



Social Mobility
Commission

Socio-Economic Diversity in Life Sciences and Investment Banking

Life Sciences

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About the Commission

The Social Mobility Commission is an advisory non-departmental public body established under the Life Chances Act 2010 as modified by the Welfare Reform and Work Act 2016. It has a duty to assess progress in improving social mobility in the UK and to promote social mobility in England. It consists of up to 10 commissioners, supported by a small secretariat.

The Commission board comprises:

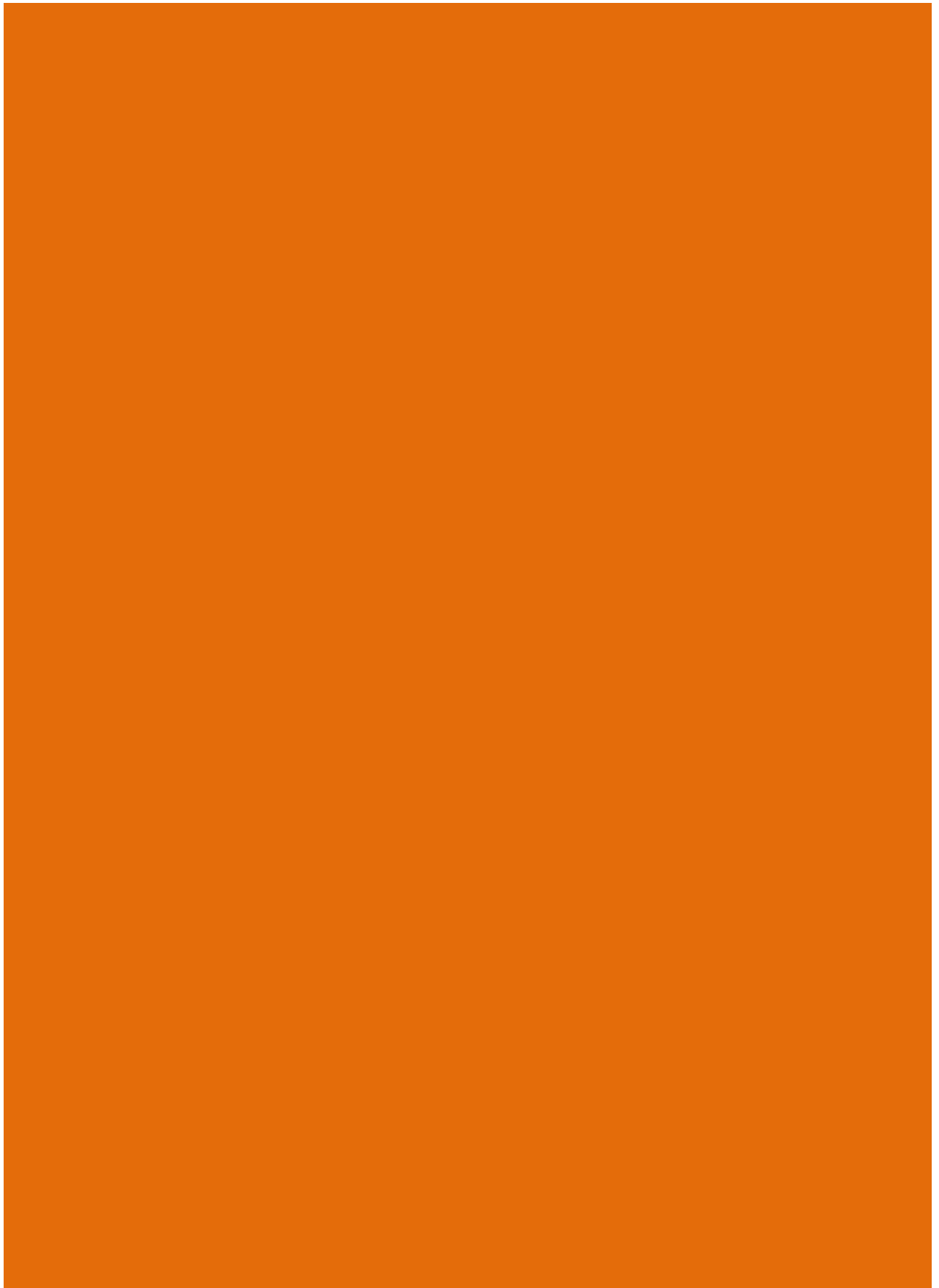
- The Rt. Hon. Alan Milburn (Chair).
- The Rt. Hon. Baroness Gillian Shephard (Deputy Chair).
- Paul Gregg, Professor of Economic and Social Policy, University of Bath.
- David Johnston, Chief Executive of the Social Mobility Foundation.

The functions of the Commission include:

- Monitoring progress on improving social mobility.
- Providing published advice to ministers on matters relating to social mobility.
- Undertaking social mobility advocacy.

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Executive Summary

People from more privileged backgrounds are over-represented in professional scientific roles in life sciences and in front office roles within investment banking compared to the population as a whole.

- In the UK c.82% of children attend a non-selective state school, 11% attend a selective state school, while 7% attend fee-paying schools.
- In comparison, within investment banking, according to research published by The Sutton Trust in 2014, 34% of new entrants over the previous three years had attended a fee-paying school and 14% had attended a selective state school. Overall, 51% of current leaders were privately educated, and privately educated leaders are more prominent in the under 45s (at 72%) than the over 55s (at 57%).
- Within the life science sector the research found that data on educational background of employees is currently unavailable. The life science sector is very diverse and it is likely that the social mix will depend on the employment context and sub-sector. For professional level scientific jobs, particularly with large employers, the profile appears to be skewed to high achieving graduates from relatively privileged backgrounds. Science graduates are stratified by social origin, and differences in access to science education start during initial schooling.

Ensuring fair and equal access to life sciences and investment banking is important, for our economy and society, and for individuals.

- For our economy, it is important that key sectors including life sciences and investment banking use the full range of talent available to them, in order to ensure innovation and entrepreneurialism, and reduce the negative consequences of homogeneity, including group think.
- For our society, opening up access to top jobs on the basis of social background, including in science and investment banking is vital, in order to ensure higher rates of relative social mobility, and to reduce the impact of structural inequalities.
- For individuals, it is important that access to work that is either fulfilling and/or well-paid is not decided on the basis of background. Social and cultural background factors have been linked to the chances of success and progression in science education, and also play an important role in relation to access to the investment banking sector. To the extent that young people from non-privileged backgrounds cannot access the latter roles, they are excluded from an important route to a high-income career.

Different rates of access to these sectors can be explained because young people from more privileged backgrounds are advantaged at different stages of the recruitment and selection process, while those from non-privileged backgrounds are more likely to experience challenges, which may add up to a cumulative disadvantage overall. These challenges start with the recruitment process and originate in the relationship between leading employers and elite universities.

- Employers in life sciences attract and appoint new graduates from across the breadth of the higher education sector, including internationally, but in a competitive labour market there can be a tendency towards giving preference to graduates from particularly well-known or prestigious courses or institutions.
- Across investment banking, recruitment is also international. However, though the range of universities from which investment banks recruit is relatively diverse in terms of its global reach, it is narrow in terms of its focus on a small number of elite institutions. Within the UK, target universities which supply particularly high numbers of graduates to the sector include London School of Economics (LSE); the Universities of Oxford and Cambridge; Imperial College London, University College London, and the University of Warwick. Young people who do not attend a target university may be less likely to gain access to a front office role in investment banking, irrespective of prior attainment.
- Overall, students from non-privileged backgrounds are less likely to attend the elite universities from which employers within life sciences and investment banking recruit, for a variety of reasons, including more limited knowledge about pathways into the professions. Those who do attend these elite universities may be more likely to self-select out of the application process if they feel they may not fit-in or that employers do not welcome diversity on the basis of social background.

Challenges with respect to recruitment are amplified within the selection process to life science roles and, even more so, to front office roles in investment banking.

- Recruitment practices to graduate jobs in life sciences often focus on candidates' practical skills as well as academic criteria; this depends on having exposure to laboratory/industry experience - which may be more limited for non-privileged students who are known to face barriers to taking up placements and internships. Non-privileged students also may be less likely to progress to post-graduate study, which is becoming increasingly important for employment opportunities, in the context of oversupply of science undergraduates.
- In investment banking, applicants are pre-screened including on the basis of academic credentials gained at secondary or high school. There is a relationship between achievement at A-level and socio-economic background in the UK, meaning that pre-screening could have a disproportionate impact on applicants from non-privileged backgrounds, even where they have performed well at university.
- A relatively high level of formality at pre-screening often gives way to a relatively high level of *informality* with respect to final decision making, where hiring managers have a tendency to recruit for familiarity and similarity, and focus on perceived 'fit.' This combination of formality at pre-screening, and informality with respect to final selection decisions, could mount particular challenges for candidates from non-privileged backgrounds. This is particularly the case since the concept of 'fit' is often determined by whether aspirant bankers share a social or educational background with current hiring managers. It is though important to underline that the precise impact of these processes varies within and between banks, with some offering a wider range of opportunities to people from diverse backgrounds than others.

Overall, access to both sectors requires a particular portfolio of economic, social and cultural capital, which is more available to young people from privileged backgrounds, and might be summarised as science and investment banking capital.

- Academic credentials are important in recruitment to high performing jobs in life sciences and access to employment opportunities also often depend on candidates having exposure to practical laboratory/industry experience, being socially confident and having commercial awareness and the ability to communicate drive and ambition to innovate, because these factors play a major part in framing the recruitment decisions of life science employers.
- Social confidence and communication skills can be honed through involvement and leadership in extra-curricular activities, something that can conflict with paid employment for non-privileged students.
- Access to front office roles in investment banking requires many of the characteristics described above. However, in addition, the recruitment cycle for investment banking starts in the first year of university, or even at school, and aspirant bankers are expected to secure relevant work experience at an increasingly early age. Young people from more affluent or professional backgrounds whose existing social networks offer access to relevant information and knowledge about entry routes to investment banking are thus advantaged.
- Specific forms of cultural capital also play an important role, especially within the sales and advisory functions of investment banks, including corporate finance or mergers and acquisitions (M&A). Here, a candidate's suitability is assessed by some hiring managers not only in relation to educational background but also to specific behaviours, speech patterns and dress codes, all of which are arguably more available to those who have been socialised within a middle or upper-class environment. Hiring managers consider that these characteristics, summarised as 'polish', reassure clients about their advisors' expertise and experience, and help build trust.

Employers within life sciences and investment banking lag behind those in other sectors, including law and accountancy, in recognising and acting to reduce the full range of barriers to access on the basis of social background.

- In general life science employers have not explicitly considered social class in their recruitment strategies and none of the case recruiters we spoke to were aware of any related work being undertaken by other employers or sector bodies. However, several employers included in the research showed understanding that by recruiting graduates and postgraduates they were recruiting from a pool of relatively privileged individuals and therefore their workforce was likely to reflect this.
- Within investment banking, several large employers have established schemes, often working with third sector providers, to facilitate inclusion on the basis of social background, usually involving work experience, internships and skills training for individuals from non-privileged backgrounds. This is positive, especially where such initiatives are part of the talent agenda and thus act as a clear pipeline into mainstream recruitment and selection processes. However, these schemes are sometimes small scale and have not always been accompanied by more fundamental alterations to mainstream recruitment and

selection practices which would facilitate wider access on the basis of social background.

- A business case for change is being developed in both sectors. Life science employers want to recruit the best scientists and this means being open to people from different backgrounds: having a diverse workforce is commonly an explicit company objective, given the association of diversity with global innovation and excellence, especially for large employers. However, some employers are concerned that hiring the best needs to take account of existing achievement and demonstrable skills.
- Within investment banking, widening access to front office roles is seen by some current professionals as an important means to reduce homogeneity and therefore limit the dangers of group think. However, interviewees noted that the current approach to recruitment and selection is efficient and effective as a means to appoint high numbers of people whose social and educational backgrounds are similar to those who have historically been dominant within the sector.
- Commitment to change may also be hampered by a strong cult of meritocracy within the investment banking sector, in which access to the sector is characterised by current bankers as reliant predominantly on an applicant's IQ and effort. The current study underlines that in fact, entry often depends on additional factors which can be mapped on to social class.
- Interviewees considered that the potential for progressive change within the sector is currently limited by a lack of strong leadership around social inclusion. This in turn was related by interviewees in part to the international nature of investment banks in the City of London such that current leaders, many of whom were not born in the UK, may not feel as invested in issues such as social mobility, which have an apparently domestic focus. However, again, some banks have made more progress here than others.

Employers in both sectors have not attempted to monitor the socio-economic background of applicants and new entrants to the sector, or current employees.

- With some notable exceptions, large employers in life sciences and investment banks lag behind those in sectors such as law and accountancy, where employers are more likely to measure and monitor the social and educational background of aspirant and current staff, and are also relatively transparent with respect to sharing both data and information about their approach to social inclusion. Firms in peer group sectors are also more likely to collaborate, via initiatives such as Prime in the legal sector and Access Accountancy, therefore driving forward good practice. These tendencies are not yet evident in either life sciences or the investment banking sector.

Alternative routes to higher level skills are being put in place and these will need employer recognition to succeed.

- Employers within life sciences are starting to open more alternative routes to the sector, including through the Higher Apprenticeship framework for life sciences (equivalent to a level 4/5 higher education qualification at technologist level) and the more recently introduced Degree Apprenticeships in science (for scientist

roles including life sciences at graduate level 6). These routes are in the early stages and have the potential to draw in a more diverse profile of new entrants as well as developing those already in the workforce who wish to progress to a professional level role. Putting vocational learning on an equal footing with academic routes has been identified as a key issue for meeting the future skill needs of the sector and education of employers about the value of the Apprenticeship route and job relevant training is seen as a key priority for the sector.

- This trend is less evident within investment banking, where apprenticeship schemes tend to lead to back or middle office roles, for example within information technology. Middle and back office roles within banks are likely to be more diverse on the basis of social background, and routes into front office roles are available, although interviewees suggested that these are rarely formalised.

Summary of Recommendations

More detailed recommendations for each sector are provided within the relevant chapters (see page 112 for life science and page 115 for investment banking). A summary of the key over-arching recommendations for both sectors is provided below.

Objective	Why is it important
<p>Encourage agreement on the business case for tackling social inequality in life sciences, and investment banking.</p>	<p>Over recent years employers have placed an increasing emphasis on achieving greater diversity within recruitment, and on safeguarding against overlooking the best candidates for the job or those with the most potential. However, there has tended to be a more limited focus on socio-economic background, despite a wealth of recent research to show that related factors have an important negative impact on access to professional careers.</p>
<p>Understand barriers to access. Employers within life sciences and investment banking should collect data on the social and educational background of applicants to all roles (including but not limited to front office roles in investment banking), along with new entrants and current staff at all levels of the organisation.</p> <p>This data should be used to understand in more detail to what extent and why individual from non-privileged backgrounds are less able to take up the available employment opportunities, and how issues can be addressed.</p> <p>Monitoring social background is complex, especially where there are high levels of experienced hires and international recruitment. However, employers can learn from experiences in other sectors, including the use of contextual data.</p>	<p>Measurement and monitoring allows employers to understand the barriers to access in more detail, including precisely where they occur in the recruitment and selection process, and how these barriers can be reduced.</p> <p>It is also important in order to understand the possible impact of social background on relative rates of career progression.</p> <p>Monitoring also enables employers to identify ‘what works’ in terms of widening access.</p>
<p>Address key barriers within mainstream recruitment and selection. Based on findings from</p>	<p>Employers within life sciences and investment banking lag others in peer group occupations in terms of identifying</p>

qualitative research and analysis of data, employees should work to remove or reduce roadblocks for non-privileged candidates. In other occupations, this has involved alterations such as no longer screening on academic credentials gained at secondary school; attracting students and selecting from a wider range of universities; contextualising academic performance in relation to the applicant's education and/or socio-economic background; and trialling CV blind recruitment techniques¹. Good practice requires that interventions are assessed regularly to determine their impact, with further adjustments as necessary. Ideally, employers should be transparent about the impact and collaborate in order to drive forward good practice.

and addressing challenges around access.

In life sciences, having more targeted internship schemes would enhance the potential for increasing opportunities for non-privileged groups to transition into employment because achievement of evidence of practical skills is a key factor in recruitment. The profile of take-up of internships and placements needs to be monitored and opportunities opened up to groups not currently participating.

Initiatives, especially within investment banking, have tended to focus on internships and work experience for non-privileged candidates. The emphasis is on 'fixing' aspirant professionals in order that they meet existing expectations, rather than on 'fixing' the organisation to ensure that it does not set up unnecessary and unfair barriers to access, for example, on the basis of perceived 'fit.' An additional focus on alterations to mainstream recruitment and selection – in other words a focus on demand-side factors - is likely to prove more impactful in terms of widening access, compared to focusing solely on the supply side.

Expand entry opportunities and routes.

The social mobility potential of routes into life sciences through Higher and Degree Apprenticeships need to be maximised through inclusive recruitment practices for new staff and existing employees into training and monitoring the profile of take-up of vocational progression opportunities.

Within investment banking, further assessment could be made of the

Putting vocational learning on an equal footing with academic routes has been identified as a key issue for meeting the future skill needs of employers. Apprenticeship opportunities at higher education level in life sciences although currently relatively small scale are set to expand. The sector bodies are engaging directly with the Apprenticeship agenda to strengthen vocational routes into sciences so it is important these routes do not perpetuate barriers for non-privileged applicants.

¹ CV blind recruitment involves for example removing information on a candidate's educational background in order to neutralise any bias towards particular institutions during the selection process. This approach may be appropriate in investment banking given an apparently strong tendency for hiring managers to select on this basis, but has had conflicting results elsewhere and therefore should be carefully trialled. CV blind may require further consideration in life sciences where the institution and course followed has a direct impact on achievement of employer-relevant scientific skills and knowledge.

potential for non-graduate routes into front office roles, and/or formalising routes from back and middle office into front office roles for high performing employees.

Section 1 Introduction and Background

1.1 Introduction

This report sets out the findings from qualitative research studies focusing on two main areas. The first examines the barriers to entry for people from non-privileged socio-economic backgrounds to professional scientific jobs in life sciences, with a particular focus on the issues for people currently entering careers in pharmaceuticals, medical technology and bio-technology. The second examines the barriers to entry for people from non-privileged backgrounds to front office roles in elite investment banking firms, while also considering how the picture has changed over time. The scope and methods used in each of these studies is given within the appropriate sections below.

The research forms part of the Social Mobility Commission's role as an advocate for social mobility in the UK. The aim is to understand better the candidate recruitment and selection processes and decisions around progression within life sciences and investment banking firms and how this helps –or hinders – social mobility. It considers how firms think their recruitment processes ensure they get the highest performing staff, the extent to which firms ensure this is what their recruitment process delivers, and the potential challenges in changing business practices to promote fair access.

Throughout this report we use the term non-privileged to refer to individuals whose socio-economic background may indicate relative disadvantage according to a number of variables, which could include parental income and parental occupation when the individual was aged 14, the type of school attended between 11-16, and whether their family was eligible for income support and/or free school meals. The term non-privileged has been chosen to indicate the extent to which barriers may exist not only for people who are under-privileged but also for those who come from a wider range of backgrounds.

1.2 Social Mobility: UK context

Boosting social mobility has been an objective of successive governments,¹ often linked to a particular policy priority to secure opportunities for children and young people to move out of poverty and disadvantage. Achieving the ambition of a fairer society means more opportunities to attain a higher social status need to be open to generations of young people (intra-generational mobility), as well as seeing movement between social classes and occupations occurring from one generation to the next (inter-generational mobility). Finding and nurturing talent no matter what the person's background is generally recognised as important for our economic prosperity as well as on grounds of fairness. A diverse workforce means employers are drawing on a wide range of talent that strengthens business and the economy as a whole.

The concept of movement between social strata is complex, not least because of the challenges involved in defining social class, especially at the interface with other identity factors such as ethnicity. The national measures are based on occupation, and occupational categories are often underpinned by considerations related to levels of educational attainment. Other factors that are considered to map to social class include cultural interests and patterns of consumption. Underpinning the

debate is Bourdieu's concept of society in terms of social fields, defined as a structured social space with particular rules and forms of meaning that encompass economic, human, cultural, symbolic, and social forms. Traditionally the value ascribed to these various forms of capital rest with the dominant elite who are in a position to enforce their particular way of being as 'universal norms' thereby perpetuating social hierarchies.

The Social Mobility Commission has highlighted some recent evidence of successes in social mobility. For example, fewer children are in workless households than at any time in two decades.² Education inequalities appear to be narrowing and the number of young people from low socio-economic groups taking up a place in higher education increased by 34% in 2015 compared to a decade earlier.³ Not only is social mobility now considered a 'holy grail' of public policy, it has become a priority for many employers.⁴

Despite some signs of progress, there remains however a major concern that divisions in UK society are hardening, particularly in view of the mounting split in income levelsⁱⁱ⁵ often underpinned by class considerations. The number of low paid workers is on a rising trend.⁶ Professional occupations remain skewed towards the privately educated, and people from privileged backgrounds are also found to dominate a range of 'top jobs', including the senior levels of the armed forces, civil service, newspapers and parliament.⁷ Non-privileged young people remain much less likely to go to the most prestigious universities,⁸ and may need higher grades to get a place at a Russell Group institution compared to privately educated applicants⁹, even though their chances of higher education overall have increased. Studies suggest that differential access to information, teaching and related resources is a factor in reducing entry of talented individuals from less privileged background into high status universities, who also may have an additional barrier of feeling out of place at elite universities.¹⁰ Moreover, Saunders (2006) suggests that the more people gain access to education, the greater the penalty for those who fail to access it at all.¹¹

From an historical perspective UK society suffers from low rates of upward social mobility, with a highly stratified educational system and importance of family background playing a major role in the reproduction of class divisions. Indeed, Blanden et al (2005) concluded that there has been a decline in social mobility over time given that the link between the earnings of a parent and their adult child is stronger for the generation born in 1970 than the generation born in 1958.¹² Even when the level of educational attainment is controlled for, there remains a significant association between an individual's class origins and class destinations.¹³

A large-scale study of social mobility found that people from elite social and educational strata are over-represented in professional populations, while people whose parents worked in routine or semi-routine employment constitute only 17% of NS-SEC 1 (managerial, administrative and professional occupations), despite accounting for around a third of the population.¹⁴ The study found that social background is predictive of earnings even when other factors such as educational qualifications, job tenure and training, are controlled for, meaning that even where

ⁱⁱ The income share of the top 10 per cent increased from 28% to 39% since 1979.

socially mobile people are successful in entering the higher professions, they frequently do not achieve the same levels of earnings as their more privileged peers. It is unclear the extent to which the 'class ceiling' is underpinned by issues relating to career choices of different groups or conscious and unconscious discrimination which prevents their advancement. The tendency of more senior professionals to promote in their own image has though been noted in the research.¹⁵

The policy spotlight on the need for the professions to become more accessible to a wider social pool, rather than the preserve of an 'elite' social grouping, has gained momentum following the Cabinet Office Panel for Fair Access to the Professions (known as the 'Milburn Review').¹⁶ The enlargement of HE has been an underpinning feature of the policy approach to opening up labour markets, taking 'employability' as a function of a person's achieved skills and merit including through investment in education, regardless of birth or class characteristics. However the approach has been challenged in view of the fact that the capacity for aspirant professionals to demonstrate their employability in itself can be closely related to class background.¹⁷ There is a danger that with an increase in the size of the graduate population, meaning many more applicants presenting with higher educational qualifications, employers turn to other indicators when differentiating between job applicants. In this context, the awarding institution becomes important as a signal for quality, as do other applicant characteristics (such as personal style, accent and mannerisms) and 'soft skills' (such as adaptability, team working). Such factors can be related to social background.¹⁸ 'Conflict theory' suggests that more-privileged applicants are able to deploy non-academic advantages (as well as educational-advantages) to gain entry to and advancement in professional labour markets, and that the status-quo (or 'social closure') is perpetuated because it is in the interests of professional occupational groups to maintain their prestige and status by limiting opportunities for new entrants.¹⁹ The tension between the tendency of elite groups towards social closure, and a policy background of increasing emphasis on diversity and inclusion, may have led to increased emphasis on concepts of 'merit' and 'talent' in the recruitment processes to high level positions, by offering 'rational' criteria for recruitment that are seemingly neutral and justifiable.²⁰

The current research seeks to enhance understanding of these processes, building on previous research into law and accountancy.²¹ In particular by putting the focus on investment banking and life sciences the research will assess any differences in conceptualisations and contextualisation of merit and talent in relation to high performing roles across different sectors. It also seeks to inform the debate about what more needs to be done in practice to open up access to high level jobs to a broader social group, building on the Social Mobility Commission's recommendation to involve business in its drive to increase social mobility.

Section 2 Life Sciences

The research considered social mobility in life sciences employment by collecting evidence on whether or not the recruitment and selection processes for early entry professionals in life sciences systematically advantage applicants from more privileged backgrounds. Life sciences is a strategically important economic sector and a major employer, with a high demand for specialised technical scientific skills. The employer profile is rather diverse, whilst tending to be geographically clustered.

Barriers to access originate in the nature of the skills and knowledge required. In summary, we find that the recruitment practices are rather diverse across different types of employers, and most companies remain flexible in their approach in order to widen the pool of potential recruits. At the same time there is clearly potential for some groups of candidates to professional life science jobs to be advantaged by current recruitment practices in view of the fact that:

- Although remaining flexible, many recruiters are strongly attracted to applicants from better known courses and elite universities, where there is a particularly strong scientific knowledge base, and often recruit from a pool of PhD/Post-doctoral students who have had access to cutting edge knowledge and research. The data suggests these candidates are predominantly from more privileged backgrounds and may have often enjoyed significant educational advantages.
- Candidates with previous industrial and laboratory experience present the strongest applications and are better able to navigate the selection process successfully. Industrial placement opportunities and support by firms to entrants to life sciences to help them to gain experience are probably not evenly available.
- Some of the characteristics that are highly sought after by major life sciences employers are linked to social class background. Not just in terms of university attended and extent of 'stand out' scientific exposure but also in terms of personal characteristics such as social confidence and commercial awareness.

By the same token, there is potential for candidates from non-privileged backgrounds to be disadvantaged in achieving professional level jobs in life science in a number of other ways:

- Screening on the basis of practical and industry experience as well as academic criteria has the potential to have a detrimental effect on social inclusion because applicants from non-privileged backgrounds may be less able to draw on relevant placement experiences. It currently remains likely that students who perform well at university, are more socially confident, have access to resources and support, i.e. those already more entitled, appear most likely to get access to the best opportunities.
- Exposure to technical skills and industry often needs to begin early in an individual's academic career, so that students have time to hone their interest in the subject and prove themselves, for example, through vacation placement during their first year at university. Widening participation students who come to the table with poorer academic results may be less competitive in achieving placements, especially early on in their university career when they have had less time to prove their potential.
- Confidence and entitlement were the aspects highlighted in discussions with

University careers services that were the social class differentiators, which mean some students have better chances of obtaining industry experience than others.

At the same time, candidates from non-privileged backgrounds who can demonstrate particular achievement and progress in science are also highly attractive to life science employers. There is a growing awareness amongst University careers services of the need to work with widening participation students to help them to make the most of their transferable skills and to boost their employability through exposure to employers.

The sector is changing, but there has been little attention on social mobility. Some recruiters commented that the sector is getting more diverse over time, and this was associated with an increase in recruitment of women and use of international recruitment to fill professional positions, often in the context of global operations and international recruitment. Thinking about systematic widening participation initiatives by social background in sciences appears to be still relatively new to employers. The main driver for any changes in recruitment and selection is widening the talent pool. Attention needs to be given to developing a narrative for social mobility in the life science sector, and to enhance the evidence-base for who science students are and for science graduates' employment patterns. Opportunities for non-privileged groups who are considering a career in life sciences could be enhanced through access to career and labour market information given that choice of career pathway, degree course and HE institution matters greatly in their future careers.

Life sciences employers have a tradition of engagement in outreach and work placements and there is potential for these activities to support more non-privileged groups to access scientific jobs. Most life science employers play a role, often in partnership with sector bodies, to generate interest in careers in life sciences. Supporting employers to target non-privileged young people with these activities would be a positive way forward to put social mobility on the agenda. Many employers provide work experience opportunities and work placements to current HE students, in part to help build the talent pipeline and in part to meet their corporate social responsibilities. Working with employers and sector based organisations, particularly with small employers, to increase access to these opportunities by those from disadvantaged backgrounds might prove effective in enhancing access to science careers for non-privileged groups. Some life sciences employers are also keen to promote Apprenticeships and encourage young people to consider different routes into life science employment although so far Apprenticeship schemes remain relatively small scale and focused on technical level positions, and it is unclear at this stage as to whether the Apprenticeship route might be an effective way of creating social mobility to professional level jobs.

The rest of this section is structured as follows:

- Section 2.1 describes the scope of the research, aims and method. A full methodology is given in Annex C.
- Section 2.2 provides contextual information in terms of trends and patterns in the take-up of science education and factors influencing the supply of qualified personal through the education system.

- Section 2.3 describes the recruitment practices in the case study employers. It starts with an overview of the processes that employers use to attract and decide on candidates. It then goes on to discuss the selection criteria used by life sciences employers and views on defining talent.
- Section 2.4 discussed potential barriers to social mobility in professional life science roles that are focused on scientific functions. It explores how the life science employers included in the sample understand social mobility, and discusses drivers for change.
- Section 2.5 looks at issues of career progression for recruits to professional roles in life sciences.
- Section 2.6 sets out key findings in relation to employment initiatives which support the pipeline of talent in life sciences.

Recommendations emerging from this research are given in Annex A.

2.1 Scope and methods

2.1.1 Sector overview

The life sciences sector has strategic economic importance. According to many commentators it is a major driver of new scientific discovery and technological based productivity, competitive position and levels of innovation. Recruitment of life science professionals remains an area of political concern, within the context of an educational policy which seeks to promote engagement in STEM subjects. There has been large-scale government investment in the sector. However analyses of participation, achievement and progression in science education is stratified by social background from an early age.¹ The traditional image of a scientist as a middle-class, high-attaining white male remains a persistent concern.

The life sciences sector crosses a number of industries. This research looks primarily at those industries helping to improve human health, well-being and quality of life, namely:

- Pharmaceuticals, which is development and production of drugs for use as medications;
- Medical biotechnology, which covers technological applications that use biological systems or organisms to create new products or processes (such as use of DNA sequencing/bio-informatics, gene techniques, applied immunology, and diagnostic tests);
- Medical technology, which encompasses products and services used to improve the quality of healthcare, along with activities performed by clinical laboratory professionals (for example clinical applications of chemistry, genetics, hematology, blood banking, immunology, microbiology and so on).ⁱⁱⁱ

These activities overlap with consumer healthcare, which is the manufacture and distribution of 'over-the-counter' drugs and nutritional supplements. Across life sciences activities, and particularly in the pharmaceutical and medical biotechnology

ⁱⁱⁱ Other aspects of the bio-economy were out of the scope of the current research, although some of the companies included in the research have operations in related areas, such as industrial biotechnology and primary production (i.e. biotechnology applications for agriculture, marine and livestock).

sectors, there is a high degree of outsourcing of activity to supply chain networks. These are companies that provide services such as products and equipment, clinical trials, regulatory compliance, contract manufacturing and contract research. Most employers are in the private sector however some employees in life sciences are within the academic workforce, and life science employers have close relationships with universities for research and development projects.

These industries are significant employers across a wide range of job roles: with an approximate breakdown of pharmaceuticals (70,000), medical technologies (50,000) and medical biotechnologies (30,000). More than a quarter of jobs are in highly skilled research and development roles.² Scientific and technical skills are in high demand, particularly as, in general, the research and manufacturing aspects are closely linked: meaning typically, a higher skilled workforce supported by a technical workforce, and process operator workforce (who support the manufacturing processes involved in producing pharmaceutical and other biotechnology products). In pharmaceuticals over 70% of workers are at the Technical/Process Operator level or above.³ A recent focus for skills initiatives in the sector has been on addressing the vocational supply of technical and process operator workers. More jobs in pharmaceutical and medical technology sectors in particular are requiring higher skills - and some process operators will be highly skilled. A large proportion of the technical workforce is at graduate level. Cogent (2010) highlighted that pharmaceuticals employs around 1,000 new graduates per year (60% undergraduate 40% post-graduate), of which 46% are from scientific backgrounds – mainly chemical and biological sciences. Up to a quarter of graduates may enter occupations lower than the indicative level of their qualification (although this may be due to the occupational classification).⁴ The sector provides opportunities for scientific staff to enter other roles within life science companies, such as marketing, business development, and technology. These types of jobs are outside the scope of the project.

2.1.2 Aims of the research

The current research is one of the first endeavours to put the spotlight on the social profile of life sciences employment, which will be influenced by the skill needs and recruitment patterns of life science employers, particularly the demand for an increasingly highly educated workforce. The focus of the research is on employment in professional high performing job roles where scientific skills are used as part of the job role in a specialist or technical capacity, and practices in relation to (relatively) new entrants to the sector rather than experienced hire. The aims are to:

- Undertake qualitative research with a sample of life sciences employers to understand the extent to which opportunities are enhanced or limited for certain socio-economic groups entering employment in life sciences companies.
- To capture the perceptions and experiences of employers and others including sector bodies, specialist recruiters, and careers services working in life sciences, on the profile of those entering scientific careers and in promoting fair access to high performing jobs and social mobility.
- To identify initiatives towards promoting social mobility in life sciences employment and make appropriate recommendations for employers and other stakeholders.

2.1.3 Methodology

The research was based on qualitative research methodology and involved data collection from a sample of life sciences employers and sector bodies. Further details of the methodology including the sample of research respondents included in the study are given in Annex C.

Case study research was undertaken with a sample of ten life science employers, involving the collection of in-depth qualitative information, through semi-structured interviews with key staff members involved in recruitment to professional roles in each employing organisation. Employers were sampled using a purposive sampling framework which ensured good representation by type of activity (pharmaceutical, medical technology, bio-technology), geographical location in UK and reach (national/global), and size of UK operations. The size of employer ranged from a single site operation with under 10 employees to a large multi-national with operations encompassing 120,000 employees globally.

The employer case studies were supported by qualitative research with a selection of sector bodies, using in-depth semi-structured interviews. In addition, following the data collection phase an online forum was held to discuss the emerging findings with representatives from employers and sector bodies.

In total researchers undertook 26 interviews with life science employer and sector representatives (including those undertaken through the online discussion). Interviews were conducted on a confidential basis and using an informed consent process.

2.2 The Context of Life Sciences

2.2.1. Introduction

This section provides context for the sector, in terms of the employment context and trends. It also looks at the trends and patterns in the take-up of science education and factors influencing the supply of qualified personal through the education system and into employment, drawing on national data and reports. It is clear that the life sciences sector is a major employer, although the profile of employment is changing due to trends in the market including increased outsourcing and growth of spin off businesses. There is a high demand for specialised and high level skills, and this is set to increase, together with concerns about the extent to which the education system is keeping pace with employer's needs, especially in view of the pace of change of scientific knowledge and processes in the life sciences field. The chances of young people doing well and progressing in science education is influenced by socio-economic factors and educational context. This is especially true at post graduate level. The employability prospects do not look particularly good for some graduates which has led to recent calls for employers and HEIs to work more closely together to meet the skills needs of the sector.

2.2.2 Employment context

The UK life sciences sector comprises nearly 4,500 companies and generates a turnover of over £56 billion.⁵ The position of life sciences as a strategically important, high value, sector for the UK economy has meant that there is a history of collaborative action between employers, government and education providers. The sector benefits from a supportive policy context (e.g. incentives for product development and inward investment), and skills development context (e.g. policy

emphasis on science education). Traditionally there has been a high level of employer involvement in designing and implementing new life science initiatives, and strong links between employers and higher education. For example, there has been a strong focus on collaborations to build awareness of STEM (science, technology, engineering and maths) careers, and give encouragement to the young scientists of the future.

The life sciences sector is characterised by:

- Research-led performance: the pharmaceutical industry, which is at the core of life sciences activity, is estimated to alone account for over 22% per cent of all business R&D.⁶ Many life sciences companies are strongly entrepreneurial in driving forward scientifically and technologically advanced activities. There are opportunities for scientists to move from laboratory work into business development roles.
- A substantial degree of geographic clustering: clustering seems to be a driving forces behind industry and company growth, linked to notions of agglomeration economies, information networks and growth poles which mean companies can benefit from increased chances of innovation and concentrated talent pools. Three main UK clusters are Cambridge/Oxford, Scotland and the North West. These are associated with significant higher education research institutions.
- Linked to above, a high level of interdependence between employers. Recent changes in the industry include a series of mergers/acquisitions in the pharmaceuticals industry, and increased outsourcing of research and development to ‘spin-off’ businesses.
- A high incidence of fixed-term employment, contingent work, outsourcing and the expectation of geographic labour mobility. Life science R&D staff have been characterised as very ‘flexible’ employees.⁷

There are differences in employment profiles across the sectors, as shown in Table 2.1. In pharmaceuticals there are a high number of very large employers. Eight out of ten jobs are located at just over 40 locations. Most employment is in the South East, North West and East of England. Medical technology employment is high in the North of England, Scotland and Midlands. In contrast however, companies employing fewer than 10 staff make up an estimated six in ten of medical technology employers.⁸

Table 2.1: Employment breakdown and turnover

Sub sector	Number of employees	% employed in South East*	Number of companies	% large**	Estimated Turnover (£bn)
Medical technology	88,000	24%	3,270	3%	18.1
Medical Biotechnology	23,000	26%	1,010	4%	4.8
Pharmaceutical	70,000	43%	550	17%	32.4

Source: BIS (2014), based on Bioscience and Health Technologies Database 2014

*Including London. **Employing more than 250 employees.

