

<b>Comments Template on EIOPA-CP-15-003 Discussion Paper on Infrastructure Investments by Insurers</b>		<b>Deadline 26.April.2015 23:59 CET</b>
Company name:	Allianz Group	
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<p>Please follow the instructions for filling in the template:</p> <ul style="list-style-type: none"> <li>⇒ <u>Do not change the numbering</u> in column "Reference".</li> <li>⇒ Please fill in your comment in the relevant row. If you have <u>no comment</u> on a paragraph, keep the row <u>empty</u>.</li> <li>⇒ Our IT tool does not allow processing of comments which do not refer to the specific paragraph numbers below. <ul style="list-style-type: none"> <li>○ If your comment refers to multiple paragraphs, please insert your comment at the first relevant paragraph and mention in your comment to which other paragraphs this also applies.</li> <li>○ If your comment refers to sub-bullets/sub-paragraphs, please indicate this in the comment itself.</li> </ul> </li> </ul> <p><b>Please send the completed template to <a href="mailto:CP-15-003@eiopa.europa.eu">CP-15-003@eiopa.europa.eu</a>, in MSWord Format, (our IT tool does not allow processing of any other formats).</b></p> <p>The paragraph numbers below correspond to Consultation Paper No. EIOPA-CP-15-003.</p>		
Reference	Comment	
Question 1	<p><b>What elements in the Solvency II framework might prevent insurers from investing in infrastructure (other than capital requirements)? How could they be adapted while preserving the same level of policyholder protection?</b></p> <p>Infrastructure debt is a bespoke asset class which requires expertise both to properly due diligence and structure the deals and also over the life of the investment to manage the exposures as they are highly covenanted and hence typically subject to on-going consents and waivers.</p>	

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<p>Question 2</p>	<p><b>Which infrastructure investments (debt/equity, rated/unrated, credit rating, sectors, geographies, revenue-schemes, etc.) have a different risk profile than implied by the standard formula treatment and what is the evidence?</b></p> <p>In our view the distinctive feature for infrastructure investments is that cash flows and thus the equity value generated by them are long-term stable and predictable. I.e. the distinctive feature is a lower equity volatility.</p> <p>This is due to the fact these cash flows are to a major extent regulated and/or long-term contracted with strong counterparties or otherwise protected against severe volatility.</p> <p>This is evidenced on the debt side by e.g. Moody's 2014 study on Infrastructure default and recovery rates and on the equity side e.g. by our stochastic discounted cash flow models which we have developed.</p> <p>Exceptions concerning a different risk profile might be greenfield toll roads, merchant power, new technology, waste-to-energy projects subject to revenues dependant on market growth/share, unrated or below-investment-grade transactions. Perhaps geography (adequate legal regimes) should be investment grade countries as these require less structuring to get to IG deals. The bigger question is on transactions in construction as these do require expertise and if anything, Solvency II should reflect that event risk is higher for these transaction.</p> <p>In many transactions, such as above, the risk of downgrade is higher then in the more straightforward government guaranteed or low technology essential service user-fee transactions. Structuring can hence be the tipping point for ensuring long term stability and it is difficult to capture any one structure that would protect other than principles of DSCR; ICR (for utilities), EBITDA multiples and proper construction packages.</p>	
<p>Question 3</p>	<p><b>How relevant is liquidity for infrastructure investments by insurers?</b></p> <p>Since illiquidity is a fundamental characteristic of infrastructure investing, and the illiquidity premium integral part of the expected return, liquidity requirements would be counter-productive. However, it should be ensured that the investing insurance company provides of sufficient capital and liquidity to</p>	

