and commercialisation of Life Sciences in Wales, by building on the Science for Wales Strategy, a new Innovation Strategy, and a £100 Million dedicated Welsh Life Sciences Investment Fund; and by working with the National Institute for Social Care and Health Research (NISCHR) to develop innovation in the health and social care sectors <p>The Plan also highlights a number of other priorities for the sector:</p> <ul style="list-style-type: none"> • Attracting life sciences R&I to Wales and speeding up the translation of innovation into patient benefit and commercial value is listed as one of the key challenges for the sector • Short-term priority to speed up the delivery of existing programmes of support for innovation and business growth and ensure that the new £100 million Life Sciences Fund starts investing into businesses • Medium-term priority to establish an accelerator programme for innovation in Life Sciences & Health, which is integrated with government funding programmes and which delivers an investment pipeline to commercial investors
Creative Industries	<ul style="list-style-type: none"> • Seen as crucial for wealth and job creation through the generation and exploitation of intellectual property • Short term priority to ensure appropriate support mechanisms are in place to support access to finance • Short-term priority to develop and pilot methods to accelerate the growth of digital media in Wales, including a digital development fund to help businesses exploit new market opportunities through emerging digital technologies
Advanced Materials & Manufacturing	<ul style="list-style-type: none"> • Short-term priority to support companies through programmes focussed on delivering innovation and skills • Long-term priority to promote and encourage a culture of R&D, Innovation and Design across the manufacturing value chain
Energy & Environment	<ul style="list-style-type: none"> • Barriers associated with access to finance listed as one of three challenges in influencing future development of the sector • Short-term priority to Secure commitment from funders for commercialisation of projects and knowledge transfer for specifically identified projects
ICT	<ul style="list-style-type: none"> • Part of the Welsh Government vision for ICT is to drive an increase in R&D and Innovation • Medium-term priorities to define and implement interventions to support start-ups and SMEs and ensure visibility and awareness within industry of relevant funding sources
Construction	<ul style="list-style-type: none"> • Medium-term priority to Identify Sovereign Growth Funds, EU Structural Funds & Venture Capital Funding to deliver Government led projects
Source: Department for Business, Enterprise, Technology & Science. 'Sectors Delivery Plan'.	

- 4.127 This sector focus is backed up by the Science for Wales strategy which identifies three industry Grand Challenge Areas:
- Life Sciences & health
 - Low carbon, energy & environment
 - Advanced Engineering & materials.
- 4.128 These were based on an analysis of existing research strengths, and potential to contribute to economic growth. They are also backed by the £50 million Sêr Cymru (Stars Wales) programme which supports the establishment of a collaborative National Research Networks and Research Chair positions for outstanding researchers recognised as world leaders in their discipline across each of these priority areas.

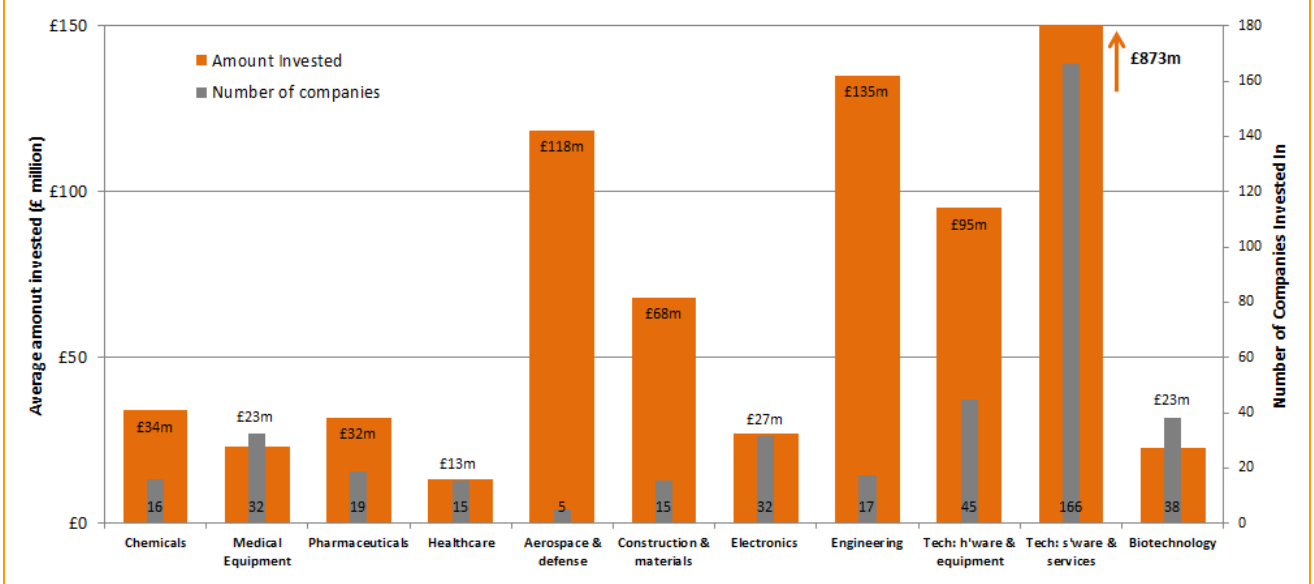
Market Activity

- 4.129 Data from the British Private Equity and Venture Capital Association (BVCA) shows the scale of equity investment into various high value sub-sectors at UK level. This spans many of the areas across which early stage research and innovation ventures are being brought towards commercialisation and gives a view on the venture capital market for commercialising R&D.

Investment across Sectors

- 4.130 Investment in software and services represented that largest proportion by far of any technology sector from 2009 to 2011 at £873 million (60.5% of the total), followed by engineering (9.4%) and aerospace and defence (8.2%). However, equity investment in these sectors is generally directed towards larger established companies. This is particularly the case in aerospace and defence where an average investment per company of £23.7 million in just 5 companies dwarfs those seen in other sectors. At the other end of the scale far smaller investments typically made into smaller and earlier stage ventures are far more numerous in healthcare (average deal size £870,000), electronics (£850,000), medical equipment (£720,000) and biotechnology (£590,000).

Figure 4-3: Number of Investee Companies and Equity Value Invested in R&D Intensive Sub-Sectors Across the UK: Average Per Annum From 2009 to 2011

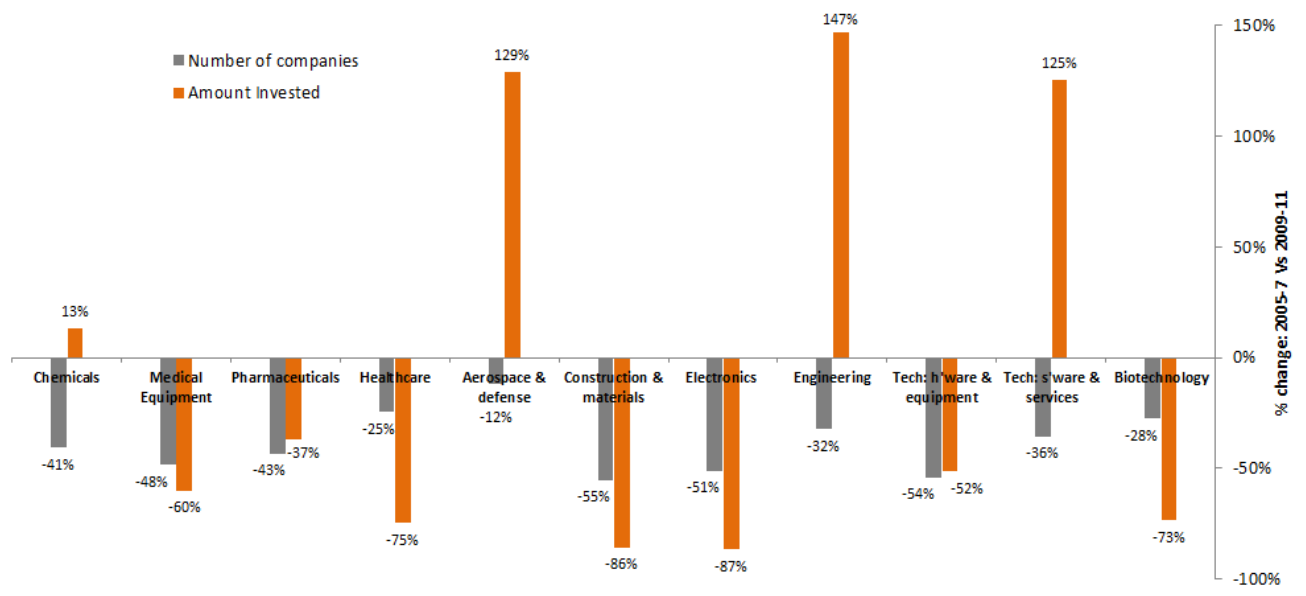


Source: Source: BVCA Private Equity and Venture Capital Report on Investment Activity, 2011

