Payment Services Directive 2

PSD2 sparks innovation in Open Banking ecosystems
In this article, Deutsche Bank and Innopay join forces to share our opinion on the foremost challenge currently facing the European payments market: “the practical implementation of third party access to account (XS2A) as part of the revised Payment Services Directive (PSD2)”. With European lawmakers finalising their work on the legal aspects of XS2A, it is now up to the industry to develop functional, operational and technical solutions. So how could industry collaboration work to leverage PSD2 compliance as an enabler of Open Banking business models?

We hope the following goes some way to helping market players to understand both the current challenges of XS2A under PSD2 and the necessary considerations for its practical implementation. This article aims to address both the obstacles and potential benefits that could be incurred, in the following sections:

1. **Introduction**: a brief overview of developments that have led to an increasingly “open” payments market;

2. **Challenge**: outlining the key challenges for EU lawmakers and market players alike in balancing security against the creation of innovative, convenient solutions in an open payments market – and how the “Regulatory Technical Standards (RTS) on strong customer authentication (SCA) and common and secure communication (CSC)” seek to contribute to this;

3. **Opportunity**: a description of potential market scenarios that could emerge as a result of the RTS, and what the benefits are of a more standardised and harmonised approach to third party access to account – including an overview of relevant market initiatives that seek to establish such an approach;

4. **Conclusion**: heralding PSD2 as a spark for the emergence of Open Banking ecosystems and emphasising the pivotal role of industry collaboration.
Some EU member states have already indicated that the PSD2 transposition timeline will be difficult to meet.

European lawmakers have identified the dominance of banks, with their traditionally limited speed in bringing innovation to the payments arena, as a key impediment. This is evidenced by the fact that the main institutions involved in financial services innovation (and payments innovation in particular) are primarily non-banks, e.g. BigTechs, FinTechs, big retailers and mobile network operators. New European regulation has already begun to have a transformative impact on front-end payment services and propositions, on the one hand, and on back-end payment processing infrastructures on the other – and will continue to further transform them. To address this, European regulators have introduced several breakthrough payments regulations and directives.

1.1 From PSD1 to PSD2

Many in the industry will likely remember the first Payment Services Directive (PSD1). PSD1 brought the first wave of competition into the payments market across Europe, by introducing ‘payment institutions’ to provide new payment services for online and mobile commerce. The resultant competition contributed significantly to a reduction in the costs of payment transactions in the EU.

With the introduction of the revised Payment Services Directive (PSD2) we have again arrived at the advent of transformational change in the EU payment landscape. PSD2 must be transposed into national law by each member state in under eight months, by 13 January 2018. Some EU member states have already indicated that this timeline will be difficult to meet, however. If the timeline is not met then the directive will be applicable only once it has been transposed into national law by the respective country. PSD2 has several objectives, including to achieve further harmonisation of the EU payments landscape, to strengthen consumer protection and, to drive competition and facilitate innovation by further ‘opening-up’ the payments market.

1.2 Third party providers (TPPs) will drive competition in the payment ecosystem

PSD2 introduces three types of services that can be offered by the respective providers: payment initiation services (PIS), account information services (AIS) and confirmation availability of funds (CAF). PSD2 will allow those commonly referred to as ‘third party providers’ (TPPs) to provide a new digital channel to access bank customers’ payment accounts – upon their explicit consent. Note that ‘third party providers’ refers to a very diverse group of potential players willing and able to adhere to the regulatory requirements. This category spans fintech companies, big merchants and enterprise resource planning (ERP) / accounting software providers, as well as incumbent payment players in the form of banks and payment and e-money institutions.
1.3 Benefits for payment stakeholders

Consumer payers are expected to benefit from the changes as TPPs drive competition and innovation, in particular via wider choice when initiating electronic payments directly from their payment accounts and especially for mobile/web e-commerce. Consumers will also obtain more control over their financial assets, as they can share information with a TPP of choice. This information can be used (with consent) to provide a holistic financial view and increase straight-through-processing of other online processes that could benefit from authentic bank data, such as credit card or loan applications.

