



**Stimulating the Attractiveness of PFI/PPPs Using Public  
Sector Guarantees**

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# Stimulating the Attractiveness of PFI/PPP Projects through Public Sector Guarantees.

## Abstract

### Purpose

Although the UK Guarantee Scheme for Infrastructures (UKGSI) was introduced in 2012 to address the huge financing gap for critical infrastructures, PFI sponsors have so far guaranteed only few projects. Many stakeholders in the project finance industry have blamed this situation on lack of general understanding of strategies for harnessing the benefits of government guarantees. The study therefore investigates the perspectives of PFI/PPP stakeholders in the UK on critical factors influencing approval for government guarantee using the UK guarantee scheme for Infrastructure as a focal point.

### Design/methodology/approach

Using a mixed methodology approach, the study identified 26 important criteria used in evaluating government guarantee applications through focus group discussions with PFI stakeholders. These criteria were put in questionnaire survey to 195 respondents.

### Findings

Through factor analysis, five (5) critical factors determining successful government guarantee application were unravelled. These include (1) compliance with UK National Infrastructure Plan, (2) demonstration of project bankability and risk management, (3) value for money (4) proof of dependence on the guarantee and (5) certainty of planning commission's approval.

### Originality/value

Results will facilitate in-depth understanding of critical factors for accessing government guarantees, while also improving the bankability of prospective PFI projects.

**Keywords:** UK Guarantee Scheme for Infrastructures (UKGSI), Private Finance Initiatives (PFI), Public Private Partnership (PPP), Public Sector, Stakeholders.

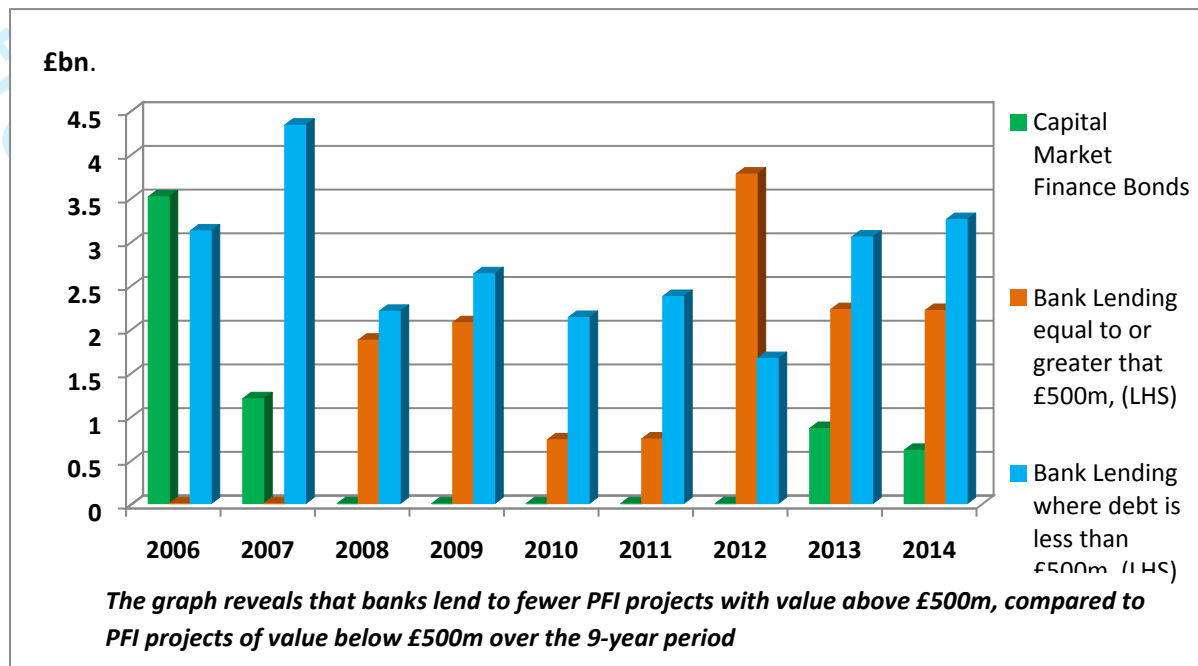
## 1.0 Background

The last global financial crisis (GFC) in 2007/08 raised serious debates about risk management in the banking sector (Demirag *et al.*, 2015). Leading up to the market crash, bank funding was very much accessible with significant competition for PFI/PPP projects by offering attractive loan pricing and structures to sponsors (Mills, 2010). However, by the beginning of 2008, the sheer enormity of financial loss suffered by project financiers, especially mono-line credit insurers at the wake of crisis, led many banks out of the PFI/PPP market (Haran *et al.*, 2013). According to the 2013 report of European PPP Expertise Centre, the European PPP market had plunged to its lowest level towards the end of 2012, with deals reaching financial close as low as €11.7billion. This reduced global activity for PPP, particularly bond and senior debt finance created huge uncertainty that threatened long-term finance for many public sector infrastructures (Hampl *et al.*, 2011). Therefore, the need for government interventions became urgent and necessary amidst growing infrastructure demands (Toms *et al.*, 2011, Connolly and Wall, 2011).

Realising the need to encourage more private sector investments in new United Kingdom's (U.K) public infrastructures (valued at £250billion in the NIP Policy, 2011), the HM Treasury introduced an infrastructure stimulus package known as UK Guarantee Scheme for Infrastructures (UKGSI) in July 2012 (Wynne, 2015). The primary aim of the scheme was to avoid delays to private investments in viable UK infrastructures, which may have been hindered by the adverse credit situation in the financial market (HM Treasury, 2014). As part of its mandate, the scheme was to provide a sovereign-backed guarantee that makes high-risk infrastructural projects within the UK bankable to lenders, while also stimulating growth within the financial market (Wynne, 2015). However, despite the laudable objectives behind the UKGSI, a recent report from the National Audit Office (NAO, 2015) revealed that many

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3 52 project sponsors have only been able to secure guarantee for few infrastructure projects.  
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5 53 According to National Audit Office (2015 .p5), out of the 200 applications for government  
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7 54 guarantee scheme received by the Treasury Department, only 7 projects have been approved  
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10 55 while 39 other projects were pre-qualified.  
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15 57 From the perspectives of the HM Treasury (2013), notable among the factors militating against  
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17 58 project sponsors' access to this fiscal facility is poor structuring of potential guarantee  
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20 59 applications for projects. Wynne (2015) argued that many project sponsors seeking government  
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22 60 guarantee often fail to prove commercial viability of their business cases. According to HM  
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24 61 Treasury (2014), extensive due diligence appraisals are conducted on guarantee applications,  
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26 62 in a similar way to that carried out by project finance banks. As a result, project sponsors are  
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28 63 expected to present guarantee applications with strong potentials that can withstand  
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30 64 government set criteria and a test of viability (Wynne, 2015). However, while the existence of  
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32 65 government guarantee would understandably encourage project lenders towards financing PFI  
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34 66 projects, the unstable PFI market makes raising senior debt a challenge for sponsors (Connolly  
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36 67 and Wall, 2011; Johal *et al.*, 2012). As such, many project lenders (banks) have avoided long-  
37  
38 68 term lending (Crotty, 2009; Johal *et al.*, 2012; Demirag *et al.*, 2015), while the available loan  
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40 69 deals are concentrated in few large projects (refer to Fig.1 below). Based on the foregoing facts,  
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42 70 the UK government still foresees shortage in market efficiency, coupled with sustained high  
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44 71 procurement costs (NAO, 2015; Demirag *et al.*, 2015).  
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73 *Fig. 1. Volume of bank lending and bonds to UK PFI projects (£bn.) between 2006 -2014*

74 *Adapted From National Audit Office (2015)*

75  
 76 Currently, the newly revised National Infrastructure Plan (NIP, 2014) has revalued UK's  
 77 infrastructure needs as £466billion (HM Treasury, 2014). Two-thirds of these infrastructures  
 78 are proposed to be funded via Private sector routes such as the PFI/PPP (NAO, 2015).  
 79 Therefore, the big question that PPP stakeholders have continued to ask is what reliable  
 80 strategies can be use by project sponsors in order to ensure successful government guarantee  
 81 approval. The focus of this paper is to investigate PFI/PPP stakeholders' perspectives towards  
 82 identifying the critical factors influencing successful government guarantee applications under  
 83 the UKGSI.