A survey of life science employers highlighted that employment of science degree graduates is high because there is a perception of “a need to have a detailed understanding of the science in order to perform any job in the sector”.⁹ Bioscience

businesses tend to recruit people with experience of working in labs. Some jobs have high turnover, although the large available labour pool of new graduates, and mobile workforce has reduced the impact on employers. The life sciences sector is becoming more globalised and demand for higher skills is increasing. According to the CBI, a fifth of STEM employers have shortages of graduates (up from 12% in 2013). They have warned that the caliber of STEM graduates needs attention; more than two-fifths (42%) consider graduates to lack appropriate skills.¹⁰ Finding solutions to employer's concerns about the quality of STEM graduates is one of the main thrusts of the Wakeham national review of STEM employability, which has recently identified graduate employment outcomes of biological science graduates as amongst the most 'concerning'.¹¹

The current economic context for life sciences is one in which there is downward pressure on cost, linked to reducing public sector funding for healthcare and a shift to 'generic' drugs, as patents expire, opening up competition in the market from low-cost manufacturers. In pharmaceuticals there is a shift occurring from 'cure' to 'prevention' and some indication that future business models will be on payment-by-results for a biotechnological health management service, rather than for single-item solutions such as drugs or treatments.¹²

Over the next ten years the sector is predicted to expand, particularly as developments in gene therapy, personalised healthcare, and medical biotechnology become realised. Future employment growth is being underpinned by key enabling technologies with demand for skills in bioinformatics, statistics, data and informatics.¹³ Rapid assimilation of competitive advantage are key drivers – companies aim to assimilate new technology into their business processes and 'fast-track' knowledge transfer into new products (especially in bio-pharmaceuticals). Cogent predict that this will require a wide interdisciplinary, and generally higher skill set drawn from the physical sciences, the life sciences and informatics.¹⁴ It is predicted that future employment demand will be increasingly for postgraduates – a group with a less diverse socio-economic profile than at undergraduate level. As well as scientific skills, life science businesses that deal with people and their medical treatments need skills associated with quality assurance, safety, competence aspects, regulatory compliance and ethical codes of conduct. Project management are also critical skill requirements.

2.2.3. Who does science?

Access to careers in the parts of life sciences examined by this research is subject to having the right specialist qualifications. Understanding who does science at school, and subsequently at undergraduate and postgraduate levels, is an important explanatory factor in who gets prestigious life sciences jobs.

2.2.3.1 Science education at school

Interest in science subjects is increasing over time, as reflected in the take-up of STEM subjects at A-level. The number of students studying chemistry or biology at 'A' level or equivalent has risen by 11.6% and 8.6% respectively since 2009.¹⁵ Yet the opportunities for progression in science education are affected by socio-economic factors. Pupils from deprived areas have been shown to be more likely to study combined, dual, single and general science at Key Stage 4.¹⁶ A National Audit Office report on the take-up and provision made for science in schools puts the

spotlight on the key areas of concern, including the number of science teachers and lack of school science facilities. Only around a half of state schools give students the option of triple science (i.e. separate biology, chemistry and physics), which provides the best preparation for A level; triple science students are more likely than those studying combined science to continue science study at A-level and to achieve higher grades having done so.¹⁷ Young people in the most deprived areas have the lowest chance of studying triple science.

By subject, pupils eligible for Free School Meals (FSM) consistently get worse results on average in STEM subjects than non-FSM pupils at Key Stage 4, an effect also seen in other subjects. The Royal Society (2008) suggests that whilst differences between groups are not specific to science, the effect 'may be more persistent over time in science',¹⁸ observing that the gap between FSM and non-FSM groups has remained fairly consistent between 2001/2 and 2005/6.^{iv} The differences in science attainment between social groups appear early on in education. Smith & Gorard (2011), using figures from 1986 to 2009, highlight that for young scientists passing through education and into employment, science graduates are heavily stratified by social origin, with 'sorting' taking place during initial schooling. This is similar to the other 'prestige' subjects: young people from less affluent backgrounds achieve at lower levels throughout schooling and have less changes of meeting the prior attainment criteria for higher education entry unless contextual factors are taken into account.

Poor attainment in science at Key Stages 1 and 2 has been correlated with area deprivation.¹⁹ The socio-cultural environment has an influence on STEM participation when considering social mobility. Studies have shown that parents play a big part in giving encouragement and support to young people who do well in science. A study in Denmark concluded the parental effect on test results is around five times more powerful than the influence of pupils' schooling, with the influence of parents mattering most in maths and science exams, however the effect of families on test scores remained the same irrespective of household income.²⁰ There are examples in the international qualitative literature of students whose parents moved in order for their children to attend a science intensive high school. Indeed, the influence of the education context needs to be recognised. Research with science students highlights the importance of a strong preparation during secondary education – for example, getting particular encouragement from teachers who invested time in them to pursue science, or participation in additional science classes. In the US supportive educational environments during college have been positively linked to retention and persistence of students from black and minority ethnic groups in STEM education: the key enabling factors have been identified as including having strong role models and support from teachers and staff members.

2.2.3.2 Take-up of science degrees

Life science employers are increasingly demanding higher level skills and qualifications. Across all sector job roles some two-fifths reportedly hold a first degree, and graduates are in the vast majority in professional level job roles.²¹ The supply of qualified persons through the higher education system is an important

^{iv} The Department for Education does not routinely publish data on attainment rates between FSM and non-FSM groups at the subject level, therefore analysis of this issue is based on ad hoc research.

underlying factor in the patterns of take-up of scientific professional jobs. Opportunities for vocational progression in science careers are increasing through the Apprenticeship route (as discussed below) however these initiatives are new and as yet relatively small scale. The bulk of recruitment to new entrants to professional scientific jobs is via a traditional higher education pathway.

The number of students taking biological science subjects^v at full-time undergraduate level at UK universities is on an upward trend – with a 4% increase in 2014/15 compared to 2013/14 – and the numbers doing full-time undergraduate degrees in the physical science subjects^{vi} has risen by 2%.^{vii}

The science subject courses perform relatively well overall on the widening participation to higher education indicators (Table 2.2). Amongst all 2014/15 entrants to full-time first degree courses in biological sciences, 34.1% of UK domiciled young entrants were from NS-SEC Classes 4, 5, 6 and 7^{viii}, higher than the average for all subjects (33.0%). Of this group some 91.8% in biological sciences compared to 89.8% for all subjects were from state schools.^{ix} However, students from non-selective state schools are less likely to study science at the most prestigious research-led universities.^{ix} High achieving students entering life science courses in higher education are more likely to be from lower-socio-economic backgrounds than in other areas of higher education. The share of UK domiciled young entrants from low participation neighbourhoods in biological and physical science subjects overall, is only around 10%, despite the fact that 20% of young people live overall in the UK live in these areas.^{ix}²⁴

Table 2.2: Widening Participation indicators for UK domiciled young entrants to full-time first degree courses 2014/15

All entry qualifications	Biological sciences	Physical sciences	All subjects
% from state schools	91.8%	87.8%	89.8%
% from NS-SEC Classes 4, 5, 6 & 7	34.1%	26.6%	33.0%
% from POLAR3 low participation	13.0%	9.5%	11.4%

Source: HESA Performance Indicators for Higher Education

Analysis of young undergraduate entrants to full-time higher education who had achieved at least ABB at A-Level or equivalent shows that just over 1 in 4 entrants in the biological sciences (26.2%) and physical sciences (25.6%) are from lower NS-SEC backgrounds (compared to 1 in 5 for humanities, languages, and social sciences which have an even less diverse socio-economic population). The share of entrants from lower NS-SEC backgrounds declines with increasing levels of prior

^v Biological sciences includes Genetics, Biology, Zoology, Biochemistry.

^{vi} Physical sciences includes Physics, Chemistry and Earth Sciences.

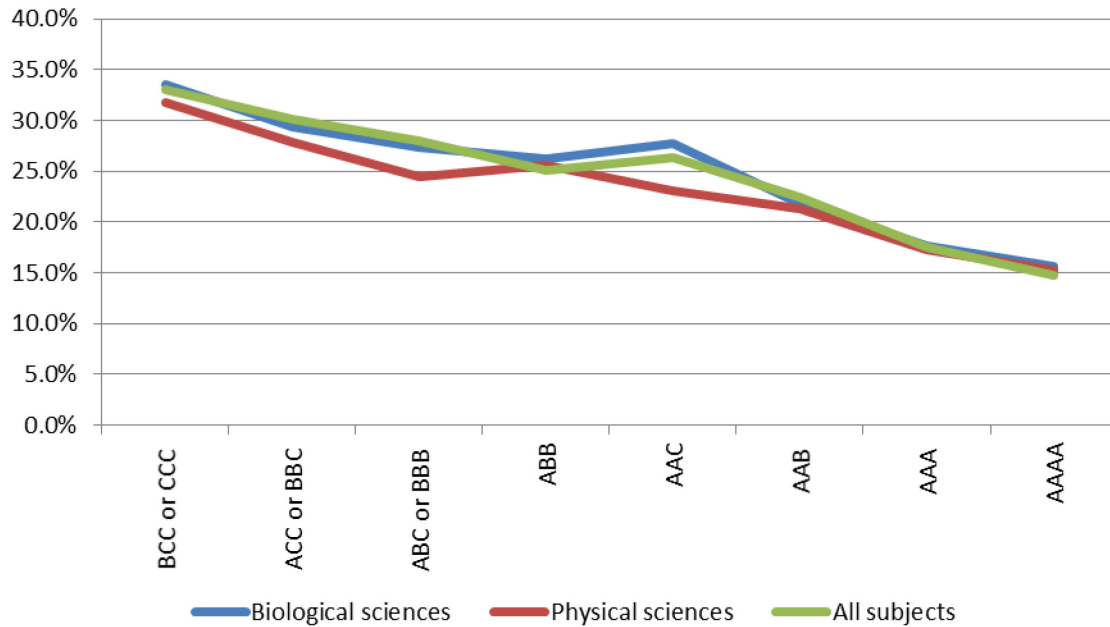
^{vii} Part-time undergraduate students fell by -7% in the same period, reflecting the general trend of reductions in part-time higher education.

^{viii} NS-SEC Classes 4, 5, 6 & 7 includes those whose parents were employed in (4) Small employers and own account workers (5) Lower supervisory and technical (6) Semi-routine occupations (7) Routine occupations

^{ix} Low Participation Neighbourhoods equate to areas classified as in Quintile 1 on the POLAR3 classification. The POLAR3 classification is formed by ranking 2001 Census Area Statistics (CAS) wards by their young participation rates for the combined 2005 to 2009 cohorts. This gives five quintile groups of areas ordered from '1' (those wards with the lowest participation) to '5' (those wards with the highest participation), each representing 20% of UK young cohort.

attainment as shown in Figure 2.1. Institutions with high entry criteria are most socially skewed.

Figure 2.1: Share of young HE entrants* from lower socio-economic groups matched by A level entry grades level (and equivalents) 2014/15



*Full-time first degree courses

Source: HESA Performance Indicators for Higher Education, Table sp5

2.2.3.3 Postgraduate and post-doctoral study

The qualitative research with employers and sector bodies supports the view that as a whole the sector is increasingly demanding postgraduate level qualifications when recruiting to professional jobs in life sciences. Skills shortages in the sector are mostly focussed on experienced individuals with qualifications at graduate, postgraduate and postdoctoral levels. In particular biotechnology and synthetic biology skills needs are currently at the highest levels, and a large portion of the existing workforce in these areas are qualified to postgraduate level.²⁵ The sense emerged from the research that increasingly the supply of recruits to high level positions with life science employers depends on the take-up of postgraduate qualifications in life sciences subjects, and this was particularly the case for those employers recruiting to research posts or requiring a highly specialised skill set. There was some debate however about whether this pattern of recruitment is entirely driven by the requirements of the sector or was in part a result of an oversupply of postgraduate candidates. Certainly there were significant differences between similar types of employers on the value they placed on post graduate qualifications and a number of university careers consultants identified a general lack of clarity on the currency of an undergraduate degree in the current labour market. An interviewee in the talent acquisition team at one of the large case employers suggested that hiring managers took different approaches within the same organisation, depending on the R&D needs and also the views of the departmental leads: some demanded a PhD as a matter of course while others were prepared to take on and train undergraduates who showed particular ability. The interviewee suggested part of their role was “*educating hiring managers to be less blinkered on requirements*” in order to ensure sufficient supply of candidates were coming through.

In 2014/15 there was a 5% increase in the number of people progressing to full-time post-graduate level in both biological sciences and physical sciences, compared to 2013/14 (part-time enrolments increased by 4% and 9% respectively).^x The biological sciences undergraduate population is large: over twice the number of students as the physical sciences and 50% larger than the engineering and technology undergraduate population.^{xi}

Relatively many biological sciences graduates go onto do further study at postgraduate level, compared to other HE subjects (Table 2.3). This reflects the large undergraduate population and because of the numbers of research council and industrially sponsored studentships available in science subjects. Biological Sciences accounts for the greatest absolute number of STEM graduates progressing to a higher degree, but Physical sciences is higher in terms of the proportion of graduates continuing. In addition, a relatively large number of international students are at postgraduate level in the UK. In fact, for STEM subjects as a whole group just over half entrants to postgraduate taught masters' courses are from overseas.

Table 2.3: Percentage of UK domiciled full-time first degree leavers in 2013/14 in further study* six months after HE

Subject**	Further study
Biological sciences	19.2%
Physical sciences	26.3%
Total - Science subject areas in general	13.5%
Total - All subjects	12.8%

*Not including work and further study

** Analyses of subject information show Full Person Equivalents (FPE). These are derived by splitting student instances between the different subjects that make up their qualification aim.

Source: DLHE, Higher Education Statistics Agency 2015

There are some notable differences in progression to postgraduate study across different groups of students. Numbers are exceptionally low amongst some groups of minority ethnic students. Overall women's access to postgraduate study appears to be relatively low, although the variations require further research. Men are more likely than women to enter both kinds of higher degree – research and taught – with differences particularly marked for research degrees.²⁶ Furthermore a US study, Case and Richley (2013) showed how experiences of gender and family biases place additional burdens on women's career paths in the postdoctoral journey.²⁷

Physical Sciences (which includes chemistry) has a higher progression rate from undergraduate to a postgraduate research degree than other disciplines (Table 2.4). Well over half of all those entering research degrees come from the Russell Group of universities^{xii} and the rate of progression of Russell Group students is more than twice that 1994 Group (which is the second-ranked).²⁸

^x Part-time undergraduate students fell by -7% in the same period, reflecting the general trend of reductions in part-time higher education.

^{xi} Source: SFR224 Analyses of subject information show Full-person equivalent (FPE). These are derived by splitting student instances between the different subjects that make up their course aim.

^{xii} The Russell Group is a self-selected association of 24 research-intensive UK universities with high entry requirements and is widely perceived as representing the top world-class universities in the country.

Table 2.4: Number of first degree qualifiers by progression status in the two years to 2011 combined

Subject	Did not progress to PG studies		Taught Higher		Research Higher	
	No.	%	No.	%	No	%
Biological sciences	40,655	81.7%	6,625	14.0%	2,040	4.3%
Physical sciences	18,465	73.3%	2,960	13.8%	2,740	12.9%
All	408,450	88.2%	44,315	9.8%	9,025	2.0%

Source: Wakeling & Hampden-Thompson, 2013.

Transition to postgraduate study is strongly linked to degree attainment and undergraduate experiences of study. Access to Information, advice and guidance (IAG) has also been identified as key to enabling learners to progress to post graduate study, for example Wakeling (2009) defined important factors in post graduate progression as access to advice, role models and judgements about suitably desirable and attainable aspirations and locations.²⁹ Research into postgraduate taught students found information and advice on postgraduate options to be piecemeal and highlights the importance of human contacts in decision-making.³⁰ Access to well informed individuals therefore appears to be important in the decision making, and in being able to make the most of the opportunities available.

Institutions tend to 'recruit their own', especially the research-intensive HEIs. Wakeling and Hampden-Thompson (2013) found that the Russell Group provided a third of individuals progressing on to taught postgraduate study, and over half to research, despite accounting for only a quarter of graduates. They saw differences as down to postgraduate admissions tutors giving more weight to first degrees from certain institutions coupled with differential availability of advice and guidance on accessing higher degrees. Zimdars (2007) looking into enrolment onto postgraduate studies at Oxford University found that 'there is a preference for graduates from the most prestigious universities'.³¹

Assessing the socio-economic composition of the postgraduate student population is challenging (Smith, 2010).³² Wakeling (2010) highlighted that inequality may be 'passed up' to postgraduate level because the profile at undergraduate level in HE is skewed between social groups.³³ Furthermore, Lindley and Machin's (2012, 2013) longitudinal research showed how the labour market rewards HE level qualifications, and people from higher income backgrounds benefit most from postgraduate study - in sharp contrast to individuals from lower income families – leading the authors to conclude that 'as the requirements of the labour market have become more demanding, this has exacerbated educational inequalities as workers with postgraduate degrees increasingly come from richer family backgrounds'.³⁴

2.2.4 Science graduate attainment and employability outcomes

The share of high attaining graduates in biological science subjects tends to lag behind other science subjects. Amongst 2013/14 graduates 70% studying biological sciences got a first or upper second (18% a first), compared to 73% of physical sciences graduates achieving a first or upper second (25% a first).³⁵ Across all subjects people considered to be from disadvantaged backgrounds measured as

being from low participation neighbourhoods^{xiii} consistently achieve below the rates of students from the most advantaged areas, matched on entry qualifications, apart from the group with the highest prior attainment (at least three A-level grades).

The latest national data on rates of employment amongst biological sciences graduates^{xiv} shows they are slightly more likely to be in employment 40 months after leaving HE than graduates as a whole (97.3% compared to 96.4% were working). The percent of biological sciences in professional employment 40 months after leaving HE is also slightly above the average (78.9% compared to 77.8%). The figures suggest however that biological sciences graduates are likely to take longer to reach employment at professional level: at the six months after graduating stage only 57.2% of biological sciences graduates were in professional employment which is well below the average for all HE subjects (62.5%).^{xv} ³⁶ More fine grained analysis is given by the Futuretrack research into the situation of 2006 HE entrants in Winter 2011: 20% of biological sciences graduates were classed as 'expert' (compared to 29% in the physical sciences and 51% in engineering and technology).³⁷

In relation to STEM subjects as a whole, Smith & Gorard (2011) found the majority of science graduates move into initial occupations that are not directly related to their degree. However, it is not clear if this is because there are too many graduates for the labour market to absorb, whether they were put off careers in science or whether incentives are not right. The authors concluded that if the 'wrong' kinds of students are studying science, then there is wastage and inefficiency in the supply process.

The issues of both unemployment and under-employment in the STEM sector as a whole has recently be put in the spotlight by the Wakeham review (2016). Using graduate destination data from 2011/12 to 2013/14 STEM subjects were considered against three indicators: unemployment level, graduates in non-graduate roles and graduates on low salaries. Data identifies a number of interesting trends, confirming in particular that graduates from biological science subjects are characterised by above average unemployment for graduates from high tariff universities (although below average for low tariff institutions), high proportion of graduates in non-graduate roles and high proportion in low paid roles. Stakeholder research (with employers, HEIs, students and other sector bodies) also highlighted biological sciences amongst subject disciplines where there is a general level of concern about the ability of graduates to meet the needs of employers. To strengthen employability outcomes for STEM graduates the review identifies a number of key recommendations, including further investigation of graduate employment outcomes in biological (and other) disciplines, improved engagement between employers and HEIs and improvements to data on graduate employability outcomes.

^{xiii} Defined as areas where low proportions of young people participate in higher education measured by the Participation of Local Areas classification, see www.hefce.ac.uk/analysis/yp/POLAR/.

^{xiv} Early career employment outcomes of UK-domiciled students who qualified from a full-time first degree course in the academic year 2008-09

^{xv} Professional and managerial occupations are defined on the basis of the Standard Occupational Classification of the graduate's employment - derived from the job title that a graduate reports in their DLHE or LDLHE response, and are aggregated into nine major groups. Those major groups identifying 'Managers and senior officials', 'Professional occupations' and 'Associate professional and technical occupations' are used to define 'professional or managerial occupations' https://www.hesa.ac.uk/component/collns/?task=show_manuals&Itemid=233&r=08018&f=011.

The national data shows differences between social groups in relation to the probability of taking up a professional level job after graduation. HEFCE has observed that the professional employment rate 40 months after leaving HE for graduates from the most disadvantaged areas in terms of HE participation (POLAR3, quintile 1) is 3.6 percentage points below that for those from the least disadvantaged areas.¹ As well as differences in degree attainment, a review of widening participation and employability related research concluded that employers are looking for graduates who can show strong involvement in extra-curricular activities and citizenship, but some graduates from widening participation backgrounds may be less able to demonstrate participation in these types of activities.³⁸

2.3 Recruitment practices and selection of candidates

2.3.1. Introduction

The preceding section has detailed the selection effects which occur at different stages of a science education. The unintentional effect is a skewing of the profile of science students to more privileged socio-economic groups along the levels of progression in science education, beginning fairly early during school education and moving through to university level. This section focuses on the opportunities available in life sciences labour markets by describing the recruitment practices in the case employers. It starts with an overview of the processes that employers use to attract and decide on candidates. It then goes on to discuss the selection criteria used by life sciences employers and views on defining talent. Given the diversity of employers, it is to be expected that recruitment practices will vary. In addition, employers have tended to seek to remain flexible in order to draw on the widest talent pool to meet their needs, especially for hard to fill vacancies. For some roles employer are seeking high academic achievement and outstanding transferable skills, however, this depends on the level and job role. Some larger employers have relationships with particular HEIs in relation to graduate schemes. Overall for professional and technical roles there appears to be a preference for recruiting in people with existing skills in order to meet immediate industry demands, rather than training up staff. Most employers receive a relatively large number of applications, tending to have an initial telephone interview stage before interviewing relatively few. Recruiters are usually mainly looking for evidence of practical laboratory/technical skills and industry experience. Other high demand skills are working independently, demonstrating drive and being accountable for results, as discussed below. The potential barriers to social mobility in professional life science roles that are focused on scientific functions are discussed in the following section [2.4] which explores how the life science employers included in the sample understand social mobility.

2.3.2. Overview of how life sciences employers recruit

Life science case employers were questioned predominantly in relation to their practices towards recruitment of relatively new entrants to jobs in science, as opposed to their experienced hire. Recruitment practices were found to vary across the sample of large and small employers, as might be expected. The differences relate to the resourcing of the recruitment function and the extent of the formalised systems for receiving, assessing and deciding on applications. Some of the big pharmaceutical and biotechnology companies are amongst some of the largest global companies. These organisations tend to have dedicated talent acquisition teams with specialist expertise (see example 1), or be in partnerships with specialist recruitment agencies (discussed below) who manage the recruitment process from

developing vacancy information onwards. Recruitment practices amongst some of these types of companies tend to be highly structured, often using online databases to advertise vacancies internationally, to record the interest of potential applicants on an ongoing basis, and to collect applicant information in respect of specific vacancies. In some cases, UK recruitment is undertaken in interaction with staff members overseas in the 'HQ' resourcing teams. There were however instances whereby some scientific teams in research and development departments had little support from central human resources and recruitment was devolved to hiring managers.

For small employers, the recruitment practices were found to be ad hoc because recruitment is sporadic and organisations are not large enough to have dedicated human resources expertise. One managing director of a relatively newly established contract research organisation described a 'DIY approach to recruitment' –driven by the immediate business needs and linked to customer demand. This was based on learning from others in the industry, and with a view to minimising the costs (see example 2). This interviewee from a recent start-up company highlighted a lack of corporate training opportunities for emerging life science businesses, because of the cost and time implications of sending managers on human resources training.

In large firms it was common practice for the talent acquisition team to agree job descriptions and person specifications in collaboration with a hiring manager for the relevant operational area of the business. Approaches varied from development of very specific checklist of skills and knowledge (global biologics R&D operation), to 'an informal idea of what we want' (smaller contract research organisation). In general person specifications for professional positions in life sciences usually stipulate a life sciences degree and, often, relevant post graduate experience. Some employers specifically ask for a PhD and some for post doc experience, however others said that for many jobs, although not a requirement, they received applications from people with postgraduate qualifications. Most focus in the person specification is on technical competency, and in several cases the degree requirement is open across life science related subjects. Whilst some employers stipulate a minimum 2i degree classification, others have no minimum and see job specific competencies as being as important as the degree class obtained.

For more senior professional roles the salary expectation is a key consideration, especially for more niche professional positions where employers are seeking to attract talent from a relatively limited pool of potential recruits. One case in the research, the UK-arm of a global medical technology and pharmaceutical business aims to be in the upper quartile for salary levels. Another South East based operation of a global biopharmaceutical company described the operation as a '*medium player in the market in terms of salaries*', and this presented challenges for recruitment to certain roles, particularly as they also require a lot of niche skills. Indeed, most of the employer cases indicated that it is sometimes difficult to find high calibre candidates for certain specialist roles. Skills shortage appear in part to be most severe where there are few employers in that particular field of work, and therefore there are limited opportunities to develop the required skills set. Some case employers also highlighted that skills shortages are most prevalent in roles at the cutting edge of scientific knowledge and therefore education and training cannot match the pace required by the sector. Employers appear to find most shortages for

more experienced specialist hires, where they are looking to buy-in skills rather than train new entrants.

2.3.3. Identifying talent

When going to market with vacancies, life science recruiters use multiple channels including professional bodies, social media and certain specialist publications. There are a host of online search portals for life sciences jobs, and the large global life sciences companies tend to have dedicated careers websites and use a wide range of vacancy marketing techniques. An operation with around 600 staff in South East England, which is focused on R&D and clinical functions, said increasingly they use social media and other informal channels for attracting talent. A large global medical technology and pharmaceutical sector employer is active on social media and YouTube. This employer has developed a Career App, to communicate information on opportunities where prospective employees can link to the company (e.g. at careers fairs, congresses, events and presentations) and to give direct access to the company recruitment pages on Facebook and Twitter and to promote videos from the company's YouTube channel. Interviewees from specialist recruitment agencies corroborated the point that there is a growing trend for large employers to request more innovative ways to reach candidates and use of social media was becoming established practice within their organisation. In contrast one of the small employers in the sample advertised through established jobs portals, with a view to minimising the costs of recruitment.

Several of the large employers reported active engagement in traditional 'milk round' events, where their representatives visit universities to promote and recruit students on campus. Careers Service respondents reported that many of the large pharmaceutical companies are still happy to engage in this way, but that the group of institutions visited is a 'handful of Russell Group universities'. They reported that each of the 'big three' companies only take between 30 to 40 new graduates for their annual graduate entry scheme. The challenge to understanding the impact of this approach on the UK is that these recruits are recruited globally

They might pick up a couple of new entrants each at Oxford, Imperial, Harvard - they recruit globally. [graduates from this HEI] can be competitive in this field but there is currently no monitoring as to how many [of our] graduates get on to those schemes (CS_1).

It was further suggested that it is growing more difficult to engage a good range of employers through general careers events and that many employers preferred to get involved in very tailored activities, for example networking events based within specific life science departments. Coming to campus is expensive and Careers Service respondents observed that smaller employers are less able to engage in recruitment events as they do not have a budget or time for this. This makes it more difficult for students to know how to access potential opportunities in those types of companies. Despite this, university Careers Services highlighted that HEIs are actively seeking to engage small and medium employers in university based careers events, with some success, especially for short events with a specific life science focus. Employers themselves reported regular engagement with HEIs, much of this was specifically about raising the profile of the organisation and encouraging students to apply for vacancies on offer (including internships and studentships), however some of the activities were also driven more by the Corporate Social Responsibility agenda. Some employers reported targeting universities in a very

specific way, this on occasion was about working with local HEIs, but more frequently employers were identifying universities that provided 'good graduates' or institutions with the most relevant provision. One large employer specifically targeted their recruitment activities at institutions delivering programmes accredited by The Royal Society of Biology but accreditation was not regularly raised as an issue in the other case employers.

2.3.4. Recruitment practices

Most life sciences employers ask for a full CV and covering letter; often also accompanied by an application form to collect certain background information in a structured way (e.g. disability information). One of the case employers took a different approach, specifically choosing to develop a long and detailed application form as a mechanism for checking interest level and motivation, this helped them to narrow the field down prior to initial sift. Another employer has moved away from CV applications for their internship programmes as candidates did not have enough experience to make the CV a useful tool for recruiters. Candidates are frequently required to apply online through company career websites where these exist, and some companies use an 'Application Wizard' to assist applicants through the process. There is a particular focus on evidencing candidates' skills, interests and achievements, and applicants may need to supply all certificates relevant to their field. Initial assessment tends to be 'paper based' assessment of the application, although some screening may be done automatically via online application processes.

The large employers in the sample used in-house or an outsourced recruitment team to undertake the initial screening. At this stage it is common practice to filter candidates on the cases of an initial telephone interview (one used video interviewing for their graduate scheme). For example, the talent acquisition manager at a European pharmaceutical business described how they use an initial 45 minute telephone interview to test the person's science background, and to assess the extent to which the person is driven by company values. Similarly, initial telephone interviews by an outsourced recruitment team for a large R&D operation focuses a lot on team fit as well as core competencies and educational criteria.

After initial sifting activities, a relatively small group of applicants are invited to the next stage, which could include in-depth interviews and often an assessment centre process (see example). One case employer took forward a minimum of four applicants, and some others said up to eight. Some employers use a range of different assessment tests depending on the role (including industry tests and ones developed in-house using their own competency frameworks). In another example candidates are assessed over one day by attending interviews and tests on site with hiring managers, HR specialists, peer group colleagues and other managers. The day is comprised of a series of 40 minute interviews covering presentation of PhD/post-doc research to test interpretation and enthusiasm for scientific knowledge; HR interview focusing on softer skills, cultural fit and careers aspirations and a tour of the lab/facilities. It was suggested that this type of intensive assessment has led to the hire rate going up because candidates get an experience of the working environment and teams. In another similar example candidates had a four step assessment day, including a panel interview, lab skills test, written test and tour during which the candidate is informally observed and assessed (as well as helping the candidate to decide on how they might fit within the culture of the organisation).

This intensive process had recently been developed to provide the employer with a range of data and scores to inform their final decision making.

Although practices varied, several companies placed particular emphasis on the use of behavioural-based interviewing (also known as competency based)^{xvi} and in general there is a strong focus on gathering evidence of technical experience/competency. In the example of one large global pharmaceutical company interviewing is undertaken by hiring managers (following selection of candidates put forward by an external agency). Interviews are structured with a given set of questions to ask and the results of interviews are assessed in a standardised way (i.e. scores). The hiring managers are encouraged to go on behavioural-based interviewing training, however it is not mandatory. In another case hiring managers use a toolkit/resources to develop knowledge of interviewing – in this example interviewees are scored against agreed competencies and a guide for scoring is provided to managers.

Example recruitment process: global pharmaceutical company with UK subsidiaries

1. Vacancy notification

The job description is agreed through discussions between the hiring manager(s) in the functional area of the business and the talent acquisition team within the HR function. Job descriptions include specific requirements and detailed information on each position. Vacancies are advertised online on the company's dedicated careers website. Potential applicants can register their interest online and receive job alerts/vacancy updates through the site.

2. Initial application

Applicants register their interest in the position and apply by providing their Curriculum Vitae, along with other details online through answering questions on the company's careers website. Staff members within the resourcing team undertake an initial screening, against the person specification.

Depending on the role and level, candidates whose initial application is successful will follow all or some of the following stages.

3. Initial interview(s)

The initial interview could be by phone or face to face, and generally includes a range of competency and skills-related questions. At this stage recruiters are concerned to assess how the person fits with the company values and the key competencies of the role. Attention is paid to evidencing candidates' successes, project experience and skills (candidates need to substantiate these).

4. Assessment Centre (usually in conjunction with second interview)

Candidates complete a mix of tailored psychometric tests online, combined with activities which could include a presentation, written exercise(s) and analysis of data, and role plays or group exercises. Most tests use objective scoring.

5. Decisions on candidates are made by hiring managers in conjunction with HR teams. The results of the assessment centre stage can sometimes inform subsequent interviews depending on the level and role. The emphasis is on a

^{xvi} Interviewing based on identifying how interviewee acted/behaved in specific employment-related situations.

holistic approach of the scores and performance at interview within the context of the job role and in relation to rest of team/internal support mechanisms in place (i.e. not recruiting in a void). Assessment tests scores are reviewed using professional judgement: for example, a poor score in one area might not be a barrier if the company felt the person could improve with training or support internally, however, for some skills (e.g. core lab skills), the evidence would need to be in place from day one. References will be taken up at the offer stage.

Example recruitment process: a small contract research organisation

1. Vacancy notification

Most job adverts are placed directly by the company through science related online vacancy databases (e.g. the 'chemistryworldjobs' channel of the Royal Society of Chemistry). Minimising the cost of recruitment is a key consideration.

2. Initial application

Potential recruits apply via CV and covering letter. Rather than having a detailed person specification the assessment of applicants is based on knowledge of the work involved and with a view to choosing applicants who would fit into and complement the existing team: *"More an informal idea of what we want and not a set of specific criteria to tick off."* At this stage senior managers shortlist down the group and invite circa six candidates to interview.

3. Interview

The interview stage was described as a 'fairly short process', usually involving 30 minute technical interview, and 30 minute HR interview, which would include talking through the requirements of the position. A particular aspect of the interview is testing for how recruiters feel the person would be able to act independently and the level of supervision they appear to require, in terms of their previous experiences and how the person comes across at the interview stage. Recruitment so far has been linked to *"asking someone early in their career to fit into a small team... therefore we would not pick someone who comes across as quiet or reserved."*

4. A decision is made on the basis of the above, led by the views of the operational manager, but possibly including the views of others depending on which teams were involved in the interview and assessment processes.

Several of the case employers included in this research recruit internationally (particularly Europe) to ensure they have access to applicants with the right skill set especially for experienced hire and more senior roles. One interview stressed that this is *"...driven by senior scientific director who wants the best talent in the world..."* (EM_3). Some recent labour market reports, including a recent report from the ABPI (2015) have found that recruitment for high skilled roles is a growing concern, particularly for roles in the pharma industries. The suggestion is that lack of good quality candidates is driving companies to seek foreign recruits. Other interviewees however noted problematic issues with international (non-EU) recruitment due to the rigour of the UK visa system, for example difficulty in getting people to UK for interviews. Another issue is the length of time it takes to get new non-EU recruits established in post, a factor for organisations that have to develop their capacity quickly. Most international recruitment is for senior staff and case employers tended to focus on UK talent at lower levels.

2.3.5. How do life sciences employers select successful candidates

The picture of what employers are looking for is rather mixed. University careers service interviews reinforced the view that what the large global life sciences employers are looking for are 'the cream of the cream': they generally have outstanding transferable skills, high academic achievement and with a track record of involvement in extracurricular activities. One careers service representative commented: *"these students are employable by anybody but there are very few of them"* (CS_1). However, this view depends on the level and job role and was not necessarily shared by all employers: one case for example, a small UK employer, was less concerned with 'the cream' and indicated that some roles are relatively routine in their organisation and hence they are more focused on finding the person to best deliver the job specification.

Reflecting on 10 years at one of the large pharmaceutical companies, one respondent also considered how different selectors within the same company might look for slightly different things in the paper applications:

Several people [would] review applications, some people wanted purely academic achievement, some wanted good universities, some wanted more indication of team-work and people skills (S_3).

Another recruiter stressed the importance in remaining flexible, especially with a view to ensuring a good supply of candidates for roles:

...a diverse range of roles and we flex to the landscape and market...can change when we see what's available. It changes a lot because of the supply coming through, but also because the demands of the business change. This is definitely not a steady state industry (DG_2).

In general, for the cases included in the research most focus in the person specifications for professional roles is on technical competency. This was linked primarily to the practical experience that candidates bring, which generally is considered important over and above possession of a degree in a life sciences subject, although for most of the roles employers usually specify a life sciences degree and for many positions relevant post graduate experience.

