**Yorkshire Universities**

**Financing Growth in Innovative Firms Consultation**

## Introduction

1. This is the response of Yorkshire Universities (YU) to the consultation document on 'Financing Growth in Innovative Firms'. YU is a regional higher education association representing eleven universities and a specialist college. YU is a partnership based on a shared interest in place and the contribution universities make (both individually and collectively) to Yorkshire. In economic terms, this contribution is delivered as employers, purchasers of goods and services, providers of graduates/post-graduates, skills, and by undertaking research and innovation activity. YU has three decades' experience of working in collaboration with regional and local institutions and actors, including Local Enterprise Partnerships (LEPs), local authorities, Regional Development Agencies (RDAs), business, Members of Parliament and local communities. Our members also have a wider societal and civic position, which is crucial as public policy seeks to address profound socio-economic disparities and inequalities across and within the UK.

2. The unique strength of YU lies in its ability to consolidate the diverse profiles of its members, bringing together a holistic 'offer' to businesses and communities across the four LEP areas of Yorkshire and articulating this proposition within the wider 'Northern Powerhouse' pan-region. Some of our members are universities with an international perspective, some are very local; some engage with large private sector companies, others with small and medium size employers (SMEs); some have scientific and technical curricula, others are based in the arts and social sciences; some work across a wide spectrum, while others focus on niche areas. YU is able to bring together the scale and capacity of its member institutions, drawing upon inter and cross-disciplinary research strengths, and can play a pivotal role in connecting business with a collective group of universities.

3. Together, YU members make a £3.7bn economic contribution to Yorkshire and play a critical role in generating jobs, supporting skills development creating innovation and driving enterprise. Yorkshire's universities produce over 55,000 graduates each year and play a vital role in the region's social and cultural life by attracting a large and diverse student population from more than 150 countries.

## Background

4. YU welcomes the Patient Capital Review and the publication of the consultation document on 'Financing Growth in Innovative Firms'. The Government sees increasing the supply of capital for firms (and increasing the demand for finance) as part of a broader effort to address the UK's productivity problem, and tackle regional

economic disparities.[1] The consultation seeks information and evidence about some of the barriers within the UK to deploying more patient-types of capital for innovative and fast growing firms. In particular, YU recognises the importance of providing views on the proposal to create a new National Investment Fund (NIF) to supplement and potentially replace European Investment Fund (EIF) investment in the UK, which provides European Union (EU)-backed finance to technology start-ups. Although no formal announcement has been made, recent press reports suggest that the EIF and the European Investment Bank (EIB), which is the main shareholder in the EIF, have both placed moratoriums on new long-term loans in the UK.[2]

5. Our submission focuses upon three themes: First, the barriers to and potential solutions for UK innovative firms seeking access to capital. Second, the importance of particular financial instruments in helping to provide capital to firms within Yorkshire and the Humber. And third, the role of universities in generating forms of patient or evergreen capital to innovative spin-out companies.

**Barriers and potential solutions to investment**

6. The UK investment community is the largest in the EU,[3] but it often attracts criticism that it is too focused on short-term returns and maximising shareholder value.[4] The Government believes that one of the main barriers to supporting innovation through the commercialisation of research (i.e. from universities to business) is access to long-term investment. In particular, a shortage of patient capital is said to be holding back UK firms, coupled with a tightening of bank lending in the aftermath of the global financial crisis. Although the UK has the largest venture capital (VC) market in the EU (providing a quarter of the EU market),[5] it remains small-scale compared to the USA. For example, the US VC market generates seven times more capital for small businesses in America than European VC markets do for EU firms. This means that many small firms are not able to realise their full potential, a point emphasised in the UK Industrial Strategy Green Paper, which recognises that more public and private investment is needed to help businesses grow. Many firms face barriers to scaling-up – including a lack of finance to support growth. The Industrial Strategy identifies, for example, that the UK has an under-supply of late-stage VC for innovative, expanding UK businesses.

