	Comments on the Consultation Paper on Call for evidence concerning the request to EIOPA for further technical advice on the identification and calibration of other infrastructure investment risk categories i.e. infrastructure corporates	**Deadline 10 12 2015 23:59 CET**
Name of Company:	AFME-ICMA Infrastructure Working Group	
Disclosure of comments:	Please indicate if your comments should be treated as confidential:	Public
	Please follow the following instructions for filling in the template: ⇨ Do **not** change the numbering in the column "reference"; if you change numbering, your comment cannot be processed by our IT tool ⇨ Leave the last column empty. ⇨ Please fill in your comment in the relevant row. If you have no comment on a paragraph or a cell, keep the row empty. ⇨ Our IT tool does not allow processing of comments which do not refer to the specific numbers below. **Please send the completed template, in Word Format, to CP-15-009@eiopa.europa.eu. Our IT tool does not allow processing of any other formats.** The numbering refers to the Consultation Paper on the Call for evidence concerning the request to EIOPA for further technical advice on the identification and calibration of other infrastructure investment risk categories i.e. infrastructure corporates.	
Reference	**Comment**	
General comments	The AFME ICMA Working Group very much supports the European Commission's Call for Evidence on possible inclusion of corporate infrastructure transactions in a special infrastructure asset class. The working group also supports EIOPA's development of further technical advice as requested by the Commission. This overall initiative supports the European Commission's Investment Plan for Europe, which is a core component of the Capital Markets Union initiative. AFME ICMA members are very supportive of this overall initiative, including its infrastructure component.	

	Broadly, the industry believes that EIOPA should include in its definition those corporates whose predominant function is the ownership, operation, and financing of essential infrastructure.	
Question 1	**Q1: What are the reasons for choosing a corporate instead of a project structure for infrastructure investments? Are there certain sectors for which a corporate structure is more prevalent and, if so, why is this the case?** Transactions structured as projects usually involve limited life, single-assets. Corporate structures would generally be used where the underlying asset is a business which, whilst it may be regulated, does not have a limited life (e.g. a renewable or perpetual licence) and which may relate to a number of cashflow producing assets. On a project financing the business of the relevant entity can usually be limited due to the defined scope of the project. For example, on a typical Public-Private Partnership (PPP) transaction, the project agreement between the special purpose company and government entity will set out the obligations of the company in relation to any construction and operation of the infrastructure asset, and set out rights to operate the asset and generate revenues for a given period of time (the "project life"). The company can from day one enter into such sub-contracts as necessary to perform these obligations over the project life, and will typically have all funding required committed at the commencement of the project, so there will be no need to manage funding requirements thereafter. The company will have very narrow objectives as it should effectively do nothing but comply with the original contract package.	

	On the other hand, where a corporate is operating infrastructure assets in perpetuity, it will typically need greater flexibility to allow it to manage those assets effectively. For example, after a period of maintaining the existing assets, it may have a period of heavy capital investment to improve or develop the infrastructure asset in response to a changing market (eg a ports operator building larger docks to accommodate increasingly large ships). It thus needs more flexibility than a simple project company to enable it to run its business effectively. However, in some cases it is difficult to see the clear distinction between "corporate" or "project" financings. In certain cases, there may be the opportunity to structure investment into a particular infrastructure asset either by way of a limited recourse project financing or corporate financing. For example, where an existing infrastructure corporate operating infrastructure assets wishes to undertake further capital expenditure, it could do this by way of a separate project subsidiary SPV which then borrows the funds required, or could borrow money itself to fund the works. The corporate borrowing may have the advantage of being simpler in terms of documentation, easier/quicker to execute, and could also be a more cost effective way of obtaining finance, as construction risk on a single asset which would otherwise apply to the project financing is mitigated by the wider infrastructure business. Equally however, the operators of the existing assets may want to separate the new investment and finance this on a limited recourse basis. In either case, the underlying infrastructure asset is of course the same. Some assets may initially follow a project finance structure (perhaps during construction), and later seek a more flexible corporate financings structure.	

	In addition, certain infrastructure corporates have opted to reduce their flexibility and agree to contractual restrictions on their activities (more akin to project financing) to improve the amount and/or terms of debt raised. Where such corporates are subject to regulation, the contractual terms often mirror or complement the restrictions which apply through regulation in any event. Such financing arrangements are commonly referred to as "secured corporate debt platforms". Although terms can vary, common provisions include: - restrictions on business activities, often permitted some element of "non-core" business but otherwise restricting the activities of the corporate to the core infrastructure activities which creditors are seeking to finance. The business of the corporate or corporate group being financed will be contractually "ring-fenced", so that dealings with entities outside the financing group (even if part of a wider corporate group with the same ultimate shareholder) will be on arms' length terms. - restrictions on indebtedness – as the business may evolve and grow, and further capital investment can lead to increased revenues, it is usually inappropriate to restrict debt to fixed EUR/£/$ amounts, but debt is generally restricted by reference to the business revenues or assets. - distribution lock-ups, whereby if certain financial ratios or other measures are not met, distributions to shareholders are not permitted, thus preserving cash within the business. - hedging policies, to ensure the corporate is not exposed to significant interest rate, currency or inflation risk and does not enter into derivatives for speculative purposes. - restrictions on debt maturity concentration, to reduce refinancing risk. – an ability for creditors to take control in the event of a default, in some cases through security over the shares of the company (so that it can be sold as a going concern), or sometimes asset security.	

In terms of sectors, infrastructure sectors within which infrastructure corporates operate include the following:

- **Utilities** – namely water, electricity, gas and communications companies. These companies may be regulated or unregulated. Cash flow into these companies is stable and has a low correlation to external economic factors. In some cases the utility has an effective monopoly position, and hence regulation is applied to protect consumers.
- **Transport – airports, ports and roads** – these companies can also be regulated or unregulated. They generally also benefit from stable revenues and have a relatively low correlation to external economic factors when compared with other businesses.
- **Rail rolling stock leasing companies (ROSCOs)** – these companies generate cash from train operating companies.
- **Renewable energy companies** – often benefit from an element of income under incentive tariffs or CfDs.

By way of examples within these sectors:

Utilities – Water

In the UK water sector, companies such as Thames Water, Southern Water, Anglian Water, South West Water (Pennon) and Kelda finance their infrastructure activites on a corporate financed basis. Such companies are subject to certain restrictions on their activities by regulation and many have established a secured corporate debt platform as described above. Prospectuses relating to the debt of these corporates are publically available and outline this type of structure in more detail.

In addition, Thames Tideway (UK), the large sewer construction project, has been financed using a similar style debt platform.

