

Executive Summary – CHAPS As a Retail Alternative

In line with our objective to offer wider interoperability as in the 2017 [Blueprint](#), the Bank has been considering the development of a contingency solution that would allow CHAPS to process account-based retail payments in exceptional circumstances: further enhancing the resilience of UK payments. This analysis has been conducted in close collaboration with Pay.UK – the operator of Bacs, Faster Payments and the cheque-based Image Clearing System – and participants. The Bank and Pay.UK have undertaken this work against the backdrop of the Bank’s programme to renew the RTGS service and Pay.UK’s work on a New (retail) Payments Architecture (NPA).

The rationale of CHAPS As a Retail Alternative (CARA) would be to offer a service proposition to enable participating Payment Service Providers (PSPs) to bulk multiple individual retail payments in one single file. The header of the bulked file would be submitted to the RTGS infrastructure to be settled as a single CHAPS payment instruction. The CARA solution would not replace the NPA’s internal contingency, but would provide additional contingency in specific scenarios where most relevant. These scenarios would likely cover: 1) an outage of the retail system at either the central infrastructure (NPA) level or the network level and 2) a scenario where an individual PSP or a subset of PSPs are unable to send payments to the retail central infrastructure.

We have consulted extensively with industry on the CARA service proposition via the Strategic Advisory Forum, CARA Working Group and two CARA subgroups, considering payments redirection and options for the aggregation of CARA payment files. These groups have discussed in detail the potential need and feasibility of the proposed CARA solution.

As a part of our industry engagement, the Bank also issued a survey to payments industry participants in April 2020 seeking views as to the preferred approach for the Bank’s further work on the proposed CARA solution. Respondents generally preferred to pause the progression of CARA work at this point pending additional information regarding the design and features of the NPA. In July 2020, RTGS/CHAPS Board agreed to pause CARA work for these reasons, but with a steer to recommence the work once the necessary information was available. In the meantime, and in line with the Blueprint for the renewed RTGS service, the Bank has continued to further consider wider operational resilience strategy and continue our engagement with industry.

This document presents a detailed summary of the responses received and highlights the next steps of this work:

- **Section 1** provides an overview of the survey including a brief technical overview of the CARA proposition.
- **Section 2** details the main points of feedback from the survey and presents the decision of RTGS/CHAPS Board regarding the Bank’s approach for further work at this point in time.

RTGS/CHAPS as a potential retail contingency alternative (CARA) Summary of responses to the Bank's stock take survey (April 2020)

1 Introduction and background to the retail contingency (CARA)

Why the Bank is considering the CARA contingency solution

1. In May 2017, the Bank outlined its Blueprint for a new RTGS service.¹ Two of the key intended features of the renewed RTGS service are greater resilience and wider interoperability, including with the retail payments systems.
2. Better interoperability will primarily be enabled through the adoption of ISO 20022 messaging, and in particular the Common Credit Message (CCM) by both the renewed RTGS service and the New Payments Architecture (NPA). However, the Bank has also been exploring a potential file-based solution that could provide a contingency for processing all critical retail payments in the renewed RTGS service, with costs proportionate to its contingency nature. The proposed solution is commonly referred to as CARA (CHAPS As a Retail Alternative). CARA would support interoperability by providing a service with the technical capability to manage high volumes of critical retail payments. At present, the Bank does not intend for the renewed RTGS service to be built with sufficient capacity to process all retail payments as individual CHAPS payments, given that this would require a manifold increase in RTGS capacity even against existing prudent contingency requirements. The solution would therefore also need to ensure that the smooth and timely settlement of routine CHAPS payments was not affected by the unavailability of a retail payments system, by offering a viable alternative to rerouting via CHAPS.
3. In 2019, the Financial Policy Committee (FPC) agreed that it would be prudent to expect the financial system to complete critical payments by the end of the value date. CARA could be an important tool to help Payment Service Providers (PSPs) meet operational resilience requirements and achieve the FPC'S impact tolerance for the speed with which 'critical payments'² can be restored in outage scenarios.

The baseline conceptual model for the CARA solution

4. As currently envisaged, the CARA solution is based on sending PSPs (for example, PSP A) bundling multiple retail payment instructions into a single file for each receiving PSP (PSP B). The file header would be formatted as a single CHAPS settlement instruction containing the aggregate payment amount of all

¹ See the Blueprint [here](#).

