



Market review into the ownership and competitiveness of infrastructure provision

Remedies consultation

MR15/2.4

December 2016

In this consultation we set out our proposed remedies and a further assessment of the ownership issues we identified in our final report.

Stakeholders are invited to submit any responses to us by 1 February 2017. You can send your views by email to infrastructurereview@psr.org.uk.

You can also respond in writing to the address below (although we ask all respondents to also provide electronic Word and PDF versions of their response).

Payment Systems Regulator
Infrastructure market review team
25 The North Colonnade
Canary Wharf
London E14 5HS
Email: infrastructurereview@psr.org.uk

Generally we will seek to publish views or submissions in full or in part. This reflects our duty to have regard to our regulatory principles, which include those in relation to:

- publication in appropriate cases
- exercising our functions as transparently as possible

As such, we would ask respondents to minimise those elements of their submission which they wish to be treated as confidential – we will assume consent for us to publish material which is not marked as confidential. If respondents include extensive tracts of confidential information in their submissions, we would ask that they submit non-confidential versions which they consent for us to publish. We will also not accept blanket claims of confidentiality, and will require respondents to identify specific information over which confidentiality is claimed, and to explain the basis on which confidentiality is sought.

Respondents should note that we will not disclose confidential information that relates to the business or affairs of any person, which we receive for the purposes of our functions under the Financial Services (Banking Reform) Act 2013 (FSBRA), unless:

- the information is already lawfully publicly available
- we have the consent of the person who provided the information and, if different, the person to whom it relates
- the information is published in such a way that it is not possible to ascertain from it information relating to a particular person (for example, if it is anonymised or aggregated)
- there is a 'gateway' permitting this disclosure. Among the gateways is the 'self-help' gateway whereby the PSR will be able to disclose confidential information to third parties to enable or help it to perform its public functions. Those receiving information disclosed under the gateway are still bound by the confidentiality regime

The places in this consultation paper where confidential material has been redacted are marked with a [REDACTED].

We have redacted the names of most stakeholders throughout this report where we report feedback from, and evidence provided by, relevant parties. For readability purposes we have not inserted scissors in each location where we have deleted footnotes or other text which identifies the source of the information or views summarised in the report.

You can download this consultation paper from our website:

www.psr.org.uk/psr-publications/market-reviews/IMR-consultation-remedies

Contents

1	Executive summary	4
2	Introduction	5
	Regulatory framework	5
	Proposed remedies	7
	What do you need to do next?	8
	This consultation	8
3	Competitive procurement remedy	9
	Introduction	9
	Alternative remedies considered but not pursued	10
	Assessment of effectiveness	10
	Assessment of costs	27
4	Messaging standards remedy	30
	Introduction	30
	Introduction of ISO 20022	31
	Costs and benefits of different transition approaches	33
	Our proposed remedy	35
	Other remedy design and implementation issues	38
	LINK	40
5	Ownership of VocaLink	41
	Introduction	41
	The effectiveness of the proposed divestment remedy options	42
	Our assessment of the proposed MasterCard transaction	45
6	Effectiveness and proportionality of our remedies package	47
	Introduction	47
	Effectiveness	48
	Proportionality	49
	Equality and diversity impact assessment	54
	Provisional decision on our package of remedies	54
7	Consultation questions and next steps	56
	Consultation questions	56
	Stakeholder feedback	57
	Next steps	57

1 Executive summary

- 1.1** In 2015 and 2016, we have conducted a market review of ownership and competition in the provision of infrastructure services for the three interbank payment systems – Bacs, FPS and LINK. In our final report we found that there is no effective competition. For the people and businesses that use payment systems this can lead to:
- higher prices
 - less innovative services
 - less pressure for infrastructure to be provided efficiently
 - a lower quality of service
- 1.2** Our objectives require us to promote effective competition and innovation in payment systems, in the interests of service-users. To address these problems and improve outcomes for users, we propose to implement two remedies:
- mandating competitive procurement exercises for Bacs, FPS and LINK when the operators of these systems purchase central infrastructure services
 - introducing ISO 20022 messaging standards in future procurement exercises for Bacs and FPS
- 1.3** Given the proposed MasterCard acquisition of VocaLink, which currently supplies the central infrastructure for all three systems, we do not at this stage plan to impose a divestment remedy. This transaction is subject to merger approval by the Competition and Markets Authority (CMA). However, we consider that the acquisition would be effective in addressing the ownership related competition problems we identified.
- 1.4** We consider these proposed remedies, taken together with the change of ownership of VocaLink, will remove barriers and create a competitive procurements process, opening up the provision of central infrastructure to competition. Specifically, these measures remedy the following competition issues that we identified in our final report:
- operators and direct payment service providers (PSPs) do not have a strong incentive to run competitive procurements, which has resulted in limited competitive pressure on VocaLink
 - the use of bespoke messaging standards by Bacs and FPS, which represent a barrier to entry for alternative providers of central infrastructure services
 - the current ownership and governance arrangements at VocaLink are likely to reduce the level of competition in the provision of central infrastructure services
- 1.5** In designing our proposed competitive procurement and messaging standards remedies we have paid particular attention to ensuring that these will work effectively with the proposals made by the Payments Strategy Forum (the Forum). We expect that the industry will soon begin preparations for several procurement exercises, including for any central infrastructure requirements for the Forum's new payments architecture. We therefore expect that our package of actions will help improve outcomes for users. This market review is part of the PSR's wider programme of work to promote more competition and innovation for the benefit of users of payment services.
- 1.6** We believe that this package of actions, taken together, will address the competition issues that we have found. In particular, they will enable new infrastructure providers with different technology to enter the market and drive new and innovative products and services. This can benefit all users of payment systems, from large PSPs to consumers.

2 Introduction

- 2.1** In July 2016 we published the final report of our market review into the ownership and competitiveness of central payments infrastructure provision.¹ We found that there is currently no effective competition in this market and set out some initial thoughts on a package of three potential remedies to address this. We said we would develop these further and consult on them.
- 2.2** In this consultation we explain our proposed remedies. We then set out our assessment of each remedy and the overall package of remedies, and our provisional decision on the remedies we propose to implement.
- 2.3** We are consulting on two remedies:
- competitive procurement of future central infrastructure contracts
 - messaging standards
- 2.4** Given the proposed MasterCard acquisition of VocaLink and the ongoing Competition and Markets Authority's (CMA) merger control process we are not consulting on a divestment remedy at this stage. We have, however, provided some additional assessment regarding the ownership of VocaLink. If the proposed acquisition is not completed, we intend to consult separately on a divestment remedy.
- 2.5** In this consultation we assess the effectiveness and proportionality of each of our two remedies and the package as a whole. We first consider, for each remedy, which of the options we have identified would be effective in resolving the problem we have identified. We then consider the costs of each effective remedy option, and so identify the least-costly effective remedy. Finally, we consider the effectiveness and proportionality of the package of remedies as a whole, including an assessment of the expected costs and benefits.

Regulatory framework

- 2.6** We have carried out this market review using our powers under the Financial Services (Banking Reform) Act 2013 (FSBRA). As we explained in our terms of reference², we have three statutory objectives, set out in sections 50 to 52 of FSBRA: our competition, innovation, and service-user objectives.
- 2.7** Under FSBRA we have a range of options that we can explore in developing the remedies. These are set out in our Markets Guidance.³ Some of these are actions we can take, and some are actions we can ask others to take.
- 2.8** They include:
- making new general directions (or amending existing ones) in relation to the relevant payment system under section 54 FSBRA
 - making specific directions in relation to the relevant payment system under section 54 FSBRA (which could apply to specified persons, or persons of a specified description), including in relation to governance arrangements for infrastructure providers
 - imposing generally-imposed requirements, or specifically-imposed requirements (that apply only to a specific participant), under section 55 FSBRA

¹ PSR MR15/2.3, *Market review into the ownership and competitiveness of infrastructure provision – final report* (July 2016): www.psr.org.uk/sites/default/files/media/PDF/MR1523-infrastructure-market-review-final-report.pdf

² PSR MR15/2.1, *Market review into the ownership and competitiveness of infrastructure provision – Terms of reference* (2015): www.psr.org.uk/sites/default/files/media/PDF/Infrastructure%20final%20terms%20of%20reference.pdf

³ www.psr.org.uk/markets-guidance

- requiring the disposal of all or part of an interest in an infrastructure provider in relation to a regulated payment system under section 58 FSBRA
- making recommendations for further industry initiatives or enhanced industry self-regulation that promote the interests of service-users
- making proposals to the Bank of England, Financial Conduct Authority (FCA) or Prudential Regulation Authority (PRA) as appropriate
- publishing guidance
- asking the CMA to consider investigating the market(s)⁴
- taking no further action for the time being – for example, because our concerns are likely to be satisfied by upcoming legislative measures, action by the relevant participants or other circumstances; in such cases, we may continue to monitor the market in case our concerns are not addressed

2.9 When deciding on our remedies – both individually and as a package – we consider:

- **Effectiveness:** The remedy must address the problem(s) we have identified and be practicable to implement, monitor and enforce. We take account of current laws and regulations, as well as those expected in the near future. We also consider the way in which the remedies interact with each other.
- **Proportionality:** The remedy needs to solve the problem(s) we have identified in a way that is no more onerous than necessary. For example, if there is a choice between two equally effective remedies, we would choose the option that is least intrusive. The remedy should also not produce disadvantages which are disproportionate to its aim.
- How the remedy (or package of remedies) fits in with our other policies relevant to the provision of infrastructure services, as well as other relevant industry developments. For example, this includes the work of the Payments Strategy Forum (the Forum), where it is considering relevant issues.

2.10 As discussed in our Markets Guidance, we also consider:

- **FSBRA Regulatory Principles:** When aiming to ensure that any action we take is effective and proportionate to the concerns identified we take into account the regulatory principles in section 53 FSBRA. There are eight principles. Our Markets Guidance identifies three of these as particularly relevant when considering intervention:
 1. **The efficiency principle:** The need to use the resources of each regulator in the most efficient and economical way.
 2. **The proportionality principle:** A burden or restriction which is imposed on a person, or on the carrying on of an activity, should be proportionate to the expected overall benefits, considered in general terms, of that burden or restriction.
 3. **The transparency principle:** Regulators should exercise their functions as transparently as possible.

⁴ Section 131(1)EA02

- **Principles of Better Regulation** in the Legislative and Regulatory Reform Act 2006, including proportionality and transparency, and the additional requirements of the Regulators' Code. Accordingly, we are carrying out an assessment of the proportionality of our proposed remedies and are consulting on the proposed measures.
- **Equality and Diversity Implications:** In line with our public sector equality duty under the Equality Act 2010, we assess the likely equality and diversity impacts and rationale of our proposals to assess whether they give rise to any concerns as a result of any protected characteristic, as part of our decision-making processes.

Proposed remedies

2.11 The remedies we are proposing are:

- Two specific directions under section 54 of FSBRA requiring that if the operators of the Bacs and FPS payment systems contract for the provision of central infrastructure this is competitively procured at least every ten years, except in exceptional circumstances. This procurement must enable the use of ISO 20022 messaging standards.
- A specific direction under section 54 of FSBRA requiring that if the operator of the LINK payment system contracts for the provision of central infrastructure this is competitively procured at least every ten years, except in exceptional circumstances.
- Two specific directions under section 54 of FSBRA requiring the operators of the Bacs and FPS payment systems to make documentation available to allow conversion between existing messaging standards and ISO 20022.

Consultation for the proposed remedies

2.12 We are consulting on the draft specific directions set out in Annex 3.

2.13 As set out in our Markets Guidance and our Powers and Procedures Guidance (PPG)⁵, when we make specific directions, we may or may not consult publicly. We consider that in this case our proposed specific directions are likely to have a broader implication and relevance beyond those organisations to which the directions would apply. Therefore, we are publically consulting on drafts of the proposed specific directions and seeking the views of all stakeholders.

2.14 As discussed in the PPG⁶, when we give notice of a specific direction we normally allow 14 days for the affected organisations to make representations to us about it. However, in this particular case we are providing a longer period of time for written representations on the specific directions.

2.15 The proposed specific directions include our reasons for proposing each remedy. This draft remedies decision sets out our reasoning and analysis for each proposed remedy in further detail. Where relevant, some elements have been redacted for confidentiality.

2.16 In deciding whether to give the specific direction(s) set out in Annex 3, we will take representations we receive into account, including any changes that may be proposed.

⁵ PSR, *Powers and procedures guidance (PPG)* (2015), paragraphs 4.1 to 4.5 and 16.1 to 16.5: <https://www.psr.org.uk/sites/default/files/media/PDF/PSR%20Powers%20and%20Procedures%20Guidance.pdf>

⁶ See paragraph 4.3 of the PPG

What do you need to do next?

- 2.17** We welcome your feedback on our provisional decision. If you would like to provide comments, please email these to us by 1 February 2017 at infrastructurereview@psr.org.uk or write to the address on page 1.
- 2.18** We will consider your comments when finalising our remedies decision, which will be published in spring 2017.

This consultation

- 2.19** The remainder of this document is set out as follows:
- Chapter 3 considers the proposed competitive procurement remedy.
 - Chapter 4 considers the proposed messaging standards remedy.
 - Chapter 5 considers the ownership of Vocalink.
 - Chapter 6 considers the proposed remedies package as a whole.
 - Chapter 7 outlines next steps, including our consultation questions.

3 Competitive procurement remedy

We found in our final report that the lack of competitive procurement represents a barrier to entry for alternative providers of central infrastructure services. Also, the operators and direct PSPs do not have a strong incentive to run competitive procurements, which has resulted in limited competitive pressure on VocaLink. To address these issues, we consider options for a potential remedy that competitive procurement exercises are undertaken for the central infrastructure services for Bacs, FPS and LINK.

We provisionally conclude that the option of mandating competitive procurement for the central infrastructure services for Bacs, FPS and LINK would be effective.

We outline the elements that we consider are necessary to make this remedy effective. These include the remedy's interaction with the Forum's work – in particular operator consolidation and the proposed new payments architecture. The remedy will be effective if the messaging standards remedy and a change in the ownership of VocaLink are also implemented.

We do not consider the options of issuing best-practice guidelines or requiring operators to set a procurement strategy would be effective because neither ensures that a competitive procurement would take place.

We estimate the incremental cost of our remedy is between £6 million and £10 million each for Bacs and FPS, and less than £1 million for LINK. In the event that a new provider is selected, there may also be an additional cost of migrating users to the new provider. However, we expect this would only occur if changing provider represented value for money.

Introduction

- 3.1** In our final report, we found that the lack of competitive procurement exercises is a barrier to entry. It prevents other potential providers from competing for the provision of central infrastructure services, despite several being interested in offering such services. Payment system operators (operators) are currently responsible for both governing the systems and procuring the central infrastructure services on behalf of the PSPs that use it. We found that the operators do not have a strong incentive to seek alternative – and potentially more efficient and innovative – infrastructure services. They have not held periodic competitive procurement exercises that would allow them to directly compare the offerings of alternative providers. The direct PSPs – as the main users of the payment systems – do not have a strong incentive to encourage the operators to seek alternatives. As a result, the incumbent provider, VocaLink, has faced limited competitive pressure and reduced incentives to provide more efficient and innovative services.⁷
- 3.2** To address these issues, we included a potential remedy in our final report that competitive procurement exercises are undertaken for the provision of central infrastructure services for Bacs, FPS and LINK. In this chapter we:
- explain which alternative remedies we considered but do not intend to pursue
 - consider the effectiveness of three different options for a procurement remedy
 - assess remedy costs

⁷ PSR MR15/2.3, *Market review into the ownership and competitiveness of infrastructure provision – final report* (July 2016), paragraphs 7.2 to 7.4 and 8.17 to 8.18: www.psr.org.uk/sites/default/files/media/PDF/MR1523-infrastructure-market-review-final-report.pdf

Alternative remedies considered but not pursued

- 3.3** Stakeholders suggested two potential alternatives to our proposed procurement remedy. We have considered these but decided not to pursue them.
- 3.4** First, four stakeholders proposed implementing direct contracting between PSPs and central infrastructure providers (instead of common infrastructure procured by each payment system). They said this would increase competition in the market and encourage potential infrastructure providers to compete.
- 3.5** This may help address the issue of why direct PSPs do not have a strong incentive to encourage operators to run competitive procurement. We want our remedies to allow the most efficient and effective forms of infrastructure provision to develop in the future and we have therefore designed our proposed procurement remedy such that it should not preclude direct contracting. We note that the Payments Strategy Forum (the Forum) is proposing a new payments architecture – the Simplified Payments Platform.⁸ This may not have any central (or collaboratively-procured) infrastructure, or if it does, it may be thinner than the current central infrastructure, allowing multiple providers of overlay infrastructure or services to compete in the market simultaneously. A move to more direct contracting is possible under this proposed architecture.
- 3.6** Second, one stakeholder proposed encouraging more PSPs to become direct members of payment systems. We do not believe this would effectively address the issues we identified. Increasing the number of member PSPs would not influence direct PSPs' incentives to encourage operators to run a competitive procurement, because the model would still be a collective procurement structure. Being direct members of payment systems may also not be an efficient approach for many PSPs. We are, in any case, working to facilitate more open and flexible direct access for those PSPs that are interested through other avenues of our work, such as our access work.⁹

Assessment of effectiveness

- 3.7** Our remedy is aimed at establishing effective competition **for** the market – the current industry structure for Bacs, FPS and LINK – which would ensure that outcomes meet service-users' needs.¹⁰
- 3.8** We have identified three options for this remedy:
1. Issuing best-practice guidelines for procurement.
 2. Requiring operators to set a procurement strategy.
 3. Mandating the operators to undertake competitive procurement when contracting for future central infrastructure services.
- 3.9** Option 3 differs from the competitive procurement remedy options we proposed in our final report. The final report had two separate options for mandating competitive procurement: one option mandated competitive procurement and the other added specific requirements (such as an independent external audit) to make the procurement effective.¹¹ Option 3 above now combines these options and considers what, if any, additional requirements might be required to make a competitive procurement effective. This includes a variation on option 3 to require VocaLink to provide shortlisted potential providers onsite access to its staff and certain information during a discovery phase in the procurement for Bacs. We identified this after consultation with stakeholders about the impact of incumbency advantages on the effectiveness of competitive procurement (see paragraphs 3.69 to 3.73).

