Submission to EJFW Committee

We are writing to enlarge on a number of the issues which arose at the meeting of the EJFW Committee on Tuesday 6th March:-

Where will the jobs come from?

- We attach a Research Paper with that title produced by the Kauffman Foundation in 2009 - https://www.kauffman.org/what-we-do/research/firm-formation-and-growth-series/where-will-the-jobs-come-from. While it relates to the American market and the research was carried out nearly ten years ago its conclusions are very stark and we have no reason to suppose that they do not apply here and that they are not just as relevant today:-

  - Approximately a third of all new jobs are created by companies under five years old; and
  - Allowing for job gains minus losses, the net job creation by companies over five years old is ZERO.

- Page 13 of the Patient Capital Review summarizes another important piece of research carried out by the Enterprise Research Centre in the UK, reviewing 239,649 firms started in 1998:-

  - 11% survived for 15 years;
  - > 0.5% of the original cohort accounted for 40% of job creation over 15 years within this cohort;
  - the top 0.05% of the original cohort (between 100 and 200 firms) accounted for an average of around 120 jobs created per firm, suggesting the number of firms in this cohort that had grown from small to large (where a large firm employs typically greater than 250 employees and has remained independent) is less than 100; and

  - John Huston, who was then the President of the American Angel Capital Association and Ohio Tech Angels addressed a conference in Edinburgh a few years ago and recounted another anecdotal but nevertheless important piece of research carried out by his Angel Group. At the time of the research, the average wage in Ohio was $30,000 and they were surprised and pleased to discover that the average wage in the companies which they backed was precisely double at $60,000. In other words, they were not just creating jobs, they were creating tax paying jobs. We have not carried out any research into the position in Scotland but we have reviewed countless Business Plans and we are confident that a similar position would exist here; and

  - The attached info graphic (Annex 1) shows the success of Converge Challenge in facilitating the creation of new companies, securing investment and creating employment in its short existence. We hope that we will see the growth of these numbers accelerate as the companies gain increasing traction in the market.

These different pieces of research emphasise the overwhelming importance to the economy of supporting new companies with high growth potential. Typically, such companies are likely to originate in our University networks and have a significant Intellectual Property content.
Access to Venture Capital

- According to the Patient Capital Review:-
  - 1% of firms access venture capital, rising to 4-14% for high growth firms, depending on how they are defined;
  - This rises to about half of the High Growth Young Companies (HGYCs) involved in technology development;
  - The annual VC investment in the UK is about 4 Billion;
  - UK VC investment is about half the per capita amount in America;
  - About a third of the money in UK venture capital funds is supplied by the European Investment Fund as a cornerstone investor;
  - The UK Government has identified a Patient Capital gap in the UK of between 3 and 6 Billion per annum; and
  - The Capital Review contains proposals to bring at least an additional 2 Billion per annum into the market, allowing for any EIF issues arising as a result of BREXIT.

The Scottish Position

- We attach a copy of a paper published by The Royal Society of Edinburgh in 2014 - [https://www.rse.org.uk/wp-content/uploads/2016/09/AP14_06.pdf](https://www.rse.org.uk/wp-content/uploads/2016/09/AP14_06.pdf) - reviewing the position in Scotland from which it can be seen that:
  - The per capita amount of VC investment in Scotland is much lower than the levels of investment in England, particularly in the so called golden triangle of London, Oxford and Cambridge;
  - While Scotland has a very well developed ecosystem of Business Angel Syndicates, particularly in the Edinburgh area, their continued involvement is absolutely dependent on EIS relief and Scottish Investment Bank co-investment and this is the principal source of funding for technology start-ups;
  - There are NO Venture Capital firms based in Scotland whose only or principal business activity is investing in Scottish businesses apart from a couple of very small funds attached to the Universities and dedicated to their spin-outs; and
  - The EIS market across the UK is now worth about £1.8 Billion a year but only about 3-5% by value and 6% by volume of the EIS transactions relate to Scotland (Source: ONS);

The Banking Crisis in Scotland
• The banking crisis arose for the simple reason that the Banks were selling equity instruments structured and priced as debt. This has had a profound impact on the Scottish economy and in particular:
  