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	<p>such assets over the expected time period also in capital and liquidity stress scenarios.</p> <p>The liability matching incentives applied through Solvency II already acknowledge the value of having long-dated assets to match liabilities including pre-payment protection to ansure if investment called away that investors are not penalized from liability matching perspective.</p> <p>Liquidity therefore should be a secondary concern. Furthermore, this part of an investors book should never require liquidity as even if more life and pension investors enter market they will be largely buy and hold hence the only time there are likely to be sales is if and when things go wrong – this by the way is true of every asset.</p> <p>Finally given that insurers are looking to put this in a buy-and-hold book, there should be a real preference for also receiving the illiquidity premium that is available to them for these assets since there is no intention to sell.</p>	
Question 4	<p><b>How could the criteria for debt with and without an ECAI rating differ and what is the rationale?</b></p> <p>The insurance industry does not distinguish between external ratings and internal credit risk assessments as long as the investor/asset manager has the required expertise, technical means and organisational set-up to analyse the potential transaction and the setup of the internal credit risk assessment complies with European and national regulation.</p> <p>We do not believe a distinction between external and internal ratings would make sense.</p> <p>We note that rating agencies each have differing models and their methodology can change over time thus they are no more or less stable than ratings being generated by the end investors themselves. We have seen transactions recently receive higher ratings than we as asset managers would ascribe and in fact have been known to include into the covenants additional tests beyond ECA1 ratings requiriements to ensure that if ratings methodologies change we still have the transaction which we believe reflects the right strengths for long dated investments.</p> <p>Acc. underwriting standards have to ensure that the risk profile of an unrated debt investment is consistent to a target rating (e.g. by orienting towards the rating grids published rating grids like Moody’s rating grid for Regulated Electric and Gas Networks).</p>	

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Question 5	<p><b>Do you think that the definition of project finance from Basel II<sub>s</sub> and/or the definition of specialised lending exposures as laid down in Article 147 (8) CRR could be used? Why (not)?</b></p> <p>In an insurer's point of view there is no acceptable definition. The CRR definition focuses on cashflows not assets which could result in definitions being too broad. We should also ensure that any definition clearly allows also for a look-through to the underlying assets on a portfolio if the assets meet the criteria. Perhaps there should be several definitions to cover each of eg utilities, PFI/PPP, other transport with user fees: airports, tollroads and ports and other. Below of course covers basic but evidently an insurer with a bespoke model could broadened this definition for own-model purposes.</p> <p><i>Project finance</i></p> <p><i>Project finance is a method of funding in which the lender looks primarily to the revenues generated by a single project, both as the source of repayment and as security for the exposure. This type of financing is usually for large, complex and expensive installations that might include, for example, power plants, chemical processing plants, mines, transportation infrastructure, environment, and telecommunications infrastructure. Project finance may take the form of financing of the construction of a new capital installation, or refinancing of an existing installation, with or without improvements.</i></p> <p><i>In such transactions, the lender is usually paid solely or almost exclusively out of the money generated by the contracts for the facility's output, such as the electricity sold by a power plant. The borrower is usually an SPE that is not permitted to perform any function other than developing, owning, and operating the installation. The consequence is that repayment depends primarily on the project's cash flow and on the collateral value of the project's assets. In contrast, if repayment of the exposure depends primarily on a well established, diversified, credit-worthy, contractually obligated end user for repayment, it is considered a secured exposure to that end-user.</i></p>	
Question 6	<p><b>Are there any other definitions of project finance in existing legislation which could be used?</b></p> <p>None that we are aware of.</p>	
Question 7	<p><b>Definition of Infrastructure: Which is your preferred option and why (pros and cons)?</b></p> <p>SEE ABOVE (Question No. 6) – perhaps own definition, but restricted to core only.</p>	
Question 8	<p><b>Could you provide a comprehensive and precise definition of infrastructure based on your preferred option?</b></p> <p>The definition of an infrastructure asset should be derived from general features which contribute to</p>	

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long-term stable and predictable cash flows and not by concluding enumeration of possible infrastructure assets:

With respect to the characteristic 'Long-term stable and predictable cash flows' the requirement should be that at least e.g. 2/3 of the equity value is based on contracted or regulated cash flows.

For infrastructure investing the regulatory risk is of paramount importance. A potential low risk profile requires e.g. an accommodating regulatory framework (transparent and reliable legal dispute resolution mechanisms, reliable track record for the regulation without ad hoc interventions by the authority, etc.).

For concession-based infrastructure assets: Re the fulfillment of service levels defined by the licensor the project company (or subcontracted company) should provide of an adequate track record.

Moreover, the infrastructure asset has to be dedicated to a one clearly specified purpose and be ring-fenced (no general corporate debt or equity).

Income has to be mostly linked to inflation providing a natural inflation hedge against price increases.

Asset has to provide a key public service/good. Continuity of supply of service based on the asset is of strategic importance for society and in public policy.

Monopolistic market position: There must be limited competition/high barriers to market entry and/or inelastic demand.

Construction risk: Generally, assets should generate a positive return on capital from the beginning. At least, an asset has to be fully developed and ready for construction ('all relevant contracts in place'). Greenfield projects only are possible, if additional risk mitigation mechanisms can be implemented, i.e. passing on most of the development risks to the project developer or other parties.

