June 13, 2018

Association of National Numbering Agencies
Via email: industry_consultation@anna-dsb.com

Re: 2019 Fee Model Questions to Industry

Dear Sir or Madam:

State Street Corporation ("State Street") appreciates the opportunity to comment on the Association of National Numbering Agencies ("ANNA") Derivatives Service Bureau's ("DSB") 2019 Fee Model Questions to Industry. Headquartered in Boston, Massachusetts, State Street specializes in the provision of financial services to institutional investors. This includes investment servicing, investment management, data and analytics, and investment research and trading. With $33.284 trillion in assets under custody and administration and $2.729 trillion in assets under management, State Street operates in more than 100 geographic markets worldwide, including North America, Europe, the Middle East and Asia (as of March 31, 2018).

State Street is organized as a United States ("U.S.") bank holding company, with operations conducted through several entities, primarily its wholly-insured depository institution subsidiary, State Street Bank and Trust Company. Our perspective in respect of this response is broadly informed by our State Street Global Markets ("SSGM") group, which operates two multilateral trading facilities ("MTFs") and one systematic internalizer ("SI").

As an initial matter, we believe that all stakeholders should have representation on the DSB Product Committee, including custody banks, such as State Street. As custody banks are privy to data from multiple clients, we have the ability to aggregate data and look across our client base. Custody banks are also focused on the overall infrastructure of reference data and play a key role in the post-execution lifecycle of over-the-counter ("OTC") derivatives. We encourage the DSB to further integrate with industry by leveraging existing product and technical advisory committees and by inviting representatives from other organizations (*e.g.,* trade associations) to join the DSB Product Committee. Furthermore, as the DSB looks to improve its service, it would also benefit from enhanced governance.

State Street supports the proposed user categorization, including the addition of the Search Only Standard User category to the existing user categories. We strongly disagree with the proposal to treat each segment Market Identifier Code ("MIC") as a unique DSB user.

In response to the several questions related to adding less capable technology solutions, we do not support the additional cost and risk of such solutions. We encourage the DSB to publish the feedback from industry since the DSB went live in October 2017 as this could provide opportunities for software

providers to cater to other users who require these solutions. We support the current two automated integration methods of ReST and FIX APIs.

While we do not recommend the addition of phone-based helpdesk support, we encourage adding resources to respond more quickly to email requests from users. As new changes are implemented, we believe that users should receive 30 days advance notice to make necessary internal changes and to have sufficient time to provide feedback on changes to the DSB. Please feel free to contact Yusuf Nurbhai at ynurbhai@statestreet.com or Guy Kirby at gkirby@statestreet.com should you wish to discuss State Street's submission in greater detail.

Sincerely,

_____
Yusuf Nurbhai
Managing Director
SSGM GlobalLink

_____
Guy Kirby
Senior Vice President
SSGM EMEA FX Trading, Sales, & Research

2019 questions to industry

The following questions are based on queries and feedback received from industry since the DSB went live in October 2017. The purpose of the consultation is to obtain industry's view is to ensure that the DSB focuses its attention on those potential changes which are the most valuable. The features identified as most desired by industry (because of this first round of consultation) will be subsequently analyzed in greater detail. Additional detail on costs and functionality will be provided as part of the second consultation to allow industry to feedback on whether it wishes the DSB to proceed with the implementation in 2019.

Proposed Format for Industry Responses to the DSB Consultations

- Consultation responses should be completed using the form below and emailed to industry_consultation@anna-dsb.com
- The option is provided for respondents to stipulate whether the response is to be treated as anonymous. Note that all responses are published on the DSB website and are not anonymized unless specific requests are made
- Where applicable, responses should include specific and actionable alternative solution(s) that would be acceptable to the respondent to ensure that the DSB can work to reflect the best target solution sought by industry (within the governance framework of the utility)
- As with prior consultations, each organization is permitted a single response
- Responses should include details of the type of organization responding to the consultation and its current user category to enable the DSB to analyze client needs in more detail and include anonymized statistics as part of the second consultation report
- Responses must be received by 5pm UTC on 13th June 2018
- All consultation related queries should be directed to industry_consultation@anna-dsb.com

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Name	Yusuf Nurbhai, Managing Director, GlobalLink
	Guy Kirby, Senior Vice President, SSGM EMEA FX Trading, Sales, & Research
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	gkirby@statestreet.com
Company	State Street Corporation
Company Type	Financial
User Type	Power
Select if responses should be anonymous	☐

