

The Regulatory Challenge of Non-Bank Payment Institutions, and the Response of PSD2

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Abstract:

Payments services were once the exclusive domain of banks. Now a host of innovative outsiders are entering this market. Their arrival poses a dilemma for financial regulators in general and for central banks, as providers of the payment system backbone in particular. Using the analogous issues in the taxicab industry as a comparison, this paper examines the economic arguments for and against restrictive regulations on the newcomers, and describes how the EU's revised directive for payments services (PSD2) attempts to strike the balance between innovation and safety in retail payments systems.

Keywords: Payment systems, financial regulation, two-sided markets, SEPA

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The Regulatory Challenge of Non-Bank Payment Institutions, and the Response of PSD2

By Charles M. Kahn¹

For hundreds of years, banks have stood at the center of payments systems. Their debt has served as the medium of exchange in individual commercial transactions and their interactions with one another have formed the web for effecting large value transactions both within and across countries.² Throughout the twentieth century the payments industry was the preserve of banks and central banks.³ Central banks provided much of the backbone for the system and much of the regulatory structure, and banks operated payments through these networks. There arose new forms of payments arrangements, such as payments cards, but they rapidly became dominated by banking institutions. Even internet payments, at least initially, fell under the sway of banks: for all of the independent start-ups of the dot-com era, the lasting and effective internet arrangements came back for the most part to credit-card backbones and to the development of internet services by banks.

Now however there is a new assault on the pre-eminence of banks in the payments landscape. The new challenge comes from many directions: Mobile phone companies in developing countries have demonstrated the possibility of sidestepping the banking system.⁴ Bitcoin has even more messianic goals⁵—of sidestepping government-based monies entirely. Other block chain technologies, if less systemically ambitious, have the potential of being equally disruptive in effect. And then there are the dozens upon dozens of start-ups proposing non-banking payments solutions in particular niches of the economy: cross-border remittances, person-to-person immediate payments, or small business solutions.⁶ Even the latest entrants in the race—

¹ Bailey Professor Emeritus of Finance, University of Illinois. This article is an extended version of my keynote address to the conference “Non-Banks in Payment Market: Challenges and Opportunities,” sponsored by Sveriges Riksbank and Lietuvos Bankas in Vilnius, October 8, 2015. I thank Santiago Carbó-Valverde for his help and advice in developing these themes.

² For example, for an account of use of the deposits within the Bank of Amsterdam as the basis of international payments in the 17th century, see Quinn and Roberds, 2009.

³ For an overview of the economics of payments, see Kahn and Roberds, 2009. For the rise of central banking and its relation to payments see Giannini, 2011.

⁴ M-Pesa is the most successful of these mobile financial services in developing countries. For a description and the results of a survey of users of this service in Kenya, see Jack and Suri, 2011. Based on survey evidence, Mbiti and Weil, 2011, argue that mobile services can also be complementary to traditional banking services.

⁵ See for example Feuer, 2013.

⁶ An indication of the variety of solutions up and running or proposed can be seen by perusal of the participation lists for central bank conferences on these topics. See for example the Chicago Federal Reserve’s 2015 payments symposium at <http://chicagopaymentssymposium.org/2015-program/> or the 2015 Riksbank/Bank of Lithuania conference at http://www.lb.lt/draft_agenda.

large IT companies like Apple—leave it an open question whether the solutions they champion will build on or bypass banks in the long run.

These new possibilities pose challenges not just for the banks, but also for their financial regulators. Up to now, regulators did not have to distinguish between payments providers and banks—they were largely one and the same. The systemic considerations in regulating payments were indistinguishable from the systemic considerations in regulating financial intermediaries. The competition and efficiency considerations in regulating payments were simply part of the overall mandate for bank regulation. But many of the new technologies could, in principle at least, operate from person to person outside of the regulatory sphere. So the new, pressing question for regulators now becomes: how should bank regulators deal with the introduction of non-bank payments systems?

Comparison with the taxicab industry

Sometimes it is useful to step back and look at the issues through another lens. So let us begin by comparison with another industry which is currently facing a similar set of issues—namely, the taxicab industry. Like banking, the taxicab industry is highly regulated, with existing networks, standards, and rents. These relationships are being threatened by a disruptive and aggressive set of entrants, notably Uber, but also Lift, Sidecar, and less directly such firms as Zipcar, all supported by a dynamic new set of technologies. The entrants provide the possibility of great benefits to previously excluded members of the economy, and new opportunities to those who use the existing technology. But they also endanger the stability and well-functioning of the existing system. So regulators of the industry face a difficult set of dilemmas in many ways parallel to those in the payments industry.⁷ (At the end, we will also consider some additional issues which make payments unlike cab rides).

