13 November 2017

Governance arrangements for the unique product identifier (UPI): key criteria and functions

Consultation document dated 3 October 2017

Optional response template

Submission of responses via this optional template document would assist with the processing of responses.

The document has been designed to be completed as a form in Microsoft Word. Users are only able to make changes in the question response areas shaded grey.

For context or any defined terms, please refers to the relevant parts of the consultation document at http://www.fsb.org/wp-content/uploads/P031017.pdf.

Please save and submit the completed questionnaire as a Microsoft Word document, rather than converting it to a PDF.

The FSB invites stakeholders to provide their responses by Friday 17 November 2017 by e-mail to fsb@fsb.org with "UPI governance" in the e-mail subject line. The feedback received will be taken into account in the FSB's development of the UPI Governance Arrangements.

You may choose to leave answers blank – in that case it is acceptable to leave the answer reading "Click here to answer text".

Questions	Answers
General questions	
A. Name of respondent institution/firm	Bloomberg L.P. 731 Lexington Ave Tel +1 212 318 2000 New York, NY 10022 bloomberg.com
B. Name of representative individual submitting response	Richard C. Robinson 120 Park Avenue New York, NY 10017 Richard Young 16/18 Finsbury Circus London, EC2M 7BP
C. Email address of representative individual submitting response	rrobinson57@bloomberg.net ryoung94@bloomberg.net
D. Do you request non-publication of any part(s) of this response? If so, which part(s)? *Unless non-publication (in part or whole) is specifically requested, all consultation responses will be published in full on the FSB's website. An automated e-mail confidentiality claim will not suffice for these purposes.*	N/A

Questions	Answers
E. About the respondent institution/firm	Bloomberg, L.P., the global business and financial information and news leader, gives influential decision makers a critical edge by connecting them to a dynamic network of information, people and ideas. The company's strength – delivering data, news and analytics through innovative technology, quickly and accurately – is at the core of the Bloomberg Professional service, which provides real time financial information to more than 325,000 subscribers globally. The comments set forth herein are based on BLP's deep expertise in transaction reporting, data management, and analytics.
F. General or introductory remarks	Bloomberg, L.P.'s Open Symbology Group (Bloomberg) thanks the Financial Stability Board for the opportunity to respond to the Consultation Document (Consultation) on the proposed governance arrangements for the Unique Product Identifier (UPI) published in October 2017. Bloomberg supports the initiative for the UPI, which will become a key identifier globally, and which if implemented correctly can deliver important operational benefits for the industry and regulatory authorities alike. It is important that optimum arrangements for the governance of the UPI are agreed if the potential benefits of the identifier are to be fully realised. The primary purpose of the UPI will be to provide a tool to uniquely identify OTC derivative products included in derivatives transactions submitted to Trade Repositories (TRs). We would hope that the UPI can provide operational benefits for the industry over and above this primary purpose. The Governance adopted will need to complement and build upon the final technical guidance on the UPI which was issued by CPMI-IOSCO.

Questions	Answers
	In general we think that the Consultation provides a good basis for moving the discussion forward on the high level attributes for UPI governance. It is crucial that such attributes are delivered if the UPI is to command the confidence of the industry. Please find our answers to the specific Consultation questions below. Bloomberg L.P. thanks the Financial Stability Board once again for the opportunity to respond to the UPI governance consultation, and we look forward to further engagement on this important initiative.
G. Date of response	November 16, 2017
Consultation questions	
Q01. Do you consider any further criteria should be included in the above list?	We are in agreement with the criteria listed.
Q02. Are there ways in which any of the key criteria should be modified? If so, which ones and how?	Open Access; We think that this particular criteria requires more granularity, and needs to be separated out into technical open access, as well as the issue of access restrictions, such as those which can be imposed by restrictive licensing arrangements. Covering technical access first; there are two main potential barriers regarding technical access. First is the use of certain technologies that can limit accessibility. The second is process and procedures, and the method of implementation, which can create artificial barriers to information and access. The technology to access and use a UPI service, or services, should be open, robust,

