Indirect access to payment systems: insights from access theory and practice

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Summary

This paper draws on relevant economic theory, and the experience of regulatory practice, to identify insights about access relevant to the Indirect Access Market Review (IAMR).

The key findings of this paper, in summary, are:

i. In vertically integrated settings, ‘access’ is sometimes conceptualised as the (voluntary or involuntary) sub-contracting out of a service by an access provider to an access seeker. Access policies can have positive and negative effects on economic efficiency, the relative balance of which will depend on context. Accordingly, policies to promote or facilitate access in a specific activity are not a desirable end in themselves, but can be so where they result in benefits to current and future consumers in terms of lower costs or an increased scope and quality of services.

ii. An important distinguishing feature of indirect access to payment systems from other contexts in which access services are supplied is the number of actual, or potential, suppliers – i.e.: Direct Participants of payment systems who could be Indirect Access Providers (IAPs). In addition, for some indirect access seekers (i.e. some Indirect Payment Service Providers or IPSPs), there is likely to be a degree of full or partial substitutability between indirect access and other access services, such as: direct access services (by becoming a Direct Participant) and direct technical access to some payment systems. Some IPSPs can also on-sell indirect access (sometimes referred to as nesting).

iii. Indirect access to payment systems shares similarities with access services provided in other regulated contexts in that it can be an *essential* input (i.e.: indispensable for some IPSPs to be able to offer an end-to-end service to retail users). However, unlike the utility sectors, where there is typically a single access provider (such as in electricity or water), or where one access provider holds a position of significant market power (such as in telecommunications or gas storage), there may be a number of providers of indirect access to some payment systems, with no single provider occupying a position of significant market power.

iv. Where access issues arise in non-utility industries (i.e. where access to a specific facility is considered ‘essential’, and the terms of access are argued to be unreasonable or unfair), such issues tend to be addressed *ex-post* either under the ‘abuse of dominance’ provisions in UK and EC competition

law (specifically under what is sometimes referred to as the 'essential facilities' doctrine) or through sectoral, or market investigation provisions.

v. Without prejudging the conclusions of the IAMR, on the basis of general principles and material collected to date, two potential problems may be associated with the supply of indirect access to payment systems. First, IPSPs <u>can obtain</u> indirect access but may face poor quality of service or access terms they consider unreasonable. Second, some PSPs may be <u>unable to obtain</u> indirect access, or face a limited choice of providers. Both types of potential access-problem can involve both price and non-price considerations.

vi. In other contexts, where access problems are identified, but there is a credible prospect of new entry, or technological change, that will result in additional access possibilities or introduce new supply arrangements, a forbearance approach is sometimes adopted. This is in recognition of the fact that regulatory intervention may actually impede market developments (by making it less attractive to enter) and reduce the incentives for entry and investment. Another approach to resolving access problems, particularly where they are not market-wide in scope, is to encourage the access provider and access user to engage in commercial negotiations in good faith with the backstop of regulatory dispute resolution in the event that the parties are unable to agree.

vii. In circumstances where market developments are not expected to address the access problems identified, and where access problems affect a wide number of users (i.e.: they are market-wide in scope), other forms of remedy are applied. For example:

- Monopoly providers of access can be regulated *ex ante*, and required to supply access on reasonable and non-discriminatory terms. If the access provider is vertically integrated, additional requirements are sometimes imposed to ensure equivalence of access terms for third parties.

- In utility industries where there is more than one provider of an access service (i.e.: oligopolistic settings), but one provider holds a position of significant market power, remedies tend to reflect the fact that there is some competition, but such competition is not considered to be an effective constraint on the supplier with significant market power. Remedies can range from light-handed measures (reporting and transparency requirements or monitoring requirements) to more formal oversight (such as cost-orientation rules and price controls).

- In non-utility contexts, if a supplier is dominant, is found to operate an essential facility, and is refusing access to that facility on fair and reasonable terms, the remedies can include: compulsory licencing obligations; mandatory requirements involving a 'duty to deal' with a would be competitor; obligations not to disrupt competitors' activities, or to offer specific services with and without the access provider's service bundled within it. However, in considering such remedies, courts and regulators have generally been aware of the potential disincentive effects of imposing mandated access requirements on firms.

- Remedies introduced following sectoral or market investigations show considerable variation. In Market Investigation References remedies can be generally categorised as involving measures to: open a market to competition (by lowering barriers to entry /expansion); improve consumer responsiveness and engagement (improving the information available to consumers and encouraging switching); and structural changes to a market (such as forced divestitures).

viii. The appropriateness of any remedial measures introduced following the IAMR will plainly depend on the type, nature and significance of any access problems identified through the market review. The need to factor in the possible risks of unintended consequences of common remedies may, however, be particularly relevant in the context of indirect access. This is because indirect access can be distinguished from other access services insofar as:

- Access is not provided in a monopoly context; rather indirect access is characterised by a structure where there is a number of providers (although some IPSPs may face a limited choice).

- There is scope for entry into the supply of indirect access (i.e.: by existing Direct Participants of payment systems who have chosen not to be IAPs).

- Some IPSPs have various substitution possibilities, including becoming a Direct Participant of a payment system (full substitution) or acquiring direct technical access to some payment systems (a form of partial substitution).

- The scope for, and effectiveness of, any remedies will be conditioned by wider public policy, particularly in relation to financial crime risk, which appears to have an important effect on the incentives to supply indirect access.

1. Introduction

This paper considers a number of general framing issues associated with the Indirect Access Market Review (IAMR). Its purpose is to situate the IAMR within a wider economic and regulatory context and, in so doing, foster a greater appreciation and understanding of why the Payment Systems Regulator (PSR) is conducting the review, and some of the issues that the PSR will likely encounter. In this way the paper is, in part, a response to stakeholder comments that, in conducting the IAMR, the PSR should consider and evaluate a range of different approaches to economic regulation before developing its own approach to regulation.[1]

Specifically, the paper draws on relevant economic theory, and the experience of regulatory practice, to consider what specific issues might be relevant to the PSR in its review, and what evidence and data will be relevant to assessing these issues. It considers important foundational questions such as:

- Why are policies directed at facilitating access, and opening up certain activities to competition, seen as desirable in some regulated industries/activities but not in others?
- What is meant by 'indirect access', and how does it compare with how the term 'access' is used in other regulated contexts?
- What is the relationship between indirect access services, direct access services and direct technical access? How substitutable are these services, and what are the possible implications for regulatory policy?
- What are the general characteristics of access arrangements that are observed in other industry settings?
- What are some of the challenges and concerns associated with access arrangements in other regulated industries?
- What is a general typology of issues that might arise in the context of the supply of indirect access?
- What sorts of remedial measures have been introduced to address access problems in other regulated settings?

[1] See, for example, *HSBC response to the PSR's Draft Terms of Reference for the market review of indirect access to payment systems* (March 2015). Para 15.

- What are some of the risks and unintended consequences associated with alternative remedial measures?

The paper comprises six sections. Section 2 sets the scene by considering some general issues associated with access, including: the economic benefits and costs of providing access, and some of the general challenges associated with access in other industries. Section 3 examines various framing issues associated with access to payment systems, including defining indirect access, and comparing it to other 'access products', such as direct access. Section 4 details some of the high-level similarities and differences between indirect access services and access services in other industries. Section 5 draws on general principles to set out a typology of issues that might be associated with indirect access, including price and non-price issues. Finally, section 6 considers the type of remedial measures that have been introduced in other contexts, and makes some brief remarks about the potential applicability to indirect access.

2. General access considerations

To set the scene for the analysis in this paper, and for the IAMR more generally, it is worth considering the rationale for, and some of the costs and benefits associated with, regulatory policies directed at facilitating access at different levels in a given supply process (i.e.: at different points in the end-to-end supply of a service). While a consideration of these general points might seem far removed from the specifics of the IAMR, access issues have proven to be among the most contentious in regulatory policy, and this makes it important to understand why access is seen as desirable in some production processes, and not in others.

2.1 Access, competition and welfare

In general terms, the relative benefits and costs of opening up a production stage in an end-to-end service to competition turns on an assessment of whether such arrangements are more efficient (in economic terms), and increase social welfare. In vertically integrated settings, the analytical framework applied to assess this sometimes conceptualises access as the (voluntary or involuntary) sub-contracting out of a service by an access provider to an access seeker.[2] Accordingly, from an economic efficiency perspective, a key question is on what terms an access service should be subcontracted out to third parties.

Potential negative efficiency effects of access

From an aggregate welfare point of view, it should not automatically be assumed that opening up an activity or a stage in a production process to competition will always result in lower costs and improve efficiency. Indeed, for some activities it may be more efficient for a single supplier to provide an end-to-end service. For example, where there are strong economies of scale and scope associated with the co-production of certain services.

In general terms, policies which require so-called ‘access providers’ to give third parties access to their facilities/services at different stages of the supply process can have various negative economic efficiency effects. Specifically, such policies:

- can impose additional costs on the access provider, which lowers productive efficiency and overall welfare.

[2] See Laffont, J.J. and J. Tirole, (2000). *Competition in Telecommunications*. Cambridge MA: MIT Press.

- can lead to revenue-recovery shortfalls for the access provider such that they are unable to recover the fixed costs of their investments in the network. This can have knock-on distributional impacts on specific customers.

- can reduce coordination in decisions relating to investment and innovation, which can reduce overall efficiency and welfare.

- can encourage entry by 'me-too' type firms who impose additional transaction costs but provide limited additional benefits to consumers.[3]

There can also be dynamic costs associated with policy requirements to provide access to certain activities in a supply chain/process. For example, a requirement to provide access can: (a) act as a disincentive for access providers to make investments in certain facilities in the first place; or (b) reduce incentives to innovate where the benefits of such innovation have to be provided to third parties on non-economic terms (i.e.: such as where they do not take account of the asymmetric risks associated with such innovations). Put differently, if access providers know that they will have to share access to their investments, or any new innovations, on fair and reasonable terms – i.e.: on similar terms to which they provide access to themselves – they may have limited incentives to make such investments in the first place, particularly when the investments involve some risk.[4]

Potential positive efficiency effects of access

Of course, policies promoting access can also bring positive efficiency benefits, including static and dynamic benefits. Most obviously, opening up an activity to competition can facilitate entry into the activity by firms who have lower costs, or are more productively efficient, than the integrated supplier. Various factors can contribute to entrants having lower costs and more productive processes, including that entrant firms: use different technologies; adopt alternative supply and production methods; have greater access to capital; have different risk appetites; or adopt alternative business strategies and structures which lower costs (e.g. a leaner management structure which reduces overheads).

Even where new entrants do not lower costs, they may nevertheless bring economic benefits in terms of: offering a higher quality of service or a differentiated level of service; expanding the types of services on offer; or servicing groups of consumers/market segments who would otherwise be un-served. For example, an integrated access provider may choose not to supply certain customers, or offer

[3] For example, the initial group of retail market entrants in telecommunications industry in many jurisdictions are said to have offered little by way of differentiation from incumbents, which in part, may have led to many of them having a relatively short life span.