Managers usually want the brightest and the best and this tends to be defined by technical skills and experience... in a usually very specific field (EM_1)

... focused on 'best person' which generally relates to scientific skill and knowledge (EM_7)

Due to skills gaps it has been about finding someone who has the scientific experience we need, regardless of who that person is... (EM_2)

We like applicants who have been pro-active in getting experiences, for example by working in a hospital or a lab-setting – experience is a spectrum. An application [to a big pharma company] would automatically go on the 'no' pile' if they didn't have any experience because there are so many other applicants who have experience, it is very competitive (S_1)

We are finding we are recruiting based on the skills of the people and their experience shown on their CV... and once they come in they need to be personable, good players and dynamic... but what stands out in the beginning is something similar in an academic setting. Having a university placement or internship really makes a difference and stands out (EM_10).

Several recruiters in leading pharmaceutical and bioscience companies indicated that more significance is paid to the job experience and evidence of technical skills in practice over and above the degree, and for professional roles at entry level did not specify any particular life sciences degree requirements. Similarly, recruitment at a small contract research organisation emphasises strongly practical lab based experience. A constraint for this employer is needing recruits to fit into a small team, working to tight budgets and deadlines. Although this employer recognises the benefits of training up entrants, successful new recruits have been more experienced candidates, who will require less supervision although graduate applicants have not met always expectations because of a lack of strong technical skills.

It's about finding someone who is fit for the job... the technical ability to fit into a small team and muck in... (EM_4)

They have the potential at undergraduate level to be very employable, but we expect them to be hands-on and independent people who can find things out for themselves. It's the practical skills and basic knowledge that's important and some undergraduates do have that foundation, but it's more than following a recipe... thinking independently is important (EM_10).

We have tended to recruit people early in their career – not expecting a gleaming lab, attitudinal - open salary expectations also. Someone who is open to their own research, takes ownership of research, but less complete and perfect (EM_5)

Expectations in relation to the level of qualification vary according to the job role and business area. Interviews with case employers suggest that direct recruitment from higher education at undergraduate level is more likely in pharmaceutical development and manufacturing, and less likely in research and development roles. The interviews showed that commonly employers' expectations around candidate's prior experience and evidence of technical skills mean that candidates with PhD and post-doc experience are more attractive to employers. Indeed, the case interviews showed that several of the employers of all sizes have very little recent/current undergraduate hire. For example, the R&D operation of a large pharmaceutical company stressed they are mainly looking for experienced staff, the majority of recruits have post graduate or post-doctoral backgrounds because they are seeking to recruit a niche skill set.

There is high competition, particularly in the R&D space...where employers find candidates with higher level qualifications available they tend to recruit them even if not needed in the job spec (DG_2).

However, the picture is rather mixed, and depends on the level of the job role and the expertise required by the job description. One of the small employers took the view that whilst a PhD demonstrates academic excellence, it does not necessarily evidence the competencies needed to do the job (and for this employer

does not lead to a higher scoring during the selection process). Another respondent commented that one employer had a practice of rejecting applications from overqualified candidates if they were above the level specified in the job role.

At least one recruiter felt that academically experienced applicants but with limited experience in industry were viewed less favourably by hiring managers, who have high expectations, than those with hands on industry experience. This was echoed by a global pharmaceutical company, where the majority of new recruits have a PhD, and most have at least two years' relevant work experience. On the other hand, for a European biopharmaceutical company academic credentials remained important.

We take good academics who want to behave like academics, do research, speak at conferences, and remain powerful in the academic world (EM_3).

There was some suggestion that some life science companies are prepared to train up inexperienced candidates in some roles, particularly technical level. For example, a recruiter in a UK operation of a large multinational said they were open to recruitment of early-career graduates and school leavers. However, candidates would need to meet employer requirements in other areas to be considered.

It's to our advantage if we can recruit and grow our own. (EM_4)

As long as they fit the culture we can train them... they need an interest in science but most importantly it depends on how they come across and whether they have something about them (EM_3)

If people having some of the skills we need then we would think strongly about bringing them in and train, but they would need to cover a lot of areas. We would train in some things but not in everything (EM_10).

The debate about the extent to which employers 'buy-in' skills is an interesting one, especially in the context of current labour market trends – i.e. redundancies and an over supply of life sciences graduates coupled with skill shortages in niche areas. To an extent the argument for hiring for 'culture' and training for skill has been gaining ground, which supports the importance of Apprenticeships, student placements, and industry support for post graduates (discussed below). However, in general the feedback from employers gathered through the case interviews suggest that an underpinning factor in many life sciences employers' approach remains a concern to directly recruit the skills they need rather than grow them (possibly because some companies need to prove they have the skills when seeking out opportunities as a business or they need to build capacity quickly in response to new areas of work). Small employers are also concerned about new recruits needing to work fairly autonomously and get up to speed fast, with few opportunities for close supervision in some cases. Therefore, they need a strong mix of skills within teams and generally more experienced staff. Furthermore, in general there has been qualifications inflation in many jobs and for more senior professional roles the requirements become increasingly specialist.

The importance of where the applicant had studied at varied between employers. Some employers paid considerable attention to the institution attended. The research and development operation of a large pharmaceutical company aimed to

source talent from specific universities across Europe and had strong relationships with a local university with high entry requirements. Some recruiters mentioned that they favoured programmes with a good reputation in a specific scientific area and use this contextual knowledge in their recruitment. One employer reported that candidates' scores during certain elements of the assessment process correlated with the HEI they had previously attended although that they had not explicitly used this to alter their recruitment processes in any way. Other smaller employers were less focused on the HEI attended and were more interested in assessing the candidate's competency to fulfil the job role.

Employers follow the 'science and the scientists' and want to link to those institutions... (RA2)

There is a selection of universities we have a relationship with... not elitism in the sense that there are a number of different universities (DG_2)

.... mainly with Russell Group institutions because they have the principal investigators (i.e. scientists) doing the science that is of interest to [employer].... although also work with some non-Russell Group where there are successful specialist departments (EM1_3)

We don't look at universities as such...you may notice they went to Oxbridge and maybe that might make them stand out but we definitely do not say they went to x university so we'll forget them (EM_10).

An interviewee involved in recruitment to undergraduate and postgraduate schemes with a large global employer indicated that the approach varies across the schemes. On the undergraduate programme which was fairly large scale (70 places) candidates were sourced from across a breadth of HEIs. The postgraduate scheme was smaller in scale and tightly focussed on only Russell Group institutions.

The group with the best chances of employment with major life sciences employers tends to be those with access to the most cutting edge scientific skills and knowledge. Employers are interested in the scientific credentials rather than university type - although there is perhaps a tendency to associate the 'best' candidates with the elite institutions. Indeed, one global pharmaceutical employer indicated almost all UK recruits have an educational background at a Russell Group institution. Some of those working in recruitment suggested that hiring managers do sometimes focus on the university attended by the candidate as a signal of quality.

...paper based selection hard to evaluate as a non-scientist... inevitably you look at their background... is it the 'right' university... can they show relevant post doc publication (EM_3)

The more specialised a recognised professor they've worked with... or as part of collaborative working with an industry partner on funded post doc research... the better the industry exposure is in an academic environment... ideally worked in research job after post-doc... recognised industry experience... publication track record... industry collaborative experience (EM_3)

[The] hiring community at [employer] looks at science credibility... have they got the

right techniques and published in the right journals... (EM_4).

During interviews with some talent acquisition teams the sense emerged that some companies use their physical base to operate recruitment in the context of an established talent pool associated with a specific pipeline of talent through particular institutions.

Our presence in M4 corridor gives us access to scientific community which is pharma-based... (EM_3)

Everyone in Cambridge is after the same niche talent pool and trying to buy the expertise (EM_1).

Some recruiters were particularly interested in 'experience that has made a difference' i.e. at the cutting edge of scientific developments and/or with a tangible benefit to people. The comments also suggested that recruiters look for 'stand-out' experiences, which are more likely to be available to the most confident applicants from more affluent backgrounds.

Generally, talent has lots of opportunities and has done something that has made a difference... Won awards internally to the company (EM_4)

...done something that has had impact and made a real difference ...not just involved in research that sits on a shelf and gathers dust... (EM_3)

Someone who recognises challenges, and is more hungry for it... a person who has done 'break through' work and is determined... (EM_3).

Defining 'talent' in the context of life sciences therefore is strongly associated with a candidate's scientific credentials, although it is also clear the employers are also looking for additional characteristics associated with drive, ambition and communication skills.

To be successful in getting a job at a SME or CRO [contract research organisation] a student needs more than a Bioscience degree, they need to have business acumen, entrepreneurship and communication skills (CS_1)

Successful applicants need first, academic ability, second, experience and third an ability to learn... We also look for applicants who will go the extra mile and do something off their own back and show an ability to take initiative and to learn (S_3)

...for smaller companies the basic lab skills students get in first years - that they sometimes forget – are important. Also, students need to show strong numerical ability on their CVs...employers want to see a decent grade in [Scottish] Higher Maths and want students to continue Maths at university... (CS_3).

Another respondent introduced the idea of 'science capital' stating that for successfully transitioning from being a science student to employment, one needed:

First, confidence, second, knowing what your options and opportunities are and third, science capital.... science capital is about having an understanding and a level of

familiarity with how science works, for example, because your mother or father or your next door neighbour are a scientist (S_4).

It is clear that within the large global life sciences companies there has been particular attention paid to the development of the value basis for the enterprises, Company values are usually firmly integrated into recruitment approaches (and used for global performance management systems for employees). Having a value culture is useful to ensure a common identity within enterprises across national boundaries and management hierarchies. Central to the approach to defining the 'softer' skillset employers included in the research said they are looking for is the concern that these companies are designed to benefit people and improve quality of life by preventing, alleviating or curing diseases (whilst creating value and growth through innovation).

Innovation is crucial to companies such as [xx], we need the brightest minds to enable us to come up with new products to help make people's lives better (EM_4)

...not just a great and talented scientist, need to deliver patient outcomes... softer skills (EM_3).

Within the sample of case study companies included there were found to be some common aspects in the way that 'talent' is explicitly defined - in relation to passion for scientific work and the particular company - these were linked to aptitudes such as persuasiveness and drive, capacity to deliver results and innovate.

...passion for the role... aspirational scientists... not just about a job (EM_3)

Be passionate for people and performance (EM_4).

Employers are interested in the motivation to work for this particular company, they want to know that students have researched the employer and want to work there...they want a commitment to CPD, to continuing their development (CS_3).

The overall message from the case interviews with employers is that recruiters are looking for the best talent in relation to the role on offer, those that will perform well and have the right organisational fit (which is measured through evidence of enthusiasm for the business values, innovation and success). Furthermore, the prevailing view was that recruiters can only select from individuals who have the specific skills and competencies needed and therefore there is limited opportunity to influence social mobility and the pool of suitable applicants at the recruitment stage.

Defining 'talent': case employer key words

exceptional scientists, proven scientific and theoretical capability, science capital
high levels of innovation, creativity, ability to solve complex problems
achieve goals and contribute to success, engage constructively with others and demonstrate a positive mindset, be accountable for delivering quality results
passion for the company and serving patients and consumers, show personal drive, inspire and motivate others, commitment to professional development, initiative, awareness of opportunities, confidence
be accountable for actions and results, successes and failures, create value for all our stakeholders

For senior level staff:

strategic decision-making skills, strong strategic thinking, organisational and communication skills, can set direction & inspire

2.3.6. Role of specialist recruitment agencies

Employers varied in their use of external recruitment agencies. Out sourcing of recruitment to an external partner is common practice for some life sciences employers including a case employer, a US-led global medical technology group. This company has established relationships with external recruitment agencies for permanent and temporary staff respectively, a decision motivated by the need to reduce costs and to ensure consistency across the group. Another large employer out sourced all recruitment for temporary staff to an outside agency, reporting that short term employment was a good opportunity for those seeking to gain entrance to the sector (a 'foot in the door').

At the same time, there was however a general sense that several of the larger employers had recently drawn back from regular use of external agencies and perhaps relied on these services in specific circumstances, for example in recruitment of very senior staff or to cover for long term staff absence. Indeed, some case employers indicated they are relying less and less on recruitment agencies and are building up talent acquisition functions in house. This is also about reducing costs and also wanting to have more control over the recruitment process – some external recruiters are perceived as expensive and the candidates offered have not always met employers' needs. For example, the in-house recruiter for a large medical technology/pharmaceutical company felt that having a direct relationship with potential candidates was more effective in terms of building up a relationship and providing better information on candidate 'fit'.

Where used, specialist recruitment agencies can play a role in defining what employers are asking of potential candidates. A specialist (transnational) agency consulted as part of the research, specialising in executive search services to life sciences companies, highlighted the work with employers to refine job descriptions and criteria. A key concern was found to be agreeing a profile for applicants that will widen the pool of potential applicants.

We try to broaden employer's minds about the candidates they need and encourage them to define talent in different ways so a range of individuals can be brought forward...this is not about social mobility but just being flexible so they can actually recruit someone. (RA_1).

One of the case R&D operations with a long standing arrangement with a recruitment agency are specifically wanting applications from diverse fields and are asking recruiters to try to bring forward candidates who are distinctive from each other. However, this is driven by business and diversity considerations, and not linked to any particular social inclusion objective.

This is not described by class... more about employers not wanting carbon copies any more (EM_8).

2.4 Social inclusion in life sciences recruitment

2.4.1. Introduction

This section discusses the potential barriers to social mobility in professional life science roles that are focused on scientific functions. It explores how the life science employers included in the sample understand social mobility, and discusses drivers for change. There is no employment data to show the social mix in employment, and anecdotally the sense emerged that this depends on the employment context and sub-sector. Employers generally understand that recruiting the best scientists means being open to people from different backgrounds, and because there is a strong emphasis on skills and competencies recruiters feel their processes are unbiased: meeting immediate and direct skills needs has been the primary driver.

2.4.2. How do life sciences companies understand social mobility and inclusion?

The research found that data on the socio-economic background of life sciences employees is not available. Interviews with case employers highlighted that social mix can depend on the employment context and sub-sector. For professional level jobs with a multi-national biopharmaceutical company operating in the South East there was a suggestion the profile was skewed to high achieving students from relatively privileged backgrounds:

When we ask [candidates] what drove them into a science career, seven out of ten say their mother or father is a doctor or a science teacher... a profession and a good one to go into...income relatively good... and often a private education... we have had only a handful who struggled at school but for whom it was recognised they were good at science and they were lucky enough to have a good science teacher... they are only a few and they had to work harder at it (EM_4).

This contrasts with the perceptions given of a Midlands based contract research SME:

I know a lot of scientists in the company who were first in family to attend university and might be considered lower socio-economic status... there's definitely a mixture... some people whose parents were scientists, a wide range of backgrounds (EM_10).

It is clear that most life science employers want to recruit the best scientists and are open to people from different backgrounds. Having a diverse workforce is commonly an explicit company objective, given the association between diversity with global innovation and excellence, especially for large employers. Within most firms those responsible for selection are attuned to equality issues and case employers perceive their processes to be meritocratic and unbiased.

Processes are fair and are specifically designed to eliminate bias, that is the criteria focused on quals, skills and competencies... we have materials and support to hiring managers about removing bias in recruitment (EM_2).

Some recruiters commented that the sector is getting more diverse over time, and this was associated with an increase in recruitment of women and use of international recruitment to fill professional positions, often in the context of global operations and international recruitment. Gender equality is a leading issue for the

sector, particularly at higher level and board level. Studies of the occupational outcomes of science, engineering and technology (SET) graduates, have shown that that women with scientific degrees are less likely to go into professional scientific jobs and also more likely to show higher levels of over-qualification.^{39 40} The case employers monitored employment by gender, ethnicity and disabilities. One large global level life sciences employer we spoke to monitors the proportion of ethnic minorities in its national workforce against industry averages and the national population. A multinational medical technology firm has had a particular concern to ensure applicants with disabilities are well supported in the recruitment process and been awarded recognition of best practice for supporting disabled applicants. One smaller organisation was particularly interested in the age profile of its workforce and a number of respondents referred to the importance of developing family friendly flexible working practices in order to attract a diverse workforce. There was a general feeling that the sector is becoming increasingly inclusive (although some respondents highlighted the continued disparity between the genders at board level).

...getting more diverse due to more females and international recruitment... partly this has happened due to skills gaps (EM_7).

However, the interviews with the sample of employers highlighted that life sciences companies have not explicitly considered social class in their recruitment strategies and none of the case recruiters we spoke to were aware of any related work being undertaken by other employers or sector bodies. Some employers considered social background as a 'non-issue' for recruiters, they took the approach that background was irrelevant as long as the focus remained on getting the best person for the job. Some interviewees were concerned that it would not be easy to monitor class/socio-economic group background, not least because employers are often comparing applicants from different nationalities and different age groups.

We want to make sure processes meet all legal requirements (e.g. age, gender etc.) but have never considered social class (EM_1)

It shouldn't be about social mobility of different groups, it's about individuals owning their development and everyone being supported to reach their potential... this is what we do as a company (EM_2)

An individual's background is not relevant at recruitment... we don't think about social class as there is just no necessity (EM_9)

Lots of different people work here... we are blind to socio-economic background in a way (EM_10)

What does class mean nowadays anyway, I don't even know what class I am...how do you judge when you have applications from across Europe? (EM_1)

The barrier from an employer perspective is clarifying the benefits of a socially diverse workforce and for that you'd need to know what the social diversity of the workforce is (DG_1).

However, several employers showed understanding that by recruiting graduates and post graduates they were recruiting from a pool of relatively privileged individuals

and therefore their workforce was likely to reflect this.

The people we recruit have already been filtered through the education system (EM_1).

We are only recruiting people who have been to university so I guess this has an impact, although I am not sure how big this is.....the types of people going to uni has changed a lot (EM_9)

I guess the issue is that (by selecting graduates) we are recruiting a self selecting group of individuals...but our business demands it (EM_2)

If you looked at the majority of people who work here then they are of a certain social type.....about the fact that we need certain level of education.....and we are based in a relatively affluent location so even for support roles we have a lot of the same types (EM_1).

The emphasis on technical skills and knowledge has led employers to suggest that, if social inclusivity is an issue, there are indirect rather than direct recruitment barriers in place. Moreover, given that recruiters and hiring managers are usually looking for the best technical skills, and often those with experience in a very specific scientific field, there was concern that in this context there is not a strong case for considering the impact of social background. Meeting immediate and direct skills needs has been the primary driver.

In my personal view, I just want best person for the job. I do not particularly believe in getting particular social groups for the job.... I don't care where an applicant is from, I just care that they do the job well.... I can't imagine anyone would select or deselect based on postcode or those things – also, (name of organisation) and SMEs, they get a large number of applications, so selectors don't even look at background info... (CS_3).

2.4.3. Potential barriers to social inclusion in employment

2.4.3.1 Educational barriers

Life sciences employers are interested in the scientific skills offered by new recruits, as evidenced by their practical experience, although it is clear that academic credentials also play a major part in framing the recruitment decisions of employers. Given the relationship between academic attainment and social background, it is difficult to avoid the conclusion that there are educational barriers to these firms.

The sector is/can be more socially inclusive. The issue is that the pipeline of talent is not diverse... (RA1)

Although sciences combines practice and academic skills the traditional route into science recruitment is people with certain educational backgrounds... Its self-perpetuating because different groups have different pre-conceptions of where they'll go in education (EM_4).

The top talented scientists generally have a high standard of education at the 'best' universities... not all but probably the majority have a relatively affluent background

(EM_3)

Due to the nature of the roles on offer we have a highly educated workforce (EM_2).

Those candidates who have taken up postgraduate degrees can benefit in the life sciences labour market from having the opportunity to specialise, and to develop and prove their technical skills, which is what many employers are looking for. Whilst there are opportunities for first degree graduates, these candidates may struggle if they lack evidence of specialist technical skills or industry experience since having a science degree alone can be too general for some life sciences companies. In this sense the non-educational barriers are also important, especially the extent of exposure to practical laboratory and/or industry experience, however these factors are often closely linked to the educational context. For example, employability is likely to be boosted for those completing a sandwich degree or progressing to a masters degree with time spent in industry.

For new professional roles some employers are looking for candidates with PhDs which have particular relevance to the latest innovation in scientific developments. One recruiter described this as *"the next level of elitism"*. Candidates not only need to be smart enough, but also working in areas of true scientific impact: those that have been exposed to opportunities working with the best regarded professors:

Some professors are like infamous super-stars in the academic world... if candidates get to work in their labs then their career is made (EM_3).

A theme identified by the research was the increasing trend for life science employers to recruit individuals with qualifications beyond a first degree. There was a suggestion from sector-based respondents that employers asked for post-graduate qualifications because 'they could' i.e. there was a ready supply rather than because the job demanded that level of academic ability. Several Careers Service respondents also seemed unsure as to what recruitment took place at graduate level and a number of employer respondents were also questioning of the requirement for 'academic excellence'. Clearly the relative importance of post-graduate education will vary between different job roles but this possible qualification inflation has the potential to create additional barriers to those from a non-privileged background.

There is a big debate about what jobs do exist in life science for those with just a degree.... more and more employers seem to want a PhD or even post doc experience (CS_4)

I look at those (applicants) that have got a PhD and think 'lovely' but I wonder why they did it and whether it was because they wanted to or just because they thought they had to.... I wonder if the whole PhD thing is a red herring... they earn the same here as those with a degree.... Don't get me wrong academic ability is important but other things are just as important (EM_9)

We don't specify post graduate experience for most roles but I think most of our staff have one.... we are part of a strong academic community and this is important to us (EM_1).

2.4.3.2 Qualities employers want and issues of organisational 'fit'

Life science recruiters pay attention to organisational-person fit issues, which usually relate to the core company values, although different employers define these in different ways. The issue of 'cultural fit' – in the sense of an explicit goal to ensure that new recruits fit a certain profile relating to someone in the mirror image of the interviewer, is perhaps less important in the context of life sciences employers which have a tradition of recruitment to support innovation and industry development.

The implications in terms of social mobility depend on how social class norms play out for candidates wishing to communicate about drive and ambition to innovate. The employer interviews showed that life science recruiters seek the characteristics most associated with independence and social confidence, and there is potential for some of the characteristics they are looking for to be mapped to social class.

Generally, more flamboyant, engaging and make more of an effort. more driven... you can see this by how they engage with you (EM_4)

...someone with an understanding of what they are doing as a person and as a career... See their career track and know where they want to go... able to show self-awareness in their body-language and how they present themselves (EM_3)

...self-aware, in their body language and presentation, how they carry self (EM_4).

Aside from the direct effect of educational background, there are also indirect effects of education related to school-specific cultural capital and habits developed in the family. One respondent shared the following example:

In my role, I have experience of running information events in private and in state schools. In private schools, students tend to e-mail me afterwards with questions – they see me as an opportunity to develop their science capital. However, students do not do this in state schools, they do not have that confidence or knowledge that you can make use of contacts. So, it is not as simple as that the doors are not there, but that the confidence is not there to walk through... (S_4).

In several cases the assessment processes include sessions whereby aspirant professionals must prove that they can hold their own in a discussion with colleagues. Although not explicit in the comments of recruiters the suggestion is that the strongest candidates will be those who show a level of confidence, or an ability to project confidence. Being able to present scientific arguments coherently and to appropriately support arguments by evidence and facts. Participants in this research did not associate the aspects displayed by the strongest candidates as being associated with any particular social class, rather they are associated more with exposure to scientific skills and knowledge, however there is some potential for these candidates to be skewed towards those with a certain elite educational background, and ability to project confidence which may be linked to socialisation into middle-class norms. The implications for social mobility in this context is whether applicants from non-traditional higher education backgrounds are more likely to be viewed as less confident/competent at interview than others who have been educationally advantaged. Clearly the indepth interview/assessment centre processes used by many major life sciences companies for higher level scientific jobs means that aspirant professionals are tested not just on their technical skills and

abilities, and the extent to which they show passion for scientific concepts and arguments, but also in relation to their ability to communicate and hold their own amongst their peer group within companies.

A concern about the differences between social groups was evident in the comments made by staff members in university careers services involved in supporting different groups of students to progress. Analyses of progression for students, by HESCU (2012) as part of the Futuretrack project, suggests that socio-economic background has an influence on extra-curricular activity (and participation in extra-curricular activities is associated with labour market advantage). Some student groups are less likely to participate in extra-curricular activities -due to a lack of finances, self-confidence or time. Indeed for these students in the sample socio-economic background had the closest relationship with whether a respondent had taken part in extra-curricular activities while in HE or been an office holder.^{xvii}

2.4.3.3 Opportunities for technical skills and experience

Graduates from relatively socially advantaged backgrounds have been found to be most likely to have been able to take advantage of unpaid work opportunities.⁴¹ As noted earlier, some employers prefer behavioural based interviewing which is designed to discover how the interviewee acted in specific employment-related situations, i.e. past performance predicting future performance, which means even more of a premium is put on exposure to practical experience. This has led to the conclusion that disadvantage can be further reinforced for students who are less able to make full use of their HE experience (although type of HEI, subject studied and access to social networks that facilitate labour market entry may also play a part).

It's not just that some students don't get early exposure to opportunities... also that they don't understand the importance of taking up opportunities (DG_2)

A challenge for people who don't have strong social networks... people not being aware of what they could do and lacking confidence (DG_4).

Whilst the current pattern of 'supply' of life sciences recruits through the higher education system may often lead to skewed outcomes, at the same time the suggestion from recruiters interviewed is that those candidates from non-traditional backgrounds who have succeeded in science education may be particularly attractive to life sciences employers because they can particular demonstrate drive and ambition to succeed in science. A candidate from a less affluent background has the potential to add more than a candidate from a more affluent background because they are able to demonstrate achievement in face of disadvantages. They might also have particular experience whilst studying, for example paid work, which they can draw on to show transferable skills – such as independence, team working, customer focus and communication - which many life science employers are seeking.

The labour market advantages of previous work experience including working whilst

^{xvii} 67% of students from a routine and manual background had taken part in extra-curricular activities while in HE and 13% had been an office holder, compared to 80% and 20% respectively for students from a higher managerial or professional background (HESCU, 2012).

studying for widening participation students is something that interviewees from the higher education careers services were keen to point out, and give encouragement to students around. There were also some examples from the employer sample to show that opportunities can be there for non-traditional graduates if they are able to access them. For instance, one case employer had recruited an ex-chef to manage a laboratory, and considered this employment background very relevant to the job role.

Comments by case employers suggest that candidates who have taken advantage of opportunities to boost employability at university are well received by employers. For example, a small employer said a differentiator in recruiting to a graduate post had been that at university they had done an (optional) course around pitching to customers. Anecdotally a careers service interviewee commented that taking part in additional experiences designed to boost employability has increased the confidence of some students who benefit from additional course-related experiences. Moreover, candidates from less affluent backgrounds who can demonstrate particular achievement and progress in science are also highly attractive to employers. Coming through an alternative route can be used to demonstrate the qualities employers want, however, non-privileged students may need help to recognise the skills they bring and need assistance in packaging their previous experiences in a way which best demonstrates they have transferrable skills.

2.4.3.4 Locational issues

The locational position of employers means a concentration of employment and supply of skilled graduates in certain areas. There is a perception that this strategy will predominantly be more successful in helping employers to meet their skill needs. Geographical clustering of life sciences employers means they draw on a local community of scientists, however location can be a barrier for applicants as much of the opportunities for scientists exist in SE which has cost of living implications. Relatively low level of geographical mobility amongst some graduates may be an issue: the careers service representatives noted a preference amongst students to stay local for placements and work experience, although employers recruit at least regionally and usually nationally. For some it appears that geography can greatly impact on career progression opportunities or the ability to take up those opportunities. One respondent reflected on her own career trajectory how she left lab-based science after her post-doc because she was unable to relocate from the North-West to a different city in the South-East where the next opportunities lay.

Local links between large global players and particular HEIs may perpetuate past hiring patterns considered to have been successful. Given the geographic clustering around Cambridge, some locally focused graduate and intern recruitment links to more selective universities, where students are more likely to be from higher socioeconomic backgrounds. The picture appears rather fluid: careers services inferred that it's easier to interact locally, and in the context of changes in the sector and the shift to smaller employers, university careers services are increasingly targeting local employers for their events. The scope of this research was not broad enough to consider the locational implications across the UK on opportunities for different types of graduates, and besides employers remain open to non-local universities because they often need to widen the talent pool available to them.

2.4.3.5 Graduate employability

The need to attune science graduates to the requirement to demonstrate a range of

experience and transferable skills to be successful in the changing life sciences labour market came out in the interviews with university careers services (including good communication and enterprise). Indeed, some services had started to engage life sciences students in career planning earlier on during their time at university, with a growing emphasis on exposing students to alternative careers such as medical writing, working in regulatory affairs or in business development and on encouraging students to think about other transferable skills they acquire whilst at university. Employability skills are considered to be increasingly important, as the labour market shifts from large to small employers, candidates need more experience because the labour market cannot fit in so many graduates.

The careers service realised pretty quickly that there are actually very few opportunities with the big players but that opportunities exist outside the big three players, but no one was telling the students about this (CS_4)

To be successful in getting a job at a SME or CRO a student needs more than a Bioscience degree, they need to have business acumen, entrepreneurship, communication skills, but this is not the picture an average student has in mind when they think about their career (CS_2).

The importance of social networks appears less of a hindrance to progression in life sciences industry experiences than in some other occupational areas, however feedback from careers service's representatives suggests that widening participation background students may be less aware, or less able than their peers, of the importance of securing work experience/placement because they lack the relevant family knowledge and encouragement.

Science degrees can nurture a range of highly transferable employability skills, including analytical thinking, attention to detail and team-working valued in a range of sectors and therefore many students with life-science degrees will have a career outside lab science, change to science-related jobs or move completely outside science

You do not need to become a scientist to get something out of a Science degree, students need to think 'what interested me in Science in the first place?' - for example this might be curiosity or enjoying finding things out - and then to think how these skills can be useful in other fields (CS_1).

One Russell Group university reported that they thought a significant number of their life science undergraduate students may have chosen their degree for the prestige of the institution and the transferable skills rather than for the science degree on offer in the first place.

Others do not stay in sciences because of a lack of opportunities or because they discover it is not for them. One Careers' Service respondent noted how "...a significant number of students discover at university that they hate being in labs..." (CS_3). Other respondents highlighted how students may have a "...rose-tinted image of being a scientist, sitting on a bench, pursuing science and making the world a better place" (CS_1), but then in reality fail to obtain internships or placements in lab that would enable them to have a realistic chance of pursuing a lab-based science career.

Not all careers' services, or indeed learned societies, we interviewed during this project had analysed their institutional DLHE data to know the career destination of their own graduates with one noting how there was a lack of appetite among science heads of department for this type of analysis.

2.4.4 Drivers for social mobility

The case interviews suggest that life science employers are interested in the debate and argument for diversity in the workforce, especially where it strengthens the talent pool, although the suggestion is this is most relevant to education providers. The case employers felt little imperative to examine the issue of social inclusion and as things currently exist it would involve a significant shift by those involved in recruitment and selection to see their recruitment practices as part of the social inclusion agenda.

The majority of case employers do however see their organisations as having an important role in generating interest in careers in the sector and supporting employers to target non-privileged young people with these activities seems a positive way forward. Some employers are also actively providing work experience opportunities to current HE students, in part to help build the talent pipeline and in part to meet their corporate social responsibilities. Again working with employers and sector based organisations to help target work experience funding and opportunities to those from more disadvantaged backgrounds might prove effective. Some life sciences employers are also keen to promote apprenticeships and encourage young people to consider different routes (discussed in section xxx) although it remains unclear as to whether this might be an effective way of creating social mobility.

Widening participation for non-privileged students to higher education is a well-established within the education policies of UK government, with strategies and funding mechanisms well embedded in the HE sector. More recently the Higher Education Funding Council for England (HEFCE) have moved the policy debate towards a 'student lifecycle approach' to widening access, a shift marked by the publication of a joint HEFCE/OFFA National strategy for access and student success. The strategy focuses the attentions of the widening participation community not just on access to HE but also on student success and progression. Amongst the careers service respondents, one had a relatively new remit for the careers of widening participation students. The driver here was in delivering the outcomes of the university's access agreement and in ensuring this whole student-lifecycle approach to supporting widening participation students beyond admission. However, the respondent described a number of obstacles, including a lack of data on who science students and students using the careers service are, a lack of tracking graduates into employment in general and tracking linked to social background. Despite obstacles, the appointment of a new post within the university perhaps provides some evidence that there will be an increased focus on supporting the employability of students from less privileged backgrounds.

Interviews with sector based organisations offering a range of differing perspectives as to possible future drivers for social mobility in the sector. One respondent noted that individual senior people like CEOs were influential in shaping agendas. Community outreach and widening participation activities could thus be the result of

changes in priorities of senior managers or stakeholders or changes in who these people are. The same respondent also highlighted that funding was key to ensuring change happened. Certainly, two small case employers referred positively to the financial support they had received through learned societies which had enabled them to support student placements. A Career Service respondent also highlighted the importance of learned societies which have an existing role in ensuring equality and diversity within their varying disciplines, the suggestion being they were best placed to start to raise awareness and offer guidance on the issue to their member base.

It was further noted that impetus for change can also come from national policy reviews. For example, the Royal Society of Chemistry launched their industrial placement and internship grants scheme as a response to the Wilson review and a Science Council Report.⁴²

2.5 Career progression and social background

2.5.1 Introduction

This section reviews the feedback from case employers on progression opportunities for new entrants to life sciences. Again rather mixed views emerged, with some trends on the ground towards more fixed-term working arrangements, coupled with developments at sector level to improve progression routes and career pathways for employees in life sciences (including funding support for employer-based training). More and more large employers are linking to academia to support scientific development and innovation, as well as helping the talent pipeline. There was no sense that once a person had come into employment in the sector that the opportunities would be more limited for any particular social group, however the opportunities available do seem to depend on the role and starting point into the life sciences industry.

2.5.2 Career progression opportunities

Interviews with case employers suggest some contradictory trends in relation to the opportunities for career progression for new entrants to professional life sciences jobs. On the one hand there is increasing short-term hire and a mobile workforce. The specialist recruitment agencies suggested that for temporary work employers may take less experienced professionals on temporary contracts and this is considered a good way into the organisation for those with limited experience as short term/fixed term posts can often be made more permanent as funding becomes available to companies, for example through research contracts.

On the other hand, some of the case employers pride themselves in a strong 'grow your own' approach and noted opportunities for people into scientific jobs from roles in other parts of life sciences businesses: e.g. customer service, consumer healthcare, if staff show an interest in the scientific area. Other case employers have been engaged with the Science Industry Partnership (SIP) and had supported staff to undertake a modular masters degree and were also hopeful that further implementation of the Degree Apprenticeship would also allow for more internal progression to professional level routes.

Smaller employers spoke about developing links with others to be able to provide more support to raise employees' management skills on the job (as an addition to

the strong technical skills that they have when recruited). The smallest employer had been able to access local financial support for training courses in quality management via their local authority, and also from national life science sector sources (through a Science Industry Partnership scheme and RSC Training voucher scheme). The management team with this employer lacked resources for a training budget, were looking at ways to offer management opportunities to existing team members; having a student placement had provided line management opportunity for the existing staff and this was considered useful for continuing professional development.

A number of large global life sciences sector employers have put the focus on enabling gender diversity in management and senior roles. For example, a global research-led pharmaceutical business has been running targeted individual and group coaching for the past three years. This builds on employee research and discussion to identify hidden barriers to gender diversity and solutions.

Through initiatives such as the SIP (discussed below) the sector is moving increasingly in the direction of training for skill. This can be seen through the importance of initiatives such as Apprenticeships and Student Placements/supporting post graduates. Cogent has called for investment in workforce development - including Higher Apprentices, technical Foundation Degrees and technical workforce Masters provision. They suggest workforce provision at the tertiary interface (level 3-4) in scientific and technical areas is weak (apart from some highly specialised courses).

The sense emerged that opportunities for career progression very much depend on the starting point the person makes into the life sciences industry. There was no sense that once a person had come into employment in the sector that the opportunities would be more limited for any particular social group. Management and leadership skills appear to be key factors needed for progressing to higher-level jobs.

2.5.3 Postgraduate study

In conjunction with research councils and universities life sciences employers are actively engaged in a range of activities delivered through studentships. This work supports students to undertake PhDs and undertake post-doctoral research (recruited by the academic centre largely). For example, a UK-based operation of a global biopharmaceutical business, said, in collaboration with research councils they commission research that is at pre competitive level, and this often leads to sponsorship of research studentships. Most students receive a stipend and sometimes this is jointly funded with the research councils, although in some case students are funded by the company for highly relevant research. Case employers indicated that students spent time in the employer premises (and could be further supported with training in specialist subjects/skills and in development of professional skills).

