COMPUTOP – THE PAYMENT PEOPLE
WHITE PAPER
„EU INSTANT PAYMENTS AND PSD2“

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FOREWORD

Europeans can expect great things in 2018, with the launch of a new European payment system available to all account holders in Europe. Money transfers will be possible 365 days a year and will be able to be completed from anywhere in Europe within a maximum of 10 seconds. Instant Payments should be available not only via online banking but also at POS in retail outlets, online and via smartphone apps. Data protection is also guaranteed. All in all, the future looks extremely promising.

However, in order for Instant Payments to really become established on the market and become a genuine step forward in smooth payment processes, it is also necessary to consider uniform standards for authentication and regulation. Without clear guidelines for practical implementation, there is a risk that many good ideas will amount to nothing, and that differences in the finer details will lead to complexity and uncertainty for users. We at Computop consider three aspects to be of particular importance:

1. The consumer could become confused if the authentication is not standardised to a reasonable level.
2. If the customer has to go through a lengthy registration process with each new merchant, this will lead to a focus on large merchants with a wide product range in the long term and drive out smaller merchants with more specialised product ranges.
3. The regulatory requirements on the European FinTech sector must not disadvantage it with regard to the banks.

In this white paper, we will not only outline the benefits and opportunities of Instant Payments but also point out where there are still hidden pitfalls, and look at areas where the success of the new payment system is dependent on the results of practical negotiations between the stakeholders involved. This is with a view to establishing a healthy retail environment where small, medium-sized and large companies can compete for the end consumers' custom with their individual ranges, as opposed to a market dominated by a few large retailers.

WHAT ARE INSTANT PAYMENTS (IP)?

Ten seconds, and the money is in the payee's account. In the future, with 'Instant Payments', that's how it can be. Because using this new payment system, the introduction of which has already been agreed across the entire euro area, the payee will be credited in real time as soon as the sender has issued the instruction. The process is based on a central platform through which all European transactions will be processed individually and completed instantly. So with Instant Payments, unlike the traditional bank transfer, the money will be credited to the payee's bank account within just a few seconds – at any time of day, 365 days a year, including evenings and weekends.

Around 40 of Europe's largest banks are currently involved in the project, and although participation is still voluntary at present, the regulators will require all banks to offer Instant Payments from 2018 onwards.

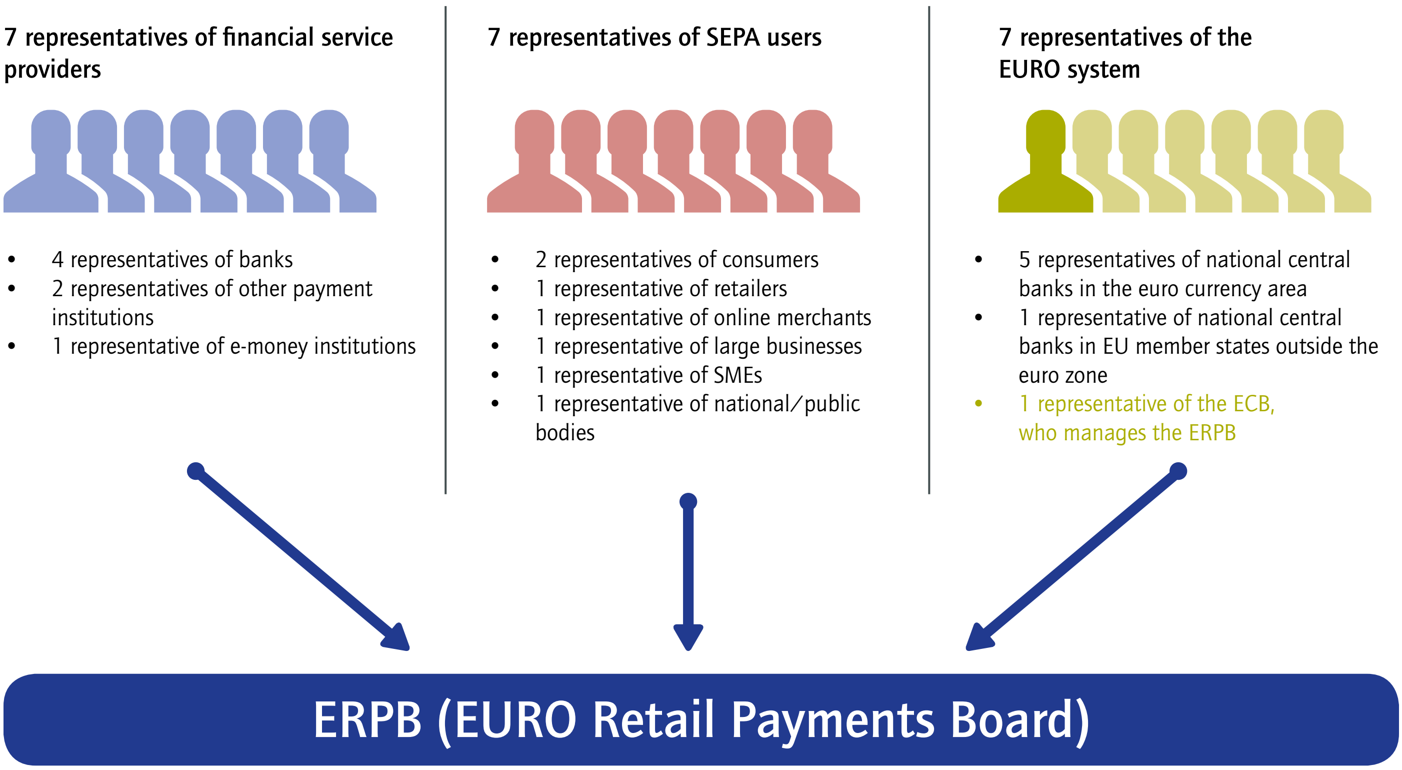
In introducing this new method of payment, Europe is tackling a number of objectives, including

