

The BIA's submission to the Patient Capital Review: Financing growth in innovative firms

September 2017

About the BIA

Established in 1989, the BioIndustry Association (BIA) is the UK trade association for innovative bioscience enterprises. BIA members include emerging and more established bioscience companies, pharmaceutical companies, academic research and philanthropic organisations, and service providers to the UK bioscience sector.

Our members are responsible for over 90% of biotechnology-derived medicines currently in clinical development in the UK and are at the forefront of innovative scientific developments targeting areas of unmet medical need. This innovation leads to better outcomes for patients, to the development of the knowledge-based economy and to economic growth. Many of our members are small, pre-revenue companies operating at the translation interface between academia and commercialisation.

Our goal is to secure the UK's position as a global bioscience hub and as the best location for innovative research and commercialisation, enabling our world-leading research base to deliver healthcare solutions that can truly make a difference to people's lives.

For additional information or clarification on any of the points raised please contact Dr Martin Turner, Policy and Projects Manager, on 0207 630 2192 or by emailing mturner@bioindustry.org

Key points

- The UK is globally recognized as a world leader in the life sciences. However, life science R&D is capital and time intensive, typically requiring 12-15 years and potentially over \$1 billion of investment to develop an asset and build a global corporation. The patient capital gap is therefore most acute in this sector
- Venture capital funding for UK bioscience has improved in recent years but there is a weakness in follow-on funding and an over-reliance on a small pool of investors
- The Patient Capital Review should focus on the provision of scale-up finance, provided through follow-on funding, and increasing the diversity and capability of investors
- Innovate UK, the British Business Bank, tax-advantaged venture capital schemes and a range of tax reliefs are valuable current government initiatives that support the UK bioscience sector. They should be retained and enhanced
- The introduction of MiFIDII and the loss of EU R&D funding through the EIF and Horizon 2020 represent significant threats to the UK's long-term patient capital supply
- The BIA welcomes the proposed National Innovation Fund, which should be taken forward whether EIF funding is lost or not; it should adhere to the following principles:
 - There should be a series of funds to support companies at different stages of development and with different business models
 - The funds should be public/private partnerships
 - They should be sector specific and privately managed
 - Pension fund participation should be enabled through low fees, professional management and maximised returns. A listed, liquid ever-green fund would be preferable to allow long-term investment while meeting short-term reporting needs
 - Use the Knowledge Intensive Company definition and EIS/VCT-eligibility in the past five years as an eligibility requirement for investments
 - The fund should not be geographically limited
 - The funds should be targeted at addressing the shortage of scale-up capital
- Specialist investors who understand the sector they are investing in and have the skills to support their companies to grow are critical to the life sciences sector and long-term supply of patient and scale-up capital. The government should increase existing initiatives to support up-and-coming fund managers and introduce new schemes, such as entrepreneurial and business training and MBA loans for PhD and post-doctoral scientists
- The BIA stands ready to work with the government to increase awareness among pension fund managers of opportunities to invest in innovative high-potential businesses. Increasing transparency in pension portfolios, along with a strategic communications campaign, are central to this. Behavioral Insights should also be deployed to encourage greater investment from pension funds. The NIF should also be opened-up to pension funds so that they can access specialist fund managers to help them invest
- The EIS and VCT schemes are valuable for the life sciences sector. The annual and lifetime company fundraising limits should be increased and the Knowledge Intensive Company definition used to target reliefs.
- The government should consider requiring users of the Investor Visa route to commit a proportion of their investment in the UK to innovative businesses in support of the government's Industrial Strategy. We estimate this could raise £100 million per annum for sectors like the life sciences

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Introduction

The UK is globally recognised as a world leader in the life sciences. Beyond the benefits of better health outcomes for patients, improved living standards, and rewarding high-value jobs spread across the UK, this competitive advantage can support long-term sustainable economic growth to the whole country.

An independent analysis by PwC estimated that the UK life sciences sector contributed £30.4 billion to the economy in 2015 and supported 482,000 jobs¹. Workforce productivity in the sector is twice the UK average, with Gross Value Added (GVA) per employee equaling £104,000. The activities of life science companies directly contributed £14.5 billion to the economy in 2015, with an additional £15.9 billion provided through the supply chain and employee spending. The sector invests more in R&D than any other in the UK (£4 billion in 2014) and sustains high-quality jobs across the UK, with two-thirds outside London and the South East².

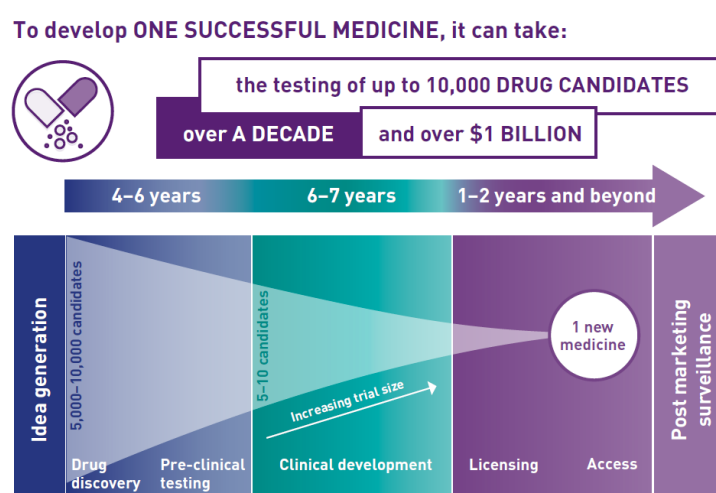
In no other sector is the need for Patient Capital – as defined in the consultation document – more acute than in the life sciences. The BIA therefore welcomes the government's focus on this critical issue and the opportunity to comment on its proposals. This submission has been developed through extensive consultation with the BIA membership and wider life sciences investment community.