84 In other to achieve the above aim, this study identified the following objectives:

- 85 1. To identify a robust and reliable set of criteria relevant for evaluating UK government  
 86 guarantee for PFI/PPP infrastructure project during guarantee appraisal.
- 87 2. To explore the underlying critical factors necessary for PFI/PPP project sponsors to win  
 88 guarantee scheme approval for infrastructure projects under the UKGSI.

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3 89 This study contributes to existing body of literatures on PFI/PPP procurement, by focusing on  
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5 90 mechanisms driving government guarantee approval. The following section begins by  
6  
7 91 examining the Post-GFC PFI/PPP market as well as the emergence of UK Guarantee Scheme  
8  
9 92 for Infrastructure policy. This is then followed by the research methodology section (mixed  
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11 93 methodology), involving focus group discussions and postal questionnaire survey to PFI/PPP  
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13 94 stakeholders in the UK for data collection. The next section presents analysis of qualitative and  
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15 95 quantitative data from focus groups and questionnaire survey respectively. The final section  
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17 96 discusses findings from the survey, which were corroborated with perspectives from  
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19 97 stakeholders' elicited during focus groups interviews. However, while the study centres on  
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21 98 UK's government guarantees, future studies can take results of this research and confirm its  
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23 99 wider applicability in other countries and regions.  
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## 31 101 **2.0 Post-Global Financial Crisis (GFC) in UK PFI/PPP Market and Emergence of** 32 33 **UK Guarantee Scheme for Infrastructures** 34 35

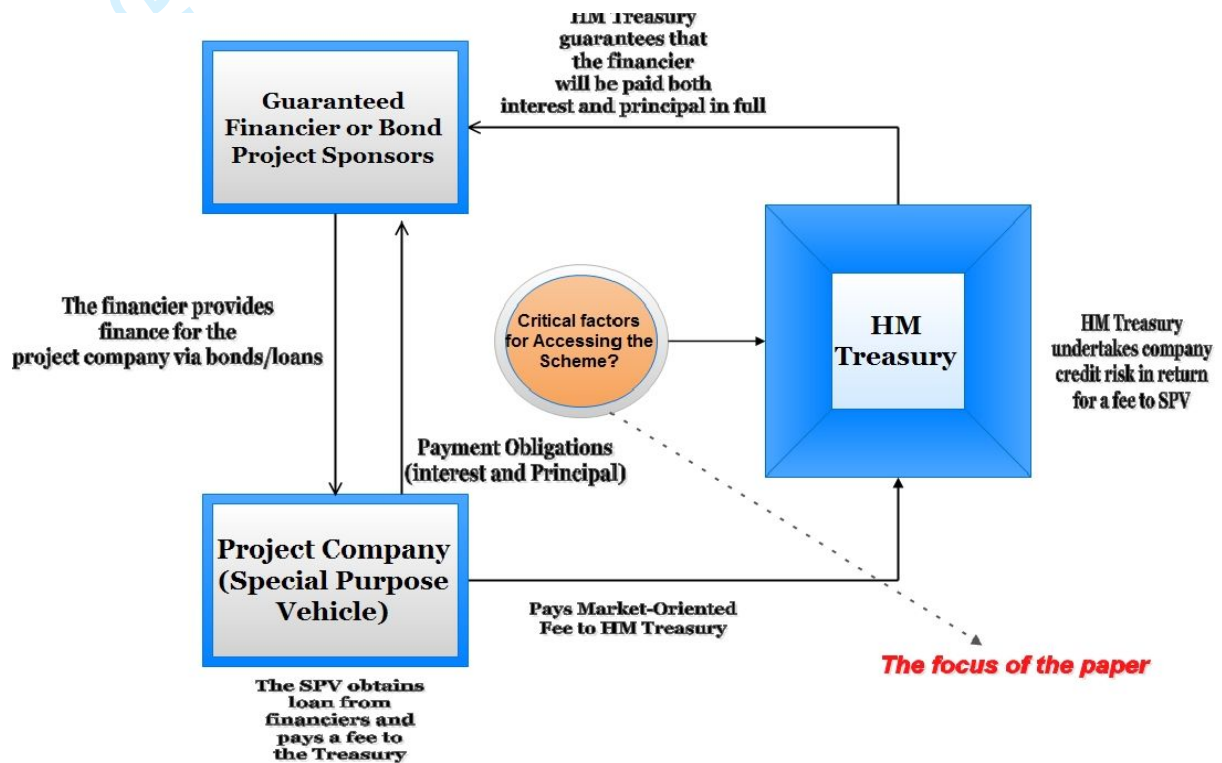
36 103  
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38 104 In spite of the importance of PFI/PPP for financing public-oriented projects such as roads, rail  
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40 105 network, hospitals etc. (Yang *et al.*, 2013), the last global financial crisis created drastic  
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42 106 reduction in loan available for numerous project finance contracts (Meng and McKevitt, 2011;  
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44 107 Hampl *et al.*; 2011; Demirag *et al.*; 2011; Farrell, 2003). The world project finance market which  
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46 108 attained a record high \$68.6 billion in 2008 suddenly plummeted by the end of 2009 to about  
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48 109 \$55.5 billion due to the effect of the economic meltdown (Demirag *et al.*, 2011). By the  
49  
50 110 beginning of 2010, the value of bank lending to UK infrastructural projects had fallen from  
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52 111 £6billion pre-crisis level to £3billion (NAO, 2015). A big gap between customer deposits and  
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54 112 bank loans resulted (Thorhallsson and Kirby, 2012), as government's access to risk free  
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56 113 borrowing drastically reduced (Toms *et al.*, 2011). In addition, the new wave of financial  
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3 114 regulations and structural revisions that followed, as an aftermath of the credit crunch, led to  
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5 115 massive exodus of lenders from the PFI market (Demirag *et al.*, 2015).  
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10 117 Amidst rising pressures on current infrastructures and budgetary constraints ((Hodge and  
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12 118 Greve, 2007; Demirag *et al.*, 2015), the reality on ground presented governments with  
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14 119 enormous challenges in mobilising long-term finance for new infrastructures (HM Treasury,  
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16 120 2014). Due to this negative impact, reversing the dangerous trend and ensuring access to  
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18 121 finance for critical infrastructures became a global agenda. This saw a number of developed  
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20 122 economies such as the UK, US, Japan, Australia, China etc. massively roll out various  
21  
22 123 economic and fiscal stimulus packages (Drew, 2010). The Obama administration rolled out the  
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24 124 most massive bailout, injecting about \$US800 billion in fiscal stimulus package, into the US  
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26 125 financial system (Garrett, 2010).  
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33 127 Following this trend, the UK Government in 2012, passed into law the Financial Assistance  
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35 128 Act. This act empowered the Treasury Department to provide financial guarantees for critical  
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37 129 infrastructure in the UK (NAO, 2015) and resulted in the introduction of a 4year UK Guarantee  
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39 130 Scheme for Infrastructures (UKGSI). The UKGSI was conceived to provide an unconditional  
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41 131 government cover for risks as well as other liabilities associated with financing large-scale  
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43 132 infrastructures in UK. This HM Treasury's policy was backed by a £40billion cover, which  
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45 133 was made accessible to potential investors (project sponsors) in UK infrastructures. The  
46  
47 134 scheme was to facilitate successful implementation of the 2011 National Infrastructure Plan  
48  
49 135 (NIP). The NIP, which is a 5-year infrastructure master plan, is coordinated by Infrastructure  
50  
51 136 UK (IUK), a department in the HM Treasury. The NIP highlighted priority sectors for new  
52  
53 137 infrastructural investments within the UK economy. Additionally, the policy had earlier  
54  
55 138 documented about 500 new infrastructure projects within the UK, requiring investments to the  
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139 tune of £250billion, with two-thirds of such investments to be privately financed using schemes  
 140 such as the PFI/PPP. See Fig.2 below for conceptual framework of the scheme and the focus  
 141 of the study:



143

144 *Fig.2. Conceptual Framework for UK Guarantee Scheme for Infrastructures*

145 *Adapted from NAO, (2015).*

146

147 However, since the scheme's emergence, many project sponsors in UK infrastructures have  
 148 had difficulty accessing the guarantee (Wynne, 2015). While the NAO (2015) highlighted poor  
 149 structuring of projects' business case as the major barrier preventing sponsors' access to the  
 150 scheme, some sections among industry stakeholders highlighted poor understanding of the  
 151 guarantee scheme (Atmo and Duffield, 2014). This perspective confirms reports from HM  
 152 Treasury (2014) which stated that, apart from poor structuring of guarantee applications, many  
 153 project sponsors were unable to demonstrate how their proposed PFI projects met set criteria.  
 154 Wynne (2015) had also challenged the absence of transparency and competitive bidding



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3 155 process in the guarantee scheme. Nevertheless, Treasury Department have maintained it  
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6 156 conducts its assessment of guarantee applications using best practices (HM Treasury, 2013).  
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10 158 According to HM Treasury (2014), as part of procedures for accessing the guarantee facility,  
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12 159 the treasury department conducts due diligence appraisals for project proposals similar to  
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14 160 commercial practice by project finance banks. Such appraisal involves risk assessments,  
15  
16 161 economic and technical feasibility of PFI projects. The treasury also ensures that, each  
17  
18 162 infrastructure project company is charged a non-refundable fee that is calculated based on  
19  
20 163 market-oriented benchmark on current prices of risk margins. This fee, it considers as value for  
21  
22 164 money to tax payers for accepting project risks. However, a number of criticisms have trailed  
23  
24 165 the overall handling of the scheme and its impact on the entire UK PFI/PPP market (Carbonara  
25  
26 166 *et al.*, 2014; NAO, 2015; Wynne, 2015). Although the Treasury recorded her first guarantee in  
27  
28 167 April 2013, by December 2014, only £1.7billion of the £40billion guarantee facility had been  
29  
30 168 accessed (Wynne, 2015). With the facility due to terminate by December, 2019 (although with  
31  
32 169 possible extension of the policy on the horizon); concerns have been raised as to the extent that  
33  
34 170 such public sector guarantees justifies its primary objectives (Carbonara *et al.*, 2014; NAO,  
35  
36 171 2015; Gropp *et al.*, 2014; Wynne, 2015). Therefore, in-depth understanding of critical factors  
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38 172 needed by project sponsors to access the facility has been clamoured (Johal *et al.*, 2012;  
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40 173 Carbonara *et al.*, 2014; Gropp *et al.*, 2014; NAO, 2015).  
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### 49 175 **3.0 Research Methodology**

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53 177 In order to deepen current understanding of critical factors for accessing the UK Guarantee  
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55 178 Scheme for Infrastructures (UKGSI), the need to explore the perspectives of PFI/PPP  
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57 179 stakeholders and confirm wider applicability of such views necessitated the adoption of a two-  
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59 180 way (explorative cum exploitative) methodological approach for the study. Described as

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3 181 “multiple operationism” by Webb *et al.* (1966), mixed methodology allows the combination of  
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5 182 methodologies in a single study. According to Denzin and Lincoln (2008), integrating  
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7 183 quantitative and qualitative data in a study is considered essential to increasing richness and  
8  
9 184 rigor in social inquiry. This buttressed Downward and Mearman (2007), who argued that,  
10  
11 185 through triangulation, qualitative findings can be validated using quantitative analysis and vice  
12  
13 186 versa. As such, by augmenting the non-overlapping weaknesses of either methods (qualitative  
14  
15 187 and quantitative), with strengths of the other (Johnson and Onwuegbuzie, 2004; Creswell,  
16  
17 188 2013); mixed methodology allowed research into the UKGSI to be robust.  
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24 190 The exploratory approach to the study involves focus group discussions with stakeholders in  
25  
26 191 UK PFI/PPP industry. The primary objective here was to facilitate authentic representation of  
27  
28 192 correct views and interpretations that participants’ subjectively attribute to a phenomenon via  
29  
30 193 their daily experiences (Alversson and Deetz, 2000). This is in contradiction to the imposition  
31  
32 194 of a priori theory, where the researcher simply tests a set of pre-defined factors identified from  
33  
34 195 literature using a deductive methodology (Johnson and Duberley, 2000). As such, the focus  
35  
36 196 group discussions helped to bring together stakeholders in UK’s PFI industry to share their  
37  
38 197 common understanding regarding the UK guarantee scheme; based on their previous  
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40 198 involvement in PFI projects backed by government guarantee scheme. The focus groups  
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42 199 comprised representatives of equity firms, senior lenders (banks), PFI/PPP contractors and  
43  
44 200 public sector employees who have been involved in the UK guarantee scheme. By building on  
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46 201 the views of one another through intersubjective interactions, participants were able to explore  
47  
48 202 various perspectives on the scheme (Creswell, 2013). This provides deeper understanding into  
49  
50 203 shared thinking on the topic of discussion (Chioncel *et al.*, 2003). Thus, the major benefit here  
51  
52 204 is that participants were able to remind one another of perceptions they may not have recalled,  
53  
54 205 an approach which is unlikely in the case of one-on-one interviews (Oyedele, 2013).  
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207 Considering the specialised nature of the UK guarantee scheme, identifying information-rich  
 208 participants with experience of the scheme required the adoption of purposive sampling  
 209 technique for the study. According to Blaikie (2000) and Neuman and Neuman (2006),  
 210 purposive sampling is best fitted for cases where the researcher intends to conduct in-depth  
 211 investigation about a unique type of study. This is more essential where the research  
 212 participants may not be easily reached (Marshall, 1996; Cooper *et al.*, 2006). This sampling  
 213 approach therefore allowed the researcher to use wide network of contacts in the UK PFI  
 214 industry, to access suitable stakeholders for the study. Examples of previous studies in project  
 215 finance that had adopted this sampling approach are Bing *et al.* (2005), Li *et al.* (2005), Meng  
 216 and McKevitt (2011) and Oyedele (2013).

217  
 218 In order to explore participants' common understanding of the phenomenon, four (4) focus  
 219 group discussions were conducted in all. Eighteen participants were involved in the focus group  
 220 discussions comprising, four (4) public sector employees, four (4) senior lenders (banks staffs),  
 221 six (6) staff of equity investment firms and four (4) PFI/PPP contractors. In total, all the  
 222 discussants have been involved in an average of 36 PFI/PPP project finance deals in their  
 223 career. Additionally, the total numbers of UKGSI applications personally involved in by all  
 224 participants were 16. The entire focus group discussions lasted 467mins. Table 1 shows further  
 225 description of participants in the group:

226 *Table 1: Overview of Participants involved in the Focus Group Discussions*

FG	Categories of Focus Group Participants	Public Sector employees	Senior Lenders	Equity Investors	PFI/PPP Contractors	Total
1.	No. of Interview Participants	4	4	6	4	18
2.	Average experience of participants in PFI/PPP Project financing	7years	9 years	8years	10years	34yrs
3.	Duration of focus group discussions	75mins	112mins	160mins	120mins	467mins
4.	Job Title of interview participants:	0	0	0	0	2
	▪ Mid-level Staffs			2		
	▪ Senior Staff	3	0	0	2	5

	▪ Manager	1	4	4	2	11
5.	Average No. of PFI/PPP projects involved	9	9	12	6	36
6.	No. of UKGSI applications involved	10	2	3	1	16

227

228 Discussions in each focus group explored experiences of various participants regarding  
 229 PFI/PPP projects with emphasis on their involvement in UKGSI applications for projects.  
 230 Issues such as how to ensure project bankability and criteria for ensuring successful guarantee  
 231 applications were examined. Data collected from the focus group interviews were later  
 232 transcribed and analysed using Nvivo10 software. From the qualitative data transcript, the  
 233 author identified a comprehensive list of 26 important factors influencing the success of  
 234 UKGSI guarantee applications for potential PFI/PPP infrastructure projects.