² The FPC has not defined a critical payment. Each PSP should consider which of their payments are regarded 'critical' as part of their own operational resilience considerations. PSPs are expected to be able to justify this categorisation to their prudential supervisor.

individual underlying retail payments in that file. PSP A would send the file with a header to the network provider who in turn, would forward only the file header to the Bank for settlement in RTGS as a CHAPS payment. The Bank would settle the aggregate payment as in the file header, and once settlement has been confirmed, the network provider would release the full file of retail payments to PSP B. Upon receipt, PSP B would credit their customer, processing the underlying individual retail payments in a similar method as if received via a clearing file from the retail payment system. See Figure 1 below for the illustrative CARA scheme and structure.

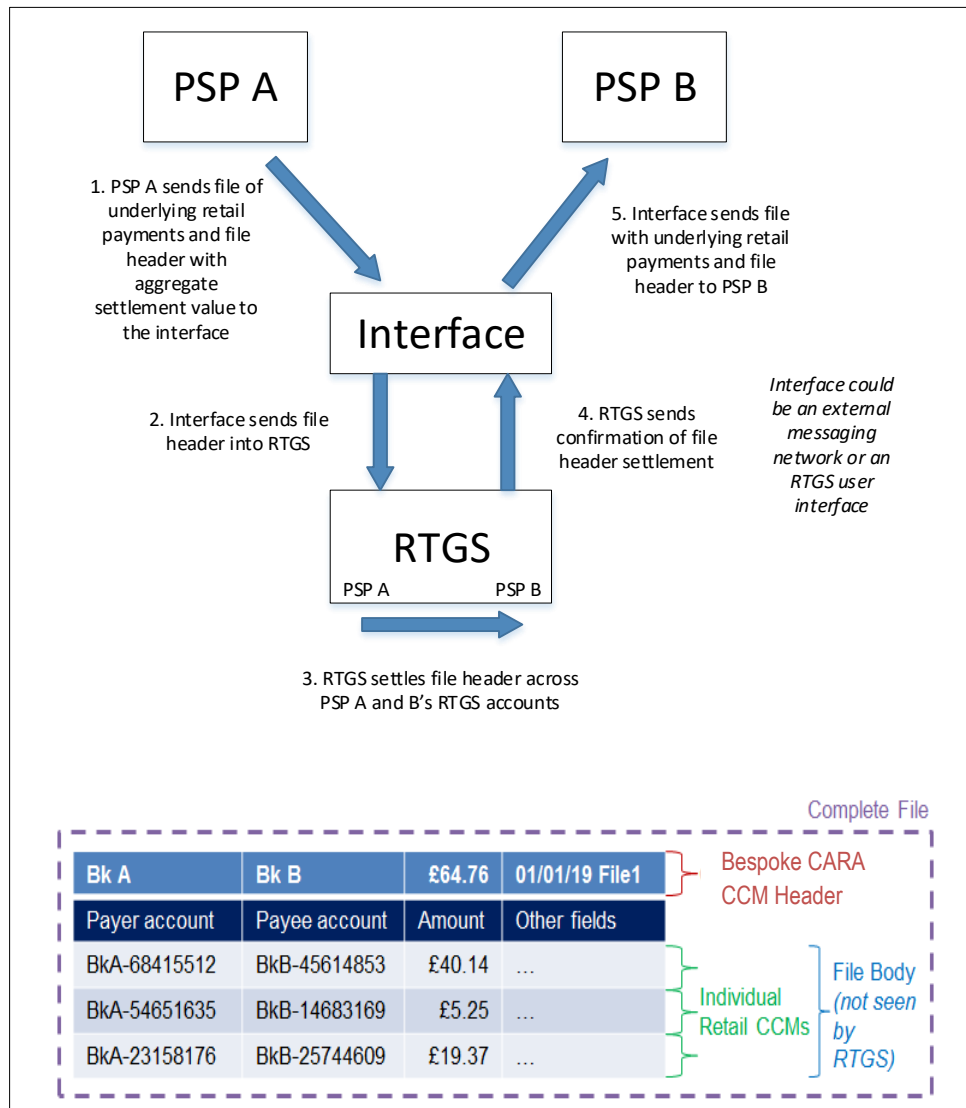


Figure 1: Illustrative CARA scheme and file structure

- It is important to note that this CARA model is only a baseline model and may evolve – both the Bank’s RTGS Renewal Programme and Pay.UK’s New Payments Architecture Programme are still working through the detailed requirements for both their ‘core’ build and operational resilience framework. As those requirements are fleshed out, it may be better to make changes to the CARA proposition for cost or efficiency gains. Alternatively other resilience measures in the NPA could render part or all of the CARA solution unnecessary for participants to be able meet the FPC’s impact tolerance.