Utilities – Electricity Distribution
There are various electricity distribution companies across Europe which are financed on a corporate basis, including:
- Elenia Distribution Network (Finland)
- Caruna Distribution Network (Finland)
- Viesgo Distribution Network (Spain)
- Western Power Distribution (UK)

Some of these companies adopt the secured corporate debt platform structures, whereas others have unsecured debt programmes with very limited covenants (see Western Power Distribution by way of example).

However, the financings for the UK Offshore Transmission Owners (OFTOs), the connectors between offshore wind farms and the national grid, have generally been structured like project financings – such as Gwynt Y Mor OFTO and Greater Gabbard OFTO.

Utilities – Gas Distribution
There are various gas distribution companies across Europe which are financed on a corporate basis, including:
- Fluxys Transmission Operator (Belgium)
- Vier Gas (German)
- Net4Gas (Czech)
- Fernagas Gas Distribution (Germany)
- Swedegas (Sweden)
- Solveig Gas (Norway)
- Madrid Gas Distribution (Spain)
- Redexis (Spain)

	• Zoom Gas Pipeline (UK) • TIGF (France) • Enel Rete Gas Network (Italy) • Open Grid Gas Network (Germany) • Phoenix (UK) Certain gas pipelines (such as the Nord Stream pipeline connecting Russia and Europe) have been financed on a project finance basis. **Utilities – Communications** Corporates include: • Arqiva (UK) – which has adopted a secured corporate debt platform structure • Shere Group Transmission (Netherlands) • Covage Telecom Network (France) **Utilities – power generation** For completeness, we note many power generation projects are financed on a project basis (such as Galloper Wind Farm (UK), Nordsee (Germany), Exeltium Virtual Power (France) and Belfast Energy from Waste Project (UK) to name but a few). **Transport - Airports** • Gatwick Airport (UK) • Heathrow Airport (UK) • Brussels Airport (Belgium) • Copenhagen Airport (Denmark) • Edinburgh Airport (UK) • Rome Airport (UK) • L ondon City Airport (UK)	

	• Newcastle Airport (UK) Some of these companies adopt the secured corporate debt platform structures (see for example Heathrow and Gatwick). Luton (UK) airport is an example of an airport which started as a project financings and then moved to a more corporate-style financing. **Transport - Ports** • Associated British Ports (UK) – which has adopted a secured corporate debt platform structure • Antwerp Port (Belgium) • Grangemouth and Dundee Ports (UK) Calais (France) has recently been financed on a project-finance basis. **Transport – Roads** Many roads are financed on a project basis, such as most PPP projects (including A11 Belgium) and toll roads including M6 (UK) and A63 (France). However, there are other toll road operators which are financed on a corporate basis, such as: • SANEF (France) • Autostrade per l'Italia (Italy) • APRR (France) • ASF (France) **ROSCOs** • Eversholt Rail (UK) • Alpha Trains (Continental Europe) • Angel Trains (UK)	

	• Porterbrook (UK) These particular entities also adopt a secured corporate debt platform structure. **Social Infrastructure** As per the roads sector, many social infrastructure transactions, particularly PPP hospital and school transactions, are financed on a project basis. There are however corporate which operate in the social infrastructure sector, including: • Bromsgrove District Housing Trust (UK) • Circle Housing Group (UK) • Cottsway Housing Association (UK) • Genesis Housing Association (UK) • Knowsley Housing Trust (UK) • Peabody Trust (UK) As noted above, there are publically available prospectuses for many of the above financings which can provide further detail.	
Question 2	**Q2: What types of infrastructure corporates do you think have a more favourable risk profile than implied by their standard formula treatment?** Given that corporate infrastructure transactions span a wide range of product sectors, countries and structures that vary for specific economic, legal, regulatory and tax reasons, the AFME ICMA Infrastructure Working Group believes it is important that EIOPA develops a set of criteria which describe the *characteristics* for corporate infrastructure transaction, rather than specific types of infrastructure corporate or specific sectors as mentioned above.	

The working group considers that some of the key characteristics of infrastructure businesses, which support long-dated, stable returns, are as follows:

- Assets and service essential to society
- High barriers to entry and exit for competitors and customers respectively
- Stable cashflow generation, with returns based on cashflow rather than capital growth
- Relatively low default rates
- High recovery rates
- Low correlation to the economic cycle or other asset classes

One example of characteristics already developed by an AFME member are those from Moody's Investors Service ("Moody's") described below; there may be others worth exploring by EIOPA.

Extract from Moody's report "Infrastructure Default and Recovery Rates, 1983-2014"

"Infrastructure corporates (as compared to non-infrastructure corporates under the standard formula) tend to be characterized by the long-term importance of their underlying business (sometimes delivering a public service), their asset-heavy capital-intensive nature, their generally low-to-manageable operating risk, and their ability to support long-term debt, often

	at higher levels of leverage than is typical for similarly-rated non-financial corporate issuers." [1]	
Question 3	**Q3: With respect to the types of infrastructure corporates you listed in the previous question, please answer the following: a. What kind of infrastructure services is provided?** See Question 2. **b. Where is the infrastructure located?** See Question 2. **c. What is the legal form?** Varies, usually a corporate but could be another form. **d. Does the debt have a rating by an External Credit Assessment Institution?** Mostly but not always. **e. What is the volume of the debt and equity instruments currently outstanding? How will these quantities evolve in the future? Why?** The only data that we are aware of is from Moody's global project and corporate infrastructure default study, which states that approximately $2.6 trillion of Moody's-rated global project and corporate infrastructure transactions, excluding US municipal finance.	

[1] See Appendix 3 of Moody's report "Infrastructure Default and Recovery Rates, 1983-2014" for discussion of the various infrastructure sub-sectors adopted by Moody's.

	f. What is the volume of investments by insurers? How will this evolve in the future? Why? To a certain extent, that is a function of the effective implementation of capital and hence the reason for this consultation. Infrastructure corporates can represent at least as beneficial characteristics as project finance SPVs – indeed in some cases the greater size and diversity can make give broader benefits than a single asset SPV solely reliant on one income stream – so it is not apparent to us why the same incentives to invest should not be present in this sector. **g. Are there any other relevant properties?**	
Question 4	**Q4: Are there definitions of infrastructure corporates in existing legislation or other** **sources that could be used?** No that we are aware of.	
Question 5	**Q5: Which criteria from the EIOPA advice in response to the first call for advice, or from the amendments to the delegated regulation adopted by the European Commission would the infrastructure corporates you suggested not satisfy?** Following are suggested amendments to existing proposed text in Commission Delegated Regulation (EU) 2015/35:	