Section 1: User Categorization and Fees

#	Question for Consultation	Participant's Response
1	Do you agree with the proposed user categorization? If not, what alternative(s) do you propose? Wherever possible please refer to public data made available by the DSB in your response.	Yes, we support the proposal to add the Search Only Standard User category to the existing user categories.
2	Do you concur with the proposed user fee model? If not, what alternative do you propose? Wherever possible please refer to data made available by the DSB both as part of this consultation and publicly.	No, we disagree with the proposal to treat each segment Market Identifier Code ("MIC") as a unique DSB user. For example, one of State Street's regulated foreign exchange ("FX") platforms, FX Connect MTF, is a single platform and should be treated as one member. There are two segments in FX Connect MTF based on trading style (allocation or request for quotes) so that the public can view this information as mandated

		by the Markets in Financial Instruments Directive II / Markets in Financial Instruments ("MiFID II/MIFIR") Regulation; however, the two trading styles should not constitute one platform being charged twice.
3	The DSB currently offers identical terms to all users in a particular category. Should the license terms for commercial intermediaries be different from other user license terms? If so, please specify alternative terms for commercial intermediaries.	No input at this time.
4	The DSB's user fee model assumes continued use over the year. Do you have workflows that require one-off DSB connectivity? If so, please could you provide examples e.g. one-time data consumption, one-off bulk creation of OTC ISINs, etc.	Not applicable at this time.
5	What additional user categories and/or charging models do you want the DSB to provide, if any?	To reiterate, we support the addition of the Search Only Standard User category. We disagree with the proposed user fee model to treat each segment MIC as a unique DSB user.
Section 2: Functionality		
6	The DSB currently provides for web-interface (GUI) users to download search results in JSON (machine readable) format.	
	a. Do you believe the DSB should extend the types of download formats considering the diverse user base (ref. section 2 of the DSB consultation presentation)?	No, the current JSON format is capable and sufficient.
	b. If yes, do you believe that csv (comma separated values) is a reasonable alternative format for downloaded	Although we appreciate the DSB's diverse user base, we do not support less capable technology solutions such as csv as an

		search results? If not, please provide preferred alternatives. Note that the csv format is specifically suggested due to user requests since launch.	alternative format. We believe the use of less capable technology solutions will lead to inefficiencies and increased costs.
7	The DSB currently provides two automated integration methods (ReST and FIX APIs) but has also received interest for Excel API integration to allow easier manipulation and access to OTC derivatives reference data.		
		a. Do you think the DSB should provide Excel API integration as a third API option?	No, we do not support less capable, less automated technology solutions. We also point out that this would increase costs without sufficient benefit.
		b. If Excel API integration is to be provided, should the functionality include both ISIN creation and search/retrieval, or is a subset of the functionality sufficient? If a subset, please provide the appropriate scope of the functionality.	We disagree with the proposal to add Excel API integration. However, if this proceeds, we strongly oppose efforts to permit ISIN creation in Excel. This would introduce risk as a user could manually make a mistake without any validation.
		c. Should the DSB consider any other integration options – programmatic or otherwise - such as an API that enables users to more easily obtain data in a human readable format? If yes, please explain what type of API would best suit your needs.	No, we view the current two automated integration methods of ReST and FIX APIs as capable and sufficient.
8	The DSB currently updates its product templates (request and response) each time an enumeration list or value changes. For example, a new reference rate, underlying index or currency could need to be added to the list. This may result in a two- to four-week development, testing and deployment cycle on each occasion (depending on the nature of the change), which in turns requires industry to also	The current process and time to market is satisfactory for our purposes as it takes us a similar timeframe to complete necessary internal changes.	