SME business payers are expected to benefit the most, as corporates often have dedicated connections from their ERP systems to their banks, providing access to the insights and capabilities PSD2 sets out to open-up. At the very least, SMEs will gain the same benefits as consumers, but they could also benefit from more and better integration between their payment accounts and ERP/accounting software systems, through use of payment initiation and account information services.

Merchants (payees) will benefit from a wider range of options when collecting payments from both Consumer and Business payers. The fact that TPPs have contract-free (and thus fee-free) access to the payer’s payments account will mean a cost advantage over payment methods that are based on interchange fees.
2 Challenge: Balancing security and innovation in an open payments market

PSD2 is not only about facilitating innovation in digital payment services

There are few if any precedents in the relatively young digital payments industry for how ‘third party access to payment accounts’ could and should be made to work in a practical way – in regulatory practice, national law and, above all, in day-to-day operations.

The lawmakers took another unprecedented step with PSD2 by introducing security requirements into an EU Directive for the first time. Indeed, PSD2 is not only about facilitating innovation in digital payment services, but about the security measures taken to protect digital transactions.

2.1 Role of the European Banking Authority (EBA)

EU lawmakers left it to the European Banking Authority (EBA) to develop detailed requirements regarding the communication, authentication and security of interactions between third parties, banks and the payment service user. PSD2 confers 11 mandates on the EBA in total:

- Six Regulatory Technical Standards (RTS) that, once adopted by the EU Commission, will be directly applicable EU law that does not require national transposition or implementation, and;

- Five Guidelines that will become legally binding when the national competent authorities implement them into national regulatory and/or supervisory framework.

When developing these mandates, the EBA will have to make difficult trade-offs between the somewhat ‘competing’ objectives of the PSD2, i.e. innovation and ease-of-use of new digital transaction services on one side, and security and consumer protection on the other.

2.2 Final Draft RTS on SCA and CSC

This conflict has been particularly evident in the Final Draft RTS on “strong customer authentication (SCA) and common and secure communication (CSC)”. This has elicited the highest ever number of reactions (224 in total) from various market players voicing concerns on 300 distinct elements of the RTS. The most important change areas of the Final Draft RTS are described in figure 1:

Sources:

1 http://www.eba.europa.eu/documents/10180/87703/EBA+Mandates+PSD2.pdf/5c2493a4-ef26-4434-8338-736899bd423f
4 When the authors refer to ‘RTS’ in the remainder of this article, reference is being made to the ‘Final Draft Regulatory Technical Standards on strong customer authentication and common and secure communication’
1. SCOPE AND TECHNOLOGY NEUTRALITY
- In scope RTS: e-payments “initiated by the payer”, or “initiated by the payer through payee”, i.e. credit transfers, card payments, set-up electronic mandates via AS-PSP, corporate payments (incl. SWIFT).
- Out scope RTS: Direct debit (payee initiated), mail orders and telephone orders (MOTO), Cross-border transactions into EEA: use of foreign payment instruments not requiring SCA, Cross-border transactions outside EEA: transactions with non-EEA merchants where it is not legally required to support SCA designed by EU AS-PSP.
- Payee’s PSP has the option to request SCA exemption, before, during and after transitional period, with the payer’s PSP having a ‘final say’ in accepting SCA exemption.
- Dedicated interface shall use message template ISO 20022 for financial messaging, while remaining technology neutral regarding communication technology and information security.

2. SCA EXEMPTIONS SCOPE & THRESHOLDS
Two new exemptions:
- Transaction Risk Analysis (TRA) based on defined fraud levels per payment instrument (remote card and credit transfers) and exempted threshold values (ETV), with stringent requirements regarding real-time transaction/fraud monitoring.
- Payment transactions at unattended payment terminals for transport and parking fares.
Three modified exemptions:
- Low-value remote transactions <EUR 30, and cumulative <EUR 100 or <five consecutive remote electronic payments.
- Series of payments with same payee/value (irrespective of payment instrument).
- Access to account balance and 90 days payment transactions, without disclosure sensitive payment data.