⁸ Payments Strategy Forum, *A payments strategy for the 21st century – final strategy* (November 2016): <https://www.paymentsforum.uk/final-strategy>

⁹ We published our latest report on the operators' progress on creating more open and flexible access to payment systems in December 2015: www.psr.org.uk/psr-publications/news-announcements/access-and-governance-report

¹⁰ PSR MR15/2.3, *Market review into the ownership and competitiveness of infrastructure provision – final report* (July 2016), paragraphs 4.4 to 4.6 and 4.13

¹¹ MR15/2.3, paragraph 8.57 c and d

General observations

- 3.10** All three remedy options aim to introduce competitive procurement to ensure effective competition for the benefit of service-users. We first assess whether introducing competitive procurement will be effective in addressing the problem we identified in our final report. We then assess whether and, if so, which of the options would be effective in ensuring that competitive procurement takes place.
- 3.11** Assuming particular market features do not prevent competitive procurement exercises from being effective, these should bring about competition for the provision of central infrastructure services. We therefore assess whether any current market features would adversely impact the effectiveness of a procurement remedy. Such features could affect alternative providers' ability and willingness to compete, or they might affect VocaLink's perception of a credible threat of competition from other potential providers.
- 3.12** There are several factors, some interrelated, that could adversely impact on the effectiveness of competitive procurement. These include:
- the existence of credible alternative providers
 - barriers to entry
 - ownership arrangements
 - incumbency advantages
 - potential regulatory changes
- 3.13** As these factors could have an impact on the effectiveness of any of our remedy options, we assess each before turning to the effectiveness of each remedy option.

The existence of credible alternative providers

- 3.14** We said in our final report that there are a number of providers willing to compete against VocaLink. These include providers currently operating in other jurisdictions that offer similar infrastructure services.¹² Since our final report we have engaged further with a number of alternative providers that are all active in similar markets. We consider them to be credible competitors to VocaLink once the barriers to competition we identified in our final report have been removed. We also noted in our final report the possibility of joint ventures and consortia that could increase the pool of credible bidders.¹³
- 3.15** A competitive procurement, even with a limited number of participants, can produce a competitive outcome, as participants that are efficient and provide interchangeable services will constrain each others' offers in the procurement process.
- 3.16** Three stakeholders noted the risk that the winning provider might walk away from delivering on the contract, which has happened in rail franchising procurement. This is a risk for the operator to assess and manage in any procurement exercise and subsequent contract with an infrastructure provider. There would, however, be significant reputational damage for any provider that walked away from a contract.

Potential barriers to entry

- 3.17** In our final report we found that bespoke UK messaging standards and VocaLink's ownership arrangements act as barriers to entry.¹⁴ If these barriers are not addressed, then a competitive procurement would not be effective because alternative providers would be deterred from competing. In Chapter 4 we consider provisional remedies to address the messaging standards barrier. In Chapter 5 we consult on our assessment that the sale of VocaLink to MasterCard would address the barrier caused by the current ownership arrangements.

¹² PSR MR15/2.3, *Market review into the ownership and competitiveness of infrastructure provision – final report* (July 2016), paragraphs 4.189 to 4.207

¹³ MR15/2.3, paragraph 4.55

¹⁴ MR15/2.3, paragraphs 4.254 to 4.290 and 6.167 to 6.187

3.18 Alternative providers have previously said that a requirement to have data centres located in the UK would deter them from competing. However, we found that current regulations do not require this.¹⁵ Therefore, in the absence of any changes to the regulations, this does not inhibit the effectiveness of a competitive procurement. We discuss potential regulatory changes that could affect competitive procurement in paragraphs 3.46 to 3.48.

3.19 The final report did not identify other barriers to competition.

Ownership arrangements

3.20 In our final report, we also found that the current ownership arrangements for VocaLink reduce the level of competition in infrastructure services. This is because the four largest VocaLink shareholder PSPs have an incentive to protect VocaLink from competition, and are unwilling to turn to other infrastructure providers.¹⁶ If the sale of VocaLink proceeds and addresses the ownership issue, then it should not impact the effectiveness of a competitive procurement. We consider this, and set out how we propose to proceed, in Chapter 5.

Incumbency advantages

3.21 We noted in our final report that some stakeholders had said that potential incumbency advantages could explain why competitive re-procurement is not common in central infrastructure services in payment systems globally.¹⁷ Incumbency advantages may hinder the effectiveness of a competitive procurement because they give the incumbent a material advantage over rival bidders. Even the perception of an advantage can also deter rivals from participating.

3.22 We have considered some potential incumbency advantages that VocaLink might have in a competitive procurement, including:

- Advantages due to the extent of bespoke requirements that are to be retained from the existing system (a like-for-like procurement of bespoke requirements). Bespoke system requirements are the business requirements, standards and rules that the infrastructure solution must meet that are bespoke to that system. An example is the bespoke messaging standards in UK payment systems.
- The cost of switching to an alternative provider – namely the potential costs and risks associated with changing PSPs' internal systems to migrate to a new central infrastructure provider.
- The existing relationship and proven track record of service provision with key system users.

3.23 We consider the potential incumbency advantages outlined in paragraph 3.22 in turn.

Extent of bespoke requirements retained

3.24 In our view, in a procurement where bespoke requirements are retained from the existing system (a like-for-like procurement), VocaLink would have incumbency advantages in terms of knowledge of, and investment in, specific infrastructure that meets those requirements. However, the degree of VocaLink's advantage, and whether this would render a competitive procurement ineffective, depends on the extent and complexity of the bespoke requirements.

3.25 We believe that VocaLink would have a material incumbency advantage in a like-for-like procurement for Bacs, given the complexity and level of customisation of the system requirements. This was noted by many alternative providers. Two alternative providers added that there are individual PSP-specific requirements in Bacs, which one noted are not well documented. We consider this would give VocaLink a knowledge advantage.

¹⁵ PSR MR15/2.3, *Market review into the ownership and competitiveness of infrastructure provision – final report* (July 2016), paragraphs 4.291 to 4.299

¹⁶ MR15/2.3, paragraphs 6.188 to 6.192

¹⁷ MR15/2.3, paragraphs 4.47 and 4.72

- 3.26** For FPS and LINK we consider the requirements are less complex and bespoke than for Bacs. FPSL, LSL and one alternative provider said that these requirements were relatively straightforward and similar to services already provided, or being developed, in other jurisdictions. Therefore, we consider VocaLink would have a lower incumbency advantage in a like-for-like procurement for these systems, particularly if the requirements are clear and detailed in the procurement documents.
- 3.27** One of the significant bespoke requirements that alternative providers are not willing to develop is the bespoke messaging standards used in the UK payment systems, particularly the Bacs standard. We identified this as a barrier to entry in our final report (see paragraph 3.17).
- 3.28** In our view future procurements, particularly the next procurement for Bacs and FPS, would not be like-for-like. We consider the requirements would be materially different to those of the existing systems, so VocaLink is less likely to have a material advantage. This is because:
- Our proposed messaging standards remedy should reduce the incumbency advantage related to bespoke messaging standards for the next procurement (see paragraph 4.46).
 - The Forum, in its final strategy, found that the current Bacs and FPS systems are not fit for purpose in delivering what service-users want. Therefore, a like-for-like procurement of these systems will not meet service-users' needs. FPSL also told us it expects that the requirements for the central infrastructure services that it procures next would be different to those of the current system, reflecting changes in service-users' needs, the work of the Forum and specific user requirements that did not exist in 2005. Furthermore, service-users' wants and needs are likely to continuously change over time, driven in part by continual advancements in technology. System requirements will therefore change to reflect these.
 - The Forum's long-term vision for a new payments architecture for the Bacs, Cheque and Credit (C&C) and FPS systems – known as the Simplified Payments Platform – would also mean significant changes to the requirements of the central infrastructure services for Bacs and FPS, which may impact on the next or a future procurement. We consider the impact of this in our remedy design and implementation below (see paragraphs 3.83 to 3.108).
- 3.29** Many alternative providers that are active in similar markets said they would be willing to compete in procurement that is not like-for-like. This is because both VocaLink and the alternative providers would have a similar level of understanding of the new requirements and would need to develop some specific infrastructure to meet these.
- 3.30** Other organisations, such as system integrators, that are not established central infrastructure providers, may wish to compete to provide central infrastructure services for Bacs, FPS and LINK. We recognise that they would be at more of a disadvantage relative to established central infrastructure providers, as noted by one stakeholder, including due to the investment needed in infrastructure-related assets. However, most organisations would face a similar issue when deciding to enter an established market and compete against existing providers. Also, as noted in paragraph 3.14, it is possible that these organisations could compete as a joint venture with other organisations that have the necessary assets to provide central infrastructure services. Furthermore, the more costly infrastructure related assets, such as data centres, can be reused to provide other technological services and therefore would not be a sunk cost.
- 3.31** We also considered whether VocaLink's knowledge of the existing bespoke requirements would give it an advantage over alternative providers in estimating the cost of service provision. There are contrasting views from stakeholders about whether non-incumbents face uncertainty about estimating the likely costs and whether this would affect their ability to compete. In our view, alternative providers that currently offer similar services elsewhere should have a reasonable knowledge of, and experience in, estimating the underlying costs of delivering the services. Two alternative providers told us they have experience with developing infrastructure to meet unknown bespoke requirements and determining the overall cost of delivering those services when submitting their proposal for that work. Therefore, we do not think this uncertainty should inhibit the effectiveness of a competitive procurement.

3.32 In summary, in our view VocaLink would not have a material incumbency advantage in the next procurement due to bespoke requirements. The reasons for this vary for each system:

- For Bacs, we consider that the complex nature of this system could mean that if a significant number of bespoke requirements are retained in the next procurement (a like-for-like procurement) VocaLink would have a material incumbency advantage. However, as explained in paragraph 3.28, in our view the next procurement will not be on a like-for-like basis, including as a result of our messaging standards remedy. This will significantly reduce the incumbency advantage that could otherwise exist.
- For FPS, we consider that due to the lower complexity of the system bespoke requirements do not create a material incumbency advantage so long as clear and detailed system requirements form part of the procurement, as will be the case as part of an effective procurement. Furthermore, in our view the next procurement is unlikely to be on a like-for-like basis, including as a result of our messaging standards remedy. Therefore, many requirements are likely to be changed which will significantly reduce any incumbency advantage that could otherwise exist.
- For LINK, we consider that due to the low complexity of the system, bespoke requirements do not create a material incumbency advantage.

The cost of switching to an alternative provider

3.33 We recognise there are potential costs and risks associated with changing PSPs' internal systems to enable migration to a new central infrastructure provider that would not be incurred if VocaLink was selected as the provider. If these costs are large, it could give VocaLink a material incumbency advantage in a competitive procurement. However, as we noted in our final report, these costs are largely unknown: they are difficult for individual PSPs and others to estimate without knowing the specific scenario in which the migration would occur.¹⁸ Ultimately, a competitive procurement exercise should identify whether an alternative provider offers value for money from switching (see paragraph 3.133).

3.34 Evidence from stakeholders indicates that the cost of migration would vary depending on the extent of changes being made, largely due to the extent of testing required. We were told by some stakeholders that a like-for-like migration would likely be less cumbersome as it would only require testing of the new connectivity, which is not a significant cost. Some stakeholders told us the extent of testing required would increase with the extent of changes made to the system requirements.

3.35 If the system requirements change materially – as we envisage they would, particularly for Bacs and FPS, for the reasons explained in 3.28 – they would likely be thoroughly tested even if implemented by VocaLink. In such a scenario, the cost of testing would likely be similar to what would be done to test the service of a new provider. Therefore, the incremental costs of switching to a new provider would relate to costs associated with parallel running and establishing physical connectivity, if these are necessary. As noted in paragraph 3.33, the associated costs would depend on the specific scenario of the migration. For example, the new provider may use the same telecommunications provider which could reduce the costs for PSPs of establishing physical connectivity to the new central infrastructure. Furthermore, the Forum, with the assistance of Ernst & Young, undertook a business case evaluation of implementing a new payments architecture (the Simplified Payments Platform) to address the key detriments the Forum identified. This estimated that the cost, in net present value terms, of upgrading the existing Bacs, FPS and C&C systems is higher than implementing a new system.¹⁹ These costs take into account those incurred by PSPs to change their internal systems, and the cost of parallel running during a migration period. Overall, this suggests that VocaLink would not have a material incumbency advantage due to switching costs in a competitive procurement that is not like-for-like, which we consider to be likely (see paragraph 3.28).

¹⁸ PSR MR15/2.3, *Market review into the ownership and competitiveness of infrastructure provision – final report* (July 2016), paragraph 4.223

¹⁹ Payments Strategy Forum, *PSF strategy development: business case evaluation (supporting document)* (November 2016), page 10: <https://www.paymentsystemsforum.uk/sites/default/files/documents/Payments%20Strategy%20Forum%20-%20Business%20Case%20Evaluation.pdf>

- 3.36** Stakeholders' evidence also indicates that the migration costs would vary across different member PSPs. This would depend on how PSPs connect to the central infrastructures, and the complexity of their internal IT systems. The amount of complexity largely reflects a PSP's range of business areas and services, but it also reflects to some degree the use of legacy IT systems. [36] We understand that some large banks are looking to rationalise their payment platforms to increase their change capacity, which could reduce costs and enable more innovation.
- 3.37** We do not consider that it would be appropriate to decide against migrating to a new provider of central infrastructure on the basis of costs related to some PSPs' internal IT systems, where those systems may not be taking advantage of advances in technology and business practices. This is because such a decision could penalise those PSPs that have invested in updating and streamlining their IT systems.
- 3.38** As noted in our final report, the migration costs and risks could be reduced to some extent. Some of the migration costs will relate to making changes to PSPs' IT infrastructure, such as physical assets, which are likely to have relatively short asset lives (four to five years).²⁰ We note that FPSL is looking to make changes to the FPS system architecture to separate the connectivity layer from the processing layer; it believes this approach could make it easier to migrate between providers.
- 3.39** We considered case studies on large-scale migration of users to new infrastructure – in payment systems and in the water utilities sector, as outlined in Annex 1. We were not able to obtain information about the costs of the migration in these case studies. However, they demonstrate that it is possible to handle a large-scale migration of users or connection points to new central infrastructure, including critical real-time systems. In the water sector, Supervisory Control and Data Acquisition (SCADA) systems – a critical, real-time communication system – are replaced periodically. This requires extensive end-to-end design, migration planning and testing of the new system, given the risk of disruption to the service provision. However, these systems are replaced around every 10 to 15 years to benefit from technological advancements and changes in requirements.
- 3.40** In summary, there would be some switching costs incurred to change central infrastructure provider, but these costs are largely unknown until the migration scenario is identified. We do not consider VocaLink would have a material incumbency advantage due to switching costs given the likelihood of changes in the system requirements, particularly for Bacs and FPS.

Existing relationship

- 3.41** A central infrastructure provider to a systemically important payment system, such as Bacs, FPS or LINK, must be able to provide a high quality of service, in particular high levels of resilience and security. Because VocaLink, as the incumbent supplier, has an existing relationship with those overseeing the procurement, it can demonstrate its ability to provide a high-quality service. As set out in our final report, stakeholders perceive VocaLink to have a good track record of providing a high quality of service.²¹ This could give VocaLink an advantage over alternative providers, who might not be able to demonstrate their service quality through an existing relationship.
- 3.42** An incumbent provider would have some advantage from having an existing relationship with the procurer, but we do not consider this would hinder the effectiveness of a competitive procurement. One alternative provider told us that competing against providers that have existing relationships with the procurer is part of doing business in this market. Also, as noted in our final report, PSPs have switched away from their incumbent provider of gateway solutions when there has been a positive business case.²² This indicates that an existing relationship is, of itself, not an insurmountable incumbency advantage for an existing provider.

²⁰ PSR MR15/2.3, *Market review into the ownership and competitiveness of infrastructure provision – final report* (July 2016), paragraph 4.222

²¹ MR15/2.3, paragraph 4.121

²² MR15/2.3, paragraph 5.35

3.43 Potential providers can also demonstrate their service quality in ways other than by having an existing relationship with the operators. Alternative providers operating in other jurisdictions have been able to build their reputation and establish track records of their service quality, as noted in our final report.²³ Similarly, other organisations may have established reputations and service track records in other areas.

3.44 No alternative providers raised any concerns about VocaLink's existing relationship, or about establishing a track record of service quality, in competing against VocaLink in a competitive procurement.

3.45 Therefore, we do not believe that VocaLink has a material incumbency advantage from its existing relationship that would hinder the effectiveness of a competitive procurement exercise.