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	<p>Compliance to the above described characteristics has to be ensured by an adequate internal risk assessment approach for such an non-routine investment.</p> <p>Assets that provide essential facilities to the public including in the areas of transportation, education, healthcare, government buildings, energy generation, energy and water storage, transmission and distribution, airports, ports and communication where revenues are defined according to category as per below/Revenues derived from:</p> <ul style="list-style-type: none"> <li>a. Exposure to financial markets is absorbed by the government through contract and some amount of macro-economic protection through revenue re-basing and inflation neutrality (PFI). If user risk is embedded in the transaction then this should be well understood and/or benefit from other forms of credit enhancement</li> <li>b. Revenues derived from user fees, rents/leases, and at times subsidies as per transactions agreements. (transportation)</li> <li>c. Multiple users of water and gas systems with regulatory oversight and regulated tariff regimes which are concession based</li> </ul>	
Question 9	<b>Are there any legal definitions of infrastructure (investments) in existing legislation which could be of use?</b>	
Question 10	<p><b>In some infrastructure sectors the vast majority of projects do not offer stable revenues and/or have considerable technological risk. What could these sectors be?</b></p> <p>As mentioned above, the stability of revenues should be assessed by the nature of the revenue mechanism and not the type of sector (whereas in practice there will be a correlation between the stability of the revenue mechanism and the technological risk of the sector).</p> <p>There are riskier asset but that does not necessarily equate to less stable long term revenues as the latter involves an in depth analysis on an asset level. Examples nevertheless could include wastewater plants, desalinization, some renewables with new technologies, greenfield tollroads. A</p>	

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	<p>better approach could be to circumscribe internal/external credit assessment levels and limit favourable treatment applies to OECD.</p> <p>The Danger in ascribing "riskier" to a class of assets is that funding and structuring of infrastructure differs across domestic jurisdictions with the same asset type receiving more or less member-state support. A port for instance could have governmental backstops, regulatory oversight site and be more essential to a local economy; but, ports can also be entirely subjected to merchant/commercial risk in less strategic areas. Ports are quoted by some legislation as a category that "generally has higher risk". Ports are typically strategic assets with high barriers to entry and properly structured to ensure that assets do not become over-gearred during periods of economic downturn can be a good infrastructure debt investment. In some cases port financings are on a portfolio basis as well further mitigating risks.</p>	
Question 11	<b>Are there any other sources of criteria that EIOPA should consider?</b>	
Question 12	<p><b>Which are the most effective criteria and/or characteristics for identifying infrastructure investments with a different risk profile than implied by the standard formula treatment? What is the evidence for their effectiveness?</b></p> <p>Long-term stable and predictable cash flows by contracted or regulated cash flows should contribute e.g. 2/3 of the equity value.</p> <p>Accommodating regulatory framework for regulated cash flows or high quality counterparts for contracted cash flows.</p> <p>The existing standard model assumes that infrastructure debt performs like corporate debt which clearly neglects the lower default and higher recovery of infrastructure. In general, all infrastructure has lower default and higher recoveries than corporates both because of the essentiality and permanency of the assets and thanks to the financial structuring that protects investors in assets where the risk profile involves more exposure to for instance user or merchant risk.</p>	

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	<p>Other factors to consider</p> <p><b>Nature and presence of concessions:</b> Whether the asset is concession based and that the debt is of a permanent entity whose existence should exceed under all scenarios the maturity fo the debt.</p> <p><b>Nature of Constructon and Operating Contracts:</b> In many project finances it is impossible to create total separation from the underlying project sponsors which typically have a dual role in both the equity and as underlying construction or operating and maintenance subcontractor or both. This risk is typically mitigated by ensuring that the services performed by the underlying subcontractors are straight forward in nature so that there are enough other companies providing such services that they can be replaced following insolvency or similar.</p> <p><b>Monitoring and Covenant protection:</b> We strongly believe that active monitoring and engagement of investors is very important if a project runs into problems and is a key factor in higher recovery rates. We therefore believe that the existence of mechanisms to ensure active monitoring and engagement is an important criteria. The risk of course is that solvency capital must not create a situation where investors are exposed to complex transaction with corporate structures eg no covenants, as these could put decision-making back with the sponsors whose interest will not be aligned with debt in the instance of serious problems or default.</p>	
Question 13	<b>Are the criteria in Basel II and the specification regarding factors to determine risk weights developed by the EBA for the Regulatory Technical Standard a good starting point?</b>	
Question 14	<b>Do you have any comments on the usefulness of individual criteria in the Basel II list?</b>	
Question 15	<b>Do you have any proposals for how the Basel II criteria that are relatively high level could be further specified?</b>	
Question 16	<b>Are you aware of any criteria to determine either the quality of project finance in general or specifically of infrastructure project finance in legal texts that could be useful (e.g. transpositions of the Basel II criteria in non-European jurisdictions)?</b>	