3. THIRD PARTY XS2A CONDITIONS
- Without further PSU authorisation, an AISP can access an account only up to 4x/day.
- TPP access with identification technically enabled once RTS applies.
- AS-PSPs to identify and authenticate TPPs through eIDAS qualified certificates for electronic seals or for website authentication.
- AS-PSP should offer at least one interface enabling TPPs to access accounts, which can be ‘dedicated interface’ or ‘existing e-banking interface’ with choice at discretion of AS-PSP.
- AS-PSPs with dedicated interface: provide same level of availability, performance and contingency to TPPs cf. existing PSU e-banking interface, use ISO 20022 for financial messaging.
- TPPs must use access ‘route’ offered by AS-PSPs after transitional period.

Figure 1: Three key change areas EBA’s Final Draft RTS
Source: Innopay analysis
The EBA’s Final Draft RTS was published on 23 February 2017 and submitted to the European Commission for approval, which is expected by mid-2017 earliest. Once approved, banks will have 18 months to ensure implementation of the technical requirements – suggesting an application date of November 2018 at the earliest.

In the interregnum, many industry actors are working hard to understand the legal, operational, functional, technical and business implications of the RTS. If the RTS is not implemented properly there is a serious risk of market fragmentation for innovative payment and account information services, which would endanger PSD2’s objectives regarding XS2A and the anticipated innovation potential. The potential for innovation goes well beyond the ‘basic’ PSD2 payment initiation and account information services, encompassing the enablement of an Open Banking ecosystem in which customers are in control of sharing their financial assets and personal data with TPPs of choice.

It is in this way that PSD2 will spark innovation in banking ecosystems, but in order to do so, the question that must be answered is: “What should industry actors do – potentially in close collaboration with EU lawmakers – to make third party access to account work in practice and realise its full innovation potential?” While common agreement on a technical communication interface is a good start, payment professionals seem to agree that it won’t be sufficient to make XS2A work in practice at scale. There are many operational compliance requirements that need to be put in place as well, for example TPP and AS-PSP registry for mutual identification, testing facility, support desk, transaction/fraud monitoring, interface specification documentation and change management.

2.3 Risk of market fragmentation

The RTS already provide guidance in the form of principle-based requirements, but (as expected) do not provide market players with technical specifications that can be implemented. As the EBA also emphasises, additional work by the industry is required to develop compliant standards and/or technological solutions to complement the ‘principle-based’ RTS requirements. Ideally, in an open payment market, there would be a single message - and communication interface - standard, complete with operational and governance procedures with full pan-European reach, for innovative and trusted transaction services enabled by third party access to accounts. This would maximise the benefit for end-users (payees and payers) and ultimately provide for a positive ‘market ROI’ on PSD2 compliance investments. In fact, maximising the benefits for end-users through pan-Europen interoperability could be perceived as the implicit promise of PSD2.
It is clear that third party “open access” to payment accounts is going to happen in some shape or form under PSD2. The various market scenarios that could emerge are depicted in figure 2:

The horizontal axis refers to the ‘level of openness’ by AS-PSPs across Europe, which can be ‘conservative’ (focus on PSD2 and RTS compliance) or ‘progressive’ (open-up account access services beyond what is mandatory under PSD2 and RTS conditional to business cases). The vertical axis indicates the ‘level of harmonisation’ of the communication interfaces and operational connectivity measures provided by AS-PSPs. In a ‘fragmented’ landscape, each bank (or banking group) with a compliance obligation under PSD2 defines its own interface and connectivity requirements; but in a ‘harmonised’ landscape, banking communities mobilise and collaborate to facilitate cost-effective pan-European reach, connectivity and interoperability. Note that a harmonised landscape is also in the interest of most banks themselves, as many banks across Europe have ambitions to also offer services enabled by PSD2.