- Broad reach: Instant Payments should be available to anyone in the euro area with a bank account
- High availability: payments can be made 365 days a year
- High speed: payments must arrive in the payee's account within no more than 10 seconds
- High penetration: Instant Payments will be multi-channel enabled and available at POS, in e-commerce and on mobile devices
- Reasonable price: banks must not charge a premium for instant payments – the fees charged must be similar to those for other transactions.

WHO INITIATED IP

The European Central Bank decided to establish Instant Payments as a natural next step to SEPA. In December 2013, therefore, the Euro Retail Payments Board (ERPB) was set up to take on the tasks of the SEPA Council, with the aim of further developing the standards and of identifying and solving the technical, legal and practical problems involved. In a reference to SCT (SEPA Credit Transfer) – the SEPA bank transfer process – the project was launched under the title SCT Inst (SEPA Credit Transfer Instant).

The ERPB consists of seven representatives of financial service providers (four representatives from the banks, two from other payment institutions and one from the e-money institutions) and seven representatives of SEPA users (two for consumers and one for each of five interest groups: retailers, online merchants, large businesses, small/medium-sized enterprises and national/public bodies), as well as six representatives of national central banks serving in rotation (five of them from national central banks of the euro currency area and one from the national central banks of EU member states that are not part of the euro zone).



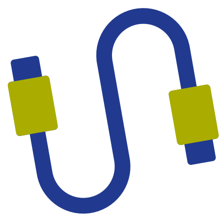
EXPECTATIONS OF INSTANT PAYMENTS[1] ...RETAILERS AND MERCHANTS

GENERAL EXPECTATIONS

- Instant Payments must be available to customers by 2018.
- IP must function for transactions at POS, over the internet and via mobile devices.
- IP will take market share from current payment methods such as cards and online banking.
- IP can replace debit charges and even cash payments.
- IP will be inexpensive to process.
- IP will be final, i.e. there will be no costs for risk provision.
- IP could revolutionise the payment process through push payments.
- At POS terminals, retailers expect a maximum response time of 3 seconds with IP.
- IP will allow the integration of further services, such as a solution for providing electronic till receipts.
- IP will improve the liquidity of merchants because they will receive their money immediately.

POS CONNECTION

It will also be possible to make Instant Payments at POS terminals in shops. In order to allow consumers to make Instant Payments at the POS terminal, all the merchant needs to do is to extend the acceptance contract with the payment service provider to include Instant Payments. In addition, sales till staff will need training, in order to ensure smooth handling of payments in the course of business. The payment process itself is becoming more complex. According to requirements in the current submission of PSD2, all electronic payments exceeding EUR 30 must be secured using two-factor authentication. Where small amounts are concerned, making payments at the POS remains uncomplicated. Above this EUR 30 limit, exceptions from the two-factor authentication may only be made if the amount to be paid is below EUR 500 and the responsible payment service provider has classed the payment as a low-risk transaction before executing the payment. European legislators specify precise fraud rates to ensure correct risk



assessment of payments; however, we lack a definition of 'fraud'. It is thus left to the payment service providers themselves to decide which criteria to use to create their risk assessments. This is something that will inevitably lead to inconsistent and non-transparent risk assessment. There is therefore a need for clarification in order to bring the impending chaos under control.

ANONYMITY OF PAYMENTS

In some cases, it is preferable or even necessary, from the point of view of the customer, that payment by means of an Instant Payments solution should be anonymous as far as the ultimate payee is concerned. This would ensure, for example, that the merchant does not receive any details about the customer's name, address or account. This is already the case for some payment methods. Whether and how it might be possible at POS in shops and in online transactions remains to be seen from the implementation details. Such details about how it will be implemented are not presently known.