7. British Business Bank (BBB)-sponsored research, undertaken in conjunction with other public-sponsored business investment banks in the EU, suggests that developing capital investment in small businesses is a long-term mission and

[1] HMG (2017) Building our Industrial Strategy Green Paper, HM Government: London.
[2] Wright, C. (2017) 'European Investment Bank cuts off cash for British building projects due to Brexit', The Times, 22 August: https://www.thetimes.co.uk/article/brexit-eu-bank-cuts-off-cash-for-british-building-projects-s2qvc66z2?shareToken=55acd6864e89a11c0a3cb2ce4c1b980b
[3] Metzger, G. (ed.) (2016) Building Momentum in Venture Capital across Europe, Bpifrance: Maisons-Alfort Cedex.
[4] Authers, J. (2015) 'Incentives favour short-term investment focus', Financial Times, 11 March: https://www.ft.com/content/ea789240-c7f8-11e4-9226-00144feab7de
[5] Ibid.

requires effective state intervention and support (and is a crucial part of an Industrial Strategy). Governments tend to be the largest source of VC finance in Europe, whereas in the US, pension funds are the largest source of funds. Even so, the involvement of the public sector has played a major role in shaping the US VC industry.

8. Most UK firms have to look towards international investors when seeking finance, particularly if scale-up finance over £5 million is being sought, with research suggesting that 60 per cent of all funding rounds for high growth businesses in the UK involve a US investor.[6] While VC, in the form of equity, provides an important means of providing capital to innovative, smaller firms[7], the challenge of securing finance above and beyond short-term horizons is said to encourage or even compel UK firms to agree to being taken over by large global technology companies. R&D companies, such as those in the life sciences, typically need investment periods of up to 30 years and not the 10 year timeframes that VC funds are based around. Capital investors that are seeking long-term returns, in an era of moderate economic growth and perpetually low interest rates, such as pension and insurance funds, might be persuaded to see innovative firms as a new form of asset class that can be offered debt and/or equity. New investment vehicles and structures, from crowd-sourcing platforms to listed institutional funds, are emerging. Traditionally, pension funds have tended to avoid investing in more 'risky' business ventures, and have instead looked to physical infrastructure as a means of generating long-term, stable returns (of approx. 5 per cent per annum). Regulatory and fiscal changes may enable more UK and foreign pension funds to invest in VC and patient capital funds.[8] An increasing number of pension funds are looking at their investment portfolios, and are considering investing more in asset classes that deliver different forms of economic, social and environmental value. For example, the University Superannuation Scheme (USS) has become a shareholder in the Green Investment Bank, which will provide finance for green infrastructure projects, while some global pension funds have begun to add social infrastructure to their portfolios.[9] These types of investments require pension funds to have sufficient scale and assets. In the UK, the Government has encouraged public sector pension schemes to reduce costs, pool resources and build critical mass through mergers.[10] Other proposals are

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[6] AFME (2017) The Shortage of Risk Capital for Europe's High Growth Businesses, Association for Financial Markets in Europe: London.

[7] For example, 3M, which has supported the development of an Innovation Centre at the University of Huddersfield, uses corporate VC funding as a means of super-tech scouting to adopt new and emerging technologies within a large corporation. A large proportion of this is equity-based investment.

[8] The Economist (2017) 'British tech firms suffer from impatient investors', The Economist, 6 April: https://www.economist.com/news/britain/21720320-government-eyes-pension-funds-source-long-term-capital-british-tech-firms-suffer

[9] Paula, J. and Della Croce, R. (eds.) (2015) Annual Survey of Large Pension Funds and Public Pension Reserve Funds, Organisation for Economic Cooperation and Development: Paris.