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Question 17	<b>How effective are the described criteria in eliminating infrastructure investments for which a different treatment in the standard formula is not justified and what is the evidence?</b>	
Question 18	<b>How could the criteria be described as precisely as possible?</b>	
Question 19	<b>Could the respective aim be achieved with other criteria (please describe them as precisely as possible)? What is the evidence?</b>	
Question 20	<p><b>What mechanisms allow a sufficient mitigation of the risks associated with the construction and ramp-up period?</b></p> <p>Risk mitigation techniques include:</p> <ul style="list-style-type: none"> <li>• portfolio diversification</li> <li>• selection of experienced partners with excellent track record, rating etc.</li> <li>• supportive regulatory environment</li> <li>• hedging and contractual agreements which create appropriate incentives</li> <li>• insurance coverage</li> <li>• government guarantees.</li> </ul> <p>We would agree that the construction phase of any project is where the structural controls embedded in the financing combined with the active monitoring and management by an experienced team of professionals can be critical in addressing and correcting issues as they arise and before they lead to a material deterioration of the credit quality. For this reason we would be concerned that investors have the right level of available expertise if they are to be involved in pre-construction transactions.</p> <p>We would agree that the key mitigation mechanisms are described in the specification regarding factors to determine risk weights developed by the EBA for the Regulatory Technical Standard. To this we would add an independent and favourable review by an independent technical adviser working on behalf of the senior lenders on all aspects of the construction risk profile including</p>	

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	confirmation that the construction works could be completed by a number of other construction contractors currently operating in the market. An orderly mechanism for voting with respect to any waivers or amendments that may arise during the construction period is also important to mitigating risks during construction.	
Question 21	<p><b>What are the requirements that these risk mitigants have to meet? Please define them.</b></p> <ul style="list-style-type: none"> <li>• Constructors with satisfactory skill set to complete project and of sufficient credit strength to be assumed capable of completing on project</li> <li>• Minimal untested technology. Projects with complex processes like desalination or wastewater treatment should have limited innovation given the process itself is complex</li> <li>• Equity and contractor risk partially offset by third party letters of credit/surety bonds</li> <li>• Protections against cost overruns including fixed price contracts, liquidated damages to cover delays</li> <li>• Contractual enforcement rights</li> <li>• We suggest the standard model should be more conservative in its treatment of greenfield toll roads or ones still in ramp-up unless facilities are available through the Juncker plan or EIB to cover ramp-up and/or provide a minimum traffic guarantee. Greenfield tollroads are those where there have been a number of defaults due to lower than expected traffic even if the construction itself goes well.</li> </ul>	
Question 22	<p><b>One mechanism to mitigate the risks before the operational phase is a credit enhancement or a guarantee provided by public bodies. What would be the criteria to ensure that these mechanisms – potentially in interaction with others – provide a sufficient level of protection?</b></p> <p>Credit enhancement or guarantees from public bodies should only be considered where construction risks are so significant as to be difficult to finance absent such guarantees such as with Nuclear where risks cannot be easily mitigated by the mechanisms described in the response to question 20. In such cases the required mechanisms – potentially in interaction with others – would need to be considered on a case by case basis.</p> <p>Institutional investors have acquired the expertise to not only become involved in transactions prior to construction commencement (hence also strengthening the structuring of their investment) but also, in so doing, institutional investors are able to access the incremental yield available to their end investors</p>	