2 The survey

Context of the survey

6. As we have developed the CARA solution, we have engaged with both Pay.UK and wider industry, including through a working group, two industry subgroups on payments redirection and file aggregation and via the Strategic Advisory Forum. In April and May 2020, the Bank surveyed the payments industry for views on whether to continue work exploring the feasibility of a CARA solution as part of the renewed RTGS service. The Bank issued the survey to all CHAPS Direct Participants (DPs), and all direct participants in Bacs and/or FPS (whether directly or indirectly settling), as well as other relevant stakeholders. This document presents a summary of responses and explains the next steps of this work.
7. The purpose of our survey was to inform our next steps and recommendations to the July RTGS/CHAPS Board on whether to proceed, stop or delay our work on CARA, given the number of external considerations that have not yet been resolved to the degree required for industry to assess a business case for CARA.
8. These external considerations fall into two broad groups: **factors related to operational resilience** and the **future NPA structure and timeline**. For example, the Bank's consideration of the business case for its own and PSP's investment in CARA will depend on each PSP's operational resilience strategy, and in particular for the PSP, the extent to which the NPA's operational resilience strategy can meet the PSP's impact tolerance for the services provided to them by the NPA. Moreover, the extent to which key features of the NPA, such as certain overlay services for the redirection of payments, can also be used with CARA, will depend both on their technical design and degree of technical independence from the NPA's core clearing and settlement engine. PSPs' implementation of CARA is also likely to be more cost-efficient if done at the same time as preparation for the NPA.
9. In the survey, we asked in particular for views on:
 - a. The credibility of a potential file-based approach in helping firms meet the FPC's proposed impact tolerance to complete critical payments by the end of their value date.
 - b. How the external considerations affect PSPs' decisions to implement CARA.
 - c. The feasibility of potential alternatives to the renewed RTGS service providing a file-based solution.
10. Additionally, we consulted on three broad options for the Bank's further work on CARA (see Figure 2 below):