[4] This is one of the reasons why we see patent protection for certain pharmaceutical and other IP innovations: if drug companies knew that they would have to share their IP with other companies for any new discoveries, they would have limited incentives to innovate in the first place, especially as such investments typically involve asymmetric risk (i.e.: where if an innovation fails the company bears the cost, while if it succeeds it is required to share the fruits of its investment on a fair and reasonable basis).

certain services, because they are considered too risky, or otherwise inconsistent with their business model. Entrants may be prepared to service such customers, either because they have a different business model (they may combine the service with other services) or have a different risk profile and pricing approach which allows them to offer services at a higher cost (to reflect the greater risk). In short, and of particular relevance to the IAMR, entrants may widen the scope of services provided and improve the coverage of the market.

Typically of more importance than these static benefits are the potential dynamic benefits of entry over the longer term. In a nutshell, allowing access, and introducing competition, at different stages of the supply chain, can allow for the entry of firms with different business models and innovative products and services, which can result in better quality services for end-to-end users. The experience of market opening policies in telecommunications is often held up as an exemplar of the benefits of these changes, where access has, over time, brought in new players and facilitated innovation and investment.

2.2 Challenges associated with access being provided on reasonable terms

While the previous discussion focussed on the, in-principle, costs and benefits of introducing policies to allow access, a separate set of considerations relates to the incentives of access providers to supply access services on reasonable terms. As already noted, the terms on which firms gain access to an essential input in a production/supply process has proven to be one of the most difficult, and contentious, issues in industrial economics research, and more critically, in regulatory practice.

In essence, these difficulties arise because access providers often hold strong market positions and do not always have natural incentives to act in ways which are socially beneficial. For example, access providers can have incentives to increase the access price to close to the monopoly level, or to supply a lower level of quality, or engage in lower levels of investment and innovation than is socially optimal. These actions are undertaken in the knowledge that access seekers often have limited substitution possibilities and, absent adequate regulatory oversight, will have to accept the terms being offered. This clearly differs from the situation where wholesale inputs are sold in effectively competitive markets, and rivals have incentives to increase wholesale sales by competing on price (which leads to prices which reflect underlying costs) and to offer higher quality services in order to attract business from their rivals.

The incentives to provide access on reasonable terms are more complicated in settings where an access provider(s) also competes in a related market with the access seeker. This is because the integrated access provider is both a wholesale

supplier of services to access seekers, and a competitor of these access seekers in the related retail market. In these settings, the access provider can have incentives to manipulate the access price, and its retail price, in order to 'squeeze' competitors out of the related retail market (i.e.: charging a high wholesale price to competitors, while simultaneously lowering retail prices in order to steal custom), or to engage in other behaviour which degrades the quality of the wholesale input or otherwise raises its' rivals costs in the related market.

General typology of access-related problems in other contexts

Generally speaking, there are four main access-related problems which can arise in contexts where the wholesale input is being supplied by a monopoly, or where there are a number of actual or potential access providers, but competition is not effective. Among these:

- *Problems with the pricing of access, and price related terms:* Determining the price for access has proven to be one of the most difficult issues associated with access arrangements in other regulated sectors. This is because the access price can impact on the incentives of both access providers and access seekers, and therefore on the development of competition. An access price that is too high can have implications for the development of competition in related markets; while an access price that is too low can reduce the incentives for the access provider to invest and innovate over the longer-term. In many contexts the approach adopted has been to base the access price on some estimate of the (long-run) costs of supplying access, including an appropriate return on capital employed. However, this approach can raise its own challenges, particularly in multi-product contexts where there are large joint and common costs.

- *Issues associated with non-price related terms of supply*: In some contexts, access providers have acted in ways which are obstructive, or that otherwise distort the ability of access seekers to compete in the related market. This has included unnecessarily restrictive contractual terms or requirements, and other behaviours (such as poor communication on planned and unplanned outages/disruptions to supply) which affect the quality of the service the access seeker can supply to end-users.

- *Discrimination and non-equivalence*: In a context where the access provider is integrated and competes against access seekers in a related market, issues of equivalence and discrimination can arise. Specifically, the access provider might make the terms of supply more favourable for its own divisions than it does to its competitors.

- *Incentives to invest and innovate:* As already noted, the incentives for firms who supply access services (i.e.: access providers) can be impacted by an access framework. Specifically, in contexts where access providers are automatically required to supply access services to new facilities, this can reduce the incentives to undertake such investments. In addition, where an access provider has to supply access to new investments at cost, this can reduce the incentives for innovation. This is because the risks of such innovative activities are asymmetrically distributed: the access provider carries all the risk of failure of the innovation, while if it succeeds it does not reap the rewards of innovation. It is also argued that such policies can impact on the incentives of access seekers to invest in their own facilities, particularly in contexts where the access terms may be too favourable (and therefore provide limited incentives to invest in their own infrastructure).

2.3 Summary

Access policies can have both positive and negative effects, and the relative balance between these will depend on the specific economic setting in which such policies are to be applied. It follows that policies to promote or facilitate access in a specific activity are not a desirable end in themselves but can be desirable if they result in benefits to current and future consumers in terms of lower costs or an increased scope and quality of services. In assessing this, it needs to be borne in mind that the introduction of access policies can impose costs on access providers, and, in some cases, result in shortfalls in cost recovery which can be harmful to certain subsets of consumers. Moreover, such policies can change the incentives of access providers to supply services or invest and innovate in circumstances where: (a) they are not assured that they will be able to recover the costs of the investment through access charges; or (b) providing access imposes additional risks, and attendant costs, which cannot be recovered through access charges. This last point may be of particular relevance to the IAMR given some claims that, a reason there are not more IAPs, is that potential providers feel the risk exposures (including financial crime risk exposure), and associated costs will not be able to be recovered through indirect access pricing. This issue is considered more fully in section 5 below. Finally, access policies can change the incentives of access seekers in contexts where they have a choice about the level or degree of investment they make in their own facilities.

3. Access to payment systems

This section considers various issues associated with access to payment systems. It begins by seeking to define, in conceptual terms, what is meant by ‘indirect access’. It then compares this concept of indirect access to other ‘access products’ such as direct access and direct technical access.

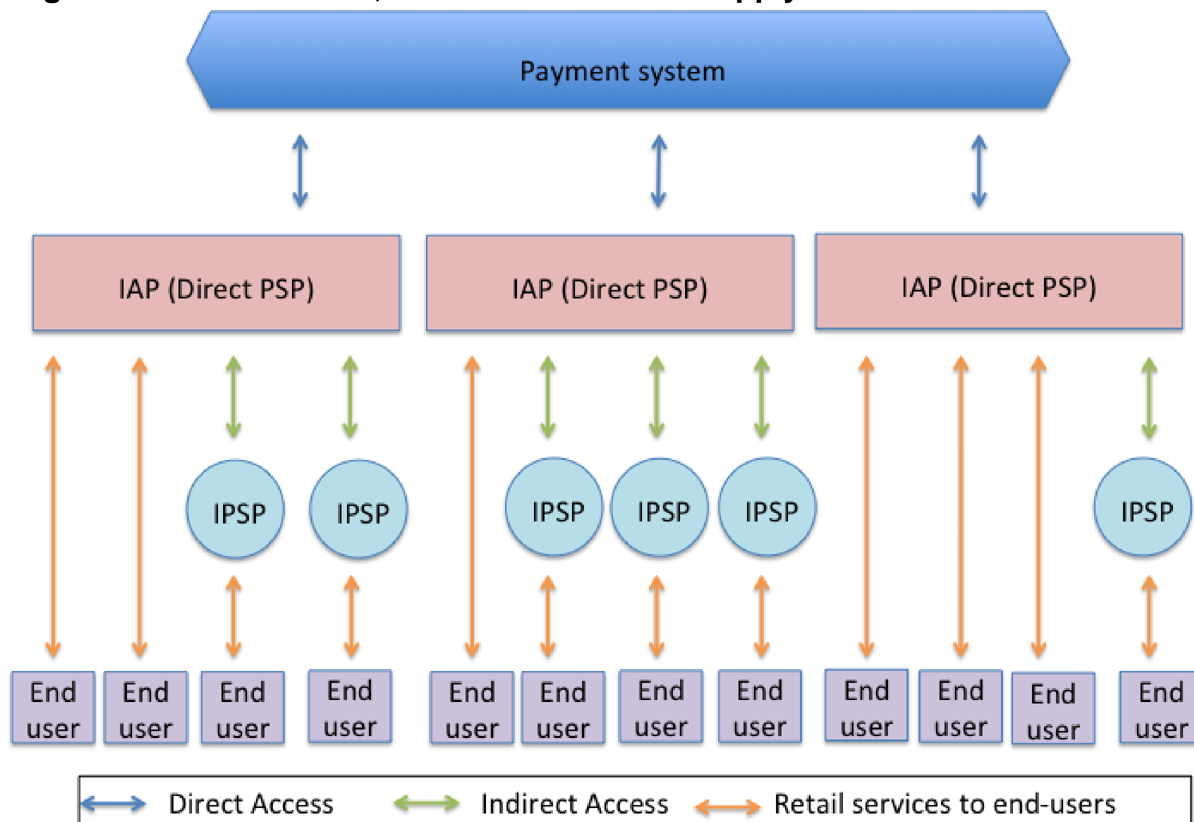
3.1 What is ‘indirect access’ to payment systems?

It is useful to define what we mean when we refer to ‘indirect access’ to payment systems, and to compare this form of access to that which is provided in other economic contexts – particularly in other network industries such as the utilities.

At its broadest, indirect access is conceptualised in this paper as services which are supplied by an Indirect Access Provider (IAP) to Indirect Payment Service Providers (IPSPs) thus allowing them to utilise certain payment systems. All Direct Participants of payment systems can, in principle, act as an IAP, as can some agency IPSPs (see discussion on secondary access or nesting below). The key point is that, in order to provide end-to-end services to retail customers, IPSPs require indirect access, and therefore indirect access is a *wholesale* input into their supply processes.

The relationship between direct access and indirect access is shown in figure 1. This figure shows that IAPs (who are assumed for the moment to also be Direct Participants of a payment system) have an arrangement in place with a payment system operator that allows them to directly send and receive payments. In contrast, IPSPs generally have an arrangement in place with an IAP which allows them to send/receive payments. However, both IAPs and IPSPs provide services at the retail level to end-users (i.e.: they compete with one another for end-users).

