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**Scottish Enterprise**

**Economic Impact of the of  
the Scottish Venture Fund**

**Final Report**

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A report prepared by

**PACEC**

for  
Scottish Enterprise

**PACEC**

Public and Corporate  
Economic Consultants  
[www.pacec.co.uk](http://www.pacec.co.uk)

49-53 Regent Street  
Cambridge CB2 1AB  
Tel: 01223 311649  
Fax: 01223 362913

416 Linen Hall  
162-168 Regent Street  
London W1R 5TB  
Tel: 020 7038 3571  
Fax: 020 7038 3570

e-mail: [admin@pacec.co.uk](mailto:admin@pacec.co.uk)

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The research, analysis, and conclusions are those of PACEC.

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## Executive Summary

### X1 Introduction

- X1.1 In January 2011 Scottish Enterprise (SE) commissioned PACEC to carry out an evaluation of the Scottish Venture Fund (SVF). In summary, SVF addresses the equity gap for businesses in the £2 million - £10 million range for high growth companies at development and expansion stage by investing £500,000 - £2 million on a £ for £ pari passu basis with private sector deal promoting partners. The Fund started in November 2006. The management of the fund was taken over by the Scottish Investment Bank (SIB) which was formally launched in December 2010.
- X1.2 SVF forms one of a suite of loan and equity co-investment funds, together with the Scottish Seed Fund (SSF) and the Scottish Co-Investment Fund (SCF) which focus on smaller businesses at earlier stages in their development.
- X1.3 SVF, as with the other funds, was set up after and in parallel with a range of studies which showed a relative shortage of finance for business in Scotland. The aims of the evaluation, in summary, are to:
- Assess whether the original strategic rationale for SVF is still valid in terms of its policy fit, the perceived market failures for capital, and its market impact.
  - Estimate the economic impact of SVF arising from the investee companies to date and into the future.
  - Assess views on the management and delivery
  - Assess the progress towards the objectives set for SVF.
  - Make recommendations on the Funds' future direction.
- X1.4 PACEC was also appointed to carry out an evaluation of the Scottish Seed Fund (SSF) in parallel with SVF, using a similar methodology, to enable comparisons to be made and complementarities explored, although the funds address two different gaps in the market.

### X2 The Evaluation Methodology

- X2.1 In order to achieve the aims of the evaluation, an integrated and customised research programme for SVF was undertaken, which involved inception stage meetings with SE and SIB<sup>1</sup> staff on the aims and delivery of SVF, a desk study of management information and relevant background reports, interviews and survey research with a representative sample of 20 businesses (from a total of 26 funded and surviving, i.e. a 77 % response rate) that received SVF investments followed by in-depth discussions with five of the businesses. Interviews were also held with some fifteen SVF funding partners along with other stakeholders in Scotland with knowledge of the

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<sup>1</sup> Reference to SE staff in the report also includes the SIB staff as they both form part of the SVF team.

funding market. Hence these consultations comprise a significant evidence base to address the evaluation aims.

X2.2 The research results were analysed to show the response to the evaluation brief, coupled with statistical modelling to estimate the economic impacts, i.e. net additional jobs and GVA and the economic impact to cost ratios.

X2.3 The research issues and questions posed in the surveys and interviews were designed and customised from the outset to add value to the brief and provided evidence on which to base the evaluation. Further insights and inferences are drawn out where this is appropriate and can be supported by the evidence.

### X3 The Extent to Which the Strategic Rationale for SVF is Still Valid

#### *The Fit with the Scottish GES and SE's Business Plan*

X3.1 The Scottish Investment Bank (SIB) was launched in 2010 to manage SE's co-investment funds (including SVF) is evidence of SE's actions to improve finance for SMEs. SVF, through the commercial co-investment concept with private investors, its aims and design, **provides a good strategic fit** with the Scottish Government Economic Strategy and the SE Business Plan. It strengthens the business support environment by providing a flow of capital for growth businesses to help address the funding gap working with the private investors and it addresses **market failure and market feature** issues. It provides advice and support to businesses through, for example, the SE account managers and the representatives of SVF investors who sit on company boards that had received investment. SVF also focuses on the key sectors that are important for the growth of the Scottish economy. They include digital media and enabling technologies, life sciences, and energy in the main.

X3.2 **This strategic fit** is also demonstrated through the evidence gained as part of the evaluation. This is shown in detail below. In summary, SVF addresses **market failures and features** for development stage businesses and helps to fill the funding gap in the £500,000 to £2m range, with deals up to £10m. It has positively impacted on the capacity and scale of the funding market, it has helped to build funding partnerships and collaborations, created inter-dependencies between the investment funds, and formed wider linkages in the business support network. The business and economic impacts generated by SVF have contributed to the overall growth of the Scottish economy through, for example, business capabilities, innovation and net additional jobs and GVA.

#### *Market Failures and Features of the Capital Market*

X3.3 The primary issue that SVF seeks to address is the equity gap that exists in the supply of risk capita for viable SMEs in Scotland with growth potential at the development stage. SVF sought to address a number of market features and market

failure issues. The literature and research, which underpinned the SVF rationale, underlined these features. They are examined primarily through the views and behaviour of investors and wider stakeholders<sup>2</sup> who were interviewed as part of the evaluation.

- A shortage of information or information failure on investment opportunities  
It was considered by investors and wider stakeholders that investors may not be aware of individual businesses seeking investment that make potential viable investments. However, collectively investors were made aware of potential opportunities through their own searches, approaches by businesses and their extensive network and interactions with other investors and agencies including SE. However, some viable businesses may not come to the attention of investors.
- The high cost of due diligence and transactions which restricts investment  
The filtering of potential investments and businesses by investors and the carrying out of some form of review / due diligence takes place in stages. A high proportion are considered as unsuitable fairly quickly, leaving a small proportion that are selected for some form of review / due diligence. Part of the reason for not proceeding with **full** due diligence was the sheer cost relative to the potential returns (compared to larger investments) and the funds available to investors to do this. The investors agreed that even for the more mature SVF businesses, especially where initial / first round investments were made, the costs of due diligence could be too high and restrict their investment.
- The perception of risk which prevents investments  
The main grounds for not going ahead with investments were that ultimately businesses were not sufficiently developed and were seen as too risky in spite of trading successfully. These views in some cases demonstrate excessive risk aversion on behalf of some investors. For investors their general view is that companies seeking funding were refused because the revenue stream, the business team, the products and the investment readiness were not strong enough, or too much money was sought which deterred them.
- Low returns and yields on high tech companies  
The risk factors above were more pronounced where some of the high tech companies sought finance and the uncertainty increased, partly because of less information available of the likely potential returns but also because of the risks at the product research and development stage and the long lead in times for commercialisation and subsequent revenue streams – although it was recognised there could be some very successful high fliers.
- Larger deals limit risk exposure  
The investors confirmed that this was the case to some extent when smaller investments were being considered and it meant that a gap was opening up in the traditional flow of funds and “hand-over” between the business angels and their syndicates and the venture capital companies. The business angels, through syndicates, had sought to fill this emerging gap to some extent.
- Fund managers remuneration is influenced by larger deals  
The investors accepted that to some extent this was a feature of the remuneration process when rewards are linked to returns. This constraint is reinforced to some extent by the fact that due diligence costs are

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<sup>2</sup> LINC Scotland, the Business Angels network, Scottish Government and academics

proportionally higher for smaller investments and fund managers sought to keep their costs down as part of their overall portfolio management and performance targets.

- X3.4 These factors, in combination, demonstrate the continued market failures and features which influence the flow of funds in Scotland, and underpin the rationale for the SVF. If anything they have become more prominent in the current period of economic uncertainty.
- X3.5 Around 40% of the investors would not have invested in the SVF businesses without SE; a third would only have made a partial investment, primarily because there was not a strong enough business case put forward by the businesses and they were seen as too risky.
- X3.6 The factors above, and the fact that capital has gone into higher performing, less risky and more liquid capital funds and alternative assets, especially where markets are volatile and there is significant investment switching, have all led to a lower than optimal supply of funding to viable SMEs in Scotland.
- X3.7 The existence of potential **market failure** for capital on the demand side was explored through the interviews with businesses that SVF has invested in. The main reasons in wider research literature for demand side market failures and features are<sup>3</sup>:
- A shortage of information. SMEs are not sure of the best sources of finance for development or how to obtain it at acceptable costs.
  - A lack of investment readiness. SMEs, even with a track record, are unable to present themselves as investable opportunities, eg poor business plans and models or adequate management skills.
  - An aversion to equity. A reluctance to dilute ownership further or share IP rights
- X3.8 On the information failure side of market failure (as above), it is not apparent that SVF businesses were not aware of the sources of funding or how to access it. However, other non-SVF businesses may well not be aware and the literature would support this. Most businesses had sought alternative funding to SVF and a third of these had been unsuccessful, whilst the remainder had only been partially successful. Businesses did not apply for investment, not because they were unaware of the sources, but because they preferred to manage without it or that the conditions were not attractive to them.
- X3.9 Overall the behaviour of the businesses that did not obtain alternative finance potentially reflects a degree of market failure in that they potentially could not demonstrate investment readiness even at their stage of development (and were seen as too risky). In terms of aversion to equity as a market feature, one of the main

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<sup>3</sup> Note the Rowlands Review (2009) and BIS. BIS Equity Finance Schemes. Survey of Investors July 2011. BIS Equity Finance Programmes: Qualitative Review of UKHTF and the Bridges Fund July 2011



reasons for not applying for alternative finance to SVF was that the conditions likely to be set by investors in terms of a dilution of ownership were not acceptable to them.

- X3.10 These features add weight to some of the supply side issues that result in a shortage of finance and support the rationale for SVF.

### *The Impact on the Funding Market*

- X3.11 The management information from Scottish Enterprise shows that SVF provided some £39.9m (or £42.7m at 2011 prices) of funding, i.e. an average of £1.4m per business for the 28 different businesses. SVF levered in an average of c.£3.3m per business from other funding sources, primarily from BAs and VCs, a leverage ratio of 2.3. The total amount levered in was £91.2m.

- X3.12 The management information also shows that there were some 66 partners that could provide capital, 44 (61%) of whom were active. None of the partners considered that SVF had displaced or crowded out existing funds or investments that would otherwise have been made in Scotland.

- X3.13 Some two-thirds of partners considered that SVF had significantly improved both the scale and quality of commercial venture funds available in Scotland. Similar proportions of partners said that new funders had entered the Scottish market, with a quarter from outside the UK and a quarter based in London and the south east.

### *Linkages and Dependencies With Other Support*

- X3.14 Interdependencies between SE programmes and the wider innovation and business support system help to strengthen the overall capacity of business support in Scotland and the expertise businesses can draw on. The research with businesses shows that around two-thirds received advice from an SE account or investment managers and three quarters said it was important to them.

- X3.15 As well as SE advisers, there were a range of linkages between SVF and other advisers and agencies in Scotland which help strengthen the impact of SVF. Of critical importance, a third of SVF companies received direct advice from their investors on their management teams and Boards. A quarter received support from HE / university advisers, and one in five from independent advisers and consultancies. Just under a third claimed positive impacts through joint working with collaborators, mainly other businesses.

- X3.16 SVF had an impact on international linkages. For example, a quarter of the SVF investors were based outside the UK, and for the SVF businesses two-fifths had started exporting, had increased their export sales and opened up new export markets, which they attributed to SVF and businesses considered that exporting would strengthen.

## X4 The Economic Impact of SVF

- X4.1 The evaluation has sought to assess the impacts on businesses invested in through SVF and, in particular, the innovation and business performance effects and how these translate into economic benefits for the Scottish economy (e.g. net additional jobs and Gross Value Added).
- X4.2 The evaluation focused on some key indicators. The research with businesses showed that SVF stimulated their innovation and R&D activities. Some 90% had or would increase spending on R&D, and eight out of ten had improved innovation outputs, i.e. tested the commercial and technical feasibility of ideas (85%), produced new scientific and technical knowledge (75%), and developed new products and services (75%).
- X4.3 The majority of businesses invested in were in the more innovative sectors in Scotland, including digital media and enabling technologies (54%), life sciences (25%) and energy (18%). These also reflected the Scottish Government's priority sectors.
- X4.4 The discussions with businesses indicated that two-thirds had actually increased their productivity as a result of SVF at the time of the evaluation, and 85% expected to do so over the next ten years. 60% of businesses had started to export, increased their exporting sales, and opened up new export markets. It was expected that around nine out of ten would see further positive impacts in these exporting areas over the next 10 years. At the time of the evaluation three-quarters of businesses had increased their employment, and nine out of ten expected to do so over the next 10 years. Three-quarters had also increased their turnover, and all of them considered that this would increase over the next ten years.
- X4.5 Over half the businesses would not have achieved these impacts without SVF.
- X4.6 Overall, the research shows that the net additional employment attributable to SVF was 317 (FTE) jobs at the time of the evaluation; which was likely to rise to 580 in the short term, and 791 in the medium term<sup>4</sup>. The net additional cumulative GVA is likely to be £92m by 2016 and £253m by 2021 (at 2011 prices). This shows that SVF was making a significant contribution to the Scottish economy in key priority sectors, for example creative industries and digital media, life sciences and energy, and very much in line with the GES and the SE Business Plan. In terms of value for money the current cost per FTE is £134k per job, falling in the short term to £87k. Over the period up to 2021 each £1m of SVF investment is likely to generate £6.0m in GVA. While a relatively high cost for public interventions, especially on jobs, this is to be expected for equity investments as it takes some time for the impacts to feed through, especially in the current economic climate. Also for sectors, such as life sciences, the period of time to commercialisation and subsequent jobs can be relatively long.

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<sup>4</sup> The "short term" covers the period 2011-2016, and the "medium term" 2017-2021. For employment impacts the midpoints of these periods are used (2014 and 2019 respectively)

## X5 The Management and Delivery of SVF

- X5.1 SVF has to a large extent provided an integrated, cohesive, and consistent approach, in that the delivery has been endorsed by both businesses and funders. Almost all those consulted thought the design and the implementation procedures were “good”, especially the amount of funding, what it could be spent on (i.e. business operation and investment functions) and the support from the SE team of advisers and account managers.
- X5.2 Very few weaknesses were identified. A very small minority of private sector partners suggested that SE staff should be given more discretion to go ahead with further funding rounds for businesses and suggested that the amount of information required from partners could be reduced and approval times shortened. It was also suggested that the overall amount of SVF funding that could be made to individual companies increased with consideration given to whether the SVF threshold could be increased above £2m to reflect gaps in the market towards the higher end of the £2-10m range.

## X6 The Overall Progress towards SVF Objectives

- X6.1 The evaluation brief sets out two main objectives for SVF. The evidence from the research presented for each of these is as follows:

- *Support the development of the early stage investment market through measures designed to increase the level of risk capital and numbers of risk capital providers potentially available to Scottish companies (acting as a strong catalyst rather than dominant investor).*

SVF has been successful in increasing the amount of early stage venture capital available in Scotland. Some 40% of the investors would not have invested in the SVF businesses without SE, and a third would only have made a partial investment which shows the catalytic role of SE.

In terms of flows into the funding market, some £91.2m had been levered in from private investors.

Some two thirds of partners considered that SVF had improved both the scale and quality of venture funds available in Scotland, either significantly or to a large extent with new investors from outside Scotland entering the market.

The research shows that half the partners thought that SE would not invest in the companies without SVF and the co-investment approach. Some 40% thought SE may make some partial funding available but through grant funding (e.g. SMART or some other appropriate scheme).

Some one in three of the sixty-six SVF investors would not have invested in the SVF Venture Capital Market in Scotland to the same extent without SE commercial funds.

In combination these findings show that SVF has stimulated a growth in the venture capital industry.

The evaluation found that none of the SVF investors thought there had been any crowding out, or displacement, of investment funds in Scotland as a result of SVF.

- *Operate on a fully commercial and equal risk sharing basis with the private sector to the highest professional investment standards.*

The investments in business that use SVF reflect the aims of the scheme to invest on a £ for £, equal risk and equal reward, pari passu basis with private sector deal promoting partners

A key feature of SVF is that it had improved the supply of commercial funds through deals with SE on a shared risk and equal basis. SE finance was also being used commercially which reflected the policies of the investors and was supported by the aims to stimulate returns and ultimate exit plans through business growth and profitability.

The investors and businesses considered that the professional and investment standards of the SIB / SE staff were high. They valued their expertise in terms of making deals, their knowledge of the Scottish markets and investors and sectors and their relationships with businesses and other investors.

X6.2 Overall these results show that SVF had progressed significantly towards its objectives.

## X7 The Positive Impact of SVF

X7.1 SVF has made significant progress in terms of its objectives and brought positive benefits to the Scottish economy in a number of ways:

- *Economic Benefits.* It will have generated some 580 net additional FTE jobs over the short term. The jobs figure is likely to rise to 791 by 2021. The cumulative GVA generated is likely to be £92m by 2016 and £253m by 2021 (2011 prices - Table 6.3).
- *Intermediate Business Impacts.* The businesses have strengthened their R&D, innovation and technological capability which have resulted in improved and new products and processes which have reached the market place or are likely to do so.
- *Key Sectors.* The main thrust of the impacts has taken place in the priority sectors in Scotland, eg creative industries and digital media, life sciences and energy which are increasingly important for the Scottish economy.
- *The Improvements in the Supply of Finance.* SVF has led to an injection of funding in Scotland provided by the risk capital investors.
- *The Innovation System and Support Infrastructure.* There has been increased and collaborative engagement in SVF businesses by the network of advisers in the innovation system, e.g. SE, HEIs, private consultants and the specialist advisers of venture capital and business angels and their syndicates.

X7.2 Overall, although the cost of impacts (eg for jobs and GVA) has been relatively high, this is primarily because it takes some time for the impacts of equity funding to feed through. Life sciences is a good example here where it takes some years to develop products and test them fully prior to going to market. The impacts are also potentially slower to emerge in the current economic context. However, the positive impacts of SVF show that it has, and will continue to, demonstrate value for money.

## X8 Future Direction and Recommendations

- X8.1 The research and consultations with businesses and partners has shown that the programme management arrangements, the basic concept of SVF to address market failure for capital, its relationship with other funds in the SE (eg SSF and SCF), together with the level of funding, remains valid.
- X8.2 The key lesson is that the management and delivery of SVF has worked well. Some suggestions are made for the future operation.
- a *Improvements in delivery.* There are a number of points made by a small minority of businesses and partners and other observations made as part of the research.
    - Steps could be taken to increase the participation of some funding partners, particularly as around a third had made no deals.
    - While businesses recognised the benefits of account management, the relationship could be strengthened to help ensure a consistent flow of advice for them.
    - For businesses and investors the roles of transaction, investment, portfolio and account managers for SVF could be clarified.
  - b *The management data.* The information on businesses and investors is already robust and comprehensive. SE is already addressing the issue of making the annual employment figures more complete.
  - c *Monitoring of the economic impacts.* It takes time for the full actual impacts of equity impacts to feed through. Hence these impacts need to be regularly monitored every few years to assess the implications for policy and ultimate cost effectiveness.
- X8.3 These suggestions above are given equal priority for consideration subject to resources available and implementation by SE.

# 1 Introduction and Aims

## 1.1 Introduction

1.1.1 In December 2010 Scottish Enterprise commissioned PACEC to carry out an evaluation of the Scottish Venture Fund (SVF). The objectives of the evaluation were to:

- Assess the extent to which the strategic rationale for SVF intervention in the market is still valid, given the current economic climate, and look at the extent to which SVF may have changed the market
- Estimate the economic impact of SVF arising from the investee companies to date and into the future and equity and equalities issues
- Assess views on the management and delivery of SVF
- Assess the progress towards the objectives set for SVF, ie:
  - Increase the amount of venture capital available to SMEs in a way that does not displace existing investment activity;
  - Demonstrate to potential investors that returns can be made by investing in this sector of the equity market thereby stimulating the growth of the venture capital industry;
  - Increase the number of fund managers operating in this sector of the equity market; and
  - Attract new investors who had not previously invested in this sector of the venture capital market.
- Make evidence based recommendations on the Funds' future direction

1.1.2 A key aim of the evaluation is to assess the potential impacts over a five and ten year period up to 2021, in recognition of the time it can take investment to bear fruit (and the innovation practices of companies). This period also reflects the 5 to 7 year disposal aspirations of investors.

1.1.3 As part of the evaluation, consideration was given to carrying out a review of the performance of SVF in terms of the commercial return. However, it was considered that this was not appropriate in that, primarily, it was too early and as a result of the current economic context it would take longer for returns to feed through. This position was confirmed by the investors.

1.1.4 PACEC was also appointed to carry out an evaluation of the Scottish Seed Fund (SSF) in parallel with the SVF, using a similar methodology, to enable comparisons to be made and complementarities exposed, although the funds address two different gaps in the market.

1.1.5 For each of the evaluations above, a number of issues also needed to be considered, which are set out in Appendix A in summary. These relate directly to the objectives above and provide more detail.

1.1.6 This report covers the evaluation of SVF and sets out the results of the evaluation.

## 1.2 Strategic Policy Context for SVF

1.2.1 SE's policies and activities contribute to the Scottish Government's wider policy objectives, especially those outlined in the Government Economic Strategy (GES)<sup>5</sup>. This identifies five strategic priorities that are critical to economic growth:-

- Learning, Skills and Well-being;
- Supportive Business Environment;
- Infrastructure Development and Place;
- Effective Government; and
- Equity.

1.2.2 SE's provision of investment contributes directly to the Supportive Business Environment priority. It promotes responsive and focused enterprise support, working in partnership with others in the public, private and third sectors to increase the number of highly successful, competitive businesses, and their access to skills, finance and business infrastructure. This includes actions to:-

*"Address gaps in access to capital that are constraining Scottish businesses from reaching their full potential, while helping to build capacity in the investment community to remove barriers to investment". (GES, p. 28)*

1.2.3 This is recognition of the fact that whilst the UK has a strong private equity market, it tends to invest significantly less in early stage risk capital (as a percentage of GDP) than many of its major competitor economies. Historically, Scotland has had a relatively lower level of risk capital investment than the UK average, which could be the result of market failure and feature issues that could influence its relative performance.

1.2.4 SE's Business Plan<sup>6</sup> highlights how, by working with partners to increase the availability of early stage risk capital, this will allow companies to develop and become globally competitive.

1.2.5 The Business Plan recognises that in the current economic climate, the role of risk capital has become even more important in stimulating and supporting start-up and early-stage companies. Through the investment funds, SE is helping to bridge the funding gap for many companies and helping to improve the investment market in Scotland.

1.2.6 The focus of SE investment support is on continuing to build capacity and scale in the early-stage risk capital market. The approach is based on the principle of commercial partnership with the private sector. This is in line with the core objective of increasing the numbers of investors available to Scottish companies to help them progress from start-up to growth and expansion. Aligned to developing the scale of the market is the related objective of improving the capability of the indigenous investment

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<sup>5</sup> GES is available at: <http://www.scotland.gov.uk/About/scotPerforms/purposes>

<sup>6</sup> The 2010/13 Business Plan is available at: [Scottish Enterprise Business Plan 2010-13](#)

community. Reaching out to UK and international investors helps ensure that Scottish companies can access the capital and experience they need to become global companies.

1.2.7 In this context and to achieve its strategic aims, Scottish Enterprise has developed its approach to work with its partners including the banks, venture capitalists and business angels to make it easier for SMEs to access growth finance, in the form of loans or equity or a combination of the two. **Hence policy in Scotland towards the venture capital industry has changed. The focus has shifted to indirect support for private sector players in the market, for example, working through partners such as the Scottish Venture Fund co-investors. The overall policy for this shift has been clearly articulated: “Enhancing the quality and focus of support for business and innovation will have a direct impact on business competitiveness and growth. Responsive, accessible business support services will allow all areas of Scotland to contribute to and benefit from a shared approach to economic growth”<sup>7</sup>. Specifically, “the Strategy should not be to pick individual companies as winners – the market does that. Rather, the job of government should be to facilitate and accelerate the growth sectors and to provide the necessary environment to make sure that it happens in Scotland.”** This has been the position since 2003.

1.2.8 SE’s investment activity provides capital and expertise that will enable Scottish companies to develop and grow from a Scottish base and retain high value activities in Scotland, thus ensuring that more Scottish companies can become internationally competitive.

### 1.3 Finance for Business in Scotland. Background Research

1.3.1 There has been considerable research on finance available to businesses in Scotland. It has focused on SME finance, but does not generally distinguish between start-up and growth finance. The availability of finance for SMEs has remained in relatively short supply with lower levels of risk capital in Scotland than the UK, potentially underlying the market feature and failure issues related to the requirements of viable firms and investments. In the early 2000s, there was a withdrawal of VC investors from the Scotland market following the dot-com crash, liquidity constraints faced by business angels syndicates and reports of good companies failing to raise capital<sup>8</sup>. More recent research in 2008, however, indicated that the risk capital market for growth companies in Scotland showed some buoyancy, especially for later stage and larger deals.<sup>9</sup> There were a number of key trends emerging:

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<sup>7</sup> Scottish Government (2007) *Government Economic Strategy*

<sup>8</sup> Richard T Harrison. Public Policy and Regional Risk Capital Markets. A Case Analysis of the Scottish Co-investment Fund. 2009

<sup>9</sup> Scottish Enterprise. The Risk Capital Market in Scotland. 2008



- The number and proportion of larger and later-stage deals was increasing, suggesting that as the market develops there is an increased requirement for follow-on finance; which may, paradoxically, limit the availability of finance for start-up and early stage ventures.
- Reflecting the economic downturn, there is evidence of an increased number of mature companies seeking equity investment for the first time, as access to bank finance becomes more constrained.
- The recession does not appear to have significantly affected the appetite of investors for larger investments, and there are still good investment opportunities, and some deal levels have come down.
- Business angel investors dominate, in terms of deals reported in Scotland – increasingly through syndicates. While there are still examples of co-investment by business angels and VC funds, there is segmentation, with business angel syndicates providing the follow-on investment to their portfolio companies rather than ‘handing over’ to a VC investor. In the absence of a strong exits market, through trade sales or, more rarely, a listing, this feature of the market may in the longer run constrain the availability of investment capital as less capital is available for early stage companies.

- 1.3.2 The SME Access to Finance research in 2010<sup>10</sup> provided an update on credit conditions. It concluded that overall lending to Scottish SMEs in 2010 is lower than in 2009, reflecting a combination of weak demand and constraints in the supply of finance for viable companies. However, the demand for finance has also fallen since 2009, reflecting among other things, an easing of working capital pressures and an increase in the proportion of firms revising growth objectives downwards. The report notes that there is a mixed picture on the new supply of finance. Outright rejection rates for businesses have increased and supply for new lending appears constrained, yet there is some evidence of an overall improvement in the total amount of finance secured by firms - but probably through more larger deals. Although economic conditions have improved somewhat in Scotland, GDP has yet to return to pre-recession levels, and a great deal of uncertainty remains as to the pace and sustainability of the recovery.
- 1.3.3 Additional evidence shows that market failure and feature issues for capital persist in the English context which provide a rationale for the range of co-investment funds run with the Department for Business, Innovation and Skills (BIS)<sup>11</sup>
- 1.3.4 In a wider context, the UK government Project Merlin Initiative seeks to encourage the main banks to provide loans for SMEs. However, the £19bn Q1 target in 2011 was not likely to be achieved (with a £2bn shortfall recorded)<sup>12</sup>, although the Q2 trend potentially show some improvement. However, the banks argue that there is lack of demand amongst SMEs. In order to counteract this, the government has announced a co-investment initiative with funders and a new Green Bank for 2012.

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<sup>10</sup> Scottish Government. SME Access to Finance 2010

<sup>11</sup> The Rowlands Review (2009) and BIS. BIS Equity Finance Schemes. Survey of Investors July 2011. BIS Equity Finance Programmes: Qualitative Review of UKHTF and the Bridges Fund July 2011

<sup>12</sup> BIS / HMT. Project Merlin Progress Report. May and September 2011

- 1.3.5 The specific case for the Scottish Venture Fund (SVF) is shown below in section 1.5 on Market Failure and Feature Issues.

## 1.4 The Equity and Loan Schemes for Business

- 1.4.1 In response to the research on finance for businesses, Scottish Enterprise, since the mid 2000s, has developed a suite of co-investment funds as part of a funding escalator to help meet the needs of businesses at different stages and with different finance needs. They included the Scottish Seed Fund, the Co-investment Fund, the Scottish Venture Fund and the Portfolio Fund. Details are shown below.