	Comment
55a. 'Infrastructure assets'	Suggest referring to assets as well to

means physical structures or facilities, systems and networks that provide or support essential public services.	include, for example, rolling stock companies. *'Infrastructure assets' means physical structures, assets or facilities, systems and networks that provide or support essential public services.*
55b. 'Infrastructure project entity' means an entity which is not permitted to perform any other function than owning, financing, developing or operating infrastructure assets, where the primary source of payments to debt providers and equity investors is the income generated by the assets being financed.	Suggest delete "project" in definition title, as it implies only project companies are included. Corresponding change to references throughout definition to be made (not separately noted at each occurrence below). Suggest also a slight relaxation of the requirement that the entity has no other functions than those listed. Many of the infra corporates have the ability to undertake an element of "non-core" business, albeit this is restricted either by regulation or covenants in favour of creditors. *'Infrastructure entity' means an entity which has as its predominant function the owning, financing, developing or operating of infrastructure assets, where the primary source of payments to debt providers and equity investors is the*

	income generated by the assets being financed.
Article 164a – Qualifying infrastructure investments	
For the purposes of this Regulation, qualifying infrastructure investment shall include investment in an infrastructure project entity that meets the following criteria:	No change required.
the infrastructure project entity can meet its financial obligations under sustained stresses conditions that are relevant for the risk of the project;	Remove project references only. *the infrastructure entity can meet its financial obligations under sustained stresses conditions that are relevant for the risk of the entity;*
the cash flows that the infrastructure project entity generates for debt providers and equity investors are predictable;	No change required.
the infrastructure assets and infrastructure project entity are governed by a contractual framework that provides debt providers and equity investors with a high degree of protection including the following:	Certain infra corporates which have investment grade-style finance documentation, such as UK electricity distribution companies, do not have highly covenanted contractual packages, as investors consider the business (and the restrictions set out in the regulatory

		package including restrictions on dividend payments on a fall below investment grade) sufficiently stable so that such provisions are not required. It is not clear whether they will comply with this test. Suggesting replacing with: *the relevant investment benefits from a high degree of protection as regards risk mitigation, including the following:*	
	(a) where the revenues of the infrastructure project entity are not funded by payments from a large number of users, the contractual framework shall include provisions that effectively protect debt providers and equity investors against losses resulting from the termination of the project by the party which agrees to purchase the goods or services provided by the infrastructure project entity;	Many infra corporates will have revenues funded by a large number of users (such as utilities with retail customer bases). However, in some cases revenues may be indirectly funded by customers, with payments made by government-related entities (e.g. National Electricity Transmission System Operator- NETSO to an Offshore Transmission Operator- OFTO or UK HMTreasury to Network Rail). We therefore suggest the following drafting: *where the revenues of the infrastructure project entity are not funded by payments from a large number of users, either (i) the contractual framework shall include provisions that effectively protect*	

	debt providers and equity investors against losses resulting from the termination of the project by the party which agrees to purchase the goods or services provided by the infrastructure project entity or (ii) the revenues of the infrastructure entity are governed by a regulatory or licence payment framework;
(b) the infrastructure project entity has sufficient reserve funds or other financial arrangements to cover the contingency funding and working capital requirements of the project;	No change required.
Where investments are in bonds or loans, this contractual framework shall also include the following:	
debt providers have security to the extent permitted by applicable law in all assets and contracts necessary to operate the project;	Many infra corporates provide security (to the extent permitted by law and the licence) and therefore will meet this requirement. As noted above however, there are a number of entities which do not provide security, as investors perceive investments as low risk and do not require this additional protection. In addition, as regards the current

	wording, there are jurisdictions where general "floating charge" security over all assets is not possible but it is not considered necessary or proportionate to take security over all such contracts which may be replaced from time to time (e.g. in the context of a ports business). Further, there are jurisdictions where it is considered overly burdensome to take full asset security (eg Spain in the context of mortgages of land), where creditors may consider themselves adequately protected, for example by way of share security (so they will have no need to enforce land security separately).
equity is pledged to debt providers such that they are able to take control of the infrastructure project entity prior to default;	As above.
the use of net operating cash flows after mandatory payments from the project for purposes other than servicing debt obligations is restricted;	This is quite project-specific. In the case of an infra corporate, one would refer to payment of operating costs (which also applies to the project companies). If the intention is to prevent leakage of funds by way of dividends, the test could be reframed in this way, in which case the majority of transactions do include this

	protection (including some of the unsecured transactions). *payments by way of distributions or similar payments to shareholders are subject to restrictions [relating to financial performance];*
contractual restrictions on the ability of the infrastructure project entity to perform activities that may be detrimental to debt providers, including that new debt cannot be issued without the consent of existing debt providers;	Many transactions impose limits on the incurrence of debt, or distribution blocks if a certain debt level is exceeded, rather than requiring a consent at the relevant time. It is not clear whether such tests would suffice for the purposes of the current drafting. Suggest clarify as follows: ...*including contractual restrictions on or relating to the incurrence of new debt or levels of total debt;*
where investments are in bonds or loans, the insurance or reinsurance undertaking can demonstrate to the supervisor that it is able to hold the investment to maturity;	No change required.
where investments are in bonds for which a credit assessment	A majority of debt will be rated. However, as per our previous

by a nominated ECAI is not available, the investment instrument is senior to all other claims other than statutory claims and claims from derivatives counterparties;	submission, if carve-outs are to be provided here, they should include claims of liquidity facility providers (which are often super-senior) and trustee and agency costs and presumably it is intended that for both projects and infrastructure corporates that this ranking only refers to the post-enforcement priority of payments.
where investments are in equities, or bonds or loans for which a credit assessment by a nominated ECAI is not available, the following criteria are met:	
(i) the infrastructure assets and infrastructure project entity are located in the EEA or in the OECD;	No change required.
(ii) where the infrastructure project entity is in the construction phase the following criteria shall be fulfilled by the equity investor, or where there is more than one equity investor, the following criteria shall be fulfilled by a group of equity investors as a whole;	No change required – this test should be expressed to relate to greenfield projects only.
– the equity investors have a	No change required.

history of successfully overseeing infrastructure projects and the relevant expertise;	
– the equity investors have a low risk of default, or there is a low risk of material losses for the infrastructure project entity as a result of the their default;	No change required.
– the equity investors are incentivised to protect the interests of investors;	No change required.
(iii) the infrastructure project entity has established safeguards to ensure completion of the project according to the agreed specification, budget or completion date;	This test should be expressed to relate to greenfield projects only.
(iv) where operating risks are material, they are properly managed;	No change required.
(v) the infrastructure project entity uses tested technology and design;	No change required.
(vi) the capital structure of the infrastructure project entity allows it to service its debt;	No change required.