Figure 1: Direct access, indirect access and supply of services to end-users



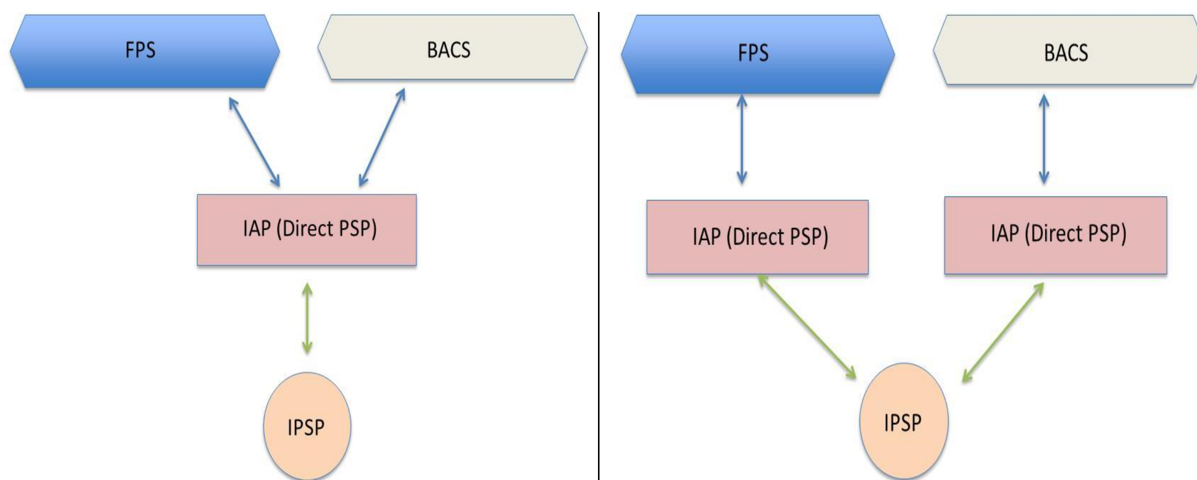
Features of the supply of indirect access

The specific way in which PSPs gain access to payment systems tends to differ across jurisdictions, and the payment system structure that has developed in a particular country is therefore in some respects unique. This differs from access products/services in other industries – such as energy or telecommunications – where the broad industry structure tends to be relatively similar across jurisdictions.

Given this point, it is useful to set out some of the distinguishing features and characteristics of indirect access to UK payment systems. Firstly, indirect access is offered to a number of designated interbank payment systems including: Bacs, Faster Payments Service (FPS), CHAPS and Cheque and Credit Clearing (C&C). IPSPs who wish to access these payment systems are required to procure indirect access from IAPs to *each* of these payment systems. In some cases, an IPSP might source its indirect access to all payment systems from a single IAP. Alternatively, an IPSP might multi-source its indirect access, obtaining indirect access to each payment system from different IAPs (e.g. source indirect access to Bacs from one

IAP, and indirect access to FPS from another IAP). These two scenarios are shown in figure 2 below.[5]

Figure 2: Single and multi-sourcing of indirect access



Secondly, only Direct Participants have direct access to payment systems, and are therefore the only institutions capable of supplying indirect access to all types of IPSPs (as discussed below some agency IPSPs can supply indirect access to non-agency IPSPs on a nested basis). The relevance of this point is that the scope of those who can supply indirect access to IPSPs is largely conditioned by the size and number of Direct Participants. The number of Direct Participants for the different UK payment systems is detailed in table 1 below:

Table 1: Number of Direct Participants of Payment Systems*

Payment System	Number of Direct Participants
Bacs	16
Chaps	21
C&C	11
FPS	10

*As at 31 December 2014.

Thirdly, although all Direct Participants can, in principle, provide indirect access to the various payment systems on an agency basis, not all of them currently do so. Indeed the number of active IAPs (i.e.: those Direct Participants who supply indirect access) is often significantly smaller than the number of Direct Participants of a payment system.

Fourth, there is variation in the elements of the services offered by different IAPs alongside indirect access. Put slightly differently, there is not a homogenous indirect

[5] A third scenario is where an IPSP has multiple connections to a single payment system – i.e.: it has two IAPs supply it with access to FPS.

access product, and the services offered by IAPs can differ. Among the relevant dimensions of difference include whether the IA service:

- encompasses both technical and settlement services (see discussion below)
- is combined with other corporate banking services
- is combined with other 'added value' clearing related services, such as the use of automated data files or counter services access to retail branches of the IAP
- includes the outsourcing of various 'back-office' functions, such as 'managed payment services'.

Finally, indirect access can also differ by type of customer. Generally speaking there are two broad categories of customer for indirect access: agency IPSPs (which typically includes challenger banks and large building societies) and non-agency IPSPs (which typically includes Authorised Payment Institutions, Small Payment Institutions, e-money institutions and money remittance companies). An important practical difference between these two categories of user of indirect access is that agency IPSPs are always allocated a dedicated sort-code. In contrast, for non-agency IPSPs, particularly smaller ones, indirect access services are similar to those provided through a standard business bank account.

Secondary/nested indirect access

Some agency IPSPs currently offer indirect access to non-agency IPSPs which enables them to provide end-to-end retail services.[6] The possibility of an agency IPSP on-selling indirect access (sometimes referred to as nesting) is presented in figure 3 below.

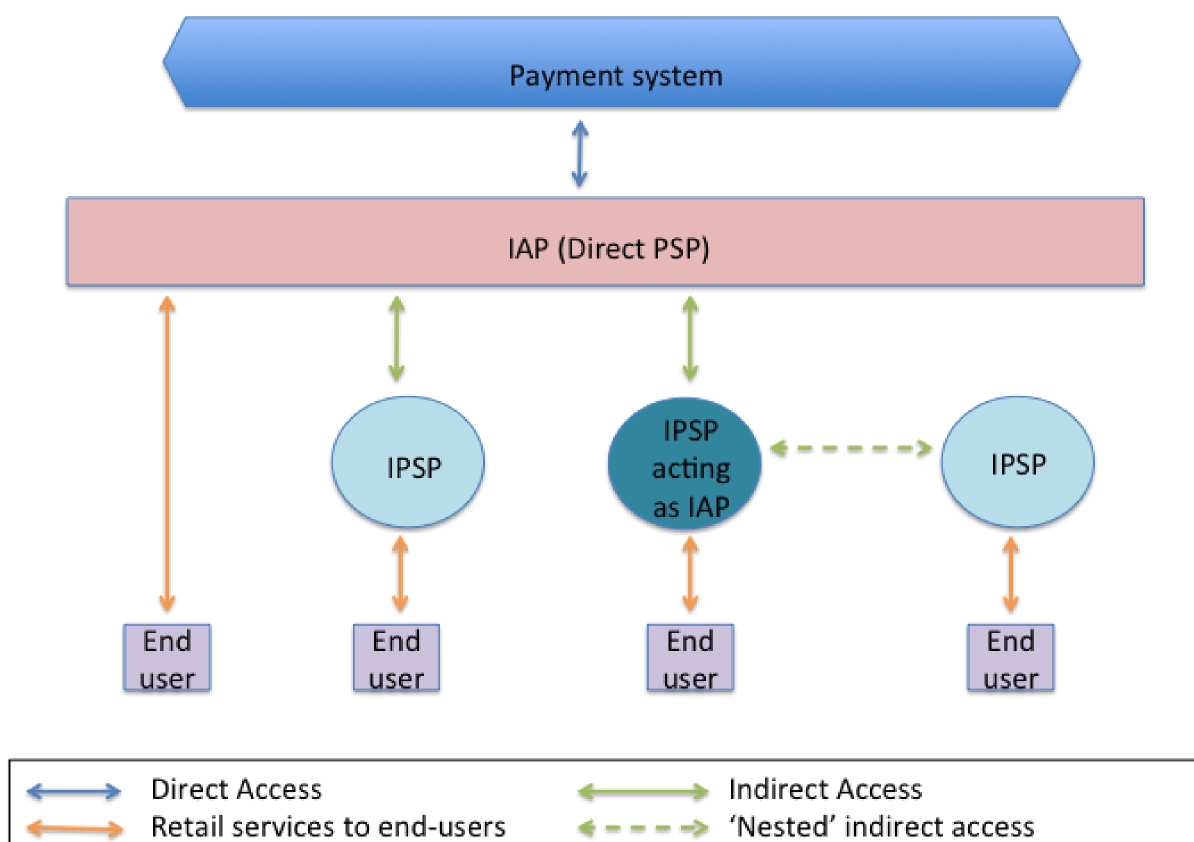
A general observation is that an active and liquid market for the supply of secondary/nested indirect access could potentially introduce greater competition by allowing IPSPs to choose between indirect access offered by IAPs (who are Direct Participants) or indirect access offered by other IPSPs on a secondary/nested basis. The scale of this activity is not clear, and therefore it is difficult to assess the extent to which secondary/nested IAPs act as a competitive constraint on IAPs who are Direct Participants of payment systems.

Two additional general observations can be made about this form of access and the potential for its growth. First, the terms and conditions attached to secondary, or nested, indirect access will generally be constrained in many technical and operational respects by the terms which govern the primary access relationship between an IAP and the (primary) agency IPSP. This limits the ability of those offering secondary/nested indirect access to differentiate themselves in terms of the quality of their technical offering. Second, and notwithstanding the previous point,

[6] In general terms, this is conceptually similar to secondary access arrangements that occur in other market contexts.

the potential exists for those offering secondary/nested access to differentiate themselves in other competitive domains. For example, they could offer superior customer service to their competitors, or could potentially adopt different risk appetites to their competitors (although this will also likely be conditioned to some degree by the risk appetites of the primary access relationship).

Figure 3: Secondary/nested indirect access



3.2 The relationship between direct access, indirect access and direct technical access

From a regulatory and competition policy point of view, a defining characteristic of industries where mandated access policies have been introduced is that the services that are being provided are considered to be essential, or indispensable, to the provision of the end-to-end service. That is, access seekers face no, or limited, substitution possibilities, and are therefore, to different degrees, locked-in to a situation where they must deal with the access provider.

An implication of this point is that, where substitution possibilities exist, the arguments for mandating access are less compelling, as access seekers are, albeit

to different degrees, no longer locked-in to a supply arrangement with a single supplier. In this section we consider whether there are potential substitute services for indirect access, and whether such services might be considered as viable substitutes for different types of IPSP.

Direct access and indirect access

For some IPSPs, such as those who are capable of becoming a Direct Participant of a payment system, indirect access is potentially substitutable for direct access. That is, these IPSPs have the option of 'accessing' the payment system at two points:

- Becoming a Direct Participant and accessing the payment system directly (i.e. self-supply); or

- Not becoming a Direct Participant, but acquiring indirect access through an arrangement with an IAP.

The relevant point is that, for these IPSPs, indirect access is potentially *substitutable* for direct access, and an option of 'by-pass' exists. These IPSPs have more choice and supply options than PSPs for which the possibility of becoming a Direct Participant either does not exist, or is not feasible. Put differently, indirect access is less indispensable to those PSPs who can by-pass the indirect access market, than for those PSPs who cannot by-pass the indirect access market and must acquire indirect access from an IAP.

Indirect access and direct technical access

In addition, there are other substitution possibilities which are available to some PSPs for accessing payment systems. For some payment systems, the potential exists for IPSPs to 'unbundle' technical access services and settlement access services, and to acquire technical access services separate from settlement services.

The ability for PSPs to acquire separate technical access services – and obtain direct *technical* access to a payment system – is a prominent feature of access to the Bacs payment system. The possibility also exists for such technical access for FPS, although to date only large PSPs have taken advantage of this opportunity.