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	through this early involvement. The use of government guarantees, often at subsidized rates on well structured transactions could hence lead to crowding-out rather than crowding-in European Institutional Investors.	
Question 23	<p><b>What is your view on the proposals set out in the Annex? What could be suitable thresholds and how could they be derived?</b></p> <p>Basically, we consider the general proposal to look at the share of low volatile cash flows with respect to all cash flows from the infrastructure asset (and e.g. the respective contribution to the equity value of debt service) as an adequate approach (see also our comments above).</p> <p>We consider 2/3 of low volatile cash flows as a suitable threshold.</p> <p>However, the approach for delineating infrastructure assets in the Annex seems too restrictive: Low cash flow volatility can not only be generated by a regulated revenue scheme, but also contractually fixed cash flows with high quality counterparts. Background: Regulated revenue schemes do not necessarily come with zero (external) revenue risk. Instead, such regimes are always associated with regulatory risk.</p> <p>Whilst availability based revenue streams clearly have low revenue risks there are other payment streams with similar characteristics including regulated revenues (e.g. guaranteeing a fixed WACC on capital), contract for difference, capacity payments and feed In tariffs and other support mechanisms for conventional/renewable energy generation. In addition for debt investment opportunities with incremental revenue risk (e.g. toll roads and ports) it is possible to ensure a similar high degree of revenue certainty (e.g. floor levels of port revenues underpinned by government bodies or toll road revenues based on historic traffic and debt repayment not exposed to significant growth assumptions). It is therefore important that these opportunities are also recognised when assessing revenue risk.</p> <p>We do not think it is appropriate to associate lower risk with only government offtakers nor that anyone regulatory approach eg fixed price for renewables can identified as a threshold.</p>	
Question 24	<b>Do you have alternative proposals for how to measure low revenue risk and what is the evidence</b>	

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	<p><b>that it is effective?</b></p> <p>As per our earlier mention and the suggestion of (a) and (b) in the Annex, we would agree to defining revenue risks by sub-sectors. This process would not necessarily be capable of capturing the full package of credit factors determining the level of instant risk in a given project but would come closer to reflecting the lower risk transaction within each sub-sector. A more comprehensive solution would hence involve dividing assets by a series of identifiable factors such as:</p> <ul style="list-style-type: none"> <li>• Credit Risk factors: construction and operations risk, contractual and market risks, operational obligations, regulatory framework and financial forecasts</li> <li>• Legal: stability of system, security in and quality of any collateral, step-in rights, enforcement history and "creditor friendliness"</li> <li>• Revenue Risks: stability of cash flows, analysis of counterparty, macroeconomic or performance stress analysis, in PFI deduction regime and operating obligations</li> </ul>	
Question 25	<p><b>What are other contractual arrangements than those in the Annex with low revenue risk? How could this be assessed with a criterion?</b></p> <p>See response to question No. 23 and 24 above.</p>	
Question 26	<p><b>What kind of non-public off-taker would have a sufficiently low risk of default? How could this be assessed (criterion)?</b></p> <p>Multiple-users and regulated tariffs both lead more generally to lower risk payor schemes. Examples of non-public off-takers include payments from regulated utilities (ultimately payments from individual customers), passenger fees from airports, port fees and revenues generated by toll roads.</p>	
Question 27	<p><b>What would be suitable ratios available to investors to measure the financial risk?</b></p> <p>From a debt perspective the minimum DSCR is the most relevant ratio particularly on amortizing debt, whereas ICR can be more relevant on bullet repayments. However, it would be difficult to establish anything more than principles of inclusion as criteria for the purposes of Solvency II as even for otherwise straightforward transactions, DSCRs are project specific. As an example, a PPP project which takes on maintenance risk on existing assets will need higher DSCRs than a project where maintenance risk is limited to a newly built asset because of operational gearing (i.e. the ratio of debt and the resulting free cash available after debt service for a given DSCR to the on-going maintenance obligation). ICR's often more important for regulated assets or ones exposed to user fees where concession very long term and hence funded through bullets.</p>	