Building the talent pipeline in a collaborative arrangement with universities appears to be increasingly attractive to employers who want to undertake research, The R&D operation of a large global company directly sponsor PhD students (pay fees) for small numbers of PhD students in relevant areas of interest. Another large employer has been in collaboration with a Scottish university to provide studentships for graduate chemists to complete a research-based PhD. Students require an excellent

Masters qualification in a relevant field and are taken on to work on the identification of new medicines within the research and development teams at the company. More widely it is known that some employers get grants (including from the European Union) to take on PhD students.

Although places are small scale the feedback from several case employers suggested the recruitment of post doc students is growing. Employment tends to be on fixed term contracts only but some recruiters indicated that this is a route to permanent roles.

...we have 6 at the moment for 3 years... a very particular development programme...by the second year if we like them we start encouraging them into jobs (EM_3).

A recent survey of science students suggests academia also remains a popular hopeful employment prospect for many who have already decided to stay on for a PhD or as post-doctoral researchers⁴³. However, in light of the number of available high level senior positions in academia compared to the number of PhD students and post-doctoral fellows in Science disciplines, this ambition is not realised by many. HESA statistics for 2013 show the decline in available positions for the case of academic biological sciences. There are over 14,000 PhDs compared with fewer than 5,000 academic Early Career Research positions, under 3,000 lectureships and senior lectureships and just about 1,000 professorial positions.⁴⁴ A respondent from a university Careers' service noted regarding academic progression:

A fair number of undergraduate students drift into postgraduate study because they don't know what to do and then the key issue for PhDs is the lack of opportunities for post-docs...so this year, for the first time, Careers talked to all taught graduate students on their first day of the year to get them thinking about careers outside science... (CS_3).

Very striking is also the declining representation of women as careers progress with 62% of PhD students in biological sciences being women but only 45% of early career researchers in academia. Representation in high level jobs is even lower: 33% of lecturers/senior lecturers and 14% of professors. It is likely to be statistics like these that have moved debates around gender in science careers centre-stage with respondents in the research interviews reporting comparatively less focus on issues around social class in science careers.⁴⁵

2.6 Employer initiatives

2.6.1 Introduction

This section explores a range of initiatives which are being introduced to support entry into and progression in life science careers. Life science employers have traditionally been very supportive of the talent pipeline through outreach work including partnerships with careers services, and the provision of placements and internship opportunities. The supply of placements and internships is crucial given the premium placed on practical and industry experience in recruitment. Employers also have a key role to play in raising awareness of opportunities in science amongst children and young people. There is some tradition of targeted intervention however this is in relation to gender equality in life sciences. People from non-privileged

backgrounds may be less likely to engage with some of these types of initiatives, as discussed below. The introduction of Higher Apprenticeships and Degree Apprenticeships in life sciences are important new developments which have the potential to benefit social mobility, however, this would require employers to become more open to non-traditional recruitment and a shift to greater parity of esteem between the academic and vocational routes. As yet the newness of the Apprenticeship frameworks and lack of data makes it difficult to assess the relative importance of Apprenticeships programmes in supporting non-privileged groups into the sector.

2.6.2 What initiatives are employers introducing

Clearly thinking about systematic widening participation initiatives by social background in sciences appears to be still new to employers. For a long time, a key concern has been differential progression of female scientists into senior positions. There are a range of schemes that seek to promote greater progression for women into science careers including the Athena Swan Charter Mark for universities, Equate Scotland, Science Girl, the WISE campaign, and DfE funded Institute of Physics projects to promote Science uptake for women doing A-levels.

Initiatives specifically targeted at widening the social class talent pool are harder to find. One sector based respondent explained, however, while her *“Organisation’s initiatives are definitely about gender, but we actually take the view that there is a lot to learn about low SES and minority students in sciences by understanding how gender works...in all cases, it is about what makes an individual, whatever and whoever they are, able to succeed in Science”* (S_4).

There was a general consensus that employers were willing and able (to varying degrees) to support the diversification of the workforce through engagement with the education community, rather than through altering existing recruitment and selection processes. However, diversity seemed to be a secondary objective for the engagement activities employers described. The primary driver was about increasing the supply of talent and generally raising the profile of STEM and/or life science industries. Corporate Social Responsibility and brand awareness were also a factor in deciding to invest in outreach strategies.

Our approach is not to pick the flowers it is to water the roots...we need to keep the pipeline of talent coming through (EM_9).

The larger employers in the sample offer a range of opportunities to undergraduates and students at different stages of education, including school and college leavers. To a lesser extent, small and medium employers included in the sample were also found to be supportive of a number of initiatives which directly and indirectly supported potential entrants to life sciences careers. The structures and resourcing for educational liaison in large companies can be highly developed. For example, a UK based operation of a global biopharmaceutical business has employed a full-time Academic Liaison Manager since 2010. This role is designed to support a range of activities that link the organisation to education and the wider community. The driver for this role was around improving academic links for research purposes although, the role also supports an undergraduate placement scheme, and management of outreach work from primary to higher education. Dedicated staff resources were not

found in small companies, and the interviews suggest that initiatives depend on the interest and backing of a particular individual within the management teams.

2.6.3 Employer and Careers' Service collaboration

There was general agreement that engagement with careers needed to start earlier during students' life-cycle at university and also needed to extend to taught and research postgraduate students. Careers Fairs and Alumni events were popular events among Careers Services. Fairs in particular allowed showcasing a range of employment options in science-related careers. One institution had also worked hard to gain representation from SMEs at the Careers Fair rather than only representing the well-known large life science companies. Fairs and alumni connections also serve to highlight the additional non-science skills needed for a career in the field. One Careers' Service used LinkedIn to show current undergraduate students the 'field of study explorer' which showcases what graduates are doing with their degrees, the ability to narrow this down by institution was considered particularly helpful for seeing what previous alumni had done.

All respondents thought, however, that embedded activities where a Careers Service representative talked to all students on a particular programme were necessary rather than having only bolted on activities that were optional for students to attend or depended on prior knowledge of how relevant they might be. Indeed, one respondent noted that:

While opportunities to participate in careers events are advertised to all students, attendance as a proportion of the whole student cohort in life-sciences is low. There has not been an analysis as to who these people are (e.g. by their socio-economic status) and perhaps there might be an opportunity to 'nudge' particular groups such as Widening Participation students to attend such events in the future (CS_1).

One large initiative in this university was therefore to have career information as part of the induction of all first year students in life sciences. In 2015, the Careers Service had also, for the first time, talked to all life science taught post graduate students on the first day of their course. Another idea for the future was to potentially target WP students to have lunch with alumni when those were on campus for careers events.

Good Practice

Good practice is to improve the information available to non-privileged job seekers on how to develop a career in science, including detailed careers advice (i.e. how to navigate science education and become employable at the end). Employers have a strong focus on their immediate skill needs and candidates need to better recognise what's attractive to employers in order to make better decisions to boost their employability. Some graduates may be currently disadvantaged in the science labour market if they lack experience, have a weaker academic background, and did not select the qualification most valued by prospective employers.

Napier's Skills Passport

Napier University in Scotland, partnering with Skills Development Scotland and

after employer consultation, developed 'Skills passport' for Life Sciences. Students have access to a tool-kit explaining the skills life-science employers are looking for and are then guided in how they can demonstrate that they have these transferable skills.

2.6.4 Internships

Internships are a common feature of the life sciences sector, and a crucial way in which entrants gain early experiences. Practice towards the provision of internships varies from company to company. For example, a global research-led healthcare company that researches and develops pharmaceutical and healthcare products offers undergraduate internships - these usually take place in the summer before third year of university and can last around 8- 12 weeks. The R and D operation of a global pharmaceutical company offers student work experience for specific activities on an ad hoc basis – this company takes on intern students on project work that is unpaid (with a focus on local students) and also recruited through personal referral (i.e. unadvertised).

The common feature is that in general the internships are designed to support the employment pipeline and to 'grow talent' and internships tend to be across all areas of the life sciences sector (not just science areas).

Interviews with some university career services show they are actively seeking to create opportunities for students to complete internships. A challenge for institutions is the effort and resources associated with creating student experience opportunities. One person commented: "*creating an internship requires a lot of work but only benefits one student and, at the moment, this student could be anyone*". A further challenge is that many smaller life sciences employers do not have the capacity to offer internships or need longer than a summer for a student to have a research experience and to be useful to the company, for example, a year.

As far as the researchers are aware there is no mapping of the students benefitting from these schemes. None of the HEIs included in the sample undertook monitoring of the profile of students who benefit from internships.

Issues emerging in relation to student internships

- **Financial constraints.** There are examples of unpaid internships in the sector, potentially creating a financial barrier for some student groups. One University careers service respondent described how the life sciences faculty had established a bursary fund for graduates to take up unpaid short term internship opportunities. Although unable to offer graduates a salary the scheme provided some funding to cover expenses, such as travel costs.
- **Locational barriers.** Interviews with university careers services in diverse locations suggest there can be locational barriers to some groups of students taking up internships, which may disproportionately affect students from non-privileged backgrounds. The ability of some people, especially those from non-privilege backgrounds, to travel a distance to take up an internship opportunity came out as an issue and this was mentioned across the sample, regardless of the type of geographical location of the institutions.

- **Lack of opportunities.** Interviews with some university career services show they are actively seeking to create opportunities for students to do internships or similar work experience. These activities are usually universal but it is clear from the interviewees that there is currently debate around how to give students from lower socio-economic groups the best opportunity to be the best candidate, by for example, putting in place opportunities to gain wider experiences which support employability. One university, for example, develops opportunities for volunteering and is considering targeting this support, and additional help, for widening participation students (e.g. financial aid to help with transport costs).

One careers service representative working with life sciences students at a Russell Group institution commented: *“The model of the articulate, typical Russell Group student who knows how to network and does not need support is not useful for providing careers’ advice to a diverse range of students (CS_1).”* Lack of monitoring means it is hard to get a sense of the current profile of take-up of the available internship opportunities between groups.

Available internships are not always in a student’s field of interest: One HEI remarked that from a students’ perspective, internships are not usually offered in their preferred area of interest, that is as lab-based internships. However, the few internships that are on offer are many likely to be in business development type roles. While knowledge of the lab might be helpful, they are not actually bench-based placements.

Good Practice

Good practice here to engage with employers to work on the supply-side of internships across the breadth of employers in the sector, whilst also engaging with students to improve their skills and to boost their chances of getting a place. The Social Mobility Commission is encouraging employers to pay and advertise for internships, targeting at least 25 per cent at disadvantaged groups: many internships convert into permanent jobs. Ensuring these are accessible to people from different backgrounds is an important part of opening up the professions.⁴⁶

ScotGrad: Scottish Life Science Internship programme

This competition was launched in response to a report by Skills Development Scotland highlighting the gap employers see between the skills they are looking for in new graduates and the skills universities hone in their students.

The competition is open to 1st, 2nd, 3rd year university students who submit their CVs and those who submitted the best CVs get an opportunity to undertake an internship. CVs are written in response to fake job descriptions. The idea behind the scheme is that students learn to articulate their skills better. In the current third year of the scheme, 18 internships were on offer.

2.6.5 Student placements

A number of the case employers offer fixed term posts to students as part of their sandwich degree (usually during a 3rd year before completion of the final year at university), with two of the smaller case employers able to engage in placements due to the support of a scheme overseen by Royal Society of Chemistry.^{xviii} Some students would like shorter placements, but in general these are less popular with employers because of the resources implications of supporting placement students.

Placement opportunities tend to be advertised openly in the same way as regular jobs,^{xix} and at least one of the large employers has a dedicated post to foster links to universities to ensure a strong field of applicants. Some international companies offer placements in the HQ operations internationally. For example, one case, a global health care business, regularly offers students the chance of a practical year in Germany involved in oncology research, immunotherapy and antibody-drug conjugates (amongst other business areas).^{xx} During the placement students work independently on a project, and will write a report on their results at the end of the placement. Another global research-led healthcare company in pharmaceutical and healthcare products offers industrial placements over around a year organised at a country level.^{xxi} In large life science operations the industrial placement opportunities span all operational disciplines (i.e. ranging from research and development to analytics and production, regulatory affairs, market access or marketing, finance, human resources and so on). Industrial placements tend to last approximately twelve months, which means that students get extended experience and in many cases have the chance to make a genuine contribution/impact.

Good Practice

Changes in the sector have meant the employment profile is shifting away from large life science companies towards a more diverse mix of employers, including those supporting industry supply-chain linkages. The good practice is to support the continuation of work experience opportunities in this new context, and to help candidates to better understand and navigate the emerging job opportunities, especially with new types of employers (such as contract research organisations).

The Royal Society of Chemistry Industrial Placement Scheme

The RSC, working with their partner Cogent Skills, launched an industrial placement scheme in 2014 which awarded grants to 11 students (9 females, 2 males). Fourteen students benefitted from the scheme in 2015. Each placement runs for one year and students receive a Registered Scientist Award at the end of the scheme. The scheme is open to SMEs who are given support for recruitment. The RSC also runs a three month internship scheme which benefitted eight

^{xviii} There are a number of schemes that are designed to assist SMEs to find students for industrial placements, and to provide financial support for participating companies and students. These are sponsored by government agencies, sector bodies and private funders (such as Santander <https://www.agora-santander.com/profil/527a52f1e04ecc1d6c8e59c3>).

^{xix} In some cases employers ask candidates to apply via application form rather than CV to help processing and because these students may as not have any previous experience.

^{xx} In total there are around 20 placements a year.

^{xxi} Recruited 47 in 2014 (30 of which were scientific, others commercial/business roles). In 2015 figures were 63 hires/32 scientific and in 2016 65 hires/26 scientific.

students in 2015.

These schemes also aim to raise awareness among students of the up to 96 per cent of the UK's chemical companies that are SMEs but that have a small profile compared to the large industry leaders in the field.⁴⁷

Issues emerging in relation to student placements

- **High level of competition.** Competition for places can be fierce (one employer said they receive approximately 600 applications and another said they had upward of 800 applications for a relatively few vacancies). There is some suggestion that sector changes may be affecting the availability of science-led placements, mirroring reductions in scientific hires associated with reorganisation of global businesses and closure/reduction of a number of research sites.
- **Differences in programme design.** Not all degree programmes are designed in a way that allows for students to undertake placements. One case employer identified a number of local, high tariff institutions, which did not have structures in place to allow for their students to take up the industrial year placements on offer. For students without this opportunity then more emphasis is on them to identify and take up work experience in a more ad hoc way.
- **Differences in HEI linkages.** There are some differences in the higher education providers case employers have the strongest links with, and to an extent the employers target universities that are well known in a relevant curriculum area. Some employers have other criteria, for example a biologics R&D operation are interested in linking to programmes that are accredited by the Royal Society of Biology. The interviews suggest that generally employers have most contact with a fairly narrow range of institutions, although the range varies from employer to employer. For one employer the latest intake of students on placement will include students from around 8 universities nationwide.^{xxii} On the other hand a global biopharmaceutical company said they work with approximately 60 universities (although they have closest links with Bath and Southampton). A North West based contract research organisation has taken students on placements from Leeds and Sheffield universities (under a Royal Society of Chemistry supported scheme for SMEs).
- **Lack of tracking.** The case employers were not found to track if the organisation goes on to employ placement students later on. For several in the sample student placements are seen as part of a commitment to corporate social responsibility and generally increasing the talent pool, rather than identifying talent/new recruits for the future. However, recruiters in other firms indicated that student placements had been a source of recruitment, and that if the company liked the individual then moves could be made to encourage them to apply to suitable vacancies where these existed. One R&D operation gave anecdotal comment that perhaps 1 or 2 from the 12 placement students they have each year will end up working with them at a later stage.

^{xxii} There are 13 places starting in July 2016.

- **Entry criteria are high.** most employers want high achieving and ‘exceptional’ students. In the example of sandwich year programme the criteria is a 2i standard student (minimum) and those with highly relevant degree courses. Selection criteria is similar to other jobs, and employers are looking for ‘organisational fit’ and trying to identify the ‘high fliers’.
- **Networks for accessing placements.** One respondent from a Careers’ Service observed how in particular many of her biomedical science students aspired to NHS careers. However, she noted that there were only a handful of NHS trainee positions available despite a forthcoming retirement wave of senior scientists in the NHS. The few students she had ever known to achieve an NHS placement had done so through personal contacts and not open advertising or competition.
- **Salary levels.** In the case of a South East based biologics operation a salary of 18k is paid for the placement year, to cover costs of living. The case employer interviewee commented that less could be paid, but are concerned not to exclude anyone on the basis of not being able to afford living in the South East. However, careers services mentioned low salaries and unpaid placements as a barrier to some low income family students.
- **Careers advice and information.** Feedback from HEIs suggests that to be successful students need to apply for industry placements early on in their university career. For example, King’s College London offer a degree programme with an integrated year in industry. The challenge here was that undergraduate students need to apply for this scheme within their 1st term of their second year at university, a time when for many students careers are not ‘on their radar’ yet. This might be particularly true for any students without networks in the science sector, a group that will disproportionately include non-privileged students. Embedded support from early on in students’ university days is likely to enhance engagement with careers from the outset.

Good Practice

It is widely recognised that employers need to offer high quality work experience which is accessible to a wide range of groups. The good practice would be an individual gaining access to a placement without assistance, although sector bodies and HEIs may need to engage with employers to ensure opportunities are open to everyone who can benefit.

Student placement opportunities at large biologics R&D facility

Case employer offers 12 month fixed term posts to students as part of their sandwich degree. Posts are advertised openly and the company is anticipating 13 starts on the programme in July 2016. A competitive salary of 18k is offered to students on the scheme. Ensuring the placement year was salaried at an appropriate level was an important decision taken by the organisation. Being based in an area with a high cost of living the company was keen to offer a salary that allowed individuals to locate to the area for the duration of their employment.

The organisation acknowledged that they could have set the salary level lower but they did not wish to exclude potential applicants for financial reasons. The organisation does not track the students after their placement year, the focus of the scheme is more about CSR than direct recruitment, anecdotally they know that 1 or 2 from the 13 are likely to be recruited at a later stage.

2.6.6 Apprenticeships

Cogent, the Sector Skills Council (SSC) for Life Sciences (and Chemical industry) is the issuing authority for the Apprenticeship frameworks for life sciences at all levels, including the Higher Apprenticeship and the recently introduced Degree Apprenticeships. Putting vocational learning on an equal footing with academic routes has been identified as a key issue for meeting the future skill needs of the sector and building provision and progression routes for vocational learners is seen as one of the key challenges facing the sector (Cogent, 2016). Education of employers about the Apprenticeship route and showing them the value of providing job relevant training is seen as a key function of the Science Industry Partnership, alongside increasing awareness of the Apprenticeship pathway in the school sector.

The Higher Apprenticeship framework for life sciences is based on Level 4 or Level 5 job roles - i.e. technologist level - sitting between technical operator and scientist^{xxiii} and there have been around 170 starts on the Higher Apprenticeship in the last two years. The standard underpinning the new Degree Apprenticeships^{xxiv} in science (including the life sciences sector) was introduced in 2015. It is a broad based award that can be delivered across a range of sectors including life sciences to allow access to scientist roles at level 6. This route is very much in its early stages; at the time of this research Cogent had two Degree Apprentices registered. It is envisaged that the Degree Apprenticeships will be delivered to new entrants to the sector and to those already in the workforce who wish to progress to a professional level role.

Learned Societies are engaging directly with Cogent and the Apprenticeship agenda to strengthen a non-degree route into sciences. For example, the Royal Society of Chemistry has begun accrediting apprenticeship training providers and offers grants for employers that have not previously had apprenticeships as well as free advertising for apprenticeships in their magazine 'Chemistry world'. The RSC is looking to link the professional awards 'Registered Science Technician' (RSciTech) and Registered Scientist (RSci) to apprenticeships⁴⁸.

Apprenticeship provision and access to professional level roles

Case employers reported varying levels of engagement with the Apprenticeship programme, although by and large the number of Apprentices at any single case employer was relatively small in comparison with the overall size of their workforce. A sector respondent suggested the largest single recruiter to Higher Apprenticeship vacancies had taken on approximately 20 staff since the introduction of the framework. Some case employers had had active engagement with Apprentices for many years "*we have been using Apprentices for over 20 years*" (EM_2) but had

^{xxiii} Work has been undertaken with Manchester Metropolitan University (MMU) and the University of Kent to develop a blended learning approach to the life sciences higher apprenticeship framework. The programme is online and includes periods of summer school/block teaching.

^{xxiv} <http://bit.ly/22K1z5d>

welcomed the new standards and the impact within the organisation. Other respondents referred to the work of the SIP and how this had encouraged the employer to take on Apprentices for the first time. Collaboration with Cogent in their role as a managing agent for apprentices, had enabled one large employer to actively engage in the recruitment of Higher Apprentices. Overall, case employers could see real value in the recruitment of Apprentices and a belief that the Higher and Degree Apprenticeship frameworks offered a significant opportunity for the sector to better embrace vocational routes to higher level roles.

Our experience of Apprentices has been good... they provide a tangible contribution (EM_3)

Innovation is important for a life science company such as [organisation]... for us that includes recruiting apprentices as well as nurturing the talent we have already (EM_4)

[Apprentices] do very well within the organisation and are a very attractive proposition for higher managers at the [name] site (EM_2)

It is an opportunity to get past the glass ceiling in operation in life sciences... recruitment is biased towards graduates and post graduates... there is a bit of snobbery involved (EM_6)

Apprentices are top of our list this year and we are growing the programme especially with the levy coming in... it's a chance to look at recruitment from a different angle – to think about getting a better flow through (DG_2).

A key selling point for the recruitment of Apprentices identified by respondents was the improved retention rates associated with recruits. Indeed, part of the business case for Apprenticeships, based on employer case study, is that Apprentices have relatively better job retention than graduates. Retention is an issue for the sector and the evidence suggests that employers using graduates to fill technical vacancies have tended to have a high turnover of staff. *“It's better to train an Apprentice rather than spending 12-18 months getting a graduate up to speed for them to leave” (S_1).*

‘Growing’ future talent through Apprenticeships is an important part of the employee development strategy of a number of the larger employers in the sample. A couple had been recognised in employer award programme for ‘excellence’ in support for Apprentices (these cut across job functions, and are supported by an external training provider).

Work to raise awareness of Apprenticeships with young people, schools and parents was identified as an important role for employers and sector representatives to play and this was underway through outreach and Ambassadorial work. One sector respondent suggested that schools were keen to hear about the opportunities afforded by the Higher Apprenticeship, perhaps in part as this is one area of the 16-19 curriculum they cannot deliver ‘in house’. Discussion about the Higher Apprenticeship had *“given them a good way in to talk about different routes into science” (S_1).*

However, not all case employers were positive about Apprenticeships, one smaller employer had previous negative experiences in recruitment of Apprentices and some of the case employers were still testing the water and remain unconvinced as to whether the strategy will prove successful in driving up skill levels.

Issues emerging in relation to Apprenticeships

- **Resistance in the sector.** One of the key issues identified by some commentators is that of ‘academic snobbery’ in the sector.

Some [employers] are uncomfortable with the sort of people that traineeships might bring into their organisation (S_2).

...Uncomfortable with young people without proven academic ability (S_1).

- **Progression opportunities unclear.** The relative newness of the Higher and Degree Apprenticeships means there is not yet clarity on how effectively the frameworks will operate in supporting individuals into higher level professions. It was also identified that some employers are unable to offer permanent positions to Apprentices and hence cannot retain them after completion.
- **Limited supply of Apprenticeship vacancies.** To date numbers of Apprentices at higher levels has been limited across the sector although this is expected to shift upwards in line with government policy and the introduction of the Apprenticeship Levy.^{xxv}
- **Entry requirements.** Employers reported high minimum entry requirements for vacancies and in some instances a strong field of candidates from which to select. Recruitment patterns were relatively traditional, for example a strong profile of GCSE and A Level grades.
- **Lack of data/tracking.** Researchers could identify no publicly available data on the background of Apprentices and it is therefore unclear whether the new Higher and Degree frameworks will widen opportunities for those from non-privileged backgrounds. One employer suggested that to date *“Apprentices offer very little in terms of diversity... they all tend to be 16,17,18 and [town] born and bred.”* (EM_2). As of yet there is also no data available publicly or through case employers regarding the career trajectories of those completing the programme. This makes it difficult to assess the relative importance of the Apprenticeship programme in supporting non-privileged groups into the sector.

2.6.7 Outreach

Many of the case employers had a history of involvement in social and community programmes, sometimes in partnership with other organisations. A wide range of outreach work is taken forward – some examples from the interviews were: a project to buddy young entrepreneurs to develop their own business ideas; scientific challenges on site for young people aged 14-19; mentoring for local pupils; work with schools and sixth forms to expose young people to industry/scientific environment e.g. lab tours; support to local science festivals, STEM fairs and events; working with Year 11 on interview techniques. A number of employers referred to outreach work

^{xxv} The apprenticeship levy requires all employers operating in the UK, with a pay bill over £3 million each year, to make an investment in apprenticeships. Employers can benefit from this investment by training apprentices.
<https://www.gov.uk/government/publications/apprenticeship-levy-how-it-will-work/apprenticeship-levy-how-it-will-work>

delivered by Ambassadors and organised in association with the SIP (described below).

We do local work with schools and colleges to expose young people to scientific environment...we do tours and challenge activities, generally working with whole classes but sometimes we work with young people interested in science or with the ability to do well at science (EM_1)

We offer work experience for young people.... this is very rare in our kind of environment (EM_2).

One sector based respondent acknowledged that limited outreach or school engagement activities took place at the science hub due to its geographical location, *'It's a challenge getting younger people on site..... we are 15 miles outside the City and transport is difficult without a car' (S_3)*. There was also an indication that involvement in activities relied on an individual's levels of personal motivation to support outreach and their commitments outside of work, *"we have a middle-aged population, some with family commitments.... they are just not able to do that"*.

Issues emerging in relation to outreach

- **High degree of employer engagement.** There is a strong commitment amongst the science community to public and learner engagement and to ensuring there is a pipeline of talent 'for the good of the sector'. There was a consensus amongst case employers that they had a role and a duty to support the scientists of the future and many employers had committed significant resource to deliver on this agenda.
- **Targeting.** Outreach with local schools and colleges tends not to be targeted at schools in areas of deprivation or with higher proportions of non-privileged backgrounds, work is driven more by geography and by requests/interest from particular schools. In some instances, employers actively sought to work with schools where the science attainment was high. In general, work is undertaken with whole year cohorts and where employers work with smaller cohorts schools identify learners on basis of interest and ability in STEM rather than disadvantage. This no doubt reflects the driver for the outreach which is to increase the supply of talent rather than to diversity it. There currently appears to be no targeting of lower socio economic groups as part of national science engagement programmes, such as STEMNET and the SIP careers programme.

Good Practice

Life sciences employers have a tradition of engaging in outreach to raise awareness of careers in science. The good practice here is to make STEM engagement more focused on the groups that can benefit most, and to enhance the role of outreach in supporting access to high quality careers and labour market information. The social Mobility Commission is encouraging employers to engage strategically with schools and young people and to support enduring relationships with schools that will lead to changes in young people's attitudes and prospects. Businesses have a particular role to play in helping to explain and support paths to

professions for those lacking experience in the family.⁴⁹

Targeted outreach in partnership between employers and others

Although outreach work itself does not seem to be focused on issues of educational disadvantage, life science companies were in some instances engaging with organisations representing diverse communities. For example, one large employer had delivered outreach in support of a local social mobility charity, Villiers Park Trust and alongside the Cambridge science centre, both of which had a remit for working with young people to tackle disadvantage.

The Science Industry Partnership is a membership based organisation originally established with funding from the Government's Employer Ownership of Skills Pilot fund (EOP). The SIP is led by employers in both life and industrial sciences, and supported by Cogent Sector Skills Council. The focus of the SIP is to enable employers to take ownership of the whole skills agenda and to ensure a pipeline of talent to enable the sector to compete in a global environment. A key strand of the SIP has been the development of the careers strategy, which has at its heart the STEM SIP Ambassador programme. The programme, delivered with the support of STEMNET, trains and supports industry professionals to deliver interactive outreach activities with young people using materials specifically designed to engage learners with careers in life and industrial sciences. Since delivery commenced in January 2015 thousands of young people across England have engaged with the scheme which is supported by a variety of SIP members, including GSK and Pfizer. Although not established to tackle social disadvantage the scheme once fully established as part of the new SIP could adopt a targeted approach to school engagement

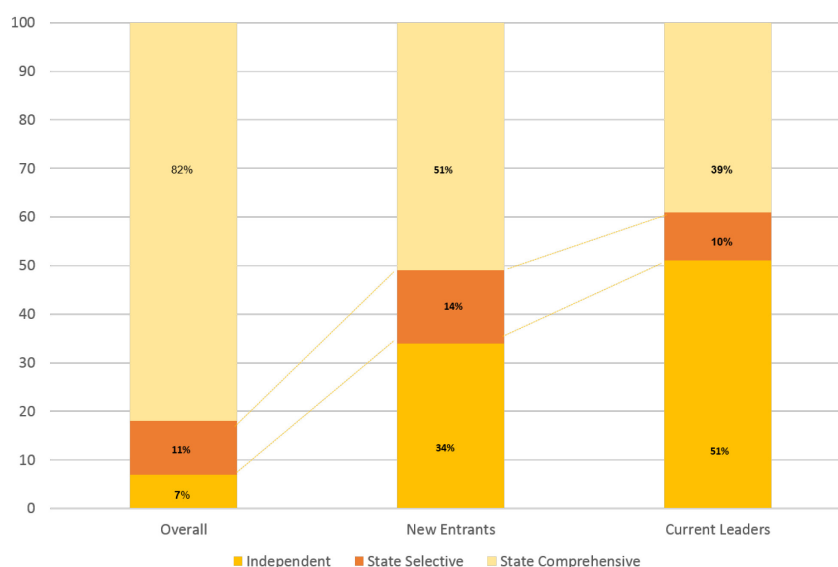
Section 3 Investment Banking

There is currently limited data available which systematically surveys the demographics of the UK investment banking sector. However, in 2014, educational charity The Sutton Trust¹ commissioned research by the Boston Consulting Group (BCG), examining the educational background of 500 leaders and 1,800 new recruits across the financial services sector. The findings were disaggregated between banking (including investment banking, retail, corporate and private); hedge funds; and asset management and private equity.

Overall c.82% of all UK children attend a non-selective state school, 11% attend a selective state school and 7% attend fee-paying schools. In contrast, The Sutton Trust reported that 34% of new entrants to the banking sector over the previous three years who were educated in the UK had attended a fee-paying school and 14% had attended a selective state school. It is important to note that corporate and retail banking are generally considered by current incumbents as more diverse on the basis of socio-economic background than investment banking. It is interesting then to consider that in hedge funds and asset management, 42% of new entrants over the past three years had been educated privately, while in private equity the equivalent figure was 69%.

Given similarities in recruitment techniques and job roles, it is possible that these latter figures are more indicative of the demographic composition of new entrants to front office roles in investment banks. This can only be confirmed via further analysis. However, The Sutton Trust research strongly suggests that the workforce within the financial services sector, of which investment banks are an important part, is not representative of the UK population as a whole. This issue is underlined given that The Sutton Trust found that 51% of current leaders within the banking sector who were from the UK were educated privately.

Figure 3.1: School background of new entrants in banking sector (including investment banking, retail, corporate and private).



Source: The Sutton Trust, Pathways to Banking²

This chapter aims to understand the challenges individuals from non-privileged backgrounds face when seeking access to a front office role in investment bankingⁱ, and identify the drivers towards progressive change. In order to do so, we draw on interviews with 52 current, aspirant and retired bankers and other key stakeholders including representatives of third sector organisations, who generously volunteered to take part. Interviews were conducted between March and May 2016.

Key findings are as follows:

- **Current attempts to open access to front office roles in investment banking focus on outreach and work experience rather than on mainstream recruitment and selection processes:** Opportunities do exist for non-privileged people to access front office roles within the investment banking sector, and banks are increasingly engaged in outreach programmes and other initiatives in order to further improve access on this basis. These programmes tend to focus on the provision of work experience, internships and skills training for talented individuals from non-privileged backgrounds. However, though these programmes represent a positive development, to date they have been relatively small scale, and there has been less attention within investment banks on alterations to mainstream recruitment and selection processes, which continue to set-up barriers to access for individuals from non-privileged backgrounds. Further attention to these practices and their impact on socio-economic background therefore represents an important opportunity for investment banks to diversify their intake.
- **Barriers to access originate in recruitment and attraction strategies:** Investment banks appoint high numbers of new entrants from a relatively limited range of elite universities, which are located across Europe and worldwide. In the UK, universities which are targeted especially often include London School of Economics (LSE), University College London (UCL), Imperial College London, the Universities of Oxford and Cambridge and the University of Warwick. Students at these universities tend to be drawn from more privileged backgrounds compared to both the wider population and the university population as a whole, and those who are not may self-select out of the application process in relatively high numbers on the basis of perceived 'fit' or the relative attractiveness of a career in investment banking.
- **The particular combination of formality and informality in the selection process to investment banks may represent a specific challenge to applicants from non-privileged backgrounds:** In the selection process, investment banks often adopt a rigid approach to screening on the basis of academic credentials gained at school. Since there is a relationship between socio-economic background and attainment at A-level in the UK, this may have a disproportionate negative effect on students from non-privileged backgrounds. In contrast, final decision making often involves a relatively high level of informality, with potential determined by current hiring managers according to perceived 'fit.' This high level of selector discretion may have a negative impact on applicants from non-privileged backgrounds, who are less likely to share the same social or

ⁱ See page 58 for a definition of front office roles in investment banking.

educational background as current hiring managers, in contrast to their more privileged peers. Within certain divisions, notably corporate finance, suitability is especially associated with markers of middle or upper class status, often summarised within the sector as “polish.”

- **The case for change:** Interviewees hinted at a business case for change. Some acknowledged that the occupants of front office roles are homogenous, leading to a danger for example of group think. Interviewees also underlined that effective client service requires banks to attract and retain talent from a wide range of backgrounds, including individuals who not only have high IQ but also emotional intelligence, alongside the potential for effective management and leadership. These characteristics were considered especially important by interviewees given that the investment banking sector is under considerable pressure and subject to rapid change.
- **Barriers to action:** However, this business case for change is relatively muted at present and both recruitment and selection techniques and definitions of talent have apparently remained stable in recent years. Leaders within the investment banking sector have engaged in only limited critical introspection around who can and should be an investment banker as far as this relates to socio-economic and educational background. Indeed, the evidence collected for this report would suggest that suitability for a career in investment banking is often assessed within the sector not always in relation to a systematic review of the specific skills required, but as often against the characteristics of previous and current occupants of related roles. This has the effect of reproducing the current workforce, and limiting the pace of progressive change.

We emphasise that as in peer group professions, to the extent that individuals from non-privileged backgrounds have difficulty accessing the sector, this is largely the result of systemic and institutional factors, rather than the result of conscious actions by individuals. Indeed, many of our interviewees expressed a wish to see a more diverse and inclusive profession. There are also considerable differences between and within investment banks in the degree of inclusivity. For example, interviewees suggested that corporate finance remains more exclusive on the basis of social background whereas markets and trading are marginally more accommodating towards difference on this basis.

In addition, as qualitative research, this study is not equipped to pinpoint the exact impact of the processes outlined above on social inclusion within the investment banking sector, or to say definitively which points of the recruitment and selection process represent the most significant roadblocks for non-privileged applicants. A key recommendation is therefore that investment banks take forward further research on this subject, based initially on the systematic collection and detailed analysis of relevant data. Further details are provided on this and other recommendations in appendix two.

The remainder of this chapter is structured as follows:

- Section 3.1 provides contextual information and an overview of the sector.

- Section 3.2 defines the scope of the research and the methodology used for the study.
- Section 3.3 provides a brief history of investment banking in the City of London.
- Section 3.4 describe the recruitment and selection practices used across the banks, particularly in relation to entry level graduate posts.
- Section 3.5 discusses the impact of the recruitment and selection practices on aspirant bankers from non-privileged backgrounds.
- Section 3.6 briefly explores the relationship between career progression and socio-economic background.
- Section 3.7 outlines the various approaches banks take in dealing with issues of social mobility in their front office roles.
- Section 3.8 discusses some of the key drivers and barriers to change currently operating within large investment banks operating in the UK.
- Section 3.9 summarises the emerging findings and implications of the research for social inclusion in the investment banking sector.

3.1 Overview of the Sector

The function of investment banks is to help organisations, including companies and government agencies, raise finance through capital markets³. Investment banks also underwrite the issuance of shares and bonds, and trade in a wide range of financial instruments, including shares, government and corporate bonds, foreign exchange and commodities, including oil or precious metals, and related derivative instruments, usually on behalf of their clients. Clients for these trading instruments can include companies, whose purpose is often to help manage their risk. Other clients include retail banks, insurance companies, and financial institutions which manage savers funds, such as pension funds and hedge funds. Table 3.1 shows the fifteen banking groups with the largest investment banking operations globally, all of which have a substantial presence in the UK.