In the future, however, the potential emergence of suppliers of technical aggregation services – who combine demand from a number of smaller scale PSPs – is seen as one way in which smaller PSPs can share the costs associated with direct technical access to FPS.[7] Recent analysis suggests that it will be cost effective for a PSP to use an aggregator, rather than directly connect to the central infrastructure as a Direct Participant, if it has less than 13 million transactions per year. The analysis

[7] See Faster Payments (2014). *Faster Payments: A Vision for a New Access Model Opportunities for Payment Service Providers and Solution Vendors.* 8 December 2014

also suggests that if a PSP has less than 1.4 million transactions per year then it would be more cost effective to acquire both technical and settlement access from a IAP (i.e.: to not use technical aggregator services).[8]

The different access options

The preceding discussion highlighted that, for some IPSPs, there is likely to be a degree of full, or partial, substitutability between indirect access and other services, such as direct access and direct technical access. As in many markets, the extent of substitutability between these options is likely to lie on a spectrum, and there will often not be clear-cut delineation between IPSPs in terms of which access option they prefer. Rather, the extent of substitutability will depend, among other things, on an IPSP's business model, its ability to satisfy various criteria (such as access to a Bank of England settlement account), its retail customer base, and the scale and nature of its activities.

While it is not the focus of this paper to assess the extent of substitutability between different access options, the relevance of this point for the IAMR is that there are different access possibilities for some IPSPs, each of which can potentially allow them to provide end-to end payment services to final users. This has implications for the relative degree of indispensability of indirect access for different IPSPs, and it follows, the appropriateness of mandated access policies premised on such indispensability. Specifically, depending on the scale of activity and their required functionality, they can:

i. Become a Direct Participant of a payment system and obtain direct access (i.e.: full substitution).

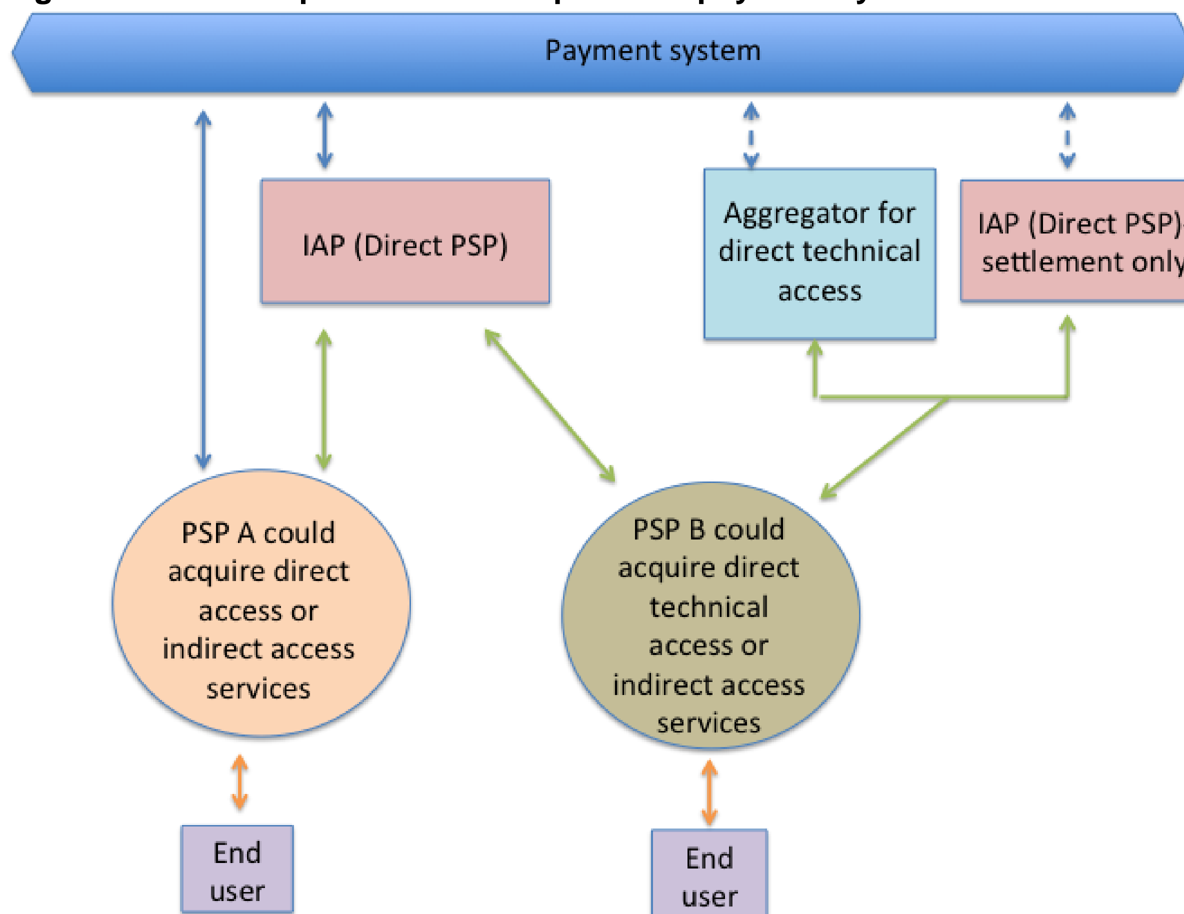
ii. Make use of direct technical access services, including through aggregators where they exist (i.e.: partial substitution).

iii. Obtain indirect access through an arrangement with an IAP.

These different access options are shown graphically in figure 4 below. In this figure, Given the scale and nature of its activities, PSP A might realistically see direct access and indirect access as potential substitutes. In contrast, given the nature of its activities, PSP B might consider that direct access is not feasible, but has a choice between indirect access or direct technical access services using an aggregator.

[8] See Accenture (2015) *Faster Payments New Access Model Creating a competitive market in access services for real-time, 24/7 payments.*

Figure 4: Different possible access points to payment systems



3.3 Implications of different access options

There are two immediate implications of the potential substitutability of access options for the IAMR:

- First, it is important that access issues that arise at different points are not considered in isolation. This is because the cause of a specific access issue might be properly attributed to problems at a different access point. For example, the cause of some indirect access issues identified may lie at the direct access level – that is, requirements to be a Direct Participant of a payment system may be too restrictive (which may be because of exogenous or endogenous factors).

- Second, any proposals to address access problems at one point such as indirect access, needs to take account of the fact that there is some degree of choice for some PSPs between the different access options. That is, policies to encourage greater competition at the indirect access level will likely have impacts on the demand for direct access, and similarly, on the demand for direct technical access services. The extent of any impact will depend on the

degree to which services are substitutable for one another. As shown in figure 4, for example, a policy introduced to encourage more Direct Participants of payment systems, might make IPSP A choose direct access over indirect access; alternatively a change in policies in relation to technical access might make this access point more attractive to IPSP B. While if indirect access prices are subject to regulatory control at low levels this may discourage PSPs from using direct access or direct technical access.

It is worth noting that similar types of issues associated with potential substitutability between different levels of access have arisen in other sectors, most notably in telecommunications, where access seekers have a choice as to how 'deep' they invest in a network. As with access to payment systems, deeper levels of access typically involve additional costs, specifically involving investments in infrastructure facilities by the access seeker. Choices of this type also arise in other utility contexts where access seekers can choose to interconnect with a network at different points. For example, a large industrial electricity user can choose to site itself at different points on an electricity network – some sites may allow it to directly access the transmission network, other sites may require it to connect with a distribution network first before accessing the transmission network. The different points of access will involve different investments and on-going costs (i.e.: connecting to the distribution network requires that transmission and distribution charges be paid).

One relevant insight from the experience of other sectors – particularly telecommunications – is that there can be important interactions between access policies at the different levels, which can have knock-on effects on the decisions of access seekers. For example, in telecommunications, there was a policy preference in many jurisdictions for policies which actively encouraged access seekers to make deeper investments in infrastructure over time, and to move away from a reliance on wholesale access products towards facilities-based or quasi-facilities based competition.

4. How does indirect access compare to access in other settings?

As already noted, access-related issues have proven to be some of the most difficult and contentious in regulatory theory and practice. An important insight from this experience is that the effectiveness of access policies is highly sensitive to the setting, or context, in which they are implemented. Relevant contextual features include: the extent to which the access service can be by-passed; the scope for the facility to be replicated in either full or part; the industry structure; the extent of competition in related markets; and the degree and pace of technological change.

Given this, it is important to consider how the supply of indirect access compares to access services supplied in other regulated contexts. At the risk of over-simplifying, there are some high-level conceptual points of similarity and difference between indirect access to payment systems and the access services that are provided in other regulated contexts.

4.1 Similarities with other industries

In terms of broad similarities, and at the most general level, indirect access is similar to other access services in the sense that, for some IPSPs, it is an *essential* input if they are to provide an end-to-end service to retail users. Put slightly differently, it may not be possible for an IPSP to offer specific retail services at a particular scale, or with specific attributes, without obtaining indirect access to a relevant payment system. In this sense, indirect access is an example of a wholesale access product that is required in order to compete in retail markets (although as discussed above, the essentiality of the service is moderated by the fact that some IPSPs could potentially provide end to end services via direct access or other technical access points).

A second general similarity with some utility industries – particularly telecommunications – is that different levels or types of access services are possible. As already discussed, in telecommunications, as the market has been opened to competition, it has been possible for those seeking access (sometimes referred to as ‘access seekers’ in a generic sense) to purchase different types of access product at different ‘layers’ of the network, each requiring different levels of investment in assets on their part. Some access seekers choose to make minimal investments in their own infrastructure and acquire a fully ‘bundled’ wholesale access service from an access provider. Other access seekers choose to make some investments in relevant assets and acquire ‘unbundled’ access to some facilities of the access provider’s network at a deeper level. In short, as with access to payment systems, some access seekers have a choice among a number of access points, each of which entails a different degree of investment in their own assets. However, it should

be noted that this characteristic is not a feature of all utility industries, and in other industries – such as in electricity, gas and water networks – access to a facility or infrastructure is sometimes provided at only one point/level (although differences can exist in terms of various aspects of supply – such as relative firmness of the access right, interruptability etc, and, as noted, access seekers can sometimes situate themselves at different geographic locations on a network).

A third high-level similarity between indirect access to payment systems and access services in some utility industries is that for some (but not all) IPSPs the potential exists to by-pass such services. That is, some current IPSPs could potentially become Direct Participants and therefore by-pass the indirect access market altogether. This 'build or buy' potential is also a characteristic of telecommunications and gas transmission[9] and storage, where access seekers, in some circumstances, have a choice to either buy a wholesale access service or to make investments in their own assets to self-supply the service. However, again, this characteristic is not true of all utility industries, and in some industries the ability of access seekers to fully by-pass an access provider is not possible (such as where there are legal restrictions on who can build their own infrastructure, or where it is simply uneconomic to develop alternative network infrastructure).