- 1.4.2 The management of these funds was taken over by the Scottish Investment Bank (SIB) which was formally launched in December 2010 (having been announced in 2009). It was announced by the First Minister (April 2009) in response to a call from the STUC for the formation of a “single door” approach to financial support for companies, building on the success of the Scottish Co-investment Fund model, working directly with the private sector. The Scottish Investment Bank is not a “bank” but is a division of Scottish Enterprise delivering existing early stage equity schemes and a new loan fund (The Scottish Loan Fund) aimed at established growth and exporting companies. Access to finance is primarily a role for the banks but when there are elements of market failure, the Scottish Investment Bank will seek to address these gaps. All funds are operated on a fully commercial basis with private sector partners and are delivered in a way that seeks to maximise net economic impact. The characteristics of each of the funds is as follows.

- Scottish Seed Fund (SSF)

The Scottish Seed Fund addresses the early stage equity gap for high growth potential seed and start up stage companies by investing £20,000 - £100,000 (primarily in the form of ordinary shares) on a £ for £ pari passu basis with private sector investors. The Scottish Investment Bank (SIB) carries out due diligence and makes investment decisions on all applications to the Fund. Companies apply direct or via SE’s Investment Readiness staff (who help businesses improve their case for investment), or investors can bring potential deals to SE through LINC Scotland which is the national association for business angels in Scotland with a large membership network of investors. SSF started in September 2006 and aims to invest some £2m in approximately 20 companies per annum.

- Scottish Co-Investment Fund (SCF)

The Scottish Co-investment Fund (SCF) is an equity led fund which addresses the early stage equity gap for high growth potential early stage companies by investing £100,000 - £1 million within a deal ceiling of £2 million and on a £ for £ pari passu basis with private sector. SCF Partners bring deals and make investment decisions on SIBs behalf. Companies apply directly to the private sector SCF Partners. The Fund started in June 2003 and has secured ERDF backing.

- Scottish Venture Fund (SVF)

The Scottish Venture Fund addresses the second equity gap in the range £2 million - £10 million for high growth companies at development and expansion stage by investing £500,000 - £2 million on a £ for £ pari passu basis with private sector deal promoting partners. If the deal cannot be fully

financed by these partners and SVF, then the SVF team will identify and bring in other private institutional investors. The Fund started in November 2006.

A description of the ways in which SVF operates is shown below.

- Scottish Portfolio Fund (SPF)

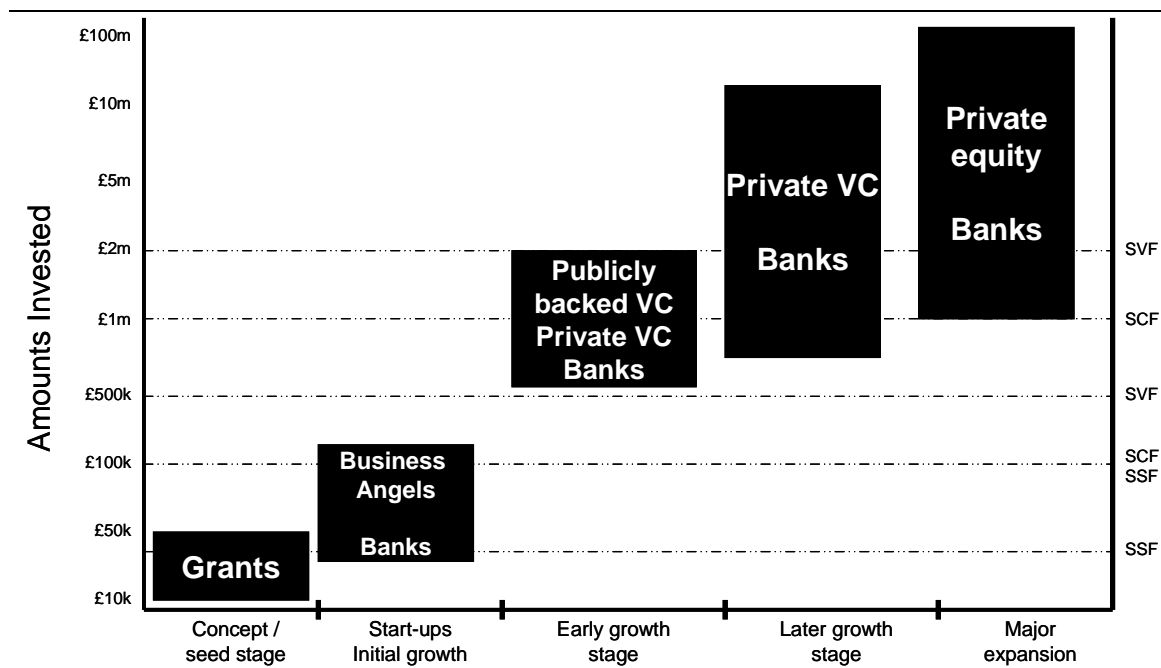
The Scottish Portfolio Fund allows the SIB to invest in its portfolio companies to help them achieve their growth ambitions. This also ensures that SIB acts commercially and follows its earlier investments to maintain its shareholding and to avoid dilution in those instances when there is a rights issue and SCF (see above) and SVF are not involved. SIB currently has a portfolio of 250 companies in which it has invested and provides advice for through a combination of the co-investment funds and SE staff.

1.4.3 Investors may have used other SE funds such as the Business Growth Fund<sup>13</sup>.

1.4.4 SVF funds form part of a funding escalator for SMEs run by the SIB which provides co-investment funds through the schemes above reflecting the different development and growth stages of businesses and their funding needs. This is illustrated in general terms below. SSF is designed to address needs up to £100k (overlapping with grants, bank and business angel funds). SCF addresses the £100k to £2m range (with publically backed and private VC monies and banks), and SVF focuses on the £2m - £10m range (with VCs and banks).

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<sup>13</sup> The Business Growth Fund (BGF) was designed to support Britain's fast growing smaller and medium sized businesses as a partner investor through long term equity investments along with advice and support.

**Figure 1.1 SME Illustrative Funding Escalator<sup>14</sup>**

## 1.5 Equity Funding: The Market Features and Failures

- 1.5.1 Small and medium-sized enterprises (SMEs) potentially constitute the most dynamic firms in the economy. However, they often face economic and institutional barriers to growth. These include issues related to limited access to working capital and long-term credit, legal and regulatory restrictions, and limited managerial and technical expertise. The lack of adequate finance for many viable SMEs with growth potential is a significant obstacle to the development of early stage and growing businesses. The consequences are that businesses cannot achieve their full potential and generate additional economic benefits. Following the credit crunch and the recession, more emphasis has been placed on this obstacle.
- 1.5.2 A lack of finance for **all** companies does not constitute the existence funding 'market failures'. Market failures exist where **viable** businesses with a proven track record of sales and profits and growth potential experience difficulties in raising the appropriate levels of medium and larger amounts of equity and debt follow-up capital required for continued development<sup>15</sup>.
- 1.5.3 There is evidence of a lack of funding for early stage high growth companies. This is despite only a small proportion of UK SMEs seeking equity growth capital (only about 1-2% of UK SMEs<sup>16</sup>). There is also evidence of an equity gap in that companies looking for certain amounts of funding may find this difficult to obtain. A second equity

<sup>14</sup> Adapted from Perakkis and Westlake (2009) *Reshaping the UK Economy: The Role of Public Investment in Financing Growth*. NESTA

<sup>15</sup> Scottish Enterprise. Market Failure in the Scottish Risk Market. R T Harrison report. 2000s.

<sup>16</sup> [BIS equity finance programmes qualitative reviews of: a\) UKHTF and b\) the Bridges Fund \(BIS, 11\)](#)

gap emerges as a result of many businesses that had previously received very early stage funding not being able to access further rounds of funding.

- 1.5.4 A number of recent research reports have highlighted the structural problems, features and market failures that have combined to cause this 'funding/equity gap' and which make it difficult for viable SMEs with growth potential to raise the capital they require<sup>17</sup>. These failures and features are summarised below.
- 1.5.5 On the supply side, causes of the funding/equity gap include:
- 1.5.6 **The high cost of due diligence and transactions:** early stage businesses tend to be high risk as they have unproven track records or business models and so require rigorous due diligence and analysis by investors. The costs of due diligence and analysis tend to be fixed and so represent a larger proportion of an investment in early stage, smaller deals than for significantly larger deals<sup>18</sup>. This acts as a disincentive to investors to invest in the relatively smaller deals, even for more developed businesses. Also, without due diligence and research information, it makes it more difficult for investors to distinguish good investment opportunities from bad ones<sup>19</sup>. This applies to SVF where, although the deals are relatively large, they are not the largest in the venture capital market.
- 1.5.7 **The perception of risk:** information on returns from early stage growth capital investment is generally limited as only a few growth funds exist with comparable data. Lack of information on the track record of returns from equity investment can make investors more 'risk averse' leading to excessive risk aversion, and investors can underestimate the returns which can result in incorrect expectations. In this context investors may maintain their existing portfolios rather than identify new investment opportunities<sup>20</sup>.
- 1.5.8 **Past poor performance:** Historically, there have been low returns and yields on investments in high tech companies. For example, in the 1980s, investors often made very low returns when financing early stage high technology companies as a result of poor quality investment decisions (the investment industry had little knowledge of making technology investments). Low returns continued with the long recession of the 1990s has led to a current perception of poor returns from this type of investment.
- 1.5.9 **Fund manager remuneration:** later stage and buyout deals have provided better returns and personal remuneration for fund managers so that there is less incentive for them to invest in earlier stage deals

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<sup>17</sup> [The Provision of Growth Capital to UK Small and Medium Sized Enterprises](#) (BIS, 2009), [BIS equity finance programmes qualitative reviews of: a\) UKHTF and b\) the Bridges Fund](#) (BIS, 2011)

<sup>18</sup> Scottish Enterprise. Market Failure in the Scottish Risk Market. R T Harrison report.

<sup>19</sup> Centre for Business Research. University of Cambridge. Financing UK SMEs. 2007, 2010.

<sup>20</sup> Scottish Enterprise. The Scottish Venture Fund 2008.

- 1.5.10 **Limiting risk exposure** - the private equity/venture capital industry has in recent years sought to limit its exposure to risk by focusing on buyout and secondary purchase investments, which tend to be larger and are perceived to be less risky. They have sought to focus on a smaller number of investments where the fund manager can have more control and influence on business operations and strategic decisions. This has reduced investment in early stage deals.
- 1.5.11 The factors above, and the fact that capital has gone into higher performing, less risky and more liquid capital funds and alternative assets, especially when markets are volatile and there is significant investment switching, have all led to a lower than optimal supply of funding to viable SMEs.
- 1.5.12 On the demand side (amongst SMEs) the main market features and failures are:
- 1.5.13 **Lack of information:** SMEs may not be sure of the best sources of finance for development or how to obtain it at acceptable costs.
- 1.5.14 **Lack of investment readiness:** SMEs, even with a track record, may be unable to present themselves as investable opportunities, e.g. they may have poor business plans and models or inadequate management skills.
- 1.5.15 **Aversion to equity.** A reluctance to dilute ownership further or share IP rights are the most common features of aversion.
- 1.5.16 As a result of the supply and demand side market features and failures, the market cannot, in itself, deliver efficient outcomes and economic efficiency as some viable growth businesses or investment opportunities may not receive the investment required. Also, in the recent and current period of credit and economic uncertainty, the causes and effects of the equity gap have become more prominent, now affecting mature businesses with positive track records.
- 1.5.17 As noted above, not all the causes of the funding/equity gap are market failures, some are simply features of the growth capital and equity funding market. However, they do result in viable growth potential SMEs facing difficulties in access funding and so do provide a strategic rationale for public sector support through initiatives such as the SVF.
- 1.5.18 These market features and failures are tested in terms of their existence and continuing relevance in Scotland in this research and have generally been confirmed, and this will be expanded on in later sections.
- 1.5.19 A number of these factors relate to imperfect or asymmetric information market failures (e.g. the lack of information on the track record of returns from equity investment and SMEs not being aware of funding options or not being investor ready). However, an improvement in information, in itself, is not sufficient to overcome these market failures as there are other aspects of market failure as shown above, eg related to due diligence costs.

1.5.20 The notion of market failure is subject to some testing through the discussions and negotiations between investors and investees, for example on the issue of risk for investors and potential due diligence costs. It is therefore open to discussion and judgements made given the roles of investors and investees before co-investment funding is used with public sector funds. This is unlike most other public sector support where the market failure rationale for intervention is rarely negotiated on but is implicitly assumed to exist. An exception to this is possibly where businesses seek grants from the public sector (eg for R&D) following discussions and negotiations with investors who do not provide the funding required because of market failure issues.

## 1.6 Design and Operation of the SVF

1.6.1 The establishment of the SVF was approved by the SE Board in 2006. The objective of SE investment activity, and within this SVF, is to provide capital and expertise that will enable more Scottish companies to develop and grow from a Scottish base, retaining high value services in Scotland, and with the aspiration that more Scottish companies can become internationally competitive companies of scale.

1.6.2 The introduction of the Scottish Venture Fund is intended to improve SE's record in stimulating the Scottish investment market through its national investment products. The objectives of the fund in this respect, reflecting the original objectives set out in the SVF approval paper and the evaluation brief, are to:

- Support the development of the early stage investment market through measures designed to increase the level of risk capital and numbers of risk capital providers potentially available to Scottish companies (acting as a strong catalyst rather than dominant investor) and
- Operate on a fully commercial and equal risk sharing basis with the private sector to the highest professional investment standards.

1.6.3 SVF is designed to ensure that all investment companies benefit from wider SE/SIB support to help them achieve their growth objectives.

1.6.4 Unlike a standard Venture Capital fund or business angel investor the SVF does not find and negotiate deals of its own. Instead it engages with active VC fund managers, business angels and business angel syndicates from the private sector. These partners have previously held discussions with SE on their willingness to invest and their general investment track record. They find the opportunities, but unlike the Scottish Co-Investment Fund (SCF), SE undertakes its own due diligence and negotiates the terms of the deal and commits its own resources to the equity investment. The SVF is consistent with SE's co-investment approach of always matching private sector investment in deals which are led by private investors.

1.6.5 The SVF always invests on the same terms as the private sector investor. The fundamental operating principle for SVF is that it should operate at minimal cost to the public purse 'on a fully commercial basis and will not provide any form of subsidy

or guarantee to either the investment partners of or the individual companies<sup>21</sup>. Also the SVF, in applying a fully commercial approach, will make investments that require no subordination of public funds. In effect as a genuine co-investment vehicle the entire operation of the Fund will be on an equal risk, equal reward terms (pari passu) between the private and public investors. As such it respects state aid rules.

1.6.6 The target market for SVF is high growth potential later stage companies with a focus on the Scottish Government's priority sectors which include digital media and enabling technologies, life sciences, and energy. The investors as partners are venture capital companies with a track record of investments and business angel syndicates (and business angels) operating in Scotland, elsewhere in the UK and overseas.

1.6.7 Based on a Scottish Executive allocation of £20m to Scottish Enterprise in 2006 the Scottish Venture Fund was established as a joint Scottish Executive (now Scottish Government) / Scottish Enterprise fund to operate on a Scotland wide basis. The SVF made its first investment in March 2007 and the first 18 months of operation were funded exclusively through this allocation. Following this in 2008/09 a £50m ERDF application was approved for SVF II, with a £30m commitment from SE leveraging £20m ERDF. Demand for the SVF steadily increased since it was opened, as follows:

- £2m invested in 2006/07
- £8m invested in 2007/08
- £9.7m invested in 2008/09
- £14.7m invested in 2009/10
- £7.7m invested in 2010//2011<sup>22</sup>

The annual funds allocated to SVF have been drawn down in full for each year since the scheme commenced, and have been approved by the SE Board as part of the annual planning process and budget allocation.

1.6.8 The operation and delivery of SVF is as follows:

- A company approaches a private sector investor (venture capital company; business angel or syndicates) that then brings the deal to SE. This may be an existing SVF partner or an investor that seeks approval as an SVF partner. The partners hold discussions with SIB/SE and are those that are active in the investment market and are committed to investment in appropriate companies.
- On receipt of an approach SE will establish whether the basic eligibility criteria are met and begin consideration of the investment itself (the Business Plan and due diligence review).
- Agree outline terms, conditions and scope and instruct additional due diligence (if considered necessary).
- Scope and agree the investment agreement. SVF will, subject to its compliance regime, invest in whatever type of share, loan stock or

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<sup>21</sup> The SE approval paper(s) for SVF

<sup>22</sup> The 2010/2011 figure is lower than previous years since it was provided to the researchers before the 2010/2011 period had finished



convertible preference share that the business agrees with the private-sector partner, and invest pro-rata with the partner investor on the same terms and conditions (the amount invested by SVF is determined by the partner to a level needed to complete the deal, subject to the maximum SVF permitted).

- 1.6.9 In terms of deal characteristics, SVF can invest up to a maximum of £2m in any one individual company, either in one tranche or in multiple rounds, and total deal size, including any debt component, should not exceed £10m. The investment must be at least matched pound for pound by the partner and the terms of the deal must be without partiality to the partner. Scottish Enterprise cannot own more than 29.9 per cent of the voting rights of a company, including those acquired through other SE investment schemes either current or in the past. Also, public money cannot account for more than 50 per cent of the total risk capital funding in a deal.
- 1.6.10 As part of the ERDF application that obtained match-funding, SE also established a number of core targets for the project. These included assisting 42 companies (including 2 new companies over the period to 2012); increasing turnover of the investee companies by £114m gross and creating 280 jobs gross, although it was recognised that these could take some time to feed through because of the nature of equity funding and the economic context.
- 1.6.11 To be eligible for investment from the SVF, the investment and the company must meet a number of eligibility criteria: including incorporation and complying with the EU definition of a Small to Medium Enterprise (SME)<sup>23</sup>. Additionally the investment must be in an approved business sector. Restrictions apply to SVF investments in the following sectors:
- real estate/property development;
  - social and personal services;
  - pubs, clubs and restaurants;
  - local services;
  - banking and insurance;
  - motor vehicles;
  - nuclear decommissioning;
  - professional services;
  - retail; or,
  - such other activities as specified by Scottish Enterprise from time to time, acting reasonably (having regard, for example, to ERDF requirements).
- 1.6.12 The SVF product is combined with regular advice to the businesses from the SE account managers and the transactions and portfolio management teams at SE/SIB who work closely together. They liaise directly with the SVF businesses and investors. They can also bring in expertise from other SE staff, and the network of business advisers in Scotland (eg HE and private sector consultants). The specific roles of these managers are shown below:-

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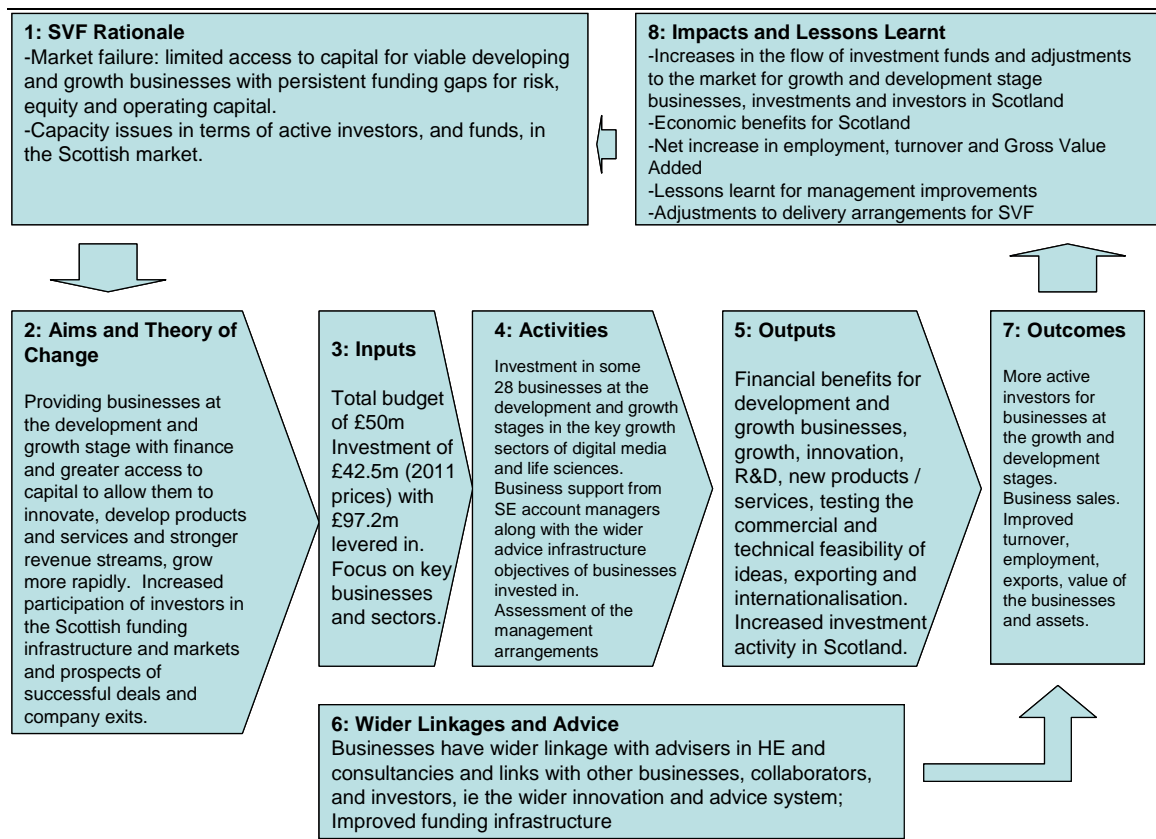
<sup>23</sup> [http://ec.europa.eu/enterprise/policies/sme/facts-figures-analysis/sme-definition/index\\_en.htm](http://ec.europa.eu/enterprise/policies/sme/facts-figures-analysis/sme-definition/index_en.htm)

- **Account Managers (ACs).** They lead the strategic relationship with the company. ACs seek to understand, challenge and support the company's management team – their ambitions, plans for growth and what they need to unlock to achieve their growth (through the client management process, facilitating strategic workshops etc). ACs articulate where SE can add most value in achieving company growth plans and based on this key role, establishes an account team to support the realisation of this. The AC leads and co-ordinates the work of the account team and is the main point of contact for the company. The AC is accountable for articulating and capturing the overall attributable turnover from SE's support.
- **Portfolio Management (PM).** To meet SIB's strategic objective of maximising value for money from SE's investment portfolio, the role of the PM team is to substantially undertake a market practice investment portfolio management approach via a dedicated, skilled, in-house team to create, preserve and maximise returns (commercial & economic) to SIB/SE over the longer term whilst minimising risks.
- **Transaction Managers (TMs).** The transaction team is responsible for completing investments brought to SE by its investment partners: this means that the team will instruct and review due diligence as appropriate and will also ensure that investments are made on commercial terms and on an equal basis alongside the investment partners. The team is also responsible for initiating and managing the investment partner relationships.

## 1.7 The Evaluation Methodology

- 1.7.1 To help develop the narrative and storyline for the evaluation, in terms of the context and the flow of benefits against the aims, an evaluation framework or logic chain has been applied. It covers the following aspects and stages.

**Figure 1.2 SVF. Evaluation Framework and Logic Chain**



1.7.2 This approach reflects the SE evaluation guidance, the Green Book and the BIS evaluation guidance, but customised for SVF, and allows assessment of the net additional impacts and the economic impact ratios.

1.7.3 The research results were analysed to show the response to the issues, together with modelling to estimate the economic impacts i.e. net additional jobs and GVA and the economic impact ratios. The main results of the evaluation, reflecting the aims, are discussed below.

- 1.7.4 The guiding principles of the research were to ensure that:
- A representative cross section of SVF businesses was obtained, together with a sufficient number of interviews to provide confidence in the information obtained;
  - Interviews were held with the most appropriate representatives of the businesses and funding partners;
  - The views of different participants could be compared and contrasted on similar issues in order to triangulate and confirm or corroborate the research results; and
  - The research provided both “harder” quantitative information (for example on business performance and economic impacts) and “softer” qualitative information, for example attitudinal and behavioural changes and impacts that result from SVF.

1.7.5 The research programme was customised for SVF and comprised the following linked and integrated tasks:

- The inception meeting clarified the evaluation aims, the design and delivery arrangements for SVF, and the overall methodology, access the management information on SVF, and to identify the background reports and the contact information for the SE team, businesses, funding partners and stakeholders.
- Interviews were held with the SVF Directors responsible for policy and the operation of SVF, staff responsible for investments, and thereafter telephone interviews with staff covering investment and delivery, in particular those responsible for the SVF's operation (6 interviews). During the evaluations, telephone interviews were also held with further staff, including account, transaction, and portfolio managers at SE and SIB (12 interviews) at different stages in the project. A full list of those interviewed can be found in Appendix C.
- A desk study, particularly focussing on the management information for SVF, was carried out on the number of investments and types of businesses and financial performance.
- Background reports and previous evaluations to inform the evaluation design and methodology were analysed.

These were used in an attempt to collect benchmarking and comparative evidence against which to compare SVF. However, this had some limitations because: the other research did not fully quantify the impacts in the same way; was more qualitative, and was carried out at a different point in the economic cycle, which had an impact on the results. As well, the programmes were at different stages in their development. Nevertheless, the results from the SCF research are used where appropriate.

- A survey and telephone interviews with SVF businesses supported from 2006 onwards were carried out. The interviews were conducted with a representative sample of 20 businesses (i.e. a 77% response rate from the 26 in business at the time of the evaluation). A structured questionnaire was used which was designed with the Steering Group and piloted before the full fieldwork. The questions especially on employment and turnover impacts were based on timescales, for the past and future, that the firms thought were practical and for which they could provide useable information. Follow-up telephone discussions were carried out with a representative sample of 5 businesses to obtain more detailed information on the nature of impacts.
- Telephone interviews with SVF private sector funding partners (i.e. primarily Venture Capital companies) were carried out, focusing on those who had made an investment. Fifteen investors were interviewed, together with seven partners who had not invested and other stakeholders with knowledge of funding issues for SMEs. The analysis reports the views of all the partners, with differences drawn out between the larger partners (by the average number of investments made each year) and the smaller investors.

1.7.6 An attempt was made to obtain from funding partners a matched sample of businesses who applied unsuccessfully for SVF investment (being rejected at the last hurdle). This would have broadened the assessment of the application process, and would also have been useful in estimating the extent to which economic benefits (such as jobs and GVA) might have occurred without SVF. However, none of the funding partners was either able or willing to provide this information.

### *The Analysis*

1.7.7 The overall analysis has focused on the evidence derived from the research programme above. This, together with the questions posed in the survey and

interviews, was designed using the insights of businesses, investors, experts in the field and the literature. The analysis is supported by interpretation and judgement where appropriate, related to the evidence.

1.7.8 The quantified analysis of SVF is in two parts. The analysis in chapter 2 is based on information supplied by Scottish Enterprise on the 28 businesses which received SVF funding. This indicated that 26 (93%) were operational at the time of the study.

1.7.9 The second part of the analysis in chapters 3 to 8 is based on a survey of the 20 (out of 26) fund recipients who were operational at the time of the study. This is an exceptionally high response rate (77%) for survey research, giving rise to an 11 percentage point margin of error due to sampling.

1.7.10 In addition to analysing data for all those who received SVF funding, particular attention is given to those key aspects of support which might give rise to differential performance:

- The amount of SVF funding received (whether they received more or less than £1.5m)
- Whether any funding was received from SE in addition to SVF
- The amount of other assistance given by SE, covering Business Growth, Business Improvement, Innovation, Internationalisation, Market Development, Organisational Development and Strategy Development.

1.7.11 The particular groupings used (using cut-offs of £1.5m, in the case of SVF funding, and 4 assists in the case of SE assistance products) were selected to split the companies into roughly two equal groups. Other types of support were not included in the analysis, for example, external advisers from HEIs.

1.7.12 Tabulations of data are given in Appendix B.

### *Economic Impact Analysis*

1.7.13 The key impact of SVF investments is their rate of return. However, since these returns are likely to take place around seven years after the investments were made, it is not possible to produce estimates of them

1.7.14 The other measures of impact available are the standard ones used to measure Economic Impact, namely those of employment (in Full Time Equivalents, or FTE) and Gross Value Added (GVA)<sup>24</sup>. However, it is important to stress at the outset that these are Impacts for which the SVF investments were **necessary, but not sufficient**. The investments are *necessary* in that without them the impacts would not occur, but they are not *sufficient*, in that other factors in the past, present and future are also likely to be necessary for the impacts to occur, for example, the economic context and other SE support. These factors contribute to the economic

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<sup>24</sup> GVA, also known as GDP at market prices, is an indicator of wealth creation and measures the contribution to the economy of each individual producer, industry or sector in the UK. GVA is generally regarded as the best measure of the sum of economic activity within an area.

impact of businesses receiving SVF investment. **Caution should, therefore, be used in the interpretation of the impacts reported**, in that the impacts may not be directly related to the SVF funding investment alone, but also as a result of wider influences and potential funding support, both in the past and in the future.

