



ABSTRACT

According to the UK government and Big Society Capital, pension funds are not investing enough in social and environmental impact investments. Pension funds are the largest asset owners in the UK economy and are legally obligated by fiduciary duty, to maximise financial returns. Many impact investment practitioners argue that fiduciary duty is the main reason holding back pensions from making impact investments, for various reasons. In this research based on my master's dissertation, I argue that fiduciary duty is not the most critical reason holding back pension funds from impact investing. I designed a case study on UK pensions' engagement with the impact investment market to test my hypothesis that measuring the impact of an investment leads to high transaction costs and is a limiting factor.

INTRODUCTION

The UK's social impact investment¹ market is considered a success among G8 countries. However, the UK government and market champion Big Society Capital (BSC) argue that the market has yet to achieve scale with institutional investors: "The UK is still a distance from having a robust and scalable social investment market but has played a leading role in much of the innovation in social impact investment internationally" (UK National Advisory Board [NAB] Report to G8 Taskforce, 2014, p.27).

Many perceive that institutional investors, especially Pension Funds (PFs)², have a role in financing the global transition to a socially positive and climate resilient economy (Della Croce *et al*, 2011; ClearlySo, 2009). This is often justified because the volume of PFs' Assets Under Management (AUM) has the power to make a significant impact on the global economy. PFs are the largest asset owners in the economy and are legally obligated to fiduciary duty, to maximise financial returns to their beneficiaries.³

Many argue that fiduciary duty is the main barrier for PFs to invest in the market. Other obstacles have been acknowledged in literature. The UN's Principles of Responsible Investment (PRI) organisation and others have been advocating for a new paradigm: not only that Environmental, Social and Governance (ESG) risks do not jeopardise fiduciary duty, but also that they should be weighted in investment decisions because positive social impact and good financial performance are linked (PRI, 2012). In 2015 the Law Commission advocated that trustees (fiduciaries) should explain whether ESG risks are considered prior to making investments. However, the UK government declined to accept the Law Commission's recommendation, leaving many practitioners disappointed (Williams, 2015).

- 1. Social Impact Investments are "those that intentionally target specific societal and/ or environmental objectives along with a financial return and measure the achievement of both" (UK National Advisory Board to G8 Taskforce, 2014, p.5).
- 2. PF is a common asset pool aimed "to generate stable growth over the long term, and provide pensions for workers when they reach retirement" (ClearlySo. 2011).
- 3. A legal duty commonly known as imposing obligations on trustees or fiduciaries to maximise investment returns to their beneficiaries.

4. In 2015, some of the biggest investment managers globally signalled that their clients find interest in the market, among them are BlackRock (US-headquartered, with second largest office in the UK) and Goldman Sachs (Mudaliar et al., 2016)

Despite the fiduciary duty barrier, some UK PFs are engaging with the impact investment market through collaborative initiatives of impact investments. At the same time, global investment managers have begun signalling that their clients (i.e. PFs) are interested in the impact investment market.⁴ Observing both BSC's argument that PFs have not taken on impact investing, and institutional investors' positive efforts to engage with the market, I am interested in whether PFs in the UK have taken part in impact investing, and if not, why not? This study discusses my findings on UK PFs' engagement with the market.

LITERATURE REVIEW

Research shows that in 2009, UK PFs had \$2.5tn (around £1.7tn) of AUM, which was estimated as 9 per cent of the world's total AUM (ClearlySo, 2011). This sum is larger than UK's GDP and is spread between two types of PFs, public pensions and private pensions, which are different in nature. Public PFs are grouped by a system of 89 funds. Together they comprise the £179bn UK Local Government Pension Scheme (LGPS) in England and Wales (Flood, 2016). The Local Authority Pension Fund Forum (LAPFF) brings together 70 LGPS funds from across the country with combined assets of over £175bn (LAPFF website).

Private funds, but not exclusively, are grouped in two leading lobbying organisations: the Association of Member Nominated Trustees, and the National Association of Pension Funds. The latter represents 1,300 PF member funds that provide pensions for more than 17m people. NAPF owns more than £900bn of assets (NAPF website). Recent UK policy changes will have a significant effect on increasing personal contributions for pensions. By 2018, automatic enrolment of workers to a retirement

5. The National Association of Pension Funds (NAPF) former name is PSLA (the Pensions and Lifetime Savings Association).

fund should lead to nine million new pension savers (Galdiolo *et al*, 2015). Therefore, with the AUM growth expected from automatic enrolment, PFs' assets are estimated to grow by more than £600bn by 2030 (Keohane and Rowell, 2015).

Initiatives by pension funds to engage with social impact investment market

Over the recent years, PFs have begun to co-invest through collaborative initiatives. Some of these collaborations have been considered responsible and sustainable investments, and most recent initiatives relate to impact investing, for example, the Capital Market Climate Initiative (CMCI)⁶ and the Investing for Growth (I4G) initiative. The latter is the major initiative analysed in this study.

The I4G consortium was launched in March 2013 by five local government PFs, including Greater Manchester Pension Fund (GMPF), West Yorkshire Pension Fund, West Midlands Pension Fund, South Yorkshire Pension Fund and Mersyside. This initiative was built on the growing trend of divesting from unethical investments, such as alcohol producers, and aimed to generate positive impact (Anderson, 2015). I4G brought together PFs which jointly own around £30bn in investible assets (Lokhandwala, 2014). It reflected an innovative investment trend in channelling retirement funds to generate positive social or environmental impact. This initiative will be discussed in length in chapter five.

Pension funds' barriers to impact investments

Many barriers to UK PFs seeking to engage in the impact investment market were found in a large study prior to the launch of I4G initiative (Smith Institute, 2012. P.6). These challenges include: 1. A trade-off between social impact and financial return, which is perceived to contradict the fiduciary duty to

6. CMCI brings experts to help deliver private climate financing at scale in developing countries (OECD,

maximise returns for investors. 2. Potential local conflicts of interest may occur if the investments are linked to local or geographical schemes. 3. PFs invest with strategy for a long-term investment horizon strategy. Hence, the impact investments targets that mainly interest PFs are infrastructure projects for their attractive long-term income streams. 4. There are reputation risks associated with new investments. Overall, fiduciary duty is commonly considered the most important reason that PFs avoid impact investing and keep to mainstream financial investments.

Fiduciary duty

The UK's institutional environment is considered strong, where investors, creditors and clients are legally protected to exercise their rights (Rojas-Suarez, 2014). Fiduciary duty is a legal and economic mechanism for ensuring that clients' best interests are kept by their investment managers. This is a fundamental institutional tool to ensure trust across UK's capital market actors. Similarly, the disclosure principle is an important financial accounting mechanism. It enables standardisation of financial information reporting, and its goal is communicating financial activities clearly and accurately. When institutional investors consider engaging with a growing capital market, such as the impact investment market, they are expected to be prudent and cautious, behaving to ensure their fiduciary duty is maintained.