	(vii) the refinancing risk for the infrastructure project entity is low;	No change required.	
	(viii) the infrastructure project entity uses derivatives only for risk-mitigation purposes	This could work as drafted, but given the more complex hedging arrangements which tend to be in place at infra corporates (as not simply hedging specified debt or revenues as at closing), it would be preferable to restate as: *the infrastructure entity does not enter into derivatives for speculative purposes*	
	2. For the purposes of paragraph 1(b), the cash flows generated for debt providers and equity investors shall not be considered predictable unless all except an immaterial part of the revenues satisfies the following conditions:	*...the cash flows generated for debt providers and equity investors shall be considered predictable if the revenues predominantly satisfy the following conditions:*	

	(a) one of the following criteria is met: (i) the revenues are availability-based; (ii) the revenues are subject to a rate-of-return regulation; (iii) the revenues are subject to a take-or-pay contract; (iv) the level of output or the usage and the price shall independently meet one of the following criteria: – it is regulated; – it is contractually fixed; – it is sufficiently predictable as a result of low demand risk;	Infrastructure corporate will generally will fall within (a)(iv). However, it would be helpful in the final limb to clarify that where demand risk is present but material protection is provided in respect of that risk by governments, ECAs, regulators or other parties, this is acceptable. For example, consider the protection provided by the UK Department for Transport under s54 Agreements in the context of UK ROSCOs. *it is sufficiently predictable as a result of low demand risk (including where demand risk is present but mitigated to a low risk by regulatory or contractual arrangements)*	

	where the revenues of the infrastructure project entity are not funded by payments from a large number of users, the party which agrees to purchase the goods or services provided by the infrastructure project entity shall be one of the following: (i) an entity listed in Article 180(2) of this Regulation; (ii) a regional government or local authority listed in the Regulation adopted pursuant to Article 109a(2)(a) of Directive 2014/51/EU; (iii) an entity with an ECAI rating with a credit quality step of at least 3; (iv) an entity that is replaceable without a significant change in the level and timing of revenues	No change required – this paragraph will generally not apply to many infra corporates as revenues are funded by a large number of users or are funded by government/quasi-government entities.	

	Comments on the Consultation Paper on Call for evidence concerning the request to EIOPA for further technical advice on the identification and calibration of other infrastructure investment risk categories i.e. infrastructure corporates	Deadline 10 12 2015 23:59 CET
Question 6	**Q6: Do you think that the criteria referred to in the previous question could be** **modified so that a similar outcome is achieved from a risk perspective but the** **infrastructure corporates you suggested would qualify? Areas of particular interest would be:** **a. Predictability of cash flows** **b. The privileged access of investors to cash flows or assets** **c. The use of covenants** **d. Restrictions on the ownership of assets** **e. The use of Licensing or permitting restrictions** **f. The ability of the entity to withstand relevant stress scenarios** **g. Refinancing risk** See Question 2 response above for Q6 responses a-g.	
Question 7	**Q7: For questions 5 and 6, is it relevant to make a distinction between new, compared to existing, debt and equity issued by infrastructure corporates?** Members do not feel that there needs to be distinction between new and existing debt and equity securities issued by infrastructure corporates, since there is no need to distinguish between the two.	
Question 8	**Q8: Infrastructure corporates may engage in activities not or only indirectly** **related to the provision of infrastructure services. What would be appropriate**	

	criteria to ensure that such activities are of only limited importance or not material in relation to the payments to investors? Many infrastructure projects do include ancillary services related to an essential project, for example, retail shops at airports. These types of cash flows should be eligible to be included in projected corporate infrastructure transactions as long as they meet the industry's recommended inclusion of those cash flows whose "predominant function is the ownership, operation, and financing of essential infrastructure.	
Question 9	**Q9: Infrastructure corporates may comprise the construction or operation of different infrastructure assets with different risk profiles. In case a "look_through" approach was applied for the identification of eligible infrastructure corporates (i.e. the properties of the underlying infrastructure assets are taken into account), what could be suitable criteria for allowing a corporate entity with some higher risk assets to be eligible provided such assets or activities are not material?** These types of cash flows should be eligible to be included in projected corporate infrastructure transactions as long as the corporates meet the industry's recommended inclusion of those cash flows whose "predominant function is the ownership, operation, and financing of essential infrastructure."	
Question 10	**Q10: In their responses to CP 15/004 some stakeholders proposed that the assets pertaining to infrastructure activities could be effectively ring-fenced (for example see comments no. 2 and 13 within Annex 4 of EIOPA Final Report on Consultation Paper no. 15/004). Are you able to provide further detail on such arrangements and their legal nature?**	

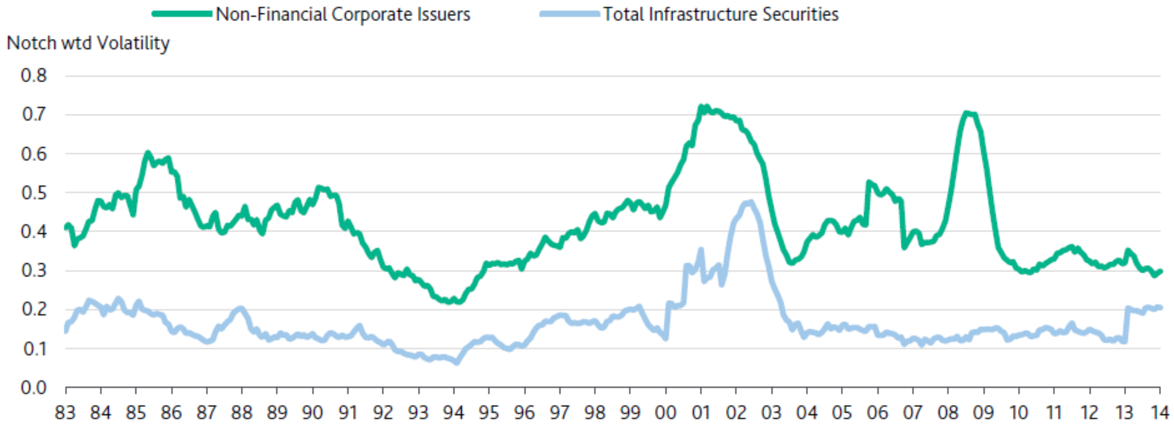
	These arrangements would be limitations on activities or relationships with other entities within the relevant corporate group and restrictions on financial relationships (e.g. upstream loans or distributions) with related companies which could be imposed either through the contractual terms of the financing or as a result of the regulation (e.g. a licence) to which the infrastructure entity is subject.	
Question 11	**Q11: In their responses to the CP 15/004 some stakeholders proposed that very strong internal risk assessment and modelling capacities (for example see comment no. 56 and similar remarks in comments nos. 57 and 58 within Annex 4 of EIOPA Final Report on Consultation Paper no. 15/004) were necessary to distinguish between infrastructure corporates and conventional corporates; what are the components of such capacities?** No comment.	
Question 12	**Q12: What is the empirical evidence that the infrastructure corporates you identified have a lower risk profile than suggested by their current standard formula treatment?** Moody's report "Infrastructure Default and Recovery Rates, 1983-2014", March 2015 cites selected findings which show that 10-year credit loss rates for corporate infrastructure debt securities are materially lower than for like-rated non-financial corporates are reproduced on pages 75-80 of EIOPA's Final	

Report 15/004.