	follow a similar process. Do you believe this approach needs to be altered or is the current process and time to market satisfactory for your purposes?	
9	The DSB currently provides end-of-day OTC-ISIN record files in JSON format on a daily basis and has received some requests to also make available (a) consolidated, on-demand data for any user-defined period and (b) such consolidated snapshots to be provided in comma separated value (csv) format to allow a broader set of users to be able to consume the data in a less technology intensive manner. Do you concur with this view? If yes, please could you provide examples of how this additional functionality would aid your integration with the DSB.	The current process is sufficient. We do not support the DSB assuming greater responsibility in this respect and the related cost of consolidated data and snapshots.
10	The existing DSB GUI ISIN search functionality is targeted at technical users who understand the Lucene programming language (see here: https://www.anna-dsb.com/download/dsb-search-1-3/). This means organisations and end-users with small IT departments may not be able to take advantage of the full search capabilities of the DSB GUI. Bearing in mind the additional development effort that would be required, should the DSB enhance its GUI to allow non-technical users to search for ISINs by any attribute across any product template?	No, the DSB should not enhance its GUI in this manner. Rather than decreasing function and adding costs, the DSB should publish this interface as an opportunity for new entrants to enter the market and provide a software service to less technical users.
11	Some user feedback has been received asking the DSB to provide analytics that would allow users to have real-time insight into ISIN creation trends within the DSB.	
	a. Do you concur?	No, as stated in our response to question 10, this is an opportunity for new entrants to create and sell new products and services. This should not be a core activity for the DSB.

	b. If yes, what analytics would you like to see the DSB make available to the market?	
12	What additional user workflows, if any, do you want to see the DSB support?	None.

Section 3: Service Levels

	Are you satisfied with the DSB's current client service levels?	
13	a. If not, what more do you believe the DSB could do to improve the level of service available to you?	We would recommend faster response times over email than what we have observed to date. Additionally, there should not be downtime periods for holidays as the FX market operates on a 24/6 basis.
	b. The DSB has received requests from users to provide named account managers for single point of contact for queries. The DSB currently does not have personnel providing such a function and would need to hire additional staff to fulfil this need. Do you believe the DSB should have account managers? If yes, please explain why and provide your proposal for an appropriate ratio of account managers to users for each category of DSB user.	No, the DSB does not need to have named account managers as the associated costs to hire additional staff would not provide sufficient benefit. However, as stated above, responses need to be sent more quickly in email.
	c. The DSB has received requests from users to provide telephone support in addition to the existing email-based support. The DSB currently does not have the personnel to provide such a function and would need to hire additional staff to fulfil this need.	No, we would not advocate for the addition of phone-based helpdesk support. Instead, focus should be placed on reducing the time needed to respond to email requests from users.

	Do you want the DSB to enhance its support model to also include a phone-based helpdesk during operating hours? If yes, please explain why this is needed, with reference to the categories of DSB users that you believe telephone support should be made available to. If a phone based model is required, do you believe an external ticketing system should be implemented to track calls made to the DSB?		
	d. What else (if anything) could the DSB do more/ less to better service your institution's needs?	No further comments.	
14	The current DSB performance SLA is to process 99% of all messages across all workflows within 1,000ms. The DSB proposes a more targeted performance SLA based on 3 individual workflows: a. ISIN Record retrieval workflow: 99% of all lookups (via an ISIN identifier) to occur within 500ms b. ISIN Create Request workflow: 99% of all ISIN create requests to be processed within 1,000ms (both for ISIN creation and return of existing ISIN where the ISIN already exists) c. ISIN Search workflow: 99% of all searches (via wildcard attributes) to occur within 5,000ms Is the proposed revision to the model and latency metrics appropriate? If not, what do you believe is more appropriate and why?	State Street believes that latencies of use cases (a) and (b) should rival latencies that are industry standard for exchange infrastructure. ISINs are now a mandatory data point for European Union ("EU") domiciled institutions to include on both quote and trade records – as such this data needs to be available at point of quote and at point of trade in a timeframe that is in line with the time taken to price and check an inquiry or a trade.	
15	The DSB has received user requests to stay abreast of upcoming market changes and enable the DSB to provide timely implementation timelines (e.g. SONIA reform, introduction SOFR, currency code updates, reference data requirements for FTRB, etc.). At		