[10] Marriage, M. (2015) 'Benefits of pension scheme mergers outweigh risks for Treasury', Financial Times, 20 September: https://www.ft.com/content/0b469976-5c97-11e5-9846-de406ccb37f2

calling for the UK to create sovereign wealth funds that would invest in corporate business alongside infrastructure investment.[11]

9. The Government is suggesting that the NIF could channel investment into patient capital, and in the consultation document it proposes three options for how this might happen. First, new private investment could be crowded in through a public-private partnership, which would provide scale to new private investment, although private investors may not want to participate in a new fund without an established track record of prior investment. The second proposal would be to incubate the NIF on the Government's (sovereign) balance sheet (as a new subsidiary of the BBB) with the intention of selling part or a percentage of the NIF to private investors once it has established a track record.[12] The third option would be to increase Government investment through existing channels, although the suggestion is that this may, in the long term, reduce vibrancy within the market and not be fiscally sustainable. In each case, the Government would see investment made through the BBB. In addition, we also believe that there might be an opportunity to encourage more Original Equipment Manufacturers (OEMs) to adopt Corporate Social Responsibility (CSR) principles to create patient capital funds.

10. The Government suggests that the size and structure of the NIF would depend on whether a domestic replacement for the EIF is needed in the UK, although the Government indicates that even if there is a continued relationship with the EIF, post-Brexit, there is a strong argument for a new fund in the UK. The EIF is seen as an 'anchor' investor for British venture capitalists raising new funds. Between 2011 and 2015, the EIF invested £1.9 billion into 144 UK VC firms, and in 2016 it invested £800m in equity and £400m in other support such as loan guarantees.[13] Nine UK unicorns – that is hi-tech businesses with a net worth of at least $1 billion – have raised £1.98 billion between them, of which EIF-backed funds contributed some £271.7 million.[14] Given the challenge of accessing capital for innovative, small businesses, there is a strong argument for the EIF to be replaced if it does not continue financing UK projects and companies after the UK leaves the EU. In their General Election Manifesto, the Conservative Party suggested that, as the UK contributes to the EIF via the EIB, the UK would repatriate the funds and allocate them via the BBB.[15]

11. The UK may also wish to draw upon other international evidence when proposing interventions to support increased investment in innovative, small businesses. A

[11] Madeira, P. (2017) 'In the absence of domestic resources, foreign cash is feeding UK start-ups', LSE Business Review, 16 August: http://blogs.lse.ac.uk/businessreview/2017/08/16/in-the-absence-of-domestic-resources-foreign-cash-is-feeding-uk-startups/

[12] This appears to follow the model the Government adopted for the Green Investment Bank.

[13] EIF (2016) The EIF in the United Kingdom, European Investment Fund: Luxembourg: http://www.eif.org/news_centre/publications/country-fact-sheets/EIF_Fact-sheet_UK.pdf

[14] Madeira, P. (2017) 'In the absence of domestic resources, foreign cash is feeding UK start-ups', LSE Business Review, 16 August: http://blogs.lse.ac.uk/businessreview/2017/08/16/in-the-absence-of-domestic-resources-foreign-cash-is-feeding-uk-startups/

[15] The Conservative Party (2017) Forward, Together, Our Plan for a Stronger Britain and a Prosperous Future: the Conservative and Unionist Party Manifesto 2017, The Conservative and Unionist Party: London.

study undertaken by the Organisation for Economic Cooperation and Development (OECD) has suggested that governments should adopt both supply and demand-side instruments in order to address the lack of access to finance for young innovative firms.[16] Supply side interventions range from grants, loans and guarantee schemes, to tax incentives and equity instruments. There has been an increase in the use of equity instruments in OECD countries, but the focus has shifted from government equity funds investing directly to more indirect models such as co-investments funds and fund-of-funds. On the demand side, to encourage and enable firms to launch and grow successfully, human capital development is important, in the form of education, training and/or on the job experience, while specific programmes, such as incubators, accelerators, business angel networks and matchmaking services, have also become increasingly popular in OECD Member States.