PFs are generally considered more conservative than other institutional investors because of their hesitation to innovate with their beneficiaries' assets. Due to PFs' fiduciary duty and responsibilities, they focus on investments with at least a market risk-adjusted financial return (Drexler and Noble, 2013). ⁷

PFs' hesitation from engaging with impact investing arises from a perceived trade-off between financial return and social impact (Grabenwarter & Liechtenstein, 2011). Social impact is

7. Risk-Adjusted Return is "a concept that refines an investment's return by measuring how much risk is involved in producing that return, which is generally expressed as a number or rating. When comparing two or more potential investments, an investor should always compare the same risk measures to each different investment in order to get a relative performance perspective." (Investopedia)

a concept that brings uncertainties to the investment field for several reasons; it takes time to achieve social change and measure the investment's social impact. Proving that there are impact returns, i.e. that the social change happened and it was the cause of the specific investment, requires an analysis of the investment's counterfactual. Finding the answer to the most critical question "what would have happened in the absence of the investment" requires monitoring data on various characteristics of the investee. More importantly, an answer to the question proves whether there is a causal link between the investment and the environmental or social change that the investee delivered. These actions result in a costly investment strategy where PFs face unfamiliar challenges. Impact measurement alone is challenging to conduct. Hence, I assume it is difficult for PFs to engage with this investment strategy if they do not have the knowledge or expertise to conduct impact measurement.

There is a positive link between fiduciary duty and delivering social or environmental change

The UN's PRI organisation and others have been advocating for a new paradigm: not only that ESG risks do not jeopardise fiduciary duty, but that they should be weighted in investment decisions because positive social impact and good financial performance are linked (PRI, 2012).

PFs seek comfort and low risk (Friedman, A. Public lecture at the LSE Alternative Investment Conference. 18th January 2016), and impact investing allows PFs to diversify their investment portfolio with specific assets often uncorrelated with other assets. Another justification for a logical link between fiduciary duty and social change is that delivering social impact requires time (normally several years), in line with PFs' long-term horizon.

Practically, one of the few PFs that invest in UK's growing impact investment market is Greater Manchester PF. It argues that

its fiduciary duty does not prevent it from investing in northern communities in the UK, and that impact investing locally encourages economic participation and creates social and environmental impact (GMPF annual report, 2014). My study focuses on GMPF because it leads other UK PFs in the I4G initiative, setting an example with its commitment to impact investing.

Other common barriers

More barriers that hold back investors from impact investing are acknowledged by the Global Impact Investing Network (GIIN) annual survey on impact investing, Nesta in the UK, the Global Social Entrepreneurship Network and the G8 taskforce: (1) the ecosystem is currently considered fragmented, which suggests its development is hindered (Nesta website, 2015), (2) there is a lack of sufficiently mature impact ventures with proven business models and revenue streams for investors to work with (GIIN, Nesta & the Global Social Entrepreneurship Network), and (3) a lack of a favourable legal environment (G8, 2014).

Potential solutions from overseas to overcome barriers

Recent OECD research on the global impact investment market (OECD, 2015) finds that when some of the US' largest asset owners invested in impact investments, they were often subsidised by the government (Wood *et al*, 2012). US case studies reveal that when the government or philanthropists create grants to provide investors with catalytic capital offering "first loss" funding, they guarantee an agreed protection ratio in case of a "first loss" to the capital committed. This "first loss" policy tool has been widely used by the US administration to incentivise growth by small business and VC growth (EY, 2014); it has been supporting US impact investors as well (interview with Social Finance UK, October 28, 2015). However, although "first

loss" capital is a mechanism that reduces the risk of the investment, it is not sustainable for a high volume of investments.

This is not the case in Australia, where, in 2015, an Australian PF named HESTA committed AUD \$30m to impact investments targeting competitive returns (Mudaliar *et al.*, 2016). HESTA reveals on its website that it awarded the assets to Social Ventures Australia (SVA), a not-for-profit organisation focused on overcoming the disadvantages in Australia (HESTA, 2016). SVA manages the Social Impact Investment Trust, one of Australia's largest impact investment allocations. It represents the largest single commitment by an Australian superannuation fund to the local impact investing market. HESTA recently closed its first investment, a loan of AUD \$6.5m to Horizon Housing, a non-profit community housing provider which operates properties and projects across 15 local government areas in Queensland and northern New South Wales (HESTA, 2016).

France has also set an example to other countries with its Solidarity Investment Fund initiative. The Solidarity Investment Fund directs 10 per cent of each saver's assets to social investments, and 90 per cent to traditional companies that qualify as socially responsible (Keohane and Rowell, 2015). According to The Financial Times, French Solidarity Investment Funds have been investing this way for more than a decade with more than €4.8bn AUM (Cumbo, 2015). The UK NAB report recommended following the French model, and since 2014, specific UK market leaders have been advocating for the endorsement and adoption of social investment pension options (UK NAB, 2014).

One prominent supporter is former UK NAB Chairman, also BSC's co-founder and former CEO, Nick O'Donohoe. He now chairs the UK's New Dormant Account Committee and argues the UK should obligate employers to offer an option for "Defined Contribution pension" savers where they pay a portion of their retirement fund into a social fund (Cumbo, 2015).

UK government regulations to encourage impact investments

The UK government has been encouraging impact investments through several changes in regulation since 2002 (UK NAB report to G8, 2014). In 2014, with the efforts of BSC, the Social Investment Tax Relief (SITR) was introduced to provide a 30 per cent tax relief for social investments (Palin, 2015).

Additionally, in 2014, the Investment Intermediaries Fiduciary Duties Reform was launched by the Law Commission, aiming to address legal uncertainty and lack of clarity around fiduciary duties (UK NAB, 2014). In 2015, two departments asked the Law Commission to specifically review the UK Equity Markets and Long-Term Decision Making for identifying how fiduciary duties apply to investors. The Law Commission recommended that PFs, usually focused solely on maximising financial returns to their beneficiaries, should take into account ethical or ESG factors, with one condition: to ensure that investments are financially material. Despite the government's refusal of the Law Commission's recommendations (Williams, 2015), I understand that fiduciary duty is not compromised when institutional investors engage with impact investments.

investment - "Not all ESG information is created equally in the eyes of the investor. An investor considers any factor that can have a significant impact on an investee's (company's) core business value drivers - namely growth, profitability, capital efficiency and risk exposure - to be financially material." (RobecoSAM definition).

8. Financially material

Literature review conclusions

The UK regulatory environment is more supportive today than ever before for institutional investors to consider social impact investing. However, there is wide uncertainty around fiduciary duty and impact investments.

Despite hesitations, there are initiatives for PFs, led by PFs, that engage with impact investing in joint-investments. In contrast to the French PFs, UK PFs face a regulatory disadvantage, because UK beneficiaries do not have a demand mechanism for requesting their PF managers to engage with this type of investment.

ARGUMENT AND THEORY

I argue that fiduciary duty is not the most critical reason holding back pension funds, and test the hypothesis that measurement fees are a limiting factor because they lead to high transaction costs. I hypothesise that PFs invest less when transaction costs of impact measurement are high. I test my hypothesis by designing a case study on UK PF engagement with the market:

H0: There is no relationship between impact measurement costs to PFs' engagement with social impact investing.