- 4.131 Those sectors receiving the largest level of capital intensive investment (aerospace, engineering and software) are also the ones which have seen investment increase since 2005-7, despite a fall in the number of companies benefiting. Across all other sectors there has been a sizeable decline in both the number of companies invested in and average value. This suggests that the concentration of technology focussed venture capital flows into these sectors is only becoming stronger. Indeed, Ullah et al. (2011) find considerable evidence that early stage equity finance has become more difficult for technology based businesses to obtain in the current financial environment, post 2008, particularly for intensive longer term R&D investment ranging from £250,000 up to £10m³⁹.
- 4.132 The value and number of equity investments in early stage ventures outstrips expansion investment across all sectors (excluding 'other electronics'). This is common as the returns to risk capital are highest where made before or as investments reach the market place.
- 4.133 The number of companies invested in at early stage is especially high compared to expansion (+224% more companies on average versus +149% in terms of the amount invested). Again, this is to be expected as smaller early stage investments are typically smaller than those made for expansion. Early stage investments account for an especially large proportion of the overall number of companies invested in within healthcare and biotechnology. Across all sectors, early stage investments at £555,000 are 23% lower on average when compared to average expansion investment of £848,000.

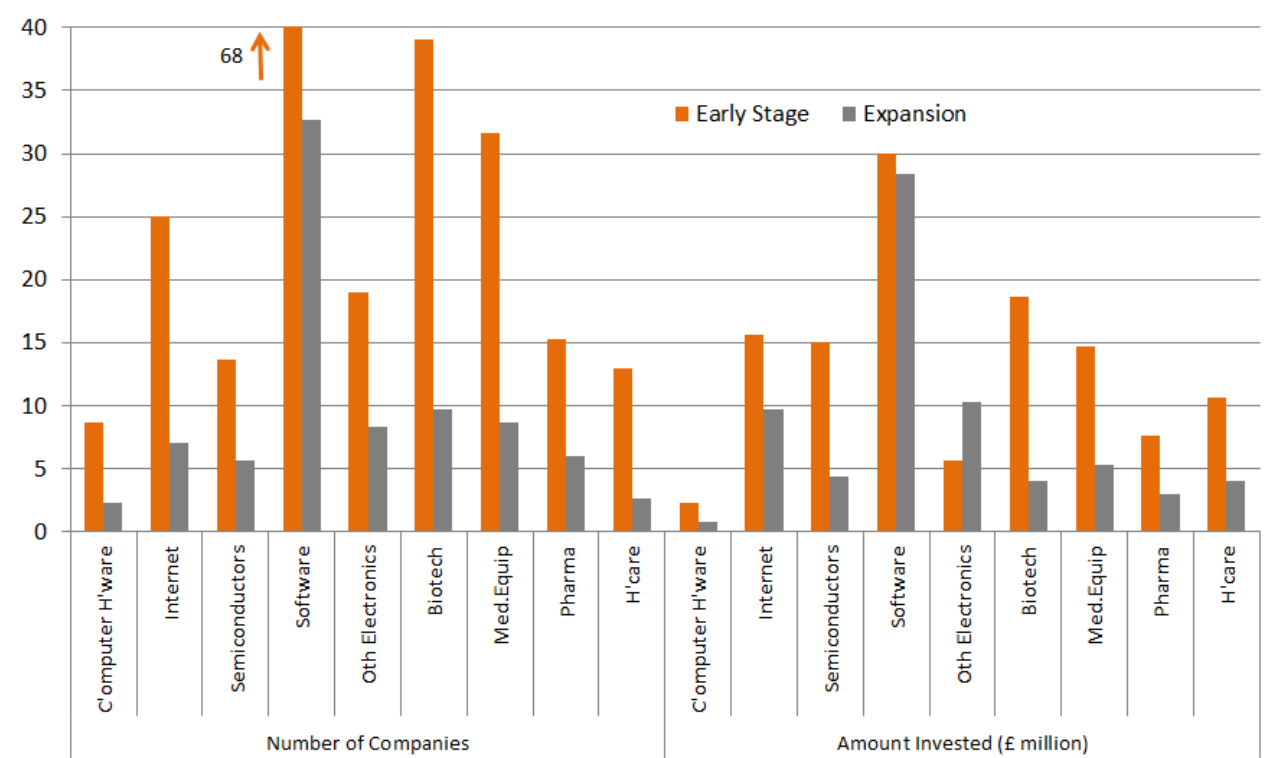
³⁹ BIS (2012) 'Early assessment of the UKIIF'.

Figure 4-4: Number of Investee Companies and Equity Value Invested in R&D Intensive Sub-Sectors Across the UK: % Change of Average from 2005 to 2007 Vs 2009 to 2011



Source: Source: BVCA Private Equity and Venture Capital Report on Investment Activity, 2011 and 2007

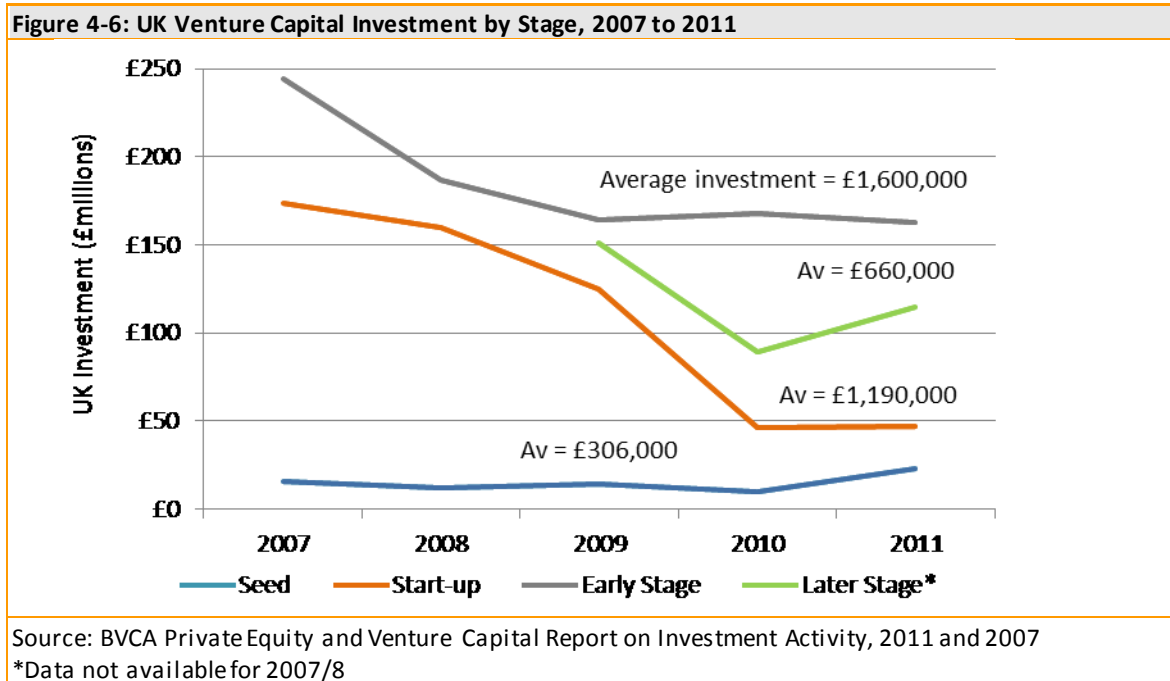
Figure 4-5: Number of Investee Companies and Equity Value Invested in R&D Intensive Sub-Sectors Across the UK: Early Stage and Expansion, Average Per Annum 2009 to 2011



Source: Source: BVCA Private Equity and Venture Capital Report on Investment Activity, 2011

Investment by Stage

- 4.134 Looking more closely at the stage at which investments are being made, it can be seen from Figure 4-5 that the majority are being invested in at early stage. This is perhaps unsurprising as it is here, where ventures are close to reaching commercialisation but have not yet generated profit that investors are able to make the largest returns.
- 4.135 While a lower overall sum has been invested in business start-ups, the average amount invested is well above that invested in later stage investments, presumably as a result of heavier capital investment requirements need to set-up. The aggregate amount invested in later stage ventures is however greater than for start-up suggesting there have been a high volume of smaller investments into growth and expansion finance.
- 4.136 Start-up investment has seen the largest reduction in investment since 2007 at -73%, compared to -33% at early stage. In comparison, seed investment has typically remained stable and actually registered a 44% increase from 2007 to 2011.