Questions	Answers
	flexible and efficient. UPI solutions should avoid being over-engineered, and as a global requirement must offer access mechanisms that are flexible and have regard for differing technology profiles and norms across markets. Therefore reliance on cutting edge technologies may not be the best approach initially, although of course UPI services can and should develop over time. An obvious initial approach is to ensure that web-based access is amongst the options made available by the provider or providers of UPI services. However care needs to be taken to ensure that simply because a web-based solution is offered, that it still meets the test of being open, robust, flexible and efficient. The simple claim of offering a 'web-based' solution does not confer these aspects of ease of access and openness. The method of access should be free and devoid of any patents or restrictions on usage itself, and should not require purchase or membership in some other service. Ideally UPI should avoid a large technical footprint at the user end, and offer technology options that are readily available and usable across financial firms operations, but which are nevertheless robust and efficient. This technology approach needs to apply to all aspects of the interactions with a UPI supplier, so covering UPI code creation as well as access to, and use of, the associated reference data. Artificial barriers need to be avoided, as well. Mandated user registration to access data and information is a common initial barrier which can limit usage and participation, as

Questions	Answers
	well as enforce 'tiers' of users and associated benefits. Implementation and access should not be impacted by a single or multiple provider model. There is no reason a multi-provider model would need to be any more complex than a single provider model, as a single access portal should exist in either case. The other aspect of open access concerns any restrictions placed upon the use of the service or availability of the data e.g. through licensing. In our view the UPI service should not come with complex licensing mechanisms which restrict access to the service and/or the data that goes with it e.g. by imposing restrictions related to the timeliness or completeness of the relevant data. As far as possible a uniform and transparent service level arrangement should be put in place, rather than any system which 'licenses' the data in a particular way, or which restricts how it is used or accessed. This should be uniform across the identifier as well as the associated metadata, and not require any metering, tracking or other types of restrictions or reporting for usage.
Q03. Should the UPI System operate on a cost recovery model? If not, what is the suggested alternative and how does it fit with other governance criteria?	Cost recovery sounds, in theory, like the right way to proceed, with the implication that potential providers of UPI solutions are not making a profit, and are literally just looking to get back the costs of supplying the service. However key questions arise from this potential model. Firstly; how are costs assessed

Questions	Answers
	at providers, and what level of oversight is there relating to the costs to be recovered? Essentially this is a transparency question. Secondly, some potential providers may have much greater costs which they need to recover than others. If so how should this reality be recognised in any UPI system? If there is only one UPI provider the question then arises as to whether that sole provider should then be selected at least partly on how cheaply they can deploy a service, and thus keep user costs down. If it is thought that there should be multiple suppliers (as with LEI), the opportunity clearly exists for those with lowest costs, but viable operating models, to displace those who cannot control their costs. Either way a system which provides oversight of exactly what those costs are will be required. *** What is crucial is that authorities do not assume that cost recovery models always produce benign outcomes. They do not. *** There is a growing set of academic, government and industry research surrounding the issues of cost recovery and 'Fair, Reasonable and Non-Discriminatory' (FRAND/RAND)

Questions	Answers
	pricing, and questioning the use of such models. One of the important points to consider is that FRAND/RAND and 'cost recovery' do not have any formal, legal definitions that are commonly accepted, nor that are able to be formally governed in a consistent manner. The reality is that implementation, governance, and success of these models is murky at best. There is a growing inventory of legal cases regarding perceived abuses, lack of clarity, anti-competitive behaviour, especially regarding intellectual property. And without uniform, formal, legal definitions for these conceptual models, the ability to find redress for abuse or anti-competitive behaviour will itself be barrier to governance. In the paper by Mario Mariniello, Digital Advisor to the European Strategy Centre of the European Commission (link provided in the footnote)there is a summary of how adoption of standards can raise competition concerns, as well as providing an outline of a methodology to assess FRAND terms, and violations thereof. Crucially the error of appointing any single provider to the UPI space based on an unaudited cost recovery paradigm that lacks independent, and ideally regulatory transparency, must be resisted. As an alternative to ‘cost recovery’ and related models, recognition needs to be given to sustainable, proven, and viable methods of operating, which can keep user costs down to