235

236 The second phase of the study involved postal questionnaire survey developed using the criteria  
 237 identified through focus group discussions. The adoption of questionnaire survey for this study  
 238 centred on the need for wider applicability and reliability of findings generated from the  
 239 qualitative study (Oyedele, 2013). Questionnaire respondents were identified via the UK PFI  
 240 projects' database provided by Partnership UK. From this database, a list of three hundred and  
 241 five (305) financial and contracting firms, comprising senior lenders (banks), equity firms,  
 242 financial consultants, hedge funds, pension fund managers, PFI/PPP contractors etc. were  
 243 collated. The survey was piloted using three academics (in project management field), four  
 244 lenders (staff) and two financial consultants, all of whom possess an average of 15.3 years'  
 245 experience in PFI/PPP deals in various capacities. Their feedback, which included rephrasing,  
 246 and shortening of few questions were carried out, to develop the final questionnaire. In the final  
 247 questionnaire, respondents were individually required to indicate the importance of criteria  
 248 determining approval for PFI projects under the UK guarantee scheme for infrastructures. This  
 249 was done on a five-point Likert scale, where 1 represented "Not Important" and 5, "Most  
 250 Important".

251

252 Distribution of the survey to various respondents was done via postal mail and accompanied

253 by a letter of introduction to the study, as well as a return envelope each. Out of the two hundred

254 and seventy one (271) questionnaires distributed, 195 questionnaires were returned amounting

255 to a response rate 71.95%. Thirty-eight (38) of the questionnaires were incomplete and

256 therefore rejected. This left us with a total of one hundred and fifty seven (157) usable

257 responses from senior lenders (banks), equity firms, financial consultants and PFI/PPP

258 contractors, representing 57.93% of distributed questionnaires. Data collected from the

259 questionnaire survey was later analysed using Statistical Package for Social Sciences (SPSS)

260 Software. Factor Analysis, which allowed the exploration and identification of the principal

261 underlying dimensions behind the phenomenon, was conducted. This is in addition to

262 identifying the importance of each criterion from the questionnaire using a Significant Index

263 Rating. Table 2 shows the summary of sample response from the survey respondents. From

264 Table 2, the response rate were, 86.5, 80, 86.4, and 57.3% comprising senior managers of

265 banks, financial consultants, directors of equity firms, construction site managers respectively.

266 This was considered suitable for analysis based on the claim by Oyedele (2013) that a survey

267 result could be considered to be of little significance and biased if the rate of return was lower

268 than 30 to 40%. All the respondents have been involved in an average of 21 UK Guarantee

269 Applications for PFI/PPP projects.

270

271 *Table 2. Sample Responses from Questionnaire Survey*

Professionals	Number Distributed	Number of Responses	Percentage (%)Return	Av. years of Experience	Av. No. of PFI Projects Involved with
Senior Managers (Banks)	67	58	86.5	21.5	20-25
Hedge Funds Managers	25	11	44	12.0	20+
Financial Consultants	40	32	80	15.5	25+
Equity Investments Directors	59	51	86.4	17.0	25-30
PFI/PPP Contractors	61	35	57.3	15.0	20-25

Pension Funds Managers	19	8	42.1	13.0	25+
<b>Total</b>	<b>271</b>	<b>195</b>	<b>71.95</b>	<b>15.6</b>	<b>25+</b>

## 272 4.0 Analyses of Data

273 This section discusses the qualitative and quantitative analyses of findings from focus group  
 274 discussions with UK PFI industry stakeholders and responses from questionnaire survey as  
 275 regards the UK guarantee scheme.

### 277 4.1 Qualitative Analysis and Findings

279 According to Creswell (2013), qualitative data analysis involves identifying significant  
 280 statements, meaning units, structural and textual themes that highlight the essence of a  
 281 phenomenon. This approach allows the researcher to transit from narrow units to broader units  
 282 of analysis (Alversson and Deetz, 2000). After extensive discussions that spanned a total of  
 283 467mins where participants explored various perspectives on the UKGSI, transcripts of the  
 284 discussions were produced using Nvivo10 software. The author carefully read the data  
 285 transcripts on several occasion, while identifying various themes from experiences of industry  
 286 experts. After thorough analysis of the qualitative data, 26 important criteria that can influence  
 287 approval for projects under the UK guarantee scheme were revealed (See Table.2 below).  
 288 According to focus group discussants, these various factors, if carefully integrated in PFI/PPP  
 289 project sponsors' guarantee applications, will improve project bankability, and maximise  
 290 chances of winning UKGSI approval for potential infrastructure projects.

293 *Table 3: Important Criteria Influencing Approval for UK Guarantee Scheme*

No	Criteria for Accessing the UK Guarantee Scheme for Infrastructures	Focus Groups			
		1	2	3	4
1	▪ Project is infrastructure in NIP-defined priority sectors.	✓	✓	✓	✓
2	▪ Compliance of project with European Commission guidance on state guarantees	✓	✓	✓	✓

3	▪ Project must be nationally or economically significant in nature (Large scale).	✓		✓	✓
4	▪ Project must be non-investment grade due to high construction risk	✓	✓	✓	✓
5	▪ Strong financial credibility of project.	✓	✓	✓	✓
6	▪ Project must be technically feasible.	✓	✓	✓	✓
7	▪ Existence of front-ended equity commitment from sponsors.	✓		✓	✓
8	▪ Project must have robust risk structuring and management framework	✓	✓		✓
9	▪ Competence of project consortium members	✓			✓
10	▪ Project must have obtained approval and permit from authorities	✓	✓	✓	✓
11	▪ Project's readiness to start construction within 52weeks of guarantee.	✓	✓	✓	✓
12	▪ Existence of delay in start-Up insurance by project consortium.	✓			
13	▪ Project's compliance with other legal and regulatory laws.		✓	✓	
14	▪ Project demonstrates how inadequate finance will hinder project.	✓	✓		✓
15	▪ Project demonstrates the viability.		✓		✓
16	▪ Consortium proves lenders' risk aversion and desire for more financial cover.	✓		✓	✓
17	▪ Consortium proves how absence of guarantee will damage project time scales	✓	✓	✓	
18	▪ Clear identification of level of risk exposure in the project	✓			✓
19	▪ Projects must have acceptable credit quality.	✓	✓	✓	✓
20	▪ Compliance with social, legal and environmental laws and standards.	✓		✓	✓
21	▪ Efficient risk transfer away from tax payers.	✓		✓	✓
22	▪ Project's affordability	✓	✓	✓	✓
23	▪ Project offers least Cost of procurement.	✓	✓	✓	✓
24	▪ Project offers opportunity for technological transfer		✓	✓	✓
25	▪ Project offers innovative designs and strategies.	✓	✓	✓	
26	▪ Market-oriented fee commensurate to risk borne by the tax payers.	✓	✓	✓	✓

294

295 The focus group discussions were also used to identify participants' perspectives on issues such

296 as:

- 297 ▪ Divergent stakeholders' opinions regarding various guarantee criteria.