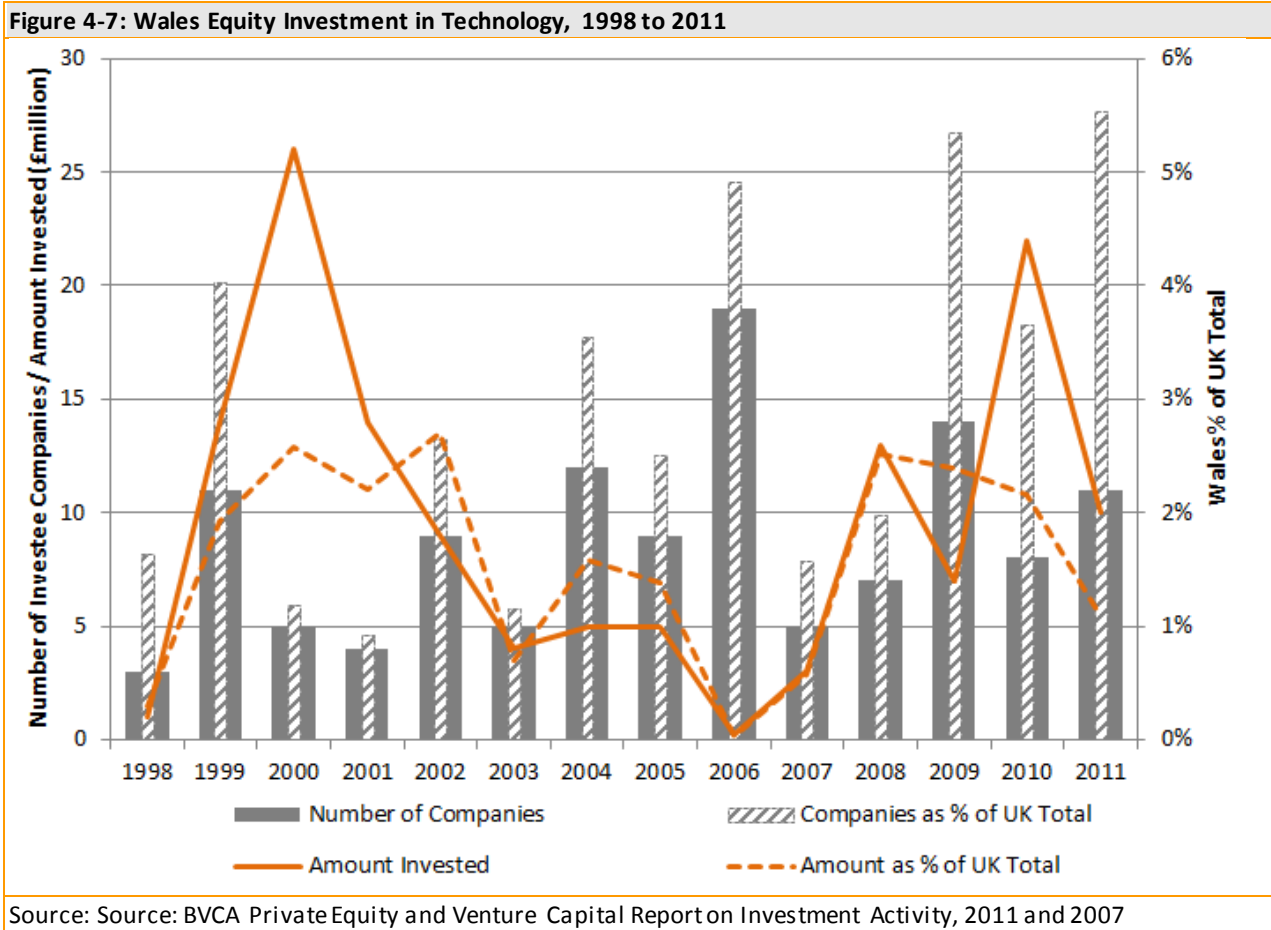
Wales Investment versus the UK

- 4.137 Technology investments⁴⁰ have fluctuated significantly since 1998, peaking at £26 million in 2000 and falling close to zero in 2006. Investments in technology sectors are typically larger than those made across other sections of the economy and as there are a relatively smaller number of investments made in Wales per year (2.9% of the UK figure on average since 1998), such variation over time is unsurprising.
- 4.138

⁴⁰ Investments in technology cover communications, computers (hardware, software, internet focused and semiconductors), biotechnology, medical instruments and pharmaceuticals.

4.139 Since 2006, despite worsening economic conditions, the value of technology investments in Wales has increased, reaching £22 million in 2010 and averaging £11 million from 2007 to 2011. This is in large part due to the increased focus on early stage investments under the current JEREMIE fund. With the Co-investment and Tech Transfer sub-funds delivering an average £14.6 million and £18.6 million per annum respectively since 2009/10, it is reasonable to assume that a large proportion of this activity is being delivered through JEREMIE (see the analysis of JEREMIE co-investment and technology transfer below).

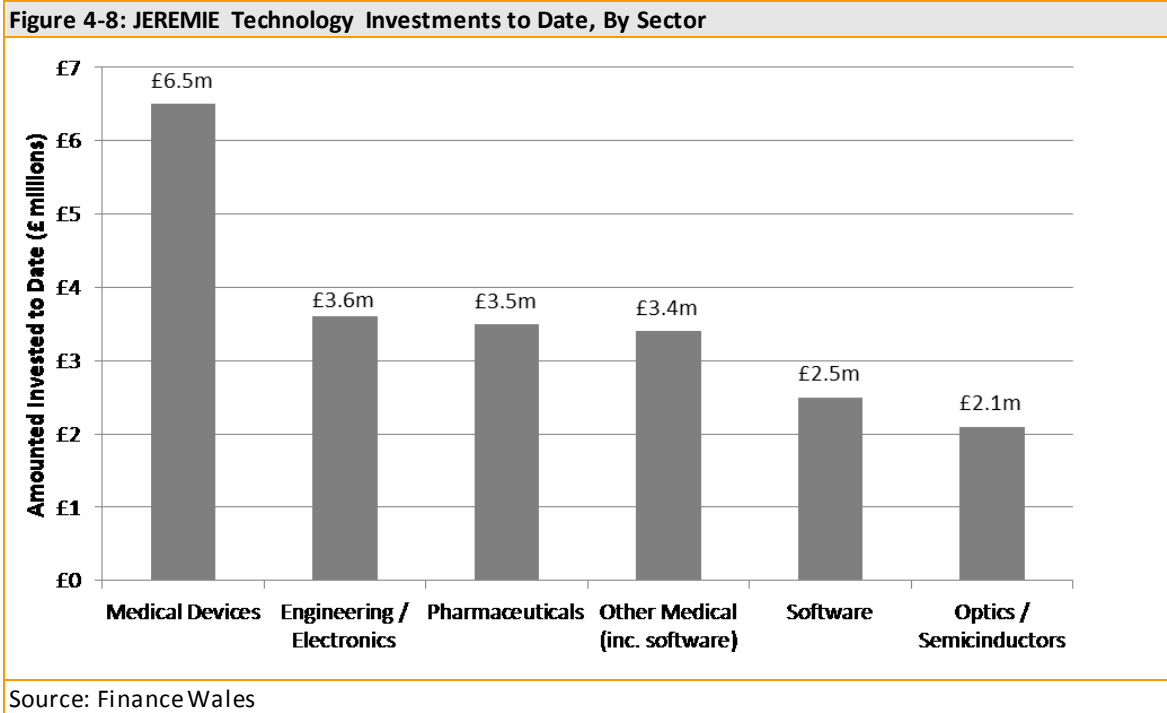
4.140 However, consultations with Finance Wales and Fusion IP have suggested that in the current economic climate it has been harder to find private sector finance in order to match this rise in publicly backed-funds. Businesses responding to the 2012 assessment of the UK Innovation Investment Fund have also suggested that the time required to find and negotiate early stage R&D equity finance has increased, approximately doubling from six to twelve months.