Questions	Answers
	a minimum. There are many examples today of organisations that maintain and/or issue standards at little or no cost, and do so on a perfectly sustainable basis. Such examples include SWIFT, which issues and maintains BIC and MIC codes, as well as the maintenance of ISO 20022. In the same way, Bloomberg L.P. manages the Financial Instrument Global Identifier (FIGI) standard for the Object Management Group (OMG.org) under the MIT Open Source license terms. Bloomberg does not charge for FIGI and associated metadata, and provides open, non-discriminatory access. The business benefit gained by Bloomberg is available to any firm that wishes to also be a Certified Provider (issuer) of the FIGI, which as an Object Management Group standard is free and open no matter who issues it. These examples are perfectly sustainable, as in such examples the relevant firms enjoy a range of associated benefits which can range from goodwill (the "green effect"), to an introduction to paid-for services that have additional value. So in summary, cost recovery in whatever mode it may be offered (e.g. RAND/FRAND principles) needs to be treated with caution, and those who state their compliance with such models need to be subject to appropriate external oversight.

Questions	Answers
	In the meantime authorities need to also consider the premise that there are existing firms that could feasibly, and with a reasonable amount of minor technical work, adjust a current 'Business As Usual' process to also produce a UPI-valid code in a way that minimises, or even in some cases eliminates, 'costs of recovery'. References; https://academic.oup.com/jcle/article-abstract/7/3/523/942039/FAIR-REASONABLE-AND-NON-DISCRIMINATORY-FRAND-TERMS http://download.asic.gov.au/media/4046004/asic-market-supervision-cris-as-at-1-july-2016-updated-17-october-2016.pdf http://curia.europa.eu/juris/document/document.jsf?text=&docid=165911&doclang=EN https://academic.oup.com/jiplp/article-abstract/3/1/22/878857/FRANDly-fire-are-industry-standards-doing-more?redirectedFrom=fulltext https://patentlyo.com/patent/2015/02/amends-patent-policy.html
Q04. How should cost recovery be defined in the context of UPI? How should a UPI Service Provider be permitted to recover its costs? Should start-up, infrastructure, and initial creation of UPI Code costs be treated differently than ongoing maintenance and other continuing costs of operating a UPI Service Provider?	As outlined above, cost recovery is an approach which demands caution and which is open for abuse without strict oversight and control. Even then, there remain very subjective criteria, even if cost is shown to match revenue. For example, is the cost being claimed reasonable, or is it being inflated unnaturally to align with projected revenue? There are assumptions being taken in this question that may change the answer

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depending on changing those assumptions.

Single Provider vs Multiple Providers
Existing solution adapted vs New solution

<table>
<tr><th></th><th>Single Provider</th><th>Multiple Providers</th></tr>
<tr><td>Existing solution</td><td>• Costs will be around adapting existing solution to UPI (including any costs imposed on UPI issuers by the scheme itself);
• Cost recovery dependent on existing solution business model, as well as current IP issues. This could include no cost recovery; based on BAU and funded from other operations.
• Concerns around anti-</td><td>• Costs will be around adapting existing solution to UPI (including any costs imposed on UPI issuers by the scheme itself);
• Different options for cost recovery;
o Cost recovery dependent on existing solution business model, as well as current IP issues. This could include no cost recovery; based on BAU and funded from other operations.
o LEI 'LOU-type' model; minimal 'tariff' to fund</td></tr>
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<tr><th>Questions</th><th>Answers</th></tr>
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<tr><td></td><td>competitive behaviour</td><td>data synchronization, other fees determined via accreditation process.
• Need to manage co-operation between providers to provide optimal solution to users</td></tr>
<tr><td>New solution</td><td>○ Higher initial start-up costs, both in infrastructure as well as operations/people.</td><td>○ Higher initial start-up costs, both in infrastructure as well as operations/people.
○ Costs may be shared across initial providers, lowering overall industry impact
○ Questions on ‘late joiner’ providers if costs born by initial group</td></tr>
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<tr><td>Q05. How should costs be allocated amongst stakeholders?</td><td>If costs are to be covered by stakeholders, this must be determined by the model adopted. For example, if the Open Data model is adopted, then each provider should already have an established business that can support any additional costs (if any) to provide the service.