**Investment capital in Yorkshire and the Humber**

12. The Government accepts that the supply of equity finance varies between different parts of the UK and tends to be concentrated in London and the South East. New types of funding, such as crowd-funding, are also highly concentrated in London and the South East, and are spreading only slowly to other regions.[17] The gaps in the availability of capital and shortage of productive and innovative firms in the North of England is said to contribute, in part, to the differences in productivity between London and the South East and the North.[18]

13. In an attempt to increase the demand and supply of finance for innovative, high-growth businesses, LEPs in the North of England (through the guise of the Northern Powerhouse) have chosen to distribute some of their allocations under the European Regional and Development Fund (ERDF) to VC. These tend to make investments under £1 million and account for up to 70 per cent of investments by volume. Funds that were initially part of the Joint European Resources for Micro to Medium Enterprises (JEREMIE), which provided loan/repayable finance to businesses, under the auspices of RDAs, have been consolidated and brought together with new resources (ERDF and EIF loans) to extend financial support and generate legacy funds for economic development over the next ten years. These kinds of ‘Financial Instruments’ are designed to deliver equity, loan and mezzanine investments to ‘underserved’ geographic areas, and are a way of increasing the efficiency of European Structural and Investment Funds (ESIF). The theory is that financial instruments can make ESIF stretch further by leveraging in additional public, private or social finance and by creating legacies for future use. They can bring in additional expertise, which increases the efficiency and effectiveness of public investment and can enable the recycling of funds for long-term benefit in local economies.

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[16] Wilson, K. (2015) Policy Lessons from Financing Innovative Young Firms, Organisation for Economic Cooperation and Development: Paris.
[17] HMT (2017) Financing Growth in Innovative Firms, HM Treasury: London.
[18] SQW (2016) Northern Powerhouse Independent Economic Review, SQW: London.

14. Regional JEREMIE funds in the North of England (including Yorkshire and the Humber) are being consolidated into the £400 million Northern Powerhouse Investment Fund (NPIF), with the BBB acting as the Implementing Body (Fund of Funds Holder) operating from Sheffield. NPIF brings together the BBB and ten LEPs in the North West, Yorkshire and the Humber and Tees Valley, and builds on the platform created by three smaller predecessor funds: Finance Yorkshire, North East Finance and The North West Fund. LEPs coming together to pool resources should enable fund managers to provide micro-finance, debt and equity to small businesses, and should increase the supply of debt finance across the Northern Powerhouse.[19] A NPIF Strategic Oversight Board is led by the Chair of the Leeds City Region LEP, Roger Marsh. The North East opted not to join NPIF, preferring instead to create a successor fund based in the North East, utilising existing local expertise and infrastructure. The North East Investment Fund will provide up to £120m of loan/repayable business finance.

15. In the context of devolution and Brexit, there are three issues that are of importance to universities in Yorkshire and the Humber, in relation to 'place-based' finance for innovative firms. First, is to ensure that existing EIF investment continues to be provided for vehicles, such as the NPIF. Second, is a challenge to the Government to ensure that if EIF investment in the UK does not materialise following in the run up to and Brexit, then domestic replacement funding should provided in a similar vein to that being called for by local government and universities in debates surrounding post-ESIF mechanisms. Third, is to ensure that the UK NIF, which the Government is proposing in the consultation document, should be sufficiently place-based to align effectively with the emergent geographies and institutions of devolution in England.

**Universities and finance for innovative small firms**

16. The House of Commons Science and Technology Committee undertook a review on technology transfer and the translation of university research into commercial success.[20] The inquiry and subsequent final report are useful for illustrating the role of universities in providing patient capital and other forms of investment to support research and development (R&D) in business, and could present a basis for encouraging a greater role for universities, alongside public and private sectors and other actors to increase the supply and demand for business finance in regions, such as Yorkshire and the Humber.

17. The Committee's report was concerned that previous efforts by the Government had disproportionately focused on the 'supply' of research by universities, rather than on the level of 'demand' from businesses. The Committee argued that, without a healthy commercial demand for R&D (in different places), the scope for universities to strengthen their engagement in technology transfer is limited. This has particular

[19] Analysis undertaken by Regeneris Consulting, for the European Investment Bank and the Department for Communities and Local Government, identified a need for debt finance across the Northern Powerhouse.
[20] HoC (2017) Managing Intellectual Property and Technology Transfer: Tenth Report of Session 2016-17, Science and Technology Committee, House of Commons: London.

implications for regions, such as Yorkshire and the Humber, where commercial demand for R&D is lower than in London and the South East.