	this time the DSB is not integrated within existing industry fora which has resulted in user feedback to the DSB that some notifications to the DSB of impending industry changes have occurred late, resulting in the late creation of associated ISINs.	
	a. Do you believe the current level of DSB integration with industry is sufficient? If no, please provide examples of how the DSB can be better integrated with industry.	The DSB can be better integrated with industry by leveraging existing product and technical advisory committees.
	b. Should the DSB explore membership of industry bodies to better integrate with user expectations and workflows? If yes, which bodies (for example AFME, EVIA, FISD, FIX, ICMA, ISDA, SIIA), bearing in mind that membership will require additional resources and potentially expenditure on membership fees?	No, rather than exploring membership, we would recommend broadening the current DSB Product Committee membership by including other stakeholders, such as custody banks and industry associations (e.g., the International Swaps and Derivatives Association ("ISDA"), the Association for Financial Markets in Europe ("AFME"), the Global Foreign Exchange Division ("GFXD") of the Global Financial Markets Association ("GFMA"), and the International Securities Association for Institutional Trade Communication ("ISITC")). This would create more effective information sharing without the added cost of industry association memberships.
	c. Are there any other actions the DSB should take for better integration with industry?	As the DSB looks to improve its service, it would benefit from enhanced governance, including expanding the diversity of industry perspectives on its board.
16	The DSB introduced a new web-site (www.anna-dsb.com) in 2018 that contains amongst other items, the DSB's performance SLAs, the DSB User Agreement, the DSB's availability hours, all technical documentation	We support initiatives to improve transparency.

	and all DSB notifications. What additional transparency information would you like to see made available and why?	
17	The current DSB availability hours is 24*6, from Sunday 12 noon UTC to Saturday 12 noon UTC and reflects the DSB's mandate to support RTTS-23 reporting. The DSB has heard that in some circumstances this may not be sufficient; e.g., where OTC-ISINs are being created to allow for RTS-2 reporting. Bearing in mind that additional availability hours will require additional resources:	
	a. Are the current availability hours appropriate?	Yes, current hours are appropriate.
	b. If not, what are the most appropriate availability hours?	
	c. What should be the downtime period for holidays (if any)?	There should not be downtime periods for holidays given how the global FX markets operate.
18	Programmatic Users are currently able to submit up to 60 messages per minute via ReST and have one message in flight via FIX. Details are: A. FIX connected Users streaming messages to the DSB Service must not have more than 1 message (comprised of create or search or any other message) per connection pending acknowledgement from the DSB Service at any given time; B. Users connecting via REST API (as set out in the Connectivity Policy) are permitted to make up to 60 API calls (comprised of create or search or any other calls) per minute per connection subject to the overall cap set out in the acceptable use policy; Do you believe the DSB should revisit these	Although there is the ability for a user to have multiple concurrent connections to the DSB, we believe the DSB should revisit these thresholds by allowing FIX connected users to have more than one message pending at a time and be able to submit more than 60 API calls a minute.

	thresholds? If yes, do you believe the rate should increase or decrease given that programmatic users may have up to 10 simultaneous API connections? Please provide acceptable alternative thresholds if you believe that the current values should be amended.	

19	Programmatic Users are currently subject to the following weekly caps to ensure that the DSB infrastructure continues to offer stability:
	
	  A. Users connected via an API (FIX or ReST) must not send more than 200 invalid messages a day or more than 1,000 in a calendar week across all API connections;
	  B. Users connected via an API undertake not to send the DSB Service more than 100,000 search requests or 50,000 ISIN creation requests in any given calendar week across all API connections.
	
	Do you believe the DSB should revisit these thresholds? If yes, do you believe the rate should increase or decrease given that users are able to have up to 10 simultaneous API connections? Please provide acceptable alternative thresholds if you believe that the current values should be amended.
		A. We believe the current threshold related to invalid messages does not need to be changed.
		B. We believe the caps should be increased for creation. Entities such as FX regulated trading venues are required to create ISINs based on the instruments traded by their customers, and thus have no discretion in the matter of creating ISINs. A good starting point would be to align the threshold for creation and search requests to 100,000.

20	Technical Support Outside Availability Hours: In order to save on staffing costs, the DSB does not currently monitor the system outside the mandated availability hours. Instead, support staff start their rotas one hour before the availability start time. Consequently, a system failure during the unavailability hours that lasts longer than one hour will impact the DSB uptime SLA. The DSB is aware that the risk of system failure is typically higher at start of	We agree with the need to address this risk and believe that option 1, an on-call rota, is the best path forward.

week because of system restarts that typically occur during this period.