ELECTRONIC TILL RECEIPTS

If Instant Payments also allow the integration of further identifiers, it makes sense to offer useful information alongside the individual transaction. An electronic till receipt would be one such possibility. This will depend, however – with in-store trading, for example – on the nature of the application itself. Questions yet to be answered in this respect include: whether the terminal will send such data to the mobile device on which payment is being made and how such data will then be processed, in an app for example. An alternative, of course, is a URL with the till receipt. From a simple financial summary to integration into a Personal Finance Manager, everything would then be possible.

DO MERCHANTS AND RETAILERS SEE THE NEED FOR IP?

For companies, the fact that Instant Payments are credited immediately has a beneficial effect on liquidity. Real-time crediting of payments into an account, however, creates considerable work as it requires accounts to be checked and consolidated daily. For merchants and businesses, it offers great opportunities for speeding up their processes but the costs of an Instant Payment transaction have to be taken into account. If the transaction costs are too high, they will not offer their customers IP transfers. In spite of everything, though, the most expensive form of payment is cash: obtaining, protecting and transporting it is a major cost for merchants. Safe and secure transactions using Instant Payments thus represent an interesting alternative to cash and debits for the trade.

...CONSUMERS

GENERAL EXPECTATIONS

- IP must be capable of being used everywhere – at POS, on the internet and for person-to-person payments.
- IP will be secure.
- IP will be offered by banks and merchants.
- IP will allow the integration of further services, such as a solution for providing electronic till receipts.
- IP will provide data protection and payments can also be made anonymously.

DO CONSUMERS SEE THE NEED FOR IPU?

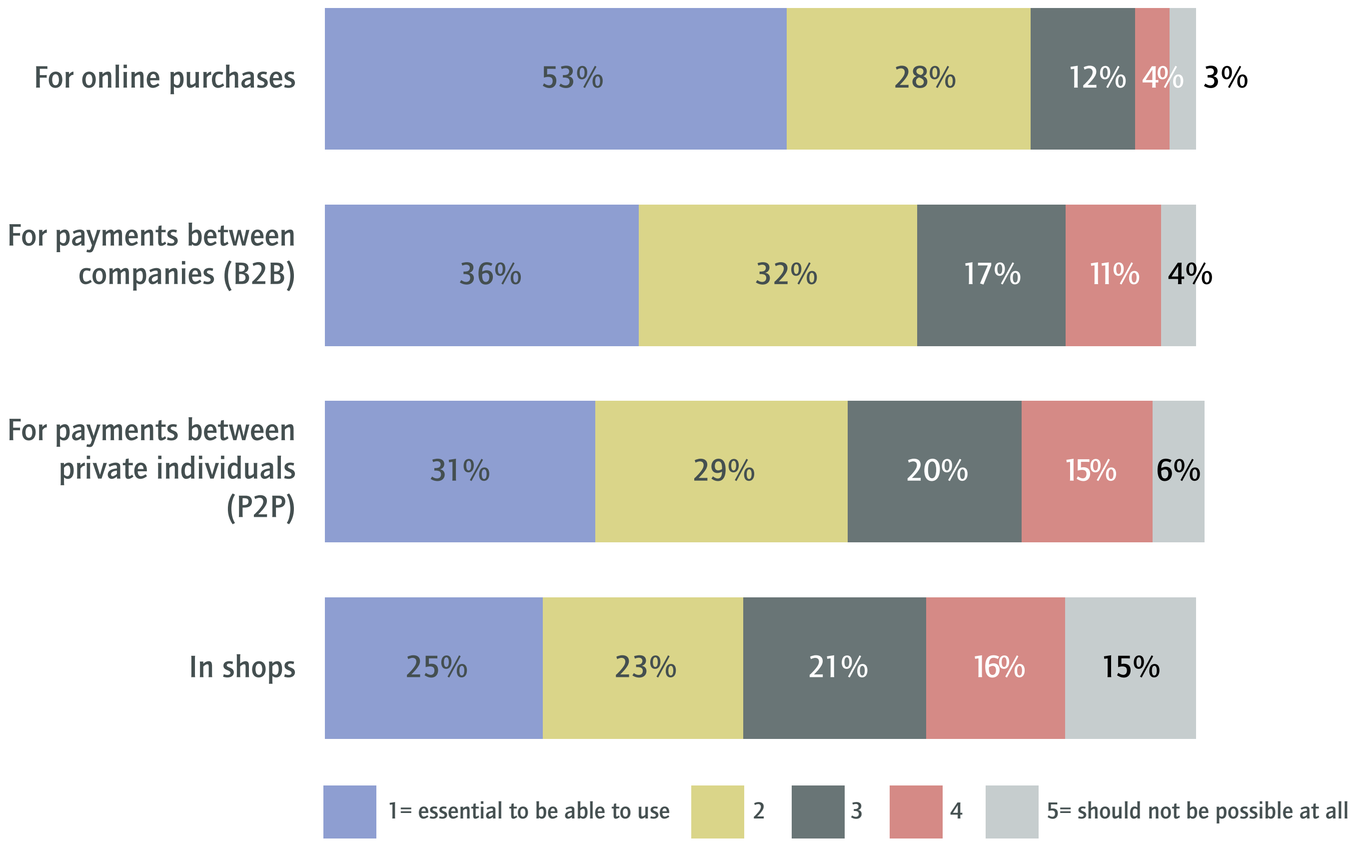
The private individuals who are likely to see the potential for Instant Paymentslook for transactions which are easy to carry out while they shop online. These Instant Payments need to be attractive, universal and meet the expected high data protection standards. The ability to use them in shops, with the extra functions such as till receipt summaries or discount schemes are less important to consumers, according to a study by the payments 'Think Tank IBI' research. In the view of respondents, shop transactions should – as with current debit and credit cards – generally require authorisation at the till by means of a PIN.