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Question 28	<p><b>What would be a suitable minimum level for the ratios (e.g. corresponding to “investment grade”)? What is the source and evidence for this level?</b></p> <p>See response to question No. 27 but very difficult to come up with one set of ratios or levels.</p>	
Question 29	<p><b>What would be the arguments for also making non-senior debt eligible?</b></p> <p>E.g. mezzanine debt lies between equity and debt, hence should perhaps be treated by the standard model as closer to equity.</p>	
Question 30	<p><b>Is it necessary to limit the refinancing risk in infrastructure projects (please provide evidence) and what are suitable criteria?</b></p> <p>No it isn't.</p>	
Question 31	<p><b>What significance does prepayment risk have and what would be a suitable criterion to limit it?</b></p> <p>Given the fixed rate nature of infrastructure debt prepayment protection is a key requirement to ensure that investors are properly reimbursed if the instrument is not held to maturity. We believe that the current practice of including breakage costs at the issuer level and in any termination costs payable by the public sector following voluntary termination adequately deals with this requirement but that some form of protection is an important element. Floating rate transactions could also have a prepayment penalty protection although this is far from market convention so more difficult to achieve.</p>	
Question 32	<p><b>How could a condition “proven technology and designs” be made operational?</b></p> <p>We note that this criteria is already included in the specification regarding factors to determine risk weights developed by the EBA for the Regulatory Technical Standard under design and technology risk.</p>	
Question 33	<p><b>How could criteria that are difficult to validate (such as those described above) be incorporated into the framework?</b></p>	
Question 34	<p><b>Do you have any other suggestions besides those described below for how to derive alternative risk charges? What is the evidence?</b></p> <p>Examples for possible measurement approaches:</p> <ul style="list-style-type: none"> <li>•Market data for traded infrastructure companies (e.g. NMX Infrastructure Europe)</li> </ul>	

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	<ul style="list-style-type: none"> <li>•Stochastic discounted cash flow modeling</li> <li>•Merton-type approaches for using listed equity data to infer credit risk form debt instruments (and vice versa)</li> </ul> <p>From our perspective, the suitable approach currently lies in some combination of the mentioned ones. E.g. establish equity volatility for infrastructure assets by market data and validate by an exemplary stochastic discounted cash flow model.</p>	
Question 35	<p><b>How would requirements for partial internal models need to be adapted so that they are suitable for infrastructure projects without reducing the level of policyholder protection?</b></p> <p>An own assessment of the risk profile for infrastructure assets by the investing insurance company is required. For this assessment of a non-routine investment, the general requirements for internal models have to be fulfilled – i.e. from our view there should be no reduced requirements for infrastructure investments.</p>	
Question 36	<p><b>What are potential sources for reliable cash flow data on infrastructure projects in a sufficient quantity?</b></p> <p>The only reliable source we can think of is the performance data that you have access to after having acquired a project or which you might get access to in the due diligence before acquiring a project. Obviously, this would not be a source of information offering sufficient quantity.</p>	
Question 37	<p><b>How can historical cash flow data be transformed into an equity risk charge that reflects changes in market prices?</b></p> <p>Historical cash flow data could theoretically be used to determine the cash flows to equity and thus the NPV of an infrastructure project. Applying, the</p> <p>However, since historical cash flow data (with sufficient quantity) is not or only hardly (see Question No. 36) available, other approaches are better suited for inferring an equity risk charge (see Question No. 34).</p>	
Question 38	<p><b>Which listed equities could be a good proxy for equity investments with a different risk profile than implied by the standard formula treatment and what is the evidence that the risks are similar?</b></p>	

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	<p>E.g. infrastructure companies representing liquid and tradable exposure to companies which make their revenue to a major extent by providing infrastructure services.</p> <p>Evidence could be established by comparing the vola of such equities (preferably a listed index of such equities) to e.g. the result of a stochastic discounted cash flow modeling of an exemplary infrastructure asset.</p>	
Question 39	<p><b>Can you provide any data regarding proxies?</b></p> <p>Cf. NMX Infrastructure Europe</p>	
Question 40	<p><b>What is the evidence that a segment of infrastructure project equity has a risk profile that is similar to type 1 equities?</b></p> <p>A comparison should be rather straight forward by drawing upon the historical volatilities from market data.</p> <p>Although Allianz is not looking at infrastructure listed equities, we believe that infrastructure listed equities have a quite similar profile to type 1 equities and a high correlation with them. Hence, they should remain treated as type 1.</p>	
Question 41	<p><b>Is there evidence for a lower correlation between the value of certain infrastructure equities and other risks within the standard formula in a stress period? How could this be reflected (data inputs, calculations in detail)?</b></p> <p>Using traded infra equities (or equity indices) as proxy would exhibit an inbuilt correlation which would be rather comparable to traded (non-infrastructure) equity.</p> <p>Nonetheless, generically infrastructure can be expected to have a (somewhat) lower correlation with traded risk factors than (non-infrastructure) equity.</p> <p>There is an analysis conducted by J.P. Morgan*) supporting the commonly accepted view that returns of unlisted infrastructure exhibit much lower volatility and are almost uncorrelated with listed infrastructure and listed equity in general. *) J.P. Morgan Asset Management, Global Real Assets (2013): A case for</p>	