4.2 Differences with other industries

Access in monopolistic industry structures

A major difference between indirect access to payment systems and access services provided in other, but by no means all, utility industries is that in many of the utility contexts the access is being provided by a single access provider. That is, access services are typically provided by a monopolist, and it is for this reason that access services are subject to close regulatory oversight (although as discussed below, the degree or form of regulatory oversight can vary). The obvious point is that, because there is only one supplier, and therefore no substitutes, the service is indispensable.

In contrast, indirect access is supplied in a context where there are, in principle, a number of existing and potential suppliers of the wholesale input to IPSPs. The economic relevance of this point is that the behaviour of a given IAP is potentially (and again to different degrees) constrained and influenced by the behaviour of other suppliers of indirect access in the following ways:

- Most obviously, there is the potential for competition among existing IAPs for the supply of indirect access to a *specific* payment system. For example, different IAPs offer IPSPs access to the Bacs payment system. If competition is effective, the threat of a response by a rival should limit the ability of IAPs to

[9] In jurisdictions where pipeline competition exists.

act in an exploitative way (by raising prices or reducing quality), and should provide incentives to be responsive to the needs and preferences of IPSPs.

- Although the number of existing IAPs varies by payment system, and to some degree by customer segment, there is also *potential competition* by other Direct Participants of each payment system (who are not currently IAPs). As discussed below, this potential competition can be important in terms of constraining the behaviour of existing IAPs; the threat of entry can itself act as a disciplining device.

- Finally, as described above, for some IPSPs, the potential also exists to substitute indirect access with direct access and direct technical access for some payment systems. For example, should the indirect access offers not be considered reasonable, the potential exists for some IPSPs to 'by-pass' the indirect access market entirely and seek to become Direct Participants of the payment system. In principle, this ability to bypass indirect access should exert some degree of competitive constraint on the conduct of IAPs.

The difference between access issues in a monopolistic structure and the context in which indirect access is supplied (which is arguably oligopolistic) has important implications for the IAMR and in particular for the nature of the issues which may arise, and the appropriateness of any remedies where issues are identified. Put simply, in monopolistic structures, access requirements are introduced to address the fact that an access provider has full control over the terms and conditions of access and, by definition, is not constrained by the existence of other actual or potential suppliers. Moreover, because the monopolist has full control over the terms of access, remedies tend to be *ex ante* in nature: that is, requirements are imposed on the access provider to supply access on reasonable terms in advance of any harm arising.

Access in oligopolistic industry structures

While access issues most typically arise in monopolistic industry structures, it is not unknown to have some degree of regulation of access in settings where there is more than one supplier, but where one supplier has significant market power. Examples of oligopolistic contexts where access to some operators' infrastructure is regulated include: certain telecommunication services (such as wholesale leased lines); the regulation of gas pipelines in jurisdictions where there are a number of potentially competing gas pipelines; and the regulation of gas storage facilities in some jurisdictions. All of these settings can be distinguished from the monopolistic structure described above, in that there is more than one supplier, but one supplier is assessed as holding a significant position of market power (i.e.: in competition law terms, it might be assessed as being dominant).

The specific rationales for imposing access requirements in these oligopolistic settings can vary but, in most cases,[10] derive from the fact that competition is assessed as insufficiently effective – i.e. the other suppliers cannot effectively constrain the conduct of the supplier(s) with significant market power. Access requirements are therefore imposed on the supplier(s) with significant market power to ensure that access seekers, and ultimately end consumers, are protected from exploitation. However, a critical observation is that the terms on which access is provided in these oligopolistic contexts is often moderated according to an assessment of the extent of market power that a supplier (or suppliers) holds. For example:

- In telecommunications markets in the UK, and across Europe, periodic assessments of market power are undertaken to assess the position of different suppliers, and in particular, whether the incumbent operator is assessed as holding a position of significant market power. In circumstances where a single operator is assessed as holding a position of significant market power, different forms of remedy relating to access may be introduced (ranging from requirements to supply access on cost-oriented terms, to the imposition of specific price controls – see discussion in section 6.2).

- For gas pipelines in some jurisdictions, where multiple providers supply from a gas well to a particular city-gate, assessments of market power are undertaken to assess the extent to which the pipeline market is competitive, and the appropriate level of regulatory oversight in relation to access.

- In relation to gas storage and LNG facilities, assessments of market power are undertaken to determine whether or not third-party access to such facilities should be made available. Such assessments typically involve an examination of the extent of market power held by the facility operator.

In terms of remedies, where a supplier is assessed as holding a position of significant market power it typically follows that a set of regulatory requirements relating to access are introduced. These requirements are typically imposed *ex ante*, meaning that they are introduced to forestall any possible misuse of market power by suppliers. However, as discussed in section 6, the specific nature of these regulatory requirements can vary; from requirements to supply access at regulated prices to requirements to negotiate access on fair and reasonable terms.

One important potential difference between access obligations imposed in other oligopolistic structures, and access obligations that might apply for indirect access to payment systems, is that the possibilities for 'exiting' the market are arguably greater for the supply of indirect access than they are in the other utility contexts. In many

[10] With the possible exception of mobile termination access where the industry structure typically comprises a tight oligopoly (i.e.: there are a small number of providers of mobile services providers) but where access issues arise because of what is known as the mobile termination monopoly problem.

other access contexts, the supplier may have made considerable investments into specific physical assets – such as in a gas pipeline or gas storage facility or in laying fibre optic cable or acquiring spectrum rights – and therefore might be reluctant to exit the market in response to the introduction of remedies. Put differently, if a regulator imposes onerous access obligations on these suppliers they may nevertheless decide to continue to supply services provided they can cover their fixed costs and make a marginal profit on each unit sold.

In contrast, the nature and extent of investments by IAPs in fixed assets associated with the supply of indirect access is arguably more limited.[11] This might, in principle, make some IAPs more willing to exit the market, or certain segments of the market, if they consider the access terms imposed on them by a regulator to be particularly onerous.[12] This is discussed in section 6 in more detail.

Access in non-utility contexts

Access issues have also arisen in non-utility industries where access to a specific facility is considered to be 'essential', and where the terms of access are considered to be unreasonable or unfair. In these industries – where sector-specific regulation is not applied – such access issues are typically addressed *ex post* through competition law (i.e. following a complaint, or ex officio investigation, of harm arising from a failure to obtain access or from the terms of an access arrangement).

In non-utility industries, there are two ways in which access issues tend to be addressed. The first is under the 'abuse of dominance' provisions in UK and EC competition law, and specifically under what is sometimes referred to as the 'essential facilities' doctrine. In a nutshell, these provisions involve a three stage assessment: (a) whether an operator of a specific facility holds a dominant position with respect to that facility; (b) whether the facility is indispensable for access seekers, meaning that it is incapable of being duplicated or could only be duplicated with great difficulty; and (c) whether there is evidence that the operator is offering access terms which are unreasonable or which otherwise exploits its position of market power.

Examples of the types of facilities which have been found to be essential facilities in Europe include: ports, airports, railway networks, gas pipelines, oil storage facilities,

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[11] Investments in utility industries typically involve durable and immobile assets which have significant costs attached. For example, some estimates suggest that the infrastructure costs of network rail (based on route length) as £0.516m per mile of track. In the water industry in England and Wales it is estimated that companies have invested an average of £4 billion *per annum* since privatisation. Similarly, a widely cited estimate of the costs of near national rollout of fibre-to-the-home was £25 billion (in 2008), which is roughly £944 per household. Subsequent studies have suggested a cost of between per passing in the range of £545 to £2,000 per-household, implying a total cost of £14.4 to £52.9 billion. See Nesta (2015) *Exploring the costs and benefits of FTTH in the UK*. March 2015.

[12] Although motivated by a range of reasons, the Co-operative Bank decided in June 2013 to cease supplying indirect access to agency PSPs. The 'de-risking' exercises of some of the major banks might also be viewed as a partial form of exit from certain segments of the market.

telecommunications wires, set top boxes, airline reservation systems, cross border payment systems, cross-border securities clearing and settlement systems, postal networks and premium TV content.[13] In the US, where the essential facilities doctrine was developed,[14] the concept has been applied more broadly to include: a football stadium; the New York Stock Exchange, Intellectual Property Rights (IPRs) and a multi-day skipass scheme. In all of these cases, the market definition exercise can be critical to the assessment of whether or not the operator of a facility (or supplier of a service) is dominant (i.e.: very narrow market definitions are more likely to result in a specific facility operator being found as dominant).

Although there is debate regarding the scope of the essential facilities doctrine under UK/EU competition law, the more general position in relation to when a dominant undertaking can refuse to supply has been set out by the Competition Appeals Tribunal who have noted that:[15]

- A dominant undertaking may abuse its position if, without objective justification, it refuses supplies to an established existing customer who abides by regular commercial practice, at least where the refusal of supply is disproportionate and operates to the detriment of consumers.

- Such an abuse may occur, in particular, if the potential result of the refusal to supply is to eliminate a competitor of the dominant undertaking in a related market.

- However, it is not an abuse to refuse access to facilities that have been developed for the exclusive use of the undertaking that has developed them, at least in the absence of strong evidence that the facilities are indispensable to the service provided, and there is no realistic possibility of creating a potential alternative.

The second way which access issues tend to be addressed in non-utility industries is through sectoral, or market investigation, provisions where they exist. In the UK, these include market studies or investigations under the Enterprise Act 2002, and what were formerly known as complex monopoly investigations under the Fair Trading Act 1973. The purpose of these reviews is to assess the effectiveness of competition in certain markets. These investigations are also reactive in the sense that they are initiated on the basis of concerns about the effectiveness of competition in a particular market. Under the Enterprise Act, for example, the focus of market investigations is on assessing whether there is an adverse effect on competition in a specific market, and if so, what remedies could be introduced to address this

[13] See Whish, R and D. Bailey (2012). *Competition Law.* Oxford University Press. page 704-5.
[14] Under US antitrust law, if a company controls a facility for which access is indispensable in order to compete on the market, that company may not refuse access to that facility without objective justification.
[15] See *M.E Burgess, JJ Burgess and SJ Burgess v Office of Fair Trading* [2005] CAT 25, para 311.

deficiency. Such investigations differ from competition investigations described above in that the scope of analysis can be broader, and the nature of the remedies that can be introduced can also be broader than those applied under the standard competition law provisions (including forced divestments, or requirements to stop supplying specific services and products).

Table 2 below summarises the different ways in which access issues arise, and how they are addressed, in different structures and contexts.

4.3 Insights for the Indirect Access Market Review

The main points to emerge from the comparative analysis in this section that are potentially relevant to the IAMR are:

- There are some general similarities between the supply of indirect access to payment systems and the supply of access services in other economic contexts. First, for some IPSPs indirect access, like other access services, can be a critical input necessary to obtain in order to be able to offer an end-to-end service to retail users. Second, as for some utilities (such as communications networks), different access options are available to some IPSPs. Third, there is the potential for by-pass for some, but not all, IPSPs, (i.e.: the potential exists to fully substitute indirect access with direct access and to partially substitute with direct technical access).