- 1.7.15 Three estimates are made of both FTE employment and GVA, namely current (2011), short term (2012-16) and medium term (2017-21). Due to the very high response rate (77%), it is possible to produce estimates of economic impact which do not suffer from large levels of sampling error. However, the main problem with estimating economic impact arises from the fact that much of the impact is still in the future. Not only is there an unknown margin of error associated with estimates up to 10 years into an uncertain future, but there is also the possibility of an **optimism bias**. This systematic tendency for people to be overly optimistic about the outcome of planned actions is mitigated in that the actual annual **survival rate** of businesses receiving SVF of 98 per cent per annum is applied cumulatively to all future estimates (so that after 5 years 90% of businesses survive, and after 10 years 82% survive). Further discussions were also held with businesses and their investors to check their estimates of growth. The estimates of growth are also checked against a benchmark of actual growth of Scottish SME companies in receipt of SMART: SCOTLAND awards<sup>25</sup> and judged to be reasonable.
- 1.7.16 The current estimates of **GVA** are, in many cases **negative**, as a result of the (negative) profits being greater than the (positive) employment cost element of GVA. This occurs when (typically early stage) companies spend money on wages and materials and services prior to having (any) turnover to cover this expenditure. It should be noted that some companies are pre-revenue/ at the technology development and commercialisation stages, and as such not yet generating sales at the time of the evaluation.
- 1.7.17 Each of the six impact measures (the current, short term and long term measures of employment and GVA) is the difference between the Intervention case (in which the SVF investment occurred) and the reference case (in which the SVF investment would not have occurred – the **deadweight**). This estimate of deadweight takes into account not only the views of businesses, but also the views of funding partners.
- 1.7.18 The final net estimates take account of any negative impacts on Scottish competitors (**displacement**), positive effects on Scottish suppliers (**multipliers**), the effects of either production taking place outside Scotland or staff living outside Scotland (**leakage**), and, in cases where more than one type of Scottish Enterprise of funding has been received, an estimate of the impact **attributable** to SVF (as a share of the impact of all the Scottish Enterprise funding). It was not possible to estimate the relative effects of other SE support, as the businesses could not disentangle this in the interviews.

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<sup>25</sup> Grants for SMEs for research and development to help find solutions to innovation and technology issues and subsequently commercialise products and services developed.

- 1.7.19 A more detailed description of the estimation of economic impact is given in Appendix B.

## 1.8 The Report Structure

- 1.8.1 Following this introduction, the remainder of this report comprises the following chapters:

- Funding details (management information)
- Results of the survey of SVF-supported businesses:
  - Businesses invested in
  - The objectives of participation
  - Outputs: intermediate effects/outputs
  - Outcomes: business performance effects and economic impacts
  - Wider effects on other organisations and staff
  - Funder support and other advice
  - Assessment of the schemes
- The impact of the SVF on investment partners and the funding market
- Appendices

- 1.8.2 The interviews with businesses and funding partners are reported separately in different chapters to retain the flow of the respective interviews. They are combined in the executive summary and conclusions chapter, which focus on the main aims of the evaluation.

- 1.8.3 This report is accompanied by appendices which show the specific evaluation questions, methodology and estimation techniques.

## 2 The Inputs and Funding Details

### 2.1 Introduction

2.1.1 The previous chapter covered the rationale for SVF and the project aims, and reflect stage 2 in the evaluation framework described in the methodology section (section 1.7). This chapter, which forms the next two stages in the evaluation framework, deals with the inputs to SVF and the activities. It covers the number of SVF investments, the nature in terms of equity and loans, the types of SE funding used by businesses and the amounts of investment for businesses.

### 2.2 Funding details

2.2.1 The data used in this chapter are drawn from the Scottish Enterprise Management Accounts. These provide the information on the population of firms receiving support, as well as contextual data for the evaluation and net additional impact assessment. Data tables and brief commentary are presented below.

2.2.2 A total of 75 SVF investments by SE, with a value of £39.7M, have been made over the period 2007-2010. About £11M was invested in each of the three years 2008-10. At 2011 prices (i.e. taking account of inflation), the total investment is estimated at £42.5M (Table 2.1).

**Table 2.1 SVF Investments**

Year	Investments		
	Number*	Value (£M)	Value (£M, 2011 prices)
2006	-	-	-
2007	6	5.5	6.2
2008	14	11.2	12.3
2009	28	12.3	13.1
2010	27	10.6	11.0
<i>Total</i>	75	39.7	42.5

\*These are numbers of investments, not numbers of companies  
Source: Scottish Enterprise Management Accounts (PACEC analysis)

2.2.3 Table 2.2 shows that the majority of the 75 investments are in equity (£30.8m over 55 investments) rather than loans (£8.9m over 20 investments).



**Table 2.2 SVF Investments split between loan and equity**

Year	Investments			
	Loan (#)	Equity (#)	Loan (£m)	Equity (£m)
2006	0	0	0.0	0.0
2007	2	4	3.4	2.1
2008	0	14	0.0	11.2
2009	6	22	2.3	10.1
2010	12	15	3.2	7.4
<i>Total</i>	20	55	8.9	30.8

# These are numbers of investments, not numbers of companies  
Source: Scottish Enterprise Management Accounts (PACEC analysis)

- 2.2.4 The 75 SVF investments have been made to 28 different companies. For 15 of these (54%), SVF is the only SE fund which they have received to date. Seven (25%) companies have received two funding interventions from SE, and the remaining six (21%) have accessed three or more sources of funding from SE.
- 2.2.5 The main other SE funds which these 13 companies (46%) have accessed are the Scottish Co-Investment Fund (32% of all companies funded by SVF) and the Scottish Portfolio fund (25%). One company (4%) accessed the Scottish Seed Fund and 4 (14%) accessed other SE funds.
- 2.2.6 SVF funding ranged between £200k and 2m, with a roughly even split between those receiving less than £1m (18%), 1-1.4m (32%) £1.5-1.9m (21%) and exactly £2m (29%). These results are set out in detail in Table 2.3 below.

**Table 2.3 SVF Funding received**

	Percentages of respondents (see §A3 for details)								
	Total	Sector DMET	Sector Life	Sector Other	Year 06-08	Year 09-10	No loan	Some loan	Size <10
0.2-0.9m	18	25	0	20	15	20	26	0	22
1.0-1.4m	32	44	29	0	46	20	37	22	39
1.5-1.9m	21	13	43	20	8	33	16	33	28
2.0m	29	19	29	60	31	27	21	44	11
<i>Number of recipients</i>	28	16	7	5	13	15	19	9	18

Source: Scottish Enterprise SVF Management Accounts (PACEC analysis)

- 2.2.7 The **total** funding received from SE (i.e. SVF and from other funds) ranged between £0.7m and £3.4m, with a roughly even split between those receiving £0.7-1.4m (29%), £1.5-1.9m (39%) and £2.0-3.4m (32%).
- 2.2.8 The average amount of funding received via Scottish Venture Fund was £691,000, and the average received via Scottish Venture Fund II was £733,000 (thus the SVF funding totalled £1,424,000 on average). SVF II included the ERDF finance. There was a roughly equal three way split between companies which received SVF only (31%), SVF II only (35%) and both SVF and SVF II (35%).

- 2.2.9 Other significant sources of SE funding included the Scottish Co-Investment Fund, averaging £224,000 for all businesses receiving SVF funding (including those not receiving SCF) and the Scottish Portfolio Fund (£52,000, again averaged across all SVF beneficiaries). The total average SE funding received by SVF businesses was £1,730,000<sup>26</sup>. Hence on average SVF funded businesses received £306,000 in other SE funding, in addition to their SVF monies.
- 2.2.10 On average the total amount of SE funding (£1,730k) given to those who received some SVF<sup>27</sup> is broken down as follows:
- £902k of shares (£840k ordinary, £62k preference)
  - £505k of outstanding loans
  - £321k of Unit revaluations made by SE
  - £2k of share disposals / loan redemptions
- 2.2.11 On average, the SVF monies levered in £3,257k of third party funding in addition to the £1,424k average SVF funding, a leverage ratio of 2.3 for the SVF. The total SE funding, averaging £1,730k, was accompanied by £3,850k of total third party funding, giving a total SE leverage ratio for SVF recipients of 2.2.
- 2.2.12 At the time of the evaluation one business had been sold. Up to March 2011 there were three major incomes from SVF shares totalling £2.75m. These arose from investments totalling £2.44m, which represents a return of 13%. In both cases the returns were made after two years, so the annual rate of return was 6%.
- 2.2.13 In addition to arranging funding for companies, Scottish Enterprise delivers assistance, covering a range of products. The majority of businesses have had assistance with market development (75%), strategy development (60%) and innovation (50%). In addition, between a third and a fifth have received assistance with organisational development (35%), start-up development (30%) and business improvement (20%).
- 2.2.14 The recipients of SVF are found in the following sectors<sup>28</sup>
- 54% in Digital Media & Enabling Technologies<sup>29</sup>
  - 25% in Life Sciences
  - 18% in Energy (of which 7% are in renewable technologies)
  - 4 % in other sectors

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<sup>26</sup> This equates to a total of £48.4m of SE funding.

<sup>27</sup> A breakdown of SVF funding alone is not available from the SE management accounts.

<sup>28</sup> There are no significant differences between the sectors in terms of amount of SVF funding, amount of other SE funding or amount of SE assistance.

<sup>29</sup> It is not possible to report Digital Media and Enabling Technologies separately, due to a lack of underlying data

- 2.2.15 The first three sectors reflect the priority sectors for the Scottish Government as providing opportunities for growth which potentially stimulates the investors and SE to provide investment for them.

### *Survival Rates*

- 2.2.16 A key finding from the management information is that the annual survival rate of companies receiving SVF was 98% over the first three years (after 3 years 26 out of 28 survived). This is far in excess of the 90% annual survival rate of all companies in Scotland.<sup>30</sup> This high survival rate may reflect the fact that these businesses received funding in the absence of which they may have otherwise failed, coupled with the high quality of the due diligence process in selecting companies for investment which are most likely to survive. When consulted on this issue, SVF-funded businesses and SVF advisors both suggested that this survival rate was enhanced by the operation of the fund and the advice provided. Due diligence plays a role, but in the current market, some potential co-investors are naturally risk-averse (although not excessively so), so a business which succeeds in obtaining funding is likely to have a good market proposition and the necessary management team in place, although there are significant market uncertainties given the current economic context.

## 2.3 Key Points

- 2.3.1 The key findings from this chapter are as follows:

<b>Panel 2.1</b>	<b>Inputs and Funding Details</b>
	<ul style="list-style-type: none"> <li>• 75 SVF investments have been made, accounting for £39.7m (or £42.5m at 2011 prices).</li> <li>• The majority of the 75 investments are in equity (£30.8m in 55 investments) rather than loan investments.</li> <li>• Investments have been made in 28 different companies. For 54% of businesses SVF is the only investment used.</li> <li>• Other significant sources of funding include the Scottish Co-investment Fund.</li> <li>• The main recipients of SVF were in the digital media and enabling technologies sector (54%), in life sciences (25%) and energy and renewables (18%).</li> </ul>

<sup>30</sup> Source: 2009 Business Demography dataset from the Office for National Statistics (using the death rate of companies in 2009).

### 3 The Businesses Invested In

3.1.1 This chapter outlines the nature of the businesses invested in, and draws on the results from the surveys of businesses and funders. It forms part of stage 4 in the evaluation framework. The chapter covers the characteristics of businesses, in terms of employment size, age and status of businesses, their growth aspirations, and turnover trends. This information is essential for the assessment of impact, and the key points are summarised below.

3.1.2 The businesses supported number twenty six at the time of the evaluation and had have the following characteristics:

- At the point of approval of their earliest SE funding, 74% of recipients of SVF funding had fewer than 10 employees, and 82% had under £1M in turnover per annum (with 65% having turnover under £100k).
- At the time of the interviews, a quarter (25%) of the businesses had fewer than 10 employees; more than two-fifths (45%) had between 10 and 24 employees, and the remainder (30%) had 25 employees or more. Just over a quarter had annual turnover under £100k, and 60% had turnover between £100k and £1M.

3.1.3 A substantial proportion of the businesses have grown, in terms of employment and turnover, since receiving SVF.

**Table 3.1 Change in employment and turnover**

	Earliest Funding (% of companies)	Current (2011) (% of companies)
<b>Employment</b>		
<10	74	25
10-24	11	45
25-99	11	20
100-249	5	10
<b>Turnover</b>		
Zero	53	13
<100k	12	13
0.1-0.9m	18	56
1m+	18	19

Source: PACEC of SVF recipients, 2011 (Q8)

- More than two-thirds (70%) of the businesses were established as completely new start-ups. Two businesses (10%) were spin-offs from an existing business, two were spin-outs from a university or college, and one business was a result of a management buy-out or buy-in.
- Around two-thirds of businesses (65%) were independent businesses with no subsidiaries when they first received SE funding. One in four (25%) were independent businesses with subsidiaries, and two (10%) were subsidiaries of UK-owned businesses. At the time of interview, two businesses were not trading
- Most of the companies which had received SVF funding started trading from 2000 onwards. Just over a third (35%) started trading between 2000 and 2005, and more than two-fifths (45%), between 2006 and 2011. Three

businesses (15%), though, started trading before 2000, while two were not trading at the time of the survey.

- At the time they received their first SE funding, four-fifths (80%) of the businesses surveyed indicated that their business growth objective was to grow significantly. One in five (20%) aimed to grow moderately.

3.1.4 Nine out of ten businesses have increased their employment since the approval of their first SVF funding. Almost half (47%) gained 1-9 jobs, one in 7 (16%) gained 10-29 jobs and just over a quarter (26%) gained 30+ jobs. Nearly nine in ten (87%) businesses have grown their annual turnover: 60% had turnover of £0.1-0.9M, and two businesses (13%) had £1M or more in turnover, while another two had turnover of less than £100k. All businesses had increased their productivity (in terms of turnover per FTE employees). A fifth had increased turnover by £50k per FTE.

**Table 3.2 Change in employment and turnover**

	Change (Earliest funding to 2011)	% of companies
<b>Employment</b>	No Gain	10
	Gain 1-9 jobs	47
	Gain 10-29 jobs	16
	Gain 30+ jobs	26
<b>Turnover</b>	No gain	13
	Gain up to 100k	13
	Gain 0.1-0.9m	60
	Gain 1m+	13
<b>Productivity (by turnover)</b>	<10k/FTE	45
	10-49k/FTE	33
	50k/FTE+	21

Source: PACEC survey of SVF recipients, 2011 (Q8)

3.1.5 These impacts, and the extent to which they can be attributed to the SVF funding, are examined in greater depth in Chapter 6 which deals with the business performance and economic impacts.

## 3.2 Key Points

3.2.1 The key findings from this chapter are as follows:

<b>Panel 3.1 The Businesses Invested In</b>
<ul style="list-style-type: none"> <li>• At the time of the evaluation twenty eight businesses had been funded.</li> <li>• More than two-thirds of the businesses were started as completely new start-ups.</li> <li>• Two-thirds of the businesses were independent businesses with no subsidiaries when they first received SE funding.</li> <li>• At the time they received their first SE funding, four-fifths of the businesses were aiming to grow significantly.</li> </ul>

- A substantial proportion of the businesses have grown in employment and turnover since they received SVF. Nine out of ten (90%) have increased their employment, and almost nine in ten (87%) have increased their turnover.

## 4 The Business Objectives of Participation in SVF

### 4.1 Introduction

4.1.1 This chapter investigates the objectives businesses had when they received their SVF funding (the third stage of the evaluation framework). It also covers their funding background – how they heard of SVF and the **alternative** sources of funding they had sought **before** receiving SVF funding to help assess the market failure issues. It also examines the **additional** sources of funding they sought **alongside** SVF.

### 4.2 SVF and Business Objectives

4.2.1 Initially the discussions with businesses examined how they had heard of SVF prior to using it. A third of SVF businesses could not recall who had first advised them about the scheme. One in five (20%) indicated that the information came directly from the SVF private investors, and one in seven (15%) indicated that they had been advised by another firm. One in ten (10%) had been referred by an external accountant, or by an SE account manager, or had conducted their own research into SVF on eligibility criteria and their likely success in terms of investment.

4.2.2 The SVF funded businesses were asked about their objectives in using the scheme. The objectives themselves were grouped under four main headings: **general business objectives**, **financial objectives**, **business operation objectives**, and **innovation objectives**:

- The most common **general business objectives** in using SVF were to develop new products or services, and to help the business to grow (cited by 90% and 85% of businesses respectively). Three out of five (60%) wished to internationalise or start to export.
- The SVF investors' views supported the growth aims of businesses but placed less emphasis on the development of new products or services or the exporting aims.
- The most common **financial objectives** in using the funding were to provide working capital, and to provide investment capital (70% in each case). The other significant aims were to meet a funding gap in the market or to lever in other finance (65% in each case).
- The view of the SVF investors was that businesses placed more emphasis on obtaining working capital and meeting the funding gap they had encountered.
- The main **business operation objective** of businesses was to use SVF funding for recruitment or the development of skills (80% of businesses). The other objectives here included financing the rent or the purchase of buildings (25%), financing the purchase of plant or machinery (15%), financing the purchase of other assets (15%), or other less specific business operation objectives (15%).
- The main **innovation objectives** in using the funding, common to almost all firms, were to finance research and development (95% of businesses), to develop new or existing products or services (95%), or to test the technical feasibility of an idea or some ideas (85%). The other objectives frequently mentioned were, to produce new scientific or technical knowledge (75%) or to test the commercial feasibility of ideas (70%).

4.2.3 It is therefore clear that businesses have a wide range of multiple objectives with regard to obtaining SVF investment, some of which are confirmed by the investors (see below).

### 4.3 Market Failures and Features and Alternative Funding Sought

4.3.1 The SVF was established to address **market failure and feature** issues related to finance for viable SMEs. On the demand side this market failure (reflecting the points in the introduction to the report) are considered to be:

- Shortage of information. SMEs are not sure of the best sources of finance for development or how to obtain it at acceptable costs.
- Lack of investment readiness. SMEs, even with a track record, are unable to present themselves as investable opportunities, eg poor business plans and models or adequate management skills.
- Aversion to equity. A reluctance to dilute ownership further or share IP rights.

4.3.2 A key issue in the context of **market failure** is whether businesses were aware of sources of funding, the alternative funding sought, and what the outcome was. Some 60% of the SVF-funded businesses indicated that they had sought alternative funding before applying for SVF funds. 30% said that they had not, reflecting a view that they may not be successful. Hence they sought to use SVF initially; 10% could not recall if they sought alternative funds. In terms of market failure it is not apparent that businesses were unaware of the sources of funding or how to access it – none of them gave this reason as to why they did not seek it. There was no comparison group of businesses, as part of the evaluation, that were not funded through SVF but in general terms the literature indicates that some businesses think a lack of information is a constraint<sup>31</sup>.

4.3.3 The 60% of businesses which had sought alternative funding prior to applying for SVF support were asked about the types of alternative funding sought:

- Almost half (46%) of these businesses had sought [alternative] venture capital finance, in the form of equity capital (exclusively those receiving under £1.5M in SVF funding). Around a quarter (23%) had applied for a loan through a venture capital fund (exclusively those receiving over £1.5M in funding). The businesses did not generally seek alternative funding other than through venture capital, although one in seven (13%) approached business angels for equity capital sources, and around one in ten (8%), approached banks for a loan. In all these cases the amount of funding sought was less than £100k.

Given that banks are a traditional source of additional funding for the majority of businesses, the relatively small proportion that sought bank funding partly reflected the cautious approach adopted by the banks following the credit crunch and recession. This view was supported by investors and businesses. But it could also partly be explained by the fact that businesses themselves (especially the early stage technology businesses) were reluctant

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<sup>31</sup> Note the Rowlands Review (2009) and BIS. BIS Equity Finance Schemes. Survey of Investors July 2011. BIS Equity Finance Programmes: Qualitative Review of UKHTF and the Bridges Fund July 2011



to approach banks because they considered that their funding requests were unlikely to be met. They could well be considered as too risky.

- A third of the businesses which had sought the alternative funding from the sources above had not received any offers of finance because they were seen as too risky which could imply that to some degree they could not demonstrate investment readiness and that they were viable businesses. Around a third had been offered funding by a venture capitalist, but for most on a partial basis as they were deemed to be risky. Hence two thirds of those who sought finance were not offered what they sought, which shows a potential degree of market failure for finance, in that they were seen as being too risky where investors were excessively risk averse. This is underlined by the fact that all businesses received funding when the investors joint-funded with SVF. Hence SVF investors were willing to share the risk via SVF. The other third that sought alternative funds were offered what they sought. Most had been offered a venture capital finance loan. The remainder were mainly offered business angel equity finance. In all cases, the offer was taken and the conditions accepted.

4.3.4 The 30% of businesses that did not seek alternative finance to SVF had not applied for other sources of funding because they did not think they would get it, and/or the conditions would not be acceptable to them. The businesses considered that, in the main, they would be perceived as too risky and they could not demonstrate they were viable investments, even though they were relatively well established businesses, but also that the conditions would not be acceptable including the release of equity and the dilution of their ownership and control that would result. These two points demonstrate a consequence of market failure on the demand side.

4.3.5 These findings also reflect the views of the SVF investors. They all considered that businesses faced significant issues when seeking to obtain capital, in part for the above reasons.

4.3.6 While it was difficult to obtain benchmarking evidence for this evaluation, other research shows that full or partial additionality for raising finance was over 90% for SCF, when considered from both the investor and business partner perspective<sup>32</sup>. Over half of SCF investee companies felt that their chances of raising capital elsewhere would have been 'poor' without SCF, and 70% stated that the fund had been 'vital' to their business survival<sup>33</sup>.

4.3.7 All the SVF firms were asked if they had sought **additional funding as well as their SVF co-investment funds** (with the private sector). Over two-thirds of businesses (70%) claimed that they had, and in almost all cases they were successful. These businesses were asked a set of follow-up questions about the types of additional funding they had sought:

- The most common source of additional funding was additional venture capital finance in the form of equity or share capital. This was sought by half (50%) of the businesses which had stated that they had applied for additional funding (7 businesses). One in five (21%) had sought equity or share capital

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<sup>32</sup> Richard T Harrison. A Case Analysis of SCF and Evaluation of ERDF Supported Venture Capital and Loan Funds and the Scottish Co-Investment Fund, Scottish Executive 2008

<sup>33</sup> Hayton et al (2008) op cit

from other businesses. Two businesses (14%) sought equity or share capital from a business angel. One business had applied for a loan from a venture capital fund, one from a business angel, and one from another business.

- In all the above cases, except for one of the businesses applying for VC equity or share capital and the business seeking a business angel loan, an offer of finance was made, usually for the amount requested. Most offers were accepted, but two of the three offers of equity or share capital made by other businesses were not accepted.

4.3.8 The results show that the degree of **market failure** that potentially prevented businesses from accessing alternative funding prior to SVF had eased somewhat at the time they sought additional funding. This was mainly because investor confidence through SVF had been demonstrated, the businesses were performing adequately, and were perceived as less risky.

4.3.9 Those companies which had *not* sought additional funding (i.e. 30%) were asked why they had not done so. Five out of six businesses (83%) claimed that they felt able to manage without other finance.

## 4.4 Key points

4.4.1 The key findings from this chapter are as follows:

### Panel 4.1 The Business Objectives of Participation in SVF: key findings

- On the information failure side of market failure, it is not apparent that SVF businesses were not aware of the sources of funding or how to access them.
- In terms of alternative finance to SVF, some 60% of SVF businesses sought alternative funding. A third of these were not successful, and a further third were only partially successful. The other third were offered what they sought.
- The 30% that did not seek alternative funding did not do so because they thought they would not get it.
- Overall the behaviour of the businesses that did not obtain alternative finance, although they sought it, or did not seek it reflects a degree of market failure in that they potentially could not demonstrate investment readiness (and were seen as too risky) or the conditions likely to be set by investors in terms of a dilution of ownership were not acceptable to them.
- Some 70% of businesses applied for additional finance to SVF, and almost all were successful, hence the market failure issues had been alleviated to some extent.
- The most common objectives for businesses were **R&D** (95%), **product development** (95%), and **growth** (85%).

## 5 The Outputs: Intermediate Effects / Outputs

### 5.1 Introduction

5.1.1 This chapter deals with the intermediate business effects and outputs of participation in the SVF programme, and is the fifth stage of the evaluation framework. The outputs provide an indication of the likely/potential outcomes and business performance effects. They also help to validate the impacts, and demonstrate the capacity and skills, which as they become embedded in businesses, help to underpin performance especially over the likely ten years or so of the investment funding. The intermediate indicators are concerned with new and improved products and processes, general business and financial effects, the effects on the operation of the businesses and innovation activities, as well as skills and practices.

### 5.2 The Business Operation

5.2.1 Two-thirds (68%) of businesses indicated that they had wholly met the objectives set out in the previous chapter. A fifth (21%) had “largely” met their objectives, and the remainder (11%) had “partly” met them. This means that all the recipients of SVF funding had recorded at least some measure of success based on their objectives.

5.2.2 More than three-fifths (63%) of SVF firms had taken **new** products or services to the market as a result of their funding. One in six (16%) had not done so, but indicated they were likely to within the next three years. But a further 16% did not think it likely they would bring new products or services to market within three years, and one respondent business was not sure.

5.2.3 Around a fifth (22%) of SVF firms had taken **improved** products or services to the market as a result of SVF. But half of businesses thought it unlikely that improvements to products or services would take place within the next three years, and 28% were not sure.

5.2.4 One in six (16%) of the SVF businesses had implemented new processes as a result of SVF, while almost two-thirds (63%) said that new processes were not likely within three years, and a fifth (21%) were not sure.

5.2.5 Where new or improved products, services, or processes had been implemented, three-quarters (74%) of the businesses claimed that the level of technological innovation had been “significant”. One in ten (11% in each case) described the level of technological innovation as “high” or “moderate”. One business mentioned a low level of innovation.

5.2.6 Three-quarters (76%) of businesses who said they had new or improved products or services indicated that some or all of production would take place in Scotland. Two-fifths (41%) indicated that some production would occur elsewhere in the UK, and around a fifth (18%) thought that some production would take place abroad, mainly

because the costs of production were lower and overseas markets could be accessed.

5.2.7 Among the businesses reporting new or improved products or services, exactly half claimed that their new or improved products and services had increased their business growth or performance; whilst the other half indicated there had been no change in the growth of the company (indicating that the introduction of the new or improved products and services enabled the company to grow at its former rate).

5.2.8 Those businesses introducing new or improved products or services were asked if they had faced any particular barriers when doing so. Four-fifths (79%, or fifteen out of nineteen businesses) said that they did not; although two businesses (11%) said that they faced inadequate sales prospects as the demand had fallen for their products. One business indicated they had failed to achieve their technical objectives, which created a barrier. This failure on the part of some businesses to achieve objectives in the past is an indication that such failures may happen in the future, and this needs to be borne in mind when considering 'optimism bias' (in which projected employment and turnover impacts are not fully realised).

### 5.3 Actual and likely impacts

5.3.1 Using the same categories (groups) of objectives in the previous chapter, the businesses were asked to describe the actual and likely effects of their SVF funding.

- The main **general business effect** attributed to SVF was to help the business grow (especially in terms of turnover and employment), and was claimed by 85% of SVF firms.
- The other main impacts were the ability to share risk (55% of businesses), starting to export (60%) and obtaining development funding (45%).
- The main **financial effects** were accessing investment capital (75% of firms); leveraging in other finance (65%); provision of working capital (65%); meeting a funding gap (60%); improving cash flow (55%); and obtaining funding quicker (45%) i.e. sooner than would have been possible through other avenues.
- Nine in ten (90%) businesses claimed actual or likely **business operation effects**. By far the most common was finance for the recruitment of staff with the right skills, which was highlighted by 85% of all businesses.
- The most frequently mentioned actual and likely **innovation effects** of the funding were the ability to finance research and development (90% of businesses), testing of the technical feasibility of an idea(s) (85%), improving the image of the firm (85%), producing new scientific or technical knowledge (75%), developing existing or new products or services (75%), and testing the commercial feasibility of ideas (70%).

5.3.2 The SVF businesses were asked the extent to which their funding had helped them achieve these objectives. Almost three-fifths (56%) of them claimed that SVF had helped them to wholly achieve their objectives. Exactly one third suggested that the effect of the funding was to help them "largely" achieve their objectives, and the remaining 11%, that SVF helped them "partly" achieve their objectives.