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	Core Infrastructure.	
Question 42	<p><b>What evidence is available on spreads for project bonds in general and infrastructure project bonds in particular?</b></p> <p>Spreads on brownfield projects are typically in line with similar rated corporate bonds issued by companies in the same legal jurisdiction.</p> <p>As noted relevant data for project bonds is limited in Europe. This is because many of the outstanding bonds were guaranteed by the monlines with investors now having limited information on the underlying but also because infrastructure bonds are typically bought on a buy-and-hold basis and hence trading volumes are limited. Whilst the US has a very active bond market the number of project bonds issued in this market is also limited meaning tha the provision of additional evidence in this respect will be difficult.</p> <p>Banks spreads if available however could be an indication of available spreads as Banks continue to be a competitive funding source but as these are executed on a bilateral basis the information is not freely available.</p>	
Question 43	<p><b>Is there evidence that movements in the spreads of infrastructure corporates differ from those of normal corporates with the same rating?</b></p> <p>Basically no. From a bond perspective it may be possible to analyse the movement of spreads for relevant indices comprised of the European regulated utilities with indicies comprised of a basket of other comparably rated corporates. However, the analysis may be of limited use given the long term bonds typicaly of the regulated utility companies and the shorter term debt typicaly of the other comparably rated corporates.</p>	
Question 44	<p><b>Is there evidence that infrastructure corporate debt (or a suitable subset) can be used as a proxy for infrastructure project debt with a different risk profile than implied by the standard formula treatment?</b></p> <p>LGDs are significantly higher for corporate debt.</p>	
Question 45	<p><b>Describe in detail (data, calculations) how an adjustment factor could be derived.</b></p> <p>We do not currently treat infrastructure debt any differently than we do corporate debt despite the considerable lower LGDs. This may be reviewed at some point in the future.</p>	



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Question 46	<p><b>What conditions could ensure that insurers are in a position to hold the infrastructure investments to maturity?</b></p> <p>This does not apply to us. We intend to hold all of our infrastructure to maturity. We don't know what should prevent any investor from doing so. Perhaps - for regulatory purposes across Europe - so called "Spezialfonds" may need tradeability.</p>	
Question 47	<p><b>What is the rationale to apply an adjustment factor for infrastructure debt but not for other (illiquid) debt investments like SME loans?</b></p> <p>We do not currently apply an adjustment factor to infrastructure debt.</p>	
Question 48	<p><b>What is the rationale to cover infrastructure debt in the counterparty default risk module while other exposures like SME loans or rated corporates are allocated to the spread risk sub-module?</b></p> <p>Given the illiquidity of infrastructure bonds – in large part because they are bought on a buy-and-hold basis – spread history is not widely available and therefore not a meaningful measure of capital allocation. However independent default and recovery rates are available and hence could instead be used for calibration purposes as meaningful measure of capital allocation for Solvency II. Internal work and that achieved by industry specialists such as Moody's confirm that the default multiples are lower than corporates and recoveries higher given the intrinsic value and often monopolistic characteristics of infrastructure compared to SME or corporate loans.</p>	
Question 49	<p><b>How could a counterparty default risk charge for infrastructure project debt be derived (model, correlations, data?)</b></p>	
Question 50	<p><b>Would including infrastructure project debt in type 1 or type 2 (i.e. using the current calibration) reflect its risk profile?</b></p>	
Question 51	<p><b>How can a minimum quality for infrastructure debt without an ECAI rating be ensured?</b></p> <p>In general, there should be no preference on external ratings, if the insurance company provides of an adequate internal rating system. If there is no internal rating in place, the fulfillment a comprehensive list of investment criteria (see Question No. 4) could theoretically also substitute an external/ internal rating. This would require a comprehensive non-routine assessment by the investing insurance company.</p> <p>We agree that internal ratings of banks could be used where insurers invest alongside a bank</p>	