City by city, Uber causes controversy when it arrives.⁸ The stated reasons for the controversies are fears of lower quality and even dangerous service provided by the unlicensed entrants; or disgust with exploitation of the “independent contractor” drivers who are not receiving the employee protections afforded to operators of regular taxicabs.

The real reason for the controversies, of course, is the loss of rents to the holders of the existing permits. Uber has caused nosedives in the values of taxicab medallions in cities where it has entered—and so serious financial losses to the holders of those licenses.

⁷ For a recent analysis of the social costs and benefits of Uber, see Rogers (2015).

⁸ For an analysis of the disruptive effect in New York, see Economist (2015) and <http://www.economist.com/blogs/graphicdetail/2015/08/taxis-v-uber>

To the extent that cab owners' pain comes from the damage to their economic rents, there is no efficiency argument that they can bring to bear on the controversy. Nonetheless there are some legitimate arguments that they can call on, based on regulation.

The first legitimate argument is that the regulations imposed on existing taxicab companies are more onerous than what Uber and its drivers face. In the name of safety and quality, licensed cabbies must go through checks for their knowledge and suitability to their jobs. Their cabs must also satisfy standards. Now, to the extent that Uber customers evaluate and rate drivers, they too have tests of their knowledge and of the suitability of their cars. Nonetheless, licensed cabbies can argue that, on some dimensions at least these consumer reviews impose looser standards--particularly so on those dimensions difficult for the customers to observe.

When an economist hears that the playing field is not level, that some are subject to more onerous regulations than others, the gut reaction is "Why not reduce the regulation on everybody?" What difference does it make whether the London cabbie has the legendary "knowledge" of all the streets of the metropolis in the era of Google maps? Of course the economist's solution would not actually satisfy the incumbent drivers. They have already invested in meeting the standards. If the standards were dropped their returns from this investment would dry up along with the returns on their monetary investments in the medallions.

On the other hand, there may have been legitimate reasons for regulatory interventions within the existing taxicab industry. The most plausible reason is the existence of *network externalities in a two-sided market*: Taxicabs, at least when hailed on the street, are subject to a search externality: the willingness of individuals to hail a cab depends on likelihood of cabs being on the street, and the willingness of cabs to be on the street depends on the likelihood of meeting customers.⁹ And both of these willingnesses are likely to be dependent on the quality of the ride services when the meeting occurs, which were largely determined before the meeting. So there is coordination role for a regulator in setting the minimum qualities for cabs.

Such regulations provide a social benefit in that they generate expectations of the likely waiting time to and quality of the ride and driver that the individuals are searching for. But in the meanwhile, all sorts of complicated cross-subsidies are arising in the market: restriction of licenses limits the number of cabs, but ensures that the cabbies receive trips sufficiently quickly to make it worth their while to search for fares. Requiring cabs to maintain certain standards of cleanliness increases costs but may encourage more riders to search for cab rides.

Nonetheless, those customers with more relaxed standards of cleanliness end up subsidizing

⁹ The theoretical investigation of two-sided markets is extensive. The theory has been applied in particular to payments cards platforms. See, for example, Rochet and Tirole (2006), and McAndrews and Wang (2008).

those with higher standards, and those going to some locations end up with a pricing structure subsidizing those going to different locations.

And when a disruptive technology like Uber comes along, it not only brings new buyers and sellers into the market; it also makes things much better for some existing participants in some segments of the market. But since those participants were part of this complex cross subsidization, this will in general eliminate the subsidies they were providing to the other participants in the market. Even more, their exit from the traditional part of the market imposes negative search externalities on their opposites in the existing segment.

The welfare theorems of economics do not provide a clean answer to the question of whether it is desirable or not to permit entry of the new platform. The new platform provides winners and losers and the externalities are sufficiently complicated that there is not going to be a straight conclusion as to whether one side can overcompensate the other for the change. We can be skeptical of the claim that banning Uber would be a good thing overall, or of the claim that the introduction of Uber would cause traditional cab networks to disappear. But economic theory can't rule out the possibility that there could be a sufficiently precipitate decline in the availability of traditional taxicabs and an overall loss of welfare, because of the impact on segments of drivers and riders for whom the switch to the Uber platform is expensive (For example, on the rider side, strangers in the city if that city is heavily dependent on tourism).