Supply of Finance across Sectors

4.141 Looking at the sector breakdown of JEREMIE technology investments made to date can give an indication of the where the most financially viable prospects are arising, but also to some extent the expertise of the fund managers. At a total of £6.5 million (30% of the total), medical devices firms have been the largest beneficiary to date. This compares to just 1.6% of equity investment in medical devices UK wide (as shown by BVCA data in Figure 4-3 above). The JEREMIE team have therefore been able to tap into core sector strength across Wales. Engineering and electronics, biopharmaceuticals and other medical investments also represent fertile ground for investment, representing circa. £3.5 million each (16%) to date.

4.142 Life sciences (as opposed to physical sciences) account for 62% of JEREMIE investment, similar to the split generated by Fusion IP investments into Cardiff University research spin-outs and well above the 6.2% of private equity investment made across the UK. This acts to validate the focus paid to life sciences by the Welsh Government, the establishment of the new £100m Life Sciences Fund and provides evidence of strong potential for commercialisation in the sector and support for directing future funds toward these sub-sectors.



The View from SMEs

- 4.143 Nesta (2011)⁴¹ found that access to finance presents a particular barrier for firms with higher growth potential; 32% of high growth firms say obtaining finance is a significant obstacle to success compared to 25% of other firms while 5% of high growth firms say it is the most important obstacle they face. Controlling for other firm characteristics, *potential* high growth firms are especially likely to argue this is the main obstacle to their success.
- 4.144 The Evidence and Analysis paper produced to inform the upcoming Innovation Wales strategy consulted a range of organisations⁴² on a range of innovation related topics. Access to finance was rated as the most prominent barrier to growth currently (followed by red tape, skills and infrastructure). In particular it was felt funding should be directed towards sharing the risks associated with investing in innovation, accepting that not all ventures will be successful.
- 4.145 IP is another commonly cited barrier to successful commercialisation of research. Investors are typically risk averse and where a particular venture has commercial potential but does not establish IP and there is therefore a risk that if appropriate support to apply for IP is not offered, this potential will not be realised.

⁴¹ Nesta (2011). 'Barriers to Growth: The Views of High Growth and Potential High Growth Businesses'.

⁴² 36 SMEs, 31 business associations, 24 universities, 10 large businesses, 10 local authorities, 7 governmental, 6 business advisers, 2 funding/investment bodies and 8 others.

Commercialising University Research

- 4.146 The Mid-term Evaluation of the Welsh JEREMIE fund found that although significant variation is to be expected from year to year, on average across all Welsh universities around 3-5 spinouts can be expected a year, with an estimated funding requirement of between £2 million and £3 million.
- 4.147 Consultation with commercial investors in university research and universities themselves has suggested that there is a continuing demand for University Challenge-type funding; a finding backed up by the Final Evaluation of the Wales JEREMIE fund.
- 4.148 The model presented by Fusion IP in their collaboration with Cardiff and Sheffield University (discussed in more detail in the box below) presents an emerging and widely endorsed model for delivering finance to university research departments.

Cardiff University & Fusion IP

The relationship formed between Cardiff University and Fusion IP is aimed at supporting potential spin-outs and other research with the business and market knowledge required to deliver successful businesses and products.

Cardiff University spends £82 million on research annually and is ranked 7th UK wide in the latest HEFC Research Assessment Exercise (RAE) rankings. It has produced 25 spinouts that have been floated on the stock market at a value of £1.5 billion over the three years to the end of 2012.

Fusion Cardiff was formed in 2007 on a 10 year contract as a subsidiary of Fusion IP which was established in 2002 to commercialise university IP from Cardiff and Sheffield Universities. Fusion also holds more informal partnerships with Swansea and Nottingham Universities. Cardiff University has a 30% stake in Fusion IP and has access to a ring-fenced £8.2 million investment fund. In 2012 Fusion invested £2.9 million into potential spin-offs and its portfolio totalled £19.8 million

Fusion Cardiff works with the Research and Commercial Division of Cardiff University (RACD) to identify research with commercial potential. The partnership provides both the specialist research capability and commercial hands-on support required to bring potential spin-outs to market.

Fusion typically invests up to £200,000 in very early stage research where Fusion often owns a majority stake. During this time Fusion IP provides management expertise and assists in the production of a business plan and in establishing commercial strategy.

Further rounds of investment see investment of up to £500,000 where ventures get closer towards commercialisation. Here Fusion assist in developing the venture as a business and in recruiting a management team while further third party funding is sought and Fusion IP ownership diluted.

In total, the journey to realising the commercial potential of an idea has generally taken at least six years. In the case of pharmaceutical ventures, it can take this long to get to a phase one medical trial.

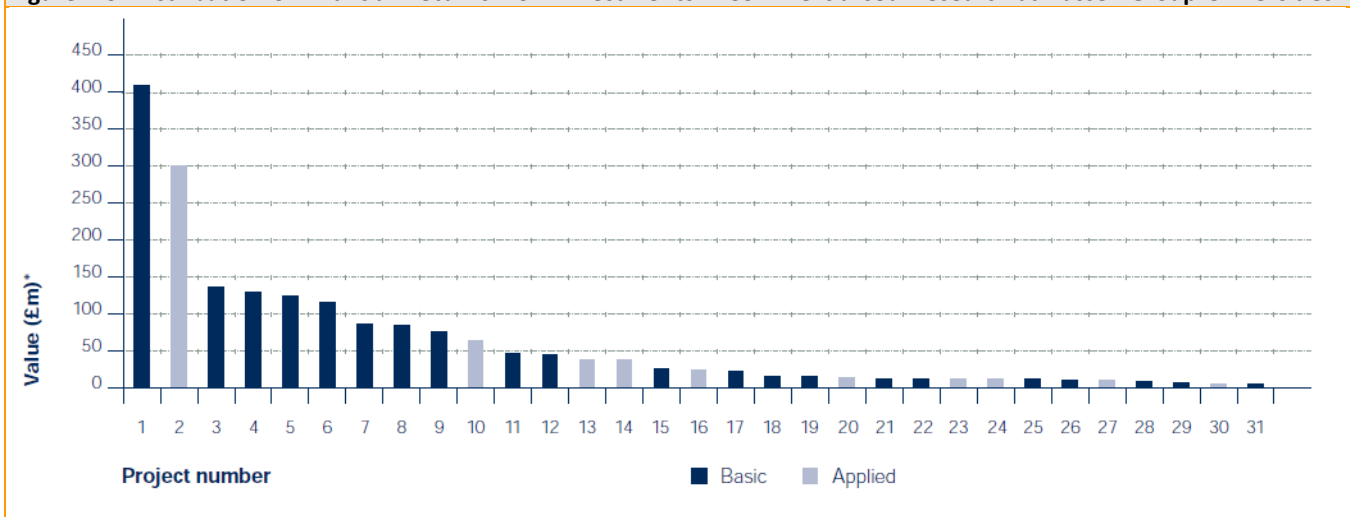
Investment by Fusion IP is complemented by The Cardiff Partnership Fund which has run since 2000 and invests smaller amounts of money in projects at Proof of Concept (POC) stage, which are returned as the venture starts to generate returns.

- 4.149 Ultimately, investing in research is high risk, can start with no established plan for market exploitation and typically takes years to generate a commercial return. More in-depth research

might be required than was first thought; feasibility and demonstration stages might have to be repeated in order to show commercial potential; a patent application takes an average of 18 months to process, with international technology patents taking 3 years; and establishing a venture as a legal entity can take months of negotiation.