- However, a major difference between the supply of indirect access to payment systems and access services in other utility contexts (such as electricity or water) is that there is typically more than one supplier of indirect access. While there can be more than one supplier in telecommunications, or for gas pipelines/storage, it is typically the case that, in those settings, one or more supplier may hold a position of significant market power. This is not necessarily the case in relation to indirect access to payment systems, where there may be a number of IAPs with no single supplier occupying a position of significant market power. Although as discussed in the next section some IPSPs may, in practice, face a smaller choice of IAPs. A second, related, difference is that, because there is typically more than one supplier of indirect access, issues associated with a single dominant firm abusing its position by refusing to supply access (which arise in essential facility cases) are arguably less relevant in this context. However, there is in principle, the possibility of an abuse of a collectively dominant position by refusal to supply if *all* providers coordinate their behaviour and chose not to supply an essential wholesale input to a competitor in a related market.

These similarities and differences have important implications for the framing of the IAMR and the consideration of possible remedies. Specifically, given its nature, indirect access to payment systems should not automatically be equated to access services supplied in most other utility industries, or in the context of competition law cases based on access to an essential facility. Rather, such services are arguably most appropriately framed as an example of access being provided in an oligopolistic structure (what used to be termed a 'complex monopoly'). As discussed in the following sections, this frame has important implications for how access in this market is assessed (i.e.: access is being supplied in an oligopolistic rather than monopolistic structure) and the nature and type of remedies that might be appropriate to address any problems identified.

Table 2: Approaches to access issues in different economic settings

	Monopoly supplier of an essential input	Significant market power assessments in utility industries	Essential facility	Market/sectoral investigation/ complex monopoly
Timing of determination of access terms	Ex ante	Ex ante	Ex post	Ex post
Industry structure	Monopoly	Typically oligopoly, but where some firms have more market power than others.	Requires that a supplier be dominant within a relevant market.	Typically, but not invariably, oligopoly or markets with a small number of suppliers.
Characteristic	Only one supplier of a key wholesale input	More than one supplier, but where one supplier holds a position of significant market power.	Generally involves a refusal to supply in contexts where there are no other satisfactory sources of supply (i.e.: a service is indispensable).	More than one supplier, but where various structural and market factors combine to create an adverse effect on competition.
Examples	Access to an electricity transmission network	Access to telecommunications networks; access to gas pipelines in some jurisdictions (where there are more than one competitor); access to certain LNG facilities or gas storage facilities.	Numerous examples in competition cases, including: access to port facilities; airports; set top boxes etc.	Numerous examples from the MMC, CC and now CMA. Examples include supply of home credit, payment protection insurance, private healthcare, supply of beer markets, grocery markets etc.

5. General typology of issues for indirect access to payment systems

As highlighted in the previous section, the *context* in which indirect access is supplied differs from other settings where access issues have arisen insofar as:

- There are a number of actual and potential suppliers of indirect access; and
- IPSPs, albeit to different degrees, potentially have the option of obtaining substitute access services including direct access and direct technical access. This means that, at least for some IPSPs, indirect access, in its current form, may not be indispensable.

Against this contextual background, and without prejudging the results of the IAMR, two types of potential problems with indirect access might, based on general principles, be capable of arising:

i. Some IPSPs might be offered indirect access services but on terms they consider unsatisfactory or unreasonable, and which distort their ability to compete (thus, ultimately harming end users).

ii. Some IPSPs might not be able to obtain indirect access services at all. That is, notwithstanding the fact that there are a number of IAPs in the market, no IAP may be willing to supply them, or their choice of IAP may be severely limited.

5.1 Issue 1: Access obtained, but terms are unsatisfactory/unreasonable

The reasonableness of access terms can be broadly considered along two dimensions: terms relating to price and non-price terms. Although some respondents to previous PSR consultations have raised some concerns about pricing, access pricing issues appear to have featured less prominently in relation to payment systems than in other regulated industries, where the level of, and approach to, access pricing, has often been the subject of considerable controversy. Again, and without pre-judging the results of the IAMR, this is not to say that the PSR may not find issues associated with the structure and level of prices for indirect access, but rather that they do not appear to have featured as prominently in prior analysis as they have in other markets.[16]

[16] The PSR has previously noted that: "*Stakeholder concerns raised with us about the fees for Indirect Access do not appear to be widespread at present*" see Payment Systems Regulator (2015) *'Access to Payment Systems: Supporting Paper 4.*" Para 4.230. Similarly, the OFT market study in 2003, concluded that, at that time,

The more prominent concerns raised in prior analysis have generally been related to the non-price terms of access. Among the issues that have been raised: a lack of transparency regarding the negotiation process; an absence of contractual clarity regarding the obligations and rights of the different parties; and poor communication by access providers relating to outages and other changes to the service agreement which can impact on the business of the IPSP. More generally, some IPSPs have suggested that they are in a poor bargaining position *vis-à-vis* the IAPs, and that access providers have been able to exploit this asymmetry in various ways.

A specific complaint voiced by some IPSPs is that the quality of indirect access they have to certain payment systems – notably Faster Payments – is inferior to that which an IAP has as a Direct Participant of that system. More specifically, there is a claim that the technical quality of service provided to IPSPs is not equivalent to the service that is provided to the IAP. The wider claim is that this difference in quality of service is potentially limiting the ability of IPSPs to compete in retail markets, and that this puts competitors (such as challenger banks) at a disadvantage.

5.2 Issue 2: Inability of some PSPs to obtain Indirect Access

The second general type of access problem – where some potential IPSPs cannot obtain access at all – might, in some circumstances, be classified as a form of refusal to supply. Specifically, this claim has been raised about the decision of some IAPs not to supply indirect access to certain types of money remittance companies. To the extent to which this occurs this can create a situation where some IPSPs (who are not able to become Direct Participants or cannot acquire indirect access on a secondary/nested basis) are effectively foreclosed from providing certain types of end-to-end payment services (i.e.: because they cannot obtain access to an indispensable service).

An important consideration therefore is whether the decision of some IAPs to not supply indirect access to some IPSPs is economically rational and justified. Again, at a general level, there are price and non-price aspects to consider.

Price-based rationales for refusing to service particular customers

Although the question of the appropriate level of access price can be highly contentious, a generally accepted point of principle across all regulated industries is that access providers should not be required to provide access in contexts where it is unable to recover the costs of supplying access (including a reasonable return on invested capital).[17] Where regulated access prices have not allowed an access

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competition for agency business was intense, and that no evidence was found of significant problems with the level of agency fees. See OFT, 2003. “UK payment systems: An OFT market study of clearing systems and review of plastic card networks”. May 2003, page 63.

[17] Recognising that from an economic efficiency point of view, in some contexts the optimal access price may be above or below the costs of supplying access.

provider to recover the costs of supply, such arrangements have sometimes been characterised as involving the appropriation or confiscation of capital (i.e.: regulatory takings), and illegal.

Non price-based rationales for refusing to service particular customers

In other regulated industries, access is not always automatically granted to all access seekers, and those seeking access services are generally required to satisfy certain requirements. Specifically, in many utility industries, access seekers are generally required to satisfy various technical, operational and financial requirements in order to qualify to obtain access services. For example, access seekers may need to be licensed, and to demonstrate that they have appropriate processes in place to address various risks associated with supply. The need to satisfy such requirements derives from the interconnected nature of these networks, such that a failure of supply at one point on a network can have knock-on effects at other points (an electricity blackout being a prime example). In addition, in many utility industries, requirements exist to ensure various aspects of security of supply and health and safety policy are maintained (such as quality standards for those inserting water into a water system or natural gas into a pipeline). In the payments industry there may be concerns about system stability and integrity if a PSP generates large volume of incorrect payments, or frequently breaches its limits etc.

Risk-based rationales for refusing to service particular customers

A rationale that encompasses both price and non-price elements that has been made to justify the decision of some IAPs not to supply some IPSPs with indirect access is that the financial crime risks of servicing such customers are too great. Specifically, it is argued that the supply of indirect access to some IPSPs – particularly money services businesses (MSBs) – gives rise to increased exposure to financial crime risks (such as money laundering and terrorist financing risks). Some IAPs have argued that, because of this increased exposure, and the costs associated with managing such increased exposure, IAPs should not be required to service such IPSPs. This risk-based line of reasoning was put forward by Barclays in a recent High Court case (*Dahabshiil v Barclays*) in support of its decision not to provide banking services to particular IPSPs. In that case, Barclays argued that its decision to reduce the total number of MSB customers by 62% (from 414 to 156) was 'risk-based', noting:

> *"Barclays has not targeted particular MSBs. It has taken a risk based approach and acted in accordance with defined eligibility criteria and by reference to regulatory exposure and the costs of providing services bearing in mind the increased cost incurred as a result of that regulatory exposure."*[18]

Although it is beyond the scope of this paper to consider the specific issues in detail, an important general question this raises is whether this line of reasoning is likely to

[18] *Dahabshiil Transfer Services Limited v. Barclays Bank plc.* [2013] EWHC 3379 (Ch). Para 25.

be economically justified. Specifically, the question is: when will the financial crime risks (and associated costs) with providing banking services, including indirect access services, to certain PSPs make it economically unviable for an IAP to supply a PSP?

In principle, the mere fact that there is a diverse group of potential customers, with differing characteristics and risk profiles, should not, alone, mean servicing all of these customers is economically unviable. In other market contexts, differences in risk tend to be factored into the price that is charged to a customer. Prominent examples include insurance markets (where young, inexperienced and therefore more (statistically) risky drivers attract higher premiums) and payday loan markets (where those with a poor credit record are charged substantially higher interest rates).

However, it has been argued that the supply of banking services is different in that the potential magnitude of fines and other penalties for AML/CTF compliance breaches is so great – including, in some cases, the potential loss of a banking licence – that the price for higher-risk customers would have to be at an inordinately high level to cover the potential exposure of the IAP. In this respect, reference is sometimes made to the level of past fines levied on banks for inadequate money laundering controls, such as the £8.75 million on Coutts and Co and £5.6 million on RBS all levied by the FCA and predecessor bodies. Reference is also sometimes made to the $1.9 billion levied on HSBC by US authorities in relation to poor money laundering controls.[19]

These points suggest the need for a structured framework which can allow for the assessment of whether, in a specific case, an IAP's decision to not service an IPSP is justified, having regard to factors such as: the potential risk exposures for the IAP; the commercial incentives to supply; wider public policy objectives; and any potential anti-competitive effects associated with not supplying a particular IPSP.

[19] See *Dahabshiil Transfer Services Limited v. Barclays Bank plc*. [2013] EWHC 3379 (Ch). Para 17.

6. Ways of addressing access problems

In the previous sections of this paper we have considered issues associated with the supply of access services, both in a general way and in the more specific context of the supply of indirect access. The discussion in these sections has been based on general principles, and on the results of past analysis and consultations, and does not seek to pre-judge the outcome of the IAMR.