### *Additional finance*

5.3.3 Lastly, in this section on intermediate effects and outputs, the businesses were asked what effect (if any) the SVF funding had had on their ability to obtain other finance. While 16% said that it had made no difference, 26% claimed that it had made obtaining other finance “a little easier”, and 58% said that it had become “much easier”. Follow-up interviews with businesses suggested that they considered that SVF improved their reputation and their ability to secure further finance. However, SE advisors were less likely to believe that this was a significant effect, although it was seen as a risk-reducing measure for private investors and existing investors in the companies.

## 5.4 Key points

5.4.1 The key findings from this chapter are as follows:

<b>Panel 5.1</b>	<b>Intermediate Effects / Outputs: key findings</b>
	<p>As a result of receiving SVF investment, the main effects were as follows:</p> <ul style="list-style-type: none"><li>• 68% of businesses stated that they had <b>wholly met their objectives</b></li><li>• 63% of SVF firms had taken <b>new</b> products or services to market</li><li>• 22% of SVF firms had taken <b>improved</b> products or services to market</li><li>• New or improved products, services, and processes involved <b>significant technological innovation</b> for almost three quarters of businesses. these products were <b>produced in Scotland</b> or would be for just over three quarters of businesses</li><li>• 58% of businesses stated that SE funding made it <b>much easier to obtain other finance</b></li></ul>

## 6 The Outcomes: Business Performance and Economic Impacts

### 6.1 Introduction

6.1.1 This chapter, reflecting the seventh stage of the evaluation framework, focuses on the outcomes induced by SVF, including the business performance effects of the SVF investment and, for example, the impacts on turnover, employment and the value of assets and profitability – those features which investor partners seek to drive up when they are looking to sell the business on (or achieve a listing) over a 5 to 7 year period. The business performance effects can generate wider effects on customers, clients, suppliers and collaborators. These performance effects are also critical to the net economic impacts for the Scottish economy in terms of jobs and GVA. The final section of the chapter shows these effects and the economic impact ratios to date (current), and over the short and medium terms.

### 6.2 Business performance impacts

6.2.1 Part of the strategic rationale and **market failure/feature** rationale for SVF was to alleviate business finance constraints and assist businesses to grow and develop, hence adding value to the Scottish economy and providing employment and income opportunities<sup>34</sup>. To assess the impact of SVF, the businesses were asked to expand further upon the actual business performance effects **arising from SE funding** to date, and the effects which are likely to arise within the next 5 years, and the next 10 years. Nine out of ten (90%) SVF recipients had registered intellectual property or were in the process of doing so. Three-quarters (75%) had increased overall turnover/sales, had also increased employment, or had safeguarded employment; that is, jobs which would have been lost without SVF. Two-thirds (65%) indicated that productivity had increased, and also that they had increased the value of their companies. These results show that SVF had provided the capital to allow businesses to grow and develop.

6.2.2 The necessity of taking a forward look at the business performance impacts is demonstrated by the number of firms indicating that the impacts are likely to occur in the future. In five years time, all the firms anticipate that they will have increased overall turnover/sales, increased employment, and increased the value of their companies. 95% (all bar one business) stated that they will have increased sales in existing domestic markets, started exporting, registered intellectual property (or started the process), and increased the profit margin on sales.

6.2.3 The views of SVF investors were that business growth, in particular, would increase in the businesses invested in over 5 to 10 years. They would get to market more quickly and improve their competitiveness and profitability as result of SVF.

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<sup>34</sup> SE Approval paper for SVF and the evaluation brief.

6.2.4 The anticipated full benefits of SE funding after 10 years is almost identical to that recorded by SVF recipients after 5 years above. All recipients of SVF anticipate that they will have increased overall turnover/sales, increased employment, and increased the value of their companies. 95% (all but one business) stated that they will have increased sales in existing domestic markets, started exporting, registered intellectual property (or started the process), and increased profit margins on sales. The percentage of businesses expecting increased income from intellectual property increases from 70% after 5 years to 75% after 10 years. The full list of business performance effects identified by businesses at the time of the evaluation is shown in Table 6.1 below.

**Table 6.1 Actual and likely business performance effects as a result of SVF**

	Percentages of businesses		
	Actual	Actual plus likely (5yrs after funding)	Actual plus likely (10yrs after funding)
Increased sales in existing domestic markets	50	95	95
Opened up new domestic markets	50	90	90
Started exporting	60	95	95
Increased export sales	60	85	85
Opened up new export markets	60	85	85
Intellectual property registered / underway	90	95	95
Increased income from intellectual property	35	70	75
Increased overall turnover / sales	75	100	100
Increased employment	75	100	100
Safeguarded employment	75	85	85
Increased profit margin on sales	50	95	95
Increased the value of its assets	55	90	90
Increased the value of the company	65	100	100
Increased productivity	65	85	85
Other	5	5	5
None of the above	0	0	0
<i>Number of recipients (rate=100%)</i>	20	20	20

Respondents could select more than one option; so percentages in any column may sum to more than 100. Actual refers to actually achieved.

Source: PACEC Survey of SVF recipients, 2011 (Q35)

6.2.5 Over half the businesses would not have achieved these impacts without SVF.

6.2.6 The SVF firms were asked to estimate the scale and timing of the impact of the funding upon their employment, salaries of employees, turnover, and the attribution of these effects to the different sources of funding used. The responses to these questions were used for an economic impact model to estimate the gross and net additional impacts and the factors which may be influencing these impacts. These are set out in sections 6.3 and 6.4 below. The methodology is explained in more detail in Appendix B.

### 6.3 Wider effects influencing economic impact

- 6.3.1 In addition to the intermediate and final effects on their own businesses, the SVF firms were asked if they had any other actual or likely effects on other organisations and their staff. 89% said that the funding would have a positive effect upon their **customers, in that they had new and improved goods and services to sell on to their customers.**
- 6.3.2 One possible unwelcome effect of public funding can be to disadvantage local competitors of businesses supported, which reduces the net benefit to the local and Scottish economy. To gauge this effect (“**displacement**”), the SVF-funded businesses were asked the proportion of sales arising from funding which would be taken by Scottish competitors if their business ceased trading. Every business stated that none of their additional sales would be taken by Scottish competitors. This is an exceptional result: it implies that the impact of the funding is not offset by any displacement within the Scottish economy. This can occur when the activity funded is genuinely innovative and unique, or scarce enough that competitors are few and far between i.e. the SVF businesses have unique product or spatial markets. Looking at the issue of the impact on **competitors** more widely (including those outside Scotland), 12% thought their SVF funding would have a negative effect upon their competitors, 6% thought it would have a positive effect, but 24% thought it would have no effect. The remainder were not sure.
- 6.3.3 SVF-funded companies indicated that, on average, 28% of their goods and services came from Scottish **suppliers**. Furthermore, 39% thought it would have a positive effect upon their suppliers, i.e. through providing more revenue for them. 31% thought it would have a positive effect upon their **collaborators**, as they benefited from knowledge exchange and potential revenue; 6% expected a negative effect, and 13% no effect. These four questions (impacts on customers, suppliers, competitors, and collaborators) were difficult for the survey participants to judge – in each case, 45-59% of businesses said they were not sure of the potential impacts.
- 6.3.4 With regard to the effects upon the wider economy of Scotland, half of the SVF funded companies said that all of their staff lived in Scotland, and the other half said that the majority did so. This is important as it means that wages will tend to be spent upon products and services in Scotland, increasing the local benefit of the funding by “recycling” it through the Scottish economy (e.g. reducing **leakage** of wages outside Scotland).
- 6.3.5 Finally within this section of the report, the SVF-funded businesses were asked how market conditions in their main area of business had changed over the last three years. Primarily as a context for the analysis, they expressed a wide range of views, but as a whole felt that conditions were likely to improve. A third thought that conditions had remained the same. 28% thought they had improved moderately, 17% thought they had improved strongly, 17% thought they had declined moderately, while only 6% (one business) felt they had declined strongly. Hence market conditions may have been influencing the impacts accordingly.



6.3.6 In qualitative follow-up interviews, SVF funded companies said that they had noticed benefits to their suppliers from increased orders to other customers, and a small minority said that their customers secured a competitive advantage as a result of using their improved products. Another potential wider effect of the investment in businesses in the cleantech sectors was the potential to reduce the environmental impacts of a range of products and thus reduce negative externalities in the economy in general.

## 6.4 The economic impacts

6.4.1 In this section an estimate is made of how the business performance data and the influences above convert into key economic impacts – employment and Gross Value Added (GVA) for the Scottish economy over time. The estimates are based on the grossed up impacts reported by the businesses themselves, which are adjusted to take account of optimism bias and are in line with the actual business growth achieved by similar Scottish companies in receipt of SMART awards<sup>35</sup>. The estimates take account of deadweight, displacement, leakage, substitution and multiplier effects in the Scottish economy to arrive at net additional and attributed estimates. **The approach, set out in Appendix B1, follows best practice as set out in the SE, Green Book and BIS RDA evaluation guidance.**

6.4.2 Of the 28 companies which received SVF funding, 2 are no longer operating. On the basis of this research, we estimate that the 26 companies which are still trading are providing 786 gross FTE jobs. This rises to 1,391 gross FTEs in the short-term and 1,862 gross FTEs in the medium-term. See 6.2 below (row A). These estimates assume a 98% annual survival rate, resulting in 21 companies being in existence in 2021.

6.4.3 The company survival rate is higher than the national average of 87% per annum in Scotland. When consulted on this issue, SVF-funded businesses thought that this could partly be attributed to the funding and SE support but also suggested that a high survival rate implied an overly cautious approach to funding in terms of businesses selected by investors. SVF advisors also suggested that the effect was due to risk-aversion on the part of investors (in that they chose to fund the potentially more successful businesses) but also an unwillingness to withdraw support from a company before a profitable exit can be made, even if a company is under-performing in the short to medium term. Investors took the view that a 5 to 7 year period was required prior to exit which was 40 to 50% longer than in the pre-recessionary period.

6.4.4 In order to estimate the net impacts of the SVF funding from the gross intervention case (in Table 6.2) effects, a number of steps are taken. They are shown below based on Table 6.2 for the short term employment impacts, along with the numbers estimated at each stage, recognising that it can take time for the effects of

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<sup>35</sup> PACEC's evaluation of SMART Scotland (2009 for Scottish Government Social Research)

investments to feed through for equity investments and for some firms in sectors such as life sciences.

- From the Gross case (1,391 FTEs) we subtract the negative impact on competitors (0 FTEs or 0% **Displacement**) and the proportion of economic benefit which goes outside Scotland due to staff living elsewhere (147 FTEs or 11% **Leakage**). This gives a Net Intervention case (1,244 FTEs).
- We then add the jobs associated with the supply chain (expressed as a **multiplier** of c1.6) to produce the Full Net Intervention case (2,018 FTEs).
- The Full Net Reference case (871 FTEs) is estimated in a similar way based on what would have occurred in the absence of SE funding (43% of 2,018 FTEs **deadweight**), which is subtracted from the Full Net Intervention case to give the net additional impact (1,147 FTEs).
- Only a certain percentage (c.50%) of the additional effect is **attributable** to the SVF funding (the rest is due to other funding received alongside SVF, and, possibly to some of the SE support products), which gives rise to the final estimate of Net Additional-Attributable effect (580 FTEs). The intention of the research was to remove the effects of other SE funding i.e. to attempt to estimate the impacts of just SVF support.

6.4.5 The approach to estimating GVA per annum as shown in Table 6.2 is similar to that used for the employment impacts.

6.4.6 On the same basis we estimate that the net additional attributable effect of the SVF funding on the 28 companies in terms of GVA and employment is

- Currently: -£2m per annum in GVA, and 317 FTE jobs
- In the short-term: £24m per annum GVA and 580 FTE jobs
- In the medium-term: £45m per annum GVA and 791 FTE jobs

**Table 6.2**      **Grossed up impacts: Employment and Gross Value Added**

	Employment (FTE)			GVA (£m per annum)		
	Current	Short term	Medium term	Current	Short term	Medium term
A: Intervention case Gross	786	1,391	1,862	25	97	140
B: Intervention case Displacement	0	0	0	0	0	0
C: Intervention case Leakage	71	147	197	3	16	21
D: Intervention case Net (=A-B-C)	715	1,244	1,665	22	81	119
E: Intervention case Multiplier	1.6	1.6	1.6	1.6	1.6	1.6
F: Intervention case Full Net (=D*E)	1,154	2,018	2,697	36	129	191
G: Intervention case Company Losses	0	0	0	40	27	19
H: Intervention case Full Net – Losses (=F-G)	1,154	2,018	2,697	-3	103	172
I: Reference case Gross	372	604	778	13	46	64
J: Reference case Displacement	0	0	0	0	0	0
K: Reference case Leakage	33	63	82	2	8	11
L: Reference case Net (=I-J-K)	340	542	696	11	38	53
M: Reference case Multiplier	1.6	1.6	1.6	1.6	1.6	1.6
N: Reference case Full Net (=L*M)	543	871	1,118	19	60	84
O: Reference case Company Losses	0	0	0	18	9	6
P: Reference case Full Net – Losses (=N-O)	543	871	1,118	1	51	78
Q: Net Additional (=H-P)	611	1,147	1,580	-4	52	94
R: Net Additionality (=Q/A)	78%	82%	85%	-16%	54%	67%
S: Attribution	52%	51%	50%	57%	46%	48%
T: Net Additional Attributable (=Q*S)	317	580	791	-2	24	45
U: Intervention case displacement ratio (=B/A)	0%	0%	0%	0%	0%	0%
V: Intervention case leakage ratio (=C/A)	9%	11%	11%	13%	16%	15%
W: Reference case displacement ratio (=J/I)	0%	0%	0%	0%	0%	0%
X: Reference case leakage ratio (=K/I)	9%	10%	11%	12%	17%	17%
Y: Deadweight (=N/F)	47%	43%	41%	51%	47%	44%
Z: Substitution	0%	0%	0%	0%	0%	0%

Note: In this table, "Short term" refers to the period 2011-2016, "medium term" to the period 2017-2021.

The intervention case is what happened with the SVF programme.

The reference case is what would have happened in the absence of the SVF programme.

The gross effect is the full observable effect

The net additional effect takes account of displacement, leakage and multiplier effects.

Displacement is the impact on Scottish competitors.

Leakage is income falling outside Scotland.

The multiplier effect measures the additional jobs and GVA created in the supply chain

Multipliers can differ between cells due to differing levels of impact and expenditure

in Scotland between companies – see paragraph Appendix B2.2 for example

"Loss" refers to the negative effect upon GVA of companies trading at losses

Attributable impact is that associated with the direct SVF expenditure.

Source: PACEC survey of SVF companies 2011

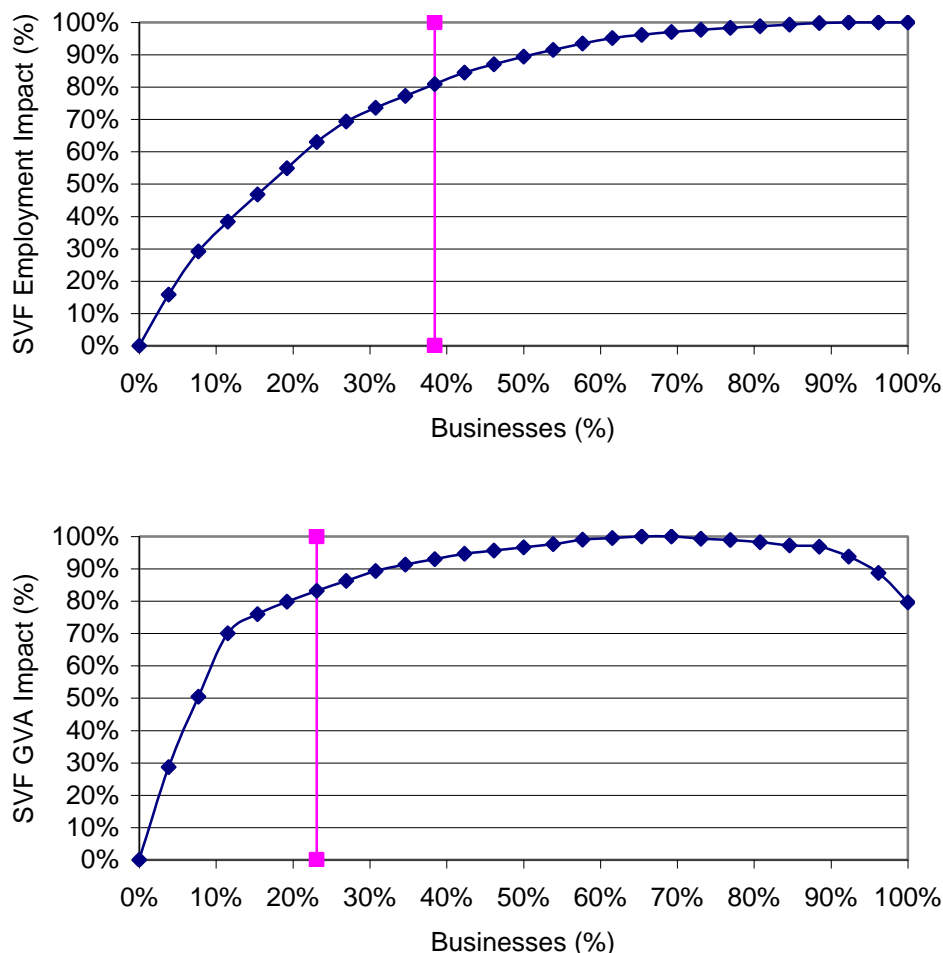
6.4.7 A fuller explanation of terms in 6.2 is given in Appendix B1, particularly in Table B1.3. Also, an explanation of the variation of displacement, leakage, deadweight and

multiplier is given in Appendix B2 which also comments on the data and potential linear trends.

- 6.4.8 Because many of these companies currently have low or zero turnover, they currently have a negative impact on net additional Gross Value Added (GVA) of minus £4m. However as turnover is projected to increase this rises to positive impacts of £52m (by 2016 at 2011 prices).
- 6.4.9 On average, additional assistance from SE in conjunction with SVF (and the use of more than one SE fund) tended to lower the deadweight associated with SVF funding in terms of employment growth (that is, companies accessing additional SE assistance stated that more of their employment growth was attributable to the SVF funding than did other businesses). Hence this combination of support may not have been available from elsewhere or through other support available which reduced the deadweight ratio. Companies incorporating greater loan funding into their SVF package also had lower-than-average employment deadweight. This could possibly be because loan funding (eg from the banks) was more difficult to obtain, given the economic and credit climate. Companies in the DMET sector had higher deadweight (they considered that more of their increased employment would have occurred anyway, possibly because in the survey research they had aimed to grow significantly anyway), as did those accessing less than £1.5m in SVF funding, possibly because the amount of funding was lower, hence they were less dependent on it.
- 6.4.10 At this point, it is important to repeat that the SVF investments were **necessary, but not sufficient** for these very large impacts: i.e. without the SVF investments, it is anticipated that, in the medium-term, 580 FTE jobs and £22m of GVA per annum (at 2011 prices) would not exist in the Scottish Economy. However it is not being claimed that SVF investments are solely responsible for these economic impacts. **In particular some of the impacts may be attributable to SE support products in combination with the SVF funding.** It was not possible to assess the impacts of the SVF funding from the SE support products since they are combined as part of the support and the businesses could not disentangle them.
- 6.4.11 It is usual for impacts not to be evenly distributed across businesses, since organisations grow at different rates. A Pareto distribution, in which 80% of the benefits accrue in 20% of the beneficiaries, is typical in the field of economics and business support interventions. In the case of SVF, 80% of the employment impacts are concentrated in 38% of businesses, indicating a more even distribution of employment benefits, and 80% of the GVA impacts are concentrated in 23% of businesses, indicating a slightly less even distribution of GVA impacts. See Figure 6.1 below. The businesses that have the higher employment impacts tend to be those that have used other SE products – funding and advice, and worked more closely with investors. They also have smaller investments over a shorter time period. However, the numbers of companies are small so that these results are illustrative only.

6.4.12 The companies that have the higher GVA impacts have similar characteristics to those in paragraph 6.4.11 above.

**Figure 6.1 Distribution of Short Term Employment and GVA net additional attributable impacts**



Note: Some businesses are still forecasting negative GVA in the short term  
 Source: PACEC survey of SVF companies 2011

6.4.13 The annual Full Net Attributable Impacts are set out below in Table 6.3. Over time this shows 580 FTE jobs to 2014<sup>36</sup>. The five year<sup>37</sup> net total row for 2011-2016 is given for GVA since these impacts are cumulative over time, ie £104m at 2011 prices. Ten years into the future is shown for illustrative purposes only and is heavily qualified as this is a very difficult period over which to forecast.

<sup>36</sup> 2014 is used here as the midpoint of the period 2011-2016.

<sup>37</sup> The use of a five year period for GVA shown is a practical period of time to estimate the impacts and is supported by the views of the investors who strongly advised against considering impacts over a shorter period as profits may not have fed through, or a longer period of more than 5 years into the future as impacts would be difficult to estimate.

**Table 6.3 Annual Full Net Attributable Impacts over time**

Year	FTE	GVA per annum (£m, current prices)	GVA per annum (£m, 2011 prices)
2011	317	-2	-2
2012	404	6	6
2013	492	15	14
2014	580	24	22
2015	622	28	25
2016	664	32	27
2011-2016 cumulative		104	92
2017	707	37	30
2018	749	41	32
2019	791	45	34
2020	791	45	33
2021	791	45	32
2011-2021 cumulative		317	253

Source: PACEC survey of SVF companies 2011

**6.4.14** To date, the estimated economic impact ratio (ie discounted cost effectiveness at 2011 prices) of the SVF scheme is £134k per net additional FTE (full time equivalent) job. In the short term, the estimated economic impact ratio will be £87k per net additional FTE job, and over the medium term (2011-2021) the cost per job will fall to £76k (again, in 2011 prices). The cumulative GVA over the short term will be £92m, and over the medium term £161m, for a total impact 2011-2021 of £253m (in 2011 prices) It should be stressed that not all of the costs are included in these ratios (i.e. those costs which are also necessary for the impacts to occur), so the ratios on the future impacts should be treated with caution. **Also, the impacts for 2017-2021 are based on the responses of the small number of companies which gave estimates of impact for that period of time, and used for grossing-up purposes, and so should be treated as a broad indication of what growth and performance might be expected from the cohort.**

6.4.15 Table 6.4, on cost effectiveness discounted, also shows for GVA the impact per £1m of SVF spend, ie £2.2m GVA in the short term and £3.8m in the medium term, a total of £6.0m over the period 2011-2021 (with the caveats in 6.4.14).

**Table 6.4 Economic impact ratios. Cost and impacts**

	Employment (FTE)			GVA	GVA - cumulative		
	Current	Short term	Medium term	Current	Short term	Medium term	2011 - 2021
<b>Cost and impacts (not discounted – current prices)</b>							
Cost (£m)	39.7	39.7	39.7	39.7	39.7	39.7	39.7
Impact (000 FTE or £m)	0.3	0.6	0.8	-2.3	104	213	317
Cost per FTE (£k)	125	68	50				
£m GVA impact per £1m SVF					2.6	5.4	8.0
<b>Cost Effectiveness (discounted – 2011 prices)</b>							
Cost (£m)	42.5	42.5	42.5	42.5	42.5	42.5	42.5
Impact (000 FTE or £m)	0.3	0.5	0.6	-2	92	161	253
Cost per FTE (£k)	134	87	76				
£m GVA impact per £1m SVF					2.2	3.8	6.0

Note: "Short term" refers to the period 2011-2016, "medium term" to the period 2017-2021

Impacts are Net Additional-Attributable

The process of deflating (to produce constant 2011 prices) has the effect of increasing the value of past items (costs) and decreasing the value of future items (benefits)

\*Note, there is little availability of information from other similar schemes to allow comparisons to be made.

Source: PACEC survey of SVF companies 2011

- 6.4.16 The cost per job of £134k is probably relatively high currently for a public intervention, but this is to be expected as it takes time for the impacts to feed through from equity investments. From an economic development perspective the actual impacts need to be monitored in order to assess the courses of action required for cost effectiveness.
- 6.4.17 These estimates reflect the qualitative results in other research, i.e. the SCF has had and is forecast to continue to have an economic impact on the companies that have been supported, in terms of identifiable increases in turnover, gross value added and employment<sup>38</sup>.
- 6.4.18 To identify some of the business characteristics that may be influencing the impacts, a stepwise multivariate least squares regression was undertaken (details in Table B1.4) which gave rise to the following findings:
- Receiving more SE products **improves** employment impact ratio. This confirms that the wider assistance and advice given to SE has benefits to the companies.
  - Having <10 employees when funded **reduces** employment impact ratio. This is evidence that micro companies are not in a position to benefit as fully as others from SVF, and that there is a critical mass of 10 employees which optimises economic impact.
  - Having arms length co-funders who are not so involved with businesses **reduces** the employment impact ratio. This is not a surprising result, given that co-funders' focus on returns on investment which potentially pushes up the employment impacts over time.

<sup>38</sup> Hayton et al (2008) op cit and Richard T Harrison, A Case Analysis of SCF and Evaluation of ERDF Supported Venture Capital and Loan Funds and the Scottish Co-Investment Fund, Scottish Executive 2008

- Having funding over 1-2 years **increases** the employment impact ratio (compared to having funding over 3 or more years). This shows that there are diseconomies of undertaking multiple investments.
- Having SVF funding of £1.5m **reduces** the employment impact ratio. This shows that there are diseconomies of scale which occur as the size of the investment goes over £1.5m.

6.4.19 There is no evidence that the investment by the age of company (ie the timing of investment) affects the outcomes and impacts.

## 6.5 Effects of company takeovers (Scenario 2)

6.5.1 Our research with SVF investors suggests that they would aim for a successful exit between years 5 and 7 after SVF investment. The available exits for investors include acquisition by another company (potentially foreign-owned). In the event of acquisition by another company, there is the potential for economic activity to be relocated outside Scotland (e.g. senior management being provided from overseas, relocation of administrative or manufacturing activities etc). We have prepared a second economic impact scenario to account for the potential impacts upon the Scottish economy if a proportion of the more successful businesses are taken over.

6.5.2 The parameters we have used to adjust our economic model for this new scenario (Scenario 2) are based upon our research with SVF companies and investors, and two further sources provided by Scottish Enterprise:

- Work undertaken by the Department for Business Enterprise and Regulatory Reform (BERR) and published in 2008 looking at high growth firms in the United Kingdom<sup>39</sup>; and
- Work undertaken for Scottish Enterprise, published in 2005, looking at corporate headquarters in Scotland<sup>40</sup>.

The key finding of the BERR report was that over a period of ten years, around a third of the high-growth firms in the study were acquired by other firms. The Scottish Enterprise work focuses upon company headquarters in Scotland, but is relevant to this work as the great majority of companies in the sample were independent single-site businesses. This work suggests that, on average, employment in the companies which were acquired will have halved by ten years after acquisition. The acquired companies lost their autonomy and lost jobs in senior management to the HQ of the acquiring company, potentially leading to a relocation of their R&D and marketing functions.

6.5.3 The evidence from the BERR report suggests that by the end of Year 10, one third of the high-growth companies will have been acquired. The SSF investors stated that they would ideally aim for exit between years 5 and 7. As a result, we have assumed for this scenario that acquisition begins in Year 5 after funding, and occurs at a

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<sup>39</sup> <http://webarchive.nationalarchives.gov.uk/+http://www.bis.gov.uk/files/file49042.pdf>

<sup>40</sup> <http://www.evaluationsonline.org.uk/evaluations/Search.do?ui=basic&action=show&id=2>



constant rate until one-third of the companies have been acquired by the end of Year 15. This is equivalent to an annual acquisition rate of 6.5% .

- 6.5.4 We have made the further assumptions that the impact upon GVA will be the same as the impact upon employment (i.e. halving ten years after acquisition) and that the highest-growth firms are the ones that will be most attractive to potential purchasers. Elsewhere in the report we examine the distribution of companies and find that 5 are responsible for 80% of the GVA impact of SVF in the short-term. We assume for this scenario that these 5 companies are considered for takeover.
- 6.5.5 The 2005 Scottish Enterprise work referenced above suggests that employment will drop by 50% over the 10 years following acquisition. We have assumed that this employment loss will occur at a constant rate, starting the year after acquisition. This is therefore equivalent to an annual employment loss of 6.7%. This adjustment has been applied in the reference case as well as the intervention case (i.e. in the absence of SSF funding) because some companies claimed that they would grow in the absence of SSF funding and as such remain viable targets for acquisition. Companies that did not expect growth in the absence of SSF funding are unaffected by this adjustment calculation in any case.
- 6.5.6 In the long term (ie ten years plus), these effects would lead to substantial impacts upon the total performance of the SSF-funded firms. However, most of the effects occur outside the time impact frame used for this study (i.e. more than 10 years after funding). The companies which are affected most are those acquired in Year 5, which lose 29% of their employment and GVA by Year 10. The full employment impact is reached between years 15 and 20 after funding. Another factor mitigating the impact of acquisition upon employment and GVA is that the companies exhibiting the largest effects tended to have high leakage due to the location of staff and production outside Scotland. The impact of further loss due to acquisition is therefore lower on these companies.
- 6.5.7 Table 6.5 shows the grossed-up impacts in the medium term for employment and gross value added under the acquisition scenario (which we shall call Scenario 2) and the original scenario discussed previously, which we shall call Scenario 1. The effect of this on scenario 2 is to reduce the net additional attributable impact by 2% for employment and 4% for GVA.