- 4.150 The Russell Group (2010) found that across more than 100 case studies of university spin-outs and license agreements it took an average of nine years for research to progress from conception to establishing a licensing agreement and more than ten years for the top ten commercially successful cases to reach the market. It then took an average 8.5 years from licensing or establishing a spin-out to the point of revenue generation or buy-out/exit⁴³. Medical research typically develops over an even longer timescale, the median period from discovery to demonstration of clinical efficacy being 24 years⁴⁴.
- 4.151 While there is variation according to the nature of research and commercial readiness of any one case, time scales of this nature prove to be reasonably typical across the board. There is therefore a clear need for investment to be viewed over the long-term and that finance must be delivered in tandem with high quality research and commercial support. Alternatively, while the longer-term financial benefit might be smaller, in some cases it may be preferable to license a concept to an existing commercial partner.
- 4.152 It is typical across any portfolio of venture capital investments that a very small number of highly successful ventures may return a disproportionately large return. This is especially true of investments in research and development as Figure 4-9 illustrates; of the 66 cases that returned information on financial performance to the 2010 Russell Group study on the impact of investment in research 80% of the total value of investments was accounted for by just 20% of cases.

Figure 4-9: Distribution of Financial Returns from Investments in Commercialised Research at Russell Group Universities



Source: Russell Group (2010). 'The Impact of Research Conducted in Russell Group Universities'

⁴³ Russell Group (2010). 'The Impact of Research Conducted in Russell Group Universities'.

⁴⁴ Countopoulos-Ioannidis D G, Alexiou G A, Gouviás T C and Ioannidis P A (2008). 'Life Cycle of Translational Research for Medical Interventions.'

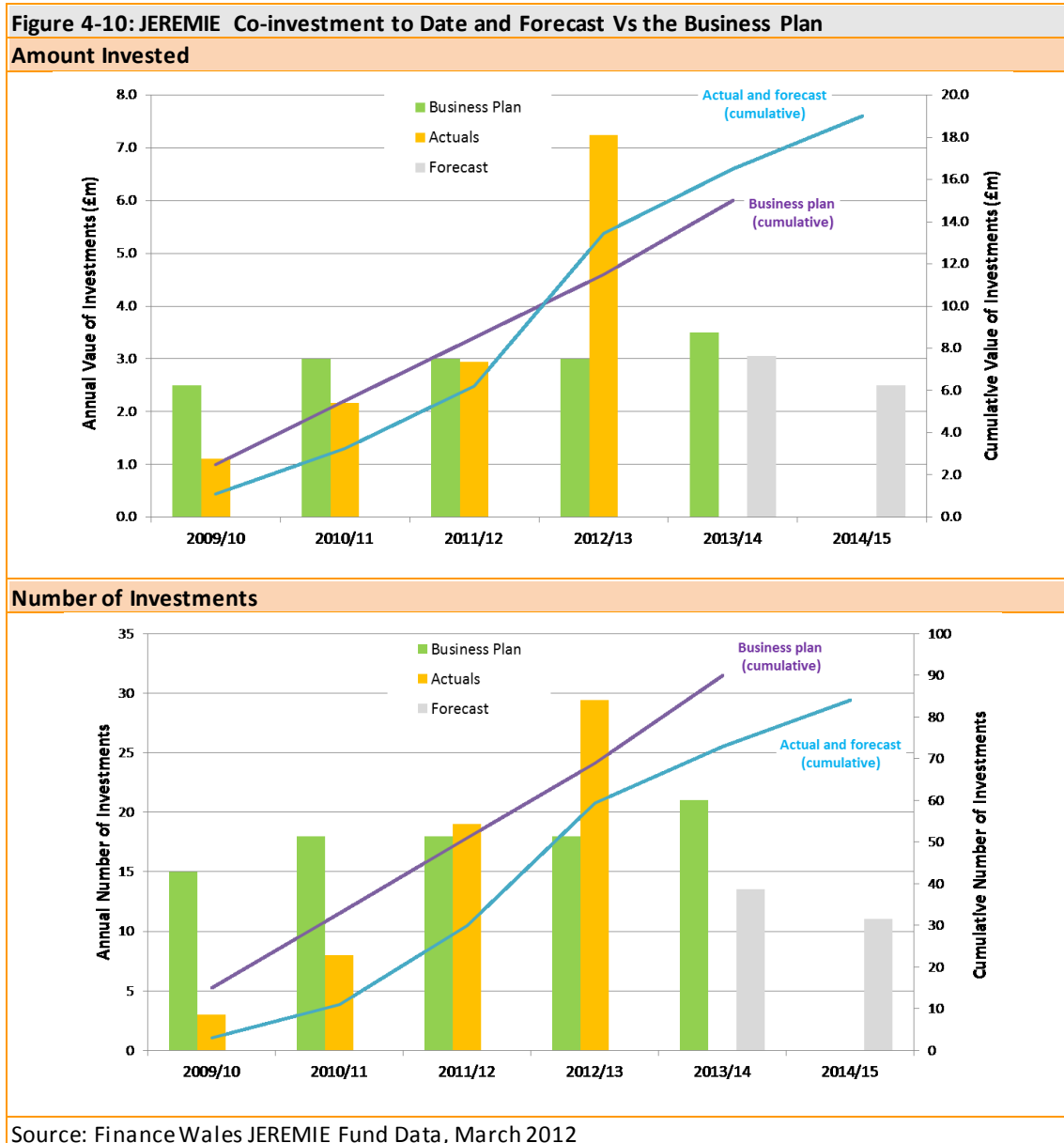
Public Sector Backed R&I Finance in Wales

Wales JEREMIE

4.153 Technology investment has been an emerging area of focus for Finance Wales. Nonetheless, across the two relevant funds, £20.5 million was invested up to January 2013 of a total original allocation of £25 million – now expanded to £32 million (+£4 million for Co-investment and +£3 million for Technology Transfer). The performance of the two funds comprising early stage technology investment by the JEREMIE fund is assessed individually below.

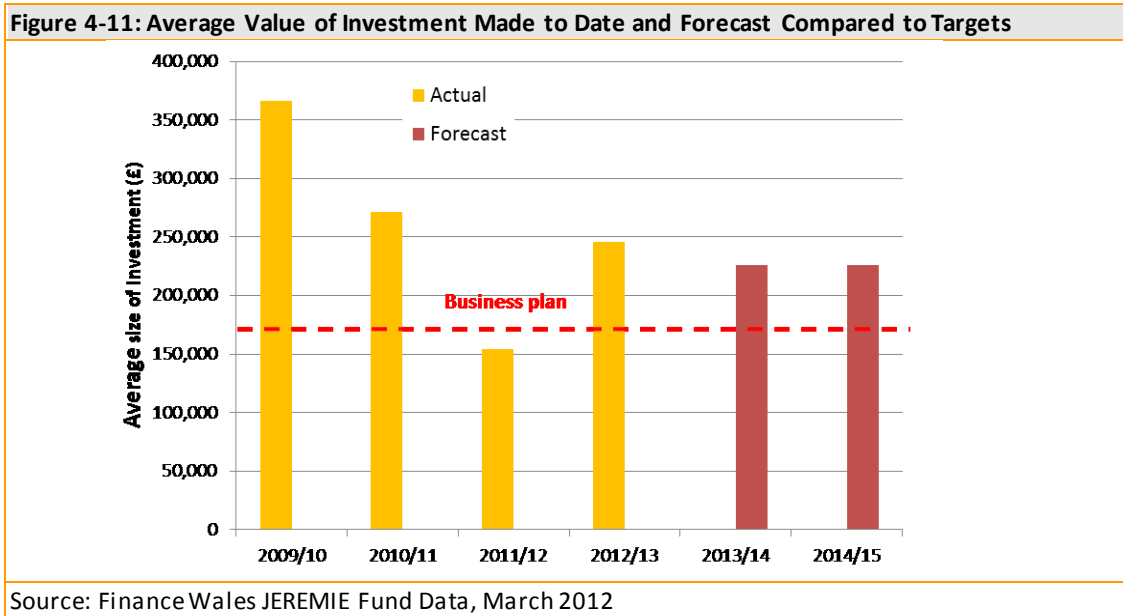
Co-Investment Sub-Fund

4.154 As Finance Wales has not typically invested on a co-investment basis previously, a significant amount of resource has had to be directed towards attracting potential co-investment partners from both within and outside of Wales..