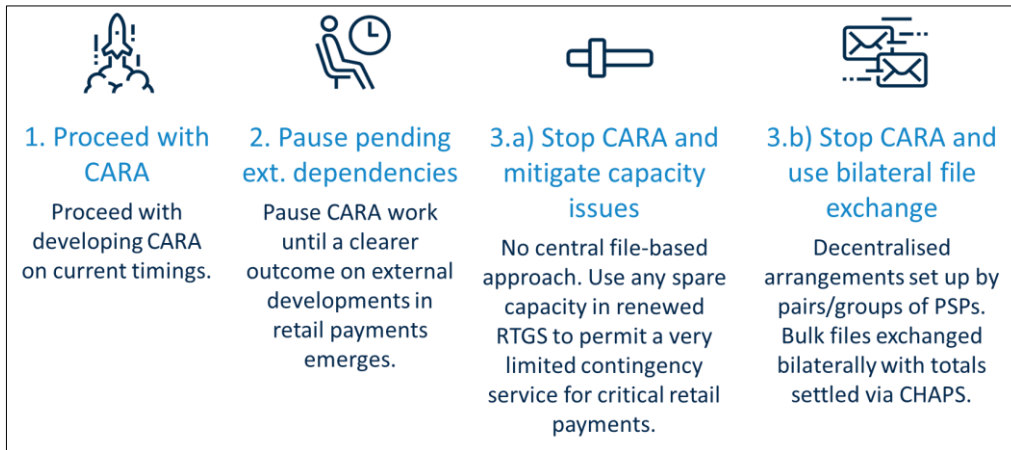


Figure 2: Options for next steps on CARA as set out in April 2020 survey

- **Progress work** on the CARA service proposition, incorporate it in the renewed RTGS, and work with the industry to prepare for its implementation at an appropriate stage of the RTGS Renewal Programme (*Option 1*).
- **Pause work** and intend to resume in the future when there is increased certainty on key external considerations that will critically influence PSPs’ decisions whether to invest in CARA (*Option 2*).
- **Stop further work** on CARA on the basis that PSPs could meet the FPC’s expectations using an alternative method to the file-based approach (*Options 3A and 3B*). This could be via the routes set out below or some other method.
 - **Limited individual rerouting** (*Option 3A*). The Bank would allocate a certain proportion of anticipated spare capacity in the renewed RTGS infrastructure for each CHAPS DP to reroute a very limited number of critical retail payments individually.
 - **A decentralised system of file-exchange** (*Option 3B*). PSPs would enter into bilateral agreements and exchange bulk-files without the involvement of the Bank as the operator of RTGS/CHAPS. The Bank’s role would be limited to settling the net aggregate settlement value for each bulk file exchange. This option would likely require standardisation of process across directly settling PSPs and would need to be led and maintained by industry.

Main feedback points

11. The survey asked six short questions to understand the position of industry on the proposed contingency service. We received 22 responses to the survey from across the industry, representing approximately 95% of total FPS volumes and 94% of total FPS values. The main feedback points are summarised below. More detailed feedback to each individual question is provided in the Annex 1 of this document. Please note that we have not included those N/A responses received where the participant (typically international banks that are only Direct Participants in CHAPS) did not make significant numbers of retail payments in the UK.
12. Several respondents representing approximately **65% of total FPS volumes felt that CARA could help them meet the FPC’s proposed impact tolerance**. The majority of **other respondents felt they needed further technical detail on the proposed features of CARA and NPA** design plans in order to assess this and provide a clear agree or disagree answer.

13. All respondents agreed that they **need more certainty over both NPA design and operational resilience strategy** before they can assess the business case for CARA. With the exception of one respondent, it was broadly felt that an optimal **CARA service proposition needed to take into account and to be aligned with the final NPA design and structure**. Respondents largely felt that continuing CARA work without a fuller understanding of key elements of the NPA design would carry higher costs and risks than implementing CARA after a pause in the short-term.
14. Moreover, almost all respondents felt that they needed further clarity on the **technical specifications of CARA** before taking an investment decision. Most flagged the need to understand how redirection of retail payments would (or would not) work in the absence of a central redirection facility, and the details of the file aggregation and submission process as particularly crucial. Additional detail on how critical government payments will be identified and settled in CARA was also highlighted by some respondents.
15. **As such, all respondents but one preferred to wait for further detail related to the NPA's operational resilience and design, and for this to be reflected in the CARA proposition where possible, before taking an investment decision on CARA.**
16. Whilst several survey respondents, representing **less than 5% of total FPS volumes, stated they could meet operational resilience requirements using an alternative to CARA**, most of these respondents did not specify what option they would do this by and how. Only one respondent expressed interest in Option 3A (limited individual rerouting). While there was some interest in Option 3B (decentralised system of bilateral file exchange), PSPs also noted its potential complexity as a different solution between the myriad different pairs of PSPs.

RTGS/CHAPS Board decision and next steps for further CARA work

17. **This industry feedback was reflected in our recommendations to RTGS/CHAPS Board and RTGS Renewal Committee (RRC) in July 2020. RTGS/CHAPS Board and RRC agreed to pause much of the CARA work in order to wait for more certainty regarding certain key external considerations, mostly related to NPA design and operational resilience.**
18. The Bank will continue to monitor progress around these external factors. We will seek to resume CARA work when we can establish that PSPs have the necessary information about Pay.UK's approach to NPA's operational resilience, direct corporate access, treatment of Bacs payments and settlement of critical government payments. **We will review whether to resume this work around mid-2021.**
19. In the meantime we will monitor progress via the Strategic Advisory Forum and bilateral engagement. If required, we may also hold ad hoc meetings of the Working Group on the Role of CHAPS in the Payments Landscape or issue a further written consultation. In addition, we will continue to provide updates to the industry via the RTGS Renewal Programme communications.
20. When the work is resumed, we will work with the industry to assess whether there is a suitable business case for CARA, and if so, develop a more detailed service proposition.

21. During this pause, we will also use the opportunity to consider in more detail how the CARA proposition fits with wider operational resilience work underway as a part of the RTGS Renewal Programme. This includes exploring potential synergies with other file-based contingency solutions, such as for RTGS messaging arrangements³, proposed as part of resilience design plans for the renewed RTGS.