Other regulatory developments

3.46 We have identified three regulatory developments that might affect the willingness of alternative providers to compete to provide central infrastructure services in the UK:

- the special administration regime under FSBRA, which HM Treasury plans to bring into force and is currently consulting on.²⁴ Within FSBRA, HM Treasury has the power to designate a company (such as an infrastructure provider) as an *infrastructure company* if it meets the relevant criteria
- other potential changes, for example if there were to be more direct regulatory oversight of infrastructure providers by the Bank of England
- the UK's exit from the EU which, among other things, could result in changes to UK data protection laws

3.47 Many alternative providers said they would not have a concern if there was more direct regulatory oversight of infrastructure providers' activities in the UK. They noted that their activities in Europe are already overseen by regulators – by the European Central Bank (and the designated national central banks) and other national regulatory authorities. They have also indicated that they would not have any concerns with a requirement to have a registered office in the UK. One of them told us that it already operates in different jurisdictions that have different data protection laws. At this time, we therefore believe that the developments we identified are unlikely to hinder the effectiveness of a procurement remedy.

3.48 We note that only two alternative providers to VocaLink already have a UK data centre. Other alternative providers have indicated that they would not be willing to compete if this was a requirement. Those that do not currently have data centres in the UK said they would therefore need to duplicate their data centres. They said this would significantly increase their cost base and they would not be able to benefit from economies of scope using their existing data centres and infrastructure (see paragraph 3.18). However, we are not aware that any of the regulatory changes we have identified will require UK-based data centres, and consequently conclude that they do not affect the effectiveness of a competitive procurement.

Summary of general observations

3.49 We do not consider that VocaLink would have a material incumbency advantage – in terms of the extent of bespoke requirements retained and switching costs – in future procurements (see paragraphs 3.28 and 3.35). For Bacs, we consider that VocaLink could have a material incumbency advantage in a like-for-like procurement, but in our view the next procurement is unlikely to be on this basis.

3.50 We find that the UK bespoke messaging standards and VocaLink's current ownership could inhibit the effectiveness of a competitive procurement because:

²³ PSR MR15/2.3, *Market review into the ownership and competitiveness of infrastructure provision – final report* (July 2016), paragraph 4.205

²⁴ HM Treasury, *Rules on ensuring the effective functioning of a financial market infrastructure special administration regime* (11 November 2016):

<https://www.gov.uk/government/consultations/rules-on-ensuring-the-effective-functioning-of-a-financial-market-infrastructure-special-administration-regime>

- they act as barriers to entry that deter some potential providers from competition
- under the current ownership arrangements the four largest PSPs have the ability and incentive to select VocaLink over other providers
- the bespoke messaging standards raise VocaLink's incumbency advantage

3.51 However, if these issues are addressed through the proposed messaging standards remedy and a change in the ownership of VocaLink – which we consider in Chapters 4 and 5 – a competitive procurement remedy would be effective.

Assessment of effectiveness of each option

3.52 We now assess the effectiveness of the three remedy options outlined in paragraph 3.8.

Option 1 – Guidelines, and Option 2 – Procurement strategy

3.53 Under the first option, we would set out best-practice guidelines for procurement. These would contain the main elements that we consider would constitute an effective procurement exercise. We would not compel operators to follow these or to conduct a competitive procurement exercise.

3.54 Under the second option we would require the operators to develop and publish a procurement strategy. We would not specify any elements of the strategy, nor would we require the operators to follow it. However, we could require that the strategy is approved by us and/or that it is audited by an independent third party.

3.55 Neither of these remedy options would require the operators to run a competitive procurement. We consider it is important that any remedy ensures that, except in exceptional circumstances, a competitive procurement exercise would take place. FPSL and LSL indicated that they intend to run competitive procurement exercises in the future.²⁵ However, we do not consider that this is sufficient certainty, including about the quality of such exercises.

3.56 We have therefore provisionally decided that remedy options 1 and 2 would not be effective.

Option 3 – Mandating competitive procurement

3.57 This option would require that competitive procurement is undertaken. We first consider why this would be an effective remedy in principle. Recognising that there are a number of possibilities for how we could mandate competitive procurement, we then go on to consider the elements required to make it effective.

3.58 As set out in paragraphs 3.11 to 3.51, we do not consider there to be particular market features that would prevent competitive procurement exercises from being effective; therefore, we consider that undertaking competitive procurement exercises would lead to effective competition for the provision of central infrastructure services. As a result, we consider that a remedy mandating competitive procurement would be effective in principle because it would provide a high degree of certainty that a good-quality competitive procurement exercise would take place.

3.59 We considered what would be required to ensure that any competitive procurement exercises are of good quality and therefore effective. We set out below the elements we have considered in deciding how to specify an effective competitive procurement. We have also included requirements which may be needed to allow the effectiveness to be monitored. The elements which we consider are:

- basic requirements
- whether the operators or an independent third party should manage the procurement process and whether to have an independent audit of the competitive procurement process

²⁵ PSR MR15/2.3, *Market review into the ownership and competitiveness of infrastructure provision – final report* (July 2016), paragraph 4.33

- a possible additional requirement for a discovery phase in a Bacs procurement
- the timing aspects of the proposed remedy
- the interaction of the remedy with the work of the Forum
- potential exceptions to our remedy
- the need for reporting requirements on the operators' progress
- consistency with relevant laws and regulations
- implementation risks

Basic requirements

- 3.60** We want to ensure that a competitive procurement takes place. We therefore propose a direction that would require that, if the operator enters into or renews a contract for central infrastructure services, it must have undertaken a competitive procurement exercise using a transparent and objective process to select the provider.
- 3.61** This remedy would be placed on the operators of Bacs, FPS and LINK. It would be implemented by issuing a specific direction, placed by reference to the role of the operator, as defined in FSBRA, rather than the specific legal entity which undertakes the role of operator in relation to each system at the current time.
- 3.62** We propose taking a principles and outcomes-based approach to the design of this remedy, rather than prescribing in detail the procurement process that must be followed. Instead, we will specify only the elements of the process that we consider are key to the effectiveness of the remedy and which reflect best practice. In identifying these we have taken account of stakeholder comments and relevant examples of competitive procurement exercises in other areas, a summary of which is included in Annex 1.
- 3.63** We therefore propose that the procurement process should include the following elements:
- development of a strategy for the procurement
 - consultation with service-users, including PSPs and end-users, for example about what services they consider should be procured
 - transparent and objective engagement with potential providers prior to the tender process
 - a transparent and objective process to shortlist potential providers for the tender process
 - a formal tender process based on transparent and objective award criteria
- 3.64** To maximise the benefit to service-users, the central infrastructure services being procured should be based on service-users' wants and needs. Therefore, as part of the preparation for the procurement exercise the operators will be required to consult service-users, including PSPs and end-users, about the services they wish to receive and in turn which the operators should procure. In addition, the operators will be required to take into account the views of service-users, to the extent they are applicable, that were expressed in the context of the Forum's work (see paragraphs 3.83 to 3.89 below).
- 3.65** Engagement with potential providers forms part of typical market testing practices that can help inform the operators about their potential options. In doing so, the operators should ensure that potential providers are treated fairly and a transparent process is followed. A transparent and objective process for shortlisting potential providers and formal tendering are important elements of any competitive procurement process.

Additional requirements – independent audit or third-party run procurement

- 3.66** In our final report, we proposed that additional requirements could be included in the competitive procurement process.²⁶ These were either to require an independent audit of the competitive procurement process, or that an independent third party run the process on behalf of the operators. These requirements would help address any perception that the competitive procurement process would not be credible – for example, due to current ownership arrangements (see paragraph 3.17).
- 3.67** We consider that neither of these requirements is necessary if the ownership issues we have identified are resolved. Furthermore, in our view, in the case of an independent third party running the procurement, the requirement could be detrimental. This is because it may introduce uncertainty about ownership and responsibility of the process and its outcomes. We consider it would be better if the operators are responsible for both defining their requirements (in consultation with their users) and evaluating the bidders' proposals. The operator would also own and manage the future contractual relationship.
- 3.68** We therefore do not consider these additional requirements are necessary for an effective remedy.

Additional requirement – discovery phase for Bacs

- 3.69** We also considered whether there should be an additional requirement of a discovery phase for the Bacs procurement. For this, VocaLink would give other potential providers access to its staff and disclose certain information that would help non-incumbents better understand the Bacs system requirements.
- 3.70** This requirement is based on the suggestion by one alternative provider that a discovery phase would reduce the knowledge incumbency advantage if a Bacs procurement retained the existing bespoke requirements (a like-for-like procurement – see paragraphs 3.24 to 3.32). The provider described to us a discovery phase that gives shortlisted potential providers onsite access to VocaLink staff and running of the system for a period of three months. For this requirement, we would need to require VocaLink to provide the necessary access to its staff and information as it is not otherwise obliged to under current contracts.
- 3.71** We recognise that in a like-for-like procurement, a discovery phase onsite at VocaLink would give non-incumbents a better understanding of the system requirements and, in turn, more confidence in competing against VocaLink. Bacs currently has complex requirements. The more existing bespoke requirements that are retained, the higher VocaLink's knowledge advantage would be (see paragraph 3.25) – a discovery phase could help to reduce this advantage.
- 3.72** However, in our view a discovery phase is not necessary in the next Bacs procurement. This is because we think it is likely that the system requirements will change once it has consulted service-users on their needs. This should lower the incumbency advantage such that a discovery phase is unlikely to be necessary (see paragraph 3.28). We welcome stakeholder feedback on whether this additional requirement is necessary to make the competitive procurement remedy effective for Bacs.
- 3.73** We do not believe a discovery phase is necessary for FPS and LINK. The current requirements of these systems are not very complex and could be interpreted by alternative providers from clearly defined specification documents (see paragraph 3.26).

Timing of the remedy

- 3.74** The benefit of this remedy will first be seen when an effective competitive procurement takes place. The timing of this is linked to the termination dates in the existing contracts. We consider that it is important that a competitive procurement takes place so that the benefit our remedy can be seen when the existing contracts end. We believe the operators can meet the timelines required to do this.

²⁶ PSR MR15/2.3, *Market review into the ownership and competitiveness of infrastructure provision – final report* (July 2016), paragraph 8.57 d

- 3.75** The existing contracts for Bacs, FPS and LINK have different provisions. The Bacs and LINK contracts are open ended and can first be terminated on 1 December 2020 and 21 April 2021 respectively. These two contracts each have 24-month notice periods. The FPS contract has an end date of 30 June 2020. BPSL and LSL told us that, to ensure supply of services, they would want to time the competitive procurement so they have signed the new contract with the winning provider by the time notice must be given. The new provider would use the notice period before the existing contracts end to build, implement and test its system, and to prepare for the migration of users, so that it is able to take over service provision when the existing contract finishes. [3<] Based on signing the next contract 24 months' before the current contract ends, the operator of Bacs, FPS and LINK would need to have completed the competitive procurement process by December 2018, June 2018 and April 2019 respectively.
- 3.76** Based on stakeholder information, we expect that the formal part of a competitive procurement – the process to shortlist bidders, the tender process and contract negotiations – would take around six months. We expect the less formal parts – developing a strategy, service-user consultation and engagement with potential providers – to take an additional six months or more. This would include work to determine the system requirements that will be procured.
- 3.77** We considered whether there was sufficient time for the operators to complete the procurement exercise, having regard to the termination dates. FPSL and LSL told us that they are planning to run a competitive procurement within these timeframes. FPSL expects to have issued its invitation to tender to the market by autumn 2017. We therefore consider that the operators of these systems would be capable of running a competitive procurement to have a winning provider in place to these timeframes.
- 3.78** BPSL told us that it should be able to run a competitive procurement process on a like-for-like basis in this timeframe. It also said it could meet this timeframe if it amended the requirements to incorporate a new messaging standard, but the process would likely take more time if it needed to materially change the requirements and build a new system. While we acknowledge the complex requirements of the Bacs system, the operator will not be required to give notice until December 2018 (and its contract terminates later than for FPS). Furthermore, messaging standards is one of the key requirements that would have to change for a competitive procurement to be effective (see paragraph 3.27). This relates to implementing our messaging standards remedy, which the operator has already begun addressing (see paragraph 4.55). We also think it is important that the benefits of competitive procurement are not delayed unless necessary. Therefore, while we recognise we are proposing a relatively ambitious timeframe, we consider that the operator of Bacs should be able to comply with this.
- 3.79** We therefore consider our remedy should apply so that the winning providers are identified and able to commence providing services to coincide with the termination dates outlined in paragraph 3.75. We explain the possible impact of the Forum's work on these timescales in paragraphs 3.83 to 3.89 below.
- 3.80** We also consider that, unless there are changes to the market structure, the operators should be required to conduct competitive procurement at regular intervals so that service-users continue to derive the benefits of competition. We considered the frequency with which such procurement exercises should be conducted. We note that contracts for central infrastructure services have historically been between five and ten years. Four stakeholders have told us that contracts need to be more than five years – possibly up to ten years – to provide economic value. We agree that contracts shorter than five years may not be economic in the current market structure. The appropriate contract length would depend on the specific circumstances, such as the costs involved (for example, switching and implementation costs) and the type of services procured. We therefore propose requiring the operators to run a competitive procurement at least every ten years.

3.81 As noted in paragraphs 3.49 to 3.51, it is important that our messaging standards remedy and a change in the ownership of VocaLink are completed before the competitive procurement decision is made. This will ensure that a competitive procurement exercise is effective.

3.82 Stakeholders had contrasting views on whether it would be beneficial for the operators to run competitive procurements at a similar time. Those opposed were concerned that alternative providers would not be capable of competing for multiple contracts at a similar time. However, an alternative provider told us that it was competing for over five contracts simultaneously at that time. Therefore, we do not believe that running competitive procurements at a similar time would limit the number of potential bidders.

Interaction with the Forum

3.83 We considered the interaction of our procurement remedy with the work of the Forum. In our view, three elements of the Forum's work are particularly relevant in designing an effective remedy²⁷:

- In setting a long-term strategy for UK payments the Forum has helped identify certain user needs.
- Payment system governance consolidation: The Forum has proposed the consolidation of the governance of the Cheque & Credit (C&C), Bacs and FPS systems – that is, consolidation of the operators – into one new entity. LINK's governance would not be part of this consolidation. The new entity would have responsibility for, among other things, the rulebooks and procurement. This consolidation is proposed to be completed by end 2017.
- The Forum's long-term vision for a new payments architecture: The Bacs, C&C and FPS systems would be in scope (not LINK). The Forum has proposed that this solution is taken forward over the coming years. In the next year it expects to outline the design and requirements of the proposed solution, including if any central infrastructure is required to support it, and to create a plan for its development, testing, implementation and migration. While a number of design elements are still to be developed, broadly the Forum is proposing that the central infrastructure services for payment systems would be smaller in size, focused on facilitating the exchange of payment messages between PSPs, and overlay services being developed on a competitive basis and provided to individual PSPs.

Work of the Forum and service-users' needs

3.84 To the extent that the work of the Forum reflects service-user needs in relation to Bacs and FPS, it would be inefficient for the operators to prepare for a competitive procurement in isolation of this work. Therefore, we consider that the remedy should also include a provision that the operators have regard to the work of the Forum.

Governance consolidation

3.85 We recognise that the proposed consolidation would have an impact on the implementation of our remedies and some details of the consolidation are yet to be finalised. For the procurement remedy to be effective it should apply to any operator of the Bacs and FPS (and LINK) systems, and not merely the current operator. We therefore propose that the remedy will apply to any operator of these systems and not merely the current operators (see paragraph 3.61).

3.86 However, if necessary, we intend to take any further steps required to apply this remedy to the new consolidated entity, as appropriate, to ensure it competitively procures any future central infrastructure that is required, including any infrastructure to support the new payments architecture.

3.87 In light of the proposed consolidation, the operators, in taking account of service-users' needs in defining the requirements of the services, may wish to fulfil some of their obligations jointly in the period prior to consolidation, where appropriate. In some circumstances this may be more efficient. We note that it would be for the operators to consider whether and how to do this, including considering any competition law issues raised. We understand that the operators have

²⁷ Payments Strategy Forum, *A payments strategy for the 21st century – final strategy* (November 2016): <https://www.paymentsforum.uk/final-strategy>

been participating in the Forum's development of the new payments architecture, and we expect that this will continue.

- 3.88** We had considered the possibility of applying our remedy as a general direction on direct member PSPs of the three payment systems. This would require that any central infrastructure they use is procured through a competitive process. Applying it on direct PSPs would ensure that the remedy would remain enforceable following the governance consolidation. However, we determined that this approach would be complex to design and enforce. It would also apply to those direct PSPs which have little control over procurement decisions of governing bodies. We therefore decided against this approach.

New payments architecture

- 3.89** The proposed new payments architecture may also have an impact on our remedy. We consider this in the following section on potential exceptions to our remedy (paragraphs 3.90 to 3.108 below).