" … Exhibit 8 compares the rating volatility for total infrastructure securities with that for global NFC issuers. The rating volatility, the sum of the notch-weighted upgrade and downgrade ratios, measures the gross average number of notches a portfolio of securities has changed over a twelve-month period. …"

EXHIBIT 8

Rating Volatility for Total Infrastructure Securities and Non-Financial Corporate Issuers



Source: Moody's

- *" … For much of the study period, total infrastructure security ratings have been relatively stable, when compared with NFC issuers. Rating volatility in the US municipal infrastructure sector has been about one fifth the level exhibited by NFC issuers, while in corporate infrastructure it has been about four fifths the level of NFCs. …"*
- *" … Corporate infrastructure ratings are more stable and in particular*

less likely to be downgraded than NFC ratings. It is therefore generally not possible to match the entire multiple-year term structure of credit risk. In other words, if NFC and corporate infrastructure ratings are calibrated to achieve similar credit loss rates, on average, over short- or medium-term horizons, then they cannot simultaneously match at longer horizons. Conversely, if they are calibrated to match at very long horizons, then they cannot match at shorter horizons. This, of course, is a general result and not particular to infrastructure. …"

- *" … Corporate infrastructure debt securities have, on average, higher recovery rates than do NFC issuers. …"*

EXHIBIT 17

Recovery Rates for Defaulted Corporate Infrastructure Debts

Sector	Senior Secured	Senior Unsecured
Utilities	76%	58%
Regulated E&G Utilities and Networks	83%	63%
Unregulated E&G Utilities and Power	80%	55%
Transportation	74%	n/a
Average Corporate Infrastructure Debt Securities	75%	57%
Average Non-Financial Corporate Issuers	53%	37%

Source: Moody's

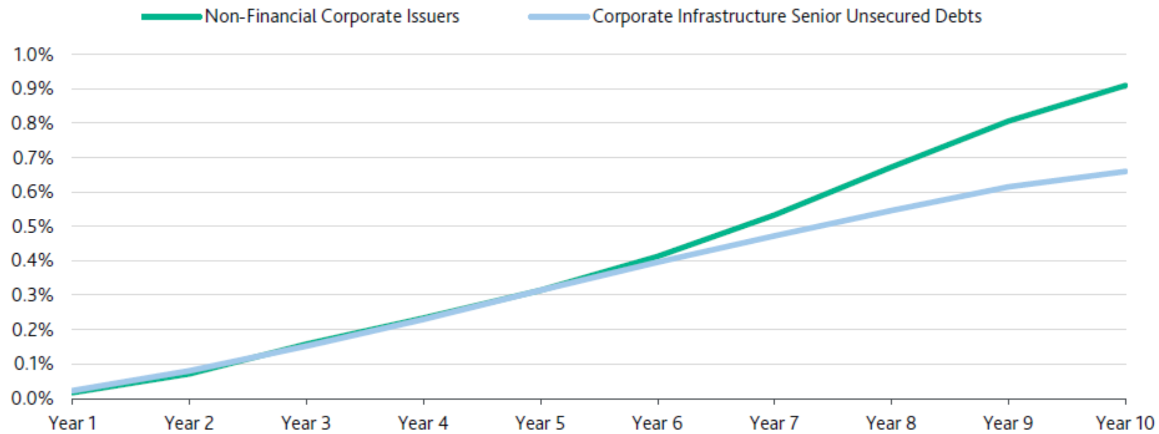
- *" … Corporate infrastructure and NFC ratings imply similar credit loss rates for horizons up to about five years. Beyond that, the greater stability of infrastructure credit results in lower loss rates than are observed for like-rated NFC issuers. This, again, is unavoidable: if ratings are set to reflect credit risk over a horizon of about three to five years, and the volatility of two populations is very different, then very long run performances will consequently differ. …"*
- *" … Exhibit 18 shows that single-A senior unsecured credit loss rates for*

NFC issuers and corporate infrastructure are very similar. …"

Note: Over the study period 1983-2014, on average 30.7% of Moody's-rated corporate infrastructure debt securities were rated single-A

EXHIBIT 18

Single-A Credit Loss Rates



Source: Moody's

• *" … Credit loss rates for senior unsecured Baa-corporate infrastructure debt securities are very similar for short horizons, but start to differ at longer horizons (Exhibit 19). …"*

Note: Over the study period 1983-2014, on average 39.9% of Moody's-rated corporate infrastructure debt securities were rated Baa

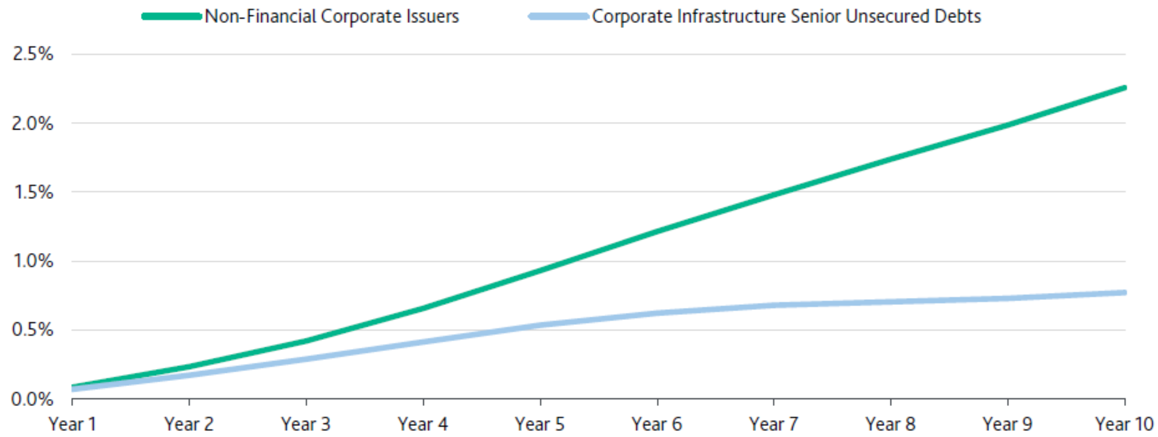
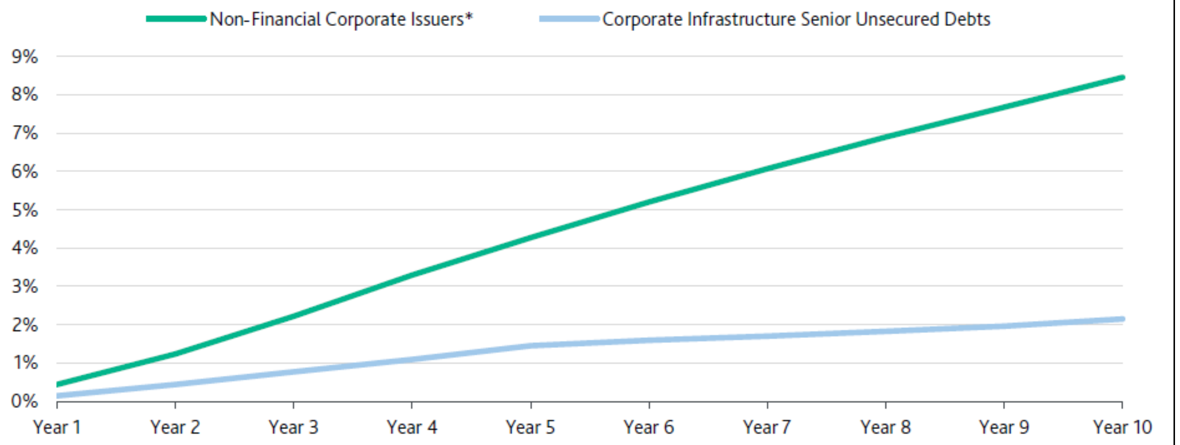
	EXHIBIT 19 **Baa Credit Loss Rates**  Source: Moody's • *" … Credit loss rates for Ba-rated overall corporate infrastructure debt securities are lower than similarly rated NFC issuers, driven by both lower default rates and higher recovery rates (Exhibit 20). …"* Note: Over the study period 1983-2014, on average only 11.6% of Moody's-rated corporate infrastructure debt securities were rated Ba and therefore caution should be used when drawing conclusions from an analysis of a smaller data set	