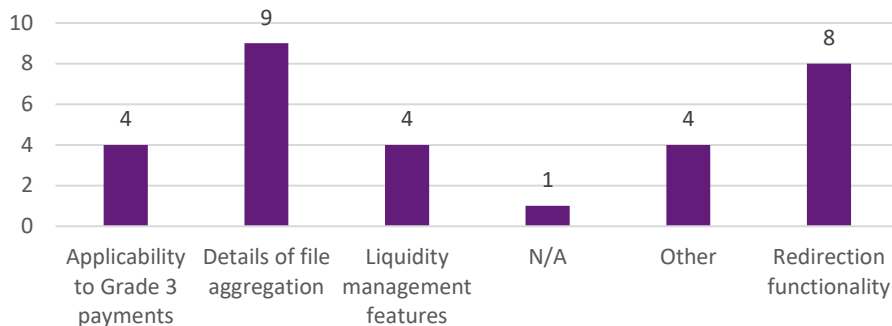
³ See [Blueprint](#) pg.10-11 for further information on proposals to enhance resilience in the renewed RTGS service.

Annex 1: Summary table of survey questions and industry feedback

Survey question	Industry feedback																						
<p>A file-based contingency solution (CARA), if implemented successfully, could help my organisation achieve the FPC’s proposed impact tolerance for the point by which critical retail payments can be completed in an outage scenario.</p>	<p>Several respondents, representing approx. 65% of total FPS volumes, agreed that CARA could help their organisations achieve the FPC’s impact tolerance. Excluding respondents who disagreed or provided ‘N/A’ responses, all other firms felt that they needed additional clarity on the technical and operational details of CARA in order to provide a clearer response. Firms that needed further clarity collectively represent approx. 24% of total FPS volumes.</p> <p>Two respondents felt that CARA would not help their organisations achieve the FPC’s proposed impact tolerance. Reasons given included the proposed operation of CARA as a non-24/7 contingency service and a preference to enhance the inbuilt resilience of the NPA ahead of a separate CARA solution.</p>  <table border="1"> <caption>Survey Responses for CARA Impact Tolerance</caption> <thead> <tr> <th>Response</th> <th>Count</th> </tr> </thead> <tbody> <tr> <td>Strongly agree/ Agree</td> <td>6</td> </tr> <tr> <td>Neither agree nor disagree</td> <td>4</td> </tr> <tr> <td>Strongly disagree/disagree</td> <td>2</td> </tr> <tr> <td>I don't know</td> <td>2</td> </tr> <tr> <td>N/A</td> <td>2</td> </tr> </tbody> </table>	Response	Count	Strongly agree/ Agree	6	Neither agree nor disagree	4	Strongly disagree/disagree	2	I don't know	2	N/A	2										
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<p>Given the current uncertainty around the outcome of the external considerations, including important design choices around the NPA (and as a result to some extent CARA service proposition), my organisation does not have sufficient information to assess an overall business case for investing in CARA at this point.</p> <p>If agree/ strongly agree, please list those external considerations that would be most critical for you to have more certainty on before taking an investment decision on CARA.</p>	<p>All respondents agreed. The consensus was that clarity around considerations related to the future structure and resilience of the NPA was critical to assess an overall business case to invest in CARA at this point.</p>  <table border="1"> <caption>External Considerations for Investment Decision</caption> <thead> <tr> <th>Consideration</th> <th>Count</th> </tr> </thead> <tbody> <tr> <td>Other</td> <td>4</td> </tr> <tr> <td>PSPs' op. resilience</td> <td>4</td> </tr> <tr> <td>Future Grade 3 arrangements</td> <td>6</td> </tr> <tr> <td>NPA go-live timeline</td> <td>8</td> </tr> <tr> <td>NPA access models</td> <td>9</td> </tr> <tr> <td>NPA messaging network</td> <td>9</td> </tr> <tr> <td>NPA ISO20022 timeline</td> <td>10</td> </tr> <tr> <td>NPA overlay services</td> <td>10</td> </tr> <tr> <td>NPA's op. resilience</td> <td>10</td> </tr> <tr> <td>Scope of NPA</td> <td>11</td> </tr> </tbody> </table>	Consideration	Count	Other	4	PSPs' op. resilience	4	Future Grade 3 arrangements	6	NPA go-live timeline	8	NPA access models	9	NPA messaging network	9	NPA ISO20022 timeline	10	NPA overlay services	10	NPA's op. resilience	10	Scope of NPA	11
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<p>Which details of a potential CARA service proposition that are currently being further developed would be the most critical for your organisation to have certainty of before making a decision to invest in CARA?</p>	<p>Most respondents felt that clarity on file aggregation and redirection in the absence of a central redirection facility was crucial for making a decision to invest in CARA. In regards to file aggregation requirements, some respondents felt that consistency of understanding across the payments industry was particularly key.</p>																						