The commonly perceived relationship is between fiduciary duty and engaging with this investment strategy. As the latter is perceived to generate below-market financial returns, PFs don't want to jeopardise their fiduciary duty, and hold back from it.

H1: PFs invest less when transaction costs of impact measurement are high.

My argument is that transaction costs of impact measurement are high due to impact investments' impact measurement requirements, and the outsourcing of the due diligence from PFs to asset managers (i.e. intermediaries). PFs often hire services of intermediaries to manage their investments, and consequently, pay them for management fees. These management fees are the reward that PFs pay to their fiduciaries.

For an impact investment to take place, transaction costs should be at prices that reflect supply and demand. Furthermore, engaging in impact investments may come with an additional price tag because an impact investment deal requires impact-measurement knowledge and experience. To gain these, I expect that PFs would use the same intermediaries who man-

age their portfolios for deploying capital into the new impact investing strategy.

Now I turn to dissect impact investment and measurement costs: A PF may find that developing this unique knowledge is challenging and costly because impact investment is a new playing field. This investment strategy offers more uncertainty and complexity than mainstream "pure-financial-return" investments. Finding the appropriate social enterprise to invest in takes time, resources and exceptional professional skills. This set of skills is not in the PFs' main line of business. By applying the transaction cost theory (Coase theorem) (Calabresi, 1968) to explain why PFs hold back from impact investing, I hypothesise that there is a market failure, leading UK PFs to limit or avoid impact investing because trading costs are very high:

- Impact investments bear *information costs* for PFs in researching potential social enterprise investees. These are higher than researching traditional investments because they are outside PFs' expertise.
- Contracting costs are higher in impact investments than for mainstream investments due to the requirement of establishing specific terms to deliver social change in addition to financial performance. For PFs, contracts to allocate and commit assets are written only after a profound evaluation and risk analysis which are mandatory due to their fiduciary duty and responsibilities.

These impact measurement costs lead to higher fees.9

9. The specific nature of the impact investment intermediary is not significant for this study, for example, whether PFs pay to a mainstream financial intermediary (e.g. KKR), or a specialised impact investment fund (e.g. Bridges Ventures). Once invested in an impact investment deal, the deal's costs are considered internalised.

Implications of impact investments:

Outsourcing the deal's impact measurement, as part of the diligence process, to a specialised intermediary does not ensure low transaction costs because closing a deal takes resources. As explained by the principal-agent theory, when a PF (principal) requires an intermediary (an agent) to reach a goal, a misalignment of incentives and objectives emerges. The intermediary exercises authority on behalf of the PF and incurs the costs of its efforts. Through its activities, the intermediary may be better informed than the PF about the true costs of the impact investment. This theory explains that asymmetric information exists where parties with different objectives have different sources and access to information. In an impact investment deal, the use of an intermediary may lead to adverse selection, 10 due to information asymmetry benefiting the intermediary. As explained by transaction cost theory, when PFs decide to invest in an impact investment deal, fees paid to the intermediary should reflect the additional impact-measurement capability provided.

In this research I expect that UK's largest PFs (in Part A of my research), and GMPF (part B), would invest through an intermediary. In the I4G initiative (part B), I expect to find that sharing the due diligence costs, including impact measurement costs, would result in an outcome where joint-investing is preferable over independent investing, because collaboration between investors leads to reduced costs and risks, in contrast to individual investments (I4G website, 2015).

10. A concept in economics which captures the following idea: intermediaries with better private information about the quality of a product will selectively participate in trades which benefit them the most, at the expense of their pension funds clients (source: Wikipedia).

RESEARCH DESIGN

These are the two building blocks for my research design:

Part A: Assessment of the gap between ideal and actual volume of impact investments

I conduct interviews with I4G stakeholders and practitioners. All interviews were conducted from February 2016 to May 2016.

I first assess the ideal impact investment volume that the UK government and practitioners have sought to achieve, by asking each interviewee (Table 1) the following questions:

- What do you think would constitute "appropriate scale" for the UK impact investment market, and why?"
- Do you think the UK impact investment market reached appropriate scale (as a sustainable financial market)?"

Secondly, I identify the barriers that, in policymakers' and investors' view, hold back pension funds. I asked each interviewee: "what obstacles remain to further scale PFs' investments to impact portfolios?"

Table 1 List of interviews				
Organisation name	Name of interviewee and position			
Investing for Growth (I4G) Initiative	Brian Bailey, 14G Initiative Facilitator			
UK Government, Cabinet Office	Robert Hewitt, Senior Policy Advisor, Social Investment & Finance Team			
Bill & Melinda Gates Foundation	Nick O'Donohoe, Senior Advisor, Chairman of the New Dormant Account Committee and former BSC CEO			
Bridges Ventures, UK	Emilie Goodall, Director of Impact+			
A London-based £13.5bn investment management firm	Managing Partner, co-Head of Private Equity of a leading financial intermediary investing on behalf of PFs ¹¹			

11. Anonymity of this investor would improve my research ability to clearly reflect the investment manager's words.

Source: Author.

Thirdly, I research the market's actual volume by capturing investments made by UK's 20 largest pension funds in 2015 (Deane-Williams, 2015). I examine the first 20 through identifying the volume of assets they committed in 2015.

For identifying an investment as an impact investment, I use Bridges Ventures' Impact+ conceptual framework that differentiates between investments' types (Bridges Ventures, 2015) (Figure 1).

12. Full list is in Appendix A online at publicspherejournal.

FIGURE 1 SPECTRUM OF CAPITAL

Spectrum of	f Capital						
	Financial Only	Responsible	Sustainable		Impact		Impact only
	Deliverin	g competitive fina	ncial returns				
		Mitigating Envi	onmental, Social	and Governance	e (ESG) risks		
			Pursuing	Environmental, S	ocial & Governan	ce Opportunities	
				Focusing on me	easurable high in	npact solutions	
Focus	Limited or no regard for environmental, social or governance (ESG) practices	Mitigate risky ESG practices in order to protect value	Adopt progressive ESG practices that may enhance value	Address societal challenges that generate competitive financial returns	Address societal challenges where returns are as yet unproven	Address societal challenges that require a below-market financial return	Address societal challenges that cannot generate a financial return
Examples		PE firm integrating ESG risks into investment analysis Ethically screened investment fund PERFORMANCE PERF	Best-in-Class SRI fund Long-only public equity fund using deep integration of ESG to create additional value	Publicly listed fund dedicated to renewable energy projects (e.g. a wind farm) Microfinance structured debt fund (e.g. loans to microfinance banks)	• Social Impact Bonds/ Development Impact Bonds	Fund providing quasi equity or unsecured debt to social enterprises or charities	

Source: Bridges Ventures, 2015.

Part B: Greater Manchester pension fund case study's design

I design a case study to analyse GMPF's impact investments during its leadership in I4G initiative, the joint investment vehicle of five local government pension funds. From 2013 to 2015, GMPF invested jointly through its leadership in I4G. After learn-

ing I4G did not continue to a further joint-investment, I search for barriers that PFs faced in I4G through primary data analysis.