  – It is estimated that amongst the three main banks there are several thousand ZOMBIE companies locked up in GRG, BSU or by whatever name their Business Support Units may now be called. These are companies which are almost by definition unable to do anything but survive and they must be a real drag on the economy as they are unable to access capital to innovate and expand;
  
  – It was estimated that there was a banking debt gap of about £300/750 Million for Scottish companies in 2015. We think the original source of this statistic may have been a PwC Report. Since then, the banking market has substantially recovered, the Banks have sorted out their Balance Sheets and are once again lending to sensible lending proportions which are bankable. There has also been exponential growth in perr to peer lending.

Scottish National Investment Bank (SNIB)

• SNIB is a very welcome intervention and it represents a huge opportunity if it is now well executed. However, we wish to highlight a number of issues:
  
  – It is clear from the RSE Report that Scotland attracts much less than its per capita share of UK venture capital investment. The more recent figures have been skewed by the very large investments into SkyScanner, FanDuel and Nucana but the underlying position remains unchanged - we do not have anything like the amount of capital we need to ‘move the dial’ and we are still largely dependent upon the goodwill of a very small group of Business Angel investors;
  
  – We agree in principle with the proposals to continue and expand upon the existing investment activities of SIB;
  
  – SNIB should concentrate its scarce resources entirely upon the provision of equity finance and not debt. The Banks are once again open for business and able to provide debt to sensible bankable propositions upon sensible terms. The example given in Figure 7 on Page 28 of the Implementation Plan is a classic example of ‘banking the unbankable’ and SNIB should not under any circumstances be in the business of providing unsecured debt. This is a classic example of “moral hazard”;
  
  – The Patient Capital Review details a lot of specific new interventions to be undertaken by BBB. One of their most important and successful interventions to date have been the Enterprise Capital Funds (ECFs). Their design is based upon an important piece of research carried out by Professor Gordon Murray, then of Exeter University. He was asked to review the performance of the Regional Venture Funds to ensure that the right lessons could be learned in designing the ECFs as a successful investment vehicle. He discovered, not unsurprisingly, that if you invite the Public Sector to take the first loss, the outcome is inevitable. The ECFs were accordingly designed with a priority return to BBB but with the overall return skewed in favour of the private investors. This structure has enabled the creation of about thirty ECFs over the
past twelve years with the private sector putting up between 30/40% of the Funds and a relatively secure return for BBB;

- There are lots of new ideas in both the UK Government’s response to the Patient Capital Review and in the RSE Report and we would urge you to consider these ideas and proposals as they involve leveraging additional private sector funds in a variety of innovative ways and in accessing the vast pool of pension fund assets under management in the UK. It would need only a tiny proportion of the pension fund assets to be re-allocated to this sector to be absolutely transformational;

- The typical cost of managing a venture capital fund, including the ECFs, is 2% of Commitments with a Carried Interest (profit share) of 20% paid at the end of the Fund which is typically 10 years and this industry standard is under downwards pressure. SNIB must be properly resourced but the proposed operating costs seem on the high side if it is to provide a commercial return and invest on competitive terms.

**Intellectual Property**

We were unable to provide a detailed answer in relation to Scotland’s performance in filing patents in comparison to its peer group. However, we attach a recent newspaper report comparing the number of patents filed in Scotland compared to Denmark and Norway - https://www.agcc.co.uk/news-article/patent-figures-show-scandinavia-outperforming-scotland. We were surprised to find that Scotland appears to lag so far behind these two comparator countries, given the research strength of our Universities.

The appropriate protection of IP is an essential prerequisite of obtaining finance, entering into licensing agreements and to achieve a successful exit so there does appear to be an issue here which needs to be considered in more detail.

**Spin-outs**

The publication ‘Spin-outs UK’ compares the spin out performance of all of the UK’s Universities. At a high level, Scotland’s Universities appear to fare quite well but there is a big gradient of experience across our Universities and the whole process is still much more difficult than it should be. The Lambert Agreements were created as standard templates to facilitate the legal process although they hardly ever seem to be used and there is no clear agreement across the Universities about the valuation of IP, within the context of agreeing what percentage of the spin-out company the University should own on spin out.