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	assuming the banks retain some long dated exposure. However, we believe that this approach should be extended to include internal models employed by the insurers themselves where such models have also been approved by the appropriate insurance regulators.	
Question 52	<p><b>Do you have any comments on the areas of attention that EIOPA is considering? Are there any other areas EIOPA should consider?</b></p> <p>The requirements to demonstrate a comprehensive understanding of the investment and the underlying exposure to individual infrastructure debt transactions will vary on a case by case basis. For example an infrastructure project involving complex construction will require different analysis for a project with a straight-forward construction but volume based revenue stream. Equally the stress tests required will depend on the particular risks associated with the individual projects.</p> <p>We therefore believe that rather than focus on individual investment criteria that the requirements should focus on the in-house infrastructure experience available to the insurer together with the policies and procedures in place including with respect to reporting. [Ultimately, the general notion of “prudent person” discipline for insurers would suggest that as with any assets a certain amount of investment latitude needs to be assumed for insurers in the management of their risk]</p>	
Question 53	<p><b>Regarding the issue of due diligence specifically, do project sponsors provide financial models which can be used to evaluate the resilience of the project to severe downside stress scenarios?</b></p> <p>Professional due diligence needs to be based on models showing both, upside and downside cases beside the base case scenario. Therefore the models have to highlight investment typical risks like refinancing gaps, changes in regulation and significant market conditions.</p> <p>It is usual for project sponsors in private financings to provide financial models which can be used by potential investors (and rating agencies) to evaluate the resilience of a project to severe downside stress scenarios. For public infrastructure bonds the model may not be available to market participants and in these circumstances investment suitability may include scenarios run by MLA’s or transactions must be assessed based on available information including in the offering circular and rating reports.</p>	
Question 54	<p><b>Is there a kind of “industry standard” for financial models and would these models be subject to an audit?</b></p> <p>There is no industry standard as such although the number of institutions providing financial model advisory services is limited and individual players typically have a house style. It is usual that the financial model for an individual infrastructure project is subject to an audit. We do not believe that</p>	

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	EIOPA should seek to regulate or circumscribe these models which need to have the flexibility to incorporate the specifics of the individual transaction.	
Question 55	<p><b>What would be relevant information for investors in offering documents (i.e. prospectus) or reporting? Is this information currently included?</b></p> <p>Reporting obligations are contained in the offering documents (i.e. prospectus) for public bonds and within the finance documentation for infrastructure bonds structured on a private placement basis.</p> <p>Investors typically benefit from additional information for private placement alternatives as the information that is made (publically) available will typically be more limited. In order to address this difference bespoke structures have been agreed including the use of monitoring advisers and agents or anchor investors acting on behalf of bondholders.</p> <p>We do not believe this information can be "standardized" given differing natures of individual transactions and the particular sets of covenants and asset reporting required of individual transactions.</p>	
Question 56	<p><b>What would be the costs and benefits of introducing as a criterion for a specific infrastructure investments category the availability of a specified list of information?</b></p> <p>We believe that this would be difficult to implement given the individual project or investment specific requirements and the limitations and liabilities which might then be incurred. A specified list of information could create additional costs to sponsors rendering the institutional solution more cumbersome without necessarily adding value to investors. We do not believe these requirements should become a formal part of the prudential requirements for infrastructure.</p>	
Question 57	<p><b>Are there any existing or emerging standards regarding offering documents or reporting?</b></p> <p>The nature/content of the offering documents will be determined by the rules of the relevant listing authority as interpreted by the directors of the underlying project company. Per our response to Question No. 55, various bespoke structures have been agreed recently in the public market for reporting but we do not believe standardization should be an objective of solvency regulation.</p>	
Question 58	<p><b>What is the added value and what are the costs of requiring the provision of information according to certain standards?</b></p> <p>Information at a certain standard is a requirement for investors, monitoring advisers and project agents to properly monitor and assess the performance of the underlying debt investments.</p>	

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	Standardization could unintentionally lead to onerous requirements that are costly for borrowers without creating useful knowledge for investors.	
Question 59	<p><b>What could be standardised elements for infrastructure investments in the specific category? What are the costs and benefits of requiring them?</b></p> <p>Projects often include bespoke arrangements, risks and solutions. Underlying contractual agreements will also vary depending on jurisdiction, contracting parties, legal regimes and project specifics. For infrastructure debt we do not believe that standardisation will lead to significant benefits.</p>	
Question 60	<p><b>How can standardisation of investor information and contractual elements contribute to a higher liquidity of infrastructure investments?</b></p> <p>The long term, stable cash flow nature of infrastructure debt investments which attracts investors also contributes to infrastructure being an illiquid asset class typically bought by investors on a long term buy-and-hold basis to match long term liabilities. We do not see this changing materially and therefore do not believe that standardisation will have a material impact on the liquidity of infrastructure investments.</p>	