Table 3.1: Banking groups with largest global investment bank activities at December 2013

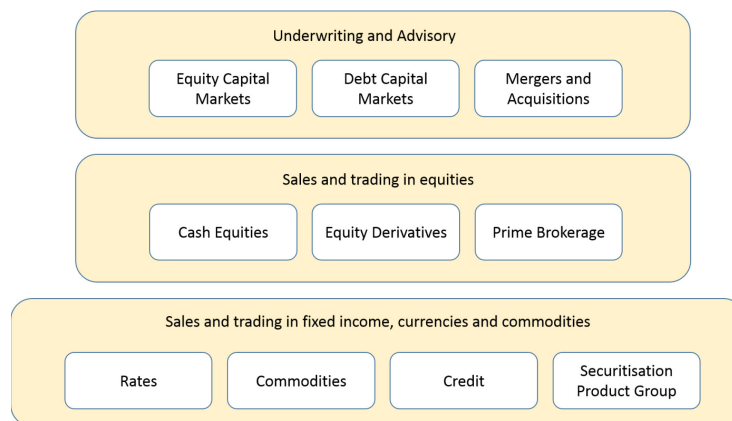
Banking Group	Trading Assets, £ billions
JP Morgan	895
Goldman Sachs	683
Bank of America Merrill Lynch	665
Citigroup	625
Deutsche Bank	595
Morgan Stanley	564
Credit Suisse	511
Barclays	481
BNP Paribas	386
Societe Generale	369
HSBC	351
Royal Bank of Scotland	347
UBS	256
Credit Agricole	163
Mitsubishi UFJ	144

Source: http://www.bankofengland.co.uk/publications/Documents/quarterlybulletin/2015/q1prerelease_2.pdf

Each of these organisations provides investment banking services, but most also operate a universal banking model, and therefore provide other retail and commercial banking services, with the latter focusing on lending and including acquisition finance, trade finance, syndicated lending, asset finance and project finance.

The term investment banking has both narrow and broad definitions. Within the sector itself, the 'investment banking division' is often the term used within larger entities to refer specifically to the underwriting and advisory functions of banks. This is where the bank helps to raise money in capital markets, and advises companies in mergers and acquisitions (M&A), with this latter specialism known as corporate financeⁱⁱ. More generally, the term investment banking is also extended to sales and trading, and to equity research. The latter is focused on reviewing company performance and producing research and analysis on future earnings prospects. A highly simplified depiction of the organisational structure of an investment bank is provided below.

Figure 3.2: Organisational structure of an investment bank



Source: http://www.bankofengland.co.uk/publications/Documents/quarterlybulletin/2015/q1prerelease_2.pdf

Roles in the functions outlined above are known as front office, where they are directly client facing and/or revenue generating. There is some slippage in this term however, since M&A analysts for example rarely meet clients, but are generally considered to occupy front office roles. In addition, investment banks comprise middle and back office roles. Middle office typically includes roles which directly support those who are interacting with clients, and include risk management, financial control, corporate strategy and compliance. Back office provides administrative, operations and IT support.

A distinction can be made between elite investment banks (sometimes described as 'bulge bracket' banks) and smaller, 'mid-cap' banks, some of which are known as 'boutiques.' The 'bulge bracket' refers to the most profitable multinational banks whose clients are predominantly comprised of large leading corporations and governments. They include Bank of America Merrill Lynch, Barclays Capital, Citi,

ⁱⁱ Corporate finance involves helping companies raise equity funding through share issues, and advising them on takeovers, which is also known as mergers and acquisitions (or M&A).

Credit Suisse, Deutsche Bank, Goldman Sachs, J.P. Morgan, Morgan Stanley and UBS. Boutiques tend to specialise in the provision of a particular service, for example advisory work and corporate finance, or a specific sector.

Two key features of the banking system and indeed the wider financial services sector in the UK today are its size, and its tendency towards growth. Over the past 40 years the size of the UK banking system has grown dramatically, with total assets rising from around 100% to around 450% of GDP⁴, with some predictions for further expansion. In a Bank of England study of Japan, the US and the ten largest EU economies, the UK banking sector was the largest as a proportion of GDP.

3.2 Scope, Aims and Methodology

The focus of this chapter is predominantly on access to front office roles within leading investment banks in the UK, focusing particularly on the largest global institutions with a presence in London. However, the scope of this study also extends to asset management. This specialism is not typically considered part of the investment banking function but is included within the study because it is an area of the financial services sector identified by The Sutton Trust as also having relatively high levels of exclusivity on the basis of educational background⁵. The study does not apply to private banking and wealth management, corporate or commercial banking, or retail banking, or to the private equity and hedge fund industry.

Over the past eight years, middle office roles have grown in status as banks are increasingly focused on not only revenue generation but also maintaining a strong focus on associated risk. However, front office roles within leading investment banks remain amongst the most prestigious within the financial services sector and access is highly competitive. This is an area where challenges relating to entry on the basis of social background are considered by many commentators to be particularly acute but where, as a result, widening access may be especially impactful in relation to social mobility.

For example, according to estimates by the Boston Consulting Group (BCG), up to 40% of those in the UK earning over £120,000 per annum work in financial services. Though the sector is highly diverse with a variety of different roles and job types, many of the most lucrative roles are within investment banks. To the extent that talented young people from low and middle income backgrounds are excluded from the sector, they are as a result excluded from one of the main routes to a high-income career⁶. In contrast, opening up opportunities to higher numbers of non-privileged people would enable them to access some of the best paid positions in the UK economy.

As already noted, the financial services sector is not representative of UK society as a whole in terms of schooling. In terms of university background, the profile of current leaders within the banking sector is similar to that of new entrants, and in this respect there has been very little generational change. According to The Sutton Trust research conducted in 2014, the proportion of leaders within the banking sector

who had attended Oxbridge and elite universitiesⁱⁱⁱ is similar for leaders under 45, and for the over 55s, at 85% and 89% respectively. Though educational background is only a partial proxy for privilege^{iv}, these figures suggest that on average, current bankers are from more privileged backgrounds than the general population in the UK. In their work on the ‘class ceiling’, Friedman and Laurison underline the disadvantage experienced by children of the working classes in a range of traditional professions. Occupations such as law, accountancy and finance are comparatively exclusive in terms of membership, but the socially mobile have predicted earnings around 20 percent less than their more socially privileged peers. However, they note that these trends are particularly pronounced within banking⁷.

Against this backdrop, the over-arching aims of the current study are as follows:

- First, to conduct qualitative research seeking to explore the impact of social background on access to front office roles in the UK investment banking sector.
- Second, to understand changes to recruitment and selection practices within the sector over the past thirty years, and how these have contributed to both continuity and change in the socio-economic composition of the sector.
- Third, to identify drivers and barriers to more progressive change and provide recommendations to investment banks to help them further diversify their intake in future.

In addition, the study briefly examines the relationship of social background to career progression, though this is not its primary focus. In order to answer these questions, we adopted the methodology outlined below.

3.2.1. Data Collection

Although existing quantitative data regarding the sector was reviewed, the primary source of data for this study was qualitative. In total, 52 interviews were undertaken with a range of key stakeholders including: current bankers, retired or ex-bankers, aspirant bankers from non-privileged backgrounds, university careers advisors, recruitment consultants and representatives of relevant third sector organisations working with the sector (see Table 3.2 below). Interviewees’ experience covered almost all of the investment banks listed in Table 3.1, and some additional institutions. Reflecting the gender balance of the sector, of these 52 interviewees, 17 were female and 35 were male.

Table 3.2: Sample Group of Interviewees

Careers Advisors		Ex/Retired Bankers		Aspirant Bankers		Current Bankers		Third Sector		Other		Total
<i>M</i>	<i>F</i>	<i>M</i>	<i>F</i>	<i>M</i>	<i>F</i>	<i>M</i>	<i>F</i>	<i>M</i>	<i>F</i>	<i>M</i>	<i>F</i>	
-	5	4	1	5	5	16	4	6	2	4	-	
5		5		10		20		8		4		52

ⁱⁱⁱ Defined here as The Sutton Trust 30 including Bath, Birmingham, Bristol, Cambridge, Cardiff, Durham, Edinburgh, Exeter, Glasgow, Imperial College, King’s College London, Lancaster, Leeds, Leicester, Liverpool, London School of Economics and Political Science, Manchester, Newcastle, Nottingham, Oxford, Reading, Royal Holloway London, Sheffield, Southampton, St Andrews, Strathclyde, Surrey, University College London, Warwick, York

^{iv} See page 1 for further information on the definition of social mobility and how social class is measured.

A semi-structured interview schedule was used throughout. Questions varied for the different groups but with respect to recruitment and selection included: how is talent currently defined and potential identified at entry level?; how do interviewees believe that these conceptualisations of talent match actual and future requirements within the investment banking sector; who is responsible for screening applicants and on what basis; what training is provided to those responsible for selection and promotion/appraisal? Questions also covered issues relating to social mobility, including how this concept is defined and understood within the sector; what initiatives are already in place to support social mobility; and what are the barriers and motivators towards progressive change in future?

3.2.2. Data Analysis

Data analysis was undertaken by the project team using a template analysis approach. This involves an iterative process whereby initial codes are developed on the basis of literature and initial familiarisation with the interview transcripts. As more fine grained analysis of the interview transcripts develops, the template is modified, codes are elaborated and relationships between categories are examined. This iterative process was led by the project leader but all members of the team were involved in the analysis process and agreement over key codes was achieved through regular team discussions. Quotes are used to illustrate key themes throughout this document. Interviewees are identified using a unique number and letters denoting their job role or position. These codes are as follows: B, denotes current banker; AB denotes aspirant banker; XB denotes retired or ex-banker; O denotes 'other', and includes here recruitment consultants, representatives of peer group professions who work closely with investment banks, and representatives of third sector organisation; CA denotes university careers advisor.

3.2.3. Potential Limitations of this Study

This study provides valuable insights into barriers to the elite professions yet as with all qualitative research there are some limitations associated with the chosen research methodology. As a small scale qualitative study, the aim is to explore key issues, and generalisability beyond the investment banking sector is limited. A further potential limitation rests with the nature of the sample. A relative lack of transparency has been noted within the investment banking sector previously and thus securing access to individuals willing to act as organisational representatives was challenging, even with the condition of confidentiality. It is also necessary to consider the potential for bias in sample selection on the basis that all interviewees volunteered to take part, and thus may have done so because they have a particular interest in and perspective on the issues at hand. There is a possibility too that interviewees may give what might be seen as socially desirable answers. We attempted to counter this possibility by asking for examples and evidence of key themes wherever possible and by cross checking interview transcripts within firms. Finally, a potential limitation could be the use of four interviewers to undertake the research. The joint development of the interview schedule and regular discussion between the interviewers to ensure consistency of approach mitigated against this potential limitation.

3.3 Continuity and Change in the City of London

In this section, we trace a condensed history of the City of London over the past century, largely for what it can tell us about the antecedents to current attitudes

towards social background within the sector. We discuss how merchant banks of the nineteenth century have become part of today's large investment banks, a transition which has been accompanied by the adoption of more formal recruitment processes. However, despite significant change, we point towards clear continuities, as the culture and traditions of a previous era continue to impact the investment banking sector even today.

In the UK, front office functions of investment banks are predominantly found in London. Though financial services is an extremely important part of the UK economy as a whole, it is especially significant to the prosperity of the capital city. Organisations within the financial services sector can be found in most parts of central London, though specific specialisms have a tendency to cluster. For example, the growing numbers of private equity and hedge funds are often found in Mayfair. The front office functions of most large investment banks in the UK are located within the City of London and Canary Wharf. This location is arguably integral to their history and development, and the changing practices and policies within investment banks over the past thirty years can only be understood in relation to the structural and cultural changes that have been experienced across the City of London and by the wider financial services sector in the UK over the same period.

As discussed in detail by McDowell in her book *Capital Culture; Gender at Work in the City*⁸, the City of London has historically been amongst the world's leading financial centres, a dominance which is closely related to the UK's imperial history. The modern City emerged during the Restoration period, via international trade. By 1750 there were 40 banks in London. The first established merchant bank^v was Barings, which was founded in 1763, and a further 11 merchant banks were founded between 1804 and 1839. A relatively high proportion of these banks were foreign owned, a factor which increased the international significance of the City during the nineteenth century and into the present day.

The City experienced significant turbulence following World War I, including the departure of German banks and subsequent global depression. The withdrawal of foreign banks was repeated during World War II, yet from the late 1950s onwards the City gained ground following the relaxation of controls and the development of Eurobond and Eurocurrency markets. This position was helped by a stable banking system in the UK and a convenient location between Asia and North America⁹. Between 1960 and the 1980s, the number of foreign banks with representative offices increased from 100 to more than 400, and by the end of the 1980s, the sector employed more than 50,000 people¹⁰.

During the nineteenth century, merchant banks were owned and run by a relatively small number of families, who were drawn from the English or foreign bourgeoisie. Families such as the Rothschilds are said by scholars to have established a particular moral order within the City, based around a notion of 'gentlemanly capitalism'¹¹. According to Cain and Hopkins¹², gentlemanly capitalists arose from the merging of two forces, the older landed aristocracy and the rising new

^v Where this term is still used, merchant banking usually refers to activities including the issuing of long-term loans, international finance and underwriting. These functions are nowadays sometimes formally grouped within what is known as the Investment Banking Division of larger banks, as separate from sales, trading and equity research. Merchant banking activities continue also to be conducted by specialist boutique banks.

commercial bourgeoisie of the City, which bought its way into the upper class through wealth, ambition, and intermarriage¹³. While manufacturing families developed their power base through commerce, City capitalists developed power in part through their close links with the landed aristocracy, and during this era, the associated elite was characterised by close personal connections including friendships. This was a period within the City in which a gentleman's word was his bond, and during which, according to Scott¹⁴, a shared sense of identity was developed and sustained via 'expectations of reciprocity, identification of interest and sheer coercion in the name of a social ideal.'

The latter part of the nineteenth century saw the rise of 'family capitalism', where kinship, ownership and control were synonymous and dynastic marriage was a form of corporate merger¹⁵. Unseem¹⁶ describes the solidarity of this class as 'underpinned by a unique lattice work of old school ties, exclusive urban haunts, and aristocratic traditions.'

During this period, the City was relatively small, and bankers had a relatively high degree of social control. This improved their ability to establish systems of closure^{vi}, which helped to ensure that power was shared mainly by white men who were usually drawn from the upper-middle classes. For some commentators, the class solidarity that ensued helps to explain Britain's relatively poor industrial performance in the twentieth century, along with a short-term approach to lending, since the economic activity on which the elite focused was 'financial, commercial or mercantile' rather than industrial¹⁷.

Moving into the twentieth century, the power of family capitalism was increasingly displaced by corporate capital. This transition was accompanied by an erosion of upper-class dominance via the development of large firms, new organisational structures and new forms of bureaucratic and administrative control¹⁸. Nevertheless, Scott¹⁹ points out that the entrepreneurial role remained significant in a number of industries including merchant banking, as did family dynasties. By the end of the 1980s, many of the largest companies remained in entrepreneurial rather than institutional control, including Kleinwort Benson Lonsdale, Robert Fleming Holdings, Schroders, NM Rothschild and Barings²⁰.

During the early part of the twentieth century a university degree was not necessary to gain access to these merchant banks, which relied more heavily on a public school 'old boys' network. However, following World War Two another strand existed alongside these traditional bankers, such that individuals with significantly lower socio-economic power and status were able to gain access to the City, mainly to trade foreign exchange and/or commodities on open outcry trading floors. This cohort were often known as 'barrow-boys' on the basis that many were drawn from

^{vi} Social or occupational closure is a term used within the literature associated with the sociology of the professions to describe the use of formal and informal mechanisms, which restrict entry to a profession, thus serving to maintain and preserve professional privilege, and help to justify high rewards. Closure mechanisms have historically rested on formal credentials, although increasingly today it is recognised that informal mechanisms based on background, gender or ethnicity play an important role. For example see: Ashley, L and Empson, L (2016) Understanding social exclusion in elite professional service firms: field level dynamics and the 'professional project', *Work, Employment and Society* (Online); Sommerlad, H. (2011). Minorities, merit, and misrecognition in the globalized profession. *Fordham Law Review.*, 80, 2481; Bolton, S. C., & Muzio, D. (2007). Can't Live with'Em; Can't Live without'Em Gendered Segmentation in the Legal Profession. *Sociology*, 41(1), 47-64; Muzio, D., & Tomlinson, J. (2012). Editorial: researching gender, inclusion and diversity in contemporary professions and professional organizations. *Gender, Work & Organization*, 19(5), 455-466.

Essex and the East End of London, and were often the sons of market traders. Though access to the City for this group did not require an upper-class background, connections nevertheless helped, as ‘barrow-boys’ would often gain access to the sector via their own networks of family and friends. This cohort often worked for stockbrokers where they worked alongside brokers whose upper-class background reflected peers in merchant banks.

The ‘barrow-boy’ route became gradually less available to new entrants into the City following deregulation in 1986, commonly known as ‘Big Bang.’ This was a process of modernisation which for example introduced electronic screen-based trading and further opened up the City to international banks²¹. Deregulation was driven in part by UK government concerns in the early 1980s to improve the competitiveness of London, including in relation to the larger New York stock market. One important result of this change was the growing influence of American employment and working practices within the City as US banks in particular saw their power and reach increase. During this period merchant banks and investment houses which were initially established and operated as partnerships were often taken over by large commercial banks. As these banks also bought up established firms of stockbrokers, one implication is that the two strands of the banking sector – public school alumni and so-called ‘barrow boys’ – increasingly worked under the same roof. Many of the dealers who joined the City from Essex or the East End of London worked their way up to senior levels of these organisations though, in doing so, according to Augar, they often ‘adopted the styles and values of the public school boys.’²²

As noted, during the era of ‘gentlemanly capitalism’ entry to merchant banks was often secured via informal networks of family and friends. For example, in 1982, Bowen conducted a study of the backgrounds of 97 partners or chief executives of top City firms (banks, stockbrokers, life insurance companies, investment trust managers, solicitors and accountants). This found that ten went to Eton, nine to Winchester and 37 to other public schools^{vii}. In total, 30 of the 97 did not have a university degree, confirming the continued significance at this point of family background, and just 12 of the 52 British graduates had attended a red brick^{viii} university. The rest had attended Oxford or Cambridge. However, deregulation led to new patterns of work and the development of new job roles and specialisms within investment banking. A key related transition was the implementation of bureaucratic management structures within banks and other financial institutions, as trained managers gradually took over power from family members. In contrast to the ‘gifted amateurs’²³ of the previous era, the position of this new ‘executive class’ was secured more obviously through technical competence and skill, and investment banking arguably became increasingly technocratic and meritocratic, rather than aristocratic²⁴.

^{vii} Approximately 93 per cent of children in the UK attend state-provided schools which are free of charge to students. Schools outside the state system are referred to as independent or private schools and are attended by approximately seven per cent of children in the UK. Sometimes for historical reasons private schools are also referred to as public schools although this term is generally used in relation to a small set of the largest, most prestigious and oldest private schools, including for example Eton and Winchester.

^{viii} The term Red Brick University refers to six universities in the major industrial cities of England, all of which achieved university status before WW1. They include Birmingham, Liverpool, Leeds, Sheffield, Bristol and Manchester.

This process was arguably facilitated by the introduction of more formal recruitment practices at entry level, based on academic credentials. Again, these practices were encouraged by the growing influence of US banks, and a new emphasis on objectively defined 'merit.' Following deregulation, the sector saw a comprehensive move towards graduate only entry for front office roles. Writing in 1987, Leyshon et al²⁵ suggests that Big Bang had the effect of 'accelerating social class change in the City of London', while Kynaston writes of a 'newly meritocratic and classless City'²⁶. Certainly, the introduction of anti-discrimination laws in the 1970s and the formalisation of human resource departments within banks led to modernisation of the sector, so that the overt sexism, homophobia, anti-Semitism and other forms of discrimination described in detail within the *City Lives*^{ix} project has arguably been reduced. Scott²⁷ however, writing in 1991, explains the recruitment of finance professionals in the following terms:

. . . the recruitment of executive and finance capitalists depends upon the possession of educational credentials and other attributes deemed relevant to the performance of these tasks. The public schools play an important role in the acquisition of educational credentials. Members of the capitalist class can use their wealth to purchase a privileged education for their children, so ensuring that they are well placed in the educational race and stand a much enhanced chance of attending the universities of Oxford and Cambridge. It is the degrees of these universities which are still regarded . . . as being most appropriate for a career in business . . . [but entry] . . . depends not simply on educational credentials; it depends also on the other, less formal attributes which are rooted in upper-circle background and public schooling . . . which are manifest in comportment, speech, and dress . . . the majority of those who are involved in the process of selection have themselves been through the same system and have come to accept its features as ensuring the normal and natural attributes of the 'right man' for the job.

In his terminology, Scott signals an alignment between investment banking and social class which we argue remains evident today. However, Scott underlines as do we that the exclusivity that results from these processes is not always consciously planned or necessarily intentional but instead rests predominantly on unconscious processes and preferences.

The formal credentials and informal characteristics that are identified by Scott can be mapped on to Bourdieu's²⁸ notions of social and cultural capital. There are two key forms of cultural capital that are especially relevant to our study: *institutionalised* and *embodied*. Institutionalised cultural capital refers to the value of academic credentials, derived in part from the exclusive and elite nature of the awarding institution, which in turn is particularly valorised in specific labour markets. The embodied form is the value derived from the way in which individuals come across to others, including their manner, cultural knowledge and tastes, all of which signal membership of an elite grouping within society. This embodied cultural capital is transmitted to individuals as they are raised in upper and middle class homes and exposed to particular cultural and educational experiences which help them to absorb these cultural norms.

An additional form of capital is *social capital*. This is defined as the links, shared values and understandings in society that enable individuals and groups to trust each other and so work together. Within the academic literature, there is much

^{ix} City Lives is a collection of interviews published in 1996 in which top bankers describe life in the City in the twentieth century. These interviews document a significant level of discrimination, snobbery, anti-Semitism, and homophobia during this period.

debate over the various forms that social capital takes, but one relatively straightforward approach divides it into three main categories.

- **Bonds:** This relates to links to people based on a sense of common identity (“people like us”) – such as family, close friends and people who share our culture or ethnicity.
- **Bridges:** This describes those links that stretch beyond a shared sense of identity, for example to distant friends, colleagues and associates.
- **Linkages:** This describes links to people or groups further up or lower down the social ladder²⁹

Bourdieu made an important contribution to studies of social class by underlining that class is associated with wealth, on the basis for example that an elite education and associated cultural assets are often more available to those who have financial capital. However, he underlined that social class is not derived solely from financial capital or indeed occupation, since individuals and groups also derive status from the other forms of capital outlined above, which may be relatively independent of both. In turn, this helps us to identify the ways in which social mobility depends upon a wide range of structural and cultural barriers which exist within societies and economies.

In the next section of the report, we describe current recruitment and selection practices in investment banks and consider the extent to which successful applicants are required to develop a particular portfolio of economic, cultural and social capital, which is more available to those from more privileged socio-economic backgrounds, and which might be summarised as ‘investment banking capital.’

In doing so, we are mindful of the point expressed by McDowell³⁰ that a clear division between the ‘old’ City, prior to Big Bang, and the ‘new’ City afterwards, as described by some commentators, is too simple. She underlines that investment banks differ markedly in their cultures, attitudes and behaviours, and their specific recruitment policies. These differences relate to the history and character of particular banks, their national origins, their specialisms, and their market positions, which also affect who is recruited to different roles or specialisms within investment banks, and determine who is considered to ‘fit’ within the particular organisations culture or sub-culture. Indeed, to speak of investment banking as though it were homogenous is problematic since, as more specialisms and job roles are created, banks are composed of ever more distinct sub-cultures. We suggest that McDowell’s comments remain entirely relevant two decades after they were written, and explore the implications for access on the basis of social background in the remainder of this chapter.

3.4 Recruitment and Selection Processes in Investment Banking

According to Highfliers research, in 2007 large investment banks received roughly 60 applications for every graduate-level job. Typically, there are 9,000 candidates for the 150 or so places on the average bank’s graduate recruitment scheme³¹ making this amongst the most highly competitive of all professional sectors in terms of initial access. This situation is likely to have been amplified as the available graduate vacancies in investment banking declined by 29% between 2006 and 2016. Nevertheless, during 2016 investment banks in London plan to appoint 1,920

graduates^x. In the remainder of this chapter, we provide an overview of the recruitment and selection process adopted by large and leading investment banks, before describing how this process raises barriers to access for individuals from non-privileged backgrounds.

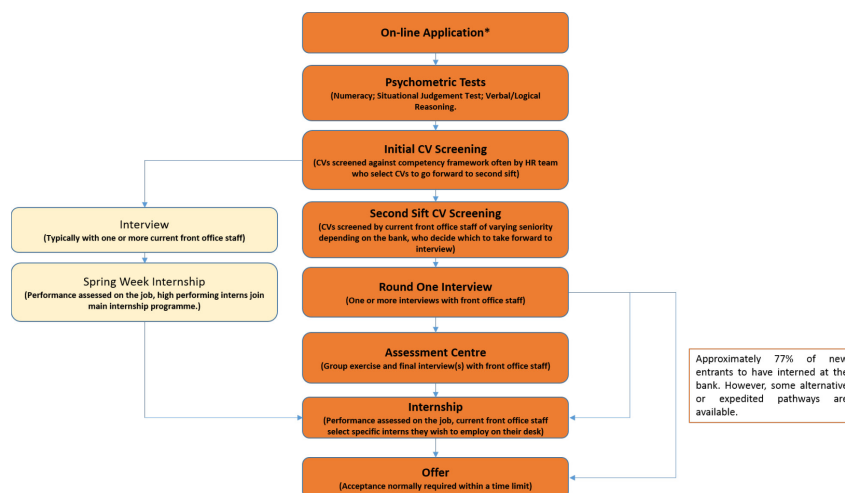
Key findings are that there have been some changes in the demographic profile of front-office workers in investment banks over the past thirty years. Particularly, we have seen significant internationalisation and some diversification, especially at junior levels, with respect to gender and ethnicity.

However, there are also many continuities. In particular, the benefits of an elite education continues to maintain a “tenacious grip³²”, with continuing implications for the demographic profile of new entrants. Issues with respect to unequal access to educational advantage are exacerbated within the recruitment and selection process, in which context students from privileged backgrounds are relatively advantaged as a result of more opportunities to develop the forms of social and cultural capital which are highly valued within investment banks.

3.4.1. Attraction and Recruitment Strategies

The typical recruitment and selection process for entry level graduate positions within investment banking is summarised in highly simplified form below (see Figure 3.3). This process differs depending on the bank and on the role. Some banks outsource all or parts of this process to specialist resourcing agencies, for some or all roles. At some banks, round one interviews may for example be face-to-face, though others will use telephone or digital interviews at this stage. In addition, graduate recruitment usually takes place according to an established cycle, though sometimes graduates are recruited to specific positions ‘off-cycle,’ as they become available.

Figure 3.3: Graduate Entry Recruitment and Selection Process to Investment Banks



^x High Fliers Research is an independent market research company which specialises in student and graduate research. Data reported here is based on its UK Graduate Careers Survey. This research, conducted during December 2015 is based on a study of graduate recruitment at the organisations named as The Times Top 100 Graduate Employers 2015 in a poll of 18,412 final year students to find “Which employer offers the best opportunities for graduates”. Investment banks included within this survey include Bank of America Merrill Lynch; Barclays; Citi; Credit Suisse; Deutsche Bank; Goldman Sachs; HSBC; JP Morgan; Morgan Stanley; RBS; UBS.

Key characteristics of the recruitment process (including attraction strategies and the timing of the recruitment cycle) are as follows:

- **Investment banks recruit heavily from ‘target’ universities which are amongst the global elite:** As in peer group sectors³³, investment banks devote their resources and recruitment budget to attracting high numbers of applications from the students they most wish to appoint. In order to do so, most have identified a small group of target universities, where they engage in more extensive campus attraction strategies.

During 2015, on-line recruitment site eFinancial careers examined the public profiles of that years’ analyst^{xi} class in London and New York, at Goldman Sachs, Morgan Stanley and J.P. Morgan. All were in front office roles. Based on their analysis of over 250 individuals they produced a list of the top universities from which banks recruit. Within the UK popular institutions include London School of Economics (LSE), University College London (UCL), Imperial College London, University of Oxford, University of Cambridge, and University of Warwick. However, in addition banks are especially likely to recruit in the UK from universities including Durham, Aston, Bath, Nottingham and Exeter. According to this survey, banks recruit on a global basis, yet exhibit regional preferences, since the vast majority of students securing front-office roles in the City of London studied in Europe (while for example new recruits in Wall Street tend mostly to have graduated in the US)³⁴. Evidence for these preferences was supported by our interviewees.

When I went to an interview . . . I was surrounded by everybody from LSE, Oxford, Cambridge and Imperial and UCL. Those were the five universities, there was nobody else. (39B)

Banks ensure high numbers of applications from these target universities by engaging in extensive campus attraction strategies, including presentations, skills training, promotions via careers services, online advertising and social media, as well as careers fairs. Indeed, according to our interviewees, investment banks are the most active of all employers at elite target universities such as Cambridge and LSE. Banks also make use of drop-in sessions, and campus ambassadors or brand managers. Through these activities investment banking is presented to students as a dynamic profession full of challenge and excitement and offering very generous rewards.

Our interviewees pointed out that in practice the early days in one of these roles can be relatively mundane, contributing to challenges around retention. However, the narrative presented by investment banks can be very attractive for ambitious students, ensuring high numbers of applicants. Indeed, such is their attraction that sometimes students who attend target universities apply to investment banks, even where they had no original ambition to do so.

^{xi} New entrants to investment banks start with the job title analyst. The career path is then as follows: Associate, Vice President; Director; and Managing Director.

I didn't study finance or anything related to finance . . . I really came to investment banking slightly randomly. More as a function of where I was studying than as a . . . personal interest or anything like that. (37B)

Interviewees suggested that the range of institutions from which banks prefer to select has narrowed over time, perhaps as a response to increasing volumes of applicants with the necessary academic credentials. As a result, some current leaders said that they would not gain entry today. One senior banker who had attended a non-target university said:

I would be quite confident of not getting back in . . . and . . . I'm pretty good at my job. (39B)

- Degree classification and courses:** Investment banks recruit individuals with a 2:1 or above, or equivalent if educated outside the UK. Most banks state that they will appoint applicants from any degree subject. In practice, it seems that the majority of successful candidates tend to come from a specific range of subject areas. Recruitment website eFinancial reported a survey of 706 investment banking directors CVs³⁵. This found that 34% of the sample had graduated from accounting, business or finance degrees and 24% studied economics. It is not clear to what extent these figures represent applicant rates and/or whether applicants from these subjects have a higher chance of success.

Table 3.3: Degree subjects of new entrants to front office roles in investment banking³⁶

Degree Subject	% of Population
Accounting, Business and Finance	34
Economics	24
Mathematics and Statistics	11
Engineering	10
Chemistry	4
Computer Science	3

Source: http://news-cdn.efinancialcareers.com/wp-content/uploads/emolument-universities.jpg?_ga=1.156144699.1290840365.1447681979

This study looked at the CVs of directors, and may not reflect recent changes in recruitment policies. However, evidence for these preferences is also supported by research conducted by The Sutton Trust, which found that economics and management graduates were most numerous among new recruits appointed in the three years prior to 2014, representing 21% and 15% of their sample group. Mathematics, computer science and engineering graduates are next, with 9%, 5% and 5% respectively³⁷. Interviewees pointed out however that today there is also an increasing focus on languages.

. . . kids who are most who most likely to get into [names two bulge bracket banks] . . . disproportionately are studying engineering and modern languages. Then you have like economics and maths . . . and then below that is, like, art subjects and hard sciences. So, if you're reading chemistry or history you're really very

unlikely to get in. If you're reading business or economics you've got a decent chance of getting in . . . what they need on their desks is people who can speak European languages and people that can build complex models in Excel i.e. linguists and engineers. (210)

It appears that there has been a transition over the past thirty years, with an emphasis on more numerate graduates becoming increasingly evident in the run up to and in the decades after deregulation. However, some interviewees suggested that following the financial crisis of 2008, some banks are moving away from this recruitment strategy, towards the recruitment of 'smart generalists' (530). This was explained on the basis that the hiring of highly numerate graduates in all divisions has contributed towards significant (and sometimes unwanted) complexity in the financial sector overall. In addition, interviewees suggested that clients prefer to interact with bankers with strong communication skills, which in turn were considered more available amongst candidates with non-traditional degrees. Interviewees also argued that there is an increasing focus on regulation alongside risk, thus encouraging the selection of bankers with a wider range of skill sets and strengths. It is though not clear how widespread this trend is across the sector.

. . . the banks suddenly found that there was a bulge of quantitative abilities . . . because they had very much hired mathematical skills. But the business required less . . . financial engineering and more attention to what the clients actually wanted . . . through the 2000s it became very technical, where people were trying to get complexity. It was about if you could outwit your competition but . . . people now are required to follow what their clients actually need, and that's a different type of person . . . people have to be a lot more cogniscent of regulatory issues and legal issues. (70)

The relative emphasis on degree subject versus where the candidate studied was ambiguous in our data. Interviewees suggested though that overall university choice is prioritised ahead of degree subject by many banks. In practice this means that applicants from target universities are particularly advantaged if they have also taken one of the subjects listed above, but would not necessarily be rejected if they have not. In contrast, applicants from outside the investment banks' range of target universities have a more limited chance of success in the application process overall, and these chances are reduced still further if they have taken a degree subject which is not listed above.

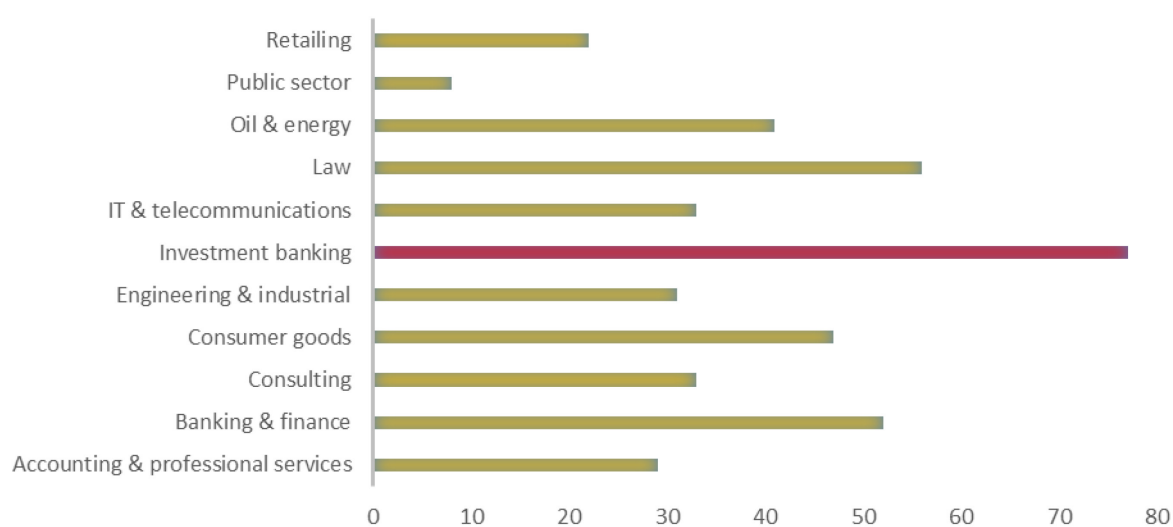
. . . from my experience working on the recruitment side of things, we . . . didn't care so much about the course, per se, but we looked at which university they were from. (2CA)

- **Masters degrees:** According to eFinancial careers³⁸, of the new analysts in 2015 going into the investment banking divisions of bulge bracket firms, 36% possessed a Masters in Finance qualification. The prominence – which some commentators suggest is increasing - of the Masters in Finance qualification is explained on the basis that firms wish their new recruits to be more technical than ever, somewhat contrasting with the statement above. The precise extent of credential inflation and its implications for the sector requires further analysis.

3.4.2. Application Process

In order to secure a permanent graduate position within the front office of an investment bank, almost all successful applicants secure at least one formal internship (and often some informal work experience), preferably at the bank they eventually join. During 2016, the top graduate recruiters across all sectors expect that 32% of entry-level positions will be filled by graduates who have already worked for their organisations, either through paid internships, industrial placements or vacation work. However, this figure is much higher within investment banking where, according to Highfliers research, almost 80% of new entrants are recruited directly from the bank's internship programme (see Figure 3.4)³⁹.

Figure 3.4: Percentage of vacancies likely to be filled by graduates who had already worked for employer



Source: The Graduate Market, 2016, Highfliers⁴⁰

Over the past five to ten years formal work experience has become an increasingly important aspect of the recruitment process and is now available to aspirant bankers at an ever earlier stage in their academic career. According to Highfliers⁴¹, over a quarter of organisations they surveyed offer paid internships and two-fifths of employers run introductory courses, open days and other taster experiences for first year students. This trend is particularly evident in the banking sector, where insight days and work experience are available to students even whilst they are still at school.