EXHIBIT 20

Ba Credit Loss Rates



* Because the rating distributions within the Ba rating class are very different for NFC issuers (44% of all Ba-rated issuers are rated Ba3) and corporate infrastructure senior unsecured debt securities (50% of all Ba-rated debt securities are rated Ba1 and only 24% Ba3), Ba CDRs for NFC have been calculated imposing the alpha-numeric rating distribution of corporate infrastructure senior unsecured debt securities.

Source: Moody's

Standard & Poor's, another Credit Rating Agency, provide analyses for Project Finance and another for Corporates ("Global Corporate Default Recovery Study 2014") but does not provide a separate default study for infrastructure corporates. The Global Corporate Default Recovery Study 2014 includes Utilities and Transportation sector corporates. This study states that the Utility sector has the lowest default rate with a weighted average of utility default rate at 0.5% between 1981 and 2014. The transportation sector has higher weighted average default rate at 2.1%, however, this figure includes transportation service companies such as airlines which have a higher default rate.

Global Corporate Default Rates By Industry (%)

	2014	2013	Weighted average (1981-2014)	Median	Standard deviation	Minimum	Maximum
Aerospace/automotive/capital goods/metal	0.5	0.6	2.3	1.3	2.1	0.0	9.6
Consumer/service sector	1.1	0.9	2.3	1.6	1.7	0.0	6.3
Energy and natural resources	2.1	1.9	1.8	1.4	2.1	0.0	10.1
Financial institutions	0.2	0.3	0.7	0.3	0.7	0.0	2.7
Forest and building products/homebuilders	0.0	4.2	2.6	1.4	3.0	0.0	14.3
Health care/chemicals	0.7	1.3	1.5	0.8	1.4	0.0	4.8
High technology/computers/office equipment	1.5	0.0	1.2	1.0	1.5	0.0	4.9
Insurance	0.0	0.0	0.4	0.3	1.0	0.0	5.1
Leisure time/media	2.3	4.3	3.7	2.2	3.4	0.0	17.0
Real estate	0.0	1.0	0.8	0.0	2.5	0.0	9.7
Telecommunications	0.5	2.9	2.9	0.7	4.1	0.0	18.9
Transportation	0.8	2.3	2.1	1.9	1.7	0.0	6.1
Utility	0.3	0.2	0.5	0.2	0.8	0.0	4.2

Note: Includes investment-grade and speculative-grade entities. Sources: Standard & Poor's Global Fixed Income Research and Standard & Poor's CreditPro®.

Question 13

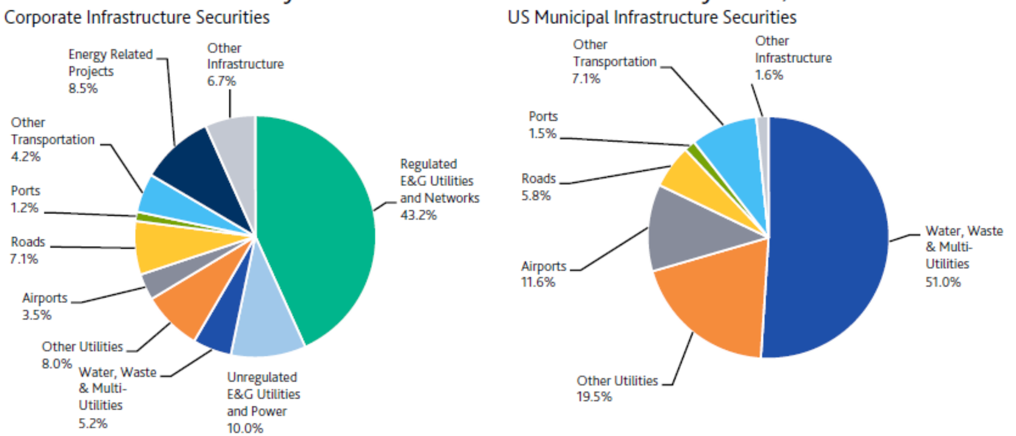
Q13: Regarding the Moody's study on default and recovery rates for infrastructure corporates, do you think this data represents a suitable proxy for the infrastructure investments you have identified, and if so, why?

Yes.

The scope of Moody's analysis is based on investments that many people consider as utilities, including power generation companies, electric and natural gas transmission and distribution networks, long-haul energy pipelines, water and wastewater companies, and integrated utilities. The study also encompasses transport systems including roads, bridges, ports. The sector distribution of Moody's-rated corporate infrastructure securities by count is dominated by regulated electric and gas utilities and networks. Please note that in Exhibit 3 below, the left-hand chart provides detail on the sectoral composition of Moody's corporate infrastructure data, however this data includes global transactions outside of Europe.

EXHIBIT 3

Sector Distribution of Moody's-Rated Total Infrastructure Securities by Count, End 2014



Note: 'Other Utilities' includes US electric coops, US municipal electric and gas utilities and oil and gas pipelines. 'Other Transportation' includes, among others, mass transit, passenger railway companies and government rail networks. 'Other Infrastructure' includes social infrastructure, communications and industrial infrastructure.