Potential exceptions to our remedy

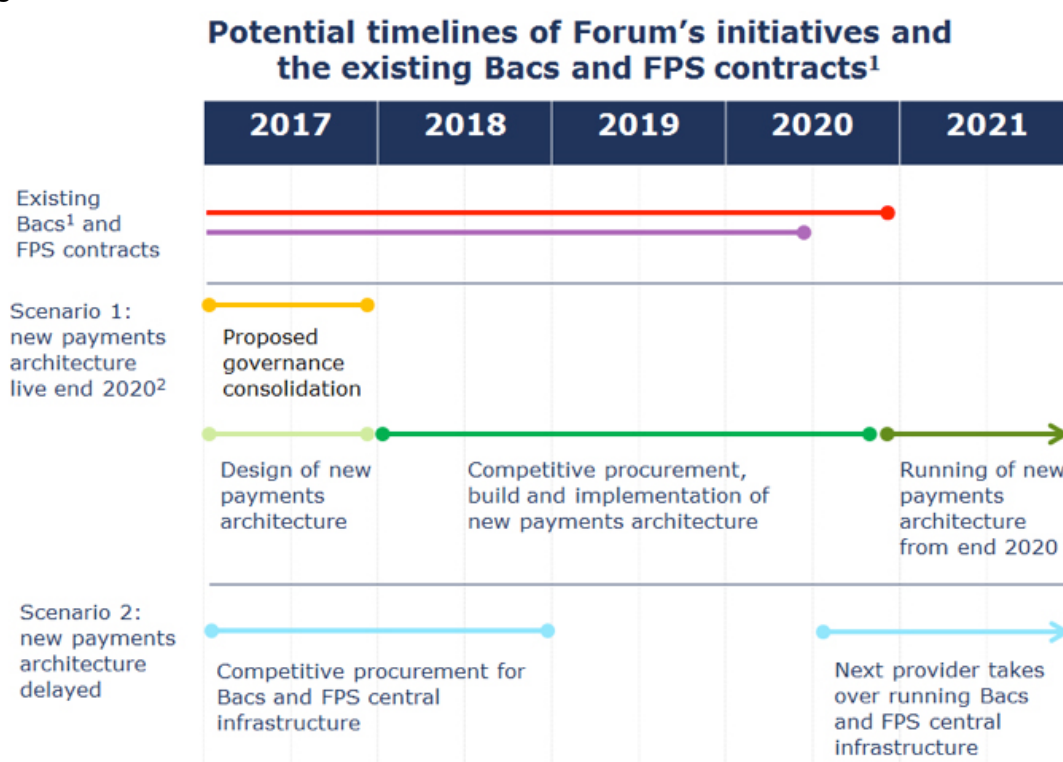
- 3.90** We are proposing this remedy to ensure that any future procurement of central infrastructure services by a relevant operator is competitive. However, we recognise that there may be circumstances when a full competitive procurement exercise, as required by our remedy, may not be the best approach, particularly if the costs of the exercise outweigh any potential benefits. In such circumstances, we would consider granting a temporary exemption from all or some of the requirements of our procurement remedy. This may take the form of an extension of time to comply with our remedy for a particular procurement exercise. Whenever we consider granting an exemption, we expect the operator to show, including through the number of steps of a competitive procurement exercise it intends to follow, how it expects to promote the interests of service-users and deliver value for money if the exemption is granted.
- 3.91** We consider this is relevant to both unforeseen developments and developments that are more foreseeable as a result of the Forum's new payments architecture (see paragraphs 3.83 to 3.89). We therefore propose that our remedy includes two provisions under which the operators may apply to us for a temporary exemption where necessary.
- 3.92** In relation to unforeseen developments, these are exceptional circumstances where the operators believe, and we agree, a temporary exemption is warranted. This could arise in relation to any of the operators. They would be required to explain their reasons to us, which part(s) of the remedy they are seeking exemption from, the period of exemption they are requesting and what other steps they are taking. We would consider these applications and approve them where justified. As part of our assessment we will want to ensure the operators are achieving an outcome that promotes the interests of service-users and delivers value for money. Where necessary, we may apply conditions. The process we would follow in assessing an application would be adapted to the circumstances at the time. We would not normally expect to consult publicly on such an application.
- 3.93** In relation to the Forum's work, its final strategy proposes a scenario where the new payments architecture goes live at the end of 2020. This is around the time our remedy would require the operators to have the next central infrastructure provider(s) in place (see paragraph 3.79). The Forum will look into the transition and migration to the new payments architecture over the coming year. We note that the transition and migration process could involve a period of parallel running with the existing Bacs and FPS systems.
- 3.94** Were the Forum's proposals to be implemented by these dates and if there is a period of parallel running, the operator of Bacs and FPS would need to procure central infrastructure (similar to the current central infrastructure) for these two systems for a period. We recognise in this scenario that, if the length of the next contract is not long enough, undertaking a full competitive procurement exercise for Bacs and FPS, as required in our remedy, may not be a cost-effective approach to procurement. This may be because, for example:

- It may not be economic – the benefits of running a full competitive procurement may not outweigh the costs involved. A shorter contract length could mean that there is less time for provider(s) to recoup costs, which might result in a higher contract price and less innovation and benefits for service-users. There would also be less time for member PSPs to recoup costs, such as implementation costs and, if applicable, switching costs. But a procurement process involving fewer steps than a full competitive procurement could test whether a shorter contract length could provide sufficient benefits.
- Alternative providers may not invest the resources required for a full competitive procurement to compete for a short contract. Alternative providers and other stakeholders indicated that it is unlikely to be economic for potential providers, other than the incumbent, to bid for a short contract – some alternative providers said this applies to contracts shorter than 5 years (see paragraph 3.80), while FPSL noted this applies to contracts of 3 years.²⁸ However, a procurement process involving fewer steps than a full competitive procurement could be a more cost-effective process for alternative providers to participate in.

3.95 However, it is also possible that the development and implementation of the Forum’s new payments architecture might take longer than anticipated in the Forum’s strategy. If the implementation timetable is such that the Bacs and FPS systems will continue to run for a long enough period before the Forum’s new architecture is implemented, it could be economic to undertake a full competitive procurement of the central infrastructure services for these systems.

3.96 Figure 1 shows a potential timetable under two different example scenarios for the procurement of central infrastructure in the future. These timetables are indicative based on current information. Scenario 1 assumes that the Forum’s final strategy is implemented to its proposed timeline. Scenario 2 reflects the situation where the Forum’s new payments architecture is delayed, such that a full competitive procurement for Bacs and FPS could take place.

Figure 1



¹ The Bacs contract is open-ended; the date here reflects the first date its can be terminated (with 24 months’ notice).
² Timings based on current dates proposed by the Forum, subject to change.

- 3.97** We recognise that there is some uncertainty around the interaction between the Forum's developments and our procurement remedy, and that a number of different scenarios might arise. However, we consider it is important to proceed with implementing this remedy according to the timelines we described in paragraph 3.75 – that is, to have completed the competitive procurement by December 2018, June 2018 and April 2019 for Bacs, FPS and LINK respectively. This is because we want to ensure that the operators begin taking the necessary steps to plan for the different competitive procurements which may take place.
- 3.98** However, our remedy should allow for circumstances where a full competitive procurement may not be effective or economic as outlined in paragraph 3.94. We therefore propose that, in such a circumstance, the operators may apply to us for an extension of time to comply with all or parts of our procurement remedy, effectively allowing them to seek a temporary exemption. Such an extension of time would in effect allow the full competitive procurement requirement to be fulfilled in relation to the new payments architecture.
- 3.99** When making an application, we expect an operator to make an assessment based on the progress of the work of the Forum and apply to us on that basis. They would be required to explain their reasons to us, which parts of the remedy they are seeking a temporary exemption from, the period of exemption they are requesting and what other steps they are taking to achieve an outcome that promotes the interests of service-users and delivers value for money in relation to any interim contract. We recognise that a temporary exemption from all or parts of our remedy would delay introducing the benefits of a full competitive procurement for Bacs and FPS. We expect an operator to apply to us only where the benefits of the introduction of the new architecture are likely to outweigh the disbenefits of postponing or running a more limited procurement. Their application should include how they have reached this view. We would consider these applications and approve them where justified. Where necessary, we may apply conditions. Any conditions we would apply and the steps we expect the operators to propose will need to promote the interest of service-users.
- 3.100** As noted in paragraphs 3.94 and 3.95, the potential length of the next contract for Bacs and FPS would influence whether a full competitive procurement would be effective and economic and will depend, to an extent, on the Forum's timeframe for implementing the new payments architecture. We expect the operators, in the first instance, to take a view on this, which we would assess as part of any application. We currently expect that if a contract has the potential to be:
- more than five years, we would not grant an exemption – this is based on stakeholder views that contracts of this length would be economic (see paragraph 3.80)
 - two years or less, we would be more likely to grant a temporary exemption from some or all of the obligations in our remedy providing the operators could show what process they were following to promote the interests of service-users and deliver value for money – this is based on our view that contracts of these lengths are very short and a full competitive procurement may not be economic given the reasons outlined in paragraph 3.94
 - three to five years, we would assess on a case-by-case basis at the time – this is because we consider that it is uncertain if a contract of this length could warrant a full competitive procurement and may depend on the specific circumstances
- 3.101** We currently expect that any temporary exemption would be no longer than three to four years. This is based on the Forum's current timelines, and the possibility of a period of parallel running following implementation of the new architecture. We recognise that, depending on the progress of the new architecture, there might be circumstances when a much shorter exemption (for example one year) is appropriate. This could, for example, allow the operators additional time to put in place plans or to deal with continuing uncertainty. In these circumstances, there may be a risk of higher costs associated with having a very short contract length – for example for one year as opposed to three years. We therefore welcome stakeholder feedback on the possible exemption periods.

- 3.102** We would normally expect to grant only one such exemption based on the Forum's current timeframe. We expect that if operators seek a further exemption we would only grant this in exceptional circumstances and for a very short period of time, for example where the Forum's work is delayed for a short period of time due to unforeseen circumstances.
- 3.103** If the Forum's new architecture goes ahead as planned and the operators are considering applying to us for a temporary exemption, they will need to make a judgement about when to apply. On one hand, if they apply too early, there may not be sufficient clarity around the implementation of the new payments architecture, and therefore how long the next Bacs and FPS contract will be. On the other hand, if they apply too late they may need to commence a competitive procurement in any event to ensure compliance with our remedy should the application not be granted. We consider that there may be natural milestones when the operators may wish to seek an exemption to competitively procure for Bacs and FPS. For example, the following milestones align with the Forum's current timeline for developing the new payments architecture:
- a. July 2017: This should be shortly after the Forum currently expects to produce a draft blueprint for the new payments architecture, including implementation dates. The delivery of the blueprint will give more certainty around the progress of the Forum. This date also aligns with our first reporting date (see paragraph 3.109). It is also around the time FPSL expects to launch the formal part of its competitive procurement (see paragraphs 3.76 and 3.77).
 - b. December 2017: This should be shortly after the Forum expects to finalise the blueprint of the new payments architecture and pass it on to the new consolidated entity. This date also aligns with the latest point at which we consider the operator of FPS would seek an exemption. This is based on our view that if the operator was looking to complete its competitive procurement by June 2018, it would have to launch the formal part of the process around early 2018 (see paragraphs 3.74 and 3.76). It is also around the time the operator of Bacs might begin the formal part of its competitive procurement based on the view it might need more time to run this (see paragraph 3.78).
- 3.104** Subsequent milestones might depend on the implementation dates contained in the blueprint or on any exemption period we have granted. However, in our view, the latest date that the operators could apply to us for an exemption should be 31 December 2017, as this is around the latest point at which an operator of Bacs and FPS could likely begin the formal part of its full competitive procurement (see paragraph 3.103b). We recognise that, given the timeframes of our remedy, an operator of Bacs and FPS would begin undertaking work to planning and running a competitive procurement, at a cost, which may then be lost if it applies for an exemption. However, given the uncertainty around the timing of the Forum's new architecture, we think it is necessary for operators to begin planning for the procurements.
- 3.105** We would take into account the timelines in the Forum's blueprint and the progress that has been made in practice in achieving these in assessing an application. We considered whether to include cut off dates – for example, a commitment not to grant a temporary exemption if the Forum's blueprint, or milestones set out within that blueprint, were not delivered within a specified time. However, given the remaining uncertainty, we considered it would be better for us to take a view based on an assessment of the circumstances at the time and in light of the operator's application.
- 3.106** Following the granting of an exemption, an operator would be required to begin reporting to us four years prior to the end of the extension period. This is based on our view that an operator would start thinking about the next procurement around this time, which is effectively two years' prior to when the subsequent contract would need to be signed (see paragraph 3.75). For example, if a three-year exemption was granted from 2020 until 2023, reporting would begin in 2019 (four years prior to the 2023). If a one-year exemption was granted from 2020 to 2021, an operator would continue reporting to us on its plans for the procurement in 2021. We outline our general reporting requirements in paragraphs 3.109 to 3.111.

- 3.107** Applications must be made to us in writing. We would not normally expect to consult publicly on applications for a temporary exemption or on the period of the exemption.
- 3.108** We welcome stakeholder feedback on our proposals for the interaction with the Forum, the timings of our milestones and process for the applications.

Reporting

- 3.109** We believe that regular formal reporting is necessary to help ensure compliance with the direction, particularly because we have adopted a principles and outcomes-based approach (see paragraph 3.62). Given that we expect the operators to begin thinking about procurement around four years prior to contract expiry, we consider that the operators should start reporting in July 2017, and then continue regularly reporting in line with the stages of the procurements. However, as the timing of these stages is currently unknown, we are proposing that in the first instance they report to us every six months, with the ability for us to adjust that timing in future. We would normally expect to suspend reporting once the contract has been signed.
- 3.110** Such reports would provide a description of, and evidence demonstrating, the operators' progress in preparing for and running competitive procurement exercises, including the main elements of a competitive procurement exercise. This would also include the operator's plans in relation to whether or not to apply for an extension of time. In addition, for Bacs and FPS these reports would provide a description of, and evidence demonstrating, the operators' progress in having regard to the work of the Forum.
- 3.111** For subsequent competitive procurements, we would normally expect to require the operators to begin reporting to us four years before the termination of the contract date. This is based on our view that an operator would start thinking about the next procurement around this time.

Consistency with relevant laws and regulations

- 3.112** We considered whether this remedy is inconsistent with relevant laws and regulations, including the first Payment Services Directive (PSD), the second Payment Services Directive (PSD2), Payment Accounts Directive (PAD), AML legislation, and the ring-fencing requirement under FSBRA. We believe that our proposed remedy does not raise concerns of inconsistency with this legislation.

Implementation risks

- 3.113** We consider that it should be straightforward to implement this remedy. The requirement to undertake a competitive procurement exercise and report on progress should be relatively simple for us to specify and for the operators to understand. We recognise that it will require judgement by us to monitor and enforce the quality of a competitive procurement exercise being run. For this we will draw on the operators' progress reports.
- 3.114** In addition to the Forum's work, there are some other significant developments underway or expected within the payments industry. These include the ring-fencing requirements under FSBRA and the implementation of PSD2. These will have an impact on some participants in the payments industry, particularly current account providers and their payments infrastructure, and will require some of their resources. The implementation of our remedy will coincide with these developments.
- 3.115** We do not consider that this presents a risk to the implementation of our remedy. The costs of running a competitive procurement fall mostly on the operators as they are responsible for running it. In our view, they have ability to plan ahead to ensure they have sufficient resources.

Provisional decision on effectiveness

- 3.116** We have provisionally decided remedy option 3 – mandating competitive procurement – is effective.

3.117 The remedy contains the following key features:

- a requirement that, if the operator enters into or renews a contract for central infrastructure services, it must have undertaken a competitive procurement exercise using a transparent and objective process to select the provider
- the competitive procurement should include the main elements outlined in paragraph 3.63
- the requirement would apply to the next contract renewal – the first possible termination date for Bacs and LINK contracts, and the end date of the FPS contract – and then at least every ten years
- for the operators of Bacs and FPS, a provision that the operators must have regard to the work of the Forum in running the competitive procurement
- for the operators of Bacs and FPS, a provision that the operators may fulfil their obligations under the direction jointly, where appropriate
- for the operators of Bacs and FPS, a provision that the operators may apply to us for a temporary exemption from all or parts of our procurement remedy (an extension of time in complying) as a result of the Forum’s work, as described in paragraphs 3.98 to 3.107
- a provision for all the operators that, under exceptional circumstances, they may apply to us for a temporary exemption as described in paragraph 3.92
- a requirement that the operators report to us, as described in paragraph 3.110. The reporting would start in July 2017 and then, in the first instance, every six months until the contract is signed, with the ability for us to adjust this timing in the future. For future contracts, the reporting would begin four years before the contract termination date

3.118 The draft specific directions for this remedy are included at Annex 3.

Assessment of costs

3.119 We assess the cost of our proposed competitive procurement remedy against a counterfactual where the operators do not undertake a full competitive procurement. We consider the situation where the operators renegotiate their contracts with VocaLink as the relevant counterfactual, given that this is what they have done in the past.²⁹ Another plausible but less likely counterfactual is a lower-quality competitive procurement that would involve lower costs but also much lower benefits. We do not consider such a counterfactual here.

3.120 The main cost associated with our remedy is the cost of undertaking a competitive procurement exercise – as outlined in our remedy option 3 – relative to the counterfactual. In addition, we also consider the potential costs associated with switching provider if a new provider is selected. This is because, in the counterfactual, VocaLink would remain the provider. We consider each of these in turn.

Cost of running a competitive procurement

3.121 FPSL estimated at a high level that running a competitive procurement could cost around £[<] million, based on a five- to ten-year contract with a total value of £[<] million to £[<] million. It estimated that the process could take [<] years – this includes time following the contract signing for the next provider to build, plan for and enable migration and implement its system (see paragraph 3.75).

3.122 LSL estimated a competitive procurement to take more than 12 to 18 months and cost around £1 million, based on a five-year contract with a total value of £[<] million.