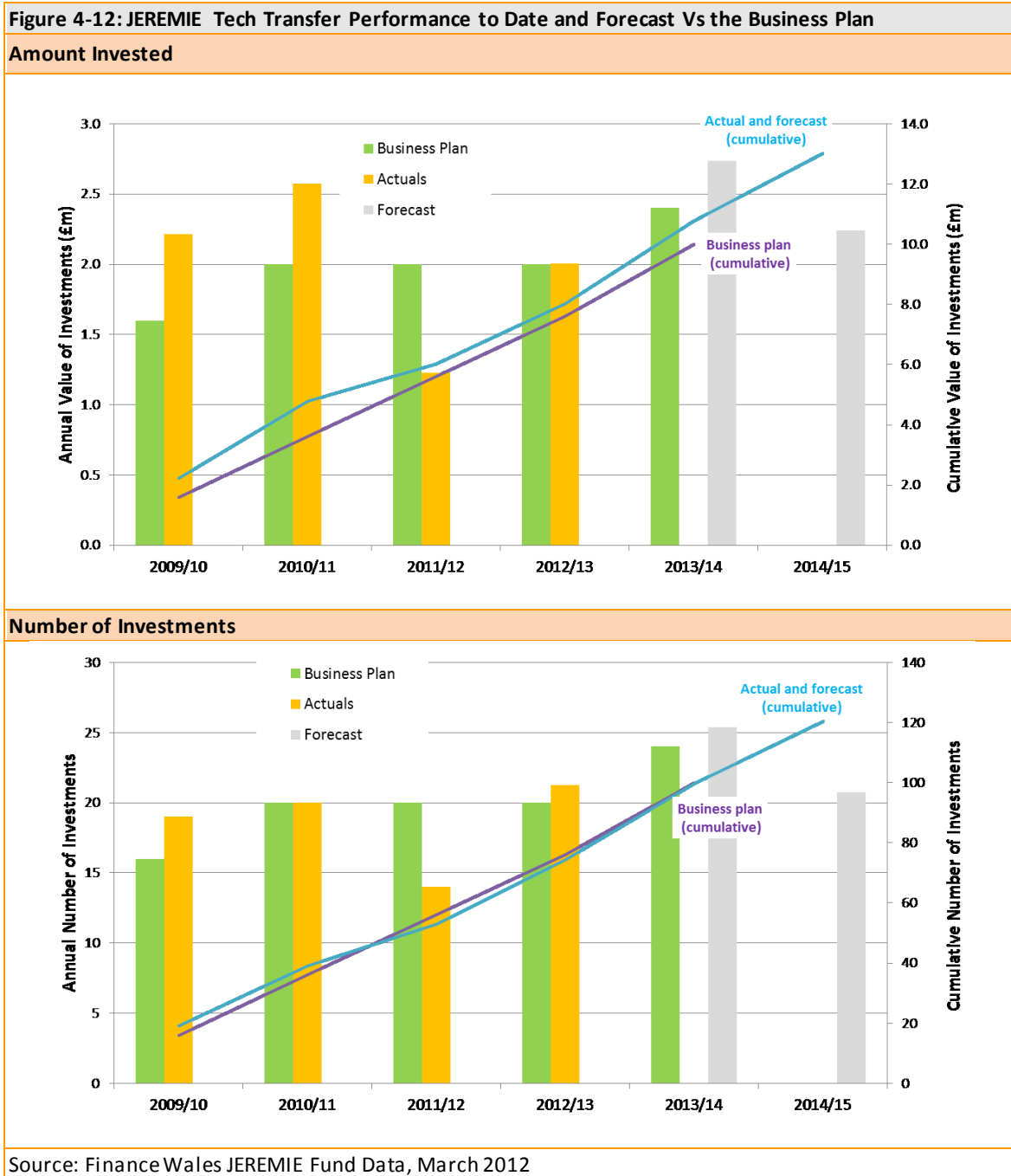
4.155 As a result, in the first two years of operation, the Co-investment Fund spent 40% less than anticipated and across 55% fewer investments. However 2012/13 saw by far the largest amount of co-investment to date with £7.24 million invested across 29 firms. After a slow start, this puts the fund on track to exceed the planned level of investment both in terms of value and firms receiving investment. Indeed, if the fund follows forecasts over the remaining two years, an additional £4 million (27%) will have been invested and to just six (7%) fewer businesses

4.156 **Figure 4-11** confirms that the average size of investment has been and will continue to be higher than the anticipated £167,000, reaching £367,000 in the first year and remaining at an average £225,000 (35% above the expected value) beyond this and into the forecast period. In short the data suggest that the fund has been best able to target higher value investments and most likely a significant number which are closer to the marketplace and require a significant capital injection to make that step.



Tech Transfer Sub-Fund

4.157 The recent Mid Term Evaluation of the Wales JEREMIE fund suggested that prior to the establishment of the JEREMIE Fund, there was only modest technology transfer activity in Wales. However, while the market is clearly in development, the JEREMIE Tech Transfer fund has posted steady progress to date, meeting business plan targets in all but the third year of its four year operation. However, a significant proportion of investments have been made with ventures originating from outside of Wales. This is partly a result of constrained demand inside Wales and due to Finance Wales recent entry to technology transfer. While Finance Wales will continue to search UK wide for potential investees, over time it is hoped that the number of investments from inside of Wales will rise.



JEREMIE Early Stage Funds: Performance to date

- 4.158 There has been a very high level of follow-on support delivered across the early stage funds; 42 enterprises receiving 121 separate investments – an average of 2.9 investments per firm. This suggests that financial support is being increased incrementally as ventures start to mature and / or provide evidence of commercial readiness.
- 4.159 When compared with the returns being generated by loans and equity aimed at new investments, those being generated by the early stage co-investment and tech transfer funds are noticeably higher, as might be expected. While the DPI ratio and Internal Rate of Return on investments and returns to date show little and negative returns in the case of tech transfer, once forecast returns are accounted for around 150% of the value of investments made are

expected to be returned alongside a strong IRR.

Table 4-3: JEREMIE Early Stage Performance Indicators			
	1) Investments made to date, and actual returns to date	2) Investments made to date, and forecast total returns from these investments	3) Forecast lifetime returns from all investments
Co-Investment			
DPI	1.01	1.60	1.54
Gross IRR	0.7%	18.0%	14.3%
Tech Transfer			
DPI	0.76	1.61	1.51
Gross IRR	-16.5%	13.9%	11.2%

Source: Finance Wales JEREMIE Fund Data, March 2012

- 4.160 Table 4.4 presents a breakdown of investment performance to date across higher and lower value investments and between those made at an earlier stage (ie further from commercial application) and those made close to or at the point of market entry. While the largest number of investments (42%) have been made in lower value ventures at an early developmental stage, it is clear that the highest returns have been - as would be expected – closer to commercial application.

Table 4-4: Firm Exits to Date and Expected Financial Return, By Investment Stage				
	Firms supported	Total Investment Made	Forecast Cash Return	Exit Multiple
Early Stage, Low Value	14	£3m	£2m	0.8
Later Stage, Low Value	4	£1m	£1m	1.0
Early Stage, High Value	6	£5m	£12m	2.3
Later Stage, High Value	9	£11m	£37m	3.5