Therefore regulators are faced with a dilemma: they can apply the same tough regulatory standards to Uber as to the rest of the industry, and lose the benefits that the new niches have achieved. Or they can leave Uber unregulated, let the old industry wither and suffer the costs to the niches that were best served by it. Finally they can try to strike a balance: treat Uber as ideal for its niche and the old industry as ideal for the remaining niche and regulate accordingly, and bear the costs associated with the fragmenting of the network.

Application to Payments Industry

The same dilemma faces the payments industry. Each of the new payments platforms has the potential to bring improved services to particular segments of the population. Each has the potential to bring into the economy individuals who were previously completely unserved by the existing arrangements. And each if successful poses a threat to the existing network of standards, expectations and cross-subsidies.

And bank regulators have the same options that taxicab regulators do in dealing with new entrants to the market:

1. Ignore them. Let them grow; let the consequences arise where they may. If traditional payments wither as a result, then so be it.
2. Strangle them. That is, put them under the same regulatory burdens as banks: capital, reserve, liquidity requirements, know-your-customer standards, deposit insurance—the works. These burdens will cause almost all of them to disappear or at least to go underground, with the remnant becoming largely indistinguishable from existing services.
3. Regulate each according to its preferred niche: the new systems are most appropriate for particular kinds of payments, the old for others. Encourage the new systems with relaxed standards within their particular environments, but restrict them from straying too far beyond. Benefits are gained and existing uses protected, at the cost of network fragmentation.

Realistically speaking, of course, neither of the first two options will be chosen. Strangling the technologies at birth is not possible (except for bitcoin where it still might not be too late). And the new technologies are also clearly too big and too important to ignore. And fragmentation is probably less of a concern in an environment (like payments) with sufficient heterogeneity that individuals are likely to join multiple platforms anyway. Nonetheless it's useful to consider the case for the new technologies under the same standards as the old, in order to understand what is at stake.

Leaving aside consumer protection and anti-monopoly justifications common to every industry, what are the additional reasons for regulating banks? Most of them come down to the fact that the banks are part of the payments system. Bank credit is prime medium of exchange, and disruptions to the medium of exchange cause externalities to the economy as a whole. A taxicab strike causes some knock on effects for the rest of the economy, but nothing compared to the closure of the payments system, as recent events in Greece or Cyprus make clear.¹⁰

So to the extent that the failure of one participant in the payment system disrupts commerce for other members of the system regulatory standards may be warranted. But failures of individual components may not disrupt the system: do users of a particular enterprise (bank, mobile phone company) have alternatives immediately available to them? Do failures cause contagions? In modern systems, if the backbone is sound the problems of knock-on failures are minimized. (The dramatic examples have come from failures of the backbone itself.) That puts us into the category of extreme events—legitimate worries for the system regulator, but not likely to require onerous regulatory burdens to individual providers.

¹⁰ For a re-examination of a parallel situation in Ireland in 1970, see Norman and Zimmerman (2016).

Where there is a difference

In fact, however, there are differences between taxicab rides and payments for, say, raw materials—differences that even someone as blinkered as an economist can discern. Two complications arise in the regulation of payments compared to the regulation of taxicabs. The first, smaller complication comes from the interaction of payments services with credit provision. There is a natural complementarity in these two functions. Historically, the most flexible medium of exchange has always been the credit of reliable third-parties—merchant traders, goldsmiths or the like, and the provision of payment services by these institutions has integrated seamlessly with the provision of short term credit.

In other words, if an institution provides individuals with credit which then serves as the basis of their payments and that institution fails, then all those individuals who depended on it find themselves stranded. To the extent that the credit relationship required information and that information is disrupted by the failure, then the customers of that institution are locked out of the payment system until those credit lines are restored (this phenomenon is sometimes described in terms of liquidity rather than payment, but the effect is the same either way).

Alternatively, an individual's ability to transact may not have been based on a credit relationship with a service provider, but on the basis of escrowed assets—an initial deposit of gold, or an upfront payment to the telephone company. If the payments entity fails, the ability to continue with other providers will then depend on the ability to retrieve the assets. Here, then, is the real justification for deposit insurance: it allows individuals quick re-entry into the world of transactions services.