If ‘cost recovery’ or FRAND/RAND models are adopted, then this will be impacted by a single provider/multi provider decision.</td></tr>
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Questions	Answers
Q06. How should a UPI Service Provider provide its rationale for calculating cost recovery? What level of transparency and frequency of disclosure of cost by a UPI Service Provider is required to demonstrate that the UPI System is being administered on a cost-recovery basis? For example, should a UPI Service Provider be required to undertake an audit or other type of review of its costs? To whom should transparency be provided (e.g. to Authorities and/or the public) and under what circumstances?	Any cost recovery system must provide full transparency as to the nature of the costs. In addition, there must be some evaluation of the reasonableness of those costs and their allocation, especially where there is a lack of competition in providing any services. A simple audit does not view reasonableness. And this process of review should be ongoing. The downside of this, however, is twofold. One, the oversight needed to properly enforce and review what could be a complex accounting may become more onerous and costly than the process it is seeking to oversee. Second, the activity may become more invasive and disruptive to the actual functioning of the service, which inadvertently could add to the costs. Note should be taken of the approach which has been adopted by the GLEIF for the LEI, if multiple providers of the UPI are envisaged. If only one provider is selected we suggest that this provider become an entity directly supervised by an appropriate national or trans-national regulatory authority - including annual review of any costs which are being recovered, with associated public transparency of the findings.
Q07. Should there be different categories of users to describe entities that interact with the UPI Service Provider(s), utilise the UPI System, or access the UPI Reference Data Library in different ways, such as creation of a UPI Code versus leveraging an existing UPI Code, and at different frequencies? How should those categories be defined and should there be different	All of these circumstances potentially create barriers to use, unforeseen benefits to one class of user over another, and uneven use and creation of data. The nature of the data, how it can be created, maintained and disseminated also needs to be considered. However we feel that categorisation of users should be minimised.

Questions	Answers
associated costs based on the type and frequency of use of UPI Codes? How would different cost considerations apply to different aspects of the UPI System?	This should be possible as a wide universe of UPIs could be pre-populated, such that in most cases users will mainly be data consumers on an ongoing basis. Anything that restricts access to particular types of data or imposes arbitrary volume or time-bound restrictions represents the sort of commercial licensing approach seen elsewhere in the data business and which is inappropriate here.
Q08. Should access to, and use of, the UPI Reference Data Library (which includes the Data Elements therein) be unrestricted? If not, what types of usage restrictions would be appropriate and to whom should they apply? What would be the consequences, including for harmonisation, of having usage restrictions on the UPI Reference Data Library?	There is no reason for restricting access to this data library; the only reason to do so would be to allow for the imposition of additional tariffs and metering/tracking, which would be against the principles of open access and public interest.
Q09. Should the UPI Reference Data Library be subject to any intellectual property restrictions? If so, what types of restrictions would be appropriate? What would be the consequences of having any intellectual property restrictions on the use of, or access to, the UPI Reference Data Library?	As with Q8, there is no reason for imposition of IP restrictions on the UPI and reference data library. IP restrictions are meant to protect business revenue for innovations and individual work product from exploitation. It is meant to promote the continued creation and innovation of new products for sale, whether that be a new technology or work of art. The UPI is envisioned to be a foundational piece of reference data for the industry, especially regulators, to utilize for the proper functioning of markets. To restrict this data would in itself threaten the proper functioning of markets, especially if UPI is mandated for use in some jurisdictions. This is a particularly sensitive issue in a single UPI provider model, where a combination of a mandate for use, cost recovery approach, and IP restrictions would invariably create a coercive monopoly. Even with multiple providers, depending on implementation, that