**Table 6.5**      **Grossed up impacts: Employment and Gross Value Added in the medium term under 2 scenarios**

	Employment (FTE)		GVA (£m per annum)	
	Scenario 1	Scenario 2	Scenario 1	Scenario 2
A: Intervention case Gross	1,862	1,862	140	140
C: Intervention case Leakage	197	232	21	25
D: Intervention case Net	1,665	1,630	119	115
F: Intervention case Full Net	2,697	2,638	191	184
H: Intervention case Full Net– Losses	2,697	2,638	172	165
K: Reference case Leakage	82	97	11	12
L: Reference case Net	696	681	53	52
N: Reference case Full Net	1,118	1,092	84	82
P: Reference case Full Net – Losses	1,118	1,092	78	76
Q: Net Additional (=H-P)	1,580	1,546	94	90
R: Net Additionality (=Q/A)	85%	83%	67%	64%
S: Attribution	50%	50%	48%	48%
T: Net Additional Attributable (=Q*S)	791	774	45	43
V: Intervention case leakage ratio (=C/A)	11%	12%	15%	18%
X: Reference case leakage ratio (=K/I)	11%	12%	17%	19%

Note: In this table, “medium term” refers to the period 2017-2021.

The intervention case is what happened with the SVF programme.

The reference case is what would have happened in the absence of the SVF programme.

The gross effect is the full observable effect

The net additional effect takes account of displacement, leakage and multiplier effects.

Displacement is the impact on Scottish competitors.

Leakage is income falling outside Scotland.

The multiplier effect measures the additional jobs and GVA created in the supply chain.

“Loss” refers to the negative effect upon GVA of companies trading at losses

Attributable impact is that associated with the direct SVF expenditure.

Source: PACEC survey of SVF companies 2011

6.5.8      The main finding resulting from the preparation of economic impact scenario 2 is that the impact of company acquisitions upon the SVF-funded businesses and their economic activities over the time period of the study is likely to be small. The bulk of any reduction on economic activity in Scotland would be likely to occur more than 10 years after first funding. We would reiterate that the impacts for 2017-2021 are based on the responses of a relatively small number of companies, due to the difficulty in forecasting the performance of a potentially rapidly-growing company that far into the future.

## 6.6 Key points

6.6.1 The key findings from this chapter were as follows:

### Panel 6.1 Business performance and economic impacts: key findings

- 90% of SVF firms had registered intellectual property as a result of the SVF funding (or were in the process of doing so)
- 75% of businesses had **increased their employment** as a result of the SVF funding.
- 75% said SVF funding had prevented jobs from being lost
- 75% had **increased turnover** as a result of the SVF funding
- By 10 years after their SVF funding, all the businesses anticipate that they will have **increased employment** and **increased turnover**
- We estimate that 317 net additional jobs have been created or safeguarded to date due to the SVF funding over and above what would have happened anyway (i.e. 317 net additional attributable FTE jobs)
- In the short term, we estimate that this net additional attributable impact will be 580 FTE jobs (in the short term period) and £22m per annum GVA (at 2011 prices)
- In the short term, the estimated economic impact ratio will be £87k per net additional FTE job. £2.2m GVA per annum (at 2011 prices) will be generated per £1m of SVF spend.
- In the medium term, we estimate that the net additional attributable impact will be 791 FTE jobs and £34m per annum GVA (at 2011 prices), although this estimate is provided for illustrative purposes only as it is a very difficult period over which to forecast.
- In terms of impacts there is some evidence to show that the larger businesses, pro rata, produce higher impacts along with those who receive more support from SE, other agencies, co-funders and businesses within a focused period of shorter term investment.

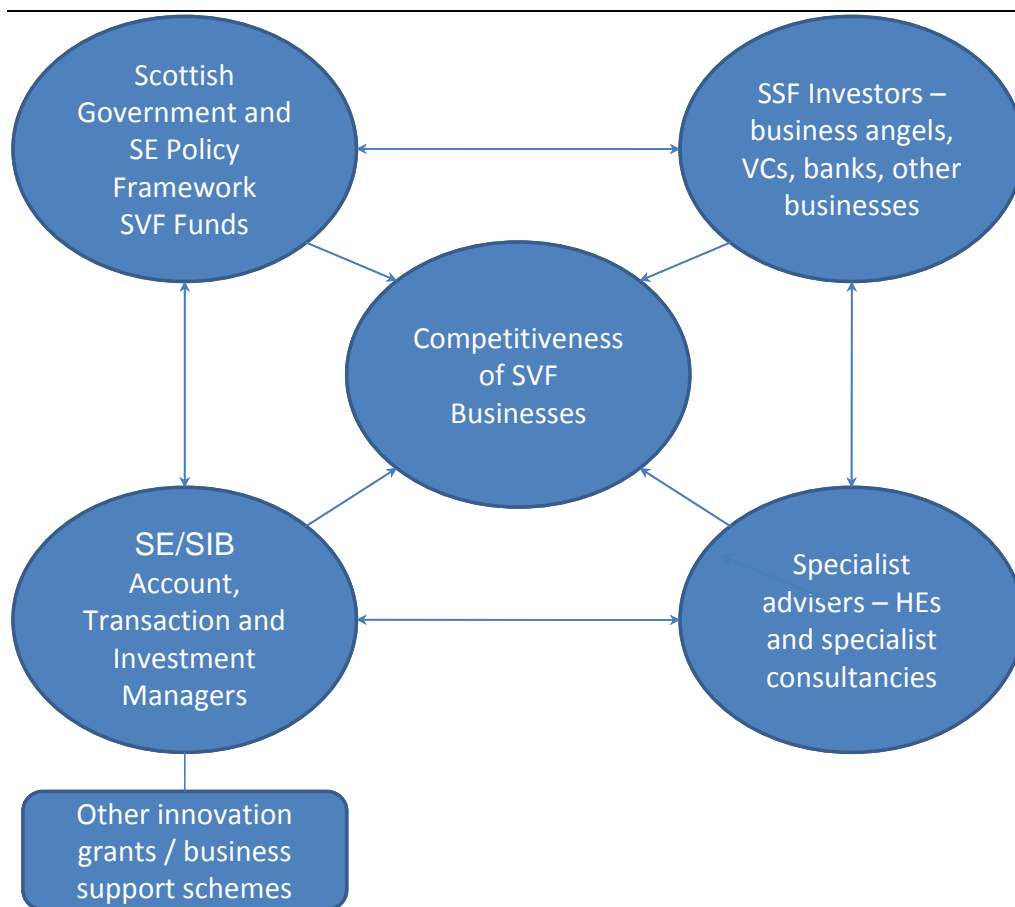
Based on the evidence above, SVF has had a positive effect on the Scottish economy which would not otherwise have occurred in its absence. This effect is likely to increase in the future. At one level this provides value for money (VfM) in the sense that the impacts are not negative or trivial. However, the VfM compared to other schemes (funded by SE) is difficult to determine because there is little comparable quantitative information on similar equity / loan schemes.

## **7 SVF Support and Other Advice**

### **7.1 Introduction**

7.1.1 Here the evaluation examines the role of advice and support that helps to generate the outputs and outcomes (i.e. business performance effects) set out in the previous section as the sixth stage in the evaluation framework outlined in the introduction. In particular the SVF funders can be very much hands-on, along with SE/SVF advisers, to help ensure investments bear fruit. The use of support from other agencies in the wider innovation and business support system is also examined. These organisations play a role in the wider innovation system and help demonstrate the linkages and interdependencies for SVF businesses invested in.

7.1.2 The overall innovation support system is shown below in Figure 7.1. It comprises a number of key features; the policy framework of Scottish Government and Scottish Enterprise and SVF funds, the support from SE/SIB account, transaction and investment managers and advisers on other SE schemes, the support from SVF investors through finance and advice (as well as funds from other potential investors, including the banks). Finally, the advice and expertise and assistance from other specialists in the public and private sectors. These may include R&D specialists on research issues, IP advisers, consultants offering advice on exploitation and other issues and banks and accountants with appropriate expertise. In combination these contribute to the innovation and competitiveness of the SVF businesses.

**Figure 7.1 The Innovation System for SVF Businesses**

Source: PACEC

## 7.2 SVF and SE support

- 7.2.1 The businesses with SVF funding were asked the extent to which they had received other advice and support. Some 63% had received assistance from Scottish Enterprise through the account managers. A quarter had a board member who was an investor, and 5% (one business) had an investor on their management group. In total, four fifths (including all those receiving under £1.5M in funding) had received at least one of the above forms of support as a result of SVF.
- 7.2.2 A small proportion of businesses expressed a view on the importance of board members as investors. They were evenly split between those who thought they were “very important”, or “not important”. Three businesses stated that their SE account manager had had a “very important” contribution to the impacts of the project, two thought they were “important”, and one thought they were not important, with the remainder feeling that the SE account manager’s contribution was not applicable or relevant to the impacts achieved. The benefits of advice included: access to other sources of funding; financial and strategic advice including alternative perspectives on the market; and introductions to customers, suppliers, and collaborators.

7.2.3 SVF-funded companies have used a wide range of other support products from Scottish Enterprise. At their seed stage, Investor Ready support and the High Growth Start-up Unit are well-used. Account-managed companies have received differing levels of direct support depending upon their stage of development, the skills of their management teams, the level of expertise of their proposed investment partners, and their industrial sector. This support included strategic advice, business planning and financial forecasting expertise, as well as providing introductions to potential financiers in the banking or equity sectors.

7.2.4 Account managers and members of the SIB investment / portfolio and transaction teams are cognisant of the need to work constructively with each other and with other teams within SE to make sure that companies are given the support they need. This was necessary to bring them to the point where they can benefit from SVF and other funding. As the SVF portfolio grows, it was considered necessary by the account, investment and portfolio managers that, in the interest of efficiency, their attention of investment / portfolio managers is proportionally focused upon the companies which offer the best returns, while directing those companies which require further support to the appropriate teams within SE that are best able to assist them and hence subsequently generate a return on investment.

### 7.3 Wider support used

7.3.1 The penultimate issue discussed with businesses was the wider public or private sector support or advice used in conjunction with SVF (over and above the investment and account management support provided by Scottish Enterprise). Almost half the SVF funded businesses stated that they had accessed this wider business and innovation support or advice.

7.3.2 A third used higher education or university advisers. A quarter used independent or SME business advisers and consultants, and 16% each used other venture capital and business angel advisers, or a grant for R&D. Just over half did not use the wider support available to them.

7.3.3 Businesses considered that the wider support they used was useful to them. The HE and university advisers were very useful in advising on the business innovation issues and R&D. Equally the VCs and BAs were very useful in terms of business operation and finance issues. The other advisers were considered to generally be useful on business development and marketing issues rather than on innovation and R&D.

### 7.4 Key points

7.4.1 The key findings from this chapter were as follows:

**Panel 7.1 SVF support and other advice: key findings**

- 63% of businesses had received assistance from their SE account manager.
- A quarter had a board member representing their funders
- Half the businesses had accessed other support or advice in the wider innovation and business support system, most commonly higher education or university advisers. These were considered very useful in advising on business innovation issues and R&D.

## 8 The Businesses' Assessment of SVF

### 8.1 Introduction

8.1.1 Part of the evaluation is concerned with the management arrangements for SVF and lessons learnt and what may be appropriate to develop and improve SVF to enhance the outputs, outcomes, business performance and economic impacts. This chapter forms part of the eighth stage of the evaluation framework and sets out the views of businesses. The views of the funding partners are shown in the next chapter.

### 8.2 The good and poor aspects of SVF

8.2.1 In the final section of the business questionnaire, SVF businesses were asked their opinion of the management arrangements for SVF and various aspects of the scheme to help point the way to potential improvements which would enhance the impacts. Four fifths said that they did not think that there were any poor aspects of SVF. No aspect of the funding was rated as poor by more than one business; individual businesses raised some concerns about the investment criteria, perceived restrictions on manufacturing outside the EU, and the scheme's flexibility in terms of the speed of decisions and the information required.

8.2.2 Almost three quarters (72%) of businesses thought that the scheme overall, and the management of it, was good. Two fifths of businesses thought that the amount of funding available and what the funding could be spent on (i.e. no limitations were imposed). 28% thought that the investment criteria were good, and 28% also thought that the time taken for funding to be made was good.

8.2.3 The majority of SVF investors thought that SVF was a "good" scheme especially because of the amount of co-investment funding available and the flexibility with which it would be used. See section 9.5.

8.2.4 The SVF businesses showed a high degree of awareness of the full suite of SE funds for different stages of development, with 84% stating that they were "very aware" of the full suite, and 11% (2 businesses) "quite aware". Only one business said that it was not aware of the full suite.

8.2.5 The majority of SVF businesses said that the relationship between SE funds was consistent and cohesive to at least some degree (in particular SSF, SCF and SVF). A fifth said that the relationship across the suite of funds was wholly consistent and cohesive (exclusively those receiving 4 or more SE "assists"), a fifth said that it was largely so, and almost a third that it was "partly" so.

8.2.6 Almost two fifths of SVF firms said that SE funds had improved the general scale and quality of funding in Scotland for businesses "significantly", and a similar proportion said that scale and quality had been improved "to a large extent". 16% said that there had been an improvement "to some extent" and the remainder (11%) were not sure.



- 8.2.7 SVF is not just about finance but also the advice and support that goes with it which enhances the delivery arrangements. Hence, almost four fifths of businesses said that SVF had improved the scale and quality of **advice** for businesses in Scotland; a quarter said that advice had been improved “significantly”, a fifth “to a large extent”, and a third “to some extent” (i.e. some four fifths in total). However, it is likely that the particular circumstances of each business are likely to colour their view of how the entire business community is affected.
- 8.2.8 This demonstrates that the rationale of providing advice along with finance remains valid.
- 8.2.9 Interviews with SE advisors suggest that an overall assessment of how SVF is performing at the stage of evaluation was difficult, as many of the sectors and businesses invested in have long lead times (such as life sciences, renewable, and the cleantech sectors) and some potentially significant investor exits have not yet materialised. The rationale for SVF is still seen as valid in terms of the gaps in the supply of capital and there is considered to be excess demand for funding. The main strengths of SVF funding are the stringent due diligence that is applied and the focus on good-quality potential investments combining a strong management team with a group of experienced co-investors.
- 8.2.10 Finally, the SVF firms were asked if any future impacts not covered by the research were expected. A fifth thought there might indeed be future impacts on products, services and opening up new markets, but three quarters said that there were no further impacts expected other than those covered by the research.

### 8.3 Key points

- 8.3.1 The key findings from this chapter were as follows:

#### Panel 8.1 The businesses' assessment of SVF: key findings

- Some three quarters of businesses thought that overall SVF was a good scheme in terms of its management and features.
- Two fifths of businesses said that the options in terms of **what funding could be spent on** were particularly good, as was the **amount of funding** available.
- Four fifths of businesses did not think that there were any particularly poor features of SVF.
- A fifth of businesses said that the relationship between the suite of SE funds (i.e. SSF, SCF and SVF) was wholly **consistent and cohesive**; a fifth said it was largely so, and a third partly so (or some four fifths overall).
- A fifth of businesses said that SE funds had **improved the scale and quality of advice** for businesses in Scotland “to a large extent”, and a further quarter said that this had been improved “significantly”. This demonstrates that the rationale of providing advice along with finance remains valid.

## 9 The Impacts on the SVF Investors

### 9.1 Introduction

9.1.1 This chapter builds on the previous chapters which have covered the company impacts. It deals with the issues in the evaluation framework (outputs, outcomes, and lessons) from the perspective of the funding partners in the private sector (i.e. primarily venture capitalists). The analysis initially covers the characteristics of investors, and their aims in investing through SVF. It sets out the assessment of the market failure and feature issues, how SVF addresses these and the reasons for investing with SE. It examines the role of SVF in encouraging more funds and investors into the Scottish market. It outlines the benefits to the partners (and businesses to compare with the business views). The final section considers the views on the management arrangements and improvements suggested by investors, i.e. the lessons learnt.

9.1.2 Interviews were held with fifteen partners, on a confidential basis, and other stakeholders<sup>41</sup>, who were mainly based in Scotland and England and who formed a representative group of those who had invested in the companies through SVF<sup>42</sup>. Where views vary between the investors, these are brought out, especially between the larger investors who make more investments, compared to smaller ones who made fewer. However, generally, there is considerable agreement between them on the issues and impacts.

### 9.2 The Characteristics of Partners

9.2.1 The investors are defined as partners in SVF because they have had prior discussions with SE about their roles in SVF. They become partners as established investors and venture capitalists with mature portfolios, and make investments which are relatively large, and made in several rounds, with the frequency depending on opportunities rather than being regular.

9.2.2 The majority of the partners made investments in the key priority growth sectors in Scotland with the focus on digital media, life sciences, energy, food and drink and health and electronics. The larger investors covered more sectors. Most are primarily UK investors or invest in Europe with approximately a quarter based overseas. Some 60% of investors have funded businesses with SE. The remainder had not completed a “deal” at the time of the evaluation.

9.2.3 Reflecting practices in the venture capital sector, the SVF investors are highly selective when choosing where to make investments, especially the smaller investors. The average number of potential investments for individual partners /

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<sup>41</sup> They include LINC Scotland, the Scottish Government, and academics who have carried out research on the Scottish funding market.

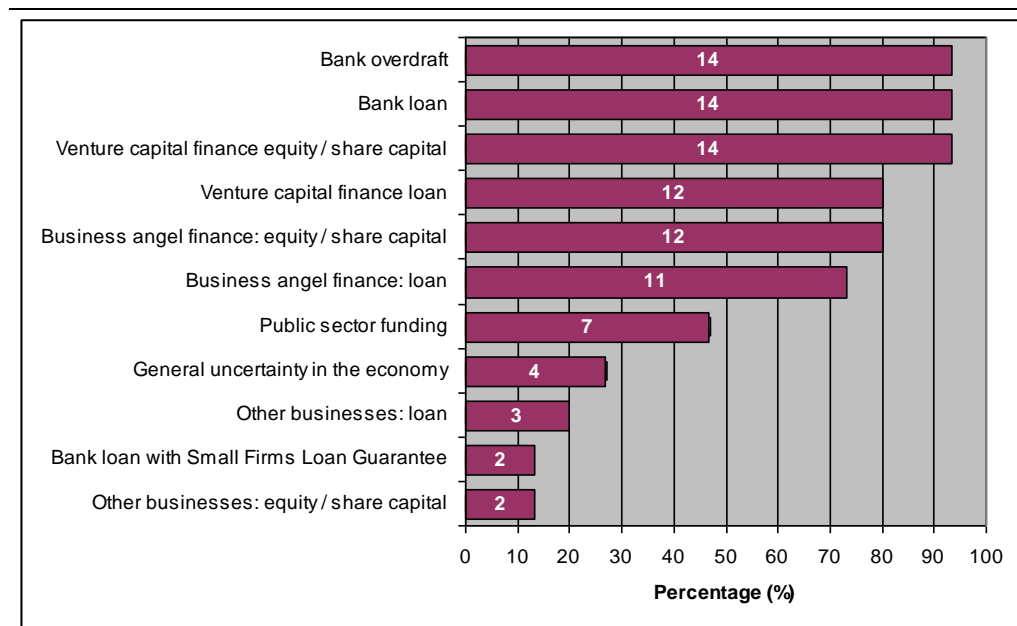
<sup>42</sup> In the chapter the term partners is used for investors and stakeholders for the sake of brevity.

investors per annum in the past two years has been in the range of 300 to 700 in total (including Scotland), and fewer for the smaller ones. These opportunities were not just in Scotland, as most invest in the UK and Europe. Of these some 1% to 5% are approved, with 95% to 99% refused. Generally the smaller investors tended to have higher rates of refusal.

### 9.3 Capital Market Failures and Features

9.3.1 The shortage of funds for viable businesses with growth potential opportunities is a key issue for Scotland. The current economic and investment climate had been a critical issue for investors as a key feature of the market over the past three years, arising from the credit crunch, recession, and ongoing uncertainty. All funders considered that there was a lack of funds available and most businesses faced significant issues raising debt and equity finance, including some of the more viable ones. However, this did not necessarily constitute market failure where businesses are not viable or do not make potentially “good” investments with adequate returns. The views on the main types of finance that were limited are shown below in Figure 9.1; in particular with regard to bank overdraft and loan availability, and also a combination of venture capital and business angel equity and loan (mezzanine) finance. It was considered that public sector funding was not the key issue but generally the lack of funding was mentioned by 47% of investors.

**Figure 9.1 Limited capital available by type of finance**



Each bar in the figure shows the number of investors that responded  
Source: PACEC Interviews with stakeholders and investors

9.3.2 The discussions with the investors sought to examine evidence of the market features and failures for capital in that some viable companies found it difficult to obtain the finance they required and the reasons. The main types of market failure and features on the supply side, as outlined in the introduction and reflecting the views of investors, are summarised as follows:

**A shortage of information or information failure.** This arises because businesses for potential investments are not known through sources and investor networks<sup>43</sup>.

9.3.3 Initially the discussion with investors to explore these issues focused on information in the sense that investors were not able to identify businesses. It was considered that this may be the case for individual businesses and investors but collectively investors were made aware through their own searches, through approaches by potential businesses and their extensive network and interactions with other investors and agencies including those with SE. However, it was considered that some viable businesses may not come to the attention of investors.

**The high cost of due diligence and transactions:** early stage businesses tend to be high risk as they have unproven track records or business models and so require rigorous due diligence and analysis by investors. The costs of due diligence and analysis tend to be fixed and so represent a larger proportion of an investment in early stage, smaller deals than for significantly larger deals<sup>44</sup>. This acts as a disincentive to investors to invest in smaller deals. Also, without due diligence and research information, it makes it more difficult for investors to distinguish good investment opportunities from bad ones<sup>45</sup>. This applies to SVF where, although the deals are relatively large, they are not the largest in the venture capital market.

9.3.4 The filtering of potential investments for some form of review / due diligence once investors are aware of them, ie the 300 to 700 per annum potential opportunities mentioned above takes place in stages by investors. A high proportion are considered as unsuitable fairly quickly and probably up to 7-8% are selected for some form of review / due diligence as being potential investments and hence viable prior to full due diligence. Part of the reason for then not proceeding with full due diligence reviews was the sheer cost relative to the potential returns (compared to larger investments) and the resources available to investors. The investors agreed that even for the more mature SVF businesses, especially where initial / first round investments were made, the costs of due diligence were thought to be too high.

**The perception of risk:** information on returns from early stage growth capital investment is generally limited as only a few growth funds exist with comparable data. Lack of information on the track record of returns from equity investment can make investors more 'risk averse', and investors can underestimate the returns which can result in incorrect expectations. In this context investors may maintain their existing portfolios rather than identify new investment opportunities<sup>46</sup>.

9.3.5 For the final stage of the decision making process the discussion with investors focused on why the potentially viable businesses were refused. These reasons reflected the other market failure and feature issues associated with risk above. The main grounds for refusal were that ultimately businesses were not sufficiently developed in that they were seen as too risky (80% of investors) in spite of some trading successfully. These views in some cases demonstrate excessive risk

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<sup>43</sup> HMSO. The Green Book. 2010 edition.

<sup>44</sup> Scottish Enterprise. Market Failure in the Scottish Risk Market. R T Harrison report.

<sup>45</sup> Centre for Business Research. University of Cambridge. Financing UK SMEs. 2007, 2010.

<sup>46</sup> Scottish Enterprise. The Scottish Venture Fund 2008.

aversion on behalf of some investors. For investors their general view of the companies seeking funding was also that the revenue stream, the business team, the products and the investment readiness were not strong enough, or too much money was sought which deterred them.

**Past poor performance:** Historically, there have been low returns and yields on investments in high tech companies. For example, in the 1980s, investors often made very low returns when financing early stage high technology companies as a result of poor quality investment decisions (the investment industry had little knowledge of making technology investments). Poor returns continued with the long recession of the 1990s. This has led to a current perception of poor returns from this type of investment.

9.3.6 The risk factors above were more pronounced where some of the high tech companies were involved and the uncertainty increased, partly because of the risks at the research and development stage and the long lead in times for commercialisation and subsequent revenue streams – although there could be some very successful high fliers.

**Limiting risk exposure and larger deals** - the private equity/venture capital industry has in recent years sought to limit its exposure to risk by focusing on buyout and secondary purchase investments, which tend to be larger and are perceived to be less risky. They have sought to focus on a smaller number of investments where the fund manager can have more control and influence on business operations and strategic decisions. This has reduced investment in earlier stage deals even with the more established businesses.

9.3.7 The investors confirmed that this was the case to some extent and it meant that a gap was opening up in the traditional flow of funds between the business angels and syndicates and the venture capital companies. The business angels, through syndicates, had sought to fill this emerging gap to some extent. The literature on the funding market also shows this trend<sup>47</sup>.

**Fund manager remuneration:** later stage and buyout deals have provided better returns and personal remuneration for fund managers so that there is less incentive for them to invest in earlier stage deals.

9.3.8 The investors accepted that to some extent this was a feature of the remuneration process, although a portfolio spread was usually the case as investors were reluctant to turn smaller scale funding opportunities away. This market feature is reinforced to some extent by the fact that due diligence costs are proportionally higher for smaller investments and fund managers sought to keep their costs down as part of their overall portfolio management and performance.

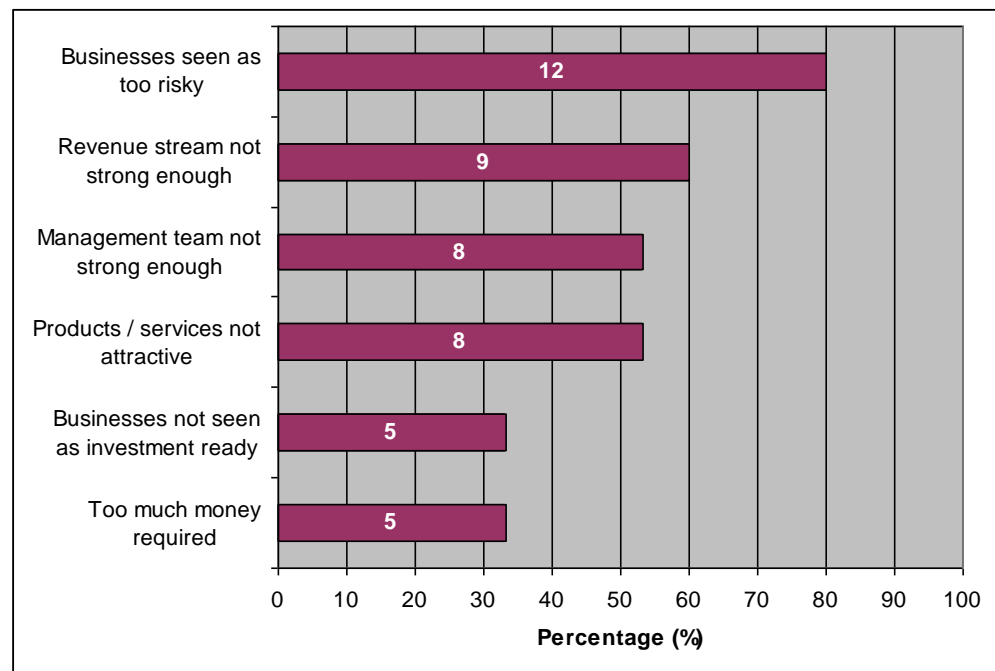
9.3.9 The factors above, and the fact that capital has gone into higher performing, less risky and more liquid capital funds and alternative assets, especially where markets are volatile and there is significant investment switching, have all led to a lower than optimal supply of funding to viable SMEs.

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<sup>47</sup> Richard T Harrison, A Case Analysis of SCF and Evaluation of ERDF Supported Venture Capital and Loan Funds and the Scottish Co-Investment Fund, Scottish Executive 2008 and LINC Scotland, the Business Angels network, Scottish Government and academics

9.3.10 The provision of information as outlined above, in itself, is not sufficient to overcome market failure, nor is a commitment to due diligence costs, where an excessive aversion to risk and the other factors above results in the shortage of funds.