THE GAP BETWEEN ACTUAL AND IDEAL VOLUME OF IMPACT INVESTMENTS

Ideal volume of institutional impact investments

My analysis firstly demonstrates that there is no monetary target for the UK impact investment market, resulting in a policy void. The government and market players provide different views on what the ideal volume of impact investments is, hence it is currently subjective. I find that with no unity and clarity for what constitutes ideal volume to achieve scale of institutional impact investments, it is challenging to claim that the market has yet to achieve scale. This is due to the following findings:

- **A.** The UK government does not have a monetary target for the volume of institutional impact investments. In addition, the government's designated unit for social investment does not track the market's scalability. When the Cabinet Office was in charge of this unit, until summer 2016, it fostered the demand for capital among social enterprises, through developing and pushing forward the 'social economy' vision.¹³
- **B.** There was no attempt by the government to monitor the market's volume of institutional impact investments.
- **C.** Measures for assessing scalability are subjective. When I asked 'what do you think would constitute "appropriate scale" for the UK impact investment market, interviewees provided diverse answers from different parallel industries. Bridges Ventures, The
- 13. There is no official UK definition for the term 'social economy'. However, according to UK Social Economy Alliance, the term includes organisations, social enterprises, co-operatives, universities, housing associations, crowdfunders, social investors, think tanks and charities.

Cabinet Office and Nick O'Donohoe agree that it is challenging to define "appropriate volume" for institutional investment in UK market.

Views on barriers to institutional impact investments

I identify the barriers that, in policymakers' and investors' view, hold back pension funds:

Barrier 1:

Impact investments suffer from weak branding with PF managers. Many PFs think that impact investing, as an investment strategy, contradicts fiduciary duty. However, there is wide evidence from Bridges Ventures and Generation fund's financial returns that show this perception is false.

Barrier 2:

Lack of incentives to engage with the industry is a major barrier.

Barrier 3:

"Impact investing is very difficult to do" – says the co-head of a £13bn PE, and a Principles of Responsible Investment (PRI) signatory. The firm provides financial services to UK's largest PFs, and the latter do not request the firm to engage with impact investing at all. Moreover, the interviewee clearly states that he has no incentive to change the firm's investment practices. Being a 'responsible investor', i.e. examining ESG concerns as obligated by PRI membership, is sufficient.

Barrier 4::

Investment managers, who invest on behalf of PFs, seek investment performance with a shorter horizon than the typical

social impact investment's long-term horizon. Delivering social change requires a long-term investment horizon of a few years, which may contradict managers' short-term performance. Most often, investment managers think about their performance according to periodical reporting, while impact investing requires longer timescales. This gap is explained by the principal-agent theory.

Pension funds' actual volume of impact investments in 2015

I research the market's actual volume and capture impact investments made by UK's 20 largest pension funds in 2015. I find that only four out of these 20 PFs allocated assets to impact investments, as detailed in Figures 2 and 3.

I find that the four PFs invested more than £1,300m into social or environmental impact investments in 2015.

Together the four PFs that invested in 2015, committed together £1,380m in assets as shown in Figure 3.

I also find that 13 of the 20 PFs report on outsourcing their asset management responsibility to institutional investment advisers, i.e. intermediaries, who are giant investment firms. Three intermediaries' names often appeared: BlackRock Investment Advisors (UK) Limited, L&G and Towers Watson. BlackRock and L&G have recently been engaging in impact investing, and further research on their impact investments might shed light on PFs' investments. Further details on UK BlackRock's and L&G's asset allocation to impact investments in Appendix B (online).

Data limitations and challenges in identifying which investment is truly an impact investment:

When I analysed the 20 PFs' annual reports, I found that reporting and disclosure principles for impact investments are not





Source: Analysis of PFs' annual reports for the year 2015 only. Publicly available annual reports missing for large PFs including Electricity Supply Pension, National Grid PF, Barclays UKRF and Railways Pension Trustee Company. Lloyds Bank shows data only for PS No.2.

FIGURE 3 PENSIONS' ASSET ALLOCATION TO IMPACT INVESTMENTS (GBP MILLION), 2015



Source: Analysis from UK pensions' financial reports.

14. See Appendix
C (online at publicspherejournal.
com) for detailed
explanation of challenges in researching nonfinancial terminology in PFs' annual reports

standardised and lead to confusion in annual reports' non-financial terminology. ¹⁴ For example, when I analysed British Telecom Pension Scheme (BTPS) impact investment strategies, I needed to use more than just BTPS's published annual reports.

GREATER MANCHESTER PENSION FUND CASE STUDY & 'INVESTING FOR GROWTH'

I reviewed GMPF's annual reports from 2013 to 2015 and analysed GMPF's actual volume of impact investments through a quantitative breakdown. Data analysis of GMPF's annual reports of the period from 2013 to 2015 reveals that the trustees acknowledge the growing UK impact investment market. GMPF consistently disclosed its long-term approach and management strategies, which found the case of impact investing CGMPF, 2013).

relevant director for Property and Local Investments, Paddy Dowdall, resulted unfruitful.

15. Attempts to conduct an interview

with GMPF's

16. GMPF refers to impact investing as 'value investing' (GMPF's AR, 2013)

Greater Manchester's fiduciary duty

GMPF's long-term approach considers that "participation in economic growth is a major source of long term equity return... [GMPF acknowledges that impact investing (D.E.V)] may result in prolonged periods of over and underperformance in comparison to a style neutral approach" (GMPF, 2013, p.107). However, in 2015 GMPF reiterated that its engagement with impact investing seeks both commercial returns and positive local impact, without risking its fiduciary duty responsibility.

GMPF began with impact investing by committing assets to I4G and I analyse its involvement through the initiative's press releases and online coverage. Additionally, I present my findings from an interview with the I4G facilitator, Brian Bailey. I identify GMPF's leadership during 2013-2014, and discuss the barriers that held back the consortium's PFs from further engaging with

impact investing. My analysis also includes discussion of GMPF's independent investment strategy in 2015, once it had left I4G.

Greater Manchester's leadership in the 'Investing for Growth' initiative – 2013-2014

Table 2 presents the assets committed by I4G PFs to five impact funds, three of them managed by Bridges Ventures. The consortium invested £152m, mostly through Bridges Ventures' funds, and diversified the investments to various sectors including property, SIBs, and the social sector. GMPF led the consortium to channel a total of £40m to two other funds: £25m was committed to Boost & Co. fund for industrial lending, and £15m to Midven Ltd. to an unknown goal. In both smaller funds, GMPF was the leading investor.

Table 2 Asset commitment to impact investment by I4G PFs						
Pension fund	Bridges Venture Property Fund	Bridges Venture SIB Fund	Bridges Ventures Social Sector Fund III	Boost&Co Industrial Lending Fund 1	Midven LTD AM&M Fund	Total Committments
GMPF	£25m	£2.5m	£2.5m	£10m	£10m	£50m
MPF	£10m	£1m	£1m	£5m		£17m
WMPF	£30m					£30m
WYPF	£10m			£5m	£5m	£20m
SYPA	£10m			£5m		£15m
East Riding	£20m					£20m
Total	£105m	£3.5m	£3.5m	£25m	£15m	£152m

Source: I4G Concluding Statement, June 2014.