Therefore, the DSB has considered two options to address this risk:

1. Institute an on-call rota during the 24-hour unavailability period so that serious failures are picked up on a reactive basis and worked on as soon as they occur.
2. Institute an additional set of support rotas for the unavailability hours, to ensure continuous proactive monitoring of the system. This option will also result in the 24x7 availability of the technical support function.

a. Do you agree that the risk outlined above should be addressed by the DSB?	
b. If yes, do you have a preference on which option provides the optimal outcome bearing in mind that the reactive support option (1) will likely incur less costs to implement than implementing the proactive 24x7 availability of technical support in option (2)?	
c. Are there any other options that the DSB should explore to mitigate the risk outlined above?	

Section 4: Service Availability

21	Current scheduled weekly downtime is 12 noon UTC Saturday to 12 noon UTC Sunday.	
	a. Is this appropriate?	Yes.
	b. What should be the downtime period for holidays (if any)?	As stated in question 17, there should not be downtime periods for holidays given how the global FX markets operate.
22	Multiple Primary Regions: The existing DSB	According to a past presentation of DSB's DR

	Disaster Recovery (DR) architecture is based on a single primary Amazon Web Services (AWS) Region in the EU that is in continuous use, and a second passive DR Region in the US that is only used if there is a disaster in the AWS EU Region. This means the DR site is only actively tested for effectiveness once a year as part of an annual DR test. The DSB would like to understand industry appetite for a revised architecture that allows for both AWS regions to be primary, by implementing a system where the primary region flip-flops between the two regions on a regular basis (for example, every week or month). Such an approach will ensure that both Regions are fully in sync on a continuous basis, thereby lowering the risk of failover to DR uncovering issues only at the time of failover. Do you believe the DSB should move to such a primary / primary architecture across the two AWS Regions as a means of increasing the robustness of the DSB's DR plans? What other factors should the DSB consider for its DR plans? (e.g. is the preservation of connectivity configuration if the primary were to flip-flop an important consideration for API users?)	capabilities, we believe that it would take the DSB four hours to switch to a DR site. We also believe that this is the current recovery time objective ("RTO") agreed by DSB. We believe that the RTO for DSB should be aligned with that of trading venues under MiFID II, two hours. If the change contemplated by DSB would help reduce the DSB's RTO to two hours, then we would support it. Otherwise, we would not.
23	Multi-cloud DR: The DSB's operations are hosted entirely on the AWS cloud across two separate AWS Regions, utilising 3 separate Availability Zones within each Region. The DSB believes this architecture mitigates all risks apart from a total outage of the cloud operator itself. Mitigating this remaining risk will require the DSB to consider a multi-cloud hosting model to remove the dependency on a single operator (AWS).	It is unnecessary to join multiple cloud providers for this purpose. The current backup and recovery model is sufficient. Adding other cloud providers would only add complexity and additional cost.

	Do you believe the DSB should mitigate the risk of collapse of an entire cloud operator by moving to a dual-cloud deployment?	

Section 5: DSB Access and Usage Agreement

24	The DSB does not currently incur penalties for failing to meet SLAs and has received some comment on this. Do you have a view on how this should work given the DSB's cost-recovery mandate?	There should be an escalation process, keeping the cost-recovery mandate in mind.
25	Uncapped fee amount – there has been commentary about the uncertainty in the DSB's current fee model. Do you have a view on alternative models that could be applied across the spectrum of DSB user types?	
26	Agreement can be changed unilaterally – Do you have a view on how the DSB could address the risk that unforeseen events require a contract change, especially given the start-up nature of the utility which increases likelihood of such risks?	The DSB addresses a regulatory mandated, function in MiFID II. The DSB should give members at least 30 days' notice in advance of implementing a change. This would allow for members to implement any internal changes required and/or provide comments to the DSB.
27	The DSB Access and Usage Agreement requires intermediaries to supply details of any client who should be a paying member of the DSB. Do you have a view on whether this is appropriate? If you disagree with the DSB's current approach, please propose an alternate mechanism that could be instituted to ensure that users who sign DSB contracts are not disadvantaged by users who abuse the system by going through an intermediary but not paying.	

Section 6: AOB

28	What other operational enhancements would	

	you like to see the DSB make?	
29	What additional services would you like to see the DSB provide? Please provide examples or business cases where relevant.	
30	What are the top three changes you would like to see the DSB make to better serve your institution's needs (including any that may have been listed above)? Listed in order of preference.	1. Better response time to support requests 2. Ability to discuss product changes 3. No holiday downtime
31	Please insert any other comments you wish to provide	