²⁹ PSR MR15/2.3, *Market review into the ownership and competitiveness of infrastructure provision – final report* (July 2016), paragraphs 4.27 to 4.31

- 3.123** BPSL said, as a general rule, that the cost of running a competitive procurement is around 1–2% of the contract value. It expects if a new system is procured, the contract could be around ten years with a potential total value of £[redacted] million to £[redacted] million, while a like-for-like procurement could be much lower.
- 3.124** Based on the information given by BPSL, we take the cost estimate for a Bacs procurement to be broadly similar to the estimate given for FPS. The difference in the cost estimates of FPSL and LSL is partly due to differences in estimated contract values, and additional actions that FPSL proposes to undertake (see paragraph 3.125d).
- 3.125** In our view, these estimates overstate the true incremental cost of our competitive procurement remedy as outlined in our remedy option 3 above. We therefore consider they represent the upper bound of the incremental cost. This is for several reasons:
- a. Broadly similar costs associated with the contract negotiation stage could be incurred in the counterfactual and therefore should not be included as an incremental cost. BPSL did not expect the contract negotiations to be more complex than past contract renegotiations if the requirements change somewhat, such as introducing ISO 20022. It said the contract negotiations would likely be more complex if multiple providers are involved – for example, if the core services are unbundled and provided by different organisations.
 - b. Operators would incur costs associated with consulting service-users in the counterfactual. The operators are subject to our General Direction 4³⁰, which requires them to take service-users' interests into account in their decision-making. This includes decisions about procurement of central infrastructure services. In our view, requiring the operators to do this as part of defining the system requirements to be procured should not generate additional costs. Also, BPSL and FPSL said they would include such a step in their procurement process.
 - c. Operators would incur some costs in the counterfactual associated with work to define the requirements. We would expect operators to review and define their requirements before contracting services regardless of the procurement approach. This would ensure that what they are procuring is appropriate and meets service-users' needs. We note that, as part of preparing for a competitive procurement, the operators will need to consider how overlay or cross-scheme services currently provided by VocaLink – such as the Bank Reference Database Services, Current Account Switch Service and government services – would be provided. This is likely to take some effort, which they might not need to do in the counterfactual – a renegotiation with VocaLink.
 - d. For FPS, the estimate includes costs associated with work that goes beyond what our proposed remedy would require. They should therefore not be included. These include changing the FPS central infrastructure to separate out the connectivity layer, and the cost to enhance its in-house technical knowledge [redacted].
- 3.126** Some costs incurred in previous contract renegotiations would be avoided by running a competitive procurement exercise. For example, FPSL said it would not require a cost-base or profit margin benchmarking analysis as it did in its previous contract renegotiation – FPSL had used a consultancy firm to do this work. However, this cost saving is relatively small.
- 3.127** Based on the information provided to us by BPSL and FPSL, we consider the upper bound for the cost of running a Bacs and FPS procurement to be £10 million each.

³⁰ PSR General Directions: www.psr.org.uk/psr-general-directions

- 3.128** We consider the lower bound for the cost of running a Bacs and FPS procurement to be £6 million each. This is based on FPSL's high-level estimated cost of running the 2005 FPS 'build and run' procurement of around £5 million to £6 million, which incorporated similar elements as our remedy option 3. We expect the operators would need to do more work, at an additional cost, than in the 2005 FPS procurement to review and define the service requirements for existing systems. This is because FPSL told us that the 2005 procurement was a greenfield development, and high-level requirements were used for the procurement process at that time.
- 3.129** The cost to potential providers of participating in the competitive procurement exercise is not a relevant cost as it is not a burden imposed by this remedy. Participation costs will be factored into the contract value by the winning provider. One alternative provider told us that this was a cost of doing business.
- 3.130** Overall, given the evidence outlined in paragraphs 3.121 to 3.129, we estimate the incremental cost of running a competitive procurement as outlined in our remedy option 3 to be:
- between £6 million and £10 million each for Bacs and FPS
 - less than £1 million for LINK
- 3.131** FPSL and LSL told us they will run a competitive procurement for the next contract renewal, regardless of our remedy. Their proposed competitive procurement processes include similar elements to our proposed remedy and in some instances additional elements (see paragraphs 3.125 and 3.126). This suggests that the incremental cost of this remedy could be significantly lower if we take their estimates as the counterfactual.
- 3.132** Operators will incur some additional costs associated with preparing reports for us, in line with our proposed reporting requirement (see paragraphs 3.109 to 3.111). We do not consider this would be significant.

Cost of switching provider

- 3.133** As outlined in paragraphs 3.33 to 3.40, we recognise there would be some switching costs incurred to change provider. However, these costs are largely unknown until the migration scenario is identified. Ultimately, a competitive procurement exercise should identify whether it is worthwhile for an operator to switch provider. An operator would only decide to switch if it considers the alternative provider to offer value for money from switching and incurring those switching costs. Where the nature of the central infrastructure services to be provided is changing, because of changing user needs and technological options, it is perhaps more likely that a new provider would offer value for money to justify a switch in provider.

Provisional assessment of costs

- 3.134** Based on paragraph 3.130, we estimate the incremental cost of our remedy is between £6 million and £10 million each for Bacs and FPS, and less than £1 million for LINK. In the event that a new provider is selected, there may also be an additional cost of migrating users to the new provider. However, we expect this would occur if changing provider represented value for money (see paragraph 3.133). We consider the proportionality of our remedies package in Chapter 6.

4 Messaging standards remedy

The bespoke messaging standards used by Bacs and FPS represent a barrier to entry for alternative providers of central infrastructure services. To remedy this and facilitate new entry and more competition, we propose that ISO 20022 is introduced for the Bacs and FPS systems.

Depending on the approach taken, transition to ISO 20022 has different cost and benefit implications for users. Our proposed approach requires that the operators of Bacs and FPS make mapping documentation available to convert from existing bespoke standards to ISO 20022 and vice versa. We also propose that future procurement of central infrastructure services is based on ISO 20022.

We consider that such a remedy would effectively address the barrier to entry we have identified at no cost to users.

We do not believe a messaging standard remedy is appropriate for LINK.

Introduction

- 4.1** In our final report we found that the bespoke messaging standards used by Bacs and FPS represent a barrier to entry. These standards make it more difficult for alternative providers to effectively compete to provide central infrastructure services.
- 4.2** Alternative infrastructure providers' systems are not built around Bacs and FPS bespoke messaging standards (the existing standards). As a consequence, they would need to develop completely new systems to compete for the Bacs and FPS contracts based on their existing standards. This development cost acts as a barrier to entry for alternative providers.
- 4.3** As a potential remedy we proposed that international messaging standards are used for the Bacs and FPS systems.
- 4.4** FPSL also proposed an additional interoperability remedy to unbundle connectivity and central infrastructure provision, both currently provided by VocaLink. The idea is to introduce an independently supplied connectivity layer, supported by multiple competing telecoms providers. This would allow PSPs or technical aggregators to competitively select one or more telecoms suppliers and easily connect into payments infrastructures.
- 4.5** We consider that this proposed remedy may help to reduce the cost of switching between central infrastructure providers for PSPs and corporates. However, we consider it would not directly address the barrier to entry we have identified – that the existing standards make it more difficult for alternative providers to effectively compete for the provision of central infrastructure services. We, therefore, do not propose to take this forward as a remedy option.
- 4.6** In our final report we also outlined that the LINK messaging standard makes it more difficult for alternative providers to effectively compete. However, for LINK we were unsure whether a similar remedy was appropriate given the different set of competitive constraints characterising this payment system. Having considered this issue further, we consider that a messaging standard remedy is not appropriate for LINK. Details on this are provided in paragraphs 4.84 to 4.88 below.

ISO 20022 as the international messaging standard of choice

4.7 In our final report we did not specify a particular international messaging standard. Following further consideration, we now define ISO 20022 as the appropriate international messaging standard. This is because:

- all alternative providers we spoke to already provide central infrastructure services based on ISO 20022 in other countries
- there is a global trend towards ISO 20022 – while it has not become the universal standard for financial messaging, adoption of the standard is increasing around the world. Adoption of ISO 20022 for payment services has already taken place or is taking place in the Single Euro Payments Area (SEPA) countries, USA, Australia, Brazil, Singapore and Japan, with Canada, South Africa, Switzerland and China having announced plans for adoption in coming years
- ISO 20022 provides a number of advantages:
 - improved global interoperability
 - potential to carry richer remittance data
 - financial messages that can be used in a number of different business areas
 - potential to deliver lower operating costs compared to existing standards
- almost all stakeholders we spoke to were of the view that if the UK payments industry decided to move to a new standard ISO 20022 would be the most obvious candidate given its global use
- ISO 20022 is a free and open standard which means that it can be used by anyone in the industry
- the Forum's new payments architecture is proposing end-to-end interoperability using ISO 20022³¹
- adoption of ISO 20022 would be in line with other investments in infrastructure that the UK has recently made or is making, and which are all based on ISO 20022, such as the:
 - new Image Clearing Service for cheques
 - Current Account Switch Service
 - Cash ISA Transfer Service
- as part of its technology refresh programme for the Real-Time Gross Settlement (RTGS) platform the Bank of England is proposing to adopt ISO 20022 as a standard for RTGS

4.8 In this chapter we consider our potential messaging standards remedy for Bacs and FPS:

- first, we describe the different approaches that could be taken to move to ISO 20022
- second, we illustrate the costs and benefits of these different approaches
- third, we describe our proposed remedy, explaining why we consider it to be effective and proportionate
- finally, we consider other design and implementation issues for this remedy

Introduction of ISO 20022

4.9 In our final report we proposed two high-level options to introduce a common international messaging standard for the Bacs and FPS systems.³² These represented two alternative approaches. We now discuss in more detail the different approaches that can be used.

³¹ Payments Strategy Forum, *A payments strategy for the 21st century – final strategy* (November 2016): <https://www.paymentsforum.uk/final-strategy>
³² PSR MR15/2.3, *Market review into the ownership and competitiveness of infrastructure provision – final report* (July 2016), paragraph 8.74

4.10 Users (PSPs, corporates and government bodies) can adopt different strategies to move to a new messaging standard such as ISO 20022. They can:

- use conversion services
- upgrade internal systems
- implement a staged upgrade of internal systems (a hybrid of the above two options)

4.11 Each of these approaches has different cost and benefit implications (see paragraphs 4.26 to 4.37).

Mapping exercise

4.12 Completion of a mapping exercise is a prerequisite to enable transition from existing standards to ISO 20022. This is independent of the approach chosen for the transition. A mapping exercise is the definition of rules explaining how to take information from payment messages written in the existing standards and move this to the correct corresponding elements in ISO 20022 messages.

4.13 A mapping exercise is also aimed at verifying that current ISO 20022 messages can replicate all functionality offered by existing standards. Where they cannot, the development of new ISO 20022 messages may be required. Transition from existing standards to ISO 20022 for Bacs and FPS can then take place once the set of mapping rules is defined. Transition could then happen in different ways – which we describe in more detail below.

Use of conversion services

4.14 Under this approach users continue to use existing standards internally to generate and process their payment messages. These are then converted into ISO 20022 messages before being processed by the central infrastructure provider.

4.15 Conversion is the process of adapting the outputs of one system or application to meet the input requirements of another, to enable the receiving system or application to process the information effectively. In this context, conversion refers to the ‘translation’ of payment messages from existing standards into ISO 20022 and vice versa. Conversion uses a set of mapping rules. These define how to take the information included in a payment message written in one messaging standard and move it correctly into a payment message written in another standard.

4.16 Conversion services enable the coexistence of existing messaging standards and ISO 20022. They do not require either the users or the alternative central infrastructure providers to rebuild their internal systems.

4.17 Message translation can be performed in different places:

- **By the user or their chosen agent:** Users generate payment messages using existing messaging standards, or their own internal standards if they prefer. They then convert the messages into ISO 20022 messages, either in-house or using a chosen conversion service provider. The converted messages are then submitted to the central infrastructure. Aggregators and gateway services providers can offer, and some already do offer, such conversion services for users of Bacs and FPS.
- **By the central infrastructure:** In this case the users can not only generate but also send payment messages using the existing standards. The central infrastructure converts the messages before processing them.
- **Centrally, in the space between the users and the central infrastructure:** Users generate and send payment messages using existing standards. A selected single industry utility entity, but not the central infrastructure, converts the message and forwards it to the central infrastructure.

4.18 These different solutions can also co-exist. Some users may prefer to use their own conversion services while others may prefer to outsource the conversion.

Upgrade of internal systems

4.19 Under this approach, users upgrade their internal systems (this may include any or all of: hardware, software, back-office systems and employee know-how) to generate, send, receive and process ISO 20022 payment messages and the increased information these can contain (the full intended messages) (see paragraph 4.35). We also refer to this as an end-to-end implementation or full adoption of ISO 20022.

Staged upgrade of internal systems

4.20 This approach is a combination of the previous approaches – using conversion services on a temporary basis and then updating internal systems at a later stage.

4.21 The business case for updating internal systems is dependent in part on the extent to which sunk investment costs in existing systems would need to be written off. For some users, previous investments may not be fully depreciated and amortised. In this case, users may use conversion services as a temporary solution to delay internal updates until their existing systems reach the end of their financial lifecycle.

4.22 Conversion will also allow users to replace/upgrade their internal systems when it is convenient – depending on their requirement for internal systems upgrades.

4.23 It follows that under this approach users would probably upgrade their internal systems at different times.

4.24 However, without any requirement to upgrade their internal systems by a certain date, some users would choose to rely on conversion services as a long-term or permanent solution. This is because:

- Users – especially those that do not have international operations³³ – are generally reluctant to bear the cost of upgrading their internal systems.
- The majority of the potential benefits offered by ISO 20022, such as those related to the ability to include more information with payments, arise only when a sufficiently large mass of users adopt the standards (see paragraphs 4.34 to 4.35). This means early adopters may not have the full benefits of adoption. Few users might have an incentive to migrate first.

4.25 We also observe that previous cases of implementation of ISO 20022 in other countries have shown that banks and corporates generally do not upgrade their internal systems to make them ISO 20022 compliant unless it is compulsory. Without a mandatory requirement, they keep using legacy standards and convert between these and the new standard.

Costs and benefits of different transition approaches

4.26 Each of the three transition approaches mentioned in paragraph 4.10 has different – and user-specific – implications.

Costs

Conversion services

4.27 The cost of conversion services for users is usually significantly lower than the cost of upgrading existing internal systems. Evidence from Europe Economics (EE) shows that in SEPA, the costs for those who used conversion services were less than 25% of full upgrade costs.

³³ Users with international operations may already be familiar with using ISO 20022 for non-UK domestic or cross-border payments, and may have some internal systems and operations already enabled for such payments.

4.28 It is worth noting that the industry only incurs these conversion costs when conversion takes place at user level. Therefore, in the case where conversion takes place at central infrastructure level, the users would not incur these costs – the cost of conversion would be incurred by the central infrastructure provider – it would be part of its competitive proposal. Central infrastructure providers confirmed that they could translate between existing standards and ISO 20022 and that this would not put them at a competitive disadvantage. It is our understanding that – considering the total volume of Bacs and FPS – the average cost that they would incur to provide centralised conversion services would not be significant.

Upgrade of internal systems

4.29 Evidence from EE shows that the PSPs would bear the majority of costs for upgrading internal systems. Some corporates (especially large ones) and government bodies would also bear some of the costs. [34]

4.30 The cost impact of upgrading is less significant for those stakeholders who have old internal systems at the end of their lifecycles. These stakeholders would soon need to spend money on upgrading, even without having to transition to a new messaging standard.

Staged upgrade of internal systems

4.31 As mentioned in paragraph 4.21, conversion allows users to upgrade their internal systems when it is more convenient for them, helping them to mitigate the upgrading costs. Evidence from EE suggests that the average migration time (for example, the time taken by PSPs and corporates to upgrade their internal systems) for SEPA was 30 months.

Benefits

4.32 Many of the potential benefits offered by ISO 20022 – beyond enhanced competition at central infrastructure level – are related to the additional information that this standard enables users to include in a payment message.

Conversion services

4.33 When converting from a constrained standard – such as the existing standards – to a more data rich standard such as ISO 20022, the amount of information that can be transmitted end-to-end is limited by the data capability of the existing standard. Any additional information would be truncated or omitted. This happens whether conversion takes place at user or central infrastructure level, or in between.³⁴

4.34 Only when a sufficiently large mass of users upgrade their internal systems do the full benefits of ISO 20022 emerge. Therefore, with conversion, many of the efficiency and competitive benefits that may be available from ISO 20022 do not occur, due to ongoing constraints on the amount of information that can be included within the messages.

Upgrade of internal systems

4.35 By upgrading their internal systems, users are capable of sending, receiving and acting on all additional information that can be included in an ISO 20022 message. Such additional information could help users to become more efficient and competitive. It could also enhance innovation at infrastructure level – enabling central infrastructure providers to put forward more competitive proposals when trying to win contracts for Bacs and/or FPS.

³⁴ Unless additional measures are put in place so that additional payment data is captured during the conversion process, stored somewhere and subsequently made available to the intended recipient. These measures may be costly.

4.36 However, the attractiveness of upgrading internal back-office systems, as opposed to using translation services, varies across different types of stakeholders:

- **For large PSPs and corporates:** With large transaction volumes and international operations, upgrading internal systems provides an opportunity to:
 - a. rationalise payment infrastructures
 - b. reduce operating costs
 - c. develop new services and solutions
 - d. become more competitive
- **For smaller PSPs and corporates:** With limited transaction volumes of direct debits and credit transfers, upgrading internal systems may be more burdensome. This is because these stakeholders may not exhibit sufficient economies of scale and scope to justify the related one-off fixed costs. Their interest to develop new payment-related services and solutions and to become more competitive may be more limited in scope.