Source: Moody's

Source: Page 6 of Moody's report "Infrastructure Default and Recovery Rates, 1983-2014

Standard & Poor's (S&P) provides various data on corporates in its "Global

	Corporate Default & Recovery 2014", including utility and transportation corporates. However, in this study, the transportation sector also includes airlines and other transport service providers which is a broader definition and should not be considered as infrastructure transactions. Standard & Poor's' other study on "Transportation Infrastructure Industry Top Trends 2016" provides data on infrastructure corporates in the transportation sector.	
Question 14	**Q14: Do you think that the calibration EIOPA proposed in response to the first call for advice could be used for the infrastructure corporates you suggested?** Yes. **If so, please provide quantitative or qualitative evidence that the criteria you proposed would result in a similar risk profile to the eligible infrastructure investments in the EIOPA advice?** We have provided suggested criteria in Q2, which have a similar economic risk criteria as assets included in the September 2015 EIOPA calibration for project finance structures.	
Question 15	**Q15: What is the empirical evidence for the infrastructure corporates you identified with respect to adequate correlation parameters? Can you suggest a concrete approach to derive these parameters from the data?** We do not have evidence on correlation parameters.	

	Comments on the Consultation Paper on Call for evidence concerning the request to EIOPA for further technical advice on the identification and calibration of other infrastructure investment risk categories i.e. infrastructure corporates	**Deadline 10 12 2015 23:59 CET**
Question 16	**Q16: Where you have referred to evidence in the form of cash flows in your previous answers, can you please provide the following: a. a concrete proposal for how this evidence could be translated into a calibration b. explain how EIOPA could access this evidence** Please see response to Q2.	
Question 17	**Q17: Can you provide data on spreads for bonds issued by infrastructure corporates? Are there any indices for bonds of infrastructure corporates?** One of AFME's member, RBC, publishes monthly pricing updates on various transactions (see below). Please note that the table includes both infrastructure and non-infrastructure transactions. Please also note that the prices below are point in time indicative pricing, and they should not be considered executable unless confirmed by RBC's trading team.	

RBC Capital Markets

Infrastructure & Structured DCM – Monthly Pricing Update

December 1, 2015

Energy & Utilities (GBP)	Rating (M/S/F)	G+ (bps)	MS+ (bps)	Yield
Southern Water £300m 6.125% 2019	Baa1/A-/A-	128	94	2.12%
Dwr Cymru £325m 6.907% 2021	A3/A/A	110	99	2.45%
Centrica £500m 6.375% 2022	Baa1/BBB+/A-	151	133	2.69%
WPD (HoldCo) £500m 3.625% 2023	Baa3/BBB+/	161	174	3.46%
Scotia Gas £350m 2.5% 2025	Baa1/BBB/BBB+	125	117	2.97%
Electricity NW £450m 8.875% 2026	Baa1/BBB+/A-	139	137	3.24%
NI Electric £400m 6.375% 2026	/BBB+/BBB+	143	140	3.28%
NGN £250m 4.875% 2027	Baa1/BBB+/	134	139	3.32%
Scottish Power £350m 4.875% 2027	Baa1/BBB/	139	143	3.37%
Nat Grid Elect £380m 8.5% 2028	A3/A-/A	110	112	3.08%
Severn Trent £425m 6.25% 2029	A3/BBB+/	136	138	3.34%
Yorkshire Water £250m 3.625% 2029	Baa1/A-/A	135	135	3.33%
Anglian Water £246m 6.293% 2030	A3/A-/A	123	140	3.41%
Greater Gabbard £305m 4.137% 2032	A3//	128	109	3.13%
Wessex Water £350m 5.75% 2033	A3/BBB+/A-	130	155	3.59%
Thames Water £300m 4.375% 2034	A3/A-/	134	169	3.74%
Gwynt y Mor £339m 2.778% 2034	A3//	133	113	3.18%
UU Water £200m 5% 2035	A3/BBB+/A-	128	161	3.66%
Affinity Water £250m 4.5% 2036	A3/A-/	123	163	3.70%
UK Power Networks £350m 6.25% 2036	Baa1/BBB+/BBB+	136	176	3.83%
Thames Water £800m 5.125% 2037	A3/A-/	133	174	3.80%
SSE £350m 6.25% 2038	A3/A-/BBB+	160	205	4.10%
RWE £1bn 6.125% 2039	Baa2/BBB/BBB+	280	327	5.30%
Vattenfall £1bn 6.875% 2039	A3/BBB+/	190	237	4.42%
Scotia Gas £225m 6.375% 2040	Baa1/BBB/BBB+	140	188	3.90%
EDF £1.5bn 5.5% 2041	A1/A+/A	186	234	4.39%
Northumb Water £360m 5.125% 2042	Baa1/BBB+/	135	183	3.87%
Severn Trent £250m 4.875% 2042	A3/BBB+/	135	183	3.87%
Centrica £550m 4.25% 2044	Baa1/BBB+/A-	160	215	4.18%
GDF Suez £1.1bn 5% 2060	A1/A/	147	194	3.87%

Energy & Utilities (EUR)	Rating (M/S/F)	B+ (bps)	MS+ (bps)	Yield
Enyle €500m 3.625% 2017	Baa1/A/	69	39	0.27%
EDP €750m 5.75% 2017	Baa3/BB+/BBB-	120	92	0.60%
GDF Suez €750m 1.5% 2017	A1/A/	53	25	0.13%
EnBW €750m 6.875% 2018	A3/A-/	76	45	0.36%
Red Electrica €750m 4.75% 2018	Baa2/A-/A-	65	33	0.23%
TenneT €500m 3.875% 2018	A3/A-/	64	32	0.22%
Madrilena Gas €500m 3.779% 2018	/BBB/BBB	113	79	0.72%
Fortum €750m 6% 2019	Baa1/BBB+/BBB+	104	71	0.66%
Vattenfall €950m 6.75% 2019	A3/BBB+/A-	106	76	0.71%
Verbund €940m 4.75% 2019	Baa1/BBB+/	75	43	0.43%
Vier Gas €750m 2% 2020	/A-/	92	55	0.66%
Elenia €500m 2.875% 2020	/BBB/	159	124	1.42%
Iberdrola €600m 2.875% 2020	Baa1/BBB/BBB+	92	53	0.70%
Nat Grid €600m 4.375% 2020	Baa1/BBB+/BBB+	85	50	0.58%
EWE €500m 4.125% 2020	Baa1//	133	94	1.11%
UU Water €500m 4.25% 2020	A3/BBB+/A-	98	55	0.61%
GDF Suez €1bn 6.375% 2021	A1/A/	104	46	0.68%
RWE €1bn 6.5% 2021	Baa2/BBB/BBB+	202	136	1.65%
SNAM €1bn 5.25% 2022	Baa1/BBB/BBB+	100	90	1.04%
Dong Energy €750m 2.625% 2022	Baa1/BBB+/BBB+	135	90	1.33%
Fortum €1bn 2.25% 2022	Baa1/BBB+/BBB+	152	108	1.50%
Eurogrid €750m 1.625% 2023	Baa1//	129	89	1.44%
SSE €700m 1.75% 2023	A3/A-/	130	80	1.45%
Gas Natural €500m 2.875% 2024	Baa2/BBB/BBB+	134	93	1.57%
Allander €400m 2.875% 2024	Aa2/AA+/	123	54	1.21%
Vier Gas €750m 2.875% 2025	/A-/	150	76	1.58%
EnBW €500m 4.875% 2025	A3/A-/	130	76	1.53%
ESB €500m 2.125% 2027	Baa1/A-/A-	142	85	1.63%
OMV €750m 3.5% 2027	A3/A-/	195	92	1.95%
EDF €750m 4.5% 2040	A1/A+/A	180	158	3.04%