Consistent with this approach, this section first considers a general typology of remedies that can, and have been, applied in other contexts, before making some brief remarks about some of the factors that should be borne in mind when thinking about remedies to address any problems identified with indirect access.

6.1 Market based approaches to dealing with access problems

A forbearance approach

In some settings, even when actual or potential access problems are identified, the approach adopted has been to forebear from introducing any specific remedies. In most cases, the forbearance approach has been based on an assessment that the market is undergoing rapid and significant change, and, that this change is likely to mitigate actual or potential access problems.

One general setting where such an approach has been adopted is where it is expected that new entry will occur in the near future, and that the new entrant (or entrants) will seek to directly compete with the incumbent on price and non-price terms of access. Another setting where a forbearance approach has been adopted is where, often as a result of technological change, new supply methods and arrangements are developing, which offer an alternative, substitute service to that provided by the incumbent access provider. The key point is that in both of these settings access to the existing access provider is expected to become less indispensable in the future.

The Federal Communications Commission (FCC) in the USA has adopted an approach based around regulatory forbearance in relation to access to fibre and IP networks since 2003. A policy of ‘regulatory forbearance’ has largely been adopted in relation to broadband services. This policy has been motivated by a desire to encourage infrastructure investment in new network technologies. A UK example of where a regulator has decided to not introduce remedies in light of market developments is the Competition Commission (CC) decision in its Movies on Pay TV market investigation. Specifically in that investigation the CC initially found that Sky’s control of the acquisition and distribution of first subscription pay-TV window (FSPTW) movie content on pay TV adversely affected competition between pay-TV

retailers.[20] However, in its final decision, the CC revised its provisional findings and decided not introduce remedies in light of market developments.[21] These developments included the emergence of Over-the-Top (OTT) internet video on demand services such as Netflix and LOVEFiLM, and the launch of Sky's OTT service (Now TV).

Generally speaking, a policy based on forbearance is likely to only be suitable as a policy response to access problems if certain pre-conditions hold. First, the expected entry, or development of alternative supply methods, is credible and likely to be of a significant scale and scope to address the problems identified (i.e.: it should not be only partial and peripheral). Second, the expected market changes are expected to occur within a reasonable timeframe. Third, the possibility of imposing mandated regulatory remedies to address any problems identified could have the perverse effect of reducing the incentives for investment by new entrants (e.g.: where the new entrant is concerned that it too will be subject to such mandated requirements).

Regulatory dispute resolution to resolve individual access disputes

Another market-oriented approach involves access providers and access users engaging in commercial negotiations as to the terms of supply in the first instance, with the possibility that, should the negotiations be unsuccessful, a reference can be made to a regulator for resolution of the matter. In this way, the regulator's role becomes one similar to a dispute resolution function. The objective is to encourage parties to determine access terms commercially. However, there is the backstop of regulatory dispute resolution in the event that the parties engage in genuine negotiations in good faith, but are unable to agree on access terms.

This approach is sometimes viewed as a more market-oriented, or less interventionist, approach than the upfront determination by the regulator of access terms. Such an approach is likely to be best suited to situations where the number of access related disputes is expected to be relatively limited in number, making it more efficient than applying an industry wide set of access conditions.[22]

Ofcom has used the approach in relation to telecommunications access. On hearing a dispute it may: set out the rights and obligations of the parties; fix the terms or conditions of transactions between the parties; require the parties to enter into a transaction on prescribed terms and conditions; or require adjustments for an under or over payment. Ofcom has, in the past, acknowledged a preference for dealing

[20] Competition Commission (2011). *Movies on Pay TV Market Investigation: Provisional findings report.* 19 August 2011 Para 38.

[21] Competition Commission (2011). *A report on the supply and acquisition of subscription pay-TV movie rights and services.* 2 August 2012. Paras 6 and 9.

[22] In Australia, this approach was used for telecommunications access disputes between 1997 to 2011. However, during this period, the regulator received over 160 arbitration notifications. Because of the large number of disputes, in 2011, this approach was replaced by 'access determinations' (where the regulator provides a set of terms and conditions upon which all access seekers can rely if they are unable to come to an agreement with an access provider on the supply of a service).

with access matters through the regulatory dispute resolution processs as compared to competition law, describing the attraction to industry of this 'swifter guaranteed route'.[23] The approach has also been used in the telecommunications industry in Australia and the USA, and in the water industry and for gas storage in the UK.

6.2 Remedies introduced to address access problems in other sectors

In circumstances where market developments are not expected to address the access problems identified, or where the number of access related problems affect a wide number of users (i.e.: they are industry-wide and cannot be resolved on an individual case-by-case basis), other forms of remedy are applied. This section briefly considers some examples of the types of remedies that have been applied to address access problems in other regulated contexts.

Regulatory remedies when access provider is a monopoly

In settings where there is a monopoly supplier of 'access', which is an essential input for activities in a related market, the operator of that facility is sometimes required to provide access to other operators, generally on reasonable and non-discriminatory terms. Examples include: access to a transmission grid for electricity; access to the national transmission system for gas; or access to a railway network. In some jurisdictions, there is a formal process to determine whether a facility has certain characteristics that make it non-economically viable to replicate, and where third-party access should be granted.[24]

A separate question to whether a supplier should be required to provide access to third parties, is the price and non-price terms on which access is provided and, in particular, whether such terms are determined by the regulator, negotiated between the access provider and an individual access seeker, or the subject of a multiparty agreement. There are two general possibilities here:

- In some cases, both the price of access and standard terms are determined by a regulator, or subject to regulatory approval. This approach is sometimes referred to as a 'regulated third party access arrangement'. In some cases, the specific regulated access terms may be contained in industry codes, which can be co-regulatory multiparty agreements setting out the terms and conditions of access.

- In other cases, the access provider and access seeker negotiate the terms of access in the first instance. In the event such negotiations fail, the regulator

[23] E. Richards, (2010) '*Competition Law and the Communications Sector*' (Speech to the UCL Jevons Institute for Competition Law and Economics Annual Colloquium, 13 July 2010)
[24] See for example the criteria under the general access regime in Part IIIA of the Australian Competition and Consumer Act.

can make a determination. This is sometimes referred to as negotiated third-party access.

In situations where the access provider is a monopoly and is vertically integrated, additional requirements are sometimes imposed on the access provider to ensure that access terms offered to third parties in related markets are fair and equivalent. This has been a particular feature of remedies introduced in the energy industries in the EU, where historically there has been a high degree of vertical integration in many countries. In some countries, such as the UK, there has been a policy of structural and ownership separation of competitive and non-competitive elements of the supply chain (i.e.: generation and retail activities from transmission and distribution activities) to assist equivalent treatment in related markets.

Regulatory remedies when access provider has significant market power

In settings where there is more than one supplier of a service (i.e.: oligopolistic settings) but where one supplier holds a position of significant market power, the nature and type of remedies introduced tend to be moderated according to the degree of market power held by the supplier. In short, the remedies are intended to reflect the fact that there is some competition, but such competition is not considered to be an effective constraint on the behaviour of a supplier with significant market power. Two examples illustrate this approach.

The first example is the regulatory framework that applies to the European telecommunications industry, which requires periodic assessments of market power. In brief, the approach requires National Regulatory Agencies (NRAs) in each European Member State to analyse a set of markets for electronic communications that may need ex-ante regulation. This process involves three steps: (i) the definition of the relevant geographic and product market; (2) a 'significant market power' (SMP) assessment; and (3) a decision on 'remedies'. Firms assessed as holding a position of SMP in a relevant market may be subject to various 'remedies' including obligations in relation to access, transparency, cost-orientation (including price regulation), accounting separation and non-discrimination (those firms assessed as not holding SMP are only subject to the provisions of general competition law and general industry-wide regulatory obligations).

To address concerns about potential non-equivalence, it has been common to observe various forms of business separation in the telecommunications industry across jurisdictions, including in particular, so-called 'operational' or 'functional' separation.[25] In a nutshell, this involves the creation of a separate core-network wholesale division within the vertically integrated firm, which, to different degrees, is separated from the firm's retail activities. The purpose of business separation is to foster equivalence and non-discrimination, meaning that the wholesale business

[25] Other forms of separation that have been introduced in different industries to deal with these issues include accounting separation, legal separation and ownership separation.

division (i.e.: which sells access to the fibre/copper network) should become indifferent in its treatment of internal customers (i.e.: the vertically integrated retail division) and external customers. Business separation can be achieved in various ways, such as restricting the flow of information between business divisions, having a separate management team for different divisions, or the appointment of an independent board to ensure that external customers are treated equivalently to internal customers. In the UK, BT submitted a voluntary undertaking in 2005 to operationally separate its wholesale network activities (to be provided by a new entity known as Openreach) from its other activities, such as retail services. This decision was undertaken in lieu of a reference by the regulator to the Competition Commission (now the CMA) which may have resulted in the imposition of mandated structural separation. Ofcom is currently reviewing the effectiveness of this separation as part of its Strategic Review of Digital Communications.

A second example of regulatory remedies in the face of significant market power is the use of various 'precautionary' remedies in the context of the emergence of competition. Relevant examples include airports and retail electricity markets. These precautionary measures range from so-called 'light handed' measures, such as oversight and reporting requirements on suppliers with market power (underpinned by a threat of formal regulation if they abuse their position) to the use of 'precautionary' or transitional price regulation, where the price cap is set at a relatively loose level and acts to restrict the ability of the incumbent firm to charge a price well in excess of costs. Transitional maximum price caps were used in the residential retail energy market in Britain as formal price controls were lifted in 2003, and have recently been proposed again as a possible remedy in the CMA market investigation into the energy sector. A 'safeguard' price cap approach has also been proposed in the past for Stansted airport in London.[26] This was in recognition of the fact that Stansted increasingly faced competition from other airports (such as Gatwick, Luton and Heathrow), and faced strong countervailing buyer power (from low-cost carriers), which limited its ability to exploit any market power it had.

Perhaps the most relevant points to draw from these examples are that: (i) in oligopolistic contexts, the regulatory requirements need to be tailored to the extent of competition in the market; and (ii) such requirements should be withdrawn when effective competition emerges. Indeed the retention of regulatory controls in markets that are competitive can have distortionary effects, and may even be inimical to the development of competition. For example, where the regulated price is set at a level above what would otherwise be the market clearing level this can act as a 'focal point' for tacitly collusive price setting and lead to higher prices. Conversely, where a regulated price is set below what would otherwise be the market-clearing price this can act as a disincentive for entry and investment. This tension between setting a regulated price which is too high or too low, has been recognised by the CMA in its

[26] The specific proposal for the safeguard price cap was for a level above costs, but lower than a level which might be considered excessive according to ex post competition law.

current energy market investigation. Similarly, mandated terms and conditions can limit the ability of parties to negotiate bespoke supply arrangements as competition develops.