The key wishes of consumers can be summed up very quickly:

- doing without cash
- digital and mobile payment processes
- simply and securely.

INSTANT PAYMENTS ARE IMPORTANT ABOVE ALL FOR ONLINE TRADE

In generel, where do you think it should be possible to use Instant Payments[1]



For payments at a POS terminal – as with mobile payment solutions – debit and credit cards may be seen as a bridging technology to payment using a smartphone. Although the fact that an IP transaction is irrevocable is a great benefit to the merchant, the private individual can see it as a risk – in the case, for example, of an unwitting or accidental payment, due perhaps to hacking or a phishing attack. In such cases, the consumer cannot reverse the transaction and the sum paid is lost.

[1] Ibi research 2016: "Instant Payments: eine neue Revolution im Zahlungsverkehr", Stefan Weinfurtner, Dr. Ernst Stahl, ISBN 978-945451-26-7 (www.ibi.de)

ECB

Digitisation has been making its mark on society for some time, and increasingly it is also affecting the financial services industry. It is making new, efficient and attractive payment methods available, so that it would genuinely be possible to do away with cash, if there were a political desire to do so. At present, though, there are few real alternatives to cash. The ECB expects IP to provide safe, cross-border and instant payments across the euro area. Instead of different national platforms, an interoperable pan-European platform is being put into use. From the point of view of the ECB, Instant Payments are thus a hot topic in the handling of mass payments, although many end users will not be at all aware of it. The ECB is therefore demanding that European banks should not simply sit back and wait, because doing nothing is not an option. In the view of the ECB, any discussion must now be about 'how'; the time for discussing 'whether' or 'why' is past. The ECB sees its own role as being to ensure security and fair competition.

POSSIBLE DISADVANTAGES OF INSTANT PAYMENTS

Although Instant Payments are seen as the next big step in payment processing, there are nonetheless still a few areas of criticism. First of all, Instant Payments – as currently conceived – are applicable only to purely intra-European payments. Moreover, instant debiting has not only its champions but also its critics, who bemoan the lack of a credit function. Critics are concerned that the necessary infrastructure changes will mean further substantial costs for merchants. In addition to the challenges in payment processing that have already been mentioned (see 'POS connection'), other areas of criticism in PSD2 could bring further drawbacks for Instant Payments. In particular, the required authentication of the consumers and account holders making the payments brings with it the risk that the trade will need to upgrade its till systems and online shops. The two-factor authentication could also lead to these payments being focused in the area of e-commerce for two reasons. Firstly, end customers can place specific merchants on a white list. Merchants who are on this list can be considered trustworthy, meaning there is no need to go through a laborious authentication process when the payment is made. Secondly, end customers have to ultimately choose for themselves which merchants they wish to register with for two-factor authentication. This raises the following important question. In the future, will smaller merchants have the opportunity of one-time customers registering for a specific online shop? Or will PSD2 mean that the market power shifts further towards well-known and leading online shops? In the future, smaller merchants in particular will have to fight to get on a customer's white list, or to retain customers and encourage customers to register with them. This is the major effort that Instant Payments and PSD2 demand from merchants. Last but not least, real-time transfers may also affect working hours in accounts departments, who at conferences are already discussing the possible need for weekend working.

SECTION SUMMARY

In contrast to the private individuals making the payments – who need to be persuaded of the security, convenience and data protection aspects – many companies have a requirement for immediate payment, as they will benefit from improved liquidity. In the case of payments that currently require priority processing and in transactions with less solvent debtors, or payments from abroad, many merchants see potential in the Instant Payments system. Those responsible for the payments also see the sense in the implementation of beneficial discounts. At the very least, companies value the fact that an IP procedure can rapidly be integrated into existing systems and will be applicable across Europe. Intuitive processes are every bit as important as a transparent cost structure. To make IP attractive to private individuals, it similarly needs to be easy and intuitive to use, to be universally accepted and to satisfy a high standard of data protection.