## 298 4.2 Quantitative Analysis and Findings

299

### 300 *Reliability Analysis and Significance Ranking of Each Criterion*

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2  
3 301 Since one of the objectives of this study is to identify a reliable set of criteria used in evaluating  
4  
5 302 UK government guarantee applications, reliability analysis was conducted. With the aid of  
6  
7 303 Statistical Package for Social Sciences (SPSS), the Cronbach's Alpha reliability coefficient for  
8  
9 304 the 26 criteria was produced as 0.904. According to Field (2005), a high reliability coefficient  
10  
11 305 usually above 0.7 confirms the greater internal consistency of the entire data to measure the  
12  
13 306 construct it was aimed to measure statistically. Oyedele (2013) indicate that any factor not  
14  
15 307 contributing to the internal consistency of the data will have a higher reliability score than the  
16  
17 308 overall Cronbach's alpha reliability coefficient (i.e. in this study, it is 0.904). Based on the  
18  
19 309 results shown in the third column of Table 4, the 26 set of criteria show strong reliability in  
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21 310 evaluating UK government guarantee applications for PFI/PPP infrastructure projects.  
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29 312 After the reliability analysis, this study was interested to know the significance ranking of each  
30  
31 313 criterion. A significance index used by similar studies Tam *et al.* (2000) and Spillane *et al.*  
32  
33 314 (2012) was used. This is mathematically expressed as:

$$34 \quad \text{Significance Index (SI)} = \left( \frac{\sum(s)}{NS} \right) \times 100\% \quad (1)$$

35  
36  
37 316 Where  $s$  represents the significance rating on a Likert scale of 1 to 5,  $S$  is the highest  
38  
39 317 significance rating (that is 5) and  $N$  is the total number of responses for that particular factor.  
40  
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42  
43 318 The significance index and ranking are shown in column four and five of Table 4 respectively.  
44

45  
46 319 The top five most significant criteria for evaluating UK government guarantee scheme are (i)  
47  
48 320 project must be nationally or economically significant in nature (ii) project must be  
49  
50 321 infrastructure in NIP-defined priority sectors (iii) compliance of project with European  
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52 322 Commission's guidance on state guarantees (iv) strong financial credibility of project (v)  
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54 323 project must be non-investment grade due to high construction risk. Likewise, the least five  
55  
56 324 criteria for evaluating UK government guarantee scheme for infrastructures, as confirmed by  
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3 325 the respondents are: (i) project offers innovative design and strategies (ii) project offers  
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5 326 opportunity for technological transfer (iii) existence of delay in start-up insurance by project  
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7 327 consortium (iv) consortium proves lender's risk aversion and desire for more financial cover  
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9 328 (existence of front-ended equity commitment from sponsors).

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### 13 14 330 ***Factor Analysis***

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17 331 After ascertaining the significance of each criterion, in line with the main objective of the study,  
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19 332 which is to unravel the dominant structures underlying the various criteria, exploratory factor  
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21 333 analysis was conducted. Factor analysis is a statistical technique used for data reduction or  
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23 334 structure detection in which variability in observed or correlated items are identified from other  
24  
25 335 smaller variables (Meredith, 1993). With factor analysis, a set of key uncorrelated factors are  
26  
27 336 unravelled from the reduced data. The Kaiser-Meyer-Olkin (KMO) measure of sampling  
28  
29 337 adequacy value and Bartlett test of sphericity were 0.63 (higher than 0.5) and  $8.1018e-34$ , less  
30  
31 338 than 0.05 respectively. These two tests confirm that the data is appropriate for factor analysis.  
32  
33 339 Principal Axis Factor and Varimax rotation were used for criteria extraction and rotation  
34  
35 340 respectively. In order to assist in the interpretation of findings, all criteria with Eigen value of  
36  
37 341 1 and above were extracted. In addition, all criteria with factor loading of 0.50 and above were  
38  
39 342 picked for grouping the criteria (Tucker and Lewis, 1973). The analysis shows five factor-  
40  
41 343 solution with Eigen values greater than one (1) as shown in column three and five of Table 5.  
42  
43 344 See also Fig. 3 for the associated Scree Plot revealing the graphical representation of the five  
44  
45 345 critical factors. The five factor-solution account for 77.22% of total variance and were  
46  
47 346 considered the critical factors influencing PFI project's approval under the UK guarantee  
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49 347 Scheme for Infrastructures. All the critical factors are labelled with due cognizance to the  
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51 348 criteria that made them up. These are listed below

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60 349 ■ *Critical Factor 1 : Project Compliance with UK National Infrastructure Plan*

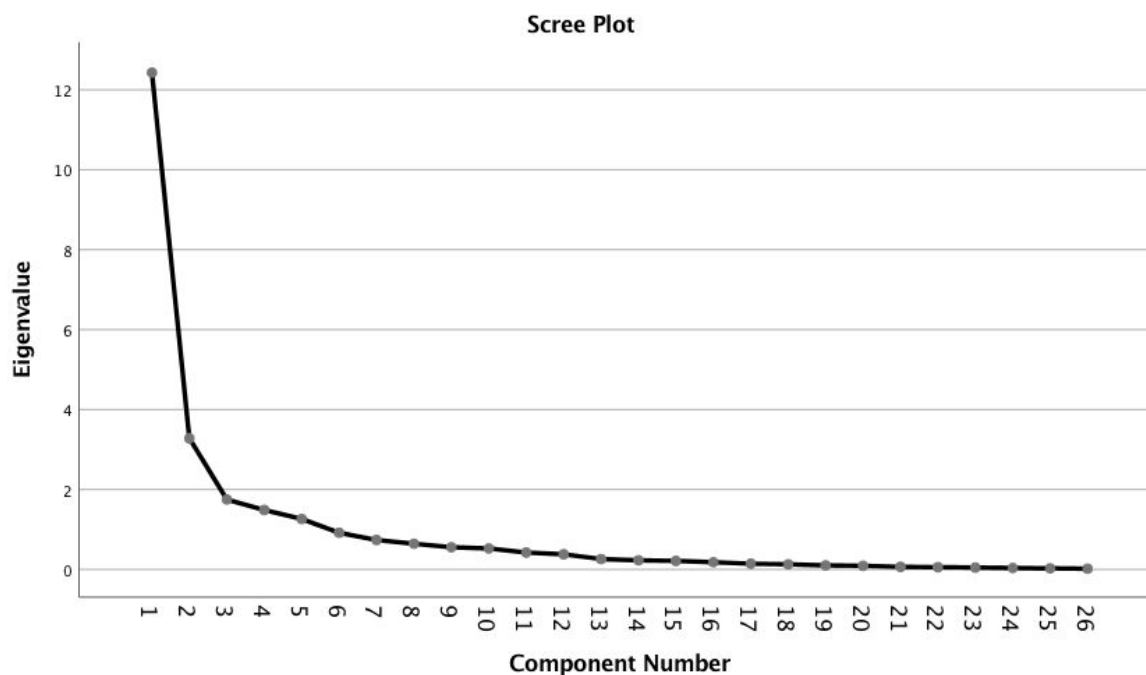
350 ■ Critical Factor 2: *Demonstration of Project Bankability and Risk Management*

351 ■ Critical Factor 3: *Projects' Demonstration of Value for Money to Tax Payers.*

352 ■ Critical Factor 4: *Demonstrate Project's Dependence on the UK Guarantee Scheme.*

353 ■ Critical Factor 5: *Certainty of Planning Commission's Approval.*

354



355

356 *Fig 3. Scree Plot Showing the Five-Critical Factors Extracted*

357

## 358 5.0 Discussion of Findings

359 This section discusses findings from the study by buttressing results from questionnaire survey  
 360 with expert opinions from focus group discussions. The discussions are based on the five  
 361 critical factors below:

362

### 363 **Critical Factors for Winning the UKGSI Guarantee Approval**

364

365 Using the Eigen value as a measure of criteria grouping's significance; evidences from survey  
 366 responses produced five (5) critical factors for winning guarantee approval. Table 5 below

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3 367 showed that three of the critical factors displayed higher Eigen value of 4.73, 3.95 and 2.67.  
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6 368 This suggests higher importance rating of the critical factors from respondents; with respect to  
7  
8 369 influencing UK guarantee scheme's approval for projects. While the remaining two factors'  
9  
10 370 Eigen values are 2.57 and 1.22 respectively. Studies on PFI/PPP project financing such as Li  
11  
12 371 *et al.* (2005); Zhang (2005); Ahadzi and Bowles (2004) have adopted similar statistical method.  
13  
14