Remedies when the supplier is dominant and found to operate an essential facility

It is difficult to develop a clear typology of the types of remedies that have been introduced in settings where a dominant firm has been found to operate an essential facility and is refusing access to that facility on fair and reasonable terms. In one important European case, involving access to a port facility (and where it was claimed that the port timetable was structured by an integrated operator so as to frustrate the activities of a competitor) the operator of the port was ordered to change its schedule so as to not disrupt the competitors' loading and unloading facilities. In the Microsoft case (although not strictly an essential facility case) the remedy adopted was to oblige Microsoft to compulsory license interoperability information. Other types of remedies that have been contemplated or introduced, include compulsory licencing in some patent cases, and mandatory requirements involving a 'duty to deal' with a would-be competitor.

An important point is that courts and regulators have generally been aware of the potential disincentive effects of imposing mandated access requirements on firms. In an influential European Court case on essential facilities (*Oscar Bronner*), the Advocate General clearly set out the tension associated with imposing mandatory requirements to supply certain customers, noting that it can have both pro-competitive and anti-competitive effects:

> "56. First, it is apparent that the right to choose one's trading partners and freely to dispose of one's property are generally recognised principles in the laws of the Member States, in some cases with constitutional status. Incursions on those rights require careful justification.
>
> 57. Secondly, the justification in terms of competition policy for interfering with a dominant undertaking's freedom to contract often requires a careful balancing of conflicting considerations. In the long term it is generally procompetitive and in the interest of consumers to allow a company to retain for its own use facilities which it has developed for the purpose of its business. For example, if access to a production, purchasing or distribution facility were allowed too easily there would be no incentive for a competitor to develop competing facilities. Thus while competition was increased in the short term it would be reduced in the long term. Moreover, the incentive for a dominant undertaking to invest in efficient facilities would be reduced if its competitors were, upon request, able to share the benefits. Thus the mere fact that by retaining a facility for it own use a dominant undertaking retains an advantage over a competitor cannot justify requiring access to it.
>
> 58. Thirdly, in assessing this issue it is important not to lose sight of the fact that the primary purpose of Article [82] is to prevent distortion of competition – and in

particular to safeguard the interests of consumers – rather than to protect the position of particular competitors. It may therefore, for example, be unsatisfactory, in a case in which a competitor demands access to a raw material in order to be able to compete with the dominant undertaking on a downstream market in a final product, to focus solely on the latter's market power on the upstream market and conclude that its conduct in reserving to itself the downstream market is automatically an abuse. Such conduct will not have an adverse impact on consumers unless the dominant undertaking's final product is sufficiently insulated from competition to give it market power.

…

61. It is on the other hand clear that refusal of access may in some cases entail elimination or substantial reduction of competition to the detriment of consumers in both the short and the long term. That will be so where access to a facility is a precondition for competition on a related market for goods or services for which there is a limited degree of interchangeability.

62. In assessing such conflicting interests particular care is required where the goods or services or facilities to which access is demanded represent the fruit of substantial investment…"[27]

In short, the position adopted appears to be one where, in certain circumstances, dominant firms can be placed under a duty to supply. However, because it can have detrimental incentive effects, it is recognised that such a duty should only be invoked where there is a clear detriment to competition, and ultimately, consumers, from such a refusal to supply.[28] And this requires a detailed consideration of the features of the market and the economic context.

Remedies when an adverse effect on competition is found as part of a sectoral or market investigation

The range of remedies that have been introduced following a sectoral or market investigation – including investigations under the complex monopoly provisions of the Fair Trading Act – show considerable variation, ranging from: requirements to divest assets; measures to improve consumer engagement and switching; the banning of specific products and sales techniques or of specific forms of contractual arrangement; to the introduction of information based and educative remedies.

[27] Opinion of Advocate General Jacobs delivered on 28 May 1998 in Case C-7/97 *Oscar Bronner GmbH & Co. KG v. Mediaprint Zeitungs- und Zeitschriftenverlag GmbH & Co. KG*, E.C.R. I-7791.
[28] In the US, a practical tension with the doctorine has been noted: "*Although the essential facilities doctrine has been the target of some distinguished critics, the remedy of mandatory access has enjoyed persistent, even growing, popularity despite being almost surely unworkable in most cases*." See Lipsky, A. and J.G. Sidak, 1999. 'Essential Facilities'. Stanford Law Review. Vol. 51. May 1999.

Since the introduction of the Enterprise Act 2002, the remedies that have been introduced by the Competition Commission (now the Competition and Markets Authority) have been categorised as follows:[29]

- Measures directed at opening markets and activities to competition, for example through lowering barriers to entry / expansion for competing suppliers.
- Measures to improve consumer responsiveness and engagement in a market, such as improving the information available to consumers to improve switching.
- Structural changes to a market, such as forced divestitures, the banning of certain sales techniques, and restrictions on certain contractual arrangements.

Table 3 below details the remedies introduced in fifteen Market Investigation References between 2002 to 2015 (as noted one Reference for Movies on Pay TV was cleared without the need for remedy in part because of market developments). An important observation is that generally a 'package' of remedies was introduced to address any adverse effects on competition, and in only one case, was a single remedy applied in isolation.

Of particular relevance to the IAMR are the remedies that have been introduced to encourage switching, and to lower entry barriers and expose suppliers in a market to greater competitive pressure. Among the specific remedies introduced in these investigations:

- In the LPG market investigation, the Competition Commission (CC) found that suppliers had imposed various restrictions on customer switching, including: requirements to obtain a new tank when switching, and various contractual restrictions (such as a three-month notice period). To address these issues, the CC required that (i) tanks be transferred from existing to new suppliers at a regulated price; (ii) that the switching process happen within 42 days; and (iii) various information be provided to consumers about the potential for switching.

- In the Home Credit investigation, the CC found that, among other things, lenders did not share information with credit reference agencies and that this created an asymmetry of information about customers' creditworthiness between incumbent operators and new entrants. To address this problem, lenders were required to share information on payments history with Credit Reference Agencies, and lenders were required to give early settlement rebates which were at least as generous as set out in legislation.

[29] See Coscelli, A, (2014). 'The UK Experience of Market Investigations'.

- In the Statutory Audit investigation, the CC found: significant barriers to switching auditors; that mid-tier auditors faced reputational hurdles; and that shareholders faced an information asymmetry about the work carried out by auditors. The remedies introduced to encourage entry included requirements for FTSE 350 companies to retender audit services at least every 10 years, and to strengthen the role of audit committees vis-à-vis management.

- The Payment Protection Insurance (PPI) investigation concluded that: suppliers (i.e.: banks) did not actively seek to win customers on price/quality combinations; product complexity and other factors led to low levels of consumer understanding and engagement; and the sale of PPI at the point of sale restricted the ability of other stand-alone providers to compete effectively. The main remedy introduced to address these problems was a prohibition on selling PPI at point of sale.

- In the BAA Airports investigation, the CC concluded that the common ownership of airports by BAA restricted competition, and required, among other things, that BAA dispose of both Gatwick and Stansted to separate buyers.

In sum, although the market investigation references cover a range of different industries, and are not generally focussed on access issues, a feature common to all of them is that they have involved markets where there is more than one actual or potential supplier of a service, but where competition has been assessed as not being effective. Perhaps the key insight to emerge from a review of Market Investigation References since 2002 – and indeed from complex monopoly investigations which predated these investigations – is that the remedial measures introduced tend to be pragmatically designed to address specific competition issues that have been identified. Put differently, the CC/CMA has applied a range of informational, behavioural and structural remedies to address what it has assessed as being the main impediments to competition in these markets.

Table 3: Remedies resulting from Market Investigation References

Investigation	Remedies to improve information to consumers	Remedies to improve switching	Remedies to lower entry barriers	Remedies to change the structure of the market	Other remedies
Store cards	Yes	Partly			
Liquefied Petroleum Gas	Yes	Yes			
Home credit	Yes	Yes	Yes		Yes
Classified Directory Advertising Services					Yes
Northern Ireland Banks (PCA)	Yes	Yes			
Groceries				Yes	Yes
Payment Protection Insurance	Yes	Yes	Yes		Partly
BAA Airports			Yes	Yes	Yes
Rolling Stock Leasing	Yes	Yes	Yes		Yes
Local buses	Partly		Yes		Yes
Statutory audit	Partly	Yes	Yes		
Cement/ aggregates	Yes			Yes	
Private healthcare	Yes	Partly	Yes	Yes	
Payday lending	Yes	Yes			Yes
Private motor insurance	Yes	Yes		Yes	

Source: Adapted and updated from from Coscelli, A, (2014). 'The UK Experience of Market Investigations'.

6.3 Insights on remedies for the Indirect Access Market Review

To state the obvious, the appropriateness of any remedial measures introduced following the IAMR will be directly related to the type, nature and significance of any access problems identified through the market review. Poorly designed and inappropriate remedies can be inimical to the purposes for which they were introduced, and can give rise to a range of unintended consequences, which can exacerbate existing problems or create new problems.

If the IAMR finds that there are substantive problems associated with the supply of indirect access, which are adversely affecting competition and are not economically justified, it will be critical that the PSR takes account of some of the core economic characteristics of the context in which the remedies will be applied. As emphasised throughout this paper, the supply of indirect access to payment systems is different from other situations where access remedies have been applied, and remedies that might be appropriate in monopolistic, utility industries may be ineffective, and potentially counter-productive, if applied to indirect access in the payment sector.

Four specific factors distinguish indirect access from other access services and which are likely to be relevant when considering the appropriateness of various remedial measures:

- First, the industry is an oligopoly rather than a monopoly, and indirect access to some payment systems is characterised by a structure where there are a number of providers (although, as discussed, this might vary for different types of IPSP).

- Second, there is considerable scope for entry in the supply of indirect access. Indeed, there are a number of Direct Participants of payment systems who have chosen not to be IAPs.

- Third, some IPSPs have various full or partial substitution possibilities for indirect access, including becoming a Direct Participant of a payment system and self-supplying access services, or being a direct technical member of a payment system.

- Fourth, the scope for, and effectiveness of, any remedies introduced by the PSR to address issues associated with competition in the market will be conditioned by wider public policy, particularly in relation to financial crime, which appears to have an important effect on the incentives to supply indirect access.

Finally, when considering the scope of application of any possible mandated remedies it will be important to take account of a number of high-level contextual differences between the supply of indirect access and other settings where access

has been mandated in this way. In most other settings where access has been mandated there is typically a single access provider, or a supplier who holds a dominant position, or at least a position of significant market power. This differs from the indirect access to payment systems where there are at least four existing IAPs. It follows that to be effective, and avoid competitive distortions, the remedy would have to apply equally to all of those who offer IAP services. In addition, to avoid competitive distortion, any mandated requirement to provide access should arguably also be extended to *potential* suppliers of indirect access services – that is, those who are either already Direct Participants of a payment system but do not currently act as a IAP (see figure 5 below). Moreover, an argument might be made that such a requirement could also be applied to those indirect IPSPs who are capable of becoming Direct Participants of a payment system, and therefore, in principle, capable of self-supplying direct access services, as well as offer indirect access to third parties.

Figure 5: Imposing access remedies on existing IAPs and not Direct PSPs who could be IAPs, or IPSPs who could be Direct PSPs (and IAPs)