The absolute majority of I4G's assets (69 per cent) was committed to property funds. This was in line with the I4G mandate to seek competitive financial returns:

"Whilst meeting their investment return and risk strategies, ... and to seek positive economic, social and environmental impact in the UK. The funds are not reducing their risk and return requirements for these investments" (I4G website).

Property investment is a typical strategy for institutional investors, as appears also from BSC's main strategic operations. The rationale, according to BSC's theory of change for social housing, is that sometimes social intervention models require a lot of capital if using property or capital-intensive assets. Social housing is affordable home funding for low-income people and those facing particular challenges in finding suitable housing (BSC, 2016).

According to I4G facilitator, Brian Bailey (interview, May 1, 2016), GMPF was the most progressive PF among the five. The I4G initiative faced barriers in allocating PFs' assets to impact investments. The programme was terminated and has not been followed by a further joint initiative. Impact investing is now only being used by a few funds in very specific areas, and GMPF continues to invest in impact investing.

Barriers to I4G initiative

I identify several barriers that held back the consortium's pension funds from following-up with further collaborative initiatives: (1) current opportunities offer small size deals and below the average investments; (2) trustees and fiduciaries' workload in other areas has greater priority; (3) market and risks are not well understood; (4) investment consultants for pension funds do not offer impact investment services due to the amount of evaluation work involved, and to the perception that these investments can

only have negligible impact on overall investment returns; (5) no external pressure exists (from beneficiaries) on funds to look at impact investments. I find these barriers to limit the scalability of UK's impact investment market.

Greater Manchester's investment strategy analysis 2013-2015

When the consortium initiative was not renewed in 2015, GMPF independently made impact investments, without other pension funds, and committed approximately £150m in 2015.

At 31 March 2015, GMPF's total AUM was £17,590m. Of this total, £17,316m was held in the 'Main Fund' and invested across a broad spread of assets, while £275m was held in the 'Designated Fund' and invested wholly in UK index-linked gilts and cash (GBMP, 2015). GMPF published its Core Belief (CB) Statement on its website in 2009, setting out the key underlying beliefs in relation to investment issues and GMPF's overall approach to investment matters. The beliefs mentioned in GMPF's CB statement provide the rationale to explain its investment activity, that "allocations to asset classes other than equities and government bonds (e.g. corporate bonds, private equity and property) are positively considered as they offer the fund other forms of risk premia (e.g. additional solvency risk/illiquidity risk)," (CB Statement, 2009, p.3).

GMPF's net assets and impact portfolio evolution

In 2015, GMPF disclosed investment information through the fund's annual report, where it reported on both strictly financial and impact-related investments. However, the fund's impact and non-financial objectives were limited in details, while financial reporting (of net assets and asset allocation to the fund's Local Investment portfolio) was clear, as shown in Figure 4.



FIGURE 4 GREATER MANCHESTER PENSION FUND NET ASSETS (TOTAL AUM, GBP MILLIONS), 2013-2015

Source: Annual reports, 2013-2015.

Asset allocation to impact investments

Over the past three years, GMPF reported its allocation of assets to impact investing through complementing strategies:

- **1.** Local Investment: Engagement in the joint initiative I4G as one part of its 'local investment' portfolio, focused within the Greater Manchester area.
- 2. Impact portfolio: In 2015, GMPF disclosed that due diligence has been undertaken on potential opportunities for impact investing and listed the following impact themes: renewable energy, SME loans and social infrastructure (GMPF, 2015).

1. Local investment portfolio

In 2013-2014, GMPF supported local investment through its Property Venture Fund, where its target allocation ranged up to 3 per cent of the Main Fund, together with other allocations. GMPF's Property Venture Fund invests within the North West of England, focusing specifically on the Greater Manchester area in (1) property development and (2) redevelopment opportunities.

GMPF's Property Venture Fund has increased its allocation to local investment (a type of impact investment) each year. Based on GMPF's annual report analysis, Figure 5 below demonstrates the Property Venture Fund's change of investments flows into impact investment (GMPF, 2013-2015).

£42 £57 £013 2014 2015

FIGURE 5 GMPF'S ALLOCATION TO LOCAL INVESTING THROUGH PROPERTY VENTURE FUND (GBP MLNS)

Source: Analysis of GMPF annual reports' analysis, 2013-2015.

In March 2014, GMPF approved to allocate £50m, a share of 0.38 per cent of its total AUM to the I4G initiative via its Property Venture Fund. GMPF was the largest participant in I4G, and allocated the largest volume. Figure 6 on the next page outlines the timeline of GMPF's asslocation to I4G, from its local investment portfolio.

FIGURE 6 DISCLOSURE OF GMPF'S ASSET ALLOCATION AND COMMITTMENT TO THE 14G INITIATIVE

March 2014: Allocated £50m to the initiative

As of March 2015, committed £38m

By 31 March 2015, £20m were drawn down and invested by the fund

GMPF reported in March 2015: Managers are making satisfactory progress against the initial objectives

Source: Analysis of GMPF annual reports' analysis, 2013-2015.

2. Impact portfolio

I find that GMPF outsourced due diligence to Bridges Ventures' Property Alternatives Fund III. This specific fund invests in direct property and "property-backed business across strategic sectors" (Bridges Ventures Website, 2016), and it achieved a final close in June 2015 with £212m of equity commitments, together with other former I4G partners - Merseyside, and South Yorkshire PFs.

CONCLUSIONS AND POLICY RECOMMENDATIONS

Conclusions

The argument that PFs are not investing enough in social and environmental impact investments, pushed forward by UK government and BSC, lacks evidence. £1,300m were already invested by PFs in 2015, and these were judged by the UK government as insufficient.

For testing this argument, more policy work is needed for setting desirable monetary milestones for the capital allocated and invested in the market. Hence, I conclude that the UK government has yet to complete its market development role. Only when the social investment market has a monetary target for achieving scale, would it then be justified to argue that it had not achieved that scale. Until then, it is upon subjective opinions to decide if the £1,300m already invested by PFs led the market to achieve scale in 2015.

My findings show that disclosure of non-financial terminology and asset commitments lacks clarity. Disclosure of non-financial terminology for impact investments should be standardised for achieving clearer reports on all investments, including those targeted for both financial and social impact. The lack of standards in reporting should be fixed.

GMPF demonstrates that some pension funds have taken on social impact investing. Its Fiduciary duty is linked to participation in economic growth, and after the consortium ended, GMPF explored investment opportunities independently. My findings suggest that GMPF faced barriers in 2013-2014, which held it back from continuing investing with other PFs in the consortium. But in 2015, it overcame barriers and invested independently in impact investments. More importantly, when GMPF moved from a joint-investment to independent investment, it could not share the transaction costs with other PFs, but impact investments were continued even with the increased costs.

When the consortium initiative was not renewed, GMPF independently invested £150m in 2015. To further engage with impact investing, Greater Manchester had to solely incur costs of impact measurement when it individually invested. Based on these findings, GMPF internalised the required impact-measurement actions required for impact investment deals. It paid higher transaction costs when it invested independently in 2015, than it did before at the consortium. Additionally, these findings suggest that for UK local government PFs, collaborating with other funds on impact investments may be an inferior strategy to independent impact investing.