Instant Payments do at least have potential:

510 Mio.

At the beginning of 2016, the total population of the EU was estimated to be about 510.06 million, including about 339.7 million inhabitants of the euro zone.

101 Mio.

In Germany, according to Statista[2], there are currently some 101.9 million bank accounts; the total number of accounts across Europe, however, is unknown.

+8,5%

The number of cashless payments in the EU increased by 8.5% in 2015 compared with the previous year, to 112.1 billion euros.

47%

47% of all transactions are card payments, 26% bank transfers and 21% bank debits.

781 Mio.

The number of cards issued (781 million) corresponds to roughly 1.5 payment cards per EU citizen.

41 Bill.

Nearly 51 billion transactions worth 41.1 trillion euros were handled via bulk payment systems in the EU[3]

[2] Statista (https://de.statista.com/statistik/daten/studie/38041/umfrage/anzahl-der-girokonten-in-deutschland-nach-bankengruppe)
[3] Bundesbank (https://www.bundesbank.de/Redaktion/DE/Downloads/Presse/EZB_Pressemitteilungen/2016/2016_09_26_zahlungsverkehr.pdf?__blob=publicationFile)

DEVELOPMENTS AND DESCRIPTIONS

THE PAYMENTS MARKET IS ON THE MOVE – BACKGROUND

The number of new fintech startups being created at the moment shows that the payments market is on the move. New companies and new technologies are penetrating the market, generally aimed at speed, simplicity and mobile devices. Products include new banking apps, alternative credit providers and even biometric authentication procedures such as the digital fingerprint, iris scanning and voice recognition. No wonder, therefore, that Instant Payments are also a particularly hot topic at the moment – bank transfers that work in a similar way to a WhatsApp message. Because today the payee generally has to wait several days for the money, as payment is handled through the Bundesbank, where every transaction is checked and collected. IP should fundamentally change all of that. This electronic, multi-channel payment handling solution can process transactions individually and complete them instantly. Payments made in seconds, 24/7 and 365 days a year – this could become standard practice for payments. IP has the following important features:

- It works across a number of channels and can be used for retail payments, person-to-person payments, e-commerce payments and government payments (fees, levies and taxes).
- It is available 24/7, 365 days a year.
- Payments are made within just a few seconds.

Europe, however, is no pioneer in the field of Instant Payments. National Instant Payments systems already exist or are being developed in several countries including Australia, Brazil, Chile, China, India, Japan, Canada, Korea, Mexico, Singapore and South Africa.

In Europe, too, Denmark, the UK, Poland and Sweden have already developed national solutions for real-time payments. The pioneer in this area is the Faster Payments Service that has been in use successfully in the UK since 2008. Not all of these systems, though, allow for genuine real-time payment – the transaction can take anything from a few minutes to two hours. The EPC, on the other hand, in prescribing 10 seconds for end-to-end processing, has made it clear what 'instant' as opposed to 'faster', really means.

And what has been missing until now has been a common, harmonised solution for the European payments area.

In order to prevent further fragmentation of Instant Payments solutions in the SEPA area, the ERPB (Euro Retail Payments Board) and the EPC have launched the SEPA Instant Payments project (see also section 1.2 above). The principal benefits of IP for merchants and customers are:

- The account balance is always up-to-date, since there are no open transactions.
- The money transferred arrives straight away and is thus instantly available.
- Online shopping processes are speeded up – a benefit in the case of media or software downloads, for instance, which are available as soon as payment is received.
- Merchants no longer need to wait for their money: cashflow is available immediately for reinvestment.
- Merchants also save on resources, since there is no need for risk management or receivables management for products paid for via IP.

PROCESSING
HOW INSTANT PAYMENTS WORK

The process itself is intended to take place in three steps and can be described thus:

- **Initialisation:** the buyer or payer uses a card, a smartphone or banking software, first of all to provide authentication and then to trigger a payment, using their IBAN for instance.
- **Clearing:** the payment information is sent immediately to a clearing platform that balances up the sums involved between sender and receiver, and both are notified that the payment has been made.
- **Settlement:** payment is then forwarded in real time to the relevant bank, which credits it directly to the payee's account.

The significant difference from current payment methods is in the authentication and real-time processing of the credit. As soon as a payment has been initiated by the sender, the money should instantly and irrevocably be credited to the payee. Their bank is informed of this straight away and the sender receives confirmation of the transaction. Present-day solutions are, as a rule, handled through batch processing both at clearing and at settlement. Solutions offering immediate credits are thus always based on the payments being subject to confirmation, or on 'on-us' payments within a single bank or credit institution.

WHAT DO CONSUMERS WANT?