Transport (GBP)	Rating (M/S/F)	G+ (bps)	MS+ (bps)	Yield
Porterbrook £250m 5.5% 2019	/BBB/	147	114	2.32%
Angel Trains £300m 6.25% 2020	/BBB/	150	138	2.74%
Eversholt £300m 5.831% 2020	/BBB/A-	147	126	2.66%
TfL £500m 2.25% 2022	Aa2/AA+/AA	69	49	2.06%
Heathrow (Class B) £600m 7.125% 2024	/BBB/BBB	168	192	3.64%
MAG £360m 4.125% 2024	Baa1/BBB+	136	139	3.12%
Gatwick £300m 5.25% 2024	/BBB+/BBB+	145	149	3.21%
Porterbrook £270m 7.125% 2026	/BBB/	156	154	3.41%
ABP £500m 6.25% 2026	Baa2/A-	175	172	3.60%
MAG £450m 4.75% 2034	Baa1/BBB+	146	186	3.89%
Angel Trains £500m 6.875% 2035	/BBB/	156	137	3.41%
HS1 £610m 4.375% 2038	/A/A-	130	168	3.71%
Gatwick £300m 6.5% 2041	/BBB+/BBB+	153	204	4.06%
Mersey Bridge £257m 3.842% 2043	Aa1//	35	84	2.86%
Heathrow (Class A) £750m 4.625% 2046	/A-/A-	145	197	3.97%

Transport (EUR)	Rating (M/S/F)	B+ (bps)	MS+ (bps)	Yield
Vinci €1bn 4.125% 2017	Baa1/A-/BBB+	61	28	0.17%
APRR €1bn 5% 2017	Baa2/BBB+/BBB+	65	32	0.21%
Heathrow (Class A) €750m 4.6% 2018	/A-/A-	85	54	0.43%
Atlantia €1bn 4.5% 2019	Baa1/BBB+/A-	84	52	0.46%
Brussels Airport €500m 3.25% 2020	Baa1/BBB/	119	85	0.97%
ASF €600m 4.125% 2020	Baa1/A-/	96	60	0.69%
Cofiroute €1.1bn 5% 2021	/A-/	110	89	0.93%
HIT (Sanef) €1.5bn 4.875% 2021	Baa3//	151	104	1.34%
Heathrow (Class A) €600m 1.875% 2022	/A-/A-	112	67	1.06%
Abertis €600m 3.75% 2023	/BBB/BBB+	149	107	1.61%
AdP €500m 3.125% 2024	/A+/A+	123	84	1.22%
Royal Mail €500m 2.375% 2024	/BBB/	142	103	1.69%
Ferrovial €500m 2.5% 2024	/BBB/BBB	189	127	1.95%
Autzon €500m 2% 2024	Baa1/BBB+/	197	159	2.29%
SIAS €500m 3.375% 2024	Baa2/BBB+	153	113	1.76%

Utility WBS HoldCo (GBP)	Rating (M/S/F)	Price	Yield
Thames Water £400m 7.75% 2019	B1/BB	111.00	4.17%
Thames Water £175m 5.875% 2022	B1/BB	101.25	5.64%
Southern Water £250m 8.5% 2019	/BB-/BB-	113.00	4.31%
Yorkshire Water £200m 5.75% 2020	/BB-/BB+	105.50	4.30%
Anglian Water £210m 5% 2023	Ba3/BB+	101.00	4.83%

Transport WBS HoldCo (GBP)	Rating (M/S/F)	Price	Yield
Heathrow £325m 7.125% 2017	Ba3/BB+	105.50	2.80%
Heathrow £275m 5.375% 2019	Ba3/BB+	106.75	3.44%
Heathrow £250m 5.75% 2025	Ba3/BB+	103.50	5.27%

Conventional Infrastructure (GBP)	Rating (M/S/F)	G+ (bps)	Yield
Integrated Accom £407m 6.48% 2029	A1/AA/	125	2.91%
Worc Hospital £97m 5.57% 2030	A1//	175	3.41%
Arqiva £400m 4.882% 2032	/BBB/BBB	210	3.83%
Exchequer No. 2 £185m 5.396% 2036	A1/AA/	120	3.19%
Connect M77 £152m 5.404% 2034	NR	400	5.85%
Octagon Health £306m 5.333% 2035	A2/AA/	153	3.52%
RMPA £600m 5.337% 2038	A2/BB+/	185	3.84%
UPP £307m 4.9023% 2040	Baa1/A-/	180	3.79%
Aspire Defence £884m 4.674% 2040	A3/A-/	140	3.59%
Derby Health £447m 5.564% 2041	A3/BBB	170	4.00%

Index Linked Infrastructure (GBP)	Rating (M/S/F)	G+ (bps)	Yield
HS1 £247m 1.566% 2038	/A/A-	110	0.38%
Affinity Water £150m 1.548% 2045	A3/A-/	145	0.67%
UPP £75m 2.7291% 2047	Baa1/A-/	180	1.02%
Annes Gate Prop £174m 3.237% 2030	NR	180	0.58%
Exchequer £128m 3.552% 2035	NR	195	1.12%
King's Col Hospital £92m 3.443% 2036	A2/	180	0.97%
Dudley Summit £66m 3.7772% 2030	Baa1//	195	1.12%
Catalyst (Manc) £210m 2.411% 2040	Ba1/BB+/	370	2.93%
Catalyst (Shef) £157m 1.8416% 2045	A2/AA/	175	0.92%
Capital Hospitals £510m 1.753% 2046	Baa1/AA/	185	1.06%

Comments on the Consultation Paper on Call for evidence concerning the request to EIOPA for further technical advice on the identification and calibration of other infrastructure investment risk categories i.e. infrastructure corporates		Deadline 10 12 2015 23:59 CET