Furthermore, GMPF's example demonstrates that not all PFs are yet to take on social impact investing. Some PFs link fiduciary duty to participation in economic growth, as a major source of long term equity return. Additionally, higher transaction costs did not stop GMPF from investing in 2015, after it left the consortium. Therefore, I find evidence that supports that H0 is not true, because GMPF is not holding back due to its fiduciary duty. Hence, fiduciary duty is not the most critical factor holding back PFs from impact investing. There must be other factors involved.

However, I conclude that transaction costs are not a limiting factors when a PF is keen to engage with impact investing. Hence, I reject my hypothesis that high transaction costs limit PFs from impact investing. Through my findings, I discovered more potential factors that may explain why many pension funds still hold back from impact investing. I believe that more research will bring better understanding and open the discussion beyond relying on fiduciary duty.

Policy recommendations

I recommend learning from GMPF's positive experience, and addressing the barriers that held back PFs before in I4G. Some of these barriers are solvable in the short-term, while others are more challenging and require UK government and BSC to design a longer-term strategy. I recommend the following steps in Table 3 on the following page.

Table 3 Policy recommendations					
Short-term goals	Medium and long-term goals				
Further educate market participants to understand risks.	If regulatory changes are feasible, create external pressure (from beneficiaries) on funds to look at impact investments: as with the French "Solidarity Funds".				
Incentivise intermediaries to offer opportunities that increase size deals to reach pensions' average investments (i.e., learn from Greater Manchester's preference to invest directly through an intermediary).	If regulatory changes are not feasible, incentivise asset managers who work on behalf of pensions to consider impact investing: 1. Address the fact that asset managers often seek horizon returns in alignment with their investment performance reviews (shorter than impact investments' horizons). 2. Provide incentives for trustees and fiduciaries to prioritise impact investments.				
Address the perception among pension managers that impact	Incentivise investment consultants to offer impact investment services by:				
investments provide weaker performance	Reducing the amount of evaluation work involved.				
that traditional investments.	Improving perception that impact on overall returns is not negligible				

REFERENCES

- Anderson, S. (2015, June 16). Divest and reinvest: 6 local governments that are innovating for sustainability. Retrieved 7 December, 2015, from http://platformlondon.org/2015/06/16/divest-and-reinvest-6-local-governments-that-are-innovating-for-sustainability/#sthash.a2owu1Mo.dpuf
- Bell, M., and Paull, G. (2014). Is it about the money, money, money? Frontier Economics Bulletin. June 2014.
- Benjamin, B. (2015) Asset Management 2020: A brave new world. USA: PwC. Retrieved 7 February, 2016, from http://www.pwc.com/us/en/asset-management/invest-ment-management/asset-management-2020.html
- Big Society Capital. (2014). Annual report. Theory of Change. Retrieved 1 May, 2016, from http://www.bigsocietycapital.com/sites/default/files/Theory%20of%20change%20 August%202015.pdf
- Big Society Capital. Social Housing. Retrieved 19 May, 2016, from http://www.bigsociety-capital.com/social-issues/housing-and-local-facilities

- Big Society Capital. Scale. Retrieved 19 May, 2016, from http://www.bigsocietycapital.com/what-we-do/our-strategy/scale
- Big Society Capital. Funding Affordable Homes. 27 January 2016. Retrieved 19 May, 2016, from http://www.bigsocietycapital.com/what-we-do/investor/investments/funding-affordable-homes
- Bridges Ventures. Property Alternatives Fund III Retrieved 12 May, 2016 from http://bridgesventures.com/property-fund/
- Bridges Ventures. (2015) The Bridges Spectrum of Capital. Retrieved July 29, 2015 from http://bridgesventures.com/wp-content/uploads/2015/11/Spectrum-of-Capital-online-version.pdf
- Calabresi, G. (1968). "Transaction Costs, Resource Allocation and Liability Rules—A Comment". Journal of Law and Economics 11 (1): 67–73 [p. 71–73]
- Cameron, D. (2010, July 19). Retrieved 17 March, 2016, from https://www.gov.uk/government/speeches/big-society-speech
- ClearlySo organisation (2011). Investor Perspectives on Social Enterprise Financing. Retrieved 17 April, 2016 from https://www.cityoflondon.gov.uk/business/economic-research-and-information/research-publications/Documents/research-2011/Investor%20Perspectives%20on%20Social%20Enterprise%20Financing.pdf
- Cross, L. (2016, April 7) Interview: BAE Systems pension fund talks housing Social Housing website Retrieved 12 May, 2016 from http://www.socialhousing.co.uk/interview-bae-systems-pension-fund-talks-housing/7014714.article
- Cumbo, J. (2015, 2 September), "Use pension funds for UK social investment, ministers urged". Financial Times. Retrieved 17 March, 2016, from https://next.ft.com/content/061b6b94-5165-11e5-b029-b9d50a74fd14
- Dean-Williams, P. (2015). "P&I/TW 300 Analysis, Year-end 2014". UK: Towers Watson.
- Della Croce, R., C. Kaminker and F. Stewart (2011), "The Role of Pension Funds in Financing Green Growth Initiatives", OECD Working Papers on Finance, Insurance and Private Pensions, No. 10, OECD Publishing, Paris. DOI: http://dx.doi.org/10.1787/5kg58j1lwd-jd-en
- Drexler, M., and Noble, A. (2013). From the Margins to the Mainstream- Assessment of the Impact Investment Sector and Opportunities to Engage Mainstream Investors. Geneva: World Economic Forum.
- Flood, C. (2016, 10 January). Pooling UK local pension fund assets is 'mere tinkering'. Financial Times.
- Retrieved 17 March, 2016, from https://next.ft.com/content/47fd8998-b5fb-11e5-b147-e5e5bba42e51
- Institutional Investors Lecture. (2016). [Public Speech by Friedman, A. Chief Executive Officer at GAM group.] Public lecture at the LSE Alternative Investment Conference. January 18, 2016
- Freireich, J., and Fulton, K. (2009) Investing for Social and Environmental Impact. New York: The Monitor Institute. Retrieved 7 February, 2016, from http://monitorinstitute.com/downloads/what-we-think/impact-investing/Impact Investing.pdf
- Galdiolo, S. and De Ste Croix, C. (2015). Responsible Investment Performance of UK Asset Managers The 2015 ShareAction Survey. Retrieved 27 April, 2016, from http://shareaction.org/wp-content/uploads/2016/01/AssetManagerSurvey2015.pdf
- Giddens, M. (January 18, 2016). Public Speech at the 2016 London School of Economics (LSE) Alternative Investment Conference.
- The Global Impact Investing Network. Retrieved May 18, 2016 from https://thegiin.org/impact-investing/