A particularly important development are the programmes lasting up to three weeks during the Easter holidays of the first year at university, which are known as 'Spring Week.' In London, Spring Week programmes are offered by banks including (but not necessarily limited to) Credit Suisse, Goldman Sachs, Deutsche Bank, Morgan Stanley, J.P. Morgan, Barclays, UBS and BNP Paribas⁴².

Spring Week programmes are intended to offer interns insight into the industry. Interns can usually select which area of the bank they would like to learn about (including for example investment banking, equities, fixed income, IT, finance, or operations), and during the internship they take part in skills sessions, CV workshops

and business information sessions, as well as social and networking events. Often the selection process for Spring Week is less onerous than for mainstream summer interns, comprising perhaps a numerical test, and two rounds of interviews (as opposed to also an assessment day). Spring Week programmes can act as a pipeline into the main graduate programme, with interns getting early access to the interview process for summer internships, and sometimes automatically fast tracked to the final round. Summer internships are typically available to students in the summers following their first and/or second year.

Application processes for these internships open up early, sometimes in the preceding July, and often close in December. Positions may be filled on a first come, first served basis, and as such students are encouraged by banks to apply early. In order to secure a position, they need to have knowledge of the process and be prepared to apply before they even arrive on campus for their first year at university.

The investment banks use very early recruitment methods, so they open in July. So students, actually even before they've arrived here, could be applying. [The banks] say the best students and the most informed students will be applying from July . . . (1CA)

3.4.3. Pre-Screening

Selection and screening processes vary between banks, as does the order in which screening takes place, yet this process can be generalised as follows. In most cases, aspirant bankers are required first to complete an on-line application form. This includes details of educational background and expected/actual grades, along with qualitative information, usually requiring applicants to explain their interest in the bank and their chosen specialism and demonstrate their core competencies or strengths in relation to previous experience.

Applications are pre-screened first on the basis of academic credentials gained at secondary or high school. For applicants educated in the UK, typically the minimum threshold is c. 320 points, which equates to ABB. However, according to one survey, this is a somewhat notional figure as the UCAS^{xii} points actually achieved by new analysts in front office roles at leading investment banks is typically much higher, with an average of 530 UCAS points⁴³. As noted, students are also expected to be on track for at least a 2:1 in the UK, or equivalent elsewhere.

Most investment banks state that applications are not pre-screened on the basis of university choice or degree subject. Interviewees though were sceptical of this position and argued that even where university and degree choice is not screened for formally or automatically, it nevertheless plays a key role in the initial sift.

Everybody knows, as much as the banks say there's no bias, they're looking for what university you went to as well. (12AB)

Applicants who pass pre-screening take a range of psychometric tests which might include numeracy, logical reasoning and situational judgement. According to Highfliers research, of 9,000 applications to one investment bank in 2007, more than

^{xii} UCAS A level points are: A* 140; A 120; B 100; C 80; D 60; E 40. AS points are A 60; B 50; C 40; D 30; E 20

7,500 were eliminated at the online application form stage⁴⁴. A further 50% to 60% were rejected following psychometric tests.

3.4.4. First and Second Sift, Interview and Assessment

For those who are successful in the psychometric tests, their application forms and CVs are read, often for the first time, by members of the HR team and/or sometimes more junior members of the front office, or by external specialists where the recruitment and selection process is outsourced. Qualitative information supplied by candidates is judged during this 'initial sift' against a competency framework and scored accordingly.

Subsequently, assuming this process is retained in-house, a smaller selection of application forms may be forwarded to hiring managers and other employees in the specialism where the applicant wishes to work. These (often more senior) managers will make a decision as to who to put forward to first interview (although in some cases the first interview will take place before this point.) First interviews may take place on campus, or at the bank's premises, and some banks offer an initial telephone interview at this stage. Second interviews are typically face-to-face with one or more senior bankers. These often take place at the bank's head office, between September and January. At this point, around 3% of the original applicants might be left in the pool. Second and subsequent interviews may form part of an assessment day. Assessment centres typically also include a numeracy test, a group exercise and a presentation, over a single day.

In some cases, applicants are not required to attend an assessment day, especially where they have already participated in an internship at the bank. More broadly, as noted, early internships including Spring Week can enable applicants to bypass some aspects of this selection process. Internships form an important part of the selection process, where performance is assessed on the job. The final decisions on who to appoint are typically the responsibility of current bankers. This is particularly the case where candidates are appointed to particular positions or 'desks', although input at this point from the human resources team may be greater where banks are hiring to a 'pool' – in other words, offered a full-time position and only subsequently allocated to a particular role.

During the selection process, hiring managers and HR professionals look for a range of experience and aptitudes, including demonstrable interest in a career in banking. The requirement for relevant work experience and often multiple internships is apparently becoming more pronounced. According to one report⁴⁵, 'top first year students often don't just do one spring internship. They do two, or three, or four...'. This theme was confirmed by our interviewees.

... everyone has grades at LSE so grades don't mean anything. The only thing that differentiated me was the fact that I'd done an internship before. So when I applied to [the bank] I was able to get another internship [the following year] and this was actually again ahead of everybody else. (39B)

Candidates are generally also expected to have a variety and often an extensive list of extra-curricular activities on their CV. Typical activities include running the finance society at university, or experience taking part in or leading sporting activities. This range of extra-curricular activity is ostensibly required in order to demonstrate a well-

rounded character⁴⁶, and to provide evidence of the range of competencies required for a successful banking career, including for example leadership and teamwork. Students with entrepreneurial experience are increasingly valued, although this was not mentioned as commonly as leadership roles in societies and sporting clubs, despite arguably being more relevant to the specific aptitudes required for the role of a banker.

. . . it literally comes down to . . . if they've got a first and you're president of various different societies, and it doesn't even seem to be in terms of what they've been doing necessarily as president. (70)

They're looking for people who are quite interested in the industry, that have been reading and they know what's going on. But then also somebody who's consistently exceeding expectations across the board, across the different things that they're doing in their life . . . They changed something, or maybe they started up a little company. (2CA)

The weight applied in the selection process to this range and extent of extra-curricular activities might also be explained because this is a means to test whether the applicant is likely to cope within this extremely high-pressured industry^{xiii}, including the requirement in many some specialisms for extreme hours. As one interviewee said, they are looking for people with:

. . . the brain power, or the drive, or the determination, or the ruthlessness, and all the commerciality to be able to function . . . what you mean by best, is those people who are most likely to be able to thrive in that environment. (450)

These requirements have arguably contributed to a relative 'arms-race' as, faced with increasing competition and an ever increasing need to stand out, aspirant bankers engage in increasingly focused efforts to build their CV. This highly competitive process also helps explain why interns within banks have a tendency to submit to very long hours: aspirant bankers believe that not doing so may indicate to their future employers that they have insufficient commitment, stamina and drive, against heavy competition.

As noted, applications and/or appointments are sometimes made to a pool. In other words, the candidate will be assessed as suitable by hiring managers during the internship, and subsequently allocated to a particular job role and division. However, often candidates will apply to a specific division, and be selected (or not) by a specific desk. In the latter instance, it is especially important that candidates use the internship to develop strong relationships with the specific individuals and teams with whom they most wish to work, as these teams will then 'bid' for the interns they wish to appoint. Some interns do not receive interest from any team, and these people are highly unlikely to achieve a permanent position at the bank. These processes can lead some candidates to burn-out before they even begin their career.

^{xiii} For example, see: <http://news.efinancialcareers.com/uk-en/236626/surviving-the-investment-banking-application-process/>

. . . it was the most intellectually demanding thing I've had to go through. Physically demanding as well, because of the hours that we were working as interns . . . We were in from . . . around five to six in the morning . . . we would leave around nine pm, eight pm . . . seven was the minimum that we would leave. But we had people staying until midnight. (49AB)

3.5 Impact of Recruitment and Selection Strategies on Access According to Social Background

In this section, we consider the impact of the recruitment and selection processes outlined above on rates of access according to social background. We focus first on barriers that relate predominantly to education and attainment. Next, we consider the non-educational barriers, including perceived 'fit.' However, we underline that there are considerable overlaps between the two. The key finding is that access to investment banking is highly competitive and therefore by no means guaranteed for any applicant. However, while individuals from relatively privileged backgrounds are likely to enjoy certain advantages at each stage of this process, those from non-privileged backgrounds are likely to experience specific challenges. Over the entire recruitment and selection process, this may add up to a quite significant cumulative disadvantage for the latter group. As one interviewee put it:

I think often what investment banks are looking for is that sort of initiative . . . that little spark, and I think maybe a few candidates from certain universities recognise that and can show that, but many [people] . . . don't even know that this is the game that's being played. (51O)

3.5.1 Attainment and Higher Education

High numbers of new entrants to front office roles within investment banks are drawn from a relatively narrow group of elite universities, and a specific set of degree subjects. To some extent, the dominance of these graduates at entry is likely to reflect their dominance within the applicant base. However, it is possible that applicants from target universities also have higher conversion rates since, as explained above, university and degree choice are used as part of the screening process by investment banks, tacitly or otherwise. Further, the campus activities outlined above are designed specifically to help students from target universities navigate the selection process successfully.

The benefits of meeting people on campus, if you go to one of their events and you . . . get to network, you get to understand more about the process . . . Those students actually have a big advantage when they come to apply because they're able to understand what the bank is looking for or understand more about particularly the divisions they want to apply to . . . and because there are already lots of students who are applying from, maybe the year above, who have been successful in getting an internship and then a graduate role, there's a really good network effect . . . everyone knows the process, everyone talks about it and everyone shares their stories. (51O)

On the other hand, non-target universities can have difficulties persuading investment banks to come onto campus, meaning their students do not have access

to the first-hand knowledge, skills sessions and networking opportunities that students from elite target universities receive. As one careers advisor said about students at their university:

. . . we do get invited to careers advisor days with some of the banks even if they won't come to campus... it would certainly make a difference if we had more of those employers on campus because . . . somebody in front of [the students] will give them the confidence to apply. (11CA)

The emphasis on recruiting from specific elite universities is likely to have an important impact on access according to social background, as identified below.

- University choice:** Preferences to recruit from elite universities are explained by interviewees on the basis that investment banks seek graduates with exceptional academic credentials, strong language skills and knowledge of the countries in which the bank operates - or wishes to operate in future. However, this approach is likely to have a marked impact on access according to social background because target institutions tend to be populated by individuals from more affluent backgrounds. Figures are not available for universities outside the UK. However, within the UK, across all universities, the proportion of young full-time undergraduate entrants who are from less advantaged social backgrounds (NS-SEC classes 4-7^{xiv}) was 33.5% in 2013/14⁴⁷. Table 3.4 shows that the socio-economic background of individuals at target universities is narrower than this.

Table 3.4: Universities targeted most often by investment banks and proportion of young students in NE-SEC categories 4-7 starting their first degree in 2014/15⁴⁸

Higher Education Institution (HEI)	Students NS=SEC 4-7 in 2014/15
University of Oxford	10.0
University of Cambridge	10.2
University College London	19.0
Imperial College London	16.2
London School of Economics	21.1
University of Warwick	19.3

Source: <https://www.hesa.ac.uk/pis/09/10/urg>

Individuals from non-privileged backgrounds are under-represented in elite universities for two main reasons. First, in the UK there is a well-documented relationship between performance at school and socio-economic background^{xv}, helping to explain why students from more affluent backgrounds are found in higher numbers at elite universities which have higher entrance requirements. However, individuals with the A-level grades necessary to gain access to investment banks are found in a wide range of universities in the UK, most of which are not targeted by investment banks^{xvi}. This can be explained because

^{xiv} The National Statistics Socioeconomic Classification for social class based on occupation distinguishes individuals based on their employment relations. NS-SEC has 8 main categories (known as the analytical scale) with 1-3 including administrative, managerial and higher professional occupations and 4-7 including routine and semi-routine occupations. Category 8 is never worked and long term unemployed.

^{xv} For example, according to the Joint Council for Qualifications, pupils from fee-paying schools achieve almost thirty percent of all A* grades despite forming just over thirteen percent of all A-level entries. See: <http://www.telegraph.co.uk/education/educationnews/11367877/Private-schools-achieve-greater-A-level-success.html> (accessed 26th April 2015)

^{xvi} For example, research published by The Sutton Trust, based on figures supplied by the Department for Education, found that in 2011/12 thirty percent of comprehensive (non-selective state) schools had at most one or two students progressing

students from non-privileged backgrounds may be less aware of distinctions in status between Russell Group^{xvii} and other universities, or prefer to study at institutions closer to home. It is possible that on average they are even less likely to be aware of the very narrow group of universities in the UK from which investment banks prefer to select, since this type of information is often most available to students whose network of family and friends includes current professionals, and/or who can access this information via their school. Finally, students from non-privileged backgrounds may self-select out of elite universities, especially Oxford and Cambridge on the basis of perceived fit. These issues have perhaps been exacerbated as banks have tended to narrow entrance requirements over time.

. . . why it tends to push towards a certain demographic is the auto screening that goes on . . . we only target certain universities . . . and then on top of that [we] do a filter from A-Level grades and then you do a filter for expected grades; you do a filter for the degrees . . . And, you know, rightly or wrongly if you've had better advice when you were younger or you go to certain types of schools they know the system a little bit better. And they're able to guide people towards doing the right degrees, making sure that they get the right grades at A-Level and things like that because they know how important that is . . . (38B)

. . . it's become more of a box ticking exercise than it was . . . [students have studied] most likely finance and accounting . . . and then [they've] done this and this internship . . . this all points to people who've had their parents push them into certain things and connections, and allowing them to do internships. And if you haven't got that, you know, you're not going to get in . . . (37B)

- **Credential Inflation:** To the extent that there is a preference for students with a Masters degree from target universities, this may also have an impact on access according to social background. Students who have attended a non-target university for their undergraduate degree may be able to secure access to an investment bank by undertaking a Masters degree at, say LSE, at which point grades achieved at school may become relatively less important. As one interviewee said, banks: *“really appreciate the fact that you've been to LSE!”* This was a strategy adopted by several of our interviewees who had become successful bankers.

I was a total failure at high school . . . it seems that from [names non target university] it's not maybe the right institution to make that jump into banking . . . so I said okay, let's just go to [target university] . . . I think I can figure it out, so let's

to Russell Group universities. Other government figures reported in the same study show that the proportion of A-level students attending comprehensive schools and progressing to the country's thirty most academically demanding universities (which includes the Russell Group) fell from twenty-three percent in 2008/09 to nineteen percent in 2011/12. It is also notable that the intake of the most academically selective universities is more socially advantaged than would be expected given the social background of those with the necessary A-level grades to enter these institutions. Though this figure is contested by some universities within the Russell Group, this leads to a situation where The Sutton Trust believes that there is an estimated 3,700 “missing” state educated students who have the grades to get into Russell Group universities in England, but do not have places.

^{xvii} The Russell Group is a self-selecting consortium of twenty-four leading universities including Oxford and Cambridge (Oxbridge) which is often used as shorthand for the UK's most prestigious universities, a designation relating in part to their strong research output and higher entry requirements.

apply, and get the brand on my CV . . . and it was true, I mean, after that I got invited to [three bulge bracket banks] . . . it wasn't easy, but it was easier. (30B)

However, this route may require financial resources, and Masters courses are often more available to individuals from relatively affluent backgrounds. In their 2013 study, which explored transition to higher degrees across the UK, Wakeling and Hampden-Thompson found that graduates from lower socio-economic backgrounds are under-represented in postgraduate education⁴⁹.

- **Pre-screening on UCAS points or equivalent:** Students who achieve strong grades at a target university but have performed less well at school, may be eliminated during rigid pre-screening. In addition, where a minimum threshold is advertised in terms of UCAS points, individuals who have not achieved the required grades (but have or expect to perform well at university) may self-select out of the application process. Both would have a disproportionate negative impact on candidates from non-privileged backgrounds as a result of the relationship between socio-economic background and attainment.

So companies screen out the first couple of stages automatically, so they don't actually read your application . . . if they'd actually read my application they would see that I was on track for a first class, they would see that... I did get a first [from target university], so they would have seen these things, but because it was all automated unluckily you just get dropped out. (23B)

These issues have led some organisations in peer-group sectors including law and accountancy to abandon the use of academic credentials gained at school, take a more flexible approach to pre-screening, and/or adopt the use of contextual data in order to assess performance in relation to the school attended, along with a range of other potentially relevant factors. This path is now also being adopted by some banks, although it is not clear how widespread this practice is to date in the sector.

- **Psychometric Tests:** We do not know the relevance of socio-economic background to performance in the psychometric tests used by the investment banks. These tests are designed to be highly objective and to assess aptitude and intelligence, rather than preparation. Evidence from other sectors does suggest however that performance in psychometric tests can improve with coaching and with practice, though beyond a certain threshold, the benefits dissipate. Coaching may be more available for individuals who attend bank's target universities, who have an opportunity to practice for example during campus attraction events. Opportunities for additional practice are also made available by specialist organisations on-line. Thus it is possible that psychometric tests could have a disproportionate negative impact on individuals from non-privileged backgrounds, but without further evidence it is not possible to substantiate that claim.

3.5.2. Social Capital including Networks of Family and Friends

As noted above, choice of university is influenced by social capital, which in turn has a strong impact on potential to access an investment banking career. Social

networks also play an important role in many other aspects of the recruitment and selection process, as described below.

- **Timing of Application Process and Internships:** The application process for front office roles in investment banks has shifted to ever earlier in the academic cycle. Aspirant investment bankers are often expected to provide evidence of their interest in the sector in their first year at university or even before. These expectations are likely to impact upon access in several ways.

First, securing a role within investment banking requires knowledge of what is involved within this career including the range of specialisms and entry routes. In turn, meeting these requirements relies, at least in part, on strong social networks, including those between family and friends who already work within professional occupations, and/or information provided at school. This is particularly the case given that investment banking is a complex sector, which is relatively opaque to outsiders and those with no previous connections.

Relevant social networks are more available to students from more affluent backgrounds and those who are privately educated than students from non-privileged socio-economic backgrounds. The latter are less likely to have identified investment banking as a potential career while still at school and may be unaware of relevant deadlines. This is an issue which affects a range of professions, but is likely to be particularly acute in investment banking given the relatively extreme nature of the recruitment cycle.

Access to the City helps massively if you have a parent who works in the City as they know where to go for advice. Also work experience is incredibly important and this often relies on social networks. (17XB)

There is a lack of general information . . . that people have access to. Unless your family is already in the industry. (12AB)

In other careers, university might provide the environment in which students from non-privileged backgrounds can identify and refine their career aspirations, ready to apply to internships during their second year. Yet for investment banks, students from non-privileged backgrounds who apply at this point may be competing against others who have already added several internships, Spring Week programmes, and/or insight days to their CV.

. . . banks are starting their recruitment process earlier and earlier and earlier. There are things that people can apply to and join when they're in their Sixth Form year. And that's when the bank get their name and then they'll be invited to it next year, and the year after, and the year after. And really, if they spot them at age 17 and they think they're great, they'll keep tracking them until they're ready for summer internship. They can get them fast tracked . . . the problem is, people like me, whose parents didn't work in this industry, I have no idea that that's available to me at 17. (19B)

It is important to note again that these processes are becoming more pronounced within the sector. However, banks acting alone may be reluctant to

reverse this trend for fear of their competitors capturing all the ‘best’ candidates at an early stage:

And before the Easter programme, you have the high school programme. And it's like, you know, by the age of 16 you know whether or not you're going to work with [the bank] . . . we've moved from a model where the recruitment pool was probably broader, to a model where it's much, much narrower. (37B)

- **Locational Issues:** Investment banks are predominantly located in London. Even though formal internships are paid, informal work experience may not be. Either way, taking part in an internship requires individuals to secure somewhere to live in London, for anything between one and six weeks. This could represent a considerable challenge for non-privileged students who live outside the capital city.

. . . we rarely saw people that were outside M25. Because of the cost factor associated with moving to London. (15XB)

- **Perceived ‘cultural competence’ and extra-curricular activities:** Interviewees said that human resource teams charged with graduate recruitment and selection may valorise candidates’ experiences which have been gained in multiple contexts, and may also prioritise applicants who have a strong record of achievement when it is apparently gained in more unusual circumstances. However, it is possible that at least some of the activities valued in the recruitment process are more available to individuals from more affluent backgrounds, again, partly as a result of their access to relevant knowledge, connections and guidance. This issue also relates to economic capital on the basis that students from non-privileged backgrounds are more likely to have part-time jobs to fund their studies, and therefore have less time to engage in the sorts of extra-curricular activities the banks tend to value. At Oxbridge:

...[the banks] do something for all the JCR^{xviii} presidents . . . that's essentially the college-based student unions . . . if you're president of that you'll get invited to another dinner. If you're captain of a sports team you'll get invited to another dinner. So what we're seeing is kind of multiple presences. They will also be sponsoring the Finance and Investment Society and so on. (6CA)

- **Social networks and perceived performance:** An applicant’s existing social networks can also prove relevant both at interview and during the internship. For example, one interviewee described a final interview at a bulge bracket bank, at the end of their internship, potentially leading to a permanent job offer.

I genuinely was so grilled in my interview. And I remember speaking to one of the girls who got in . . . the person interviewing her realised he was friends with her old boss . . . What he did was before the interview, called up and said, “look, what's this girl like? Is she any good?” And he said, “yes” - it was positive whatever he said . . . she said they didn't have an interview. They kind of had a

^{xviii} JCR stands for Junior Common Room, which is the room used by students at Oxbridge and some other universities for social purposes and can be used as the collective designation for the undergraduates at a particular college.

chat, and he called up his friend and they had a bit of a joke in the interview, and that was it, she got an offer . . . (40AB)

It is possible to build networks during internships but this does of course depend upon individuals from non-privileged backgrounds being able to access these opportunities in the first place. In addition, students from elite schools and universities are potentially more likely to have already developed the valorised social skills to allow them to build these type of networks quickly.

Existing social networks may also play a role as interns seek to build internal networks within the bank and secure all important 'facetime' with influential senior bankers. The interviewee quoted above had secured an internship on the trading desk at a bulge bracket bank, and was required to network with current traders in order to identify and impress a sufficient number who would act as referees for a permanent position. This interviewee explained what happened next:

. . . what I found was with other people, they already had those networks because this was my uncle's friend, or this trader was, you know, went to university with my brother . . . I was in despair, am I doing something wrong? Like, how am I not able to strike up these conversations? And it was only towards the end I realised that actually it's because these guys have, you know, a head start . . . those from the UK were all from like independent schools pretty much. But it wasn't just that, as I said . . . these guys all had someone that they could go to who'd almost like sponsor them . . . I couldn't get anyone senior to vouch for me or sponsor me. I couldn't really . . . develop those relationships . . . And at that point, that's when I kind of got really turned off investment banking. (40AB)

- **Nepotism (or strategic positive action):** Interviewees said that investment banks continue to offer work experience and internships which may lead to permanent jobs to individuals whose friends and family are of strategic importance, including in relation to the expansion of their business on a global basis.

... There is actually quite a lot of nepotism in banking. But it's not nepotism the way we actually think about it. It's actually very calculated, profit motivated, rational thinking. (25XB)

This may represent a step beyond for example the use of contacts by candidates to help secure work experience, and extend to preferential treatment for those with the 'right' contacts.

Globalisation has meant that . . . if you have your father who's a minister in some kind of trade delegation or something, and has influence, these people are hired purely because of that . . . so these people are positioned because of their network, positioned because they recognise the network qualities in someone else, and they can make these links . . . [if] your Daddy knows someone based on the buy-side, which is more traditional, where all this stuff plays out, and you want to go and join a bank, he'll say, maybe to the sales guy that covers him, "my daughter basically wants to do sales." In. Done . . . it's still all out there . . . that kind of network is always in play, always . . . (70)

. . . there was one guy, and his Dad was . . . obviously a client of [the bank]. And he couldn't find a desk which wanted him . . . But on the last day, one of the desks, which he'd never spent time on, one of the managing directors on that desk called him out to a meeting and offered him a job . . . in the final week, like, these jobs were just coming out for these people. (49AB)

It is uncertain what proportion of new analysts gain their position in this way, although according to interviewees it is likely to be relatively small. The benefit of existing social networks may rest most heavily on the tacit knowledge they can provide for example about entry routes, and the necessity for work experience. Interviewees also argued that this tendency may also have been compensated for within some larger banks by HRM teams:

. . . many of the big banks would have specific people within their HR teams to look after internships for people who are either sons of clients or top executives within the bank . . . HR . . . usually create an extra internship position for that person so we don't reduce the numbers for the people who are applying through the normal channels. (2CA)

3.5.3. Cultural Capital and Perceived Fit – Demand Side Decisions

We focus next on the degree to which certain forms of cultural capital play a key role in the recruitment and selection process, in part as demonstration of perceived 'fit.' We address first the perceptions of current bankers, before discussing how issues of fit are perceived and approached by aspirant bankers, in section 3.5.4.

- **Tendency to recruit for similarity and familiarity:** Interviewees made the point that human resources often consciously select for diversity among existing candidates especially with respect to nationality and experience. This is positive, although such is the rigidity of the pre-screening process, considerable levels of diversity according to social background may already have been eliminated by the time this manual screening takes place. However, the initial and second stage sift represents a key stage in this process, which amplifies the tendency to recruit from a narrow range of universities, and also introduces a specific focus on socio-economic background.

Interviewees explained that current bankers have a strong tendency to select applicants for interview from institutions with which they are most familiar, perhaps because they attended that institution themselves, or because it has a strong reputation and 'brand name.' These preferences also extend to a preference towards individuals who have attended more prestigious secondary schools.

. . . there is an obvious preference, so you have traders and managers who are a bit more senior, they make the final decisions . . . people we were interviewing had all been to private schools and all had been to Oxbridge, come from very similar backgrounds, there was a very obvious lack of diversity in terms of who we were choosing . . . HR wanted to be as diverse as possible, they were choosing people from different parts of Europe, different parts of the country, different parts of the world. Whereas the front office CVs that were being chosen were pretty obviously students from private schools . . . And I think that's because the traders themselves have come from those sort of backgrounds and they

choose people from those sort of backgrounds. Even if they hadn't it seemed to me that was the way. (39B)

More generally, current bankers have a tendency to select candidates with whom they feel they have a shared set of interests or social background, and these expectations may be not only classed but also gendered, and relate to cultural difference as well.

. . . the issue is that often the decision makers, you know, the front office bankers, the MDs or the directors who are doing the interviews and making recommendations that lead to hire, often they come from Oxbridge . . . even if they're not . . . they know Oxford, they know Cambridge . . . So it's no good coming from . . . any other universities . . . I don't think it's a deliberate decision necessarily . . . [but] often unfortunately you recruit the moulds . . . to please your own kind of ego in a way. . . [if] you find people who maybe did the same course at university as you, maybe did the same sports or the same extra-curricular activity and you think "well I'm successful, that person will also be successful"? (51O)

Interviewees underlined that the impact of these practices is likely to vary between different divisions and even within them. For example, though outside the scope of the current study, hiring managers within wealth management or private banking may place a particular emphasis on an elite education and class background in part because of the associated social networks candidates may bring with individuals of high net worth. Within front office roles, this trend is perhaps most evident in sales and the investment banking division of firms.

The investment banking piece, the private banking piece are still very much run by blue blooded, well presented, highly marketable individuals who are able to grease the wheels. (7O)

However, a tendency for current bankers from elite educational and social backgrounds to recruit in their own image is apparently evident across many divisions, including within trading.

. . . all these areas can fall into that same trap because ultimately if you're not very careful you would just start employing clones of yourself . . . "if something's not broke don't try and fix it" type of attitude. "This is what's worked for many years and this is what we think will continue to work" . . . you can see trading groups, you can see sales groups . . . there are very many business groups that are the same in that respect . . . it's probably more prevalent . . . in the corporate finance world because still the seniors that you meet and everyone else is part of the old school. (22B)

Further, while a bank may hire up to 200 new graduates each year, each desk typically appoints only a relatively small proportion of this total, perhaps two or three, and therefore they are relatively dispersed. In this context, students from elite universities apparently are considered to represent a 'safe bet.'

People are hiring people to be safe. People are hiring people not to lose their job. It's much easier hiring someone with a branded school and a branded

university. Just as it's easier to go out and hire [names leading bank] than it is a boutique, right? Because it's an insurance policy. And brand does provide an insurance policy for the person who's making selection decisions. So I do think in those situations it becomes more and more difficult. (16B)

This issue may be exacerbated if the number of graduates appointed to investment banks declines.

Recruiting such small numbers . . . a bad egg, that is their language by the way, not mine . . . is going to have a more significant sort of upshot, whereas you know, I believe [big four accountancy] are recruiting 2,000 people . . . they can afford to take a risk perhaps with a proportion of those. (42O)

In sum, though pre-screening is often heavily rules-based, the recruitment and selection process subsequently involves a relatively high degree of informality in the final stages, when decisions on who to interview and appoint are often handed to current managers, who have a high level of individual discretion and influence. In some senses, the current recruitment and selection process may represent the worst of both worlds for candidates from non-privileged backgrounds, leaving considerable room for current bankers to reproduce the existing demographics of the sector.

So everybody's choosing what they sort of know and what has worked in the past . . . (39B)

- **'Comportment' – speech, accent, dress and behaviour:** Issues of comportment noted by Scott⁵⁰ and summarised by Bourdieu as 'embodied capital' become particularly important during interviews and internships, though again, their precise impact differs within and between banks. Overall, interviewees explained that during the selection process current bankers look for evidence of technical aptitude, though given an abundance of suitably credentialed applicants, this is partly a hygiene factor. Equally important is 'fit' with the bank and in relation to the chosen specialism, which in turn involves an emphasis on issues including speech patterns, accent, behaviour and dress. These attributes are generally summarised as 'polish', a term that is used in multiple peer group professions, and within which confidence and self-belief are especially important.

The confidence [bankers] present themselves is high, [they are] generally quite polished . . . like most things in life it helps to be self-assured . . . probably more so in this industry than certain other ones. (34B)

. . . polish is partly about confidence . . . people who lack confidence, they won't survive. They'll just be crushed underfoot. (45O)

. . . competence is equalled with confidence. And if you're not confident or if you don't exude that sort of same sense of self-belief . . . then people don't necessarily rate you or think you're competent. (37B)

The focus on these attributes was explained by our interviewees in relation primarily to the need to impress and reassure clients. In addition to confidence,

the factors that achieve these objectives include a particular style and standard of dress and strong communication skills, adding up overall to a suitably 'professional' demeanour. These characteristics are actively sought by hiring managers during the selection process, and interviewees acknowledged that they are often more available to those who had grown up within a middle or upper middle-class environment, whether in the UK or indeed elsewhere.

. . . it's a combination of social skills which the private schools teach, and also they get at home, to be fair . . . if they come from a middle or upper class background . . . there's a way of doing things . . . It's about . . . appearing reasonably smooth, reasonably confident, knowing when to defer to somebody more senior than you, being able to take instruction without arguing about it, showing initiative, not being chippy about somebody you perceive as being different to you socially, not making other people feel uncomfortable . . . (26XB)

. . . if you went to a school and you were privileged and so on, there's a sense of entitlement that comes in and breeds confidence . . . somebody else, she went to a different school, you know, not saying much or if they do say it they're not quite saying it the right way. (B33)

Overall, a middle or upper class demeanour is most important in the sales and advisory functions of investment banks, and especially within corporate finance or M&A. This might be explained in part because this is a highly competitive market, with only a small difference in fees charged by leading institutions. However, perhaps more important, M&A bankers typically work alongside leading corporates for many years providing advice at no cost, on the basis of which they expect to be appointed when their clients are involved in IPOs or other restructuring. Securing work in this specialism therefore relies on networks built up over many years, which may be facilitated by a shared (middle or upper-class) background between bankers and their clients, and/or an appropriate alignment with historical constructions of professionalism.

It's effectively a sales job, isn't it? . . . you're forming connections and forming bonds from people who are more like you in the way that you think and your interests . . . corporate finance, sales, you know, you need to sound a certain way . . . people screen on the basis of accents and things like that . . . You're selling yourself! You know? It's an aura that you build . . . part of that aura is your polish . . . the thing they fear for a corporate finance firm is, we take this guy out for a client, when we're charging him X amount, and he doesn't sound right or look right, then . . . you know? (53O)

. . . [the] typical corporate finance banker [is] usually someone pretty smooth, very fast talking, well-connected typically, likely to come from a pretty decent background, likely to be very polished, probably come from a good family, and so on. And that would be stereotypical, but still true, I think. (45O)

There are some areas in the bank . . . where the concept of diversity is about taking a different year group from Eton or from Harrow, if some of the departments are really ambitious they might include St Paul's and Westminster School . . . areas where there is a lot of money . . . where the biggest perks are, those are the areas where . . . there's a very narrow intake of people. (B33)

Presenting the appropriate image can be thought of here, at least in part, as an act of persuasion, where class status including mode of speech, educational background and especially, confidence^{xix}, are considered by bankers to be an important means to signal the provision of high quality advice to clients in the absence of other information and help to justify high fees^{xx}. As one interviewee explained:

. . . if you're from a top bank . . . they can all do the job . . . At the end of the day, [clients] are going to choose someone based on whether you like them . . . That's got nothing to do . . . with them saying I want somebody who is upper class, its, "is this person charming, and do I trust them, and do I feel I can get on with them, and do I think they are going to tell me what I need to know, and do I think they know what they need to know"? But charm and somebody who can talk to people, in a way that . . . works, is important . . . Most public schools are quite good at doing that . . . if you are a front office investment banker . . . even as a very, very junior person, you are going to the meetings, right from the word go. Therefore you have got to be somebody that they are comfortable is not going to come out with something, you know, embarrassing . . . the big banks will probably be perfectly comfortable [with social inclusion in] their middle and back office jobs. (26XB)

Individuals from non-privileged backgrounds are of course found in front office roles throughout banks. Yet interviewees explained that those who had perhaps not been educated privately or who came from more modest socio-economic backgrounds, are especially likely to be found in (less prestigious) executionary roles which are not client facing. Similar requirements, though not always as marked, are also evident in sales, where client relationships are key. In contrast, as noted, interviewees claimed that social background may play a less direct role in the selection of traders, since the latter's relationships with clients are mediated by sales teams. Further, aptitude and eventual performance here is measured on a relatively objective basis^{xxi}.

. . . [bulge bracket bank] was like, we want the best . . . we don't care if they speak with an accent . . . but this was very much in the trading space. Sales is you have to be a bit more polished because you have to build the relationships and schmooze the clients, all that kind of stuff. (40AB)

. . . the sort of person you might meet on the trading floor would not necessarily be the sort of person you would meet as the relationship guy in managing

^{xix} This point echoes one made by Augar in his book *The Death of Gentlemanly Capitalism*: 'It is a requirement for successful corporate financiers and stockbrokers to sound plausible and confident even when they are on weak ground.' (p109)

^{xx} Signals which act as proxies for quality also carry weight with students. As one interviewee said with respect to bankers met during a campus attraction visit: ". . . I think, man he must be number one, really knowledgeable . . . I mean just look at him, he looks you know, he or she look like they are at the top of their game, and earning well, and it... I don't know, I would say, it looks solid" (41AB)

^{xxi} Ashley and Empson (2013) suggest that exclusion on the basis of social background can be related to the ambiguity of knowledge within many complex and knowledge based occupations, where it can be difficult for clients to assess the relative or absolute quality of advice or service they receive. Where knowledge is most subjective and ambiguous, proxies of quality which can be mapped on to social class are most important in order to reassure clients, whereas where knowledge is relatively objective and technical, the opposite is true. For further information see: Ashley, L., & Empson, L. (2013). Differentiation and discrimination: Understanding social class and social exclusion in leading law firms. *Human Relations*, 66(2), 219-244.

corporate relationships . . . [trading is] probably more meritocratic . . . because your value is determined minute by minute. You know, there's nowhere to hide on that. So some of the perhaps, social graces, and so on, are not so necessary and important there . . . (45O)

Historical legacies play an important role here, since the 'barrow boy' trope arguably continues to permit and legitimise a wider range of class backgrounds within the trading function.

. . . there is actually a sort of positive stereotype for trading . . . you know, street knowledge . . . That traders are tough people and it is actually better if you grew up in some tough working class neighbourhood because then you will be a really tough trader . . . the perception would be if you came from some working class neighbourhood and you got a PhD in Maths, you are like: "Hell Yes! You look like a trader . . . some like posh kid . . . we should give him the investment banking role. He should go shake hands and make deals. And we want you on the trading floor." (36B)

Global markets used to permeate from a culture where the FX, the foreign exchange markets, were run by very smart, deal busting foreign exchange traders . . . [it] would be significantly more diverse than any other part of banking. (7O)

In contrast, corporate finance is more directly descended from the merchant banking activities of the nineteenth century, performed by 'gentlemanly capitalists.' Indeed, as noted, family-owned merchant banks were often absorbed by large US and foreign-owned banks following 'Big Bang', and though partly suppressed, elements of their culture persist even in today's highly modernised organisations.