Questions	Answers
	model may be problematic, and could possibly create conditions to enable a cartel.
Q10. Are there any types of ownership or membership structures of a UPI Service Provider that could create conflicts of interest? If so, please describe.	There is no one type of organisation that necessarily would either lead to, or absolutely prevent, conflicts of interest. However authorities need to assess each potential UPI issuer against a clear and consistent track record in terms of commitment to open data. Organisations which have a track record, on the contrary, of imposing elaborate licensing schemes and restrictions on the use of 'open' identifiers need to be carefully considered as to their suitability for UPI issuance.
Q11. What kinds of business continuity arrangements would it be reasonable to expect from a UPI Service Provider?	The provisioning and usage model is the key dependency in determining this need. If UPIs can be pre-created, then business continuity is of less concern. This is further enabled where a multi-provider model is taken as opposed to a single provider model. If, however, UPI needs to be created on-the-fly, then business continuity becomes a primary concern. Ideally the UPI provider or providers would always need to have proven track records in terms of robust operations, and demonstrated ability to maintain those operations whilst delivering optimum data quality. UPI providers need to be prepared to be transparent about the resources at their disposal to maintain services.
Q12. What Governance Frameworks for other universal identifiers should or should not be considered in designing the UPI Governance Arrangements and why?	The governance framework will be highly dependent upon the delivery model (i.e. single or multi-provider model). As mentioned above, existing governance models such as standards managed by SWIFT

Questions	Answers
	(through ISO, the RMG and SEG committees), and the Object Management Group (FIGI, FIBO, etc) are both proven, working models in the open data space, matching the principles discussed herein, and have been in place for many years. The only other comparable global regulatory identifier initiative to the current UPI development is the LEI, which was originally developed under auspices of the FSB. In some ways, the governance for LEI and FIGI are very similar, while there are differences in implementation of each standard. Whilst the parallels to UPI are not exact, there are clear similarities including the dynamic being to improve the quality of OTC derivatives data reported to trade repositories. The LEI has increasingly been mandated for trade reporting in various markets, and is also now required for MiFID II reporting. It might be expected that over time an agreed UPI will be similarly mandated for regulatory reporting in various markets. This makes the governance a sensitive issue. Experience has shown that the governance structure around the LEI has provided the industry with an increasing level of reassurance that the codes are fairly charged for, and that the system is robust. Early data quality problems with LEI are being ironed out and the data set is being expanded to provide greater granularity. With the exception of the latter point (ie granularity of the UPI is now set), authorities would do well to study what has worked well with the LEI system. Authorities will note that LEI is an ISO standard. However a comparison between the LEI and the ISIN (ISO standard 6166), demonstrates that there are vast and significant differences between the manner in which various ISO standards are actually made available. It is important that in the UPI governance development such points are well

Questions	Answers
	noted, and that no assumptions are made simply because an existing identifier is an 'ISO standard'.
Q13. Which elements of such frameworks would be useful or not useful for the UPI Governance Arrangements and why?	The LEI governance provides a number of useful pointers. Key to the LEI model is the involvement of global regulators in the overall regulatory oversight of the scheme. This is augmented by the establishment of a foundation to administer and oversee the scheme on a day to day basis. Of course the parallel is not exact with the requirements for UPI (and may be too 'top heavy' for UPI), and we would recommend that the Object Management Group framework is also considered as this framework also provides for multiple code issuers (certified providers) based on a strong capability assessment, and a structure which ensures that data quality is maintained.
Q14. Do you agree with the articulated areas of governance identified above?	Yes
Q15. Can you suggest any refinements or modifications to any of the functions therein?	More clarity would be welcome on the thought process around seeking international data standard status for the UPI. Presumably this would be a decision taken fairly early on in the implementation process, and it would be good to know a little more about how authorities would proceed with such a step and indeed the rationale for taking it. Otherwise, more focus on the requirements versus trying to craft a picture of the end solution and implementation, should be considered.
Q16. Can you suggest any other functions that should be included in the above list?	There does not appear to be anything specifically relating to the oversight of the financial aspects of the system, such as the costs base of UPI providers, and their application of agreed fees.