### 15 372 **CF1. Project's Compliance with National Infrastructure Plan (NIP)**

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18 373 As shown in Table 5 below, project's compliance with the NIP ranked highest in the survey  
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20 374 analysis (see Table five: Eigen value of 4.73) and is identified as the most important parameter  
21  
22 375 for winning guarantee approval under the UK Guarantee Scheme for Infrastructure (UKGSI).  
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24 376 These perspectives confirm the views from focus group discussions as reflected by one of the  
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26 377 participants who argued that:  
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Table 4: Reliability Analysis &amp; Significance Ranking of Factors Influencing Approval for UK Guarantee for PFI Infrastructures

No	Factors Determining PFI project's Approval for UK Guarantee Scheme for Infrastructures	Cronbach's $\alpha$ if items deleted	Significance Index (%)	Criteria Ranking
<b>F.1</b>	<b>Project compliance with UK National Infrastructure Plan</b>			
F1a	<i>Criteria:</i> ▪ Project is infrastructure in NIP-defined priority sectors.	0.900	95.20	2
F1b	▪ Compliance of project with European Commission's guidance on state guarantees	0.902	94.20	3
F1c	▪ Project must be nationally or economically significant in nature (Large scale).	0.899	98.50	1
F1b	▪ Project must be non-investment grade due to high construction risk.	0.897	87.40	6
<b>F.2</b>	<b>Demonstration of project bankability and risk management</b>			
F2a	<i>Criteria:</i> ▪ Strong financial credibility of project.	0.901	93.10	4
F2b	▪ Project must be technically feasible.	0.900	85.10	7
F2c	▪ Existence of front-ended equity commitment from sponsors.	0.879	41.10	26
F2d	▪ Project must have robust risk structuring and management framework	0.902	81.80	9
F2e	▪ Competence of project consortium members	0.893	55.90	21
<b>F.3</b>	<b>Projects' Demonstration of Value for Money to tax payers.</b>			
F3a	<i>Criteria:</i> ▪ Projects must have acceptable credit quality	0.847	91.50	5
F3b	▪ Compliance with social, legal and environmental laws and standards	0.890	69.90	16
F3c	▪ Efficient risk transfer away from tax payers	0.904	79.80	11
F3d	▪ Project's affordability	0.902	83.70	8
F3e	▪ Project offers least Cost of procurement	0.902	81.30	10
F3f	▪ Project offers opportunity for technological transfer	0.878	49.50	23
F3g	▪ Project offers innovative designs and strategies	0.898	51.70	22
F3h	▪ Market-oriented fee commensurate to risk borne by the tax payers	0.895	74.70	12
<b>F.4</b>	<b>Demonstrate project's dependence on the UK Guarantee Scheme</b>			
F4a	<i>Criteria:</i> ▪ Project demonstrates how inadequate finance will hinder project	0.903	61.50	19
F4b	▪ Project demonstrates the viability	0.901	71.40	15
F4c	▪ Consortium proves lenders' risk aversion and desire for more financial cover	0.899	42.90	25
F4d	▪ Consortium proves how absence of guarantee will damage project time scales	0.902	58.30	20
F4e	▪ Clear identification of level of risk exposure in the project	0.896	67.10	17
<b>F.5</b>	<b>Certainty of Planning Commission's Approval</b>	0.904		
F5a	<i>Criteria:</i> ▪ Project must have obtained approval and permit from authorities	0.903	73.90	13
F5b	▪ Project's readiness to start construction within 52weeks of guarantee.	0.901	72.80	14
F5c	▪ Existence of delay in start-Up insurance by project consortium.	0.898	44.30	24
F5d	▪ Project's compliance with other legal and regulatory laws.	0.901	63.20	18

Overall Cronbach' Alpha =0.904, Significant at 95% Confidence interval =0.05

**Table 5: Factor Analysis for the Criteria Influencing Approval for UK Guarantee for PFI Infrastructures**

No		Eigen Value	% Variance	Factor Loading
F.1	Project compliance with UK National Infrastructure Plan	4.737	35.67	
F1a	<i>Criteria:</i> ▪ Project is infrastructure in NIP-defined priority sectors.			0.843
F1b	▪ Compliance of project with European Commission's guidance on state guarantees			0.801
F1c	▪ Project must be nationally or economically significant in nature (Large scale).			0.687
F1b	▪ Project must be non-investment grade due to high construction risk.			0.585
F.2	Demonstration of project bankability and risk management	3.952	19.22	
F2a	<i>Criteria:</i> ▪ Strong financial credibility of project.			0.739
F2b	▪ Project must be technically feasible.			0.657
F2c	▪ Existence of front-ended equity commitment from sponsors.			0.623
F2d	▪ Project must have robust risk structuring and management framework			0.575
F2e	▪ Competence of project consortium members			0.804
F.3	Projects' Demonstration of Value for Money to tax payers.	2.674	11.14	
F3a	<i>Criteria:</i> ▪ Projects must have acceptable credit quality			0.622
F3b	▪ Compliance with social, legal and environmental laws and standards			0.540
F3c	▪ Efficient risk transfer away from tax payers			0.773
F3d	▪ Project's affordability			0.638
F3e	▪ Project offers least Cost of procurement			0.586
F3f	▪ Project offers opportunity for technological transfer			0.517
F3g	▪ Project offers innovative designs and strategies			0.864
F3h	▪ Market-oriented fee commensurate to risk borne by the tax payers			0.858
F.4	Demonstrate project's dependence on the UK Guarantee Scheme	2.578	7.05	
F4a	<i>Criteria:</i> ▪ Project demonstrates how inadequate finance will hinder project			0.718
F4b	▪ Project demonstrates the viability			0.621
F4c	▪ Consortium proves lenders' risk aversion and desire for more financial cover			0.583
F4d	▪ Consortium proves how absence of guarantee will damage project time scales			0.869
F4e	▪ Clear identification of level of risk exposure in the project			0.692
F.5	Certainty of Planning Commission's Approval	1.229	4.14	
F5a	<i>Criteria:</i> ▪ Project must have obtained approval and permit from authorities			0.661
F5b	▪ Project's readiness to start construction within 52weeks of guarantee.			0.549
F5c	▪ Existence of delay in start-Up insurance by project consortium.			0.611
F5d	▪ Project's compliance with other legal and regulatory laws.			0.537
	<b>Total</b>		<b>77.22</b>	

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3                   *“Projects of national significance with full compliance to the NIP and European*  
4                   *commission’s guarantee guidance are majorly targeted under the guarantee*  
5                   *scheme.”* (Focus Group 3)  
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11 In line with the above assertion, the National Planning Commission described nationally  
12 significant projects as projects classified as large-scale developmental projects that meet a broad  
13 classification of infrastructure, ranging from transport, health, waste, energy, education, courts,  
14 prisons etc. As discovered during the course of the study, infrastructures in these priority sectors,  
15 and especially in transport and energy sectors, have been considered to be of priority. This  
16 confirms the UK government’s economic agenda to deliver sustainable and effective transport  
17 system for the UK in order to allow businesses and people to prosper, while reducing greenhouse  
18 gas emissions using more renewable/low carbon energy (Wynne, 2015). To this end, UKGSI  
19 allows the Treasury to guarantee large and innovative projects, which may be non-investment  
20 grade. Non-investment grade projects are high yield investment portfolio with relatively low  
21 credit quality and higher risk of default (Rigobon, 2002). Such projects are often rated below  
22 ‘BBB’ from Standard and Poor’s rating agency and ‘Baa’ from Moody’s (Hite and Warga, 1997).  
23 From the Treasury’s perspectives, most large infrastructures are often non-investment grade  
24 (NAO, 2015), given their typically higher construction risks (Dailami and Klein, 1997).  
25 However, potential projects have to demonstrate potentials for improving credit quality over the  
26 course of time and a contribution to economic growth (Wynne, 2015). The criterion of project’s  
27 contribution to economic growth has however generated divided opinions among focus group  
28 discussants, with most private sector participants (Equity investment firms, senior lenders,  
29 contractors), describing the criterion as very ambiguous. A typical quote suggests that:  
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56                   *“One of the major criterion that sponsors may find difficult to address is to*  
57                   *prove a project’s contribution to economic growth, considering the absence*  
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3 *of any objective testing criteria for such from the government. There are*  
4  
5 *certain aspects that seem rather subjective”.* (Focus Group 4)  
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9 However, public sectors participants argue that, such criteria are left to the internal decisions of  
10 the Treasury but may be influenced by the novelty of such project and its wider impact on the  
11 UK as a whole. Additionally, findings also reveal that projects with higher than 5% default risk  
12 in any particular year stand little chance of being guaranteed, since that contravenes the European  
13 Commission’s guideline on guarantee scheme. The availability of relevant price benchmarks for  
14 non-investment grade risks in the project will better project assessment.  
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## 23 **CF.2 Demonstration of Project Bankability and Risk Management**