**Figure 9.2 Investors' views on why funding is refused**



Each bar in the figure shows the number of investors that responded  
 Source: PACEC Interviews with stakeholders and investors

9.3.11 The discussions with key investors demonstrate that each of the market failures and features are relevant to SVF in their different ways and that viable businesses face shortages in terms of capital. All the factors are interrelated and influence one another.

9.3.12 Investors considered that the size of the “funding gap” as a feature of market failure was difficult to define or quantify in the current economic and financial climate. Table 9.1 shows the spread of views with the gaps being greater at the lower end of the scale, i.e. below £500,000 and in the £1-2.5m range. The smaller investors found it more difficult to specify the funding gap probably because their market visibility was not as great as that for larger investors.

**Table 9.1 Market Failure: the funding gaps**

	Percentage of all partners	Number of partners
Less than £100,000 (start-ups)	60	9
£100,000-£500,000 (early stage)	60	9
£500,000-£1,000,000	40	6
£1,000,000-£2,500,000	<b>60</b>	<b>9</b>
£2,500,000-£5,000,000	47	7
More than £1 million	47	7

Respondents could select several options; so percentages in any column may sum to more than 100.  
Source: PACEC Interviews (Q9C)

- 9.3.13 Funding issues arose for companies for all operational and development costs but in particular for costs covering innovation, R&D, and technology related activities where the outcomes were less certain and long term.
- 9.3.14 Generally, it was considered that the availability of funding for businesses would remain difficult over the next 2 to 3 years, and with a third saying that availability would stay the same and two thirds considering that it would improve only partially for both loan and equity funds for SVF businesses.

## 9.4 Reasons for Investing Through SVF

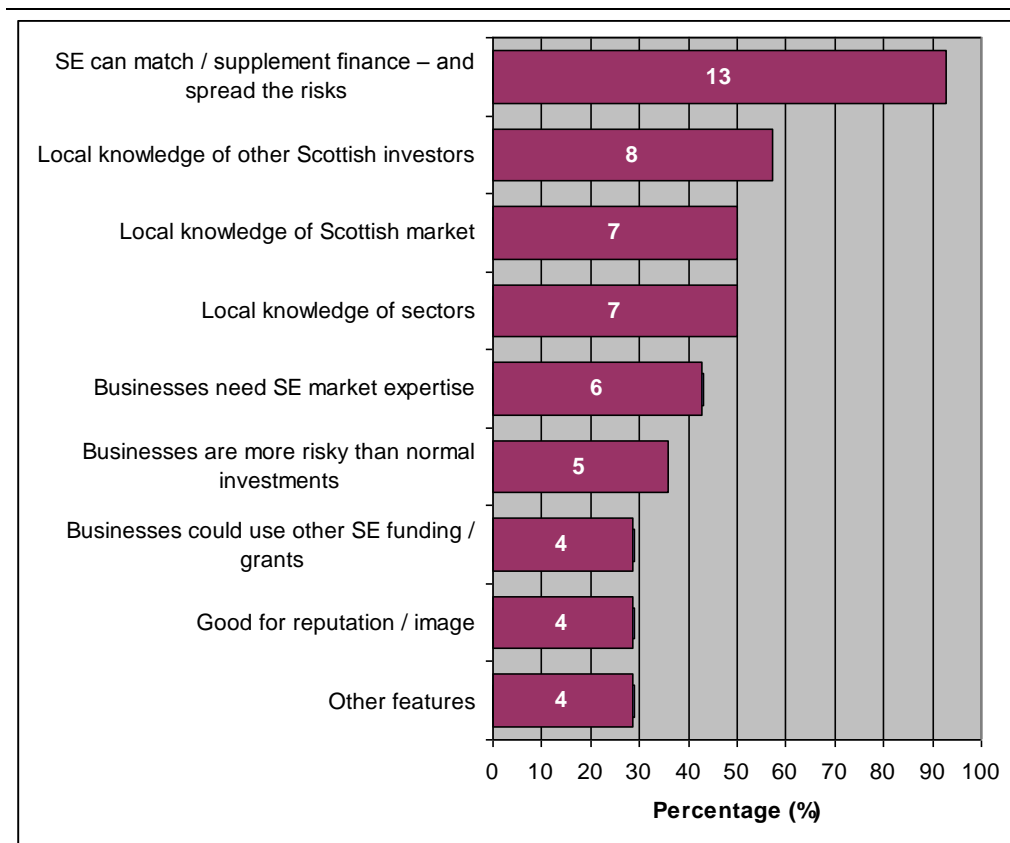
- 9.4.1 Investments are made, often in several rounds through SVF, where over a period of 5 to 7 years a listing or trade sale will be possible based on revenue streams, profitability and a reasonable / strong market position with good future prospects.
- 9.4.2 The reasons for co-investing in businesses (using SVF) for all investors were to grow their own businesses, increase the profits, increase the value of businesses and the assets and make a trade sale and exit over an optimal planning period of some 5 to 7 years. These were the main reasons, irrespective of the size of investors. Secondary reasons were to co-fund with other partners (in addition to SVF), to spread the risk and to tap into the local / sector knowledge and experience through SE. Two thirds of investors took a place on the board of businesses invested in – both the larger and smaller ones.
- 9.4.3 The business aims of participating in SVF as perceived by partners were to obtain working capital, help the businesses grow, help the them get to market, improve profitability, and meet the funding gaps **to overcome market failure issues with respect to finance**. See 9.4.4 below. Less emphasis was put on the need to address innovation, R&D, and technology issues.
- 9.4.4 The SVF businesses that received funding had in many cases sought alternative funding to SVF but the funding offered did not meet their requirements in terms of the amounts offered and the conditions associated with the offers, ie sometimes involving the release of equity. Others did not seek alternative funding because they did not think the market would be responsive to their needs in terms of the amount they

required. Some thought that potential investors would see them as being too risky while other businesses were not prepared to release equity as a condition of funding offered.

- 9.4.5 Most investors (87%) identified the companies to invest in as the investment opportunities and brought these forward for discussions with SE. In a minority of cases SE (mainly account managers) or other partners identified the opportunities. The two main sources of deals were through businesses approaching the partners (75%) or business angels or other venture capital companies bringing the opportunities forward prior to filtering for SE and SVF. Ongoing funding rounds were initiated by the partners themselves or the businesses that had been invested in, in liaison with the SE and in particular the investment/portfolio manager
- 9.4.6 The critical reasons for investing through the SVF fund were that the funds were available that could “match” the investor funds for the type of, and stage of, investment. This helped to spread the risk especially for the smaller VCs. They were also available on a shared commercial basis and criteria. Investors also felt they shared the same aims with SE in terms of growing the businesses and investment and sharing the risk and rewards. For around half the investors, SE also had local knowledge of other investors, the sectors and the Scottish market. Investors, especially the smaller ones, considered that SE had an integrated team of account, transaction and investment managers that provided a pool of expertise on which they could draw. Almost 40% of investors used SVF because the businesses were more risky than their normal investments. Hence investing with SE through SVF allowed the risk to be spread.



**Figure 9.3 Investors: reasons for investing through SVF**



Each bar in the figure shows the number of investors that responded  
 Source: PACEC Interviews with stakeholders and investors

9.4.7 Some 40% of investors would not have invested in the businesses without SVF, primarily because of the risk, and a third would only have made a partial investment (i.e. 73% in total), and this was especially the case for the smaller investors. Only 27% would have made an investment in the same businesses. However, they would not have invested the same amount as with SVF investment. The findings demonstrate how SVF was helping to address the market failure issues associated with risk shown above.

**Table 9.2 Partners that would have invested in the business without Scottish Enterprise**

	Percentage of all partners	Number of partners
Yes, wholly	0	0
Yes, largely	27	4
Yes, partially	33	5
Not at all	40	6

Source: PACEC Interviews (Q12A)

9.4.8 Partners would only invest in businesses without SE where there was less risk (93% of respondents) and/or the businesses were showing growth and profits and could be sold (60%).

- 9.4.9 Half the partners thought that SE would not invest in the companies without SVF and the co-investment approach. Some 40% thought SE may make some partial funding available but through grant funding (e.g. SMART or some other appropriate scheme).
- 9.4.10 Discussions with investors showed that some of them would not previously have invested in the SVF venture capital market to the same extent. This is primarily because they were business angels, rather than VCs, and had invested in their own right or as part of syndicates in the sector. Normally their investments would have been somewhat smaller and for earlier stage businesses.
- 9.4.11 Where the partners had not invested in a deal with SVF the main reasons they gave were that suitable businesses had not been identified (e.g. that met their objectives, the business case was not strong enough, did not have suitable products/services and actual or likely revenue streams, or the management team was too weak and not entrepreneurial enough). For some, SVF was not appropriate because the businesses were not at the right stage (and the SE Co-investment Fund had been used instead). Other reasons were that the VCs invested in other sectors such as travel, retailing and property sectors which may not be SE priorities, or businesses did not fit with the investors' core areas of expertise. None of the partners invested in the businesses that they initially thought may be appropriate for SVF on their own without SVF.

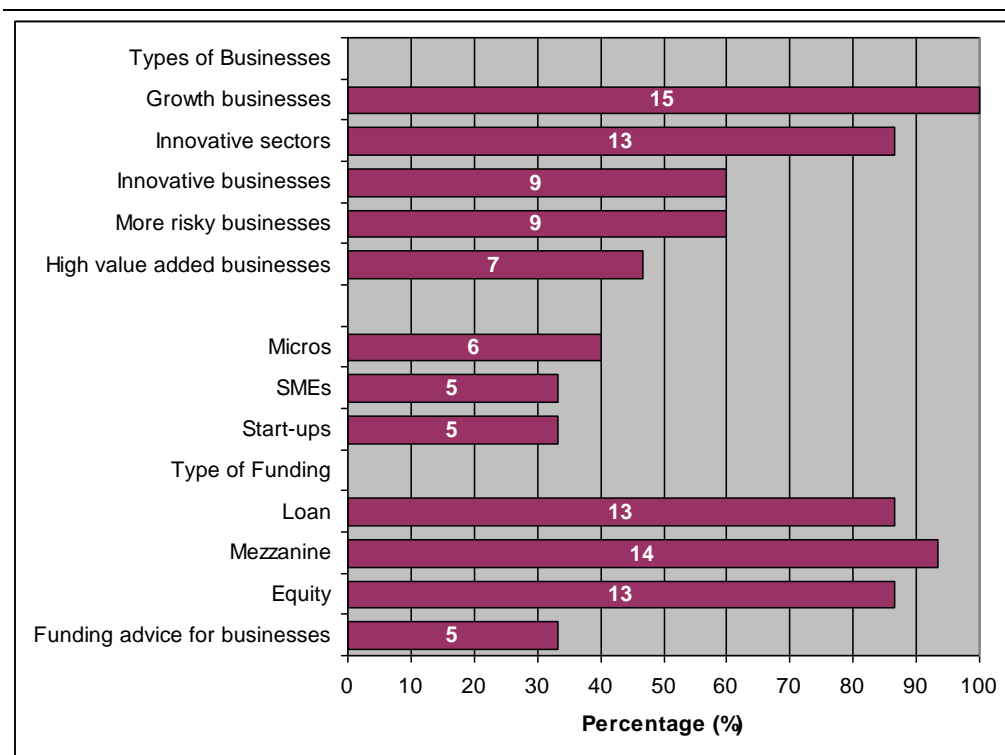
## 9.5 The Impact on the Funding Market

- 9.5.1 With market features and failures causing a funding gap in Scotland,, a key aim of SVF is to improve the supply of funds in Scotland and hence the operation of the funding market including the participation of investors that may not otherwise have invested. Some two thirds of partners considered that the SVF had helped address and improve the supply of capital to Scottish based businesses. Also, investors could be highly risk averse and/or see the investment transaction costs as prohibitively high. SVF had significantly improved both the scale and quality of the development and growth funds available in Scotland, while a third considered that funding had been improved to a large extent. This was especially the case for the smaller investors. Correspondingly similar proportions said that new funders had entered the Scottish market from England (the South East in particular) and overseas. The SE management information on funders shows that a quarter are from outside the UK and some 25% are based in London and the South East. Investors thought they were less likely to have invested in Scotland without the SVF.
- 9.5.2 A key feature of SVF is that it had improved the supply of commercial funds through deals with SE, ie the SE finance was being used commercially in businesses in conjunction with SVF investors. There was no indication that investors reduced their funding to other businesses because of the investment through SVF. However, other high risk businesses that were not appropriate for SVF could be underfunded.

9.5.3 SE advisors saw positive impacts on the level of investment in Scotland. The market for VC funding is moving towards larger and later-stage investments reflecting a trend which has continued since the introduction of SVF as a funding option above the SCF level. The market has been stimulated by the introduction of additional funds but also by encouraging investors to work together and form new consortia.

9.5.4 As a result of SVF, some 87% of partners considered that the supply of equity and loan funds (from VCs and BAs) had improved, and in particular for growth businesses (all partners), for innovative sectors (87%) and for innovative and more risky businesses (i.e. three fifths of partners for each). See Figure 9.4 below.

**Figure 9.4 Improvements in the types of funding for businesses in Scotland**



Each bar in the figure shows the number of investors that responded  
Source: PACEC Interviews with stakeholders and investors

9.5.5 The market had also improved in the sense that the partners co-investing in SVF also levered in other VC finance through additional rounds of funding for businesses.

9.5.6 Other research shows that SVF compared favourably with SCF.<sup>48</sup> The SCF model had helped develop the local financial community by increasing the deal capacity of investment partners and attracting investment partners not previously involved in company finance in Scotland.

9.5.7 None of the SVF investors thought there had been any crowding out of investors (in that they were deterred from entering the market), or displacement, of investment

<sup>48</sup> Richard T Harrison. A Case Analysis of SCF and Evaluation of ERDF Supported Venture Capital and Loan Funds and the Scottish Co-Investment Fund, Scottish Executive 2008

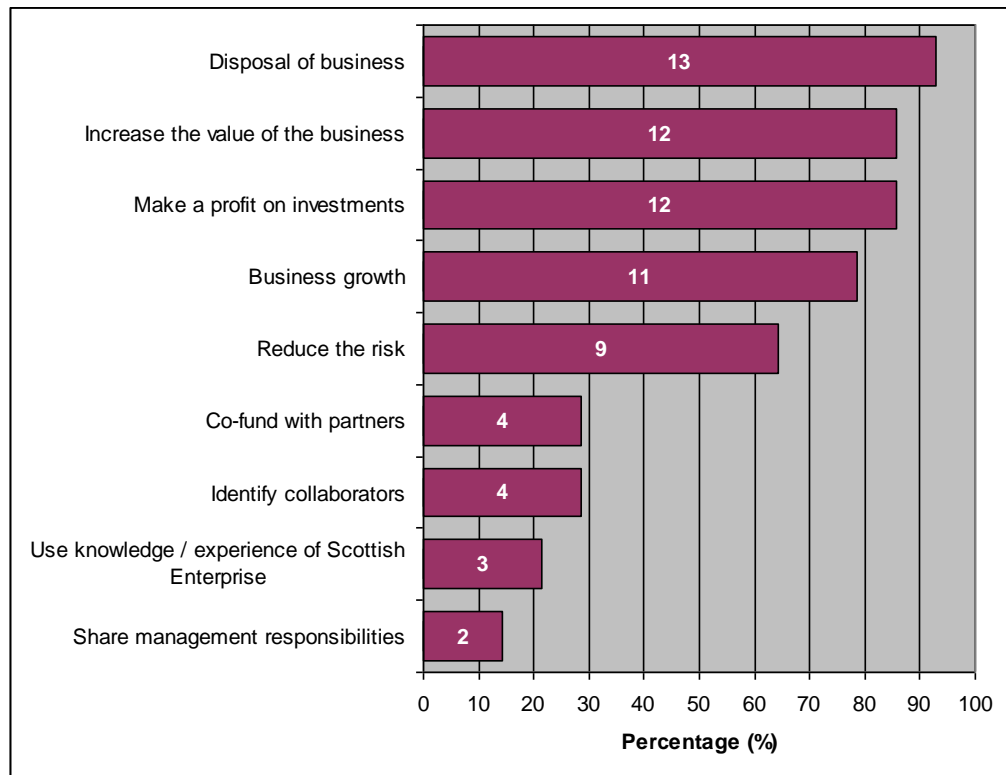
funds in Scotland as a result of SVF, ie stopping other investors from participating in the Scottish market or making investments. SE advisers and investment managers did not believe that crowding out of investors or funds was an issue. Other research finds similar findings. The structure of SCF, with investment partners bringing deals to SCF, ensures that there is no displacement of private sector finance providers – indeed, the evaluation concluded that SCF is likely to enhance the market rather than displace other providers because it only invests in deals that are brought to it by other venture capitalists<sup>49</sup>.

## 9.6 The Benefits for Partners

9.6.1 The main actual benefits for the partners were that they had reduced their exposure to risk (73% of respondents) especially for the smaller investors, grown the business and increased the business's profitability and value. The likely future benefits were disposal of the businesses (87%) through trade sales or listing, making a profit on investments (80%), coupled with an increase in the value of the businesses (80%), business growth (73%) and a reduction in risk (60%). See Figure 9.5.

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<sup>49</sup> Richard T Harrison. A Case Analysis of SCF and Evaluation of ERDF Supported Venture Capital and Loan Funds and the Scottish Co-Investment Fund, Scottish Executive 2008

**Figure 9.5** Likely benefits for funding partners

Each bar in the figure shows the number of investors that responded  
 Source: PACEC interviews with investors and stakeholders, Percentages on the bottom and number of responses in the bars.

9.6.2 For 30% of partners, these benefits would definitely not have occurred without participation in SVF (and especially for the smaller investors) and for 43% they probably would not have occurred (i.e. some 73% in total). For 29% of investors they possibly could have occurred through investment in the same or other similar companies. However, for these the benefits would have been smaller in scale and different in scope although potentially within the same time frame.

9.6.3 For businesses invested in, the actual benefits (as perceived by the investors) were that the investments helped them to meet a funding gap, obtain working capital and grow (32% of each), i.e. the SVF helped to improve the supply of capital. The other main actual benefits were the availability of risk finance, support in getting to market and gaining funding sooner than would otherwise have been the case. The future likely benefits are shown in Table 9.3 as continued investment to meet funding gaps, **and assistance to grow (80% for each benefit)**, together with improved prospects of selling out / merging with other businesses, obtaining more working capital and help to get the businesses to market (i.e. 67% for each).

**Table 9.3 Investor views: likely benefits for the business invested in**

	Percentage of all partners	Number of partners
Help the business to grow	80	12
Meet a funding gap	80	12
Help the business get to market	67	10
Obtain early funding	67	10
Provide working capital	67	10
Sell out / merge / be taken over	67	10
Provide investment capital	60	9
Improve competitiveness	60	9
Strengthen the management team	60	9
Improve profitability	53	8
Develop new products / services	53	8
Test technical feasibility	33	5
Obtain business operational expenditure	27	4
Improve R&D	27	4
Test commercial feasibility	27	4
Improve innovation	27	5
Lever in other finance	27	4
Become the market leader	20	3
None of the above	20	3

Respondents could select several options; so percentages in any column may sum to more than 100.  
Source: PACEC Interviews (Q15B)

9.6.4 Businesses that received SVF funding agreed with the investors on the benefits by and large. See chapter 5, see paragraphs 5.2.1 to 5.2.3.

9.6.5 A quarter of investors thought the businesses invested in would definitely not have achieved the same benefits without SVF. 42% of investors thought they would probably not have done so. A third thought the businesses may have achieved similar benefits but they would have been later in time, smaller in scale, and moderately different in scope and depth. Investors thought no businesses would definitely have achieved the same or similar benefits without the SVF funding.

## 9.7 Potential Improvements to SVF

9.7.1 The majority of partners who were active or had not yet invested through SVF considered that the management arrangements and most features of SVF were “good”, and the concept and operational model was sound and well managed, including the fact that it operated on a full commercial basis which helped them to achieve their aims. In particular there was agreement that the amount of funding available from SVF was about right, the flexibility of the scheme, the “application” procedures and the support from the SE team in terms of their investment and market knowledge and insights into the Scottish market. The combination of roles and skills

amongst the SE team in terms of transaction, investment/portfolio and account managers provided a pool of expertise and knowledge.

9.7.2 There were very few active investors, or those who had not made deals, who considered that any of the features of SVF were of concern or “poor”.

9.7.3 Some suggested improvements by a very small minority of active investors and those who had not made deals included giving more discretion to the SE staff to go ahead with further funding rounds for businesses (once they had been invested in – and the case had already been well made), and a reduction in the amount of information required from partners (although it was recognised that the use of public finance required greater scrutiny). A reduction in approval times was also suggested along with an increase in the overall amount of funding that could be made to individual companies. For most partners the venture capital market and the role of investors were becoming more segmented as the levels of VC investment were larger on individual deals, i.e. about £5m. There was an increasing gap in the chain of funding between the BAs (whose deals were relatively smaller compared to the VCs) and VC investors with a gap opening up in the middle. The BAs were forming syndicates in part to address this issue and to meet the needs for increased rounds of funding for businesses<sup>50</sup>, and to spread the risk. A point made by around a third of the investors was whether the SVF threshold could be reduced below £500k and increased above £2m to reflect this trend of investments towards the higher end of the £2-10m range. It was suggested by them that SE/SIB could give some consideration to extending the lower and higher ranges of funding through SVF.

9.7.4 The SVF businesses confirmed the views of investors in that three quarters thought that SVF was a good scheme and four fifths did not think that any factors were poor and merited improvements.

## 9.8 Key points

9.8.1 The key findings from this chapter were as follows:

<b>Panel 9.1 The impacts of private investors of SVF: key findings</b>	
<ul style="list-style-type: none"> <li>• All investors (especially the smaller ones) considered that most businesses faced significant issues raising finance, including some of the more viable ones, which indicated that market failure persisted.</li> <li>• On the issue of ‘information failure’ and investors not being aware of opportunities, investors agreed that this could be the case in spite of direct approaches from businesses, and extensive investor networks. However, this reason in itself is not sufficient to cause market failure at the point of funding.</li> <li>• Investors consider that relatively high due diligence costs, a market feature rather than a failure was a constraint even for the more mature SVF businesses as well as initial / first round investments.</li> </ul>	

<sup>50</sup> This trend is confirmed in other research. LINC and SSF Business angel Thinking on Exits. International Paper. Based on research by Robert E. Wiltbank

- A key reason given by investors for not funding businesses were that they were seen as too risky, even at the review / due diligence stage (especially for the high tech businesses at the research and development stage with long lead in times for commercialisation). This may be a feature of the market (rather than a market failure – except where there is excessive risk aversion).
- 40% of the investors would not have invested in the businesses without SE – this was especially the case for the smaller investors, while 33% would only have made a partial investment (i.e. 73% in total). Those that would have invested in the business without SVF would not have invested as much money.
- The main benefits for the investors were that they had reduced their exposure to risk (especially for smaller investors), SVF helped grow the businesses invested in, and increased their value and profitability. Likely future benefits were the disposal of the businesses and a profit on investments. **For two thirds of investors, these benefits would definitely or probably not have occurred without their participation in SVF, and this was more likely to be the case for the smaller investors.**
- All private investors considered that SVF had addressed market failure issues in Scotland and improved the scale and quality of development and growth funds available in Scotland, either significantly or to a large extent (in that investors were deterred from entering the market prior to co-investing through SVF). None of the investors thought there had been any crowding out or displacement of investment funds.
- SVF had met the gaps in the funding market by bringing in more investors and investment to Scotland from elsewhere
- The majority of investors considered that the management of SVF and most features of SVF were “good” and it operated well. A very small minority suggested improvements, including:
  - More discretion for SE staff to go ahead with further funding rounds
  - Reduced paperwork / information requirements, and reduced approval times
  - Increasing the amount and range of funding per company to fill the emerging funding gap which existed between the level of BA and VC investments.



## 10 Conclusions and Recommendations

This concluding chapter sets out the results of the research in the previous chapters, reflecting the evaluation aims which are shown in the introduction. The aims are assessed sequentially with the overall progress towards SVF objectives shown in section 10.4. The final section makes some suggestions on the future direction of SVF based on the evidence presented and the interpretation of the results of the research. The research issues and questions posed in the surveys and interviews were designed and customised from the outset to add value to the brief and provide evidence on which to base the evaluation. Further insights and influences are drawn out where this is appropriate and can be supported by the evidence.

### 10.1 The Extent to Which the Strategic Rationale for SVF is Still Valid

#### *The Fit with the Scottish GES and SE's Business Plan*

10.1.1 The Scottish Government's Economic Strategy (GES)<sup>51</sup> focuses on creating a more successful country, with opportunities for all of Scotland to flourish through increasing sustainable economic growth. It identifies five strategic priorities that are critical to economic growth:-

- Learning, Skills and Well-being;
- Supportive Business Environment;
- Infrastructure Development and Place;
- Effective Government; and
- Equity.

10.1.2 There are a number of key sectors prioritised, including creative industries (with digital content and technologies), energy, financial and business services, food and drink, life sciences, tourism, and education and healthcare.

10.1.3 SE's investment (including that through SVF) contributes directly to the Supportive Business Environment priority in the GES. This promotes responsive and focused enterprise support, working in partnership with others in the public, private and third sectors to increase the number of highly successful, competitive businesses, and their access to skills, finance and business infrastructure. It includes actions to address gaps and **market failures** and features in access to capital. This is recognition of the fact that the research carried out by SE shows that whilst the UK has a strong private equity market, it tends to invest significantly less in early stage risk capital (as a percentage of GDP) than many of its major competitor economies. Historically, Scotland has had a relatively lower level of risk capital investment than the UK as a feature of the market, potentially putting the economy at a competitive disadvantage<sup>52</sup> which underpins the role of the GES and support for businesses.

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<sup>51</sup> GES is available at: <http://www.scotland.gov.uk/About/scotPerforms/purposes>

<sup>52</sup> GES is available at: <http://www.scotland.gov.uk/About/scotPerforms/purposes>

- 10.1.4 SE's Business Plan for 2010/13<sup>53</sup> highlights how, by working with partners to increase the availability of early stage risk capital, this will allow companies to develop and become globally competitive. The plan recognises that in the current economic climate, the role of risk capital has become even more important in stimulating and supporting start-up and early-stage companies. Through its investment funds, SE aims to bridge the finance gap for many companies, help improve the investment market in Scotland, and address the capital funding **market failures and features**, especially in key innovative and growth sectors.
- 10.1.5 The forming of the Scottish Investment Bank (SIB) in 2010 to manage SE's co-investment funds (including SVF) is evidence of SE's actions to improve finance for SMEs. SVF, through the commercial co-investment concept with private investors and its aims and design, **provides a good strategic fit** with the GES and the SE Business Plan. It aims to strengthen the business support environment by providing a flow of capital for growth businesses to help address the funding gap by working with the private investors and address **market failures and features**. It provides advice and support to businesses through, for example, SE account managers and the representatives of SVF investors who sit on company boards that had received investment. SVF also focuses on the key sectors that are important for the growth of the Scottish economy particularly digital media and enabling technologies, life sciences and energy.
- 10.1.6 **This strategic fit** is also demonstrated through the evidence gained as part of the evaluation. This is shown in detail below. In summary, SVF has improved the supply of capital for development stage businesses and helps to fill the funding gap in the £500,000 to £2m range, with deals up to £10m. It has positively impacted on the capacity and scale of the funding market, it has helped to build funding partnerships and collaborations, created inter-dependencies between the investment funds, and formed wider linkages in the business support network. The business and economic impacts generated by SVF have contributed to the overall growth of the Scottish economy by allowing business to develop their capabilities, to innovate and create net additional jobs and GVA.

#### *Market Failures and Features of the Capital Market*

- 10.1.7 The primary consequence of capital market features and market failures that SVF seeks to address is the equity gap that exists in the supply of risk capital for viable SMEs with growth potential at the development stage in Scotland. The evidence from a number of reports prior to and during the period of SVF implementation has continued to demonstrate this. In the early 2000s, there was a withdrawal of VC investors from the Scottish market following the dot-com crash, liquidity constraints faced by business angel syndicates, and reports of good companies failing to raise capital<sup>54</sup>.