Questions	Answers
	Nor indeed is there anything relating to the development of fee models or policies for accessing and using the UPI data.
Q17. Could a UPI Service Provider also be expected to develop human readable aliases for UPI Codes to satisfy the needs of particular jurisdictions or other stakeholders? Why or why not?	There is no reason to not expect the ability for any provider to deliver a human readable alias. Depending on the adopted solution, this can be a fairly trivial addition, or something more complex. Metadata driven solutions, such as the Object Management Group FIGI, are built natively to handle this type of requirement, as well as other extensions to enable interoperability. If the standard or solution selected is less flexible, or poorly defined, then such an encoding may not be possible, or only possible within a limited remit. The other risk is that it is completely outside the boundaries of the solution and has no quality or assurance behind it. This also crosses into the technical discussion in some ways. As an identifier, the UPI would have certain aspects that any provider or providers would need to associate. This does not imply an interconnected (technical) framework with other identifiers. However, a framework - from a technical perspective - could feasibly disambiguate a UPI code creation from a 'human readable' component, allow independent creation by different entities, but provide the framework structure on how those two elements relate and become 'attached' to each other.
Q18. Are there functions in the list which are not relevant for the	They would all appear to be relevant, but as we have pointed out in Q16 above there are

Questions	Answers
UPI in your view and if so which ones and why?	some functions missing. Also, in Q17, there is a slight overlap into the technical model that does need to be explored somewhere.
Q19. Which entity or entities (or type of entity) would be best placed to perform each of the above governance functions?	Overall government oversight/involvement could be based on some form of regulatory cooperation akin to the Regulatory Oversight Committee of the LEI. However we would again also point to the way in which the Object Management Group has a proven track record for the governance of standards. The Object Management Group can, where needed, support effective governance of a multiple issuer model akin to the LOU concept for the LEI. If the FSB determines that UPI should be an international standard, the Object Management Group provides a flexible participation model, as well as a data-driven culture and technical expertise, and it is well versed in the policies around open data. There is no reason why regulatory oversight consisting of something like the FSB GUUG could not be re-created or otherwise established under such organizations as the OMG.
Q20. Do you see a need for the UPI Reference Data Elements to be standardised by an International Standardisation Body and if so why? Are there aspects in which this would be impracticable? If so, please describe those aspects.	Some of these elements already have standards in this space e.g. ISO 4217, though there may need to be some changes made to ensure inclusion of all the elements identified in the CPMI- IOSCO consultative report if such standards are able to cover all the requirements identified. To enable interoperability, where one or more standards exist for a particular data element, there should be a default position towards inclusion.

Questions	Answers
	However we do not think that in general all the elements identified need to be formally standardized by an international body. Given the highly specialized and fast moving nature of these markets a formal standardization process for all of these elements may prove somewhat cumbersome. Over time, different usage can be analyzed and refined to meet the needs of transparency as well as industry operations. In the end, this speaks to a larger issue of creating a framework that establishes clear definitions and relationships between different identifiers and standards. Such a framework can enable, broad interoperability, and promote standardization, but without limiting innovation. Both ISO20022 and FIBO have taken strides in this area, although moreso on the broad financial market aspects, as opposed to the specific issues surrounding financial instrument identification across context, process, use and relationships.
Q21. What benefits of implementation of the UPI, if any, do you see beyond OTC derivatives reporting? Please justify your answer.	UPI can have a beneficial impact beyond trade repository reporting, and will prove a useful tool for the wider regulatory reporting requirements now required for OTC derivatives in some markets (e.g. MiFID II in the EU). However the greater benefit of the UPI is that, with the right standards choice, the UPI is capable of becoming the foundation building block for a complete identifier system and framework for OTC derivatives, which has much wider usage across derivatives markets,