Scenario 2 ‘It’s a start’ would be the ‘minimum viable, cost-effective scenario’ for the payment market, with potential evolution towards scenario 1 ‘Open Banking ecosystem’ to make full use of the innovation potential that can be derived from banks opening-up their assets (beyond payment accounts under PSD2) to other market players. This will drive new financial products and services on one side and enable new business, partnership, and revenue models on the other. For this to materialise industry collaboration is required, as the alternative is a fragmented market for the PSD2 services (scenario 2 ‘Local flavours rule’) and potential fragmentation beyond this initial scope in which a ‘world domination’ mentality prevails (scenario 3 ‘Winner takes all’).
2.4 Standardisation and harmonisation as a basis for new business opportunities

Indeed, PSD2 standardisation and harmonisation requires more than just collaboration on interface specifications. The interface is important to enable TPP services to emerge with scale and at a relatively low cost. Furthermore, if industry players collaborate on PSD2 standardisation, the need for further regulatory intervention – such as SEPA end-date regulation – could be avoided. More importantly, and in addition to the interface, many more business opportunities are expected in the technical, functional, operational and governance domain for both PSD2 compliant services and services enabling Open Banking ecosystems, as depicted in figure 3:

Figure 3: New business opportunities for market players beyond PSD2 compliance
Source: Innopay analysis

As market players prepare for action and accelerate ahead, we can expect some to position themselves as service providers for PSD2 compliance, and potentially enablers of innovation in an Open Banking ecosystem. While these competitive dynamics will drive innovation in the emerging open payments market, both PSD2 XS2A services and Open Banking services require interoperability and reach to gain traction at scale.
2.5 Emerging industry initiatives to make XS2A work in practice at scale

By posing the challenge of making XS2A work in practice, EU lawmakers have created a need for industry collaboration. In response, we have seen the emergence of numerous standardisation initiatives across Europe. These initiatives tend to differ in three essential dimensions:

1. **Scope of ‘openness’**: ranging from PSD2 compliance only, to enabling banks and TPPs to reap the business opportunities of new business, partnership and revenue models;

2. **Scope of ‘standardisation’**: ranging from purely technical and functional requirements, to a full set of operational and governance rules to operate XS2A transactions at scale;

3. **Scope of ‘collaborative endorsement’ (‘reach’)**: ranging from individual bank driven efforts with limited reach to initiatives that are backed by bank and non-bank participants on a national, regional or pan-EU level. Note that this does not necessarily mean that participants are committed to implementing the defined technical solutions.

However, the implicit PSD2 promise of realising pan-European interoperability can only be fulfilled if a single (preferably) or limited number of solutions emerge that define a set of commonly agreed functional, technical, operational and governance rules. This is recognised by the Euro Retail Payments Board (ERPB), which set-up a working group on payment initiation services. The working group should identify conditions for the development of an integrated, innovative and competitive market for payment account access services in the EU.

The ERPB working group can be perceived as an ‘intermediate market initiative’ that will require other market initiatives to build on their results. The most prominent market initiatives to date – The Berlin Group, PRETA, and CAPS – are summarised in the table below with indications of their scope of openness, standardisation and collaborative endorsement.

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**Sources:**


6 https://www.ecb.europa.eu/paym/ret/paym/shared/pdf/8th-ERPB-meeting/Mandate_of_the_working_group_on_payment_initiation_services.pdf?8011ec3d60529b12af5145e7b5c8339.

7 http://www.berlin-group.org/psd2-access-to-bank-accounts


So far it is primarily the supplying industry who are taking the lead in PSD2 standardisation efforts.