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<sup>53</sup> The 2010/13 Business Plan is available at: [Scottish Enterprise Business Plan 2010-13](#)

<sup>54</sup> Richard T Harrison. Public Policy and Regional Risk Capital Markets. A Case Analysis of the Scottish Co-investment Fund. 2009

- 10.1.8 More recent research in Scotland in 2008 indicated that the early stage and risk capital market in Scotland for development stage businesses remained buoyant prior to the recession. The market for larger and later stage deals was growing; there was an increase in the number of mature companies seeking equity; and the investor appetite has returned. However, the business angel investors still dominated the market, with less 'handover' to the VCs for medium sized investments as part of the investment chain, which was potentially constraining the market for further funding and exits.<sup>55</sup>
- 10.1.9 The SME Access to Finance research in 2010<sup>56</sup> provided an update on credit conditions. Its intended purpose was to identify changes in activities and conditions. Overall lending to Scottish SMEs in 2010 was lower than in 2009, reflecting a combination of weak demand and constraints in the supply of funding. The demand for finance had fallen since 2009. This reflects a number of factors, including an easing of working capital pressures on the demand side and an increase in the proportion of firms revising growth objectives downwards. Although economic conditions have improved, particularly in Scotland, GDP has yet to return to pre-recession levels, and a great deal of uncertainty remains as to the pace and sustainability of the recovery.
- 10.1.10 Additional evidence shows that market failures and features for capital persist in the English context which provide a rationale for the range of co-investment funds run by the Department for Business, Innovation and Skills (BIS)<sup>57</sup>
- 10.1.11 The evaluation evidence from this study continues to demonstrate that the rationale for SVF are still valid on both the supply and demand sides, with the case underpinned by the impacts of the credit crunch, and the limitations on both loan and equity funds exacerbated by the current relatively low or flat growth in the economy and related uncertainty. If anything, the rationale for SVF has strengthened in this context as viable businesses find it more difficult to obtain capital and investors need to increase their search and assessments of businesses to invest in that will give appropriate returns.
- 10.1.12 The discussions with the investors sought to examine evidence of the market features and failures for capital in that some viable companies found it difficult to obtain the finance they required and the reasons. The main types of market failure and features on the supply side, as outlined in the introduction and reflecting the views of investors, are summarised as follows:

**A shortage of information or information failure. This arises because businesses for potential investments are not known through sources and investor networks<sup>58</sup>.**

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<sup>55</sup> Scottish Enterprise, *The Risk Capital Market in Scotland*, 2008.

<sup>56</sup> Scottish Government. SME Access to Finance 2010 (March and July)

<sup>57</sup> BIS. BIS Equity Finance Schemes. Survey of Investors July 2011. BIS Equity Finance Programmes: Qualitative Review of UKHTF and the Bridges Fund July 2011

<sup>58</sup> HMSO. The Green Book. 2010 edition.

10.1.13 Initially the discussion with investors to explore these issues focused on information in the sense that investors were not able to identify businesses. It was considered that this may be the case for individual businesses and investors but collectively investors were made aware through their own searches, approaches by potential businesses and their extensive network and interactions with other investors and agencies including those with SE. However, some viable businesses may not come to the attention of investors.

**The high cost of due diligence and transactions:** early stage businesses tend to be high risk as they have unproven track records or business models and so require rigorous due diligence and analysis by investors. The costs of due diligence and analysis tend to be fixed and so represent a larger proportion of an investment in early stage and smaller deals than for significantly larger deals<sup>59</sup>. This acts as a disincentive to investors to invest in smaller deals. Also, without due diligence and research information, it makes it more difficult for investors to distinguish good investment opportunities from bad ones<sup>60</sup>. This applies to SVF where, although the deals are relatively large, they are not the largest in the venture capital market.

10.1.14 The filtering of potential investments for further review / due diligence once investors are aware of them takes place in stages by investors. A high proportion are considered as unsuitable fairly quickly and probably up to 7-8% are selected for some form of review / due diligence as being potential investments and hence viable prior to full due diligence. Part of the reason for not proceeding with full due diligence reviews was the sheer cost relative to the potential returns (compared to larger investments) and the resources available to investors. The investors agreed that even for the more mature SVF businesses, especially where initial / first round investments were made, the costs of due diligence were too high.

**The perception of risk:** information on returns from early stage growth capital investment is generally limited as only a few growth funds exist with comparable data. Lack of information on the track record of returns from equity investment can make investors more 'risk averse', and investors can underestimate the returns which can result in incorrect expectations. In this context investors may maintain their existing portfolios rather than identify new investment opportunities<sup>61</sup>.

10.1.15 For the final stage of the decision making process the discussion with investors focused on why the potentially viable businesses were refused. These reasons reflected the other market failure and feature issues associated with risk as outlined above. The main grounds for refusal were that ultimately businesses were not sufficiently developed in that they were seen as too risky (80% of investors) in spite of some trading successfully. These views in some cases demonstrate excessive risk aversion on behalf of some investors. For investors their general view of the companies seeking funding was that the revenue stream, the business team, the products and the investment readiness were not strong enough, or too much money was sought which deterred them. SVF reduced the risk for them and created the

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<sup>59</sup> Scottish Enterprise. Market Failure in the Scottish Risk Market. R T Harrison report.

<sup>60</sup> Centre for Business Research. University of Cambridge. Financing UK SMEs. 2007, 2010.

<sup>61</sup> Scottish Enterprise. The Scottish Venture Fund 2008.

prospect of a profitable exit as they invested in businesses that they would otherwise see as too risky.

- 10.1.16 There was no evidence to suggest that the companies invested in through SVF were producing higher or lower returns for investors. However, if investors were funding the whole amount, their absolute pay-off would be greater as they retained all the gains.

**Past poor performance:** Historically, there have been low returns and yields on investments in high tech companies. For example, in the 1980s, investors often made very low returns when financing early stage high technology companies as a result of poor quality investment decisions (the investment industry had little knowledge of making technology investments). Poor returns continued with the long recession of the 1990s. This has led to a current perception of poor returns from this type of investment.

- 10.1.17 The risk factors above were more pronounced where some of the high tech companies were involved and the uncertainty increased, partly because of the risks at the research and development stage and the long lead in times for commercialisation and subsequent revenue streams – although there could be some very successful high fliers.

**Limiting risk exposure and larger deals** - the private equity/venture capital industry has in recent years sought to limit its exposure to risk by focusing on buyout and secondary purchase investments, which tend to be larger and are perceived to be less risky. They have sought to focus on a smaller number of investments where the fund manager can have more control and influence on business operations and strategic decisions. This has reduced investment in earlier stage deals even with the more established businesses.

- 10.1.18 The investors confirmed that this was the case to some extent and it meant that a gap was opening up in the traditional flow of funds between the business angels and syndicates and the venture capital companies. The business angels, through syndicates, had sought to fill this emerging gap to some extent. The literature on the funding market also shows this trend<sup>62</sup>.

**Fund manager remuneration:** later stage and buyout deals have provided better returns and personal remuneration for fund managers so that there is less incentive for them to invest in earlier stage deals.

- 10.1.19 The investors accepted that to some extent this was a feature of the remuneration process, although a portfolio spread was usually the case as investors were reluctant to turn smaller scale funding opportunities away. This market feature is reinforced to some extent by the fact that due diligence costs are proportionally higher for smaller investments and fund managers sought to keep their costs down as part of their overall portfolio management and performance.

- 10.1.20 The factors above, and the fact that capital has gone into higher performing, less risky and more liquid capital funds and alternative assets, especially where markets

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<sup>62</sup> Richard T Harrison, A Case Analysis of SCF and Evaluation of ERDF Supported Venture Capital and Loan Funds and the Scottish Co-Investment Fund, Scottish Executive 2008 and LINC Scotland, the Business Angels network, Scottish Government and academics

are volatile and there is significant investment switching, have all led to a lower than optimal supply of funding to viable SMEs.

- 10.1.21 A shortage of information as outlined above, in itself, is not sufficient to overcome market failure, nor is a commitment to due diligence costs, where an excessive aversion to risk and the other factors above results in the shortage of funds.
- 10.1.22 The companies were of the view that potential investors were being exceptionally cautious with an excessive aversion to risk.
- 10.1.23 The investors considered there was a funding gap for all levels of funding and for all stages of business development. It was probably greatest for start-ups and deals up to £100k; for early stage businesses between £100k and £500k; and for growth businesses for deals between £1-2.5m and up to £10m, ie the SVF range. Investors considered that in the current economic and funding context, it was not possible to be more specific about deal sizes or funding gaps, hence they expressed a range. However, it was considered that “good” early stage business proposals, ie those seen to be viable, would attract investors as they would yield adequate investment returns.
- 10.1.24 The critical reasons for investing through SVF, for almost nine out of ten partners, were that the funds were available on a commercial and shared risk basis to match investors’ funds, which allowed the risks to be spread. For one in six partners, SE also had local knowledge of the investment market, and access to other investors who may ultimately invest further in businesses. For half the partners, SE account and investment managers had useful knowledge of the business / industrial sectors in Scotland, and market expertise in the trends and opportunities.
- 10.1.25 Around 40% of the investors would not have invested in the businesses selected without SVF; a third would only have made a partial investment, primarily because there was too high a risk and not a strong enough business case put forward by the businesses; and for three-quarters of partners, the management team was not strong enough. Hence SVF helped spread the risk. The SE wider support also helped to strengthen the management team and hence the prospects for the investor exit strategy.
- 10.1.26 The overwhelming majority of partners focused their investment (without SVF) on businesses which they thought were less risky – ie safer bets (especially in the current economic climate), but which would grow profitably, and could be sold.
- 10.1.27 The continued existence of potential **market failure** for capital on the demand side was explored through the interviews with businesses that SVF has invested in. The main reasons for market failure are:
- A shortage of information. SMEs are not sure of the best sources of finance for development or how to obtain it at acceptable costs.
  - A lack of investment readiness. SMEs, even with a track record, are unable to present themselves as investable opportunities, eg poor business plans and models or adequate management skills.

- An aversion to equity funding. A reluctance to dilute ownership further or share IP rights are the most common features as confirmed by businesses in the survey.

- 10.1.28 Almost all the businesses that were consulted had specific financial issues that needed to be met, resulting in their application for and subsequent use of SVF, and two-thirds faced a specific and defined funding gap for both working and investment capital – here they were reasonably clear what the monies were needed for.
- 10.1.29 On the information failure side of market failure (as above), it is not apparent that SVF businesses were not aware of the sources of funding or how to access it – and therefore this market failure may not exist. However, other non-SVF businesses may well be unaware of sources of funding and the literature would support this<sup>63</sup>. Six in ten businesses had sought alternative funding to SVF but without success. A third of these had been unsuccessful, whilst the remainder had only been partially successful, primarily with funds from other venture capital sources. Of those that did not apply for alternative finance, most preferred to manage without it, because they considered the overall terms were not acceptable, eg: in particular they did not wish to dilute their equity.
- 10.1.30 Overall the behaviour of the businesses that did not obtain alternative finance potentially reflects a degree of market failure in that they potentially could not demonstrate investment readiness at their stage of development (and were seen as too risky). In terms of the aversion to equity as a market failure, or market feature, one of the main reasons for not applying for alternative finance to SVF was that the conditions likely to be set by investors in terms of a dilution of ownership were not acceptable to them. Of the businesses that applied for additional finance to SVF once they had secured it, almost all were successful, hence the market failure issues had been alleviated to some extent.
- 10.1.31 Both businesses and the investment partners consulted considered the **market failures and features** with respect to finance would continue in the short to medium term. The availability of capital would remain in short supply over the next three to four years up to 2015 at least because of continuing economic uncertainty. There was some degree of market segmentation in the market amongst investors. A funding gap was forming for the £5-10m range for capital because business angels (including syndicates) were investing up to the £5m level, but the VCs were increasingly more likely to be investing around £10m and above.
- 10.1.32 The results of the research shows that on the basis of the **market failure** rationale of SVF related to the supply of capital and the potential demand for it, there is a continued justification for SVF funding for businesses at the development stage where the funding gap lay in the £1-2.5m range, and up to £10m. Given the

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<sup>63</sup> Note the Rowlands Review (2009) and BIS. BIS Equity Finance Schemes. Survey of Investors July 2011. BIS Equity Finance Programmes: Qualitative Review of UKHTF and the Bridges Fund July 2011

uncertain market and economic context the availability of funds for viable businesses has decreased over time.

### *The Impact on the Funding Market*

- 10.1.33 A key aim of SVF is to improve the supply of funds for businesses in Scotland. The management information from Scottish Enterprise shows that SVF provided some £39.9m (or £42.7m at 2011 prices) in funding, i.e. an average of £1.4m per business for the 28 different businesses. SVF levered in an average of c.£3.3m per business from other funding sources, primarily from BAs and VCs, a leverage ratio of 2.3. The total amount levered in was £91.2m.
- 10.1.34 The SE management information also shows that there were some 66 partners that could provide capital through SVF, 44 (61%) of whom were active. Given that partners had been selected in part because of their investment track record and commitment, this degree of non-investment shows the caution that exists in the market. The implications are that this could be underpinned by the market failure issues on the supply side outlined above. None of the partners considered that SVF had displaced or crowded out existing funds or investments that would otherwise have been made in Scotland – SVF brought in significant additional funding.
- 10.1.35 A key feature of SVF is that it had improved the supply of commercial funds through deals with SE, i.e. the SE finance was being used commercially, supported by the aims to stimulate investment returns through business growth. There was no indication that investors reduced their funding to other businesses because of the investment through SVF. However, other high risk businesses that were not appropriate for SVF could be underfunded.
- 10.1.36 In terms of addressing the **market failure** issues and the funding market overall, some two-thirds of partners considered that SVF had significantly improved both the scale and quality of venture funds available in Scotland. This was especially the case for the smaller investors who made fewer deals. Almost a third said funding had improved to a large extent, and the funding pipeline had been extended from seed / start-up to more mature businesses (i.e. the SSF, SCF and SVF escalator). Correspondingly similar proportions of partners said that new funders had entered the Scottish market, with a quarter from outside the UK and a quarter based in London and the south east who were not previously active in the Scottish market before.

### *Linkages and Dependencies with Other Support*

- 10.1.37 Interdependencies between SE programmes and the wider innovation and business support system help to strengthen the overall capacity of business support in Scotland and the expertise businesses can draw on. The research shows some positive interdependencies between SVF and the other SE funds and other business advisers in Scotland which help to underpin and add to the benefits for supported SMEs. They also help to strengthen the network of support in Scotland and help



develop an active system for innovation, linking the key players (e.g. businesses, investors, advisers in HE and the private sector and SE).

- 10.1.38 SVF is targeted at growth businesses at the development stage, as part of a funding escalator where some businesses may have graduated from SSF and SCF. The evidence from the SE management information shows that a third of businesses receiving SVF were also in receipt of SCF, and one progressed from SSF. One in four also used the SE Portfolio Fund.
- 10.1.39 The survey research with businesses shows that around two-thirds received advice from an SE account or portfolio manager. However, they could not always distinguish between the two. 15% of businesses who had this advice said it was very important, and 60% said it was important to them (ie: combined some three quarters of businesses).
- 10.1.40 As well as SE advisers, there were a range of linkages between SVF and other advisers and agencies in Scotland which help strengthen the impact of SVF. Of critical importance, a third of SVF companies received direct advice from their investors who sat on management teams and Boards. A quarter received support from HE / university advisers, and one in five from independent advisers and consultancies. Just under a third claimed positive impacts through joint working with collaborators, mainly other businesses.
- 10.1.41 SVF had an impact on international linkages. For example, a quarter of the SVF investors were based outside the UK, and for the SVF businesses two-fifths had started exporting, had increased their export sales and opened up new export markets, which they attributed to the SVF. Some nine out of ten thought they would start exporting and increase their export sales after five years, and this position would be retained after a ten year period.

## 10.2 The Economic Impact of SVF

- 10.2.1 The evaluation has sought to assess the impacts on businesses invested in through SVF and, in particular, the innovation and business performance effects and benefits and how these translate into economic benefits for the Scottish economy (e.g. net additional jobs and Gross Value Added). The assessment has been both qualitative and quantitative, covering actual impacts at the time of the evaluation and likely future impacts. It recognises that impacts take time to feed through, primarily because of the nature of equity investment, the fact that many of the businesses are concerned with innovation and the development of new products and services which have a time lag before commercialisation, and the current economic context and continued uncertainty.
- 10.2.2 The evaluation focused on some key indicators that would result in economic growth. The research with businesses showed that SVF stimulated their innovation and R&D activities. Some 90% had or would increase spending on R&D, and eight out of ten had improved innovation outputs, i.e. tested the commercial and technical feasibility

of ideas (85%), produced new scientific and technical knowledge (75%), and developed new products and services (75%).

- 10.2.3 The majority of businesses invested in were in the more innovative sectors in Scotland, including digital media and enabling technologies (54%), life sciences (25%) and energy (18%). These reflected the Scottish Government's priority sectors and the strategic policies for growth with the emphasis on creative industries, energy, and life sciences.
- 10.2.4 The discussions with businesses indicated that two-thirds had actually increased their productivity as a result of SVF at the time of the evaluation, and 85% expected to do so over the next ten years. 60% of businesses had started to export, increased their exporting sales, and opened up new export markets. It was expected that around nine out of ten would see further positive impacts in these exporting areas over the next 10 years. At the time of the evaluation three-quarters of businesses had increased their employment, and nine out of ten expected to do so over the next 10 years. Three-quarters had also increased their turnover, and all of them considered that this would increase over the next ten years.
- 10.2.5 Over half the businesses stated they would not have achieved these impacts without SVF.
- 10.2.6 Overall, the research shows that the net additional employment attributable to SVF was 317 (FTE) jobs at the time of the evaluation; which was likely to rise to 386 in the short term, and 527 in the medium term (to 2021). The net additional cumulative GVA is likely to be £49m by 2016 and £147m by 2021 (at 2011 prices). This shows that SVF was making a significant contribution to the Scottish economy in key priority sectors, for example creative industries and digital media, life sciences and energy, and very much in line with the GES and the SE Business Plan. In terms of value for money the current cost per FTE is £134k per job. In the short term, the estimated economic impact ratio will be £131k per net additional FTE job, and over the medium term the cost per job will fall to £114k (again, in 2011 prices). Over the period up to 2021 each £1m of SVF investment is likely to generate £3.5m in GVA. While a relatively high cost for public interventions, especially on jobs, this is to be expected for equity investments as it takes some time for the impacts to feed through, especially in the current economic climate. Also for sectors, such as life sciences, the period of time to commercialisation and subsequent jobs can be relatively long.
- 10.2.7 At the stage of development of SVF and the investments it was not appropriate to assess the full commercial performance as the investments generally are not sufficiently mature. The effects of investment are still feeding through and are likely to take longer to come to fruition, primarily because of the current economic context and ongoing uncertainty. Funders were of this view and anticipate a 5 to 7 year period for existing investments to bear fruit, compared to 3 to 5 years in the mid 2000s.

10.2.8 At the time of the evaluation one business had been sold. Up to March 2011 there were three major incomes from SVF shares totalling £2.75m. These arose from investments totalling £2.44m, which represents a return of 13%. In both cases the returns were made after two years, so the annual rate of return was 6%.

10.2.9 However, there are strong indications of future commercial success, in the sense that nine out of ten funders believed they would be successful in disposing of the SVF businesses and making a profit on their investments in a timescale of over 5 to 7 years. This optimism was based on their views that the businesses would grow, improve profitability and increase in value in spite of the economic context and ongoing uncertainty. Underpinning this, there was evidence that the businesses had already strengthened their R&D activities or were likely to do so; develop their intellectual property; continue to exploit new products and services; increase their sales (and exports), the value of their assets and profitability; and progress towards a sale through a merger or take-over.

### 10.3 The Management and Delivery of SVF

10.3.1 From the point of view of businesses, 80% considered that the management and delivery of SVF was “good”. It allowed them to finance the operation of the business (especially for R&D and innovation activities), and there were positive views about the amount of funding and support from the SE team. The investors held similar views, and thought that the management and delivery and most features of SVF were “good” and the fact that it operated on a full commercial basis which helped investors achieve their aims. In particular, the amount of funding available, the flexibility of SVF, the “application” procedures for funding and the support from the SE team (including the accounts, transaction and investment managers) were highlighted, along with their investment and market knowledge on growth businesses and insights into the Scottish business and funding market.

10.3.2 While the financial support was important, it was complemented by the non-financial support for businesses. Two-thirds of businesses said they worked closely with the SE account managers, and almost all claimed this support was important to them. A second area of expertise and interaction was investors being represented on boards. Businesses would not have had access to this type of support without the SVF investment.

10.3.3 Apart from the finance available, the investors chose to invest through SVF because SE staff had knowledge of other local investors (which could assist with joint or further rounds of funding) had knowledge of the sectors in Scotland, the funding market, and the business market in Scotland.

10.3.4 Interviews with SE account managers, in particular, suggest that they are proactive in referring SVF companies to the type of specialist business support, over the period of the investment, which they need in order to generate business growth. This in turn permits SIB / SE portfolio managers to proportionally focus attention on those

companies which already have the necessary management skills and investor relations to succeed and are ready to generate significant returns on investment.

10.3.5 Very few weaknesses were identified. A very small minority of the private investors suggested that SE staff should be given more discretion to go ahead with further funding rounds for businesses in order to speed up the process and provide more certainty. There should also be a reduction in the amount of information required from partners (although it was recognised that approval for the use of public finance required greater scrutiny to help ensure it was justified and represented value for money). Other points mentioned were a reduction in approval times, and an increase in the overall amount of SVF funding that could be made to individual companies. For some partners the VC market was becoming more segmented and the levels of VC investment were higher, i.e. about £5m. An issue raised was whether the SVF threshold could be increased above £2m to reflect this trend towards the higher end of the £2-10m range.

10.3.6 The performance management data kept by SE is stored in a clear and consistent manner for all companies, and it is difficult to see how the system could be improved. It already covers, for each company in receipt of SVF:

- Complete and comprehensive contact details and company characteristics
- Complete and comprehensive details of SE funding: Date, Equity/Loan, 3rd party
- Complete and comprehensive details of loan interest/repayments, dividends and sales with dates
- Incomplete but comprehensive annual summary accounts since year of first funding: including turnover, profits, employment costs and number of employees. SE is in the process of making this element of the management data more complete.

10.3.7 SVF has to a large extent provided an integrated, cohesive, and consistent approach, in that the delivery was endorsed by both businesses and funders.

## 10.4 The Overall Progress towards SVF Objectives

10.4.1 The evaluation brief sets out two main objectives for SVF. The evidence from the research presented for each of these is as follows:

- ***Support the development of the early stage investment market through measures designed to increase the level of risk capital and numbers of risk capital providers potentially available to Scottish companies (acting as a strong catalyst rather than dominant investor).***

SVF has been successful in increasing the amount of early stage venture capital available in Scotland. Some 40% of the investors would not have invested in the SVF businesses without SE, and a third would only have made a partial investment (i.e. nine out of ten partners in total).

In terms of flows into the funding market the management information from Scottish Enterprise shows that SVF provided an average of £1.4m in funding for 28 different businesses. Hence SVF levered in an average of £3.3m per business from other funding sources, primarily the BAs and VCs, a leverage ratio of 2.3. Some £91.2m had been levered in from private investors.

Some two thirds of partners considered that SVF had improved both the sale and quality of venture funds available in Scotland, either significantly or to a large extent.

The number of fund managers operating in the SVF sector has increased given the growth in the venture capital industry illustrated above. Also, some £91m had been levered in from private investors and new funders had entered the Scottish market from England (the South East in particular) and from overseas. Investors thought they were less likely to have invested in Scotland without the SVF.

The research shows that half the partners thought that SE would not invest in the companies without SVF and the co-investment approach. Some 40% thought SE may make some partial funding available but through grant funding.

Discussions with investors showed that some of the investors would not previously have invested in the SVF Venture Capital Market to the same extent. This is primarily because they were business angels, rather than VCs, and had invested in their own right or as part of syndicates in the sector. Normally their investments would have been somewhat smaller and for earlier stage businesses.

**In combination these findings show that SVF has stimulated a growth in the venture capital industry.**

The evaluation found that none of the SVF investors thought there had been any crowding out, or displacement, of investment funds in Scotland as a result of SVF, ie other investors had not participated in the Scottish market, or not made investments. The SE advisers and investment managers did not believe that crowding out of investors or funds was an issue.

- ***Operate on a fully commercial and equal risk sharing basis with the private sector to the highest professional investment standards.***

The investments in business that use SVF reflect the aims of the scheme to invest on a £ for £, equal risk and equal reward, pari passu basis or a commercial basis with private sector deal promoting partners.

A key feature of SVF is that it had improved the supply of commercial funds through deals with SE on a shared risk basis. SE finance was also being used commercially, supported by the aims to stimulate returns through business growth.

The investors and businesses considered that the professional and investment standards of the SIB / SE staff were high. They valued their expertise in terms of making deals, their knowledge of the Scottish markets and investors and sectors and their relationships with businesses and investors.

- 10.4.2 At the time of the evaluation some twenty eight SVF businesses had been funded, showing progress towards the ERDF target of 42 by 2012. Some 786 gross FTE jobs had been generated, which is above the target (but these included the pre-ERDF take-up of firms). £53.3m in gross turnover had also been generated.
- 10.4.3 Overall these results show that SVF had progressed significantly towards its objectives.

## 10.5 The Positive Impact of SVF

10.5.1 SVF has made significant progress in terms of its objectives and brought positive benefits to the Scottish economy in a number of ways:

- a *Economic Benefits.* It has generated some 386 net additional FTE jobs. The jobs figure is likely to rise to 527 by 2021. The cumulative GVA generated is likely to be £49m by 2016 and £147m by 2021.
- b *Intermediate Business Impacts.* The businesses have strengthened their R&D, innovation and technological capability which have resulted in improved and new products and processes which have reached the market place or are likely to do so.
- c *Key Sectors.* The main thrust of the impacts has taken place in the priority sectors in Scotland, eg creative industries and digital media, life sciences and energy which are increasingly important for the Scottish economy.
- d *Improvements in the Supply of Finance.* SVF has led to an injection of funding in Scotland provided by the risk capital investors.
- e *The Innovation System and Support Infrastructure.* There has been increased and collaborative engagement in SVF businesses by the network of advisers in the innovation system, eg SE, HEIs, private consultants and the specialist advisers of venture capital and business angels and their syndicates.

10.5.2 Overall, although the cost of impacts (eg for jobs and GVA) has been relatively high, this is primarily because it takes some time for the impacts of equity funding to feed through. Life sciences is a good example here where it takes some years to develop products and test them fully prior to going to market. The impacts are also potentially slower to emerge in the current economic context. However, the positive impacts of SVF show that it has, and will continue to, demonstrate value for money.

## 10.6 Future Direction and Recommendations

10.6.1 The research and consultations with businesses and partners has shown that the management of SVF was good, the basic concept of SVF, its relationship with other funds in SE (i.e. SCF), together with the level of funding from SVF, i.e. £0.5-2m for development stage and growth businesses, remains valid. This is particularly the case within the changing funding and economic context and ongoing uncertainty over funding which strengthen the rationale for intervention. The evaluation has shown positive evidence of actual and future business performance and economic impacts, and the positive impact that SVF has had on the funding market bringing in active new investors from outside Scotland for development stage businesses.

10.6.2 The key lesson is that the operation and delivery of SVF has worked well. Some suggestions are made for the future operation. However, based primarily on the views of investors, it is recognised that the budget availability for SVF is liable to be constrained in the current economic climate.

- a *Improvements in delivery.* There are a number of points made by a small minority of businesses and partners and other observations made as part of the research.

Steps could be taken to increase the participation of some funding partners, particularly as around a third had made no deals.

- While businesses recognised the benefits of account management, the relationship could be strengthened to help ensure a consistent flow of advice for them.
- For businesses and investors the roles of transaction, investment, portfolio and account managers for SVF could be clarified.

b The management data. The information on businesses and investors is already robust and comprehensive. SE is already addressing the issue of making the annual employment figures more complete.

c Monitoring of the economic impacts. It takes time for the full actual impacts of equity impacts to feed through. Hence these impacts need to be regularly monitored every few years to assess the implications for policy and ultimate cost effectiveness.