Questions	Answers
	and creates a relational model across different identifiers required for various purposes. This is where the Object Management Group FIGI, as a possible solution for UPI, has great significance. FIGI provides a framework and hierarchy, which is ideally suited to building upon the UPI data set to link identifiers capable of describing an OTC derivative product at the appropriate context required at any particular point throughout its lifecycle - pre and post trade.
Q22. What would be the respective costs and benefits of the different potential models to administer the UPI System specified above?	Each of the various options to administer the UPI system has advantages and disadvantages - some of which we have been indicated above. The single provider has apparent simplicity on its side, but governance here is particularly sensitive, and the dangers of a coercive monopoly should UPI become a mandated code would need to be navigated carefully. It is doubtful if many providers would be able to offer an across asset class service, so the issue of too many providers (something that might be viewed as a problem in the LEI system) is not likely here. There is probably most merit in one or two providers across asset class, with a small number of specialists offering services within asset class. This provides a degree of competition (depending on the model adopted and governance of course), whilst also offering greater resiliency to the system than a single provider. In order to get things going faster it would seem prudent that the FSB select a small number of providers who meet the technical and governance capability in terms of their offering at the outset. Over time, as with the LEI, this list can expand or contract as

Questions	Answers
	needed or as markets develop. Such ongoing management could remain with the FSB, or an ongoing regulatory committee, as we have put forward in answer to Q19 above. It is important to consider the potential onward impacts of any decisions, and potential unintended consequences. A key point should be to focus on the requirements for implementation, versus prescribing a specific model of implementation. Single point of access, or ease of use does not immediately indicate the need to have a single provider, for example. There are multiple technical solutions, from 'portals' to decentralized delivery models that are more relevant to the discussion as opposed to the final providers involved. Providing the requirements, as opposed to predetermining a model, can result in innovative thinking in creating a better solution that the industry may be able to craft for any RFP response.
Q23. What would be the impact on market participants and other key stakeholders of having multiple UPI Service Providers (whether across asset classes or serving the same asset class) in terms of:	
(a) cost;	Please note that this response is directed all all the sub-bullets, as we believe the question of one vs multi providers is premature, as opposed to viewing the functional requirements of implementation and interaction.

Questions	Answers
	In reality any of the administration options given in the paper can produce an optimum result in respect of all of these points. Good governance, and the right choice of UPI issuer or issuers, operating to an optimized issuance model, can ensure that either a single or multiple suppliers can deliver a good offering. There is nothing inherent in a multi-provider offering versus a single-provider offering that should have a directly tangible effect on cost, ease of use, ability to conform or facilitate the UPI. There could be arguments made that a single provider 'reasonably' would be less complex. Or that multiple providers would ensure competition and alleviate cost concerns. These would be incorrect assumptions. Multiple providers do not by themselves ensure effective competition. The model those providers work under ensures (or not) competition and/or the provision of free and open data. A single provider can easily create a complex and costly system (one may look at the Microsoft Windows application history). Ease of use is not a function of a single or multiple provider model per se. It is incorrect that "multiple providers" necessarily translates into "multiple connection points" or "multiple relationships."

Questions	Answers
	There are multiple solution pathways that can allow for multiple providers yet create a high level of ease of use and access for users. Decentralized processing with centralized delivery and access is one of the cornerstones of modern technology solutions. So whilst there may be complexity when introducing more than one provider, adopting a proper existing and tested framework can alleviate much of that complexity. Additionally, if an open data framework approach is used (i.e. no 'cost recovery' or FRAND/RAND), the marginal costs associated with the UPI scheme could be further distributed across the multiple providers. These costs can be absorbed into the appropriate business offerings that are enhanced by providing this UPI service. This means that on cost grounds it is likely that a multi-provider system stands the best chance of producing an optimum outcome for UPI users.
(b) ease of use of the UPI System;	See response to (a)
(c) their ability to conform to the UPI Technical Guidance; and	See response to (a)
(d) their ability to associate UPIs with products in a timely manner at least to facilitate the discharge of reporting obligations for OTC derivative transactions?	See response to (a)
Q24. Should one or a limited number of UPI Service Providers be selected at the outset? Should the UPI Governance Arrangements allow for additional UPI Service Provider(s) to be incorporated	As mentioned in the response to Q22 above, we do think that to optimize, and indeed accelerate, the UPI process, that the FSB should select one or more providers at the outset which meet the requirements.

Questions	Answers
over time?	As with the LEI this does not mean that the list of issuers cannot change over time under the governance structure that is developed. The danger is that if selection criteria alone are developed by the FSB this could lead to further delay in establishing the system, given that a further body would need to be set up to apply these selection criteria and choose providers.