The finance gap for bioscience companies

This section answers consultation questions 1, 2, 3 and 4.

There are unique challenges in life sciences R&D that set the sector apart from others in the economy, even other R&D-intensive industries. Medical research, development and licensing timelines are long – typically over 12 years – due to the need to extensively test products for human use through phased clinical trials and the cost of development can exceed \$1 billion to develop an asset and build a global corporation.² (Figure 1). Long-term investment is

Figure 1: The challenge of drug development



¹ PwC (2017), commissioned by ABPI, BIA, BIVDA and ABHI, *The economic contribution of the UK life sciences industry*: <https://goo.gl/6sMhrB>

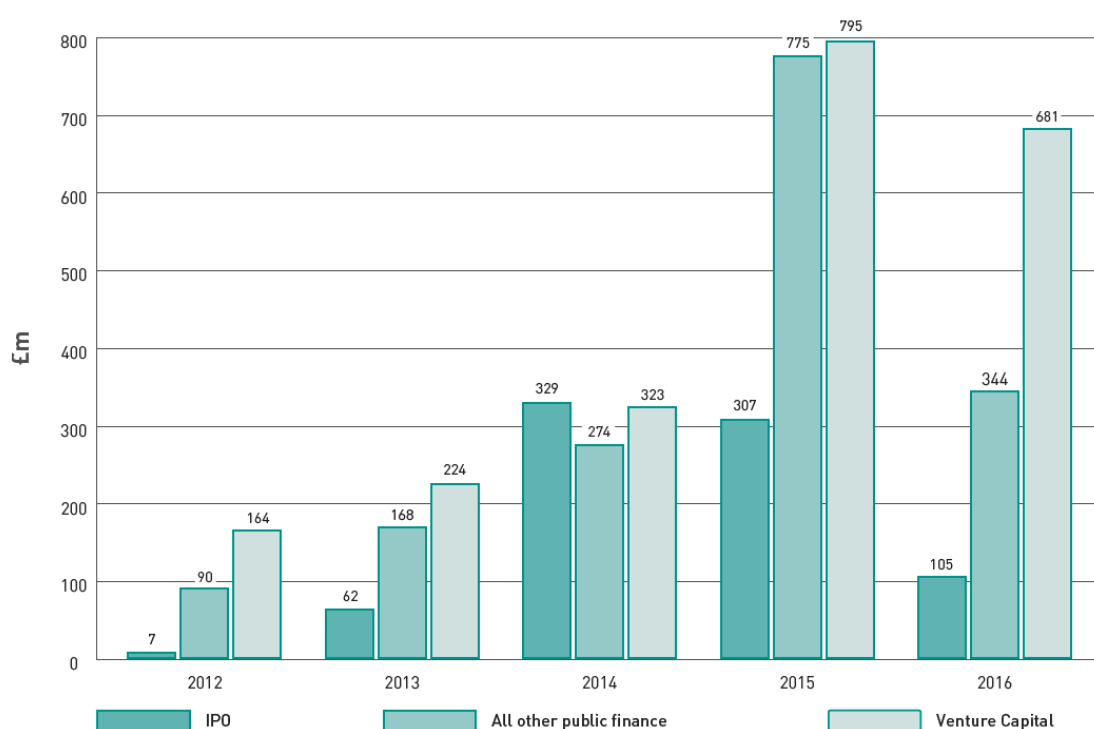
² ABPI (2012), *Time to flourish – Inside innovation: the medicine development process*: <http://goo.gl/XLQDys>

therefore a critical feature of life science funding. A key challenge for the sector is finding enough investors willing to lock in their capital to illiquid assets for five to 15 years. The patient capital gap identified in the consultation is therefore most acute in this sector.

The UK life sciences innovation pipeline is fed by small, entrepreneurial bioscience firms³. They are producing the medicines of tomorrow, growing into profitable companies, and feeding innovation into the larger pharmaceutical and healthcare industries. Bioscience SMEs are generally focused on developing a specific technology and often do not have other assets on the market generating profits. This means they must rely on successive fund-raising rounds to maintain cash flow. Due to the long-development timelines and the complexity of the science involved in biomedical R&D, the early stages of drug development are considered high risk, which limits sources of finance typically to specialist investors and increases the necessity for government support to address market failures.

Private investment in UK bioscience has increased significantly in recent years⁴ (Figure 2). A total of £1.13 billion was raised by UK-based bioscience companies from private and public market sources in 2016. £681 million venture capital (VC) funding was raised, continuing the strong performance seen in 2015, when £795 million was raised. This trend mirrors that for total UK VC investment shown in the consultation document (page 15). However, lower IPO activity in 2016 saw only £105 million raised, compared to £307 million in 2015. Finance from other sources was also hit by the challenging climate, with £344 million raised in 2016 compared to £775 million in 2015.