When it comes to payments, consumers tend to trust their bank more than a telecommunications or large IT company such as Apple or Google[4]. Countless studies have shown this to be the case. Ask the same consumers, however, whom they trust to implement new digital payment systems, and the IT companies leap ahead of the banks, because in the last 20 years the banks have not exactly been seen as digital pioneers; rather, they have been seen to be sleeping while developments such as e-commerce and mobile commerce have been taking place. The consumer, therefore, is looking for banks to be serious operators of a secure and reliable payment system, and for IT companies and fintechs to be guarantors of innovation and convenience in those systems. Many bank customers would

[4] ibi research 2016: "Instant Payments: eine neue Revolution im Zahlungsverkehr", Stefan Weinfurtner, Dr. Ernst Stahl, ISBN 978-945451-26-7 (www.ibi.de)

also like to trigger payments through online banking or a smartphone app direct from their bank – not via a third party[5]. Nonetheless, in recent times they have come to understand that third party suppliers can be the competent party here after all, since they have more understanding of, and expertise in, the complex processes of the trade.

TIMETABLE FOR INTRODUCTION

Instant Payments, in the European Central Bank's terms, are payments of money that is available to the payee within seconds of the instruction being issued. To make this work consistently across Europe, as other SEPA payment processes do – over an extensive area covering 34 SEPA countries – it is essential to have a common set of rules that applies to all of the participating payment service providers.

In summer 2015, the European Retail Payment Board (ERPB), under the direction of the ECB, instructed the European Payments Council (EPC) to develop a set of regulations for an Instant Payments process, on the basis of SEPA transfers ('SCT Inst'). The EPC has now sent its draft regulations for SCT Inst out for consultation to all those involved in the market, with a response deadline of 10 July 2016. The plan is to publish the final set of rules in the autumn of 2016. The ERPB currently expects the process itself to be launched – that is, the first SCT Inst transactions to be handled – by mid-2018.

Under the regulations, the SCT Inst process is restricted to a maximum value of 15,000 euros per transaction[6] although it is possible for institutions to agree bilaterally on different timescales or maximum limits.

German credit industry bodies are aiming to agree on a joint response to the consultation. A number of unanswered questions on operational and legal issues surrounding Instant Payments have already been identified (see item 5).

[5] ibi research 2016: "Instant Payments: eine neue Revolution im Zahlungsverkehr", Stefan Weinfurtner, Dr. Ernst Stahl, ISBN 978-945451-26-7 (www.ibi.de)
[6] http://www.bundesbank.de/Redaktion/DE/Downloads/Statistiken/Geld_Und_Kapitalmaerkte/Zahlungsverkehr/zvs_daten.pdf?__blob=publicationFile

COSTS TO MERCHANTS

For the merchant, the costs of developing the required infrastructure and the transaction fees must be proportionate to the expected benefits. According to current propositions, merchants should be charged 'normal' transaction fees but no additional fees, as the ECB wants to prevent the growth of a fee jungle that could inhibit acceptance of IP. In general, payments cannot be charged back to the payer under the instant payments process; on the contrary, payment is guaranteed. This eliminates the merchant's costs in processing chargebacks. Nonetheless, the merchant should offer purchase protection to customers and provide them with the opportunity to have the process reversed subsequently.

As already noted in item 2.1.1., IP should thus have a positive effect on merchants' liquidity For example, HypoVereinsbank explains that "Instant Payments mean merchants can immediately access any payments credited and therefore benefit straight away from the liquidity provided by the cash received. This allows them to claim any cash discount benefits which they would not previously have been able to use due to the delayed receipt of cash that comes with conventional transfers." This could also enable merchants to make use of the bank transfer times previously exploited by the bank. The Association of German Banks explains that, for the currently predominantly cashless transfers taking place within the European monetary area[7], the value date for the amount applied to the recipient's account[8] only needs to be the next banking day, but that the banks can work with these amounts within this period. It is precisely this period that Instant Payments do away with.
But this is not the only reason that Instant Payments could mean a boost to merchant's liquidity.

They could also benefit from improved liquidity in other ways as there is another payment cost factor which many merchants often neglect to take into account: according to a recent study on the costs of payment processing, carried out by Regensburg-based ibi research, most merchants underestimate the overall costs with regard to the most common forms of payment currently in use. These costs not only include those which are immediately apparent, such as transaction fees, but also prior and subsequent indirect costs, such as return costs or costs for cancelling payments. In the same study from 2014, ibi research

[7] EPC: Maximum Amount for Instructions under the SCT Inst Rulebook for public consultation
[8] http://ec.europa.eu/finance/payments/framework/index_de.htm

took into account the following facts, amongst others:

- Payment in advance is seen by merchants as the most beneficial payment process by a large margin – this, however, is a fallacy, since the indirect costs of payment processes are consistently underestimated.
- Indirect costs (arising from currency conversions, disruptions to payments, debt collection procedures, chargebacks and returns, for example) must not be underestimated and can sometimes massively increase the total costs – outweighing direct costs, indeed, by a ratio of 4 to 1 in some cases.
- Only one in three merchants regards the related accounting costs as relevant.
- The longest settlement periods are found with payment against invoice; the shortest, conversely, are advance payment, PayPal, SOFORT transfers and debit card payments.
- The average payment period ('days sales outstanding', or DSO), is eight days.
- According to the EU, costs of Instant Payments will remain within manageable limits. Therefore the new European payment method could become a good payment alternative for merchants.