Source: Finance Wales

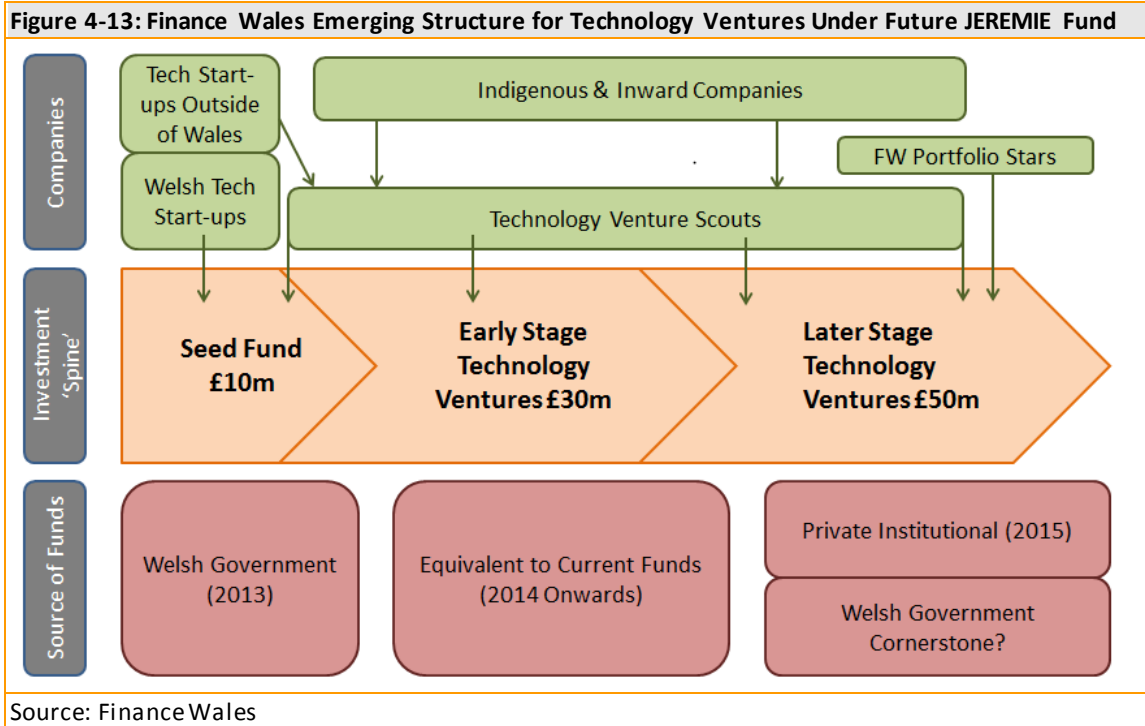
Emerging Plans for Future Public Sector Backed Funds

- 4.161 Given the scale of new and emerging deals across the Co-investment and Technology Transfers introduced as part of the current fund, Finance Wales is proposing to expand the scale of R&D and Innovation focussed investments under an ‘escalator’ of three technology focussed sub funds:

- A £10 million Seed Fund: Supporting projects at proof of concept stage with between £50,000 and £200,000 at a rate of 10 projects a year. Would be funded by the Welsh Government, possibly subsidised with ERDF and supported by two seed investment executives and one support executive.
- A £30 million Early Stage Technology Fund: Supporting projects after POC and expecting revenues soon with equity and mezzanine finance of between £100,000 and £1 million at a rate of 10 projects a year. Would be funded by private venture capital and supported by three investment executives.
- A £50 million Later Stage Technology Fund: Supporting expanding ventures graduating from early stage as well as direct outside entries with a mix of equity, debt and mezzanine finance of between £2 million and £5 million at a rate of 2 projects a year. Would be funded by the Welsh government, possibly subsidised with ERDF and

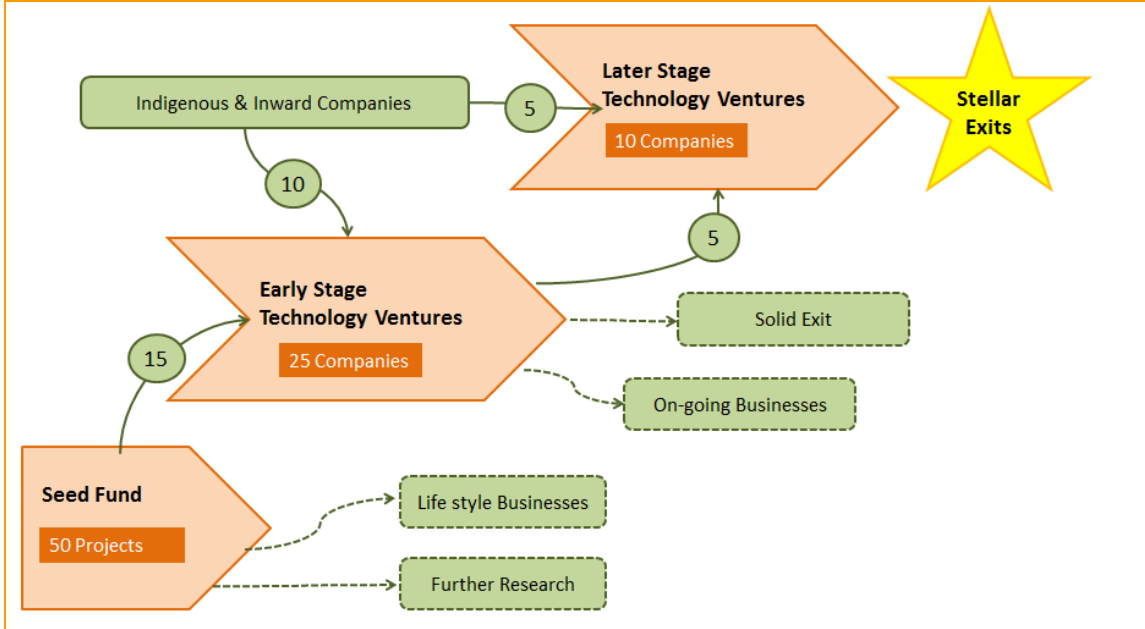
supported by two seed investment executives and one support executive.

- 4.162 This would represent a major expansion of technology focussed venture capital finance, rising from £32 million under the current fund to £90 million.
- 4.163 As already stated above a continued effort at attracting ventures from the rest of the UK to locate in Wales will be embedded within the scheme and a dedicated team of three Technology Scouts would be employed to search for and assess potential ventures.



- 4.164 Figure 4-14 illustrates how a venture might travel up the escalator and provides an indication of the number of companies that might be supported. It also shows the proportion of seed investments that might exit as lifestyle businesses or require further research and those that go on to receive further funding through the Early Stage Technology Fund; those that make a solid exit from this stage and those that secure further rounds of funding under the Later Stage Technology Fund. Of these it is estimated that just a few ventures at most will go on to become 'stellar performers'; ie floated on the stock exchange or with global market potential.

Figure 4-14: Finance Wales Emerging Structure for Technology Ventures Under Future JEREMIE Fund



Source: Finance Wales

4.165 Outside of the Wales JEREMIE early stage sub funds, there are only a handful of public schemes aimed at delivering finance specifically to early stage technology ventures. A number of these schemes are detailed in brief in Table 4-5 below.

● Wales European Programme Ex-ante Assessment – Financial Instruments Appendix ●

Table 4-5: Publicly Backed Finance Schemes for Research & Development and Innovation in Wales and the UK					
Fund	Description	Date Launched	Size of Fund	Details / Eligibility	Amount invested to Date
UK Innovation Investment Fund	<p>Two venture capital funds of funds investing government and private funds into selected underlying specialist VC funds:</p> <p>1) The Hermes Environmental Innovation Fund focusses on resource efficiency and clean technologies</p> <p>2) The European Investment Fund's UK Future Technologies Fund</p> <p>Aimed at investing in technology businesses in key sectors such as digital technologies, life sciences, clean technology and advanced manufacturing.</p>	June 2009	<p>1) HEIF: £130m (£50m government)</p> <p>2) UKFTF: £200m (£100m government, £100m EIB)</p>	Administered by a government appointed fund management company, Capital for Enterprise Limited (CfEL).	As of May 2012 16 firms had received £46.7m with a further £25.2million leveraged from other sources
Welsh Life Sciences Investment Fund	<p>Managed by Arthurian Life Sciences (a subsidiary of Europe wide Excalibur Fund Managers).</p> <p>The purpose of the fund is to increase the ability of life sciences firms in Wales to access equity finance and attract new life sciences businesses to locate in Wales.</p>	January 2013	£100m (£50m WG)	Details are emerging	None to date

● Wales European Programme Ex-ante Assessment – Financial Instruments Appendix ●

<p>Academic Expertise for Business (A4B)</p>	<p>A4B is six year programme funded by Welsh Government and ERDF that delivers grant funding direct to university research teams. It is aimed at providing a simplified, integrated package of support for knowledge transfer in order to generate technology with commercial potential and builds on the previous Knowledge Exploitation Fund (KEF), Centres of Excellence for Technology and Industrial Collaboration (CETIC), Know How Wales (KHW) and Accelerate Clusters (AC). The programme delivers funding aimed at various stages of the project development cycle.</p>	<p>2008</p>	<p>£70m</p>	<ul style="list-style-type: none"> ● Early Stage Development Fund: up to £10,000 for 3-4 months ● Patent and Proof of Concept Fund (PPOC): up to £50,000 for up to 12 months for basic to early stage research ● Feasibility Studies: up to £20,000 for evaluating the potential for commercialising ● Collaborative Industrial Research Projects: up to £300,000 over three years for collaborative projects comprising at least one university team and two businesses ● Knowledge Exchange Projects: up to £100,000 over 18 months for academic-business exchange projects ● Knowledge Transfer Centres: up to £450,000 for academics opening a KTC to promote/demonstrate benefits of new technology. <p>All projects must address the issues raised in the Welsh Government’s 2010 Economic Renewal Policy document.</p>	<p>N/A⁴⁵</p>
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Source: Department for Business Innovation and Skills (2013). ‘Measures to Support Small and Medium Sized Enterprise Growth’; www.capitalforenterprise.gov.uk.