Figure 2: Bioscience financing, 2012-2016



Source: Informa, Strategic Transactions and Scrip

³ In this consultation response, "bioscience" is used to refer to early-stage, typically-pre-revenue life science companies.

⁴ BIA (2017), *Building something great: UK's Global Bioscience Cluster 2016*: <https://goo.gl/CyQyf6>

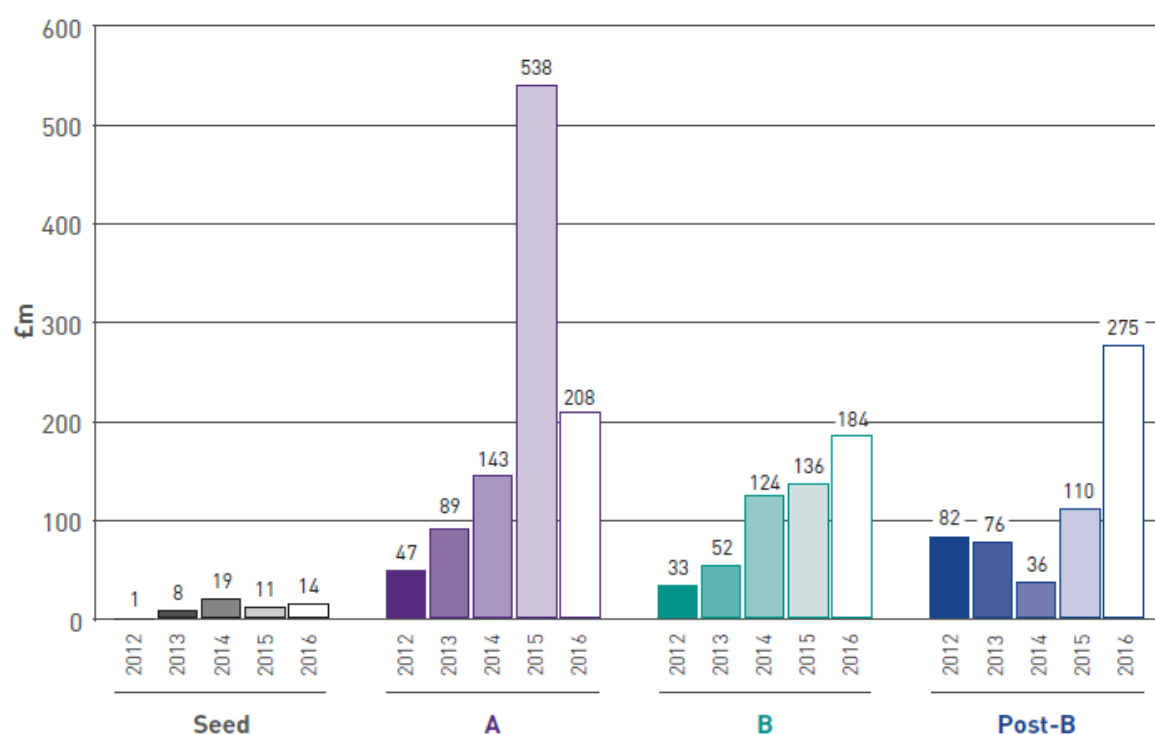
There has also been a maturing of VC funding, with the bumper 2015 series-A fundraising leading to larger post-series B fundraises: £275 million was raised in these later fundraises, up from £110 million in 2015 (Figure 3). There was also an increase in series-B funding, with £184 million raised, up from £136 million in 2015. This increase in follow-on funding is reassuring but these later-stage (B and post-B) funding rounds are still not as large as they need to be to support the growth of medium-sized bioscience companies. Furthermore, as Figure 2 shows, the public markets are not a viable source of funding for many companies.

As the consultation notes for VC funding in all sectors, the UK lags significantly behind the US, with the San Francisco Bay Area and Boston Massachusetts bioscience hubs raising £1535 million and £1550 million, respectively, compared to the UK's £680 million. However, the UK performs admirably against the rest of Europe, making up over a third of the continent's total.

The strong performance seen in 2015 and 2016 has been bolstered by the presence of the Patient Capital Trust and related funds managed by Neil Woodford. In 2016, Woodford's funds invested approximately £300 million in venture capital in the UK, around half of the UK's total, and in 2015 they invested approximately £400 million, around two-thirds of the UK's total. Although there are other significant players – Syncona for example – this lack of diversity in funding sources does pose a risk to the long-term future of the sector.

The consultation focusses largely on increasing the supply of long-term patient capital. Whilst this is important, it should not be forgotten that smart capital is potentially more important than patient capital. Technology sectors need investors who understand what they are investing in and have the skills to support a company throughout its growth. Without prudent investing,

Figure 3: Bioscience venture capital financing by funding round, 2012-2016



Source: Informa, Strategic Transactions and Scrip

bubbles can form and burst and harm the long-term viability of the sector. Linked to this, is the importance of diversity in the funding ecosystem, as different types of investors and investment vehicles play different roles throughout the growth of a company. As evidenced above, the UK currently has a more limited ecosystem compared to the US and other competitor countries. The Patient Capital Review should therefore focus more on addressing these potential weaknesses in the supply of capital to UK businesses.