### Initiative Description

<table>
<thead>
<tr>
<th>Initiative</th>
<th>Who</th>
<th>What</th>
<th>When</th>
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<tr>
<td><strong>ERPB</strong></td>
<td>Working group including demand/supply side: ERPB members, ERPB, EU standardisation initiatives, PISPs and AISP, ECB, NCB, EU Commission, E-commerce Europe, EPC (co-chairs)</td>
<td>- Define common set of technical, operational and business requirements for development of integrated market for PIS in EU (note: no technical solution specifications will be developed)</td>
<td>- May 2017: Report deadline</td>
</tr>
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<td><strong>The Berlin Group</strong></td>
<td>Joint Initiative together with market supply-side entities (bank/non-bank) Independent from specific (community of) processor(s) or (community of) bank(s)</td>
<td>- XS2A Framework for EU Bank API, with data model (conceptual, logical, physical) and associated messaging - Eligible SCA methods - Open, royalty-free standards (for data processes, interfaces, infrastructure)</td>
<td>- Start Q3 2017: publish XS2A framework for public market consultation (subject to RTS adoption)</td>
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<tr>
<td><strong>PRETA</strong></td>
<td>Commercial entity PRETA S.A.S., wholly owned subsidiary of EBA CLEARING</td>
<td>- XS2A service building blocks: Directory, testing and certification services, helpdesk facilities, and dispute resolution tools Interface specifications</td>
<td>- Q1/Q2 2017: analysis (specs, costs)</td>
</tr>
<tr>
<td><strong>Convenient Access to PSD2 Services (CAPS)</strong></td>
<td>Founding members consist of EU processors: EquensWorldline, NETS Other supply side work group members include e.g.: SIBS, PayPal, Fidor solutions, Bankgirot, Isabel Group, FIS</td>
<td>- Open Framework for new, optional role providing (functional and technical) aggregation services Three service offerings, with value proposition for both AS-PSP and TPP: PSD2/RTS compliance: technical outsourcing by AS-PSP - Basic services: “API aggregation”, directory services - Premium services: new business/ partnership models between AS-PSP/TPPs</td>
<td>- Q2/3 2017: first pilot implementations with AS-PSPs and TPPs</td>
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Table 1: Overview most prominent European PSD2 standardisation initiatives (non-exhaustive)
Source: Innopay analysis
Market players should act now and work together to ensure harmonisation in solutions that are created.

Unlike initiatives such as SEPA and Instant Payments, where banks – with a ‘gentle push’ – have taken the lead in payment infrastructure standardisation, so far it is primarily the supplying industry (technology providers and/or service providers) who are taking the lead in the development of PSD2 standardisation. Banks should consider their options carefully and closely follow the progress being made in the initiatives outlined above (some have already engaged in said market initiatives). Much is expected from the ERPB effort, which is likely to be pre-empted and supported by the standardisation initiatives described in the table above, ultimately contributing to a harmonised PSD2 landscape.

Considering the final draft RTS, we are nowhere near such single standards, operational and governance procedures. Market players should act now and work together to ensure all systems are prepared ahead of the projected RTS implementation date of November 2018 (earliest).
4

Conclusion: PSD2 is just the start – the full readiness of overall ecosystem is essential

PSD2 is an attempt by European lawmakers to facilitate the creation of a new ecosystem to drive competition and innovation in the open payments market.

First, in this ecosystem, incumbents (banks and other PSPs) and new players (TPPs and other FinTechs) are encouraged to collaborate to make XS2A under PSD2 work in practice at scale. While banks will have to ensure that they individually comply with PSD2 and RTS requirements, the importance of industry collaboration to make sure that the implemented solutions are interoperable cannot be overemphasised. Such collaboration goes beyond the mere technical interface by also considering the required operational and governance procedures of XS2A. The collaboration might even extend to Open Banking to make full use of the innovation potential that can be derived from banks opening-up their assets (beyond payment accounts under PSD2) to other market players. For this to truly materialise, the overall ecosystem of banks, TPPs and solution providers need to get organised in the coming months.

Second, ideally, there would be pan-European standardisation throughout the emerging open payment market. This would result in cost-effective and scalable innovative transaction services, enabled by TPPs having access to accounts. This, in turn, would maximise the benefits for end-users (both payees and payers). As we have highlighted here, both PSD2 XS2A services and Open Banking services require interoperability and reach to gain traction at scale.

Third, there are few or no precedents in the relatively young digital payments industry as to how something like XS2A could and should be made to work in a practical way in regulatory practice, national law and – above all – in day-to-day operations. Indeed, PSD2 is a model that sparks innovation in the new domain of Open Banking ecosystems. This is expected to drive creation of new transactional products and services on one side and enable new business, partnership, and revenue models on the other. Banks and TPPs can leverage each other’s strengths by complementing each other’s digital value proposition.

In conclusion, an important period lies ahead for the payments industry. Banks and other PSPs need to carefully consider their individual positioning in an increasingly open payments market from both cost and revenue-potential perspectives, while also considering potential synergy with the collaborative aspects of XS2A standardisation, harmonisation and accompanying services.
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