Levels of direct costs for payment vary markedly Indicate the costs incurred for each of these payment processes.[9]

Please note: Direct costs are heavily dependent on the payment service provider's charging method. There are, for instance, collection models that use an average price so that all payment process cost exactly the same. In addition, turnover-related costs per transaction can differ widely.

Turnover-related costs such as monthly fees were not taken into account in the study, as they can vary so widely.

Payment process	Sales-related costs per transaction as percentage of sales	Fixed costs per transaction (euros)	Total costs per transaction as percentage of average basket value
Payment by transfer in advance	0,19%	0,34€	0,97%
Payment against invoice	0,41%	0,71€	1,73%
Payment against invoice secured via service provider	3,02%	0,56€	3,79%
Direct debit	0,50%	0,36€	1,36%
Direct debit secured via service provider	1,84%	0,22€	2,28%
Credit card	0,40%	2,47€	3,94%
Kreditkarte	1,89%	0,38€	2,40%
PayPal	1,78%	0,28€	2,12%
SOFORT transfer	1,03%	0,22€	1,32%

[9] ibi research - Gesamtkosten von Zahlungsverfahren. Was kostet das Bezahlen im Internet wirklich? -http://www.ibi.de/files/ibi_research_Gesamtkosten_von_Zahlungsverfahren.pdf

BACKGROUND & STANDARDS FOR INSTANT PAYMENTS

Instant Payments are based on IBAN standardisation under ISO 20022 and on SEPA credit transfer. Designated UNIFI (ISO 20022), the specification for the finance industry was issued by the International Standards Organisation (ISO) on the basis of XML syntax. ISO 20022 contains a logical data model (known as the 'business model'), inter-organisational workflows and corresponding message types. The message types are freely available for use as XSD files. The message types are intended to supersede the MT formats currently used in the global SWIFT community.

IBAN, in turn, was developed in order to harmonise the payment systems used by individual countries. International standardisation of the structure of check data and account data (bank plus account identification) is aimed at opening up the potential for integration and automation in exchange of data between banks of different countries.

In addition, an internationally consistent system for quoting bank account details should also benefit companies and private individuals, since it eliminates possible sources of error. SEPA (the Single Euro Payments Area) refers to the common Euro payment area. Before SEPA, each European country had different processes for transfers, debits and card payments. Now there are common standards and uniform account data – IBAN and BIC.

CHALLENGES AND UNANSWERED QUESTIONS

GENERAL COMMENT

Money in the account instantly? It sounds great at first. However, Instant Payments present enormous demands on the banking system, merchants and the way they are interconnected. For Instant Payments, settlement has to happen straight away and the banks' IT systems will need to be completely updated, which will swallow up vast amounts of money.

BANK INFRASTRUCTURE

When they discuss putting Instant Payments in place nowadays, the banks are looking largely at two models: Either all steps in the process – initiation of payment, clearing and settlement – take place within a few seconds, or clearing takes place immediately, including notification to the payee, but settlement takes place subsequently. If the transfer or Instant Payment is to be implemented over the internet, this approach will require the use of an intermediary (as indeed is already the case) to deal with the customer and bank and make the payment process happen. From the banks' point of view, if this situation is applied to Instant Payments, there is a danger that they will set up an infrastructure at great cost, which will then be used by third parties to offer their own services.

There are many ways in which Instant Payments might be effected. The batch-orientated clearing procedure in use today, for example, might be replaced with transaction-orientated messaging. This would have the following benefits:

- For settlement, the existing TARGET2 infrastructure could continue to be used.
- The matter of settlement of instant payments via the Eurosystem's TARGET2 structure is currently the subject of intensive discussion among the central banks. A sensible and practical solution is urgently needed, in order to actually establish the equality of treatment sought by the ECB for providers of clearing solutions (ACH) and to give the institutions the necessary planning certainty – because Instant Payments could have far-reaching consequences for the institutions' risk and liquidity management and for internal banking processes.
- The only new element requiring development and provision is the messaging component.