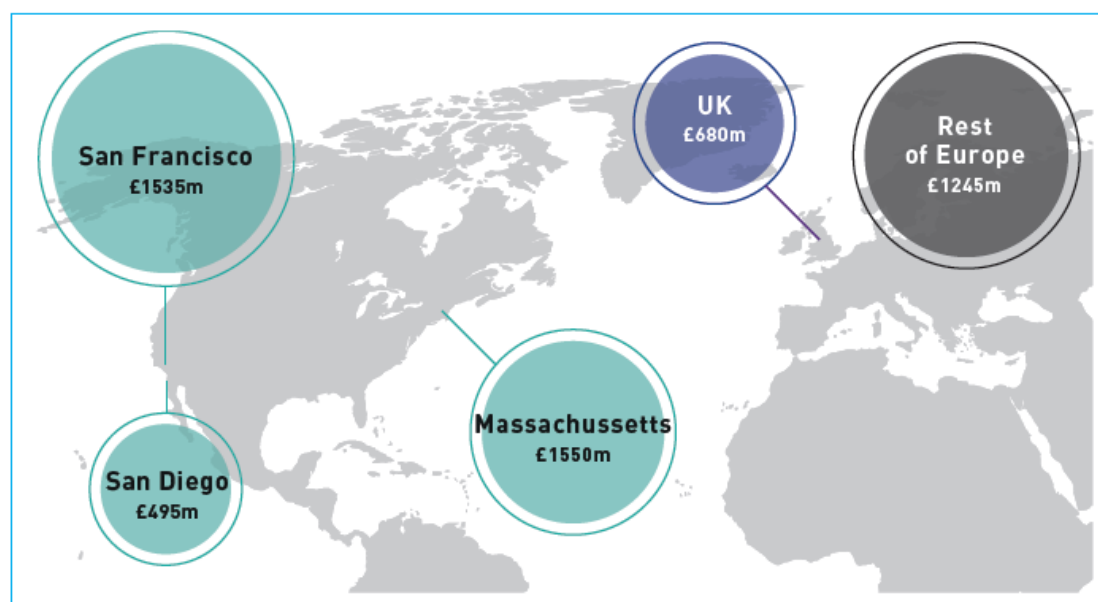
Success of existing schemes

This section answers consultation questions 7 and 10.

Innovate UK

Innovate UK has a strong reputation with industry and has proven highly effective at delivering government support for strategically important areas of technology. Its investment is also proven to be excellent value use of public funds. Through the Biomedical Catalyst, for example, grants to businesses totaling £130 million leveraged over £100 million of additional private capital for the projects⁵. Beyond the Government investment, post-award funded companies and academics realised in excess of a further £1 billion in the form of additional private finance, grant funding, via licencing or acquisition. This grant funding supports innovative early-stage companies to conduct R&D in order to attract VC funding. Innovate UK has also recently launched the Investor Accelerator pilot, which aims to better link grant recipients with VC investors.

Figure 4: International bioscience venture capital financing, 2016



Source: Informa; Strategic Transactions, Scrip

⁵ BIA (2015), *The Biomedical Catalyst: making the case to continue*: <https://goo.gl/1RXfFb>

British Business Bank

The British Business Bank provides valuable support for the bioscience sector, particularly through the Angel Co-Fund and the Enterprise Capital Fund. The BIA is aware of 60 bioscience companies that are currently supported through BBB equity schemes. The £400 million additional finance committed to BBB at Autumn Statement 2016 was welcome; further investment would help drive greater sums of private money into innovative UK businesses.

Tax-advantaged venture capital schemes

The Enterprise Innovation Scheme (EIS) (and its associated seed scheme, SEIS) incentives have been particularly effective at stimulating investment and are extremely valuable to bioscience companies (see case study box 1). Interestingly, the BIA has also seen evidence that EIS is a strong motivating factor in biotech investors using crowdfunding platforms, which is another welcome route for private money to be channelled into the sector⁶. Venture Capital Trusts (VCT) are also valuable for raising money for later-stage companies. All venture capital schemes should be maintained and enhanced where possible (discussed further below).

Other schemes: R&D Tax Credits, Entrepreneur's Relief and Enterprise Management Initiative

Although not focused on attracting investment, these schemes are extremely valuable for supporting viable and productive businesses and making the UK an attractive destination for inward investment.

The small and large business R&D Tax Credit schemes are often cited by BIA members as the most valuable form of innovation support. Tax credits provide a minimal-bureaucracy system that rewards and amplifies companies' own investment in R&D. Continuing and enhancing them is critical to maintaining the UK's attractive fiscal environment for R&D investment. Proposals for enhancing the regime can be found in the BIA's submission to the Industrial Strategy green paper⁷.

Entrepreneur's Relief is a valuable scheme for rewarding individuals who start and grow a business, and is therefore key to the aims of the Patient Capital Review. However, there is a particular issue for bioscience entrepreneurs when repeated capital raises push their own holding below 5% of the company, at which point they are ineligible for the relief, even though they have built a personal company at risk over several years. This can be a barrier to successful bioscience entrepreneurs exiting companies in a financial position where they are able to reinvest in new ventures. In some circumstances, it can also be a perverse incentive for early, sub-optimal exits to the detriment of the company. A revision of this would be welcome to ensure a fair incentive exists for this level of high risk and personal investment and to encourage a "virtuous cycle" of entrepreneurship. This could be provided to individuals who have held over 5% of shares for a defined period before being diluted. Or, alternatively, the Knowledge Intensive Business definition could be utilised to designate eligibility.