Thus, one natural way to treat non-bank entrants into payments services is as “narrow banks” -- transactional deposits require backing by sequestered verifiable safe assets, with operational standards that allow the quick release of all the information to another party in the event of failure—in other words, “living wills.”

The second of the differences is the one which makes the situation more complicated than Uber, and that is the complication caused by interconnections. A payment results in a credit of one transactor's account and a debit of the other transactor's account. An individual can set up accounts within each payment system. He could have these systems run in completely unconnected ways. But it would be a lot more useful for everybody if an individual's various accounts were netted, so that payments to somebody within one payment system could be offset by payments from somebody else on another system. In some respects netting is the essence of payment—finding a common standard of coinage or of account to allow for a series of exchanges among multiple parties.

The tricky thing is that accounts are proprietary to the existing systems. The existing structure is not just a network: it is also a fence, through which any upstart must pass to obtain access to the central system.

Go back to the taxicabs. Think of the city as a network of hotels. It's as if rights to access a particular hotel were assigned to one transportation system (taxi, trolley, Uber) by having a portion of the sidewalk outside the hotel reserved as a stand for that system. Hotels might pay to sign up with multiple systems, with each system requiring an exclusive reserved portion of the sidewalk. The hotel, on the other hand, might prefer to have the sidewalk commonly shared by any system that it might accept, saving valuable space in crowded cities.

The taxis say they don't like that. They want the "safety" of being able to know that the space is always there should it ever be called on and the customer knowing that any taxi that arrives at the station is legitimate.

Of course, that's not what they really want. What they really want is to be able to exploit the benefits of their large network. Because taxis connect all hotels, allowing Uber cars into taxi spaces would give Uber cars an enormous boost. Nor is the desire to protect their turf entirely unjustified—they have expended the resources over time to put together those networks, and it doesn't seem right for them to be required just to give them away.

So this is a complication, but the regulatory issue is the same as before. There are the stated objections, and the real objections. From the point of view of the regulator, the loss of taxi rents from opening access is generally irrelevant. But although the taxi drivers are using the safety issue as a smoke screen, it is a relevant issue.

Hotels are concerned with the safety of their guests. A car comes up to the hotel's stand give a ride. Is it a real cab or is it a thief disguised as a cabbie—a real question in certain cities. And, if the latter, who bears responsibility--the individual, the hotel, or the taxicab company whose livery was successfully imitated?

Similarly, for an unauthorized payment out of an account, or for a relied-upon payment into an account that subsequently turns out to be fraudulent, where does responsibility lie: The individual, the counterparty, one of their banks? The payments scheme that made the transfer? Or the payments scheme that appeared to have made the transfer?

All the rules for this are worked out in great detail in any existing system. All the rules are being sorted out in new systems as they arise. When two systems begin to interact, these rules become even more critical—and the decisions have fundamental implications for the mixture of payment systems that develop. All solutions proposed by any operator existing or entering, will be, to a degree, self-serving. But that does not negate the legitimacy of concerns about the safety of and liability for access on the part of new providers to existing accounts and networks. Nor does it deny the possibility that a call for strict standards can be at least partly a cover for exclusion.

The current task

In Europe right now, the task of establishing these ground rules is being undertaken as part of the revised directive for payments services (PSD2) adopted by the European Parliament last autumn (Directive EU 2015/2366) and expected to be formally approved by the EU Council of Ministers in the near future. Once officially published, the member states will have two years to introduce the necessary changes in their national laws.

While PSD2 addresses a variety of issues (in particular unconditional refund rights for direct debits, privacy requirements, surcharging for card payments), one of its important focuses is on the opening of the EU payments market to non-bank payments providers. In its attempts to do this we can see the EU addressing precisely the difficulties that we have noted thus far.

Specifically one of its stated goals is “to improve the level playing field for payment service providers (including new players)” (European Commission, 2015). The most contentious part of this is the terms for access to the accounts (for example, bank accounts) of customers by third party payments providers. While the PSD2 describes and distinguishes a variety of categories of payments service providers, for our purposes the two important types are the “credit institutions” (banks---think of them as established taxicab companies) and the “payment institutions,” particularly the providers of “payment initiation services” (such as PayPal or European companies like Sofort in Germany, or Ideal in the Netherlands---think of them as Uber upstarts). The distinction between credit institutions and payment institutions is closely related to the question of whether the institution provides an “account” for the customer—in effect a locale in which to receive payments that can in turn be used to make further payments. As stated in the Directive (article 36),

“Member States shall ensure that payment institutions have access to credit institutions’ payment accounts services on an objective, non-discriminatory and proportionate basis. Such

access shall be sufficiently extensive as to allow payment institutions to provide payment services in an unhindered and efficient manner.”