Staged upgrade of internal systems

4.37 Under this approach, once users have upgraded their internal systems, they would be capable of sending, receiving and acting on all additional information that can be included in an ISO 20022 message. This could generate the additional benefits illustrated in paragraph 4.35. However, for the reasons explained in paragraph 4.24, we consider that unless all PSPs are required to upgrade their internal systems, many of the additional benefits of ISO 20022 would not arise.

Our proposed remedy

4.38 Our proposed remedy of transition to ISO 20022 for the Bacs and FPS systems aims to address the barrier to entry for the alternative infrastructure providers identified in our final report. This would make it easier for users to switch to alternative providers and for alternative infrastructure providers to compete for the Bacs and FPS contracts.

4.39 However, as discussed in paragraphs 4.26 to 4.37, different transition approaches to ISO 20022 will have different costs and benefit implications for Bacs and FPS users. We are seeking to implement the least costly remedy that will be effective in addressing the problem we have identified. To be effective, a remedy must address the problem we have identified and be practical to implement, monitor and enforce.

4.40 We asked a number of potential alternative central infrastructure providers whether transition to ISO 20022 by using conversion services would eliminate the barrier to entry we had identified. We also asked them whether this option would be as effective as requiring users to upgrade their internal systems to be ISO 20022 compliant.

4.41 All alternative infrastructure providers we spoke to confirmed that the introduction of conversion services – translating between existing standards and ISO 20022 – would address the barrier to entry identified in our final report. They also confirmed that such an option would be as effective a remedy option as requiring users to upgrade their internal systems.

4.42 Some stakeholders, including alternative infrastructure providers, explained that there are some drawbacks related to the adoption of conversion services. However, they explained that these are not particularly significant and would not undermine the effectiveness of this option.

4.43 We therefore provisionally conclude that a remedy implementing ISO 20022, facilitated either through conversion services or an upgrade of internal systems, is effective.

- 4.44** We note that any remedy requiring the upgrade of payment system users' internal systems – even if staged – would be more costly and onerous for many users in the short term than adopting conversion services. We are therefore proposing a remedy based on the use of conversion services. We now consider the least costly way that such a remedy could be implemented.
- 4.45** Conversion services may be significantly cheaper as a short-term solution than upgrading internal systems. However, these would still represent a cost for the users of Bacs and FPS. We propose, therefore, that conversion would not take place at user level, but at central infrastructure level, as this is the least costly way to implement conversion services. Users would still have the possibility to procure and use their own conversion services or upgrade their internal systems, if they prefer to do so.
- 4.46** We consider that for our remedy to be effective, the central infrastructure provider should be required to receive and send ISO 20022 messages. Only then can all potential providers of central infrastructure services compete on a level playing field. Without this requirement, the incumbent provider could simply use its existing payment platforms – developed around the existing standards – when competing with alternative providers. The alternative infrastructure providers would have to comply with different standards at the same time, but this would not be the case for the incumbent. However, we consider that the central infrastructure provider may be required to receive and send messages under existing standards as well. The availability of a central conversion facility ensures that users do not need to upgrade their systems or implement conversion services, unless they prefer to do so.
- 4.47** Finally, as mentioned in paragraphs 4.12 to 4.13, a prerequisite for translation is the definition of mapping rules between existing standards and ISO 20022. This is therefore an essential element of our proposed remedy.
- 4.48** Considering the above, our proposed remedy is that:
- the operators of Bacs and FPS are required to prepare and make available mapping rules and all necessary documentation to convert from existing standards into ISO 20022 and vice versa before the next procurement exercise
 - at the next procurement exercise the operators of Bacs and FPS procure central infrastructure capable of receiving and sending messages under the ISO 20022 messaging standard, as well as, where required, existing standards
- 4.49** We note that the most widely used syntax for ISO 20022 is the eXtensible Mark-up Language (XML).³⁵ We see some merit in adopting the XML syntax. The XML syntax is an international open standard. As such, it is characterised by extensive support from vendors and off-the-shelf tools. XML is machine-readable, so implementation of new messages, or changes to existing messages, requires less manual effort. XML also enables easy manipulation of messages by most modern software, including mapping the information to other formats and standards.
- 4.50** However, we do not consider that the adoption of a different syntax by itself would represent a barrier to entry for alternative infrastructure providers. This is because ISO 20022 messages can be expressed in different syntaxes that are all interoperable between themselves.
- 4.51** Considering that the industry may prefer to use a different syntax, we provisionally consider that the use of XML or any other syntax should not be specified as part of our remedy. We welcome stakeholder feedback on whether a syntax should be specified.
- 4.52** We consider that this remedy would be relatively straightforward to implement, monitor and enforce. It requires the relevant operators to produce and make readily available mapping documentation between existing standards and ISO 20022 for existing payment messages and their functional attributes.

³⁵ The syntax is the physical representation of the message.

- 4.53** We anticipate that we would implement both parts of this remedy via specific directions. We believe these are relatively simple to specify, easily understood by all entities they apply to, and do not require elaborate or complex monitoring. Draft directions are contained in Annex 3.
- 4.54** We note that the operator of FPS confirmed that it has completed the mapping exercise between the standards it currently uses and ISO 20022 XML. We consider that imposing this remedy is still useful to ensure that mapping is completed to the technical standard required and is made publicly available. This allows central infrastructure providers and providers of conversion services to provide conversion services for FPS.
- 4.55** The operator of Bacs explained it is currently undertaking the mapping exercise. However it was not yet able to confirm when it would be able to complete it.
- 4.56** The operators of Bacs and FPS also confirmed that mapping documentation and field definitions are, or will be, made readily available. FPSL explained that all relevant mapping documentation was made available by June 2016 on the GEFEG website.³⁶ BPSL explained that it will also use this and other channels to publish its mapping documentation. We are proposing that this information is made available publicly on the relevant operator's website, which we consider to be a simple and clear approach. We welcome views on whether it is most appropriate for this information to be publicly available or whether there are reasons why it should be made available subject to certain conditions.
- 4.57** This remedy does not impose an end-to-end implementation or full adoption of ISO 20022. This means that users are not required to upgrade their internal systems to become ISO 20022 compliant. They are not even required to convert their payment messages from the existing standards into ISO 20022. As a consequence, our remedy does not represent any additional cost to users.
- 4.58** We recognise that, under this proposed remedy, many of the benefits of ISO 20022 beyond enhanced competition at central infrastructure level are not likely to arise. This is because such benefits only arise when a critical mass of end users is capable of accepting and providing the additional information as allowed for in the ISO 20022 message. This is only possible if there is end-to-end implementation of ISO 20022. Such an event would be unlikely to happen under this remedy, unless we make additional regulatory interventions or the industry makes the appropriate strategic decisions.
- 4.59** We also note that under this remedy users can:
- continue sending messages in existing formats as these could be converted by the central infrastructure provider or by a third party
 - make use of their own conversion services (developing these in-house or procuring them from aggregators or gateway services providers)
 - upgrade their internal systems
- 4.60** As mentioned in paragraph 4.7, the Forum proposes the full adoption of ISO 20022. This is so the industry can benefit from all the functionality and enhanced data that such a messaging standard enables. Our remedy would not make this more costly or difficult and may even represent a first step in this direction.
- 4.61** The only cost to the industry of our remedy could be that of the mapping exercise. This is necessary to ensure that payment messages and their functional attributes developed under existing standards are mapped into ISO 20022 and tested once mapping is completed. However, we note that this exercise has been completed for FPS and is ongoing for Bacs. Such mapping is taking (or has taken) place independently of this review and the remedies we may impose. This is part of the counterfactual scenario.³⁷ Therefore, we do not consider that the cost of this should be attributed to our remedy. Even if our remedy were to impose some costs on Bacs or FPS – for example because

³⁶ GEFEG is an industry tool managed by Payments UK.

³⁷ The alternative scenario is that which would take place in the industry without our remedies.

it may require them to take additional steps beyond those already done or planned – we still consider that our remedy would not produce disadvantages that are disproportionate to its aim. This is because any such additional steps would likely be very limited and that the associated costs would not be significant.

- 4.62** To use their existing infrastructures, central infrastructure providers will need to provide conversion services. However, this would not represent a cost for the industry, as it would be a cost of doing business for central infrastructure providers.

Our conclusion

- 4.63** For the reasons outlined in paragraphs 4.38 to 4.47, we provisionally conclude that the remedy described in paragraph 4.48 will effectively address the barrier to entry we have identified.
- 4.64** We also provisionally conclude that our remedy does not represent a cost for the users or the payment industry in general. As such we consider our remedy to be the least costly and proportionate by definition.
- 4.65** This remedy would not produce many of the potential additional benefits of ISO 20022. This is because the objective of our remedy is to address the barrier to entry we have identified – that is, the use of bespoke messaging standards that makes it more difficult for alternative providers to effectively compete for central infrastructure services. However, our remedy would not prevent a later end-to-end implementation of ISO 20022. Nor would it make this more costly or difficult. Further, our remedy may allow a staged approach to the end-to-end implementation of ISO 20022.

Other remedy design and implementation issues

- 4.66** We now consider some other remedy design and implementation issues:

- how it would be implemented and specified
- interaction with the Forum and potential exceptions
- timing
- consistency with relevant laws and regulations

How it would be implemented and specified

- 4.67** We would require the operators of Bacs and FPS to complete any mapping documentation necessary to enable the conversion of all payment messages developed under the existing standards into ISO 20022 and vice versa.
- 4.68** For the conversion to be possible, existing messaging standards have to be mapped into ISO 20022 and vice versa. This uses a standardised approach (for example, using common ISO 20022 data dictionary elements).
- 4.69** The operators of Bacs and FPS would also be required to make publicly available this mapping documentation. This would help allow mapping rules to be consistent across the industry and that all providers of conversion solutions (such as aggregators and gateway services providers) map in the same way.
- 4.70** As noted in paragraph 4.54 FPSL has already completed the mapping exercise for FPS messages. It has also published relevant mapping documentation.
- 4.71** BPSL is currently undertaking this exercise. We would then require the operator of Bacs to complete this exercise by July 2017 – sufficiently in advance of the next procurement round for Bacs. We welcome stakeholder feedback on the timing for our messaging standard remedy.

- 4.72** We would require the operators of Bacs and FPS to procure central infrastructure services from a provider capable of receiving and sending messages under both the existing standards and ISO 20022.
- 4.73** We would do this using specific directions. Draft directions are contained in Annex 3. The first part of our remedy, set out in paragraph 4.48, is in draft specific directions 5 and 6. The second part, also set out in paragraph 4.48, forms a part of draft specific directions 2 and 3.
- 4.74** We will not require PSPs and corporates to upgrade their internal systems to make them ISO 20022 compliant. However, they may still choose to do so. This means they will be able to continue using existing standards if they wish. Payment messages would then be converted to ISO 20022 by the central infrastructure provider.
- 4.75** Alternatively, users may decide to directly procure their own conversion services (for example, from gateway providers and aggregators) or may decide to develop and use their own solutions. Stakeholder feedback confirmed that gateway service providers and aggregators can help corporates and PSPs with their specific mapping requirements.

Interaction with the Forum and potential exceptions

- 4.76** We consider that the main implementation risk with our remedy relates to its interaction with the work of the Forum. The requirement to procure in ISO 20022 raises the same considerations regarding interaction with the Forum – and potential circumstances when an exception may apply – as for our competitive procurement remedy (see Chapter 3). This part of our messaging standards remedy is included as part of our competitive procurement direction. It therefore includes the same provisions with regard to the Forum and potential circumstances when operators may apply to us for an exemption. These are outlined in paragraphs 3.83 to 3.108.

Timing

- 4.77** As this remedy relates to the next procurement exercises, to be effective it needs to be implemented before these commence.
- 4.78** We will require the operators of Bacs and FPS to make mapping documentation publicly available in a timely manner – before the competitive procurement of central infrastructure services. This is to give all alternative infrastructure providers (and also all other providers of conversion services) sufficient time to develop and test their solutions. We propose a date of 31 July 2017 for the completion and publication of this work. It balances the need to have this documentation available as early as practicable to facilitate the competitive procurement exercise with the need for operators to have sufficient time to complete the work to a high standard. We welcome views on this implementation timeline.
- 4.79** We considered whether the requirement to procure central infrastructure capable of receiving and sending messages under ISO 20022, as well as – where required – existing messaging standards, should apply only to the next procurement, or whether the requirement should remain in place, subject to an exemption if it were no longer appropriate.
- 4.80** Our provisional view is that once a competitive procurement exercise in ISO 20022 has taken place, it is likely that this remedy will have removed the causes of the competition issue it is designed to resolve. Once an infrastructure provider is then appointed, it is unlikely that an operator will subsequently decide to revert to current standards given their deficiencies in terms of meeting user needs.
- 4.81** Furthermore, other messaging standards may be developed and/or become preferable in future. In future competitive procurement exercises the operators of Bacs and FPS may then have valid reasons to procure central infrastructure services using messaging standards other than ISO 20022.

- 4.82** For these reasons we provisionally believe that the remedy should be time-limited and that the stop date for the remedy should be once a competitive procurement exercise has taken place using ISO 20022. However, we welcome stakeholder views on whether this is the most appropriate remedy design.

Consistency with relevant laws and regulations

- 4.83** We considered whether this remedy is inconsistent with relevant laws and regulations, including the first Payment Services Directive (PSD), the second Payment Services Directive (PSD2), Payment Accounts Directive (PAD), AML legislation, and the ring-fencing requirement under FSBRA. We believe that our proposed remedy does not raise concerns of inconsistency with this legislation.

LINK

- 4.84** In our final report we found that LINK was based on a proprietary messaging standard LIS 5. However, we were unsure whether this represented an obstacle to competition similar to the one identified for Bacs and FPS.
- 4.85** The fact that LINK is based on a proprietary messaging standard makes it more difficult for alternative providers to compete to provide ATM switching services. However, because the vast majority of LINK members already have an established connection with VISA and MasterCard core infrastructures, the extent to which LINK messaging standards represent a barrier to entry impeding competition may not be the same as for Bacs and FPS.³⁸ Building internal systems entirely based on LIS 5 may put alternative ATM switching providers at a competitive disadvantage relative to VocaLink. And it would be costly for LINK members to update their internal systems to use another standard. However, conversion services similar to those described in paragraph 4.15 already exist between LIS 5 and other implementations of ISO 8583 usually used in card systems. For example, Certified Bureau Services providers already offer their clients conversion services between the messaging standards used in LINK, Visa and MasterCard.³⁹
- 4.86** Some providers of services in this space (for example, [§<] and MasterCard) also already have solutions enabling them to use the LIS 5 messaging standard. This is in case they were to provide switching services for LINK. Similarly, other infrastructure suppliers operating in the ATM space (for example, [§<]) develop and offer services based on LIS 5 for their PSP clients. This provider explained that while it currently does not provide switching services, it could provide these for LINK even if it had to use the LIS 5 standards.
- 4.87** Finally, we note that in contrast to Bacs and FPS, no alternative provider of central infrastructure services told us that adopting a different messaging standard for LINK would help competition. We consider this is because there is no common ISO 8583 implementation that would set a level playing field for different central infrastructure providers.
- 4.88** For these reasons, we believe that a messaging standards remedy for LINK is not appropriate.

³⁸ PSR MR15/2.3, *Market review into the ownership and competitiveness of infrastructure provision – final report* (July 2016), paragraph 4.290

³⁹ Software providers that route a PSP's ATM transactions to the appropriate payment system (e.g. LINK, MasterCard or Visa).

5 Ownership of VocaLink

To address the competition problems we identified in our final report, we set out a potential remedy that the four largest VocaLink shareholders should divest of their interest in VocaLink. However, given the proposed acquisition of VocaLink by MasterCard, we are not proposing to impose a divestment remedy at this time. We have therefore limited our assessment to those elements of our remedy that are relevant to enable us to assess the impact of this proposed acquisition.

We provisionally assess that requiring the four largest VocaLink shareholders to reduce their shareholding to a relatively small collective shareholding of around 10% is likely to be an effective remedy. We consider that additional governance measures would not be required for this remedy to be effective.

We provisionally conclude that the proposed MasterCard acquisition of VocaLink would be effective in addressing the competition problems we identified in our final report. This is because, under the acquisition terms, one of the four largest shareholders [8<] would sell its entire shareholding and the remaining three would have a combined stake of around 6% – which is below 10% we think is likely to be an effective remedy. There are also features of the proposed transaction agreement that would significantly reduce any remaining financial incentive that the three largest remaining shareholders of VocaLink would have to protect it from competition.

We note that our provisional assessment relates only to the issues we identified in our final report. It does not prejudice or directly relate to other issues the CMA may wish to consider. In the event that the proposed MasterCard acquisition of VocaLink does not receive regulatory approval, we expect to consult with stakeholders on a divestment remedy.