⁶ Helen Wise, Imperial College Business School (2016), MBA dissertation: *Will Crowdfunding Become a Viable Source of Funding for the UK's Biotechnology Industry?* (unpublished)

⁷ BIA (2017), *Submission response to the Industrial Strategy green paper*: <https://goo.gl/cyDie3>

Case study box 1: Tax-advantaged venture capital schemes

Synthace

Synthace, a spin-out from University College London, has created a technology platform and software that enables biologists to dramatically optimise biological experiments and manufacturing processes, speeding up and lowering the costs of developing technologies to heal, feed and fuel the growing world population. Synthace was the only UK company to be named a World Economic Forum Technology Pioneer in 2016.

All of the company's £512,000 seed funding was EIS eligible, and the tax scheme continued to support the company as it grew. In December 2014, the company raised £2.2 million in a Series A funding round, 14.7% of which was EIS eligible. At the time of the raise the company had less than 10 employees and no revenue. Now it employs 25 people and is generating seven-figure revenues.

Touchlight Genetics

Touchlight was founded with the vision that an increasing scientific understanding of DNA would lead to its ultimate role as a material of the future. The company has pioneered the enzymatic amplification of DNA at large-scale, and has established manufacturing facilities in the UK both to develop its own proprietary products and to produce DNA for a range of collaborators in therapeutic and non-therapeutic areas.

The company has been on a rolling fundraise since its founding in 2008, almost all of which has been EIS eligible, and it now reaches its upper limit of EIS-allowable funding. The company employs over 30 people and contributes to the salaries of many more through supporting academic and commercial activities. It is expecting to scale its workforce significantly in the near future as the manufacturing facility matures, and new products emerge from its platform.

Touchlight CEO and Founder Jonny Ohlson says: *"Touchlight has gone from a concept on a piece of paper to a world-leading DNA platform in 10 years. It was of course not without significant risk, but investors perception of that risk was significantly diminished through participation in the EIS scheme. Given the paucity of funding options in the UK for early-stage biotechs, EIS has proved an essential tool in the building of this company."*

The Enterprise Management Incentive (EMI), which provides tax reliefs on employee-owned shares, is a valuable scheme for companies that do not have the cash-flow to pay market-rate salaries. This is true for cash-burning early-stage bioscience companies. However, there is a risk that some individuals, for example part-time Directors or management, are not able to benefit due to the requirements on working hours (>25/week) and total working time (>75% of the individual's total working week). The government should review this to ensure the scheme is equitable and supporting young businesses to access the talent and skills they need to grow.

Risks for patient capital and the life sciences

The consultation does not ask about future risks to patient capital supply but we feel it is important to identify these. This section answers consultation questions 5 and 6 in the future tense.

MiFIDII

EU regulation scheduled to come into force in January 2018 could have highly detrimental consequences for innovative sectors that are dependent on specialist and informed investors. The UK appears to be gold-plating the second iteration of the Markets in Financial Instruments Directive (MiFID II) and its implementation is a serious concern for our sector. There is a severe lack of investors who feel confident to put their money into science-based companies, and those that do, rely on expert analysts to provide independent research on companies that they may invest in.

MiFID II will reduce analyst coverage of bioscience companies as it prevents the use of trade commissions to pay for the research. This in turn will reduce the pool of investors willing to consider our sector. Crucially, the BIA believes that gold-plating MiFID II will undermine the government's efforts to make it easier and more attractive to invest in science and technology businesses. We understand that there are limits on how flexible the government can be when implementing MiFID II but we would encourage the Financial Conduct Authority (FCA) and the government to consider how the risks described can be mitigated. Funding to support quality financial analysis of bioscience firms should be provided by the UK government to step in to prevent market failure over the next crucial few years.

We further call on the FCA and government to monitor the impact of MiFID II on bioscience and other specialist industries over the coming years.

Brexit and EU funding sources

The consultation document rightly identifies loss of EIF capital as a risk to patient capital provision in the UK. The government has also rightly recognised the risk associated with losing access to the Horizon 2020 research funding programmes, which support academic and SME R&D.

HM Treasury's commitment to underwrite funding for Horizon 2020 projects secured while the UK is an EU member provides important short-term reassurances that the UK science base is a secure partner for EU projects. However, access to EU research funding beyond the Horizon 2020 round of funding is still unknown and this could lead to a weakening of the UK's status as a world-leading location for life sciences investment. While it is not in the remit of this consultation to address this challenge, it is important to recognise it as a risk.

The National Innovation Fund

This section answers consultation questions 13, 14, 15 and 17.

The BIA welcomes the proposal to establish a government-backed fund to invest in patient capital in order to promote the asset class to private investors. We agree with the aim of the fund to increase the effective allocation of capital to high-potential firms in order to increase the overall quantum of capital longer-term. However, the National Innovation Fund (NIF) shouldn't be seen as a magic bullet, other measures in the consultation and not in the consultation will also be critical to ensuring a diversity and vibrancy in UK VC and private equity.

The British Business Bank uses specialist investors (primarily angel investors or fund managers) and so avoids the government "picking winners" and having direct control over private firms. The BIA believes these are two key features that should be retained in the National Innovation Fund.