- Grabenwarter, U., and Liechtenstein, H. (2011) In search of Gamma an unconventional perspective on impact investing. Madrid(?): IESE Business School. Retrieved 17 September, 2015, from http://socialvalueint.org/sources/iese-business-school/
- HESTA. Your investments could be helping society and earning a return. Retrieved 15 May, 2016 from http://www2.hesta.com.au/update/member/impact-investing-feb2016/
- Investing For Growth. Concluding Statement from June 2014. Retrieved 15 May, 2016 from http://www.lapfforum.org/press/files/Investing4growthI4GConcludingStatement12062014.pdf
- Investing for Growth Initiative. About us. Retrieved 7 December, 2015, from http://www.investing4growth.co.uk/Aboutus.html
- Investment & Pension Europe News. (September 11, 2015) National Grid in-house manager confirms sale to LGIM. Published by IPE Staff. Retrieved 12 May, 2016 from http://www.ipe.com/news/asset-managers/national-grid-in-house-manager-confirms-sale-to-lgim/10009766.fullarticle
- James, D., Kane, D., and Ravenscroft, C. (2016) Understanding the capacity and need to take on investment within the social sector. Retrieved 11 May, 2016, from
- https://www.ncvo.org.uk/images/documents/policy_and_research/funding/invest-ment-within-the-social-sector-2016-summary.pdf
- Keohane, N. and Rowell, S. (2015). Good Pensions: Introducing social pension funds to the UK. Retrieved 27 April, 2016, from http://www.smf.co.uk/wp-content/uploads/2015/09/Social-Market-FoundationSMF-BSC-030915-Good-Pensions-Introducing-social-pension-funds-to-the-UK-FINAL.pdf
- Legal & General Group Website. Retrieved 12 May, 2016 from http://www.legalandgeneralgroup.com/
- Marriage, M. (2016, April 24). Pension funds review tobacco divestment. Financial Times. Retrieved 17 May, 2016, from https://next.ft.com/content/e87a9b3c-0708-11e6-9b51-ofb5e65703ce
- Lokhandwala, T. (2014). UK local authority pension funds commit to social impact investments. Investment and Pensions Europe. Retrieved 12 May, 2016 from http://www.ipe.com/news/uk-local-authority-pension-funds-commit-to-social-impact-investments/10002168.fullarticle
- Mudaliar, A., Schiff, H., and Bass, R. (2016). 2016 Annual Impact Investor Survey Retrieved 22 May, 2016 from https://thegiin.org/knowledge/publication/annualsurvey2016
- The National Association of Pension Funds (NAPF) website, Retrieved 22 May, 2016 from http://www.plsa.co.uk/
- Nilsson, A. and Robinson, D. T. (2012). What is the business of business? (Research Report 90). Stockholm: SIFR the Institute for Financial Research.
- North, D. (1990). "A Transaction Cost Theory of Politics," J. Theor. Politics, 2:4, pp.355-67.
- OECD Report: Social Impact Investment: Building the Evidence Base, 2015
- Oxlade, A. (2015, September 12). Global list of biggest pensions exposes Britain's flawed retirement plan. The Telegraph. Retrieved 27 April, 2016, from http://www.telegraph. co.uk/finance/personalfinance/pensions/11854493/Global-list-of-biggest-pensions-exposes-Britains-flawed-retirement-plan.html
- Palin, A. (2015, March 18). Budget 2015: Boost for social impact investing. The Financial Times. Retrieved 7 February, 2016, from http://www.ft.com/cms/s/0/88c9252a-cd78-11e4-a15a-00144feab7de.html#ixzz3jHGim1k9
- Pearce, B. (2014) Adapting and evolving Global venture capital insights and trends 2014. EY.

- Robinson, M. (2015, January 28, 2016) Big Society Capital. Big Society Capital 2015 Numbers. Retrieved 12 May, 2016 from http://www.bigsocietycapital.com/latest/type/blog/big-society-capital-2015-numbers
- Pension Funds' Annual Reports: Annual reports of UK's 20 largest PFs were drawn from online search.
- Rojas-Suarez, L. (2014). Towards Strong and Stable Capital Markets in Emerging Market Economies. (Papers No 75). Bank for International Settlements.
- Ronald Cohen Website. Retrieved 12 May, 2016 from http://www.ronaldcohen.org/about Saltuk, Y., Idrissi, A.E., Bouri, A., Mudaliar, A. and Schiff, H. (2015) Eyes on the Horizon: The Impact Investor Survey. New York: J.P. Morgan and Global Impact Investing Network. Retrieved September 7, 2015 from https://thegiin.org/knowledge/publication/eyeson-the-horizon
- Smith Institute (2012). Local Authority Pension Funds: investing for growth. The Smith Institute September 2012.
- Thinking About Impact, Part 1. (2016). [Video recording by Trelstad, B.]. MBA and Impact Investing Network Training (MIINT), NovoEd online platform.
- The Social Impact Investment Taskforce, established under the UK's presidency of the G8. Impact Investment: The Invisible Heart of Markets. Retrieved 7 February, 2016, from
- $http://social impact investment.org/reports/Impact\%20 Investment\%20 Report\%20 Fl-NAL \cite{Main}. MAL \cite{Main} and \cite{$
- UK HM Treasury. (2012). A new approach to public private partnerships. Retrieved May 1, 2016 from https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/205112/pf2_infrastructure_new_approach_to_public_private_parnerships 051212.pdf
- UK National Advisory Board (NAB) report to the G8 Social Impact Investment Forum. (2014) Retrieved May 1, 2016 from https://www.gov.uk/government/groups/social-impact-investment-taskforce
- UKSIF mission and history. Retrieved 12 May, 2016 from http://uksif.org/about-uksif/ our-mission/
- UN Principles for Responsible Investment Website https://www.unpri.org
- The UN Principles for Responsible Investment Initiative. Annual Report 2015 From Awareness to Impact. Retrieved May 20, 2016 from https://www.unpri.org/download report/9483
- Wilson, R (2016). Social investment: a force for social change UK strategy 2016. Retrieved 12 May, 2016 from https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/507215/6.1804_SIFT_Strategy_260216_FINAL_web.pdf
- Williams, J. (2015, November 13). UK decision not to amend rules on fiduciary duty 'extremely disappointing' Retrieved 27 April, 2016, from http://www.ipe.com/news/esg/uk-decision-not-to-amend-rules-on-fiduciary-duty-extremely-disappointing/10010763.fullarticle
- Wood, D., Thornley, B., and Grace, K (2012): "Impact at Scale: Policy Innovation for Institutional Investment with Social and Environmental Benefit", Pacific Community Ventures, Institute for Responsible Investment at Harvard University and Rockefeller Foundation, February.

ACKNOWLEDGEMENTS

I thank my academic adviser, Dr. Greg Fischer, for his guidance, and Dr. Joachim Wehner from LSE's Department of Government. All interviewees have been generous to provide me with valuable information, and I thank them all: Nick O'Donohoe, Robert Hewitt, Emilie Goodall, Brian Bailey, and additional investment managers. I especially appreciate the professional mentorship from Social Finance Israel's brilliant team, including Research Director Emanuel Bohbot, Chief Executive Officer Yaron Neudorfer, and Director Shlomi Zidky. During the course of my research, I talked with professionals who were helpful in sharing their views on the UK impact investing market's intricacies: Tamsyn Roberts from the UK Cabinet Office, Michele Giddens from Bridges Ventures, Hannah Goldie from Social Finance UK, and Adam Connaker from the Rockefeller Foundation, USA. Last but not least, I would like to thank my partner and family who supported this research, and without whom I would not have been able to undertake it. I thank the editors of LSE's Public Sphere Journal, Silvana Rebaza-Fernandez and Joshua Eyre.