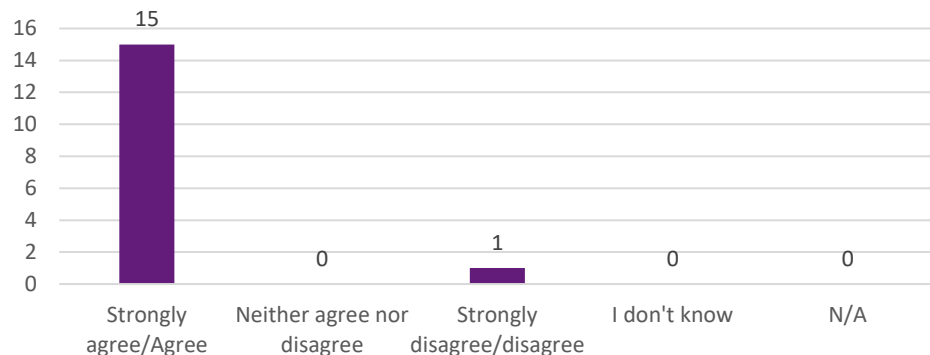
A few respondents also noted the handling of critical government payments as one of the critical factors. These payments are currently sent and handled via special arrangement (Grade 3) in Bacs. Details of the future processing arrangements for Grade 3 payments in the NPA have not yet been confirmed and respondents felt that this information was essential to CARA design.

Some respondents flagged other considerations as critical to an investment decision. This includes the need for a clear framework between directly-submitting sponsoring DPs and indirect users of CARA to ensure consistency across industry. Clarity regarding how potential errors in the underlying bulk file would be resolved to avoid any impact to payment delivery and receipt was also noted.



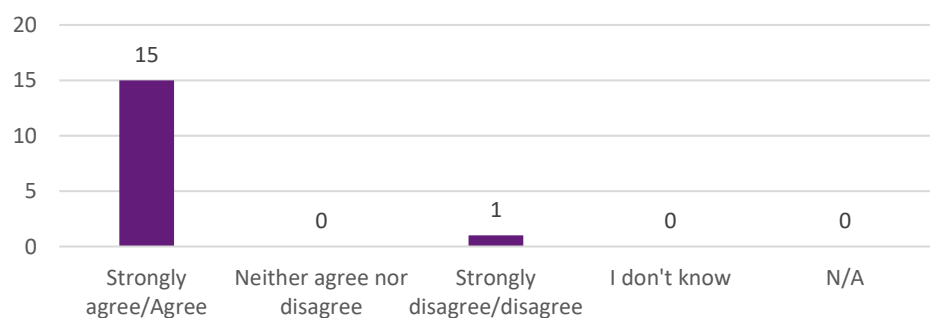
I would prefer to wait for greater clarity on external considerations and details of the CARA proposition before taking an investment decision, even if this means delaying delivery of the service by a year or two.

All respondents but one agreed. Some respondents also flagged the impact of Covid-19 on the payments landscape as a general consideration to support pausing CARA work.



I believe that continuing the CARA work without having full detail of the key external considerations at this stage would result in higher costs and risks to my organisation than implementing CARA after a pause in the short term to wait for certainty on some of the external considerations.

Almost all respondents agreed. There was some concern that continuing CARA without a clear understanding of the NPA ecosystem would risk developing a less-than-optimal contingency solution and result in additional costs. Respondents preferred to pause work on CARA in the short-term to wait for certainty on finalised NPA design and delivery plans.



I believe that my organisation can meet my future operational resilience regulatory requirements using an alternative to a file-based CARA solution.

Some respondents, representing less than 5% of total FPS volumes, felt that they could meet future operational resilience regulatory requirements using an alternative to the proposed CARA solution but not many specified which alternative they would use. There was mostly interest in the decentralised file-exchange model out of alternatives set out although other respondents had concerns that this option would be complex.

Several other respondents, representing approx. 51% of total FPS volumes, felt they needed further detail on outstanding considerations to provide a clearer response.

Respondents representing 38% of total FPS volumes felt that a central framework like the CARA proposal was necessary to effectively meet operational resilience requirements.