As stated above, the loss of finance from the EIF is a significant challenge and the BIA supports the use of additional UK government funds to compensate if it is lost. The BIA also agrees that there is a need for additional funds whether access to the EIF is lost or not.

Preferred fund structure

The BIA believes there needs to be a variety of finance sources available to businesses. The bioscience sector is currently supported by too few specialist VC investors, with one or two large investors dominating and a lack of investors able to make larger investments (£2 million+) for scaling businesses. A small pool of specialist investors poses a significant risk if circumstances were to change and could potentially be limiting the vibrancy of the sector if particular areas of science, health conditions, or business structures are preferred by the small group of investors. The BIA therefore believes that the government should structure the new fund (or funds) to establish multiple public and/or private investment funds and grow existing ones (the series option in paragraph 7.19 of the consultation document). A series of funds would allow for diversification of approaches – there could be, for example, a government-only fund of funds alongside a number of public-private partnerships.

At least some of the funds should be sector specific and targeted to address key industries for the UK's future, such as life sciences. By being sector specific, a fund is able to concentrate its resources in a team with a deep understanding of that one sector, which increases its ability to make wise investments and effectively steward the companies through growth.

A public-private partnership as part of a series of funds could be used to pool pensions and retail investment (through ISAs and crowd-funding platforms, for example) if the structure allowed a degree of liquidity and the government's involvement is used to keep fees minimal; the Australian Biomedical Translation Fund provides a proof-of-concept for how this could be delivered (see case study box 2). Another important role for the government in a public-private partnership would be ensuring the targeting of the funds to the most in-need firms, i.e. those that are subject most to the current patient capital gap. Ensuring a financial return and, potentially, annual dividends may be important, especially for retail investors, and should be considered but the government's involvement could be used to ensure that there is a long-term (patient) investment strategy that supports economically-important industries as part of a diversified portfolio that also

Case study box 2: The Biomedical Translation Fund

In 2016, the Australian government established the Biomedical Translation Fund (BTF) with more than A\$500 million to be used to invest in commercialising promising biomedical discoveries. A\$250 million of government funding was matched by private sector investors. It focuses on supporting early stage companies that are (or will be) developing and commercialising biomedical discoveries, for the health and economic wellbeing of Australians.

The BTF is managed by three private sector fund managers – Brandon Capital, BioScience Managers and OneVentures – that were selected through a competitive process. They screen investment proposals, make venture capital investments and provide Australian biomedical companies with the expertise and access to networks to be a success. Each BTF fund manager will build a portfolio of investments in companies that are developing and commercialising innovative science.

In the open competition for fund managers, Australian government specified that pension funds should be brought in as private investors. This was made possible by keeping down fees, providing reassurance of prudent investing by using experienced fund managers, and increasing returns for private investors by the government taking a bond-rate return.

delivers short-term pricing. A listed, liquid ever-green fund would be preferable to allow long-term investment while meeting short-term needs.

A public-private partnership would also help attract foreign investment, particularly from sovereign wealth funds, which may be reassured by the government's involvement. Equally, there may be a role for the Bank of England, as a central bank, to add stability and confidence to investors.

Fund investment strategy and rules

The strategy and rules that apply to the NIF are as important as the overall structure. These will determine how effectively the fund will achieve its objective of supporting high-potential firms that are currently in need of patient and/or scale-up capital.

The Knowledge Intensive Company definition currently used in venture capital tax incentives schemes could potentially be applied here (Box 1). This would ensure that the fund is being targeted to firms that are R&D-intensive and therefore likely to be high cash-burning with no or limited revenues. However, this definition could be too limiting, especially for companies in the scale-up phase or nearing market, which the Patient Capital Review should be supporting. Another less stringent option would be to only invest in companies that have been EIS/VCT-eligible and defined as a Knowledge Intensive Company in the recent past – five years, for example.

Enabling the fund to invest in foreign companies would enable expert UK money to act as a beacon and attractor of the best businesses to the UK. It would also support a diversified portfolio and deliver the best returns. This flexibility should be enabled. However, if a geographical restriction is imposed, it should be imposed only on the proportion of the fund that is public money.

Box 1: The Knowledge Intensive Company definition

A company is knowledge-intensive, if at the time of the share issue, it meets the Operating Costs conditions **and** *either* the Innovation condition *or* the Skilled Employee condition.

The **Operating Costs** conditions are that in:

- At least one of the 'relevant 3 preceding years' at least 15% of the operating costs consisted of R&D or innovation (R&D) expenditure, or
- Each of the 'relevant 3 preceding years' at least 10% of the operating costs consisted of R&D expenditure.

The **Innovation condition** is that, at the time the shares are issued, the issuing company is creating (or is preparing to create) intellectual property that, within ten years, will form the greater part of the issuing company's business.

The **Skilled Employee condition** is that at least 20% of the workforce has a higher education qualification (at level 7 or higher of the framework for higher education qualifications; or a comparable qualification) and is engaged directly in R&D.

VCTs are required to make 70% of their investments within three years, which can be difficult for large funds, resulting in inefficient capital allocation. Funds invested in by the NIF should not be subject to time-limiting rules.

Quantum of investment through the National Investment Fund

The sector needs both a diversity of funders and those able to scale and follow their investment with new rounds over many years.