³⁷The scale of finance delivered through A4B had previously been available through Quarterly project Newsletters. However, these are no longer published or available through Welsh Government.

Other Available Finance

- 4.166 Outside of these publicly led schemes there are a number of private fund operators delivering a limited amount of funding to Welsh ventures.
- 4.167 Chief among these is the Xenos Business Angel Network, a subsidiary of Finance Wales. Xenos look to bring together a network of more than 140 business angels and start-up and early stage businesses. They publish a monthly newsletter outlining all possible investment opportunities and have regular meetings at which the Angels receive presentations from applicants. There is a fee of £150 to register on their database. A typical size of Angel investment is £10,000 – £50,000, though there may be consortia of Angels willing to come together to fund larger requirements. Xenos has facilitated over £20 million of private investment in almost 200 firms since its formation in 1997. In 2011/12 it generated almost £3 million in angel investment for Welsh SMEs.
- 4.168 UK Steel Enterprise Ltd provides finance for start-ups, expansions, acquisitions and buy-outs across the manufacturing sector and related services. They provide shared equity investments and loans up to £750,000 with equity shares typically ranging up to no more than 25%. They also operate an Enterprise Finance Guarantee Scheme delivering up to £1 million to firms with an annual turnover of up to £25 million. (Section 3 above). However, much of their recent activity has been directed towards areas outside of R&D and technology.
- 4.169 WestBridge Capital LLP is based in London and Cardiff and invest between £1m and £8m in fast growing UK SMEs which are typically at a mature stage of development and generating profit. It was formed in July 2008 with a buyout of WestBridge Fund Managers Ltd (formerly Wales Fund Managers Ltd), an established private equity business.
- 4.170 Also, with a presence in Wales but operating mainly across international markets, Wesley Clover International directs venture capital investment towards the digital media and communications sector.

Summary of Activity in the Market for Research and Innovation

- 4.171 It is clear from the discussion above that while there are pockets of research and innovation activity with distinct commercial value coming out of Swansea and Cardiff Universities and from key anchor corporations, overall, R&D investment in Wales is well below that which is being generated elsewhere in the UK. Similarly the flow of finance is concentrated largely between Finance Wales, Fusion IP and the public money being made available through the New Life Sciences Fund or at a UK level through the UK Innovation Investment Fund. Outside of this there are only a handful of investors (either smaller scale or with no specific focus on Wales).
- 4.172 Despite this there is certainly cause for cautious optimism when looking back over recent years. Finance Wales has started to make a far more concerted effort to expand technology focussed activity and has successfully increased the amount which it has delivered through its early stage JEREMIE investments and reports from Finance Wales, Fusion IP and the Universities suggest there are a steady flow of investable opportunities emerging from the

research base.

Previous Use of FIs: Lessons from the UK Innovation Investment Fund

- 4.173 The UK Innovation Investment Fund UK (IIF) which started in 2009 represents perhaps the largest public investment. An early assessment of the funds' performance produced by BIS in 2012 gives some indication of its success and the potential lessons which can be drawn:
- It was found that the fund has been particularly successful in addressing a gap for equity finance aimed at technology business of between £2 million and £5 million.
 - A fund of funds model has been successful in attracting private funding and has wide market scope, but the additional administration and fund manager fees required and reduced control over underlying fund investment are disadvantages.
 - Two thirds of businesses thought that they could have raised finance elsewhere, suggesting some limited additionality. However, 81% thought it would have taken a lot longer and impacted on business performance, considerably slowing their development.
 - The fund has contributed disproportionately to the high level of growth reported by beneficiary businesses, is generating innovation spill-over effects by engaging and collaborating more with HEIs and is generating net new jobs.
 - At least four fifths of beneficiaries will export.

Conclusions

- 4.174 The discussion above has provided some insight into the operating environment in which existing and potential Welsh investors are placed; in terms of the existing appetite for investing in R&D and technology, the wider economic environment and research and industry strengths. In particular:
- Investment in R&D and innovation is low across Wales when compared with the UK picture and the position has deteriorated - particularly where HEI investment is concerned - since 2008.
 - However, a steady stream of viable prospects appears to be emerging from research at Wales' two most prominent research focussed universities; Cardiff and Swansea, where niche strengths in Life Sciences have been able to create significant commercial value.
 - There is evidence that finding private sector match investment has become more difficult for technology based ventures in the current financial climate, particularly for intensive longer term R&D investment ranging from £250,000 up to £10m. Within this, public investment in the form of the UK Innovation Investment Fund (UKIIF) has been particularly effective in addressing a gap for equity deals of between £2 million and £5 million.

- The scale of demand though reasonably concentrated, is enough to suggest that there remains an access to finance gap across a significant range of investment values reinforcing the market failure rationale for public sector investment and the role for such interventions to drive up demand further.
- Welsh government sector policy has also pointed towards the need for increasing the level of risk capital aimed towards technology ventures and towards Life Sciences in particular. This is symbolised by the upcoming publication of Innovation Wales as well as through the creation of the new £100 million Life Sciences Fund for Wales.

4.175 Proposing an estimate for the potential scale of investment which should be directed towards commercialising R&D and innovation ventures is fraught with difficulty, not least because any investment decision should be based on its individual merits. Nonetheless, we have provided below some indication of the broad ranges within which future investments should sit. These are supplemented by more qualitative recommendations as to how any future funding should be delivered:

- The strong record between Cardiff and Swansea Universities of commercialising research coupled with evidence of growing demand for finance emerging from JEREMIE early stage investments suggests there is potential for cautiously up-scaling the resource directed towards commercialising research.
- The case for increasing public investment in equity finance is strongest. In particular, once a potential venture has matured beyond proof of concept it is here that, despite risk, the greatest returns are available.
 - Seed investments are best delivered between the range of **£5,000 and £10,000** to start with follow-on investments reaching up to **£100,000**
 - Early stage investments should reach between **£50,000 and £1 million** overall (including follow-on)
 - Later stage and expansion investments could range from anywhere between **£1 million to £5 million**.
- The model developed between Fusion IP and Cardiff University presents a means through which continued success can be capitalised upon and expanded; where the knowledge required in bringing research to the market is paired with the research expertise present in Welsh HEIs.
- While there is also a case for supplying debt, this should be delivered on a typically smaller scale where suitable for particular investments and generally supplemented by equity.
- A case remains for directing grant finance towards very early stage or Proof of Concept ventures. For instance Universities have expressed a continuing demand for university-challenge type or grant funding. These measures are best delivered on a reasonably small scale of around **£1,000 to £50,000**.

- Finance to support the set-up, early growth and expansion of high tech firms is better tackled through funds aimed at SME finance more generally. This is especially the case where loan finance is concerned. Debt has only typically been applied for technology investments on a case by case basis; where a small case venture is approaching the market place and requires finance for capital investment for example.
- Just as important as the type and scale of finance made available, the creation of high-growth companies based on university research requires specialist expertise, hands-on support and financing. This is why firms like Oxford Technology have looked to invest primarily with ventures close to home; so that regular face to face contact can be maintained through often lengthy developmental periods.
- Coupled with the recommendation above that the time and expertise dedicated to such investments is perhaps even more important than the level of finance available, there is always a danger that too much emphasis is placed on short-term thinking at the expense of focus on issues which take longer to have an impact, i.e. guiding the earliest stage ventures towards the market. Recommendations from the Welsh Government Micro-Business Task and Finish Group Report (2012, p16) reiterate this point; “that investment should be focused on developing the capabilities of individuals involved in running small businesses for them to innovate and embrace new challenges”



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