Introduction

- 5.1** In our final report, we found that the four largest VocaLink shareholders, when acting collectively, have the ability to take or block key decisions of VocaLink and each of the three operators (Bacs, FPS and LINK). We found that these shareholders' interests are aligned in matters concerning stability, security and resilience and in matters that are related to exposing VocaLink to competition.
- 5.2** We concluded that as a result of the joint control that the four largest shareholders have, the current ownership and governance arrangements are likely to reduce the level of competition in the market for the provision of central infrastructure services. This is because:
- the four largest VocaLink shareholders have an interest in protecting VocaLink from competition
 - the four largest VocaLink shareholders are unwilling to turn to infrastructure suppliers other than VocaLink as they perceive there is a benefit of using a supplier they control
 - current ownership and governance arrangements discourage alternative providers of central infrastructure services from entering the UK market
- 5.3** To address this, we set out a potential remedy of divestment by the four largest VocaLink shareholders of their interest in VocaLink. We explained that we were considering three options:
- a) **Full divestment:** We would require the four largest PSPs to fully divest their shareholding in VocaLink.
 - b) **Partial divestment:** We would require the four largest PSPs to partially divest their shareholding in VocaLink so that their combined holding fell below a specified level.
 - c) **Partial plus governance changes:** In addition to partial divestment, we would also require the four largest PSPs not to seek or accept board representation at VocaLink.

- 5.4** We also set out our intention to consider one alternative remedy that was suggested to us by an operator. This was:
- d) **Changes to operator corporate governance:** We would require independence between operators and the four largest shareholders of VocaLink.
- 5.5** On 21 July 2016 MasterCard announced that it had entered into a definitive agreement to acquire 92.4% of VocaLink, subject to regulatory approval and customary closing conditions.⁴⁰ Under this agreement some VocaLink shareholders will retain an ownership of 7.6% for at least three years. The four largest PSPs will collectively retain an ownership stake of around 6% with one of these PSPs [§<] selling its stake entirely. None of the remaining individual PSPs will have a stake greater than 3%.
- 5.6** This transaction is subject to merger approval by the CMA and this process is currently underway.⁴¹ Given this process we do not, at this stage, plan to impose a divestment remedy. We restrict our assessment to:
- the effectiveness of the different divestment remedy approaches identified in our final report
 - our assessment of the proposed MasterCard transaction
- 5.7** For this reason we do not assess the alternative remedy proposed by one operator to make operators' boards independent from the four largest shareholders PSPs as an alternative to the divestment remedy.
- 5.8** Similarly, for this transaction we do not consider that there are any relevant costs we need to take into account in considering the cost of divestment. This is because the shareholders have already agreed to sell 92.4% of their shareholding to MasterCard, subject to regulatory approval. In the event that this transaction does not proceed we would consider the relevant costs that divesting parties are likely to incur as part of a proposal to implement of a divestment remedy.
- 5.9** We note that we still consider a change in the ownership of VocaLink to be important to our remedies package as a whole. Therefore, if this transaction were not to proceed, we would expect to consult with stakeholders on a divestment remedy.

The effectiveness of the proposed divestment remedy options

- 5.10** In this section we consider which of the proposed divestment remedy options we have identified would be effective.
- 5.11** We assess the effectiveness of the three proposed divestment options outlined in paragraph 5.3 together as we consider that they are similar in many respects. In making this assessment we focus on what is required to effectively remedy the competition problems we have identified in paragraph 5.2 above.
- 5.12** This analysis assumes a sale to a single purchaser. We note that this analysis may change in a scenario where there are multiple purchasers and the shareholder base is dispersed, for example in an initial public offering (IPO).
- 5.13** The assessment of effectiveness does not include an assessment of any lost benefits. We consider these as part of our assessment of the proportionality of the remedies package as a whole (see paragraph 6.35).

⁴⁰ <http://newsroom.mastercard.com/press-releases/mastercard-announces-acquisition-of-vocalink/>

⁴¹ <https://www.gov.uk/cma-cases/mastercard-vocalink-merger-inquiry>

The four largest shareholders are unwilling to turn to alternative suppliers because they control VocaLink

- 5.14** As mentioned in paragraph 5.2, we found that the four largest shareholders are unwilling to turn to alternative infrastructure suppliers. They perceive that there is a benefit in using a supplier that they control as a means of ensuring stable, secure and resilient services.
- 5.15** We found in our final report that the four largest shareholders have the ability to take or block any VocaLink shareholder decisions because they jointly control 77.6% of the votes at general meetings. These decisions require 50% or 75% of votes in favour to pass.⁴²
- 5.16** To eliminate the ability of the four largest shareholders to take or block these decisions at VocaLink general meetings, their collective shareholding would need to be reduced from 77.6% to a level where they collectively held less than 25% of the shares of the company. At this level of shareholding they would be unable to take or block shareholder decisions, including those that require 75% of votes to pass.
- 5.17** We considered whether an effective remedy should also require the four largest shareholders not to seek or accept board representation. As discussed in paragraph 5.14, our final report found that the reason why the four largest shareholders are unwilling to turn to alternative infrastructure suppliers is because they are able to exercise joint control over VocaLink as a means of ensuring the delivery of stable, secure and resilient services. A divestment that removes joint control by the four largest PSPs (as outlined in paragraph 5.16 above) will effectively resolve this.
- 5.18** In our final report, we found that the four largest shareholders of VocaLink have significant influence on the VocaLink board because they hold four out of the 12 board positions where decisions are made by consensus.⁴³ However, we did not find that the four largest shareholders controlled the VocaLink board. We consider that while a significant level of representation on the board could potentially raise concerns, a less significant level of representation is unlikely in itself to have a negative impact on competition.
- 5.19** In our final report, we also found that the four largest shareholders controlled the Operational Oversight board sub-committee (OOC) and through it are able to exercise their interest in maintaining security, stability and resilience.⁴⁴
- 5.20** The OOC has the power to bypass the board and escalate recommendations to shareholders as reserved matters. However, a divestment that removes control of VocaLink from the four largest shareholders would also remove their ability to force any recommendations through in relation to shareholder reserved matters. Therefore, we do not consider the OOC to have any continuing relevance in such a scenario.
- 5.21** Given the above, we therefore provisionally conclude that an effective remedy does not necessarily require any governance changes in addition to the proposed divestment.

⁴² PSR MR15/2.3, *Market review into the ownership and competitiveness of infrastructure provision final report* (July 2016), paragraphs 6.20 and 6.68: www.psr.org.uk/sites/default/files/media/PDF/MR1523-infrastructure-market-review-final-report.pdf

⁴³ MR15/2.3, paragraph 6.69

⁴⁴ MR15/2.3, paragraph 6.72

The four largest shareholders have an incentive to protect VocaLink from competition

- 5.22** Our final report found that the four largest shareholders have an incentive to protect VocaLink from competition. This incentive is both financial and non-financial.⁴⁵ Given this, we considered whether this finding would be remedied by requiring the four largest shareholders to divest their interest in VocaLink to a collective shareholding of less than 25% or whether a more significant collective divestment would be necessary. We were concerned that a collective shareholding of around 25% (as compared to the current 77.6%) might still provide an incentive to protect VocaLink. However, we note that most stakeholders, including most alternative providers, did not consider that a full divestment was necessary to make the remedy effective.
- 5.23** On this basis we consider that the range of joint shareholding that would address our concerns is likely to be below 25% but greater than zero.

Alternative providers view ownership as a barrier to entry

- 5.24** As set out in paragraph 5.2, some alternative providers believe that they would be at a competitive disadvantage against VocaLink. This is because VocaLink's shareholder PSPs also own or control the operators of the three payment systems of Bacs, FPS and LINK. These alternative providers view the current ownership arrangements as a barrier to entry into the market for the provision of infrastructure services.
- 5.25** We considered what level of reduction in collective shareholding in VocaLink would address the perception that some alternative infrastructure providers have that VocaLink's shareholders would favour VocaLink in a competitive procurement.
- 5.26** As part of our consultation on the interim report, one operator explained that a full divestment of the shares of the owner PSPs should be pursued in order to completely remove any incentives they may have to shield VocaLink from competition and undermine any future procurement exercise. One IAD outlined that either a full or partial divestment would be effective to remove conflicts of interests, especially for LINK as there is a high degree of overlap between members rights on LINK and the ownership structure of VocaLink.
- 5.27** However, none of the alternative providers of infrastructure services recommended a full divestment.
- 5.28** VocaLink noted that in previous relevant merger cases where the Competition Commission required divestment, it decided that full divestment would be unnecessary and therefore disproportionate. This provider explained that a full divestment would therefore not be reasonable or proportionate.
- 5.29** Of the alternative providers that have previously told us that the current ownership arrangements were a barrier to entry, two told us that they would be more likely to participate in a procurement exercise if the UK banks' at least partially divested their ownership of VocaLink. Both of these providers explained divestment must ensure that the four largest shareholders no longer have a large stake in VocaLink.
- 5.30** One alternative provider, in addition to VocaLink and MasterCard, said that the sale of VocaLink to MasterCard in which the four largest shareholders would hold a minority stake in the company would help to improve the level of competition for infrastructure services.
- 5.31** Overall, a number of those alternative providers that viewed the current ownership arrangements as a barrier to entry have indicated that a partial divestment would be a sufficient remedy. In addition, their responses also suggest that a partial disposal would enable sufficient competition for infrastructure services among providers.

⁴⁵ PSR MR15/2.3, *Market review into the ownership and competitiveness of infrastructure provision final report* (July 2016), paragraphs 6.113 to 6.124

5.32 On the basis of these views, we consider that a partial divestment to a relatively small shareholding would be sufficient to address some alternative providers' belief that they would be at a competitive disadvantage against VocaLink due to ownership and governance arrangements.

Our assessment of the effectiveness of the proposed divestment remedy options

5.33 We provisionally assess that reducing the shareholding of the four largest VocaLink shareholders to less than 25% would address our concerns with regard to control. The reduction in shareholding required to address the incentive to protect VocaLink from competition and some alternative providers' view that ownership is a barrier to entry is less clear cut. It suggests a reduction beyond 25% may be required but that a full divestment is not necessary (see paragraphs 5.22 to 5.32 above).

5.34 Overall, we provisionally consider that requiring the four largest shareholders of VocaLink to divest their interest in the company to a relatively small collective shareholding of around 10% is likely to be an effective remedy. As set out in paragraphs 5.17 to 5.21, we provisionally find that additional governance requirements are not required for this remedy to be effective.

Our assessment of the proposed MasterCard transaction

5.35 Under the terms of the MasterCard acquisition it will own 92.4% of VocaLink. The large majority of the remaining 7.6% of VocaLink shares will be held by three of the four current largest VocaLink shareholders.

5.36 One of the four largest VocaLink shareholders [redacted] will sell its entire shareholding and the three remaining largest VocaLink shareholders would hold a combined stake of around 6%. A shareholding of this size is significantly below the level required to jointly control VocaLink (see paragraph 5.16). It is a relatively small shareholding and below the level of around 10% which we think is likely to be an effective remedy (see paragraph 5.34).

5.37 Additionally, there are also features of the proposed transaction agreement that significantly reduce any remaining financial incentive that the three largest remaining shareholders of VocaLink would have to protect it from competition.

5.38 The proposed agreement between MasterCard and VocaLink's remaining shareholders contains a number of put and call options:

- a. [redacted]
- b. [redacted]
- c. [redacted]
- d. [redacted]

5.39 The way in which the price for the shares is calculated further reduces any incentive that shareholders may have to protect VocaLink from competition. Specifically:

- [REDACTED]
- [REDACTED]
- [REDACTED]
- [REDACTED]

5.40 [REDACTED]

5.41 Given the structure of the put and call arrangements, the remaining shareholders are guaranteed at least [REDACTED] if any of the options are exercised. [REDACTED] In our view, the price that the shareholders would obtain for their shares when exercising these options is unlikely to be significantly affected by whether VocaLink obtained any of the contracts for Bacs, FPS and LINK central infrastructure services in future. Significantly, the price could not fall below [REDACTED].

5.42 [REDACTED]

5.43 On this basis of paragraphs 5.35 to 5.42 above we provisionally assess that the proposed acquisition would address the ownership and control problems that we identified in our final report.

6 Effectiveness and proportionality of our remedies package

We provisionally assess that our two remedies and the proposed MasterCard acquisition of VocaLink will be effective in establishing competition for the market.

We have identified a restriction of competition in the supply of infrastructure services that produces negative effects for service-users.

These include:

- higher prices
- less innovative services
- lower pressure on the incumbent supplier to be efficient
- a lower quality of service

The benefit of our package is the elimination of these negative effects.

We quantify only the price benefit, which we estimate at £100 million to £200 million. However, we think that the innovation benefit is likely to be at least as important. We assess the costs and calculate a net present value of our package, which is positive even without considering the benefits to innovation. The benefits of our package outweigh the cost.

We provisionally conclude that our package of remedies is proportionate.

Introduction

- 6.1** In Chapters 3 to 5 we considered different options for our two proposed remedies and for the change in ownership of VocaLink. For each remedy we identified the least costly effective option. Taken together, these form our remedies package.
- 6.2** In this section we consider our remedies package's:
- effectiveness :
 - i. How it remedies the issues we have identified.
 - ii. Timing and duration, including interaction with the Forum.
 - proportionality:
 - i. Is it no more onerous than necessary to achieve its aim?
 - ii. Is it the least onerous if there is a choice?
 - iii. Does it produce adverse effects that are disproportionate to its aim? This includes an assessment of benefits to users under the current circumstances that would not arise after we implemented our remedies.
- 6.3** We then set out our provisional decision on our package of remedies.

Effectiveness

6.4 We first consider the effectiveness of the package.

How it remedies the issues we have identified

6.5 We propose two remedies:

- mandating competitive procurement exercises for Bacs, FPS and LINK (see Chapter 3)
- the introduction of ISO 20022 messaging standards in future procurement for Bacs and FPS (see Chapter 4)

6.6 We have also assessed the proposed MasterCard acquisition of Vocalink, which we consider would be effective in addressing the ownership-related competition problems we identified (see Chapter 5). We consider these measures remedy the following competition issues that we identified in our final report:

- the lack of competitive procurement exercises by the operators is a barrier to entry that prevents potential providers from competing
- that operators and direct PSPs do not have a strong incentive to run competitive procurements, which has resulted in limited competitive pressure on Vocalink
- the use of bespoke messaging standards by Bacs and FPS, which represent a barrier to entry for alternative providers of central infrastructure services
- that the current ownership and governance arrangements at Vocalink are likely to reduce the level of competition in the provision of central infrastructure services

6.7 Taken together, we believe these measures – our two remedies and the proposed MasterCard acquisition of Vocalink – will be effective in establishing competition for the market, which is the current industry structure for Bacs, FPS and LINK.

Timing and duration, including interaction with the Forum

6.8 The sequencing of our remedies package and the timing of its implementation is an important consideration. We note that the package of remedies requires effective competitive procurement to be successful in addressing the issues we have identified.

6.9 We therefore first considered the competitive procurement remedy. We consider that bespoke messaging standards, and the likely reduction in competition caused by joint control, are both restrictions or distortions of competition. If these are not addressed, they would reduce the effectiveness of our competitive procurement remedy. Therefore, for this remedy to be effective we consider that our messaging standards remedy and the change in ownership of Vocalink should be addressed by the time a competitive procurement takes place.

6.10 The interaction of our remedies with the work of Forum is also an important consideration. In designing our competitive procurement remedy (see Chapter 3) and our messaging standards remedy (see Chapter 4) we have paid particular attention to their interaction with the Forum.

Provisional decision on the effectiveness of the package

6.11 We provisionally conclude that this package of measures will be effective in remedying the competition issues we have identified.

Proportionality

6.12 We now consider the proportionality of our package of remedies.

Is the package no more onerous than necessary to achieve its aim?

6.13 We consider now whether each of the individual proposed remedies is necessary to address the problems we have identified. We find that the package would not be effective if one or more of the proposed remedies were excluded from the package.

6.14 We found that the operators do not have a strong incentive to drive effective competition, and that they have not run competitive procurements in the past. Also, direct PSPs do not have a strong incentive to encourage the operators to drive effective competition.⁴⁶ The proposed competitive procurement remedy serves to address this problem. If it were excluded from the package, operators may not procure infrastructure services in a competitive manner. This would defeat the purpose of the proposed package of remedies.

6.15 We also found that lack of competitive procurement exercises is a barrier to entry and that processes to ensure that the outcomes meet service-users' needs are lacking.⁴⁷ The proposed competitive procurement remedy addresses these findings.

6.16 The messaging standards remedy and changes in the ownership of Vocalink will not by themselves address any of these problems. If these two remedies alone were implemented, operators would still lack a strong incentive to drive effective competition. Direct PSPs would still not have a strong incentive to encourage the operators to do so.⁴⁸

6.17 As the procurement remedy is necessary to address the problems set out above, it is also necessary to have a messaging standards remedy and changes in the ownership of Vocalink. For the reasons set out at paragraphs 3.49 to 3.51, the procurement remedy would not be effective without these changes.

Is the package the least onerous if there is a choice?

6.18 The package is the least onerous combination of options. For the reasons we set out above, we could not make the package less onerous by taking any individual remedy out of it.

6.19 For each individual remedy, we have chosen the least-costly effective option. This means that the package of remedies as a whole is the least onerous package. Technically, the latter conclusion could be invalid if the specific choice of how a given remedy is implemented materially affects the cost of implementing the other remedies. We do not believe that such interaction of costs is a relevant concern for the remedies we propose.

Does the package produce adverse effects that are disproportionate to the aim?

6.20 We set out below the benefits and costs of the remedy package. We then assess whether the benefits outweigh the costs.

6.21 The benefit of the package is the elimination of the negative effects caused by the restriction of competition we have identified. The costs of the package are:

- implementation costs
- lost benefits (if any)

⁴⁶ PSR MR15/2.3, *Market review into the ownership and competitiveness of infrastructure provision – final report* (July 2016), paragraphs 4.306 to 4.311

⁴⁷ MR15/2.3, paragraphs 4.307 and 4.308

⁴⁸ If the barrier to entry due to messaging standards were eliminated and the four largest PSPs divested their shares in Vocalink, the problems we set out in our final report in paragraphs 4.81 and 4.82 would still be present.