. . . the people from [merchant bank] are different . . . they still . . . are closer to each other than to the rest of the bank and . . . And they're all the same type of person . . . (37B)

- **Opaque expectations around image affect ability to conform:** Some expectations within investment banking, around image, appearance and behaviour, may be relatively opaque to outsiders. One interesting issue here is the expected balance between an appropriate display of ambition and hunger, and necessary display of deference in what is still a relatively hierarchical culture. Thus aspirant bankers are expected to be tough enough to survive in the cut-throat world of investment banking, yet humble enough to accept instruction, particularly in the early years when analysts are said to predominantly perform what one interviewee called "*monkey-work*." As noted, aspirant bankers must also display confidence, to reassure clients and colleagues, but not necessarily arrogance (although it must be said that many interviewees acknowledged that a strong sense of self-belief by no means disbars an individual from an investment banking career and may in fact be an advantage.)

. . . some people get it naturally, and some people don't . . . you know, when . . . to stay quiet, so you allow him or her, the senior person, to have their say, and when to show initiative. I think it is a key skill actually, and takes a lot of

experience. And . . . maybe that is another one of these things that you pick up at a private school, or Eton, or wherever it is, in a way that maybe others need time to develop? (31O)

According to a senior member of the profession, the delicate line between the two – initiative and deference - can be learned at dinner and drinks parties, though this interviewee acknowledged that this might not be a possibility for individuals from non-privileged backgrounds. For some interviewees, this is an issue for schools, society and individuals to address, and a minority view was that state schools should work harder to equip students with the types of cultural capital and confidence that fee-paying schools provide.

. . . a private education . . . you've been pushed quite academically from your peer group, your friendship peer group will probably be competitively pushing one another, your teachers will probably be pushing you, your parents would have been competitively pushing you, so when you come into this environment it's probably a reflex that you just suddenly become competitive . . . I think that if you don't have that background . . . you might not feel so comfortable being so competitive so I wouldn't say that it's the bank, it's the individual . . . if you want them to be hiring more of these sorts of people, the universities and schools have got to do something about helping these young people, because whatever walk of life they go into, they are going to do better, if they have got the social skills. (16B)

- **Dress codes:** Relatively opaque codes of conduct also extend to dress. To provide one example, for men, the wearing of brown shoes with a business suit is generally (though not always) considered unacceptable by and for British bankers within the investment banking (corporate finance) division. A similar judgement is though not made in relation to M&A bankers from continental Europe for whom brown shoes are permitted^{xxii}. Yet a further qualification is that some bankers in corporate finance may 'get away' with wearing brown shoes perhaps, for example, if they are sufficiently senior.

Issues relating to dress may seem both superficial and relatively simple for individuals from all backgrounds to adopt. However, interviewees suggested that they do play a material role in the selection process, once again, as demonstration of 'fit.'

. . . dress is another issue . . . from my experience [non-privileged students] . . . don't have a haircut . . . their suit's always too big . . . they don't know which tie to wear. (53O)

Illustrating the relationship between social and cultural capital, individuals from non-privileged backgrounds may not have access to relevant networks which can provide prior instruction in these requirements placing them at a relative disadvantage. This was confirmed by one interviewee, from a non-privileged background, who described feedback received from a mentor after an interview:

^{xxii} See Luyendijk, J (2016) *Swimming with Sharks: My Journey into the World of Bankers* and Augur, P (2000) *The Death of Gentlemanly Capitalism*, for a further discussion of dress codes in the City of London.

. . . he said you interviewed really well. He said you're clearly quite sharp, but . . . you're not quite the fit for [this bank] . . . you're not polished enough . . . he looked at me and said, "see that tie you're wearing? It's too loud. Like you can't wear that tie with the suit that you're wearing" . . . what kind of industry is this where I can be told that I'm a good candidate, I'm sharp, but I'm not polished enough? (40AB)

Specific dress codes are considered by current bankers to provide reassurance to clients about the quality of the service they will provide. Expensive clothes signify success and therefore indicate to the client low risk. Again, these issues are more pronounced in corporate finance than for example trading, especially since traders do not interact directly with clients.

. . . [in corporate finance] if you've got the wrong cut of suit, if you are wearing the wrong shoes, or tie, or you look awkward in a suit, you're done before you start. And unfortunately if you've never worn a suit before in your life, how are you going to do it? . . . You go there, you stick out like a sore thumb. (70)

An additional explanation for the continuing traction of these codes, is that relatively subtle dress codes are a means for individuals to signal their allegiance to particular City 'tribes', and thus also reassure colleagues of their willingness to fit-in. It is notable though that these codes were largely taken for granted by our interviewees who were not generally reflective on the potential impact on diversity or indeed whether rigid codes around mutable aspects of dress were indicative of equally exclusive rules relating to other social identities, including race, gender and religion.

While for example strong communication can be more clearly associated with job performance, relatively arcane matters of dress are generally quite remote from the requirements of job and are arguably in danger of being over-emphasised at entry^{xxiii}. Indeed, the evidence presented here suggests that aspirant bankers can be ruled as unfit for the profession on the basis of speech, accent, dress or mannerism, even where their technical aptitude is exceptional. Though this might be positioned as a rational strategy by investment bankers wishing to build business with other professionals, it does on the other hand undermine the positioning of the sector as entirely technocratic and meritocratic, according to its own definition.

^{xxiii} These issues are identified by Karen Ashcraft in her concept of the 'glass slipper', which is a new concept to add for example to those of glass ceiling, or glass cliff. Ashcraft points out that an occupational brand is often associated with the social identities of its typical or stereotypical practitioners, ensuring that occupations appear "suited for some people and implausible to others" and leading to "systematic patterns of advantage and disadvantage." Like Cinderella's slipper, certain people, for example white men, are considered a more natural 'fit' for certain professions not necessarily because of superior technical aptitude or suitability, but because our collective image of an occupation was made in their image. As part of this process, she says that occupational identity or brand may over-emphasise certain features that favour certain practitioners, yet bear limited relation to the actual work. An important implication is that diversification efforts should not only focus on efforts to introduce non-traditional entrants into an occupation, but should also challenge the relationship between an occupational brand and specific social identities, including by challenging stereotypical views of the appropriate practitioner and focusing more heavily on the required skills and technical competencies. For further information see: Ashcraft, K. (2012) The glass slipper: 'incorporating' occupational identity in management studies." *Academy of Management Review*: amr-10

Further, though space does not permit a detailed discussion of these issues, questions of 'fit' focused ostensibly on relatively malleable issues of dress, may intersect with issues around ethnicity, religion and indeed gender. For example, where issues relating to dress were raised by interviewees, it was almost always in relation to male business attire, underlining the strong association between investment banking and masculinity. In addition, the interviewee quoted above went on to describe advice offered by current bankers:

I was told . . . “[being black] in an industry like this”, he said, “our job is to fit in. That’s how you get on”. He said, “if you’re white, your job is to stand out, and that’s how you get on” . . . And those words stuck with me . . . I know I’ve had the baggage of being [black]. . . you’re imposing one way or another, whether you like it or not. (40AB)

- **Relationship between class status and educational background:** There is a fairly consistent focus on recruiting individuals from a similar group of target universities across most investment banks and (often) a consistent emphasis on very high academic standards. The relationship between academic achievement and access to this elite occupation may seem self-evident, especially given the increasing focus on technical competence within the sector since deregulation.

Whereas in the old days, it didn’t really matter if you were a bit dim . . . I think that has changed . . . what the Americans brought in was much more, you know, intensive, more competitive style of work. And which I think probably did bring in more of a meritocracy, in terms of the sort of people that thrived in that environment. (45O)

Yet interviewees did point out that different specialisms are in fact characterised by quite different levels of technical complexity. In addition, they argued that in certain front-office positions, while intelligence is undoubtedly important, truly exceptional academic performance is perhaps not. For example, one interviewee who had previously worked at a senior level within investment banks when asked whether it was important to be highly numerate responded as follows:

God no! . . . You need to probably be able to do some basic stats. But for most jobs, you do not need to be, quite frankly, this unbelievably maths person . . . Most of the people at the very top of these firms wouldn’t get hired now, the people who have just been retiring wouldn’t get hired now . . . (26XB)

As noted above, with respect to degree subject, some banks may be moving away from their heavy focus on highly numerate graduates across all specialisms. More generally, focusing on a narrow group of target universities may not only make sense in order to deliver applicants with strong academic credentials. Perhaps as important, a move towards graduate only entry following deregulation was positioned by some interviewees as a means to distance the sector from its previous reputation as populated by either ‘gifted amateurs’ or ‘barrow-boys.’

. . . institutions started to move away from the barrow boy image and tried to make themselves look a little bit more presentable . . . the shopfront thing . . . the companies had a sense they wanted to look a bit sort of shinier . . . through

graduate training programmes, they started to ease out, to some extent, those that were from the less educated or academic backgrounds. (14XB)

Today, recruiting predominantly from elite universities helps to signal the prestige of the sector, while in addition, because these universities are often dominated by individuals from more affluent backgrounds – who may also be most likely to apply - this approach may also ensure that these applicants are more likely to be equipped with the social networks and specific forms of cultural competence identified above, which are highly valued within banks.

. . . most institutions stick to the elite . . . kids that have been to boarding school and then sort of gone on to do the degrees from the Oxbridge and the sort of top universities . . . when you go to these universities and schools I think you are self-confident. You are mixing and spending time with people of the similar sort of socio-economic background . . . you are much more travelled . . . you aspire for even greater wealth and greater sort of achievement. (27B)

3.5.4. Cultural Capital and Perceived Fit – Supply Side Decisions

The emphasis on aspects of cultural capital identified above varies according to the division and the bank, and for a minority of our interviewees, social background was considered to play little or no direct role in recruitment and selection. Others underlined the efforts they and others made to counter-act the tendencies to recruit for ‘fit’ outlined above. However, *perceptions* of elitism within investment banks have an important impact on the ambitions and expectations of aspirant professionals from non-privileged backgrounds, as described next.

- **Self-selection:** Applicants to investment banks may not be representative of the institutions they attend, or their degree course. Data collected for The Sutton Trust⁵¹ found that 9% of all new entrants to the sector in their sample group were educated at Oxbridge. Of these, 65% went to private school. This figure rises to 72% for Oxbridge educated organisational leaders. In total however, 42% of all Oxbridge graduates went to private schools. The conclusion drawn in the report is that Oxbridge entrants to the City are more likely to be privately educated than Oxbridge graduates who go elsewhere. It is not clear whether this is the result of higher numbers of applicants, or whether privately educated Oxbridge graduates experience higher conversion rates when they apply to banks than their state educated peers. However, interviewees suggested that students from non-privileged backgrounds may self-select out of the recruitment process in higher numbers on the basis that they feel they may not fit-in.

The sort of events they are [running] on campus are likely to be sort of you know, dinners in hotels . . . I think we can probably assume [non-privileged students] self-select for those sorts of events. (42O)

I think that when they're present on campus it can be seen as just often white, sort of male . . . [bankers are] very ambitious, very dedicated, very hardworking, very polished people who maybe people from certain backgrounds would associate themselves with more than others . . . they'll think that it's not for them because they're not good enough or . . . it's seen as something which is unattainable. (51O)

According to our interviewees, careers advisors on campus tend to take a student led approach and so do not actively seek out students from a wide range of social backgrounds. This means that investment banks are more likely to see students who are already confident, and have a clear idea of what is involved in the recruitment and selection process, and these individuals again are more likely to come from a relatively privileged background.

- **Masking difference and perceived or actual performance:** Almost all the aspirant bankers we interviewed who were from non-privileged backgrounds described a strong perception that success at selection, and subsequent career progression, depends at least in part on the performance of a middle-class persona.

I grew up with some really intelligent people, really able, and they could do some great things, and provide some great skills to these places, and have a great career. But they're just never going to fulfil them in that way, because they don't fit in with that crowd . . . it was sad that it came down to that. (41AB)

They underlined that they sometimes felt out of place at interviews and internships.

You end up speaking colloquially in an east London school. Go to a bank and [you] realise that's not actually how you're meant to speak in the real world . . . half of the people interviewing you were very posh, they'd clearly gone to really good schools, spoke in a different way . . . you felt out of place when you go for those interviews. So I think that stood out for almost every interview I did. (39B)

As a result, applicants from non-privileged backgrounds often made significant attempts to mask their difference, including altering their accent and style of communication, in order to display what they considered was the appropriate classed performance during interviews and internships.

I felt like my accent was a bit out of place, so I changed it. I changed it. I speak like this now . . . if I can speak properly, it gives no indication of my background whatsoever. (49AB)

It is possible that in making these efforts to fit-in, the confidence of applicants from non-privileged backgrounds is affected accordingly, thus having some impact on their perceived performance at interview and internships.

I wouldn't say it was beyond my ability but . . . [the other candidates] they're much more aggressive, they're much more kind of cut-throat, and you literally sit in that waiting room and these kids . . . are . . . you know, "I did this, I did this, I did this" . . . it's so intimidating to be in a room with people like that. Especially when you're from a background like mine . . . when you don't come from that, you almost feel like you don't have the right to be there . . . (12AB)

The interviewee quoted above went on to suggest that while not expecting special treatment, some accommodation of difference and additional support

during the selection process may assist banks as they seek to recruit talented and determined people from a wider range of backgrounds:

. . . I feel that maybe if they kind of incorporated that into their recruitment process, ever so slightly, they may be able to pick up talent that . . . maybe just might not be as confident . . . (12AB)

3.5.5. Summary of barriers to access on the basis of social background

To summarise, it is likely that educational background has a strong influence on access to investment banking. In addition, aspects of the selection process may further advantage individuals from more privileged backgrounds who can signal higher class status, though the strength of the impact is likely to vary between divisions.

To some extent, perceptions and projections of cultural competence also rely on experiences that are gained by people from more affluent backgrounds, including for example foreign travel. It is of course difficult for individuals from non-privileged backgrounds to acquire these experiences before they enter the sector. It is on the other hand entirely possible for individuals from non-privileged backgrounds to acquire and adopt many other necessary forms of cultural capital, and some start this process when they attend an elite university, for example via socialising with peers. It is though debatable whether they can do so in the same timescales as individuals who have been socialised in the preferred forms of behaviour for most of their life.

Perhaps the key point here is that expectations around speech, accent and behaviour within investment banking are arguably challenging for individuals from all backgrounds to navigate in order to gain entry and during the early part of their career. Yet those who are outside the white, middle-class 'norm' may be required to devote particularly high levels of energy to deciphering and navigating these quite complex codes, and this may detract from their ability to perform at the highest level.

. . . you know you have to act . . . you have to work at fitting in . . . I felt myself slipping into this kind of assimilation. And I feel that if I assimilate I lose . . . my unique selling point . . . you're keen to put your best foot forward . . . but actually there's nothing that's not my best foot forward about pronouncing a glottal stop . . . it has nothing to do with my capacity or my ability to deliver, [but] even if it's 1% less energy trying to pronounce Ts and etcetera, etcetera, that can go into my work, that's 1% better output . . . I just went into my shell in the first week because they spoke in a way that I just didn't . . . And they spoke about things I had no knowledge of. So they started talking about half Windsor tie and a full Windsor tie and all this kind of stuff. And automatically I felt out of my depth, out of my comfort zone. Then kind of week two, when you listen to the substance of what a lot of people are saying, it was just quite a lot of hot air actually. (40AB)

Fairly uniform expectations around dress, appearance and 'comportment' are arguably considered natural, inevitable and relatively unproblematic within the banking sector, the wider professions, and indeed society as a whole. These expectations relate to widely held understandings of what 'professionalism' means, and who can represent and embody professionalism. Yet it is perhaps worth noting that in relatively recent history, it was also considered natural and inevitable that

professionals would predominantly be white, and generally male. These expectations have been overturned, to some extent at least, in peer group professions. Making challenges which relate to social background more explicit may help investment banks and other professions to institutionalise a still more inclusive version of talent.

. . . it shouldn't matter about the way that you talk . . . how you carry yourself . . . your confidence . . . [but] they know what works. So they just keep on doing that, and they're just missing out on a hell of a lot of talent. (O1)

Some banks have made progress in responding to these issues, and several offer relevant programmes to foster inclusion on the basis of social background. Before describing these interventions in further detail, we touch briefly on the effect of social background on career progression.

3.6 Career Progression and Social Inclusion

Most interviewees believed that social background has a negligible impact on career progression. This belief cannot be tested by empirical data as yet. Data provided by The Sutton Trust⁵² and cited above suggests that current leaders within banking who are under 45 are less diverse on the basis of educational background than both older leaders and new entrants. This hints at a number of possibilities, including that banks are less likely to recruit individuals who have been educated privately now than they were fifteen years ago. Alternatively, the profile of new recruits may not have changed substantially, but privately educated leaders may simply do better. The latter might correspond with the notion of a 'class ceiling' within the professions⁵³, which suggest that individuals from less privileged social backgrounds experience a disadvantage throughout their career. Improved understanding of these trends specifically within front office roles within investment banking can only be provided should firms gather more accurate and detailed statistical data.

In the meantime, it is worth briefly considering the basis for current bankers' belief in meritocracy. In sum, we suggest that these beliefs can be contextualised in relation to the notion of 'human capital' particularly associated with influential economist Becker⁵⁴. This theory suggests that in situations where everybody has equal access to education and thus to the relevant credentials which determine merit, all individuals are able to compete in the labour market on equal terms, based purely on aptitude and skill (achieved characteristics, rather than ascribed characteristics). Some of our interviewees acknowledged that this situation does not pertain in practice, at least at entry level, precisely because in the UK as in many other countries, access to educational advantage is not evenly spread across people from different social backgrounds.

However, the majority of interviewees did argue that once an individual had gained access to a front-office role, career progression is based solely on performance. This perception was especially strong in relation to trading. In this division, interviewees underlined a "money meritocracy"⁵⁵ such that performance is assessed solely according to how much money each individual makes for the bank and therefore on an objective basis. As such, many argued, discrimination, bias or preferential treatment on the basis of gender, ethnicity or indeed social background would be illogical and irrational.

The banks are actually amazingly rationally, cold heartedly non-discriminatory . . . [it doesn't matter if you're black, white, male or female, gay or straight. (25XB)

We do have a very diverse . . . group of people. We've got many different languages on the floor . . . one of the great things is that . . . you get here on merit . . . and then when you've gotten here . . . it doesn't really matter that much where you came from. (38B)

This emphasis on rationality was also considered relevant by interviewees given the international market and client base of investment banks, in which context discriminating on issues such as accent would seem to make little sense.

You know, we are so international that we are not just interacting or marketing locally . . . We are an 100 percent international team and 100 percent international clients . . . if we were running a UK . . . team with a hundred percent UK clients and they spend all the time meeting UK companies, then you would think these divisions would be much more obvious . . . But when it is a hundred percent international from every possible angle, then you know, it certainly becomes almost undetectable to me. (36B)

The weight of evidence does suggest that investment banks do operate on a largely rational basis with respect to treatment of people on the basis of social background, yet that this does not guarantee equal opportunities for career progression. For example, in corporate finance, social background may have a direct impact on the capacity to build and develop relationships, thus contributing to improved opportunities for career progression.

I see people from a variety of backgrounds succeed . . . once you're in, if you're good, no one cares what background you're from. No one cares what university you went to, no one cares what degree you got. And if you're good at your job and you can make money for the bank and make your boss look good then actually social background is not very important . . . the problem is that actually being good at your job often means being good with clients, and often the clients are from certain backgrounds . . . even in your first few years in equity sales or as a sales trader, you will be going out with clients going for lunches and dinners etc etc. It's very much kind of a relationship management type role where you need the social capability to speak in the right way and you're used to going to nice restaurants and nice bars and you know a bit about wine or you know . . . You go skiing you have things to talk about that your clients want to talk about, it really helps so . . . It could be good if you play rugby or you mix in certain circles. (51O)

As noted, the precise relationship between social background and career progression can only be assessed through further exploration including the use of quantitative data examining comparative retention rates. A particular area of interest in relation to career progression with respect to social mobility is the potential for movement from the middle and back office into front office roles, which may provide one opportunity for people from wider range of socio-economic backgrounds to access the most prestigious (and lucrative) roles. These routes do remain available within many banks, and the possibility of this type of movement underlines that attendance at a leading university is not an essential pre-requisite for high performance, as does the fact that many current leaders acknowledge that they

would not gain access according to today's stringent requirements. Movement from back or middle to front office is not though consistent across organisations and specialisms. This route may also be more available in trading than corporate finance, because in the latter, according to one interviewee:

senior bankers just don't have that interaction with other business groups in the same way. So, it's a lot more difficult to get in. (22B).

3.7 Approach to Social Inclusion within the Investment Banking Sector

Over recent decades, investment banks have increased their focus on diversity and inclusion challenges with respect for example to gender, ethnicity and LGBT. The current study suggests that though there are encouraging signs of progress, investment banks have not yet demonstrated the same level of concern for diversity on the basis of social background.

. . . general diversity's on the agenda and it is a struggle, but there's a lot being thrown at it . . . in terms of socio-economic diversity . . . there's next to nothing. (53O)

Investment banks have made some progress with respect to outreach and the provision of targeted internships for non-privileged people and under-represented groups, especially ethnic minorities. These initiatives can be valuable, in order to introduce students from non-privileged backgrounds to the sector, encourage them to aspire to an investment banking role, reduce the associated opacity, and provide them with relevant knowledge and skills. However, associated initiatives are often small-scale and their impact is not always evaluated, meaning that outcomes are difficult to assess.

In addition, this study found little evidence that investment banks have made meaningful alterations to mainstream recruitment and selection practices that would widen access on the basis of social background. In this respect investment banks lag behind the good progress made in peer group professions within the City such as law and accountancy. In this section we provide a brief overview of some initiatives in which investment banks are involved, before considering the emerging issues.

3.7.1. Outreach, Work Experience and Internships

Outreach, work experience and internships are provided by several investment banks, often working with third sector organisations. These programmes typically identify high achieving students from non-privileged backgrounds, according to a variety of measures. For example, this could include whether they attend a state school; are eligible for free school meals; are (or will be) the first generation in their family to attend university; attend a school with above average disadvantage.

Students are provided with support and information in order to access an internship, including skills training, advice on CVs, and preparation for interviews. This support may extend to their time at university, and some programmes focus on attracting students at this point, rather than when they are still at school. These programmes also aim to 'normalise' the profession for aspirant bankers from non-privileged backgrounds, on the assumption that their image of the investment banking profession might be based on stereotypes that do not reflect a more diverse reality.

Providers in this space include **Sponsors for Educational Opportunity (SEO)**, **The Sutton Trust**, the **Social Mobility Foundation (SMF)**, and **Rare Recruitment**, which has also developed a contextual recruitment system, which allows recruiters to understand the context in which experiences have been gained, and to situate academic performance against the performance of the candidates' school. **upReach** works specifically with undergraduates to help them access an internship within professional occupations, via support with written applications, mock interviews, CV reviews, assessment centre prep and online test support. Other organisations including for example **Citylink Brokerage** and **East London Business Alliance** which apply a model somewhat similar to a recruitment agency, identifying young people predominantly from within the Greater London area, and helping them to find opportunities within the sector, although not all of these are front office.

In addition, some specific programmes are run by banks with or without support from third sector organisations. For example, **J.P. Morgan's 'Aspiring Professionals Programme'** is supported by the Social Mobility Foundation and via internships mentoring and skills training assists c.50 non-privileged students each year, from their penultimate year at school, into university, and beyond. **Deutsche Bank** offers a programme named **I Have a Dream**, whereby working with Rare Recruitment, exceptional A-Level students are offered an intensive three week paid placement during the summer and on-going support and personal development from Rare. **Credit Suisse** offers **Steps to Success**, a two year programme for A-level students in the UK, who are from an underprivileged or under-represented background. This programme consists of one four-week and one six-week summer internships in London, which take place after year 13 and their first year at university. Successful applicants receive scholarship funding for their tuition fees every year for the duration of the program.

Good Practice Case Study: J.P. Morgan's partnership with the Social Mobility Foundation

J.P. Morgan has focused on social mobility as a key diversity area for many years. Prior to 2012, social mobility programmes existed at J.P. Morgan but the work was more fragmented than we see today. In 2012, J.P. Morgan began to work with the Social Mobility Foundation (SMF), building out a strong and highly integrated approach aimed at levelling the barriers to the profession for people from less privileged backgrounds. In that first year working with the SMF, J.P. Morgan established their flagship residential programme, welcoming 50 high-achieving secondary school students to take part in a structured two week work placement including key skills training, and paired each student with a J.P. Morgan mentor for one year.

This programme continues to run and, in response to research, the firm has added to its suite of social mobility programming including: a paid returning students programme for alumni of the 2-week programme, and a university e-Mentoring programme, pairing J.P. Morgan analysts and university students. The firm recognised the ambition and talent of these students, and with the help of a professional network, mentoring and a boost to aspirations the students were ideal candidates for recruitment to campus programmes. In 2016, 11 alumni of J.P. Morgan's social mobility programmes secured front office Spring Week places, which are among the most competitive placements offered by the firm. Following that, 6 of those received early offers for 2017 internship places, which builds on the achievements of the 4 alumni who gained places on a 2016 summer internship at the firm. Key factors leading to the success of this programme:

- Front office focus – the programme is restricted to placements in revenue-generating roles.
- Business buy-in at senior levels, and across the firm – a Steering Committee of Managing Directors governs the programmes and over 160 business volunteers are involved in social mobility programmes annually.
- Integration with recruitment efforts - to ensure that the playing field is level, and we are selecting top talent from the broadest possible pool.
- Independent impact evaluation – using qualitative and quantitative data, the latter collected by the Institute of Fiscal Studies, and extending over 5 years. The initial recommendations from these studies have been used to inform changes to the programme including ongoing mentoring to ensure students are supported throughout their university years.
- Beyond London – though many programmes take place in deprived boroughs in London, there are far fewer available to young people in other parts of the UK. The vast majority of students on J.P. Morgan's residential programmes come from outside London.

Other work J.P. Morgan does:

- School's Challenge – Outreach programme to students from less privileged socio-economic backgrounds at an early stage in school career to help them explore career opportunities, and make informed choices on educational subject options during a crucial time in their lives. Teams of volunteers will support teams of students to design an innovative solution to a challenge + employability/skills workshops and workplace visits.
- St Paul's Way Trust Summer Internship Programme - 4 week internship in Operations for students of St Paul's Way Trust school, a school located in the Tower Hamlets and supported by the J.P. Morgan Foundation. The school is based in one of the most deprived areas in the London Borough of Tower Hamlets, 87% of the entire student cohort is eligible for Free School Meals.
- Apprenticeship Programmes in Bournemouth, Glasgow, Edinburgh and London – though not strictly Social Mobility programmes, they are regularly included in discussions of social mobility, since they offer an alternative to university and the debt that often accompanies it. J.P. Morgan is committed to providing high quality apprenticeships and this year introduced a degree-level apprenticeship programme in Technology.

3.7.2. Emerging Issues

Emerging issues with respect to the approach to social inclusion taken by the investment banking sector are outlined in further detail below.

- **Stronger focus on the supply-side at the expense of demand:** Action to improve access on the basis of social background can generally be divided between work which focuses on the demand side (changing existing recruitment and selection practices and encouraging behavioural change among hiring managers in order to facilitate fair access); and work which focuses on supply (changing the characteristics, skills and knowledge of aspirant or potentially aspirant professionals). The latter includes activities which fall under the umbrella of outreach, including the provision of work experience and internships.

Good practice involves a focus on both sides of the equation. This is likely to be particularly important within investment banking because while valuable, social inclusion initiatives can only assist a limited number of students each year. The current study has underlined that the barriers to entry reside not solely with the qualifications and aspirations of individuals from non-privileged backgrounds, but within entrenched beliefs about appropriate 'fit' held by current hiring managers, and embedded within institutional processes.

Currently, initiatives introduced by investment banks focus predominantly on the supply-side. This is a pragmatic approach which can be effective. However, a body of research underlines the associated dangers, one of which is that supply side initiatives focus on assimilation, which as already noted, is often difficult to achieve, and carries psychological costs which in turn can affect perceived performance. As a result, initiatives which focus predominantly on the supply side have been characterised within the academic literature as a 'deficit' model of diversity⁵⁶.

The most progressive organisations in peer group occupations have extended their focus to the ways in which current organisational structures and cultures set up unnecessary barriers to access for professionals from non-traditional backgrounds. This has tended to include a stronger focus on ensuring that mainstream recruitment and selection processes are equipped to recognise potential in aspirant professionals, in addition to 'polish.' Thus, attention is focused on removing or reducing barriers to access, via targeted training for hiring managers, CV blind recruitment techniques, alterations to screening on the basis of academic credentials, and extending the type and number of target universities from which firms actively recruit.

- **Social background not measured or monitored:** Relatively few investment banks measure the socio-economic background of applicants to the firm, new entrants or current staff. Measurement and monitoring is important not least because understanding the barriers to access on the basis of social background, and the subsequent impact on career progression, requires accurate and relevant data. Measuring social class can be challenging and the UK government is currently working on a standard set of measures to be used by organisations in

this context. To date, most organisations have focused on school attended, first-generation university, and whether the individual received free school meals^{xxiv}.

These are only partial proxies for relative privilege yet nevertheless do provide some insight and help us identify changes over time. Firms at the forefront of good practice have used this data to help understand how and why individuals from a range of social backgrounds are screened out of the recruitment and selection process, and the most appropriate adjustments that can be made in response. The most progressive are making this data transparent. Transparency is a marker of good practice since, under the right circumstances, it drives change, and contributes to excellent practice.

- **Evaluation of initiatives:** Good practice would require that outcomes of social inclusion programmes are externally evaluated against an agreed benchmark. Ideally, this would involve the construction of a suitable control group via appropriate data, which is the 'gold standard' in this context. This approach has been used by for example the Social Mobility Foundation, which has also publicly reported the results^{xxv}. It is unclear whether all banks evaluate the success of their social inclusion initiatives and against which criteria, and if so, how they do so. This adds to a lack of transparency with respect to the impact of these programmes in terms of opening access.

. . . it tends to be not well-evaluated . . . when you say to them, "why are you doing this programme rather than this one, and what is your evidence around that?", you often will get a blank face . . . I do think there's some really good practice out there, it's just that there's a lot of different organisations probably replicating poor practice, and not learning best practice. (31O)

- **Missing middle:** The evidence presented in this research would suggest that individuals from relatively privileged backgrounds are advantaged in the recruitment and selection process. In contrast, social inclusion initiatives tend to focus on individuals from *under*-privileged backgrounds. This leads to a possible 'missing middle', such that people from relatively modest backgrounds may also be under-represented. The extent of this issue could be identified via additional measurement and monitoring, and addressed if necessary via adjustments to recruitment and selection practices, including recruiting from a wider range of universities.

. . . you tend to recruit the exact same type of profile [in mainstream programmes]. But then they have these, to make up for it, programmes . . . So it's just sort of become a bit more extreme You know, you'll either get these people who come through these sort of outreach things, or then you just get the same formatted type of person. (37B)

- **Focused on CSR not talent:** Social inclusion and especially outreach initiatives are often located within corporate social responsibility (CSR) or philanthropy.

^{xxiv} Free School Meals are provided by the UK government for example where parents are in receipt of various forms of income support, support under Part VI of the Immigration and Asylum Act 1999, the Guarantee element of State Pension Credit, Child Tax Credit, or have an annual income of £16,190 or less. They are a proxy measure of low parental income.

^{xxv} See: <http://www.ifs.org.uk/publications/7610>

Although potentially valuable, this does suggest a certain disconnect from the talent agenda, such that specific initiatives are seen as an ‘add-on’ rather than integral to existing recruitment and selection practice. As noted, a more progressive approach might be to consistently embed efforts to improve diversity on the basis of social background within mainstream recruitment and selection practices.

- **Limited evidence of collaboration across the sector:** Within the legal and accountancy sector, firms are collaborating on social inclusion, sharing good practice, and setting shared targets and objectives. Relevant initiatives include Prime within the legal sector and Access Accountancy. There is no evidence of collaboration within the investment banking sector, an absence which was attributed by interviewees in part to intense competition between banks, and their tendency towards secrecy.
- **London focus:** Although investment banks are offering internships and work experience, and outreach via insight days in schools, this tends to be focused on students in the London area. Good practice also involves focusing on social mobility ‘cold spots’ outside London, including offering residential internships to students who live outside London. J.P. Morgan’s Aspiring Professionals Programme offers a model of good practice here (see page 98).

. . . corporate access work . . . tends to be London-focused, it tends to be low-hanging fruit – so they might be state-educated, but are they the most needy students? (310)

... Front office will tend to be London. If it’s back office, you might get it outside of London. (5CA)

- **Limited attention to career progression:** Peer group sectors have found that individuals from non-privileged backgrounds sometimes have lower retention rates than their more privileged peers. Those firms exhibiting the very best practice have therefore embedded social background within their diversity and inclusion agenda and offer both focused and broadcast support on this basis, including for example, blogs, training for current managers, and mentoring for those who require or request it. To the best of our knowledge, investment banks do not as yet assess the retention and progression rates of individuals from diverse socio-economic backgrounds to determine whether this is an issue, or include social background within wider diversity programmes.

Good Practice Case Study: Barclays

Social mobility at Barclays is about enabling people from every community and background to achieve their ambitions.

“When the communities in which we live and work thrive, we do too. And when society prospers, we all do. Barclays has always played a part in driving economic growth and social progress. And today, we have more opportunity to play a pivotal role in fostering innovation and facilitating inclusive, shared growth for all – now and as we develop the future of banking.” Jes Staley, Chief Executive Officer, Barclays

Barclay’s commitment to social mobility specifically within early careers recruitment is centred upon three key pillars:

- **Driving education and employability:** Barclays Life Skills was launched to inspire young people to get the skills they need for a better future. LifeSkills brings together educators, businesses, young people and parents to achieve this, as increasingly young people need to leave education not only with appropriate academic results but with the skills businesses need now and in the future. Educators are provided with more than 60 hours of free curriculum linked employability resources to teach young people in the classroom, as well as dozens of interactive tools for young people to learn in their own time or in conjunction with their parents. To date more than 2.6 million young people have participated in LifeSkills.
- **Providing employment:** Offering quality work experience and full time employment opportunities through a diverse range of entry points, catering for all levels of educational attainment. Particular attention has been placed on ensuring strong internal mobility across all programmes and clearly defined career pathways.
- **Developing recruitment processes that drive inclusion:** Assessing against potential by taking into account an individual’s journey, not just the end result.

Barclays believe that it is critical to understand the employer landscape including by capturing reliable metrics, to fully understand the impact of marketing strategies and recruitment processes, ensuring they are driving inclusion.

For this purpose Barclays has introduced contextualised data monitoring, which has ensured they have a better understanding on how students from diverse backgrounds perform in their selection process and how they can best address any emerging issues.

As a consequence the next step has been to design a completely new recruitment process that does not rely on traditional upfront disclosure of academic attainment and past experiences, known barriers to social mobility.

Barclays’s new process also incorporates a strong immersive and educational focus, preparing students better for each subsequent stage and giving them a real insight into their chosen career path.

Barclays will be monitoring the results of their recruitment transformation and will then decide future required actions and focus.

The next chapter will almost certainly include a focus on the retention and progression of our recruits.

3.8 Drivers and Barriers to Change

In this final section we consider both the drivers and barriers to change, starting with the former. An emerging business case for change within investment banking includes issues relating to talent. For example, interviewees acknowledged that many talented students are excluded on the basis of processes which one called “*insanely bureaucratic*” (31O). Others suggested that it is increasingly important to match the diverse client base of investment banks.

. . . the main thing a bank wants to do is have a relationship with its clients . . . If you go to meet a client for dinner or anything and there’s six private school students from your side, and very diverse from the other side, it’s going to stand out. (39B)

And yet on the other hand, other interviewees questioned whether the client base is universally concerned about issues of diversity according to social background, or necessarily significantly more diverse on this measure.

. . . a big part of their role . . . is to be credible in front of chairman and chief executives of large companies, and who often fit that description themselves . . . you’ve got to be one to win the most clients. (25O)

More prevalent themes tended to rest on the following three main pillars.

- **Homogeneity and emotional intelligence:** Interviewees underlined the relative homogeneity of new entrants to the profession and the dangers of group think. They argued that new entrants are often akin to “*cookie-cutters*” or “*droids*” and that a focus on academic intelligence may have compromised equal attention to emotional intelligence, which is a vital component in developing client relationships.