Scottish Enterprise carried out a Commercialisation Enquiry in 1995 to find out why we were so poor at commercialising our science base. They sent a team to America to look at the experience there and they discovered that in Boston, Harvard and MIT had together created 642 spin-out companies employing over 300,000 people with billions of $ of turnover and representing a third of the Massachusetts economy. Even allowing for a great deal of elasticity, these are impressive figures and the California technology miracle is of course largely based on or originated from the intellectual output of its Universities.

Closer to home, we talk of the Cambridge miracle. Based on the intellectual output of the University, they have created about a dozen Billion dollar companies and achieved negative unemployment.
Oxford has traditionally trailed in terms of its spin out activity because it appears to be much more controlled by its Colleges and by Oxford Innovation but the recent advent of Oxford Sciences Innovation, a £582 Million Fund for Oxford University spin-outs has transformed their recent performance.

There were over two hundred applicants for Converge Challenge last year, a more than fivefold increase since the programme started six years ago. We do not know how far away we are from reaching the full potential of the programme but we do know that the challenges in accessing seed capital are one of the biggest barriers to commercialisation and company creation. SNIB could make a transformational difference here.

We have come a long way since the Commercialisation Enquiry in 1995 but there is still a huge amount of unexploited potential in our University networks and our world class research base.

**Equality and Diversity**

Converge Challenge is the leading pan Scotland Entrepreneurial Programme operating across all of Scotland’s nineteen Universities. When it started seven years ago it only attracted about forty applicants, virtually all from two universities and overwhelmingly from male applicants. This year there were well over two hundred applications (223) with 35% from the modern Universities and 35% female applicants.

**Engaging with the Public Sector**

One of the biggest challenges for any new technology company is securing engagement with a major launch customer which might either be a big corporate or in the public sector. We believe that there is some rule in America whereby those involved in public sector procurement are required to purchase a certain minimum percentage from SMEs and a similar rule here would make a massive difference to emerging new businesses. We should observe in the passing that Israel has one of the most dynamic entrepreneurial communities in the world, largely on the back of the requirements of their defence industry. The California miracle was also started before the Second World War by the American Government sourcing the very best solutions it could from University departments and young companies, giving rise to their extraordinary dominance of so much of modern technology development.

We would however like to acknowledge the great success of [www.civtech.alassian.net](http://www.civtech.alassian.net) in finding an inspired way to secure engagement between different public sector agencies and start up young technology companies. This has already had very positive results and we believe that they are now working with their third cohort of young companies. CivTech is leading the way in the UK if not in Europe and we would urge you to continue and expand this initiative.

**Business R & D**

Scotland has an exaggerated ‘wineglass’ economy with a very small number of very large companies at the top, a very large base of micro businesses and a very thin stem. This is in stark contrast to the German economy which has a very large ‘mittelstand’ of substantial SMEs which are ambitious and well run and trade internationally. The bottom line is that we have far too many businesses which are only interested in ‘doing stuff’ to survive and have no interest in being more ambitious, taking a more strategic interest in innovation and growing their businesses.
Much of the debate around BREXIT has been about freeing up our companies to trade internationally. However, Germany has managed to create the world’s most successful exporting economy with the third largest exports and the biggest trade surplus despite the shackles of the EU. They have achieved that by making outstanding products and their willingness to trade internationally. We may have much to learn from their mindset and commitment to excellence.

**Graduate Skills**

The response to the Patient Capital Review indicates that the UK Government proposes to double the number of ‘Exceptional Talent’ visas. This may be more of an issue in Scotland post Brexit and we should be doing whatever we can to retain exceptional people wherever they come from.

**Annex 1**

- 120 early-stage and social enterprise founders trained
- 17 Scottish universities and research institutes represented
- 78 Converge companies created with a 43% incorporation rate
- 180 Converge company founders trained
- 78% survival rate post 3 years with 4 out of 5 companies (or 77%) receiving follow-on funding
- £60 million funding secured (2011-2016)