6.22 Lost benefits are any benefits to users that arise under the current circumstances but would not arise after we implement our remedies.

Benefits of the package

6.23 We consider that the restriction of competition we have identified causes negative effects to those who use payment systems. The benefit of the remedy package is the elimination of those effects.

6.24 The negative effects are the following⁴⁹:

- Users get *less innovative services* than they would if the supply of infrastructure services were competitive. We expect improvements due to innovation to help payment systems better meet user needs. Innovation will therefore bring significant benefits to those who use payment systems. However, we have not quantified this negative effect. We expect that effective competition in the supply of infrastructure services would spur the incumbent supplier to innovate. It would do this to reduce its risk of being displaced by an alternative supplier. We also expect such competition to spur alternative suppliers to innovate. This would improve their chances of winning against the incumbent supplier when operators procure infrastructure services. The Forum's strategy points to innovations that would be beneficial to users, including assurance for users that their payments are reaching the correct recipient.⁵⁰ There are also innovative features of payments systems in other countries that could benefit users if adopted by UK payment systems. These include cloud-based flexible capacity (which allows processing and storage capacity to be scaled up and down depending on users' needs at certain times) and central archiving and retrieval functionality for storing transaction details.⁵¹ For these reasons, we expect improved services due to innovation to bring significant benefits to those who use payment systems.
- Operators pay *higher prices* than they would if the supply of infrastructure services were competitive. We estimate that this negative effect totals around £[<] million per year. For a shorter term [<] contract, the negative effect would in nominal terms total £[50-109] million, and for a longer term [<] contract the negative effect would total £[164-259]⁵² million. This estimate is based on the LINK request-for-information (RFI) experience. As we do not consider the LINK RFI a full competitive exercise, our estimate is likely to understate the actual level of the negative effect due to higher prices.
- The operators' supplier of infrastructure services faces *less pressure to be efficient* than it would if the supply of infrastructure services were competitive. In a competitive market, we would expect suppliers to strive to serve customers' needs as efficiently as possible. As VocaLink is not subject to effective competition, it may not have a strong incentive to become efficient. It may have inefficiently high costs, which may result in higher prices. We have not quantified the monetary value of this negative effect. However, our estimate of operators and PSPs paying higher prices of between £[50-109] million and £[164-259] million could in part be due to productive inefficiency.⁵³
- Operators get a *lower quality of service* than they would if the supply of infrastructure services were competitive. Operators and suppliers agree on a range of indicators of service level, including availability, how quickly the supplier should respond to operators' calls and how quickly individual payments should be processed. While we do not consider current levels of availability problematic, we consider that competition could improve the level of service suppliers undertake to provide. We have not quantified the monetary value of this negative effect, but note that higher service levels would be beneficial to users.

⁴⁹ See Annex 2 for a detailed assessment of the detriment.

⁵⁰ Payments Strategy Forum, *A payments strategy for the 21st century – final strategy* (November 2016): <https://www.paymentsforum.uk/final-strategy>

⁵¹ PSR MR15/2.3, *Market review into the ownership and competitiveness of infrastructure provision – final report* (July 2016), paragraph 4.161

⁵² These are ranges which contain the estimate we have used. We consider that estimate to be confidential. For the upper bound of the range, we have added a positive random number to the estimate. For the lower bound, we have subtracted a different, positive random number from the estimate.

⁵³ These are ranges which contain the estimate we have used. We consider that estimate to be confidential. For the upper bound of the range, we have added a positive random number to the estimate. For the lower bound, we have subtracted a different, positive random number from the estimate.

Costs of the package

6.25 The costs of the package are:

- implementation costs
- lost benefits (if any)

6.26 The relevant *implementation costs of the procurement remedy* are:

- the cost of undertaking a competitive procurement exercise (less any costs due to contract negotiation which are currently incurred)
- the direct PSPs' costs of switching providers

6.27 The second cost would materialise only if the benefits of switching exceed the costs of doing so. Basing the net benefit on the full switching cost is therefore conservative. The messaging standards remedy and change in ownership of VocaLink do not result in any relevant costs to consider.

6.28 The evidence on the *cost of undertaking competitive procurement* indicates that the cost of running a single procurement exercise for Bacs or FPS is between £6 million and £10 million. The lower figure is based on the cost of FPS's initial 'build and run' procurement. The evidence indicates that the cost for LINK would be less than £1 million (see paragraph 3.130).

6.29 We consider these figures overstate the true incremental cost of running a procurement exercise relative to the current situation. Operators currently incur costs for renegotiation of contracts. They would avoid these costs if they ran competitive procurements instead of renegotiating contracts. Some of the figures we have seen also include the cost of procuring services that go beyond what our provisional procurement remedy requires (for example, the implementation of a connectivity layer).

6.30 The *direct PSPs' costs of switching providers* are largely unknown (see paragraph 3.133). The evidence indicates that the cost of migration would vary depending on the extent of changes being made during the migration. This is largely due to the extent of testing that PSPs would need to do.

6.31 A like-for-like migration would potentially require only the testing of new connectivity. If the system requirements change materially, then these changes would likely be thoroughly tested even if these were implemented by VocaLink (see paragraph 3.35). The evidence also indicates that the migration costs would also vary across different member PSPs. These costs depend on how PSPs connect to the central infrastructure and the complexity of their internal IT systems (see paragraph 3.36).

6.32 These migration costs, while potentially significant, are one off. They would therefore need to be compared with the potential benefits of switching providers that could be achieved over the total life of the next contract.

6.33 The relevant *implementation costs of the messaging standards remedy* are the cost of developing a mapping between legacy standards and ISO 20022, which we do not consider is a relevant cost (see paragraph 4.61).

6.34 MasterCard announced on 21 July 2016 its intention to acquire 92.4% of VocaLink, subject to regulatory approval. As such, we do not consider that there are any relevant costs to consider in relation to the change in ownership of VocaLink.

6.35 The remedy package will not result in costs due to *lost benefits*. While we acknowledged in our final report that the current ownership arrangements could produce some benefits to users,⁵⁴ our proposed remedy package will not result in the loss of any such benefits. This is because of the current owners' proposed sale of VocaLink shares. As we explained in paragraphs 5.35 to 5.43, our provisional view is that the proposed acquisition would address the ownership and control problems that we identified. We are therefore not proposing a divestment remedy at this time.

6.36 Our provisional view is that the remaining components of the proposed remedy package would not result in the loss of any benefits. Stakeholders have not provided evidence, or otherwise argued, that benefits would be lost because of the implementation of the competitive procurement or messaging standards remedy. We invite stakeholders to submit any such evidence.

The benefits of the remedy package likely outweigh the costs

6.37 We now assess whether the benefits of the remedy package outweigh its costs. Our assessment shows that the benefits likely outweigh the costs.

6.38 We have calculated the net present value (NPV) of implementing the remedy package. This is appropriate as the costs of the package would be incurred in the relatively near future, while the benefits would accrue over a period of several years following the implementation of the package. This approach takes into account the fact that people and firms generally prefer to receive benefits sooner rather than later, and prefer to incur costs later rather than sooner.

6.39 We note, however, that our calculation will understate the true net benefits of the remedy package:

- **The benefit that will arise from greater innovation in payment systems would be significant:** We have not quantified the value of this benefit. The calculation therefore does not reflect the benefits that would arise due to innovation. As we explained in paragraph 6.24, we expect that innovation will bring significant benefits to those who use payment systems. As this benefit is not included in the calculation, the result will understate the true net benefit.
- **Operators will not be compelled to switch if the cost of doing so outweighs the benefit:** Our calculation does not take into account the options that an operator has after having run a competitive procurement process. We expect that an operator would switch to an alternative supplier only if the benefits outweigh the switching costs. Having this optionality is valuable. As we do not take this value into account, our calculation will understate the true net benefit.

6.40 We have used an annual discount rate of 3.5% for the NPV calculation. This is the social time preference rate for cost-benefit analyses recommended by the Treasury.⁵⁵ To assess how sensitive our analysis is to changes in the discount rate, we have also calculated the NPV using annual discount rates of 2.5% and 4.5%.

6.41 The calculation assumes:

- that PSOs incur the costs of running procurements in mid-2017
- that PSPs incur any costs of migration to a new infrastructure supplier in mid-2018

6.42 The exact time at which PSPs or operators incur costs has a very modest impact on the net benefit of the package.

⁵⁴ PSR MR15/2.3, *Market review into the ownership and competitiveness of infrastructure provision – final report* (July 2016), paragraph 6.142

⁵⁵ The Green Book, paragraphs 5.48 to 5.53: https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/220541/green_book_complete.pdf

- 6.43** The calculation further assumes that the benefits of the remedy package begin to accrue at the beginning of 2020, and accrue annually from then on. We consider scenarios in which benefits accrue over a period of five years, a period of eight years and a period of ten years.
- 6.44** We understand that contracts between the operators and VocaLink have historically lasted at least five years. Contracts lasting more than five years could be necessary to ensure that the benefits of switching outweigh costs. Contracts lasting more than ten years would mean increased risk that conditions change in a way that makes the terms of the contract unsuitable. We have proposed requiring re-procurement at least every ten years. We therefore consider it likely that the duration of contracts will be between five and ten years.
- 6.45** As the cost that PSPs would incur in the migration to a new infrastructure cannot be reliably estimated, we leave this cost out of the calculation. This does not mean that we consider this cost to be zero. Instead, it means that we must interpret the result of our calculation differently. If the real migration costs exceed the value we calculate, the cost of the package would outweigh its benefit. This gives us a benchmark. If it seems unlikely that the migration costs exceed the value we calculate, then the benefit of the package is likely to outweigh its cost.
- 6.46** For both Bacs and FPS, we use £6 million and £10 million as the lower and upper ends of the range of cost of running procurements. For LINK, we have used a cost of £1 million (see paragraph 6.28).
- 6.47** We have also considered two different levels of annual benefit. The high estimate is £[<] million per year (see paragraph 6.24). The low estimate is £[<] million per year.⁵⁶ The low estimate corresponds to a total benefit of £[50-109] million in nominal terms for a shorter-term [<] year contract, and £[164-259] million for a longer term [<] year contract.⁵⁷ Note that this is only the price benefit. We have not included the effects of worse service, inefficient supply or less innovation in the calculation. Our calculation is therefore conservative in that it may understate the actual benefit of our remedy package. (As we noted in paragraph 6.24, our estimate may also understate the negative effect of higher prices.)
- 6.48** We assessed two combinations of costs and benefits:
- in the 'optimistic scenario' we have assumed that the benefit is high (£[<] million per year) and the cost is at the low end of the range
 - in the 'pessimistic scenario' we have assumed that the benefit is low (£[<] million per year) and the cost is at the high end of the range
- 6.49** As we do not believe the remedies would result in the loss of any benefits, we have not included any such costs in the calculation.
- 6.50** Table 1 below shows the results of our NPV calculation. A positive value indicates a net benefit (before taking any switching costs into account).

Table 1: Net present value of remedy package – no migration cost included (£ million)

Period over which benefits accrue	Discount rate (per year)					
	2.5% Scenario		3.5% Scenario		4.5% Scenario	
	Pessimistic	Optimistic	Pessimistic	Optimistic	Pessimistic	Optimistic
[Short term] [<]	[<]	[<]	42	71	[<]	[<]
[Medium term] [<]	[<]	[<]	75	115	[<]	[<]
[Long term] [<]	[<]	[<]	95	141	[<]	[<]

⁵⁶ The low estimate assumes that competition results in [9-23]% lower fees, while the high estimate assumes that competition results in [13-29]% lower fees.

⁵⁷ These are ranges which contain the estimate we have used. We consider that estimate to be confidential. For the upper bound of the range, we have added a positive random number to the estimate. For the lower bound, we have subtracted a different, positive random number from the estimate.

- 6.51** The table shows that over the full range of discount rates, scenarios and durations, our conservative estimate of the net present value of the remedy package excluding migration costs is between £[<] million and £[<] million. As we explained above, our calculation understates the value of the remedy package. We expect that the benefits due to increased innovation will be significant, and the calculation does not reflect any such benefit (see paragraph 6.39).
- 6.52** The 3.5% discount rate is our main scenario (see paragraph 6.40). The table shows that using this discount rate, the net benefit of the package – excluding migration costs – is at least £42 million. This figure takes into account benefits that accrue in the shorter term ([<]). The net benefit of the package over a short period could however be as high as £71 million (again excluding migration costs). The net benefit over a medium long period ([<]) is between £75 million and £115 million. Over a long period ([<]), the net benefit is between £95 million and £141 million.
- 6.53** The table also shows that results of the NPV calculation do not change much under the alternative assumptions about the discount rate that we have considered.
- 6.54** We now consider the role of switching costs in the assessment of whether the benefits outweigh the costs. It is appropriate to consider the switching costs PSPs would incur in a ‘like-for-like’ switch (a switch between infrastructure suppliers when the suppliers offer the same functionality). The benefits we used in the assessment do not include the benefits of any additional system functionality that may result when an operator procures new infrastructure services. Using switching costs based on any other scenario would therefore understate the net benefits.
- 6.55** We expect that in situations where there are users needs to fulfil, operators will procure new functionality that brings additional benefit. This additional benefit could balance higher switching costs that arise outside like-for-like situations.
- 6.56** The benefit of the remedy package likely outweighs its cost if we take into account the benefits accruing over a medium long period of [<]. It seems unlikely that the migration costs that PSPs would incur would reach as high as £75 million. Even in a scenario where all operators switch away from VocaLink, switching costs would be unlikely to reach this level. A total switching cost of £75 million across all three operators represents a switching cost of more than £1 million per PSP and operator.

Provisional decision on proportionality

- 6.57** Based on our analysis above we provisionally conclude that our proposed remedy package is proportionate. It is no more onerous than necessary and does not impose costs that are disproportionate to its aims.

Equality and diversity impact assessment

- 6.58** In line with our public sector equality duty under the Equality Act 2010, we have assessed the likely equality and diversity impacts of our proposals. We have not found them to give rise to any concerns.

Provisional decision on our package of remedies

- 6.59** We have provisionally decided that the following package of measures would be effective and proportionate in addressing the competition issues identified in our final report:
- Two specific directions under section 54 of FSBRA requiring that if the operators of the Bacs and FPS payment systems contracts for the provision of central infrastructure this is competitively procured at least every ten years, except in exceptional circumstances. This procurement must enable the use of ISO 20022 messaging standards.

- A specific direction under section 54 of FSBA requiring that if the operator of the LINK payment system contracts for the provision of central infrastructure this is competitively procured at least every ten years, except in exceptional circumstances.
- Two specific directions under section 54 of FSBA requiring the operators of the Bacs and FPS payment systems to make documentation available to allow conversion between existing messaging standards and ISO 20022.
- Changes to the ownership of VocaLink as set out in the proposed MasterCard transaction.

7 Consultation questions and next steps

Consultation questions

7.1 We are interested in your views on all aspects of this draft remedies decision. We welcome comments on the evidence and analysis presented as well as our provisional assessment. In doing so, please provide explanations and evidence where possible.

7.2 Specifically, we welcome responses to the following questions:

Competitive procurement remedy

1. Do you agree with our assessment of effectiveness of the potential remedies identified? If not, please explain why.
2. Do you agree with our assessment of the costs of the remedies? If not, please explain why.
3. Do you have any comments on the design of our proposed remedy, including but not limited to:
 - a. Whether an additional requirement of discovery phase is necessary to make a Bacs competitive procurement effective?
 - b. Our proposals for the interaction with the Forum, possible temporary exemption periods, the timings of our milestones, and the process for applications?

Messaging standards remedy

4. Do you agree with our assessment of effectiveness of the potential remedies identified? If not, please explain why.
5. Do you agree with our assessment of the costs of the remedies? If not, please explain why.
6. Do you have any comments on the design of our proposed remedy, including, but not limited to:
 - a. Whether the use of XML standard should be required to make our remedy effective?
 - b. Whether the remedy should remain in place following completion of the next competitive procurement exercises for Bacs and FPS?
 - c. Should the operators of Bacs and FPS make mapping information publicly available or are there are reasons why it should be made available subject to certain conditions?

Ownership of VocaLink

7. Do you agree with our assessment that the four largest PSPs retaining a shareholding of around 10% is likely to be effective at addressing:
 - a. the financial incentive to protect VocaLink
 - b. alternative providers belief that they are at a disadvantage to VocaLink because of ownership and governance arrangements

If not, please explain why.

Remedies package

8. Do you agree with our assessment of the effectiveness of the proposed remedies package? If not, please explain why.
9. Do you agree with our proportionality assessment of the proposed remedies package? If not, please explain why.

10. Will the messaging standards remedy, the competitive procurement remedy or the overall package result in the loss of any benefits to users? Please explain how these benefits to users currently arise and why they are unlikely to arise following the implementation of the remedies. Please provide evidence to back your claims.

Stakeholder feedback

- 7.3 Please send your comments (in either Word or text-readable PDF versions) by 1 February 2016 to infrastructurereview@psr.org.uk

Or in writing to:

Infrastructure Review Team
Payment Systems Regulator (15th floor)
25 The North Colonnade
Canary Wharf
London E14 5HS

Next steps

- 7.4 We expect to publish the final decision on our remedies in Spring 2017. We will then, if appropriate, issue any remedies.