10.6.3 The above suggestions could be appropriate to the other funding programmes, especially SSF and SCF.

10.6.4 These suggestions above are given equal priority for consideration and implementation by SE.

## Appendix A Specific Evaluation Questions

- A1.1 For each of the main evaluation aims shown in the introduction, the brief outlined some specific questions which the research should seek to cover if possible, based on the evidence available and the methodology agreed with the Steering Group. In addressing **the strategic rationale** for SE's involvement in the provision of venture capital the following should to be considered:-
- A brief assessment of the fit with GES, SE's Business Plan and sector strategies and sector delivery plans. This should include an assessment of the Funds' role in contributing to these strategies and plans and any actions that might improve the effectiveness of the "fit";
  - An assessment of the original and current **market failures** that justified, and continue to justify, involvement in this area;
  - Determine how the market has changed, looking at such issues as market adjustment, the role that SE has had in this and the evidence for new failures in the light of the current economic conditions and other factors;
  - Assess the extent to which these failures justify public sector investment in this area;
  - Assess the linkages and dependencies of the Investment Funds, looking at:-
    - The effectiveness of progression and the complementarities between the Funds;
    - Linkages with other SE interventions, especially account management. This should include an examination of the extent to which the Funds have been able to support the growth plans of companies that are, or have previously, been account managed and the extent to which support through the Funds has resulted in companies being able to become account managed;
    - The extent to which support through the Funds has resulted in other opportunities such as internationalisation; and
    - Links with other public and private sector activity.
- A1.2 In addressing this, and indeed the other objectives, the appointed consultants need to report on the SEED and Venture Funds individually. However, it is recognised that there may be some commonalities between them that may mean that the two reports have common elements.
- A1.3 Assess progress that the two funds have made in achieving their original objectives. This could involve both qualitative and quantitative assessment and judgements as to whether these objectives are still valid.
- A1.4 In undertaking **the impact assessment** it was important that the impacts to date (at the time of the evaluation) and potential future impacts are assessed in a way that fits with SE's current practice.
- A1.5 For each of the Funds (or collectively in those cases where investees have received support from both Funds and other Funds such as Co-Investment and individual Fund impacts cannot be separately identified) the consultants should assess the net additional impact of the Funds both to date and into the future on:-
- Research & development spend;



- Innovation spend;
- Productivity;
- Exports;
- Employment;
- Turnover; and
- Gross Value Added (GVA)<sup>64</sup>;

A1.6 The commercial performance of each of the Funds should also be assessed in terms of:-

- Reviewing and critically assessing the overall performance in terms of the commercial return achieved to date, number of company failures, exit opportunities, and the overall risk profile of the portfolio;
- The activities and key achievements. This will include reviewing the quantitative and qualitative benefits, outputs, outcomes and impacts achieved to date and those forecast;
- Assessing the usage, quality and demand for each Fund. This will include establishing the levels of customer satisfaction of the support provided and identifying key strengths and weaknesses; and
- Assessing each of the Funds' additionality both from the point of view of the investor; the investee and SE.

A1.7 Finally, the evaluation should assess the impact of SE's interventions on the venture capital market covering such things as:-

- Has the market been stimulated and if so, in what way;
- To what extent the gaps been addressed and to what extent there is evidence of market adjustment;
- Consider what future actions are required before market adjustment is achieved so that the market is performing as well as in, say, comparator regions;
- Assess the impact on the investors; and
- Assess the impact on the overall market (in terms of the supply of risk capital: effectively whether the Funds have addressed the gap).

A1.8 In considering the Funds **Management and Delivery** consultants should:-

- Assess the effectiveness of the management and delivery of each Fund from the investors and investees perspectives and highlight any areas where improvements could be made;
- Assess the type and extent of non-financial support provided; and
- Review the performance management data and its robustness.

A1.9 Attainment of the above objectives should enable **Future Direction** for the Funds to be assessed<sup>65</sup>. Accordingly the evaluation should:-

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<sup>64</sup> Gross value added (GVA) is a measure of the economic output of a producer, industry or the economy as a whole. GVA can be defined as the turnover of an organisation less the cost of brought in materials, components and services. An alternative definition, that gives the same figure, is operating profit plus employee costs plus depreciation.

- Highlight the lessons that have been learnt from the evaluations as to the management and delivery of public sector venture funds. This should cover what works well and what improvements and changes could be made. As far as possible comparator evaluations should be drawn on;
- Consider any options for improving the economic impact of the Funds
- Highlight any transferable learning, that is learning that could be transferred into other projects or programmes or could have an impact on future strategy or policy;
- Comment on the management data collected by the Funds, its ease of access, validity and outline any suggestions for improvements in the type of data collected, its management and use; and
- Outline evidence based recommendations for the future direction of public sector venture funds that would optimise performance.

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<sup>65</sup> It should be noted that it is likely that the SEED and Venture Funds will be incorporated into the Scottish Investment Bank at some stage. Despite this it is felt that there may be relevant learning points coming from these evaluations that could influence the future management and delivery of public sector venture capital support.

## Appendix B Estimation of economic impact

### B1 Estimation method

B1.1 Six measures of gross impact are sought from each business (Q37a, Q39a in the questionnaire) :

- Current (2011) FTE employment and annual sales
- Short term (2012-16) FTE employment and annual sales<sup>66</sup>
- Medium Term (2017-21) FTE employment and annual sales

B1.2 The number of responses for current and short term impacts is particularly high for a survey of this nature, whereas those for the medium term drop by over 50%. As a result, the short term (2012-16) impacts are given greater prominence in the report.

**Table B1.1 Response rate for economic impact questions**

Impact measure	Number of respondents	
	Employment	Annual Sales
Number of surviving companies	26 (100%)	26 (100%)
Current (2011)	20 (77%)	20 (77%)
Short term (2011-16)	20 (77%)	18 (69%)
Medium term (2017-21)	8 (31%)	7 (27%)

Note: Percentages are the number of responses as a share of the number of surviving companies  
Source: PACEC survey of SVF companies 2011

B1.3 In cases where this information is not available (either because the respondent was not willing/able to answer the question, or because the organisation was not able to complete all the questionnaire), the following estimates are made:

- The **Current estimate of employment or turnover** (for the 6 organisations who didn't answer the question) is equal to the mean Current employment or turnover value of the 20 who did answer the question.
- The **Short-term estimate of employment** (for the 6 organisations who didn't answer the question) is generated from the Current estimate by multiplying it by the mean ratio of Short-term to Current employment for the 20 who did answer the question.
- The **Short-term estimate of turnover** (for the 8 organisations who didn't answer the question) is equal to the Current estimate of turnover added to the mean difference between Short-term and Current turnover for the 18 who did answer the question. In many cases companies currently have zero turnover, so a multiplicative algorithm is not appropriate.
- The Medium-term estimate is a straight line projection from the current and Short-Term estimates<sup>67</sup>. This is based on survey evidence in which the

<sup>66</sup> Given the difficulty that organisations have in estimating future employment and sales, it was not considered appropriate to ask for ten separate annual estimates of future employment and sales. The wording of short term (2012-2016), and medium term (2017-2021) reflects the inexact nature of these estimates. In the unusual instances where respondents requested clarification, interviewers asked for estimates for the mid points of the periods (2014 and 2019).

median change from current to short term is approximately equal to the change from short term to medium term (for both employment and turnover).

- B1.4 In order to check the estimates, the grossing up for the total number of businesses that received SVF was carried out using the non responses as missing values from the outset. The results were the same.
- B1.5 In cases where a business is known to have gone into liquidation (and has therefore not been surveyed), the gross effects are set to zero.
- B1.6 **Optimism Bias**, the extent to which businesses over-estimate of how they will grow in the future is addressed *in relation to employment* using two sources of evidence, following the spirit of the current Green Book Guidance<sup>68</sup>. In the first place the actual death rates of SVF businesses is used to estimate future death rates, and in the second place, the actual growth of Scottish Companies in receipt of SMART awards<sup>69</sup> is used as a benchmark to check whether the growth rates are plausible.
- The assumption is made that the annual rate at which SVF businesses will fail in the future is equal to the annual rate at which they failed in the past. The annual survival rate in the past, in which 26 out of 28 survived over 3 years, is calculated to be 0.98 ( $=[26/28]^{1/3}$ ). The 5 year (short term) effects are then multiplied by 0.90 ( $=0.98^5$ ).<sup>70</sup>
  - After this optimism bias adjustment has been taken into consideration, the annual growth rate in employment of SVF businesses, from 712 in 2011 to 1319 in 2016 is 13% ( $=[1319/712]^{1/5}$ ). This is compared with the actual annual growth rate of 10% of non micro SME businesses in receipt of SMART awards. Given that the average SMART award was £160k, and the average SVF investment was £1.4m, the slightly higher growth rate of SVF businesses is judged to be reasonable. It is therefore judged that the adjustments which were made to avoid over-estimating impacts were valid and of a realistic size, and that no further optimism bias adjustment is deemed necessary
- B1.7 Optimism bias in relation to turnover (which affects GVA estimates) is addressed in two ways<sup>71</sup>:

<sup>67</sup>  $MediumTerm = ShortTerm + (ShortTerm - Current)$ . So if Current Employment is 10, and ShortTerm employment is 15, MediumTerm employment will be 20

<sup>68</sup> [www.hm-treasury.gov.uk/data\\_greenbook\\_index.htm](http://www.hm-treasury.gov.uk/data_greenbook_index.htm) downloaded 22nd June 2011

<sup>69</sup> Using data for SMEs (excluding micro companies) from PACEC's evaluation of SMART Scotland (2009 for Scottish Government Social Research) this is the best available evidence of actual recent growth figures for Scottish SME companies in receipt of public assistance, which are similar with regard to size, sector, age and stage of development.

<sup>70</sup> The projected growth of a company which actually fails is one form of optimism bias (the other being the project growth of companies which do not fail). The projection forward of death rates deals with the first form of optimism bias. However, there is an argument that death rates may slow down - this would be the case where the poor companies had been weeded out in the first 3 years. This means that projecting forward the death rate may address not only address the first form of optimism bias, but it may be addressing the second as well

<sup>71</sup> Turnover growth rates were not used due to the problem of some companies having zero turnover.

- The projected annual survival rate used for employment is applied to turnover.
- A maximum turnover per employee of £450k (based on the top decile of SMART award recipient businesses and double the mean value from Scottish National Accounts) is applied to all turnover estimates. This eliminates one form of optimism bias (an excessive forecast increase in turnover giving rise to unrealistic output per employee) and also ensures that the adjusted values of turnover and employment are mutually consistent.

B1.8 Estimates of GVA (both current, short term and medium term) are then made using estimates of GVA as a share of turnover for the relevant industrial sector, given in the following table.

**Table B1.2 Gross Value Share of Turnover by Sector**

Sector	GVA % of Sales	Sector	GVA % of Sales
Aerospace	<b>33</b>	Food & Drink	<b>40</b>
Chemicals	<b>21</b>	Forest industries	<b>32</b>
Construction	<b>39</b>	Life science	<b>49</b>
Digital Media & Enabling Technologies	<b>52</b>	Tourism	<b>57</b>
Energy	<b>23</b>	Textiles	<b>35</b>
Financial Services	<b>53</b>		

Source: 2008 Scottish Input-Output Tables; PACEC analysis

B1.9 A further five measures are obtained from each business, as outlined below. In cases where respondents were unable or unwilling to make estimates of deadweight, displacement or leakage, means of those who did are used.

- **Deadweight** is the business's estimate of what would have happened to employment and turnover in the absence of SE funding (Q37b, q39b). The actual question asks for the employment and annual sales which they would have expected if they had not received SE funding. This is converted to a percentage of what happened/is likely to happen *with* SE funding. It should be noted that the level of **substitution** is assumed to be zero, i.e. in the absence of SE funding, no other public equity funding would have been used.
- **Displacement** is the business's estimate of the percentage of its sales which, if the firm ceased trading tomorrow, would be taken by its competitors in Scotland (Q46)
- **Direct Leakage** is the business's estimate of the percentage of staff / value who live outside Scotland (Q45<sup>72</sup>).
- In addition, a **Mergers and Acquisitions** adjustment has been made that accounts for evidence, arising from research by Scottish Enterprise, that in future years a third of all economic impact is lost to Scotland due to takeovers by and mergers with companies operating outside Scotland.
- **Attribution proportion** is the business's estimate of what proportion of the gross additional impact could be attributed to SVF in cases where the business received multiple funding from SE (Q41). The default estimate is the SVF funding as a share of the total SE funding in order to take account of this.

<sup>72</sup> The actual question asks for the percentage of staff who live in Scotland

B1.10 Two sources of evidence are used for estimating the supply chain effect **multipliers**. The first source of evidence is the type II employment and GVA multipliers from the 2007 Scottish Input-Output tables. The second source of evidence is businesses own estimates of the proportion of their goods and services which come from Scotland.

- In the Input-Output tables, multipliers vary quite considerably by sector - for example the employment multiplier for Energy is 6.2. However, it is understood that these larger multipliers are appropriate for the core and rather large organisations in these sectors, and less appropriate for those organisations receiving SVF. The DMET multiplier (of 1.7) is the median multiplier for the SVF recipients. Furthermore, the Input-Output tables show that this multiplier of 1.7 arises from a sector which purchases 40% of its goods and services from Scotland.
- In cases where businesses have estimated the proportion of their goods and services which come from Scotland, this is used to modify the multiplier, so that a company purchasing 20% of their goods and services from Scotland would have a multiplier of 1.3 ( $=1 + 0.7 * 20/40$ ), whereas a company having 0% Scottish goods and services would have a multiplier of 1 ( $=1+0.7*0/40$ ), and a company having 40% Scottish goods and services would have a multiplier of 1.7 ( $=1+0.7*40/40$ ).

B1.11 The following calculations are then performed (for each of the six measures of current, short-term and medium-term employment and GVA)

- For both the Intervention and the Reference Cases
  - Subtracting the **Displacement** and **Leakage** from the **gross** impact we obtain the **net** impact.
  - The **Full net** impact is equal to the **net** impact plus the **supply chain** impact.
  - Finally, companies which recorded losses have the value of these losses subtracted from the GVA impact to give **Full Net – Losses**. Losses are taken into account at the end of the calculation as it is a company's turnover generates multiplier effects in the supply chain even if records a loss.
- The **Net Additional** impact is the difference between the Intervention and Reference case Full Net Impacts.
- The **Net Additional-Attributable** impact is equal to the Net additional impact less the **non attributable** effect (namely the part of the impact which was attributable to other SE funding).

**Table B1.3 Economic Impact Measures**

	Comment
Intervention case Gross	<i>Estimate of impact with SVF</i>
Intervention case Displacement	<i>Estimate of impact on Scottish competitors</i>
Intervention case Leakage	<i>Estimate of Gross impacts falling outside Scotland</i>
Intervention case Net	Intervention case Gross <b>MINUS</b> Intervention case Displacement <b>MINUS</b> Intervention case Leakage
Intervention case Full Net	Intervention case Net <b>PLUS</b> supply chain or multiplier effects <i>Some call this direct, indirect and induced</i>
Reference case Gross	<i>Best estimate of impact <b>without</b> SVF</i>
Reference case Displacement	<i>Estimate of impact on Scottish competitors</i>
Reference case Leakage	<i>Estimate of Gross impacts falling outside Scotland</i>
Reference case Net	Reference case Gross <b>MINUS</b> Reference case Displacement <b>MINUS</b> Reference case Leakage
Reference case Full Net	Reference case Net <b>PLUS</b> supply chain or multiplier effects <i>Some call this direct, indirect and induced</i>
Net Additional	Intervention case Full Net <b>MINUS</b> Reference case Full Net
Net Additional-Attributable	Net Additional <b>MINUS</b> non attributable
Intervention case Displacement %	Intervention case Displacement <b>DIVIDED BY</b> Intervention case Gross
Intervention case Leakage %	Intervention case Leakage <b>DIVIDED BY</b> Intervention case Gross
Intervention case Multiplier	Intervention case Full Net <b>DIVIDED BY</b> <sup>73</sup> Intervention case Net
Reference case Displacement %	Reference case Displacement <b>DIVIDED BY</b> Reference case Gross
Reference case Leakage %	Reference case Leakage <b>DIVIDED BY</b> Reference case Gross
Reference case Multiplier	Reference case Full Net <b>DIVIDED BY</b> Reference case Net
Deadweight %	Intervention case Full Net <b>DIVIDED BY</b> Reference case Full Net <i>(This is the deadweight of the full intervention – before attribution has taken place)</i>
Attribution %	Net Additional-Attributable <b>DIVIDED BY</b> Net Additional <i>(This is the proportion of Net Additional impacts that is due to the SVF part of the funding package)</i>

Source: PACEC

B1.12 The 3 estimates for each of GVA and Employment are then interpolated to give 11 annual estimates as follows:

- 2011 The Current value
- 2012, 2013 a straight line between Current and Short Term
- 2014 the Short Term value (2012-2016)
- 2015-2018 a straight line between the Short and Medium Term values

<sup>73</sup> As set out in B1.10 above, multiplier effects are estimated on a case-by-case basis using input-output statistics and information from the business survey. The multiplier for the intervention **as a whole** is the **total full net effect** divided by the **total net effect**.

- 2019-2021 the Medium Term value (2017-2021)

B1.13 Cumulative estimates of GVA as made as follows:

- The cumulative net GVA impact is the sum of the eleven annual GVA estimates
- The net present value GVA impact is the sum of the eleven annual GVA estimates using a suitable discount rate (3.5%<sup>74</sup>) to convert GVA into 2011 prices.

B1.14 Economic impact ratios, both Cost/Benefit and Benefit per £1m cost, are calculated. In the first place these are calculated using unadjusted financial information (both costs and benefits). Secondly, they are calculated using 2011 constant prices (which takes inflation into account)

B1.15 A stepwise multivariate least squares regression was undertaken using the variable given in the following table to examine those which had an influence in short-term employment impacts. The results are presented in the table below.

**Table B1.4 Regression analysis for Short Term Employment Additional Attributable Impact : Funding ratio**

Variable	Coefficient	Standard Error	Beta	T ratio	Significance
<b>Variables included in the regression</b>					
(Constant)	29.173	6.428		4.538	.000
More than 4 assists	21.209	4.667	.760	4.544	.000
<10 employees when funded	-9.307	4.046	-.322	-2.300	.031
Large funding 1.5m+	-16.634	4.393	-.605	-3.786	.001
Arms length co-funder	-18.350	5.481	-.460	-3.348	.003
Funding duration 1-2 years	11.350	4.908	.413	2.312	.030
<b>Variables not included in the regression</b>					
Only 1 SE funding					
No Loan component					
Funding pre 2009					
Industrial Sector: DMET					
Industrial Sector: Life science					

Source: PACEC survey of SVF companies 2011

## B2 Interpretation of results

B2.1 Estimates of displacement, leakage, deadweight, and attribution vary between Employment and GVA, despite the fact that, in the case of displacement and leakage, there is no difference in measures between employment and GVA. The difference in

<sup>74</sup> HM Treasury Green Book



the overall rates is due to each company having different base levels of employment and GVA impacts. A worked example is given below where one company has a displacement rate (for both employment and GVA) of 0% and the other company has a 10% displacement rate. The overall employment displacement rate is 5% (the average of the two displacement rates, due to the level of employment being the same), whereas the overall GVA displacement rate is 7.5% (much closer to the second company's rate, due to it having three times the impact of the first company).

**Table B2.1 Example of variation of displacement rates**

	Company A	Company B	Company A+B
Employment impact	10	10	20
GVA impact	£1m	£3m	£4m
Employment displacement	0	1	1
GVA displacement	£0.0m	£0.3m	0.3m
Employment displacement (%)	0%	10%	5.0%
GVA displacement (%)	0%	10%	7.5%

Source: PACEC

B2.2 Similarly, the multiplier effects for employment and GVA in the reference and intervention cases can all be different in the current, short- and medium-term, according to the different sizes of organisation and the proportion of their expenditure on goods and services which is spent in Scotland.

**Table B2.2 Example of variation of multiplier effects**

	Company A	Company B	Company A+B
Net employment impact	10	10	20
GVA impact	£1m	£3m	£4m
Sector multiplier	1.7	1.7	-
% of expenditure in Scotland	20%	40%	-
Adjusted multiplier	1.35	1.7	-
Full net employment impact	13.5	17	30.5
Full net GVA impact	£1.35m	£5.1m	£6.45m
Adjusted employment multiplier	1.35	1.7	1.525
Adjusted GVA multiplier	1.35	1.7	1.6125

Source: PACEC

### B3 Turnover of SVF Companies

B3.1 The 26 companies which were still in business at the time of the PACEC research (Spring 2011) are split into 3 cohorts (2008, 2009 and 2010), depending on the year in which they first received SVF funding.

B3.2 Turnover figures were estimated used the following sources:

- SE management information: 2008-10

- PACEC survey: 2011 (current), 2012-16 (short term) & 2017-21 (medium term), using annual optimism bias deflator of 98%

B3.3 Turnover figures for 2012-2021 were interpolated using different assumptions for different cohorts shown in Table B3.1.

**Table B3.1 Interpolation estimates**

Cohort	Year in which short term (2012-2016) turnover is achieved	Year in which medium term (2017-2021) turnover is achieved
2008	2014	2019
2009	2015	2020
2010	2016	2021

Source: PACEC

B3.4 The estimates of turnover by calendar year for each cohort and for all 26 companies are shown in Table B3.2, with the annual growth rates in Table B3.3. It is apparent that the 2008 cohort of 12 companies had higher average turnovers at the point of first funding, and that the annual turnover growth rates for the 2009 and 2010 firms are higher in year-on-year percentage terms.

**Table B3.2 SVF Turnover (by calendar year)**

Co-hort	#Cos	Estimated Turnover (£m) of SVF companies													
		2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021
2008	12	<b>35</b>	<b>38</b>	<b>39</b>	<b>48</b>	58	68	81	89	98	107	118	129	140	154
2009	8		<b>5</b>	<b>6</b>	<b>6</b>	8	10	12	15	19	22	26	31	37	45
2010	6			<b>1</b>	<b>2</b>	3	4	5	6	8	11	14	17	21	27
<i>Total</i>	26			<b>46</b>	<b>57</b>	68	82	98	111	125	140	157	177	199	226

Source: SE Management Information (bold), PACEC Survey of SVF Companies

**Table B3.3 SVF Turnover growth rates (by calendar year)**

Co-hort	#Cos	Annual % change in the aggregate turnover of each cohort													
		2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021
2008	12		<b>8%</b>	<b>3%</b>	<b>25%</b>	19%	19%	19%	10%	10%	9%	9%	10%	9%	10%
2009	8			<b>33%</b>	<b>5%</b>	23%	23%	25%	27%	21%	16%	19%	21%	20%	20%
2010	6				<b>151%</b>	39%	30%	31%	32%	33%	31%	24%	23%	26%	28%
<i>Total</i>	26				24%	21%	19%	20%	13%	13%	12%	12%	13%	12%	14%

Source: SE Management Information (bold), PACEC Survey of SVF Companies

B3.5 The estimates of turnover by year after first SVF investment for each cohort and for all 26 companies are shown in Table B3.4 with the annual growth rates in Table B3.5.

**Table B3.4 SVF Turnover (by year after first SVF investment)**

Co-hort	#Cos	Estimated Turnover (£m) of SVF companies											
		Y0	Y1	Y2	Y3	Y4	Y5	Y6	Y7	Y8	Y9	Y10	Y11
2008	12	<b>35</b>	<b>38</b>	<b>39</b>	<b>48</b>	58	68	81	89	98	107	118	129
2009	8	<b>5</b>	<b>6</b>	<b>6</b>	8	10	12	15	19	22	26	31	37
2010	6	<b>1</b>	<b>2</b>	3	4	5	6	8	11	14	17	21	27
<i>Total</i>	26	40	46	48	60	72	87	105	119	134	150	170	194

Source: SE Management Information, PACEC Survey of SVF Companies

**Table B3.5 SVF Turnover growth rates (by year after first SVF investment)**

Co-hort	#Cos	Annual % change in the aggregate turnover of each cohort											
		Y0	Y1	Y2	Y3	Y4	Y5	Y6	Y7	Y8	Y9	Y10	Y11
2008	12		<b>8%</b>	<b>3%</b>	<b>25%</b>	19%	19%	19%	10%	10%	9%	9%	10%
2009	8		<b>33%</b>	5%	23%	23%	25%	27%	21%	16%	19%	21%	20%
2010	6		<b>151%</b>	39%	30%	31%	32%	33%	31%	24%	23%	26%	28%
<i>Total</i>	26		14%	5%	25%	21%	20%	21%	13%	12%	12%	13%	14%

Source: SE Management Information, PACEC Survey of SVF Companies

- B3.6 Overall SVF companies grow at 15% per annum over the first decade after their first SVF investment. There is evidence (from the 2008 and 2009 cohorts) that the 2<sup>nd</sup> year after the first investment is a year of lower growth.

## B4 GVA of SVF companies

- B4.1 Using a similar methodology, interpolated estimates of GVA by cohort and by year have been produced for the SSF companies. The estimates of GVA by calendar year for each cohort and for all 72 companies are shown in Table B4.1, with the annual growth rates in Table B4.2.

**Table B4.1 SVF GVA (by calendar year)**

Co-hort	#Cos	Estimated Turnover (£m) of SVF companies														
		2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	
2008	12	<b>18</b>	<b>19</b>	<b>19</b>	<b>23</b>	28	33	39	44	48	53	58	63	69	76	
2009	8		<b>2</b>	<b>3</b>	<b>3</b>	4	5	6	7	9	10	12	14	16	19	
2010	6			<b>0</b>	<b>1</b>	1	1	2	2	3	5	6	7	10	13	
<i>Total</i>	26			<b>22</b>	<b>27</b>	33	39	47	53	60	67	75	85	95	108	

Source: SE Management Information (bold), PACEC Survey of SVF Companies

**Table B4.2 SVF GVA growth rates (by calendar year)**

Co-hort	#Cos	Annual % change in the aggregate turnover of each cohort													
		2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021
2008	12	<b>4%</b>	<b>1%</b>	<b>24%</b>	20%	19%	19%	10%	10%	9%	10%	10%	9%	10%	
2009	8	<b>24%</b>	<b>11%</b>	21%	22%	24%	26%	19%	14%	16%	19%	17%	16%		
2010	6	<b>159%</b>	48%	35%	35%	36%	38%	37%	28%	26%	29%	31%			
<i>Total</i>	26	<b>24%</b>	21%	20%	20%	13%	13%	12%	12%	13%	12%	13%			

Source: SE Management Information (bold), PACEC Survey of SVF Companies

B4.2 The estimates of turnover by year after first SVF investment for each cohort and for all 26 companies are shown in Table B4.3 with the annual growth rates in Table B4.4.

**Table B4.3 SVF GVA (by year after first SVF investment)**

Co-hort	#Cos	Estimated Turnover (£m) of SVF companies											
		Y0	Y1	Y2	Y3	Y4	Y5	Y6	Y7	Y8	Y9	Y10	Y11
2008	12	<b>18</b>	<b>19</b>	<b>19</b>	<b>23</b>	28	33	39	44	48	53	58	63
2009	8	<b>2</b>	<b>3</b>	<b>3</b>	4	5	6	7	9	10	12	14	16
2010	6	<b>0</b>	<b>1</b>	1	1	2	2	3	5	6	7	10	13
<i>Total</i>	26	<b>21</b>	<b>22</b>	23	29	34	41	50	57	64	72	81	92

Source: SE Management Information, PACEC Survey of SVF Companies

**Table B4.4 SVF GVA growth rates (by year after first SVF investment)**

Co-hort	#Cos	Annual % change in the aggregate turnover of each cohort											
		Y0	Y1	Y2	Y3	Y4	Y5	Y6	Y7	Y8	Y9	Y10	Y11
2008	12	<b>4%</b>	<b>1%</b>	<b>24%</b>	20%	19%	19%	10%	10%	9%	10%	10%	
2009	8	<b>24%</b>	<b>11%</b>	21%	22%	24%	26%	19%	14%	16%	19%	17%	
2010	6	<b>159%</b>	48%	35%	35%	36%	38%	37%	28%	26%	29%	31%	
<i>Total</i>	26	<b>8%</b>	3%	24%	21%	20%	21%	13%	12%	12%	13%	14%	

Source: SE Management Information, PACEC Survey of SVF Companies

B4.3 Overall SVF companies grow at 15% per annum over the first decade after their first SVF investment. There is evidence (from the 2008 and 2009 cohorts) that the 2<sup>nd</sup> year after the first investment is a year of lower growth.

## **Appendix C Interviews with Scottish Enterprise staff**

C1.1 The staff had views on SVF and SSF as well as other SE products and services.

- Susan Armes, Investment Manager
- Ute Beck, Account Manager
- James Cameron, Account Manager
- Roslyn Campbell, Investment Manager
- Murray Campbell, High Growth Fund
- Paul Crookshanks, Account Manager
- Laura Finlayson, Transaction Team
- Michelle Howell, Transaction Team
- Gerard Kelly, Director
- Sarah Kenhard, Account Manager
- Jaye Martin, Transaction Team
- Pat McHugh, Director
- Campbell Murray, Account Manager
- Louise Provan, Transaction Team
- Neil Ross, Director
- Derek Shaw, Investment Manager
- Andy Sloane, Transaction Team
- Gordon Stewart, Investment Readiness Programme
- Karen Tang, Transaction Team
- Gary Torbett, Investment Manager