This requirement is in addition to the requirement that all authorized payment institutions be able to participate in a non-discriminatory fashion in the payments systems themselves. In other words, not only do third-party systems have to be granted equal access to the payment systems, they have to be granted equal access to the users of the payment systems through the accounts on which users of the payment systems base their payments, even though those accounts are held with institutions which are competitors in the payments arena.

The payments systems which are guaranteed this access are those which have been authorized by the regulatory authorities in the member countries. To ensure that the access is transparently provided, the European Banking Authority is mandated to develop a central register of such institutions.

One of the criteria which is permitted as distinguishing levels of access to the payments system is whether the service provider has benefitted from an “exemption” from some of the requirements of the directive. One of the factors that can lead to such an exemption is value of payments transactions---in particular this exemption cannot be allowed for annual sales greater than EUR 3 million (Article 32). Similarly, low value contactless payments at point of sale, may be exempted from some of the security measures required of other payments services (paragraph 96).

The initial PSD explicitly took the point of view of treating new services initially as niche businesses with exemptions from some of the terms of the directive. Bringing these standards into line across jurisdictions is one of the objectives of the new directive. The previous exemptions for telecoms companies for example are intended to be tightened to deal mainly with micro-payments for digital services—placing telcom payments for physical goods under the new regulations. The intent of all these distinctions remains the same: provided they are small enough or specialized enough, payments service providers can be exempted from some of the requirements normally placed on them. But as they transition to mainstream systems, the requirements increase.

Like the original PSD, much of the space in PSD2 is devoted to the issues of liability: which of the various service providers involved is responsible if a payment fails, is misdirected, is unauthorized, is disputed, or does not execute in a timely fashion, what constitutes adequate notification of intent to make a payment, of authentication of user, of confirmation of the payment, standard setting for adequate security of payments information, circumstances where revocation is possible, and standards for dispute resolution, and minimum required

liability insurance. What is new is the integration of the new forms of payment service providers into the framework of responsibilities and liabilities, through the classification into the various categories of participant. Where this clean scheme breaks down is in the classification of existing card-based systems, which do not clearly fall on either side of the basic divide, and end up to some degree in a specialized regulatory regime of their own.

Conclusion

While PSD2 leaves open the technical details, relying on the national regulatory bodies and the European Bankers Association to fill them in, it nonetheless establishes with some clarity the set of principles which are intended to be the guidelines for the anticipated competition between the old and the new forms of retail payments in Europe.

New forms of payment service provider can indeed face lighter regulatory burdens than banks, based on the differences in structure and services provided. Nonetheless, equivalent standards are required along some dimensions—particularly in terms of security and liability.

The question of access to accounts is settled largely in favor of the upstarts. That means a significant loss in the network advantage held currently by banks through their monopoly on transaction accounts. It also begins a complex unraveling of the cross subsidizations within banks. The act is intended to encourage the development of new payments services. As these services expand in their particular niches, the reductions in cost for the new adopters will be partially offset by increased costs to those who must remain for one reason or another with the traditional forms of payment arrangement. More generally, to the extent that the payments portion of the banking business has historically acted as a cheap source of funding for the bank's credit activities, the business of lending will also become more costly for banks.

The issues that arise from the interactions between the new technologies and the existing card-based payments services, on the other hand, are largely left for another day. This is not a major criticism: indeed with the complexity of the payments landscape, not to mention the political and regulatory landscape in Europe, the achievement of a directive as comprehensive as this one is no mean feat.

Nor is it a particular criticism to predict that further major changes in the directive will be necessary within the next five years. Given the speed with which changes are occurring in the payments arena, it is hard to imagine that major new, unaddressed issues will *not* arise almost immediately. In fact, to the extent that the goal of the PSD2 is to encourage the growth of new

payments technologies, the success of the project may well be measured by the extent to which the developments it has encourage transform the payments system---and so necessitate the rewriting of the rules themselves.

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