Ultimately, the number of options the government has when designing the fund(s) comes down to the amount of public money that can be committed. Moreover, as the challenge lies in the scale-up finance part of the funding ecosystem, rather than early-stage VC, significant sums of money are to be required. The BIA therefore encourages the government to be ambitious in its approach and use current low interest rates to its advantage.

A key challenge we have heard from many investors is that individual UK bioscience businesses and VC funds are often not large enough to attract pension and sovereign wealth fund investments, which typically make £1 billion+ investments to merit the due-diligence they are required to conduct. The scale of a public-private partnership fund would therefore need to be large enough to accommodate and attract such investments.

Investments into VC funds via the National Investment Fund should be of variable sizes to both support businesses ranging from the very small to the larger growing firms, and to allow the Fund to nurture less-experienced fund managers with smaller funds (discussed further below).

Increasing investment opportunities and investor capacity

This section answers consultation questions 24 and 25.

Nurturing fund managers

As discussed above, the UK bioscience sector relies on a relatively small pool of specialist investors. Many other technology-focused industries face the same challenge, as the consultation document acknowledges. Increasing this pool could help increase the capital flow into these sectors and support their long-term sustainable growth.

Although we do not have evidence of a positive impact yet, the BIA welcomes the British Business Bank's support of new fund managers raising their first funds through the Enterprise Capital Fund. This should also be a key focus of the NIF, with sector-specific funds established to focus specialist knowledge. A proactive programme to seek out promising fund managers, as suggested in the consultation, would also be welcome, as would targeting such initiatives to sectors afflicted by the greatest dearth of specialists. Supporting young up-and-coming fund managers who have an interest in the long-term health of the sector will support the aims of the Patient Capital Review.

A fellowship programme, modelled on the US Kauffman Foundation initiative would be welcome and should be linked up to science PhD training programmes to increase awareness of such career opportunities within this cohort. Many specialist fund managers in the life sciences sector typically have post-doctoral research experience and/or a PhD combined with an MBA. These courses are expensive (the Imperial College London full-time MBA is £47,000⁸), which creates a barrier to accessing a career in finance for scientists who typically have modest salaries. The government could support scientists to become specialist investors by providing interest-free loans to cover MBA fees, or a proportion of it, contingent on the individual working in the UK for a set period of time post-award.

At a time when the London financial market is retrenching from risk it is prudent for the UK to grow its own specialist life science investment managers alongside and able to invest in its cadre of Nobel Prize-winning scientists.

Incubators

We note that incubators are not in scope for the Patient Capital Review and will instead be addressed through the Industrial Strategy (Figure 2.A, page 10). However, incubators can be a valuable means to increase investment opportunities.

In Israel, the government cornerstones investment in the infrastructure (physical labs and onsite management teams) through the incubator network and pharmaceutical companies and VC firms top-up the funding and add their expertise, advice and connections. This provides young companies lab-space, facilities, and management, as well as capital, with associated VC firms to syndicate their Series A rounds. This links the companies with a huge international network of investors, which will potentially support them throughout their growth. The total budget for the

⁸ <https://goo.gl/MC1oMv>

Futurx incubator, which is focused on bioscience, over 10 years is \$80 million, of which the government has put in \$30 million and the private sector \$50 million.

There is no comparable single institution in the UK. Incubators in the UK follow a range of models but none have the significant corner-stoning of government money that attracts significant private money and allows the incubator to scale. The UK does however have a number of strong incubators that, with government support, can continue to grow and rival Futurex (see case study box). Around 20% of all UK life science start-ups are based at just a few incubators (BioCity, Stevenage Bioscience Catalyst and the Babraham Institute). These, along with several others provide a highly efficient route to access and support for early stage, high potential life science companies. A national innovation fund targeting businesses based at bioincubators would be an effective and efficient tool for growing these companies. The UK government should explore using the National Innovation Fund proposed in the Patient Capital Review, or the Industrial Strategy Challenge Fund to cornerstone one or more life science incubator.

Trade associations also have an important role to play – the BIA signposts the physical, managerial and investment support available in the UK to bioscience companies in what can be a fragmentary and un-coordinated landscape. Student-led organisations, global corporations, the investment community, science parks and regional development organisations all play a part in this agenda.

Unlocking pension funds

This section answers consultation questions 21 and 22.

The BIA welcomes the consultation's focus on unlocking pension funds and the analysis that suggests there are no legal or regulatory barriers to these funds investing in patient capital. Due to their significant size, unlocking these funds so that a small proportion of their holdings are invested into innovative early-stage and growth businesses would be a game-changing development. The BIA stands ready and willing to work with the government and other stakeholders to change the risk-averse culture in investment institutions.

Case study box 3: BioCity

BioCity Group specialises in the creation and development of life science businesses. It provides homes and access to high-end equipment, shared services, training, business support and access to investment for new and growing bioscience businesses.

Over 200 companies are based in the four BioCity Group business incubators across the UK, making the BioCity network one of the largest concentrations of life science businesses in the UK and home to a significant proportion of start-ups in the regions in which it operates.

At the group's main site in Nottingham, such companies have a 91% survival rate over a 13-year period. Since BioCity has been in existence there has been a more than 3-fold increase in the number of R&D focused life science companies in the Nottingham area to 160.