The opinions expressed here are my own and do not reflect the view of any of the abovementioned professionals.

APPENDICES

Appendix A: List of the 27 largest UK pension funds

Appendix A List of the 27 largest UK pension funds					
Rank	Top 300	Fund	AUM 2014	AUM 2004	
1	44	BT Group	\$67,9751	N/A	
2	52	Universities Superannuation	\$64,825 ²	N/A	
3	58	Lloyds Banking Group	\$59,415 ³	\$22,467	
4	63	Royal Bank of Scotland Group	\$53,535 ³	\$26,436	
5	70	Electricity Supply Pension	\$48,730 ²	\$34,380	
6	92	Barclays Bank UK	\$41,799	\$21,489	
7	106	HSBC Bank	\$35,244	\$15,024	
8	118	Railways Pensions	\$33,736	\$26,431	
9	123	British Airways	\$32,086	\$20,969	
10	124	BP	\$31,773	\$22,380	
11	125	BAE Systems	\$31,427	\$18,877	
12	126	British Coal Pension Schemes	\$31,1544	N/A	
13	132	National Grid	\$30,310 ¹	N/A	
14	165	Unilever	\$24,786 ³	N/A	
15	172	Greater Manchester	\$24,031	\$14,498	
16	179	Strathclyde Pension Fund	\$23,239	\$13,132	
17	182	Aviva	\$22,955	\$9,250	
18	205	BBC	\$19,891 ¹	\$12,216	
19	206	British Steel Pension Scheme	\$19,744	\$15,492	
20	210	AkzoNobel	\$19,347 ³	N/A	
21	213	Rolls-Royce	\$19,229	\$8,741	
22	220	GlaxoSmithKline	\$18,778	\$8,021	
23	243	West Midlands Metropolitan	\$16,827	\$10,521	
24	252	West Yorkshire	\$16,156 ²	\$9,797	
25	268	Tesco	\$15,0783,5	N/A	
26	277	Banco Santander (UK)	\$14,651	N/A	
27	294	Marks & Spencer	\$13,3946	\$7,622	

Source: Towers Watson, (Dean-Williams, 2015).

Appendix B: Pension funds invest indirectly through UK asset managers

Legal & General Group plc

Legal & General Group is a UK-headquartered investment management firm that managed £746.1 bn in total AUM in 2015. L&G is the largest UK pension asset manager by AUM.

In 2015, 0.17 per cent of its AUM (£1.232 bn) were invested in social housing bonds. However, the 2015 annual report shows that all investments in infrastructure/PFI/social housing are grouped together, so it is hard to identify the specific allocation to social housing in isolation to infrastructure and PFI. This presents a decline from 2014, when the group invested 0.18 per cent of its total AUM (then recorded at £693.7 bn) (Legal & General, 2014-2015).

BlackRock

BlackRock managed £3,186 bn in AUM in 2015, most of which was invested in internally managed active listed equities. Black-Rock allocated 4.394 per cent to impact investments.

The fund declares itself as helping to "set standards of reporting and transparency for sustainable investments" through its 2014 initiative, *The BlackRock Impact*, a designated platform focused on three key sustainable investing segments: Exclusionary Screens, ESG Factors and Impact Targets. The platform capitalises the fund's proprietary analytical platform to enable investors to use BlackRock's models where data is not publicly available. A recent platform to launch products, for example, is the CRBN, Black-Rock's Low Carbon iShares ETF.

The fund leverages its collective market intelligence to identify sectors and companies with its over 1,800 investment professionals in more than 25 investment centres globally (BlackRock, 2015).

1. http://www. blackrockimpact.com/ BlackRock's platform allows clients to match investment opportunities to their specific social and financial obligations and goals. Its three investing segments include: Exclusionary Screens for screening according to specific themes: Alcohol, Country, Fossil fuel, Gambling, Tobacco, Weapons and customized screens; ESG Factors are categorized to five options: Clean energy weighted, Low carbon optimized or weighted, Sustainability optimized or weighted; Impact Targets cover Broad public equity impact, Green bonds and Renewable power.

My attempt to analyse the weight of BlackRock's SII in the responsible investment portfolio was hindered by a lack of clarity. In its 2014-2015 PRI Report it declared that it used negative screening. In the previous year, closed at 30 June 2014, the firm managed approximately £178 bn in mandates that specifically focus on ESG factors, excluding securities in areas such as Alcohol, Tobacco, Gambling, Weapons and Adult Entertainment.

BlackRock manages sustainability thematic funds, environmentally themed funds, socially themed funds and funds that combine these themes. However, from BlackRock's PRI Report, it remains unclear what is the specific allocation of assets across thematic funds. BlackRock invests in responsible investing through eight categories of negative screening, socially-responsible ETFs, ECO-solutions Investment Trust, New Energy, Carbon Efficiency, Green Bonds, SII and Renewable Power (BlackRock's Transparency report). The specific share of impact investment is unknown.

Appendix C: Findings of inconsistency in annual reporting standards

Secondary data analysis from annual reports (ARs) on the 20 largest UK PFs between 2013 to 2015 shows serious inconsistencies in annual reporting standards when disclosing information on investments that also have non-financial objectives. This finding

caused a higher research challenge than expected. Below are the challenges I faced while assessing PFs' asset allocation to impact investments.

- **a.** Inconsistencies in reporting categories on asset allocation to impact investment in PFs annual reports. Clearer data are found in the 2014 and 2015 reports.
- **b.** The problems that arose with ARs' data led to cross-checking PFs' ARs with annual PRI reports, when available. This attempt also resulted in limited success.
 - i. The PFs who are also "PRI Signatories" self-report on their investment decisions based on ESG factors.
 - ii. The PRI report that each signatory fills on a yearly basis requires various components. Unfortunately, no component requires the investor to specifically declare the share of its AUM allocated to each strategy, including the most interesting for this research its impact investing strategy.
- **c.** Some PFs clearly state their investment strategies while others do not; research required additional resources (PRI reports) to fully perform the research study. PRI reports' analysis showed high variance in PFs' self-reporting standards.

An example of this challenge can be found in research on British Telecom Pension Scheme (BTPS). In order to analyse BTPS' impact investment strategies, one must use more than BTPS' published AR. One should also analyse the fund's self-reported PRI information. To provide a clear answer for BTPS's share of all impact investing related-activities out of total asset allocation,

one should research beyond its annual report's disclosure of the £502m invested.

- 2. Cross, 2016.
- **d.** BAE Systems PF did not disclose any allocation to impact investing. However, media coverage² shows that it is interested in impact investing in social housing, a clear SII strategy/asset.
- **e.** Barclays Bank UK Retirement Fund (UKRF) does not disclose its annual reports online, and provides them only upon request from a beneficiary. Information is more elusive to find on banks and insurance groups' staff PFs.
 - i. This limitation hinders the ability of stakeholders, including policymakers, to assess PFs' asset allocation to impact investments if they are made in-house within banks and insurance companies.