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26 Project bankability and risk management ranked next in importance based on evidence from  
27 survey responses as shown in Table 5 with an Eigen value of 3.95. This result suggests that,  
28 given the high-risk nature of PFI/PPP projects, bankability remains the next crucial factor to  
29 consider (Yescombe, 2013). As such, a project is not considered bankable where risks related to  
30 its’ commercial viability have not been identified, allocated and mitigated within the project  
31 structure from a commercial perspective (Meng and McKeivitt, 2011). These perspectives  
32 confirm opinions expressed by focus group discussants as summed-up by a senior lender who  
33 argued that:  
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45 *“The crucial thing here is that the project must demonstrate bankability. In reality*  
46 *bankability is actually the starting point for any project financing, and the*  
47 *guarantee scheme prioritises this as well....”* (Focus Group 1)  
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54 In line with the above assertion, HM Treasury (2013) highlighted that; projects must demonstrate  
55 bankability by satisfying minimum bankability requirements. Bankability in PFI/PPP projects  
56 requires that the commercial terms of a project be satisfactory to lenders. This emphasizes the  
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3 project's ability to generate sufficient income that enables debt repayments to financiers and  
4  
5 returns on investments to project sponsors (Meng and McKeivitt, 2011). According to Delmon  
6  
7 (2011), projects must show robustness in cash flow projections that is based on adequate Debt  
8  
9 Service Cover Ratio (DSCR) over the project life cycle. Zhang (2005) argued that financial  
10  
11 robustness in PFI projects is often hinged on successful project completion, which marks the end  
12  
13 of construction stage. As such, assurances that such project will be successfully constructed  
14  
15 within financial budget and stipulated time will require technical competence on the part of the  
16  
17 project consortium (Akintoye *et al.*, 1998). In that respect, competent construction contractor  
18  
19 with wealth of experience in such projects, financial strength and tried-and-tested project  
20  
21 technology will boast project bankability (Mills, 2010).  
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29 Results also show that, since most PFI/PPP projects are often front-loaded in terms of capital  
30  
31 involvement at the construction stage, sponsors may enhance bankability chances by agreeing to  
32  
33 a front-ended equity injection. Front-ended equity stake in PFI projects (sponsors put in all their  
34  
35 capital from project commencement), is seen as a huge demonstration of commitment from  
36  
37 project sponsors towards the success of the project (Hoffman, 2008). Evidence also show that,  
38  
39 where a guarantee application demonstrates strong understanding of project risks and capability  
40  
41 to efficiently allocate and manage such risks in manner that unburdens the public sector, more  
42  
43 bankability is conferred on such project. This buttressed Gropp *et al.* (2014), who argue that, the  
44  
45 public sector is not involved in speculative businesses, and as such, any risk transfer to public  
46  
47 sector under any guise must not be at the expense of the taxpayers. Therefore, competence on  
48  
49 the part of the project consortium will ultimately inform the series of financial, technical and  
50  
51 managerial decision that will ensure the bankability of projects (Mills, 2010), and a successful  
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53 guarantee bid.  
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### CF3. Projects' Demonstration of Value for Money to Tax Payers

Value for money ranked third as a parameter influencing approval for UKGSI. This is evidenced by survey results in Table 5, with an Eigen value of 2.67. Value for money (VFM) to tax payers is considered a critical parameter for winning the UKGSI guarantee. In November 1994, the UK government mandated all public sector procurements to pass through value for money test (Akintoye *et al.*, 2003). Here, the HM Treasury puts all procurements, using private sector finances, under three cardinal criteria namely: cost savings in comparison to cost of direct traditional procurements (using public sector comparator), affordability and efficient risk transfer away from the public sector (Cheung *et al.*, 2009). Finding show that, besides charging market-oriented fee to guaranteed project companies (which is considered the most important factor under the UKGSI VFM test, the value for money assessment also involves examining the viability of the project, social and environmental impact assessments, opportunities for innovative designs and strategies, etc.

However, the need for guarantee applications to fulfil value for money criteria generated various perspectives among focus group participants. While participants expressed collective views concerning the importance of VFM, they expressed different opinions on the number of VFM tests required for projects applicants under the scheme. Most private sector participants (senior lenders, equity investors and PFI/PPP contractors) in the focus group considered the scheme's VFM test as cumbersome. As one discussant argued:

*“Let's not forget that in a PFI project, there is VFM test, during the bidding stage where the public sector clients expect a demonstration of VFM. Therefore having another VFM test at the guarantee stage simply is too much bureaucracy*

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3 *to the current system...and obviously something has to be done to our regulatory*  
4  
5 *regimes.” (Focus Group 2)*  
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8 From public sector participants’ opinions, the current VFM test only examines whether the fee  
9 charged to project companies for obtaining government guarantee represents value to tax payers  
10 or not. This approach to VFM, according to many participants, is not holistic enough. As  
11 exemplified in the views of one participant:  
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18 *“Value for money ensures the project does not present any fiscal or economic risk to*  
19 *the financial system. But quite frankly....the challenge here is that we can’t just simply*  
20 *look at the fees charged by the Treasury on guaranteed projects as representing VFM,*  
21 *while neglecting the aspect of whether the project itself represents VFM. So there is*  
22 *still need for bottom up approach on VFM in the scheme“.* (Focus Group 3)  
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31 This perspective buttressed a recent study by Gropp *et al.* (2014) who argued that public sector  
32 guarantees have been argued to represent another on-balance sheet financing for governments,  
33 and as such, require proper management to the extent that it galvanises lending markets to their  
34 traditional roles.  
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#### 41 **CF4. Demonstration of Project’s Dependence on the UK Guarantee Scheme**

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45 Dependence on UK Guarantee Scheme for Infrastructure is also another critical factor that  
46 influences guarantee approval under the UKGSI. Table 5 indicate an Eigen value of 2.57 from  
47 the survey results. As argued by NAO (2015), justifying the reliance of a proposed project on  
48 government guarantee is essential upon the objective that the UKGSI is not designed to grant  
49 direct infrastructure loans to project sponsors. As such, the facility must serve targeted audiences  
50 and prevent a situation where sponsors obtain guarantee for projects that could have been  
51 financed independently with no recourse to the scheme (HM Treasury, 2014). These arguments  
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3 also reflect perspectives from focus group discussions as aptly captured by one of the participants  
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5 who argue that:

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9 *“The scheme will only consider projects that prove how it cannot go ahead without*  
10 *the backing of UKGSI guarantee. There are several ways of proving that, but of*  
11 *course there is no point providing guarantee to projects who have no business been*  
12 *guaranteed”* (Focus Group 1).  
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19 Wynne (2015) buttressed the above assertions by arguing that, it is essential to avoid investors’  
20 undue exploitation of the public sector guarantee. This is because when providing guarantees,  
21 the public sector may incur significant contingent liabilities, such that if called upon to be paid,  
22 can be an enormous financial obligation (Wibowo and Kochendoerfer, 2010). Tiong (1995)  
23 argued that it is not logical for the public sector to allow project sponsors to simply make money  
24 while the risks in a project are passed down to the tax payers. To this end, guarantee applications  
25 must demonstrate how such PFI projects are not financeable from a commercial point of view.  
26 Findings show that sponsors may need to clearly articulate a detailed framework of barriers to  
27 such project investments in terms of identifying high-risk profile of such projects, which  
28 therefore makes such a non-investment grade investment, and thus require government guarantee  
29 support. Other strategies may include a demonstration of the benefits and significance of such  
30 PFI project to the economy that makes it laudable (e.g. low carbon emission projects, reducing  
31 travel time on transport links etc.). Evidences of the prior financiers’ verdicts on the projects  
32 weak prospects on a commercial level due to enormous technical and other risk risks may also  
33 confer some weight on the justification (Tiong, 1995; Kumaraswamy and Zhang, 2001). In  
34 addition, evidences of the credit quality rating of such project from credit rating agencies (e.g.  
35 Moody’s, Standard & Poor’s, and Fitch) may give further impetus to the application concerning  
36 its weak credit rating (Wibowo and Kochendoerfer, 2010).  
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### CF5. Certainty of Planning Commission's Approval

Obtaining planning commission permit ranked least with respect to its' influence on winning UK guarantee approval for PFI projects, based on results from survey analysis with an Eigen value of 1.22 (see Table Five). The need for planning permit was highlighted during the focus group discussions as one discussant argues that:

*“The planning commission's permit has been part of the system for years with respect to any development project in the UK. But the challenge here for sponsors has always been delays to obtaining planning permits and this has stalled many guarantee applications for important infrastructures”* (Focus Group 4).

The need to obtain planning permit was highlighted by Mills (2010) and Wibowo and Kochendoerfer (2010), who argued that obtaining planning permits and approval for construction and operations of PFI projects is crucial to public sector guarantee for BOT projects. According to Mills (2010), such permit represents a major confirmation that the project sponsors are hoping to commence serious construction and operations of projects in earnest. Further evidences show that as part of procedures for considering guarantee applications, the UKGSI will consider whether the PFI project demonstrates evidences that it will commence construction of the project within 52weeks of guarantee approval. This particular factor may however be undermined by the lengthy procedures for obtaining planning permits (HM Treasury, 2014). According to National Planning Act (2008), decisions on applications for development consent orders (DCOs) are in strict accordance with National Policy Statements (NPSs). However, NPSs passes through series of procedures with respect to public consultations and parliamentary enquiry, before government's formal approval. The entire cycle of obtaining planning commission's permit from the pre-application stage through to acceptance, pre-examination, examination, decision and post decision stage may take not less than one year and four months. Further evidence also indicates

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3 that, in a number of situations and for certain types of PFI infrastructures, sponsors may also be  
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5 required to provide additional information with regards to compliance with the National Policy  
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7 statements (NPSs). However, considering the amount of time invested in obtaining planning  
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9 commission approval for PFI infrastructures (seeking to obtain UK guarantee), many  
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11 applications have been aborted at this stage. Findings also show that many at times, project  
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13 sponsors opt for a “Delay in Start-up Insurance”, in order to boost chances of winning  
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15 government guarantee approval. The National Audit Office in her recent report of 2015 has  
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17 bemoaned the lengthy process of obtaining planning permit for projects seeking government  
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19 guarantee, arguing that, such prolonged process is capable of frustrating successful  
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21 implementation of the UK guarantee scheme.  
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## 26 27 **6.0 Conclusion**

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30 The intervention of the UK government through the UK Guarantee Scheme for Infrastructures  
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32 (UKGSI) became necessary upon the aftermath of the last global financial crisis, which badly  
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34 affected the PFI market and threatened private sector finances for UK public infrastructures. This  
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36 study investigated the perspectives of stakeholders in UK PFI/PPP industry with respect  
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38 obtaining guarantee approval under the UKGSI. Issues such as critical factors for winning  
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40 guarantee approval and divergent stakeholders’ perspectives on guarantee criteria were explored.  
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42 The study adopted a mixed methodological approach involving focus group discussions with PFI  
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44 stakeholders (i.e. equity sponsors, lenders etc.) and postal questionnaire survey to ensure wider  
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46 applicability of findings. After much explorative cum exploitative studies conducted, findings  
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48 from the study revealed 26 important criteria influencing successful guarantee application. The  
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50 significance index and raking of the criteria revealed five topmost criteria which includes: (i)  
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52 project must be nationally or economically significant in nature (ii) project must be infrastructure  
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54 in NIP-defined priority sectors (iii) compliance of project with European Commission’s guidance  
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56 on state guarantees (iv) strong financial credibility of project (v) project must be non-investment  
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3 grade due to high construction risk. With the aid of factor analysis, a five factor-solution  
4 representing critical factors underlying the various criteria for winning the UK government  
5 guarantee approval were unravelled. These critical factors include; (i) project alignment with UK  
6 NIP policy in terms qualifying as infrastructure and falling within priority sectors (i.e. roads, rail,  
7 aviation, renewable energy etc.) (ii) Demonstration of project bankability and risk management  
8 (i.e. credit quality) (iii) Project's demonstration of value for money (VFM) (iv) demonstration  
9 of project's dependence on the guarantee scheme (v) certainty of obtaining planning  
10 commission's permits for projects. The study shows that, the five factor-solutions, if diligently  
11 incorporated in guarantee applications will enhance approval rate. Further evidences from the  
12 study also suggest differences of opinions among PFI industry stakeholders with respect to the  
13 appropriateness of a number of the criteria (i.e. value for money and project's contribution to  
14 economic growth). These diverse opinions put the private sector participants (i.e. equity  
15 sponsors, senior lenders and PFI/PPP contractors) and public sector employees on separate  
16 divide on issues. The study showed that the absence of objective testing indicators for certain  
17 guarantee criteria (VFM, measuring economic growth impact of project) have hindered project  
18 sponsors' understanding of how best to access the UK government guarantee scheme. The  
19 rigorous nature of the VFM assessment of the scheme has also been questioned with the public  
20 sector calling for project-level to guarantee-level VFM assessment. In this regard, policy makers  
21 must therefore address the divergent stakeholders' opinions, in order to create a win-win strategic  
22 framework with a bottom-up approach. Additionally, a robust engagement with industry  
23 stakeholders to foster clearer understanding of the guarantee scheme, transparent and objective  
24 evaluation of infrastructure project guarantee applications are also crucial for the public sector  
25 to consider. The national impact assessment of the scheme should therefore extend towards  
26 examining the total contribution of UKGSI to the entire segments of UK project finance and  
27 infrastructure industry as a whole.  
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7 The outcome of this study has been limited to the criteria for accessing the UK Guarantee Scheme  
8 for Infrastructures, particularly with respect to PFI/PPP project financing. Currently, little is  
9 known regarding how the scheme evaluates the economic growth impact of a PFI/PPP project  
10 under the scheme. Further empirical research might also be required to examine the impact of  
11 the UKGSI on green field and brown field infrastructure investments in the UK. This study will  
12 no doubt be useful to policy makers, project sponsors, financiers and other industry stakeholders  
13 concerning reorganising the scheme as well as exploiting maximum benefits from such  
14 government policies in the near future.  
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**Response to Reviewers' Comments and Feedbacks**

S/N	Responses	
	<b>Reviewer 1:</b>	
1	“The results presented in Table 4 could be split into 3-4 Tables to put the findings into a much more clear perspective. It appears lumpy and cumbersome as it is.”	Thanks a lot for the feedback. This has been adequately addressed in the manuscript. Kindly see Tables 4 &5 on Pages 19 & 20 respectively for correction.
2	“However, there are still some minor editorial errors. For example, line 311 on Pg 16, dada should be data”.	Much appreciation for the feedback. The entire manuscript has been proof read for typo errors. However see Page 15, line 6-8 for the correction requested.
	<b>Reviewer 2:</b>	
1	“To produce a scree plot for to diagrammatically show the factors identified as critical”.	Kindly see Page 17, line 354 for Scree Plot of the Factor Analysis conducted in the study.
2	“A scree plot would have helped to further highlight the critical factors that have been identified.”	Please see Page 17, line 354 for correction.