Coupled with “tailored communication” and reassuring guidance for the pension industry proposed in the consultation, the government could consider requiring pension funds to report on the proportion of their holdings that are in long-term and, potentially, illiquid investments. Holding such asset classes may be currently viewed negatively by the industry, as the consultation suggests, but a concerted communications campaign coupled with greater transparency could help change that perception as everyone would see others changing their behavior, thus reinforcing the culture change. The government’s “nudge” unit should be commissioned to provide some policy ideas to change investment behavior here. The BIA is keen to take a leading role in this communication campaign. Additionally, the government should assess if there are regulatory imbalances that allows institutions and individuals to invest in overseas assets, particularly in tax havens, while discouraging investment in UK industry.

Pension fund involvement in the NIF

If illiquid investments prove too challenging for pension funds to invest in, the NIF may be able to provide a solution. Listed public-private fund of funds would allow for the scale and liquidity required to allow pension funds to invest, while the specialist fund managers and government or central bank involvement would provide reassurance to pension holders.

Encouraging and focusing retail investment

This section answers consultation questions 8, 9, 12 and 19.

Targeting tax-advantaged venture capital schemes

The Knowledge Intensive Company definition (Box 1) was introduced to the tax-advantaged venture capital schemes in 2015 to provide improved incentives for investing in such businesses whilst meeting State Aid rules. The BIA has consulted its membership and concluded that this definition is working well and effectively targets investment to earlier-stage, innovative businesses. We therefore encourage the government to use this definition to target investments.

Whilst the definition works well, the innovation condition is ambiguous and creates uncertainty for businesses as they are not sure on what criteria they will be judged, which means they often are forced to seek costly professional advice. Simplifying the definition by removing this requirement would benefit companies that are often short of capital.

Enhancing tax-advantaged venture capital schemes

The policy intention behind EIS and VCT was to incentivize investment in early-stage companies. As discussed above, they have achieved this to a large extent and the access to capital challenge has been moved along the business timeline to the point of scale-up.

The government should seek to utilise these effective schemes to address the scale-up challenge. Small enhancements to the schemes and an expansion in their scope could result in a sea change in fundraising. For example, when VCT Income tax relief changed from 20% to 40% in 2004-05, there was a 643% increase in investment; and when EIS income tax relief changed

from 20% to 30% in 2011-12, there was a 32% increase in investment⁹. In particular, the current annual and lifetime company fundraising limit on EIS/VCT capital is challenging for the life sciences sector, which is more capital-intensive than others, and should be raised. To avoid abuse of these schemes and ensure any changes are well-targeted to address investment market failures, enhancements should only be applied to Knowledge Intensive Companies.

The inherent flaw in EIS and VCT schemes is that investors cannot follow their money in future non-qualifying fundraises. This penalises early investors as they become diluted as a company progresses. To incentivise greater and longer-term investing, EIS and VCT investors should be able to benefit from continued tax relief when investing further in companies they have backed at an early stage.

Additionally, the government should reconsider providing relief for replacement capital, which it consulted on in 2016 but did not progress at the Autumn Statement that year. Allowing purchasers of secondary shares to benefit from tax relief, subject to the same conditions as primary investors, would encourage a more active market for life science companies. The scheme should be limited to Knowledge Intensive Companies.

The BIA recognises that State Aid rules restrict the government's ability to enhance these schemes in some areas. In its response to this consultation, the government should publish its analysis of which components of the EIS and VCT schemes are limited by State Aid.

Finally, by increasing the flexibility of the schemes and reducing the penalties for accidental non-compliance, the government could support businesses at minimal cost. In particular, often commercially-driven decisions can trigger forfeiture of EIS status, for example, a reorganisation or change in research project focus, which leads to significant investor dissatisfaction and harms the sector.

An Investor Visa Fund

A currently untapped source of capital for innovative growth companies is high-net worth individuals coming to live in the UK. The Tier 1 (Investor) visa is available to individuals who are able to invest £2,000,000 in the UK by way of UK Government bonds, share capital or loan capital in active and trading UK registered companies¹⁰. The nature of this investment means it is highly likely to go into the lowest-risk assets possible.

The BIA proposes a rule determining that 10% of this investment should be in high-risk ventures in UK innovative businesses. This will refine the visa policies to support economic activity in line with the government's industrial strategy approach. It would also introduce investors to sectors they would otherwise not consider, potentially creating a virtuous cycle of investment.

The Australia government has introduced such a rule for its "Special Investor Visa". This has stimulated private financial institutions to establish services to facilitate the investment for

⁹ The data supporting this statement has been provided to the Enterprise Investment team at HM Treasury, please contact us if you require it.

¹⁰ Home Office (2016), *Tier 1 (investor) visa guidance*,: <https://goo.gl/VAZidT>

individuals, ensuring that the investments are informed by specialist fund managers. With the UK's mature financial services sector, a similar system could easily be established here.

Taking the average combined amount invested by Tier 1 (Investor) visa holders from 2011-2015¹¹, it is estimated that this policy could raise £100 million annually for investment into innovative businesses (based on the 10% rate proposed). The UK investor visa scheme also allows settlement sooner if users invest greater sums, meaning the policy could raise more than this.

As the government develops a new immigration system in response to Brexit, now is the opportune time to introduce such a scheme.

¹¹ Home Office (2016) *Immigration statistics, January to March 2016*: <https://goo.gl/bLxOKx>