18. The 2015 Innovation Survey, published by the then Department for Business, Innovation and Skills, found that the 'availability of finance' was the most cited factor said to be constraining business innovation, and in particular proof of concept funding.[21] However, problems, as illustrated earlier in this paper, also exist with the absence of a 'ladder of funding' that provides later-stage, long-term finance. Universities, in response, have developed their own in-house university investment funds. The Science and Technology Committee has recommended that the Government's Patient Capital Review should engage with the university sector and learn from those universities that have developed patient capital schemes.[22]

19. In evidence to the Science and Technology Committee, the Russell Group suggested that, while UK universities perform well by international comparison in commercialising research, a question remains over how the UK can get more finance to enable firms to scale-up (especially businesses with a value of between £5 and £100 million).[23] Russell Group universities have helped to develop the approach of patient capital, whereby evergreen funds adopt a much longer investment time horizon than traditional VC companies as there are no fixed-term investment periods. Unlike the US, the UK has not yet developed 'Super Angels' (ultra high net worth individual investors) or university endowment fund-backed University Venture Funds. The fact that providers of patient capital do not have to provide returns within a set period means that they can take a more long-term view with investments, which is said to be an essential requirement for developing scientific academic start-ups. One of the first universities to pioneer the patient capital model was Imperial College London, which also made investments in intellectual property developed at, or associated with, the University of Cambridge, the University of Oxford and University College London.

20. Patient capital investment vehicles require similarly patient financial backers. Much of the technology commercialisation sector has been underpinned by long-term supportive investment from wealth management funds, such as Invesco Perpetual, Woodford Investment Management, Lansdowne Partners and others.[24] Companies use their balance sheets to invest typically with a single university, although EIF-backed venture funds have been associated with single and/or multiple universities (e.g. UCL Technology Fund, the MTI UMIP Premier Fund (focused initially on Manchester University) and Epidarex (focused on Kings' College, Edinburgh, Glasgow and Aberdeen). Some companies may not be of sufficient potential future scale to attract either patient or VC funding. However, university-led models can

[21] BIS (2016) UK Innovation Survey 2015, Department for Business, Innovation and Skills: London.
[22] At the time of writing this paper, the Government has not yet responded formally to the Science and Technology Committee report.
[23] Russell Group (2016) Written evidence submitted to the Science and Technology Committee Inquiry into Managing Intellectual Property and Technology Transfer: London.
[24] Hickson, T. (2015) Patient Capital: A new way of funding the commercialisation of early-stage research, Imperial Innovations Group plc: London.

address this issue. For example, Imperial Innovations at Imperial College London runs a dedicated company creation and development unit to support small firms.

21. Universities in Yorkshire and the Humber, including the University of Leeds, University of Sheffield and University of York, are members of the IP Group, which has pioneered the concept of the long-term partnership with UK universities to strengthen intellectual property relationships with business. The IP Group business model is based on seeking and maintaining long-term relationships with US and UK universities, and providing initial capital into scientific-based companies (e.g. healthcare, cleantech and biotech).

22. There is a fundamental issue for the Patient Capital Review, and the consultation on how to increase finance for innovative firms, to consider, which relates to the role of universities in providing business and R&D finance. Further measures are needed in order to build and expand upon the contribution of a small number of UK universities, so that they and other HE (anchor) institutions can support place-based innovation that stimulates productivity improvements in all parts of the UK, and not simply the more prosperous regional economies.[25]

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[25] Goddard, J. (2017) Towards a placed based science and innovation strategy for England: a role for universities? A paper for the BEIS, Advisory Group on Smart Specialisation and Innovation Audits, Centre for Urban and Regional Development Studies (CURDS), Newcastle University: Newcastle upon Tyne.