[New entrants are] generally bright but not always as inquisitive . . . A lot of people have a ton of work experience from a very young age which is great, but you kind of get the impression that their dad was a senior financier or something and arranged this . . . you get quite a robotic [type] . . . a tendency towards being slight automatons, amongst the people I’ve interviewed anyway, who all have got similar experience. Great experience but you don’t feel like they’re that rounded and I think that manifests itself when they get into the workplace as well . . . it’s a client business which is a people business and the clients are all shapes and sizes and forms and personalities so it doesn’t necessarily facilitate a good client service. (34B)

. . . we work in opinion based industries. And having a broad range of backgrounds, having a broad range of viewpoints, only makes you a stronger organisation . . . When we’re doing large trades, when we’re doing very client specific activity, it’s not just one person making that decision . . . having that, sort of, broad range of opinions both in gender as well as backgrounds, as well as degrees, as well as everything else, only helps for a better conversation because ultimately they will bring in viewpoints that . . . you’re not always party to. (22B)

- **Entitlement:** Interviewees suggested that new entrants sometimes arrive with a sense of entitlement and are often disappointed when faced with the reality of

what is often relatively routine (but hard) work during their early career. They suggested that in contrast, non-privileged students are hungrier for success.

For me, recruiting at the elite level, from good universities, it's actually a mistake because people get so unhappy so quickly, they come in on the sales pitch, you know three interviews and whatever, and assessment pitch, and then they get disappointed, whereas if you brought someone with less education or with a poorer socio-economic background, they would actually maybe be working more harder and more willingly accepting to work harder. (30B)

. . . the problem that we face is that there are too many people who come in here with a sense of entitlement . . . I [would rather] have somebody . . . who is really hungry and has a thirst for knowledge [rather than] somebody who has dreamt of trading since the age of 11, [runs the] finance committee at university and, you know, father's, father's, father's, father was a banker. (22B)

Some interviewees suggested that often the graduates who come through existing routes are unable to hit the ground running and may show limited initiative, at least initially. This was presented as a problem for front office staff:

There's more of a machine about recruitment than any understanding of the business, or any ability to actually recruit the right people . . . every year [current bankers] . . . moan about their graduates who are coming through from the HR which have been resourced from universities . . . they get them and they go, "oh Jesus Christ. Jesus Christ, we've got to babysit these XXXX." (70)

A minority of interviewees argued that by selecting so heavily from a small set of target universities, banks rely too heavily on admissions officers at those institutions to initiate the selection process on their behalf. As the interviewee above went on to say:

. . . they do leverage still quite a lot on universities because they think universities are still operating at a high enough level . . . but they're not . . . the universities are really ineffectual with making that difference between who gets there. And the people who go to milk rounds are your corporate droid . . . It's the bank's problem that they've got to solve. They've got to be saying to people, we're looking for something different. (70)

- **Changing expectations of graduates and attraction of banking:** These discussions often took place in the context of wider conversations about the aspirations and expectations of 'millennials'. Most important here, interviewees referenced the changing preferences of 'top' graduates, with apparently higher numbers wishing to work in fashionable areas such as Financial Technology, or 'fintech'^{xxvi}.

^{xxvi} Fintech companies are defined as those that offer technologies for banking and corporate finance, capital markets, financial data analytics, payments and personal financial management. Fintech is often considered likely to disrupt traditional investment banking activities. See for example. <http://www.fintechinnovationlablondon.co.uk/media/730274/Accenture-The-Future-of-Fintech-and-Banking-digitallydisrupted-or-reima-.pdf>

. . . all banks are going through cost cutting exercises . . . And you have lot of fintech companies which are starting up across London. So you have all these young guys making a lot of new things, you have regulation which is stopping the banks doing new things themselves, and also doing what they used to do . . . which means they have to fire a lot of people or restructure the businesses. And the way they're doing that is they're either shrinking completely or moving to different locations . . . it probably won't attract the same grads . . . They look at law, they look at accounting, they look at the new fintech firms . . . Or traditional industry as well. (39B)

. . . if you think about what's hot right now, I want to be tech entrepreneur, you know. (22B)

In addition, the attractiveness of investment banking has apparently diminished as a result of reputational issues following the financial crisis, and as a result of reduced compensation compared to working conditions, including the necessity still for extremely long hours. Interviewees argued that the financial crisis was a systemic issue, yet the reputation of the sector remains damaged, some suggested disproportionately.

Bankers used to be considered right at the top of the professions with the doctors and the lawyers . . . But today . . . bankers are not seen in the same light. They are seen as greedy, they are seen as deceptive, they are seen as lining their own pockets and bending the rules to achieve their targets and goals . . . it's been a tough five/six years. (27PB)

. . . the dynamic which is paramount at the moment is that banks are downsizing. . . people who know about that, it deters them from coming in, but it also gives them a sense that . . . "I no longer have a career in a bank. I'm going to go there, I'm going to be fodder. I'm going to try and make as much money as possible, it's probably not as much money as I used to be able to make and if I don't like it I'll go off" . . . Over the last five years we've lost huge amounts of human capital, highly skilled human capital . . . there's not the upside. And . . . [bankers] clearly look for the financial upside. That is exactly why they're here. (70)

These issues point to the fact that investment banks are currently subject to considerable pressure, and hint at the requirement for more fundamental change in recruitment practices. This study cannot comment definitively on the extent to which these issues have been addressed within the sector, although as noted attention has apparently been focused on appropriate degree subjects, and there may be a stronger focus on testing the integrity and honesty of applicants' at interview. However, this may not always have extended towards a systematic review of the types of technical skills and character traits required by investment banks in future, and how this might map on to diversity issues including gender, ethnicity and social class.

Further, despite the concerns outlined above, investment banking undoubtedly remains a highly popular and attractive career choice for graduates from leading universities, and the sector has no shortage of applicants. One interviewee reported that the bank in which she interned received 1,000 applications for 40 places on a spring week programme. During 2014 Goldman Sachs received 43,000 applications

for its analyst positions, of which 96% were rejected⁵⁷. Clearly salary plays a large part in the attractiveness of investment banking careers. According to Highfliers⁵⁸, the most generous graduate salaries in 2016 are those on offer from the investment banks (median of £47,000), which compares to law firms (median of £41,000), and oil & energy companies (median of £32,500).

Given a considerable over-supply, the motivation for investment banks to substantially diversify their intake on the basis of socio-economic background may be relatively limited. Several additional factors within the culture and structure of investment banks are also likely to represent barriers to change.

- **Cost:** A continued focus on a narrow group of target universities presents banks with an efficient approach to graduate recruitment, and is considered within the sector as a cost-effective way to reduce a very significant volume of applicants to more manageable proportions. It is important to note that the number of UK universities targeted by banks is particularly narrow, even compared to peer group occupations such as law and accountancy, because investment banks also target elite universities on a global basis, and thus they argue that their recruitment budget is stretched in this respect. This focus is aligned with a perception within the sector that the 'best' candidates, though present in other universities, are relatively few and far between and therefore expensive to reach.

. . . if they were to look at the Birminghams, Manchesters, Glasgows, Edinburghs . . . there'll be smatterings of very good people in all those places . . . an HR department . . . would say they [are] much more difficult to unearth, the kind of jewels or whatever. (39B)

Questions of cost are particularly important in the post-2008 context where according to interviewees investment banks have limited budgets to invest in widening participation.

. . . there is a sort of return on investment question here . . . the recruitment budget is pretty modest . . . for a lot of these firms. (S1)

. . . the investment banks are under huge pressure at the moment in terms of costs. (26XB)

- **Shared values and diffuse leadership:** It was noted at the outset of this chapter that such is the diversity of roles and specialisms within investment banking, it is difficult to talk of the sector as though it were a single entity. These concerns extend even to individual banks, which interviewees explained are characterised by multiple sub-cultures and conflicting but often unstable power bases held by individuals and teams. As such, authority is not always most obviously vested with those in formal leadership positions.

. . . the people that you meet vary across these investment banks, and the culture of the firm that you hear about in the presentations, does not drill down to the teams that you're in . . . your experience in these companies will largely depend on the team you end up in, not on the bank. (41AB)

. . . *fiefdoms exist. And fiefdoms are . . . culture specific, they're like your sub-groups, and they'll all be like the same little tribe. So you've got to break that down.* (70)

A relatively fragmented culture represents potentially challenging conditions in which to promote the adjustments to recruitment and selection practices that might significantly open access to banks on the basis of social background. This is also likely to be true because as noted investment banks are characterised by a strong cult of meritocracy, against which backdrop current bankers appear reluctant to acknowledge a possible challenge around social background. If current bankers are convinced that recruitment and selection, and processes for career progression, are already fair and meritocratic, there may be limited perceived incentive to change. These views might be supported or challenged with access to additional data.

In the meantime, further action around social mobility may be slowed because interviewees claim that investment banks have become increasingly risk averse in some aspects of their culture, as a direct and indirect effect of regulatory change. As one banker commented (18XB): *“Now though, if you want to fart you have to get it signed off.”* Further, as noted, some aspects of the selection process are relatively informal. Thus, final selection decisions are often handed to current professionals, who may only appoint two or three people each year, and who may see little point in change, or more potential for risk should they diversify their intake.

- **Internationalisation:** The issues outlined above are exacerbated because large investment banks in London are often foreign owned and headquartered elsewhere. This poses three specific challenges with respect to social mobility. The first relates to a perceived requirement for consistency in approach in graduate recruitment across the bank. In other words, bank representatives suggest that they would find it especially difficult to make adjustments to screening procedures that would facilitate diversification (for example the use of contextual data, or no longer screening on academic credentials) unless these adjustments can be consistently applied to applicants from around the globe.

The second challenge relates to concerns within banks that changes to practices that would facilitate diversification on the basis of social background often have to be signed off in headquarters which are distant in terms of geography and culture, and where issues around social mobility which are (relatively) live in the UK, do not carry similar weight. As a result, interviewees suggested it is difficult to obtain wider leadership buy-in and support.

A third but related impact of internationalisation is that investment bankers are part of a global elite, who travel extensively, and who have often lived in multiple locations. As already noted, many of those working in London were not born or educated in the UK. Some interviewees suggested that on average, they may be less committed to the social mobility agenda, where they see social class is an English obsession and a relatively parochial concern. Interviewees contrasted banking with law and accountancy in this respect. They argued that professionals in the latter occupations working within the City are more likely to be British and

thus more likely to have a commitment to progressive change in the society in which they were born and still live.

If you look at law firms these are UK people running UK entities headquartered in the UK and [the partners] own them . . . So, in that context you take [scrutiny] personally . . . [Most] banks are not even headquartered here so the people running them are just pretty much immune to all of those things. (21O)

I don't know the extent to which social diversity is really recognised as an issue the same way that it is in law and the same way that it is within accountancy at the moment . . . mainly the people who are managers and senior leaders within the investment banks, within front office, are not British. They don't really understand the whole British class system . . . at [big four accountancies] they all understand the issue even if they differ in their approach and the amount of importance they place on it. (51O)

- **Crisis and continuity:** Interviewees said that, especially since the financial crisis, investment banks are sometimes characterised by a climate of fear, in which individuals and groups have become “*scared of change and scared of innovation*” (21O). The extent of this issue and its precise impact is uncertain since a parallel theme was that product innovation has become more rapid since the financial crisis. However, the specific effect on recruitment and selection may be to further institutionalise and embed existing practices, rather than encourage change.

. . . what is okay? Okay is someone that you can trust. Okay is someone who shares your values . . . in a situation or a corporate culture where risk-taking is being shied away from . . . I do think that people become ever more narrow. And the larger the organisation they're in, I think the more common it is to see an increasingly narrow range or, you know, stereotype, they're looking for in order not to upset the ship, right? (16B)

A general tendency towards the status quo may be further encouraged as a result of insecurity. Many interviewees spoke of an investment banking culture which has become more rather than less aggressive since the financial crisis, and remains “*brutal*” (45O).

I found the really ugly side of human beings and how teams were ripped apart. We didn't know who was going to be fired next, so everyone was kind of fending for themselves, and I feel like that kind of sick culture has remained . . . it's quite an aggressive sport. (30B)

. . . they can really be cut-throat places . . . they cut-off the bottom 20% of the company, in terms of performance . . . the culture seemed quite toxic at times . . . I had to watch my back. (41AB)

This analysis appears to suggest that to some extent, even where individual preferences of current bankers point in a more progressive direction, the structure of banks and the market in which they operate, along with associated incentives, point in another. The intensity of this culture undoubtedly varies between divisions and again, between banks, yet a consistent factor is that

technology is changing the landscape of investment banking, leading to the potential loss of jobs and associated insecurity.

. . . today they're trading FX or IRD interest rates or whatever, and then the next thing you know, they are replaced by a computer . . . I see it in the older staff, they are very scared of losing their jobs before they . . . hit retirement age. So they do a lot to keep their position safe, which I really did not see in 2007 or 8. (30B)

Interviewees also pointed out that compensation structures have been altered, against which an unintended consequence is that senior bankers with potentially the most power and influence to bring about change are in fact incentivised to maintain the status quo.

. . . the variable to fixed ratio has just completely changed . . . These are incentives that go the wrong way eventually because . . . if you've been in it for ten or say for fifteen years, your salary in a front office investment bank is probably like 200k, 250k . . . So once you're at that level of comp, you know . . . all you want to do is not fuck up and not lose your job. Like basically that is your only objective, to secure your position and stay where you are . . . You don't want to improve things, you don't want to change anything . . . And it doesn't matter whether the business is working well - normally it's not working well. It's not managed. (37B)

- **Social justice:** Many investment banks are clearly committed to philanthropic work and have a strong focus on corporate social responsibility. However, related practices are sometimes add-ons to existing practice and focused on external good works, rather than everyday internal cultures and their wider impact. Further, according to some interviewees, a relatively narrow attention to money as a key motivation sets bankers apart, at least to some extent, from peer group professionals such as corporate lawyers and accountants, who they argued are more likely to retain at least some commitment to social justice and ethics in their everyday work. This could have a limiting effect on the pace of change.

I think quite a lot of lawyers are decent people who want to make a change. Who are British and are really clued in to . . . all of the sort of kudos that you get from being a fully paid up member of society . . . it is simply a fact that bankers are more motivated by money. (21O)

. . . from their point of view, how is [social mobility] relevant to making money? Unless it is, why would they be interested? . . . bankers, they don't really have a code of ethics . . . I think probably most bankers wouldn't think having a social purpose was necessary at all, as long as you're making money. (45O)

As one interviewee said specifically in relation to current recruitment and selection processes:

. . . why would anyone want to [diversify?] . . . because at the end of the day all the incentives in banking are purely financial. That is the only incentive: money. That is what the industry is about, getting paid a lot. (37B)

3.9 Conclusion

Interviewees noted that investment banks carefully control the information which reaches the public domain, and that there may be limited perceived incentive to permit scrutiny of specific recruitment and selection techniques, especially when wider issues around diversity or organisational culture and associated practices may be exposed. As one said:

. . . a lot of weird things happen in the bank . . . the glossy front of the bank and nice presentation you receive as a client doesn't reflect even a small portion of what happens in the bank . . . be it, you know, vulgar language, be it things flying around the office, discrimination, bullying, any of the stuff, the list goes on endlessly, and the thing that happens is when someone raises their voice, they get paid out . . . you start being transparent on one issue and the next day, you know, there's calls to be transparent on another issue. (30B)

Concerns around transparency were also often situated by interviewees in the context of considerable 'banker bashing' following the financial crisis. One interviewee explained that:

. . . the banks have been through a searing journey over the last seven or eight years . . . they're not able to make as much money as they used to be able to because of all the regulatory constraints on them. And so they're not the supermen that they were. (45O)

Another described the effect of negative publicity:

[There's been] a lot of negative press about everything banks do no matter what it is, and almost they've been made a scapegoat on a lot of things . . . So I think banks almost want to control their own destiny in what they're going to be in the paper about . . . they make sure they choose what they want to be known for. (39B)

A recent tendency towards secrecy within the sector was noted by Luyendijk, who in his book about investment banks identified a 'wall of silence'.⁵⁹ However, this trait has been associated with institutions within the City of London long before 2008. For example, writing about City during the post-war period, Kynaston describes its 'traditional secrecy and instinctive dislike of explaining (let alone justifying) its activities'⁶⁰.

This issue is raised in the current context because in peer group sectors a willingness to share and publish information has driven change, encouraged healthy competition between organisations with progressive aims, but also been cause and effect of valuable collaboration.

In the legal sector and the professional services sector, the improvements they've made, I would say is largely a symptom of peer pressure. I mean if [one firm] is going to put their head above the parapet, then everyone else thought . . . we better do something as well. (42O)

Partners in law firms sit around competing with each other on diversity. They're obsessed with the numbers and they all know what XXXX's number is and they all want to get up there . . . banks just don't compete like that. (21O)

Further, as institutions which have high status and power within the hierarchy of professions within the City of London, investment banks could potentially play an important role in supporting and driving change in other sectors, not least by helping to reconfigure our collective image of the 'appropriate' professional. In contrast, should they not do so, they may delay progress as corporate lawyers and accountants continue to seek to match their client base, which for many includes investment banks.

In his influential book, *The End of Gentlemanly Capitalism*, Augar describes the failure of a generation of managers in merchant banks during the last century. He notes that they had emerged from the public schools, with 'respect for hierarchy, conservatism and with bags of self-confidence.' Following 'Big Bang', the British firms were however left 'gasping to keep up with the harder working Americans.'⁶¹ There is little doubt that today's bankers are hard working and thirty years later there has been both continuity and change with respect to their demographics. Further, the most recent financial crisis has been experienced as a considerable shock to the system, and this has led to some reflection inside and outside the sector on, for example, the relationship between masculinity and risk⁶². However, with of course some important exceptions, this critical introspection may not have extended to considerations of social background.

It is vital to underline once more that issues relating to access according to social background are systemic and institutional, rather than individual. As one experienced banker argued:

I think ultimately the driver will be the change in incentives . . . to get more diversity; to have a more sustainable banking system; to have less, or more appropriate, risk taking . . . to transform this industry into a normal business where the incentives are appropriate. Because they're really not. (37B)

Further, changing the demographics of the sector will not in itself change its institutions. However, as one interviewee said:

. . . there is so much talent. And some of the best people in this industry now, at all different ages, all different genders, come from not your blue blooded backgrounds. They are quite simply the best at what they do. (70)

Should issues relating to inclusion on the basis of socio-economic background be more widely acknowledged and discussed within and by the sector, alongside a commitment to transparency on associated action, this might be indicative of a commitment to embedding related change more deeply within the structure and culture of these organisations.

Appendix A – Summary of Recommendations Life Sciences

A.1 Recruitment

<p>Life Science employers and sector related bodies acknowledge that they have an important role to play in developing a talent pool from which to recruit and as a result there has been significant investment in STEM engagement programmes. STEM engagement work has tended to be untargeted in the main, and take up by schools and colleges is likely to be rather uneven.</p>	<p>Funding agencies and delivery partners (including employers) should improve the targeting of STEM engagement programmes to ensure learners from the least privileged backgrounds are enabled to participate. Messages delivered through STEM engagement programmes should be adjusted to ensure a clear focus on supporting learners make informed choices about entrance to life science careers. Messages should be backed up with age appropriate labour market information.</p>
<p>Life science employers recruit for skills, often because they are responding to immediate business needs, and the pace of change is high in the sector.</p>	<p>HE learners from non-privileged backgrounds require improved access to accurate labour market information and work experience opportunities in order to increase their understanding of the skills in demand now and in the future. University Careers Services and academic departments should work more effectively to ensure students from widening participation backgrounds are encouraged to access support early in their university career.</p>
<p>Social mobility in employment has to date not been a priority for the sector, although there is strong interest in diversification of the workforce in terms of gender and to a lesser ethnicity.</p>	<p>A narrative for social mobility in the sector is needed in order for change to take place. Leading life science employers (for example SIP member organisations), learned societies, the sector skills council and other sector related bodies should seek to establish the business case for socially diverse employment in the life sciences sector.</p>

A.2 Employability

<p>For a career in life sciences the choice of degree course matters, employers are keen to recruit from particular programmes and/or particular universities due to the skill and knowledge base these programmes provide.</p>	<p>Ensuring access to high quality information and advice is imperative in supporting potential recruits make informed choices throughout their education. There is a need for clear messages about the best routes to develop a life science career, and to ensure these are delivered in an accessible and engaging way for non privileged learners.</p>
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A.3 Internships and Work Experience

The shifting employer base towards increased numbers of smaller employers, is changing the nature of available work experience opportunities. SMEs report barriers to offering work experience, and have differing recruitment practices.

Continue and expand the support given locally and nationally to smaller employers to deliver work experience opportunities. Seek to address the issue of lack of infrastructure for recruitment and supervision of students on work placements, perhaps through SMEs working in closer partnerships e.g. with HEIs.

Competition for work experience and Internship vacancies is strong and opportunities are unevenly available, leaving non-privileged students less chance to gain valuable industrial experience.

Ring fence opportunities within Internships and work placements for individuals from non-privileged backgrounds. Give encouragement and support to non-privileged students to access the available opportunities, which could include financial support to cover expenses on unpaid placements.

The NHS is likely to face recruitment challenges due to the demographic profile of the senior scientist workforce. There is a strong interest in employment within the NHS amongst the HE study body, however there is a lack of work experience placements available.

Increase the capacity of the NHS to deliver on Internships and work experience, especially in Biomedical sciences, to support graduates who aspire to a career as an NHS scientist. The NHS could increase the capacity to support internships for students and enhance social mobility through open and transparent selection procedures that students regardless of background and science capital can apply for these positions.

A.4 Career Progression

Apprenticeship opportunities in life sciences are currently relatively small scale and most widely at technical level. It is however anticipated that numbers of learners undertaking Higher and Degree Apprenticeships is likely to grow across the sector (not least due to the introduction of the Apprenticeship Levy). Ensuring equal representation of non privileged learners on programmes (where competition is usually high) is likely to bring challenge.

The potential of the Apprenticeship programme as a vehicle for social mobility should be examined. Monitoring of the social background of Higher and Degree Apprentices across the sector would assist in understanding whether the programme is widening opportunities or whether barriers are in place. Employers should be supported to develop inclusive recruitment practices. Information about the opportunities to progress to professional level roles through the Apprenticeship programme should be firmly embedded in STEM engagement programmes.

There is not yet parity of esteem between vocational and academic routes in the sector and there is not yet evidence that the Apprenticeship framework will allow equal progression to professional careers within the sector.

Work through the sector skills councils to raise awareness of the Apprenticeship route with employers needs to continue. Tracking of learner outcomes on Higher and Degree Apprenticeship pathways would help to establish evidence of impact and increase confidence in the sector of the Apprenticeship route.

A.5 Measuring and Monitoring

There is insufficient data on the social background of science students and on the life science workforce. Sometimes, gender breakdowns are available, but generally, not more sophisticated analyses.

Enhance the evidence-base for who science students are, what science graduates do and the profile of the life sciences sector. An annual analysis of UCAS, HESA and linked DLHE data would allow the sector to map the profile of entrants. Further work by employers to classify and analyse the social background of their workforce would enable progress in relation to social mobility to be judged.

Appendix B – Summary of Recommendations Investment Banks

B.1 Measuring and Monitoring

There is a lack of data in the investment banking sector which details the socio-economic background of applicants and new entrants to the sector, and current staff.

As a result, it is difficult to assess which aspects of the recruitment and selection process represent the most significant barriers to access, and how these might be addressed.

In addition, the precise impact of social background on relative rates of career progression is not clear.

Measure and monitor socio-economic diversity within the applicant base to front office (and indeed all roles) as part of the applicant tracking system, and extend measurement to the bank's wider population.

Assess for example, what proportion of applicants are from non-privileged backgrounds, and what proportion are screened out of the recruitment and selection process, at what stage, and why.

Use this data to make alterations to recruitment and selection processes as necessary, to measure progress over time, and to ensure that outcomes related to any interventions are understood, so that interventions are both evidence based and adjusted accordingly.

This process may be assisted on a practical level via the application and adoption of a contextual data system in recruitment (see below), but is complicated in the case of investment banking because of its highly international intake. As such, investment banks may wish to collaborate and seek advice on suitable measures for individuals educated outside the UK.

B.2 Recruitment and Attraction Strategies

Front office roles in investment banks are heavily populated by individuals from elite universities, whose students are predominantly from more affluent backgrounds.

These students may have a higher conversion rate from application to appointment as a result of access to campus attraction strategies offered by banks, and more relevant social networks, including with other students who have successfully gained access to the sector, though again this can only be confirmed via collection and analysis of relevant data.

Consider how attraction strategies can be adjusted to attract students from a wider range of social and educational backgrounds.

Consider offering specific ring-fenced entry routes for students from non-privileged backgrounds who have not had prior contact with an investment bank via internships etc. For example, encourage and enable non-privileged students to apply for ring-fenced internships in their second or final year at university.

Ensure that all graduate recruitment material underlines that diversity is welcomed, and ensure that this is evidenced within practice.

Even when they attend elite universities, students from non-privileged backgrounds may self-select out of the application process in higher numbers than their more privileged peers, on the basis of perceived fit.

Events run as part of campus attraction strategies may underline representations of investment banking as an elitist profession, perhaps via the type of event, and bank representatives who attend these events.

Aspirant bankers are expected to secure work experience and internships from an early stage, even while they are still at school. This offers considerable advantages to students who have the appropriate social networks which can provide knowledge of investment banking careers and entry routes.

Firms offer outreach programmes to help raise aspirations amongst students from non-privileged backgrounds, working with schools. However, many of these programmes are focused on students who live and study in London.

Many firms offer work experience and internships to students from non-privileged backgrounds. This is positive.

However, some programmes are relatively small scale and there is limited evidence that they are always embedded within the talent agenda.

The overall impact may be somewhat limited to date, although this is difficult to know as firms rarely publicise data on outcomes, and it is unclear precisely how some programmes are evaluated.

Record the socio-economic background of attendees at campus attraction events and compare this to the student population at that university as a whole. Where there is a discrepancy (e.g. under-representation of non-privileged students), work with the careers service and widening participation teams to encourage students from a diverse range of backgrounds to attend and ideally apply to investment banks should they wish to do so.

Consider the socio-economic background of campus ambassadors and other current employees who attend relevant events, to ensure that it represents diversity.

Firms could consider changing the timing of the recruitment cycle.

If this is not possible, as noted, consider offering ring-fenced opportunities for applicants to enter this cycle at a later date, perhaps during their second or final year at university.

Best practice would involve developing relationships with schools in diversity outside London and the south east, in so-called 'cold-spots.'

Where banks have not adopted targeted internships for non-privileged students, they may wish to do so.

Whether working with third sector organisations, best practice would require that the impact of programmes is assessed by an external evaluator, using both qualitative and quantitative measures. The gold standard is assessment of outcomes using statistical data against a suitably constructed control group.

Additional measuring and monitoring of these programmes, along with more transparency on the impact, could offer a useful opportunity for investment banks to share information around 'what works.'

Finally, firms who do not already do so should ensure that they offer opportunities for residential internships for students from non-privileged backgrounds who do not live in or near London.

B.3 Selection Processes

Rigid screening on academic credentials gained at school may have a disproportionate negative impact on students from non-privileged backgrounds, because of the relationship between educational advantage and attainment.

However, this relationship needs to be assessed via further use of quantitative data.

Current hiring managers may select new entrants according to perceived fit, and seek to match the characteristics of existing bankers and/or their own social and educational background.

New analysts within investment banking are often appointed to a particular division or desk, rather than a pool. However, some evidence suggests that this exacerbates challenges relating to inclusion, as selectors have a high level of individual discretion. In this respect, the process is relatively informal, enabling further room for judgements made according to perceived 'fit.'

Assess the impact of pre-screening on entry according to socio-economic background.

Consider following the approach of firms in peer group professions, including no longer screening on academic credentials gained at school, and/or using contextual data systems in recruitment. However, as with all changes ensure that the impact is carefully monitored and measured to ensure that it has a positive effect on outcomes, and that it is adjusted if not.

Provide additional and ideally compulsory training for all hiring managers on issues surrounding social background and 'fit.'

Ensure that these issues are actively considered in 'wash-up' committees following final interviews. Introduce structural measures alongside behavioural change, for example removing hiring privileges from managers who do not actively recruit for diversity.

Consider offering tailored support to all applicants on internships and at interview, to ensure that they have the best opportunity to perform at their best. Ensure that individuals who have better opportunities to learn the 'rules of the game' at an early age are not disproportionately rewarded, compared to those who have equal potential, yet less opportunity to prepare.

In addition to targeted training, include stronger measures to reduce informality in relation to final selection decisions, including a specific requirement that hiring managers should appoint for socio-economic diversity.

B.4 Career Progression

There is limited evidence that investment banks have considered the impact of socio-economic background on relative opportunities for career progression to date.

Doing so is important, not least because there is little point widening access at entry level, if individuals from diverse backgrounds do not have an equal opportunity to progress their career compared to new entrants drawn from more privileged backgrounds. Indeed, doing so

Adopt additional measuring and monitoring to understand the impact of socio-economic background on relative career progression, including how this differs according to different divisions within the bank.

Use this data to devise relevant interventions, including for example specific mentoring and support for those who want and need it, and additional and targeted training for managers in relation to both conscious and unconscious

could have ethical implications by setting up more diverse entrants to fail. bias.

B.5 Organisational Culture and Collaboration

Representatives of investment banks underline that progressive change is limited by budgetary constraints.

This provides a good opportunity for banks to collaborate, in order to maximise impact while controlling costs.

Opportunities to collaborate extend to raising awareness on a diverse range of university campuses and indeed schools about the range of available careers in investment banking, and entry routes.

Representatives of investment banks suggest that collaboration is limited by intense competition between banks for candidates, though it may be possible for banks to collaborate to attract, and compete to appoint.

Some interviewees suggest that a concern with socio-economic background has not been embedded within the culture of most investment banks.

Identify one or more social mobility champions who is in a leadership position, has influence within the bank and who has a strong understanding of, and interest, in the relevant issues.

This may be exacerbated because leaders from international backgrounds may be less concerned with issues around social mobility in the UK compared to those who have been born and brought up here.

Ensure that social mobility is embedded within the firm's wider diversity and inclusion agenda.

Establish clear senior leadership accountability for achieving diversity on the basis of socio-economic background and ensure that progress around social mobility is reported regularly to the board or equivalent.

Include proposed measures of success and clear targets in an associated action plan.

Appendix C – Life Sciences Research Methodology

C.1 Overview

The research into social mobility in employment in life sciences was based on qualitative research with employers and sector bodies. The research involved:

- Agreement of the definition/scope of the life science sector for the purpose of the research, and development of a sampling framework to ensure the range of employers included within the study reflected the breadth of the sector;
- Case study research with a sample of life science sector employers, involving the collection of in-depth qualitative information, through semi-structured interviews with key staff members involved in recruitment to professional roles in each employing organisation;
- Qualitative research with a selection of sector bodies, using indepth semi-structured interviews;
- An online forum, held following the data collection phase to discuss the emerging findings with representatives from employers and sector bodies. The online forum was designed to help researchers to test the strength of agreement with the emerging findings, conclusions and recommendations.

In total researchers undertook 26 interviews with life science employers and sector representatives (including those undertaken through the online discussion). Interviews were conducted on a confidential basis and using an informed consent process. The names of the participating organisations remain confidential.

C.2 Definition of Life Sciences Sector and Sampling

For the purposes of this study, employers in the life sciences sector were those involved in the following activities: pharmaceuticals (ie. development and production of drugs for use as medications); medical bio-technology (ie. technological applications that use biological systems to improve human health); or medical technology (ie. products and services used to improve the quality of human healthcare). The study focused on employers that recruit science graduates at the entry and early career stage for professional level roles in which scientific knowledge and skills need to be applied as part of the job function.

The life sciences sector is diverse in terms of the size and reach of employers, and there is a high degree of dependency between sector employers through outsourcing of activities to supply chain networks including to contract research organisations. Most employers are in the private sector however some employees in life sciences are within the academic workforce, and many life science employers have close relationships with universities for research and development projects.

For the indepth qualitative research with case employers a purposeful sampling technique was employed, the objective being to identify potentially information rich cases and to ensure the research took account of the diversity of the sector. Consideration in developing a sample frame was given to strand/activity of operation (pharmaceutical, medical technology, biotechnology); size of UK operation (small, medium and large employers), geographical location of main UK base (South East,

Scotland, North West and Midlands were identified as primary locations for the sector) and geographical reach (UK, Europe, Global). The sample frame was developed using expert knowledge and a long list of employers was agreed between researchers. Initial interviews with sector related bodies and a brief review of relevant literature was used to adjust the sample and at this stage the importance of business function and ensuring representation from Contract Research Organisations and an academic employer was identified.

Ten case employers took part in the research. Table C.1 shows the make up of case employers against each of the criteria within the sample frame.

Table C.1: Profile of case employers

Life Science Strand*	Pharmaceuticals/ Consumer healthcare	Biotechnology		Medical technology
	8	7		3
Business function*	Research and development	Manufacturing		Contract Research and support functions (incl. academia)
	5	4		5
Size of UK operations	Small	Medium		Large
	3	2		5
Geographical reach	UK	Europe		Global
	3	1		6
Primary UK base	South East	North West	Midlands	Scotland
	6	2	1	1

*Several of the case employers spanned a number of activity strands and business functions. Total number of case employers included in the study was 10.

C.3 Research with employers

A total of thirteen face to face or telephone interviews were completed across the ten case employer organisations. Companies were selected using purposeful sampling techniques (as described above) and a direct approach was made to a selection of employers by the research team to request a research interview. A number of the sector related organisations included in the research also helped to publicise the study and make contact with a wider group of employer organisations for inclusion in the project. The largest group of respondents were heads of HR and talent/recruitment acquisition officers with a dedicated remit for staff recruitment, however the sample also included some individuals in senior management and scientific roles where they had an involvement in recruitment functions.

For case employers key areas of questioning included: how talent is identified; the recruitment and selection processes in place and how these were developed; the social background of staff and data on this; views on social inclusivity of the organisation; initiatives in place to encourage social inclusion; perceptions of the barriers to the organisation becoming more socially inclusive.

C.4 Research with sector related bodies

In order to obtain a wider perspective on recruitment practices within life sciences and test the generalisability of findings, semi-structured interviews were undertaken with nine sector related bodies. This included discussions with sector skills and

employer support organisations (2), a learned society (1), with university careers services (4) and specialist recruitment agencies (2). Some sector related bodies were identified during the initial scoping of the study. Others were identified through discussions with employers and followed-up by the research team where they appeared to be in a position to offer a wider perspective on sector recruitment practices. Interviews with sector related bodies encompassed a relatively broad range of respondents, including HE careers advisers, recruitment consultants and education officers.

For sector bodies the interview was tailored to the organisation and the role of the respondent, however respondents were questioned about the social inclusivity of the sector; availability of research/data; initiatives or programmes are in place (at sector or employer level) to support the social inclusion agenda?; current drivers toward the inclusion agenda and views on possible interventions to make the sector more inclusive.

C. 5 Data collection and analysis

For collection of qualitative data a semi—structured interview technique was employed. This technique enabled researchers to collect data by setting up a situation (the interview) that allowed each respondent the time and scope to talk about the background, the approach and experience of measures in relation to social mobility, and emerging issues from their point of view. An interview script was developed for each respondent type, in conjunction with the team undertaking the research into banking sector, enabling the collection of qualitative data in a relatively standardised way. The interview scripts were initially piloted and amended accordingly.

Qualitative analysis was undertaken using an analysis grid with key points and verbatim quotations taken directly from interview transcripts. This approach built up a complete record of all the points and issues raised against each of the emerging themes. The sciences research team transcribed their individual interviews and regular discussions took place between the team to ensure there was a consistent approach to recording data and to agree key findings and recommendations.

During the qualitative interviews with employers and sector bodies, the researchers sought to identify any quantitative data that could be analysed to support research findings. Researchers were unable to identify any employers with data related to social background of the workforce, however publicly available HE participation data was accessed to enable the team to examine the background of life science students at undergraduate and post graduate level.

C.6 Online forum

Following in the completion of the semi-structured interviews, researchers established an online discussion forum to present emerging findings and shape final recommendations. The online discussion was highly structured and revolved around a presentation of key data followed by areas of questioning for each participant to respond to. The forum, using a simple web based audio conferencing facility, was heavily promoted by a range of different sector bodies and through researcher's existing networks. Take up of the forum was low and non-attendance on the day

had a further impact on respondent numbers. In total 5 respondents contributed to the study in this way including employer representatives (2), sector representatives (3).

C.7 Limitations of the study

The research was a small scale qualitative study which provides a detailed exploration of the barriers to social mobility within the life sciences sector. Generalisability of findings is an issue with the chosen methodology, although researchers attempted to counter this issue in a number of ways. Firstly, employers were selected for their inclusion against a sample frame developed in consultation with sector based organisations. Secondly, in addition to interviews with employers, interviews were held with recruitment consultants, HE careers advisers and other organisations with a whole sector perspective. Finally, researchers held an online discussion forum to gauge the scale of agreement or disagreement with the findings and ensure recommendations are grounded in real experience of employers. Despite low attendance at the discussion forum this was a useful mechanism to help researchers test out and confirm key findings.



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