On the other hand, the banks want more influence in the area of payment processing. What they lack, though, is in-house expertise in B2C payment processing, because they buy in POS and online payment services from third parties, namely the PSPs. The desire of some banks to integrate IP into their banking apps and thus take market share from innovative fintechs cannot work. Regardless of how well a bank integrates IP into its app, merchants are focusing on omnichannel solutions and need service providers who can assist in the integration and automation of payments through all channels right across the world. An NFC-enabled app does not go nearly far enough, because integration with the shop, ERP system and accounting system is required.

MERCHANT INFRASTRUCTURE – HOW TO GET IP INTO THE SHOPS?

Integrating IP into the shop, ERP system and accounting system demands experience, flexibility and individual solutions that can meet the technical requirements of mid-sized and larger merchants. For example, in order to automate the bookkeeping process, the merchant needs to reconcile payments received with unpaid invoices. The credit cards, PayPal and international systems such as iDEAL and Alipay all provide different types of accounting file, however. A good payment service provider relieves the workload from the merchant, collects accounting files from all the different sources and assembles them in one standardised file for the accounting system to use.

How can instant payments succeed in winning consumer preference over other payment processes at point of sale? To answer this requires a detailed examination of the reasons for which current payment processes are chosen. Within physical stores, cash is still the most common form of payment in Germany.

Using SEPA Instant Payments would therefore need to be as easy as paying in cash. This means, among other things, that payment data such as the amount being charged and the recipient's details need to be transmitted direct from payee to the payer. At present, however, like other additional services, this is not a component of the SEPAInstant Payment scheme.

There is a risk, therefore, that a range of different solutions will grow up, which in the longer term would lead to a kind of monopoly on the part of one individual provider. The German digital association Bitkom has referred to this and demanded that the Instant Payment scheme should also include standards for this interface.

Also up for discussion is whether an Instant Payment solution should or should not require an account number to be provided. According to the EU Commission, in 2014 a total of 58 million EU citizens had no access to an account of their own. Certainly, the Payment Accounts Directive (PAD), which obliges banks to offer consumers in the EU a basic bank account, will help here. Nonetheless, it seems highly sensible to allow alternatives to an account number, in order to guarantee anonymity to the payer in the way that cash does.

Incentives such as coupons or the opportunity to join a customer retention scheme, similar to those offered by current mobile payment solutions, also need to be evaluated for SEPA instant payments by the PSPs. This would, moreover, allow merchants to access the consumer's highly prized POS data in a similar way.

SECURITY AND POLICY

Through IP, payment service providers and fintechs will gain direct access to bank accounts. Processors of Instant Payments will thus become 'payment initiation services', which according to PSD2 are comparable to cash and thus require at least light-touch regulation. The German Finance Ministry is working on a draft implementation of PSD2 into German law and this includes such light-touch regulation.

The conversion rate to Instant Payments will also be heavily dependent on the way in which the statutory requirement for 'two-factor authentication' is implemented. The two factors comprise something that the user knows, such as a user name, password, PIN or TAN (transaction authentication number), and something that they possess, such as a smartphone, a hardware token, a bank card or a key, or a physical characteristic that belongs inseparably to the user, such as a voice, fingerprint or iris pattern. At present, the Instant Payments system does not provide for any standardised authentication process by the banks; the body initiating the Instant Payment will be responsible for authentication. This could be a merchant, a PSP, an acquirer or a bank. This delegated responsibility for authentication, with a different method of authentication (passwords, PIN, SMS, biometrics etc.) for every new payment, could cause confusion among consumers, with negative effects on acceptance and conversion.

SECTION SUMMARY

The more pragmatically focused payment service providers and the stricter European Banking Association (EBA) are currently negotiating over these important technical details; final clarification is expected in 2017.

PROSPECT

POLICY

There is also a political dimension to the issue of Instant Payments, since almost all credit and debit card payments are handled via the networks of US-owned companies (Visa, MasterCard, Amex and Discover/Diners). This even applies to local debit cards such as the girocard/ec-Karte in Germany, Carte Bancaire in France and Dankort in Denmark. If cash were to be abolished today, virtually all card payments in the EU which are based on US standards would pass through US-operated networks; it is for Europe's politicians to decide if such a level of dependency is really what they want. But one decision at least has already been made about Instant Payments – Europe will be getting a new, purely European payment system.

SECTION SUMMARY

Both before and after the establishment of IP, there will be several hurdles to overcome, such as the technical implementation processes. Above all of these, however, comes the human factor, for it is the customer who will decide at the end of the day on the pluses and minuses of the new payment system.

STATEMENT: RALF GLADIS

At Computop, we are convinced of the benefits of Instant Payments and are getting ready to be out leading the action. In technical matters, we are exploring the options for implementing the statutory requirement of two-factor authentication. We are engaging with politicians and with industry associations to head off negative developments, such as the risk that the banking organisations, either through improper regulation of authentication or by making over-strict demands regarding the 'light-touch regulation', could harm the fintech sector.

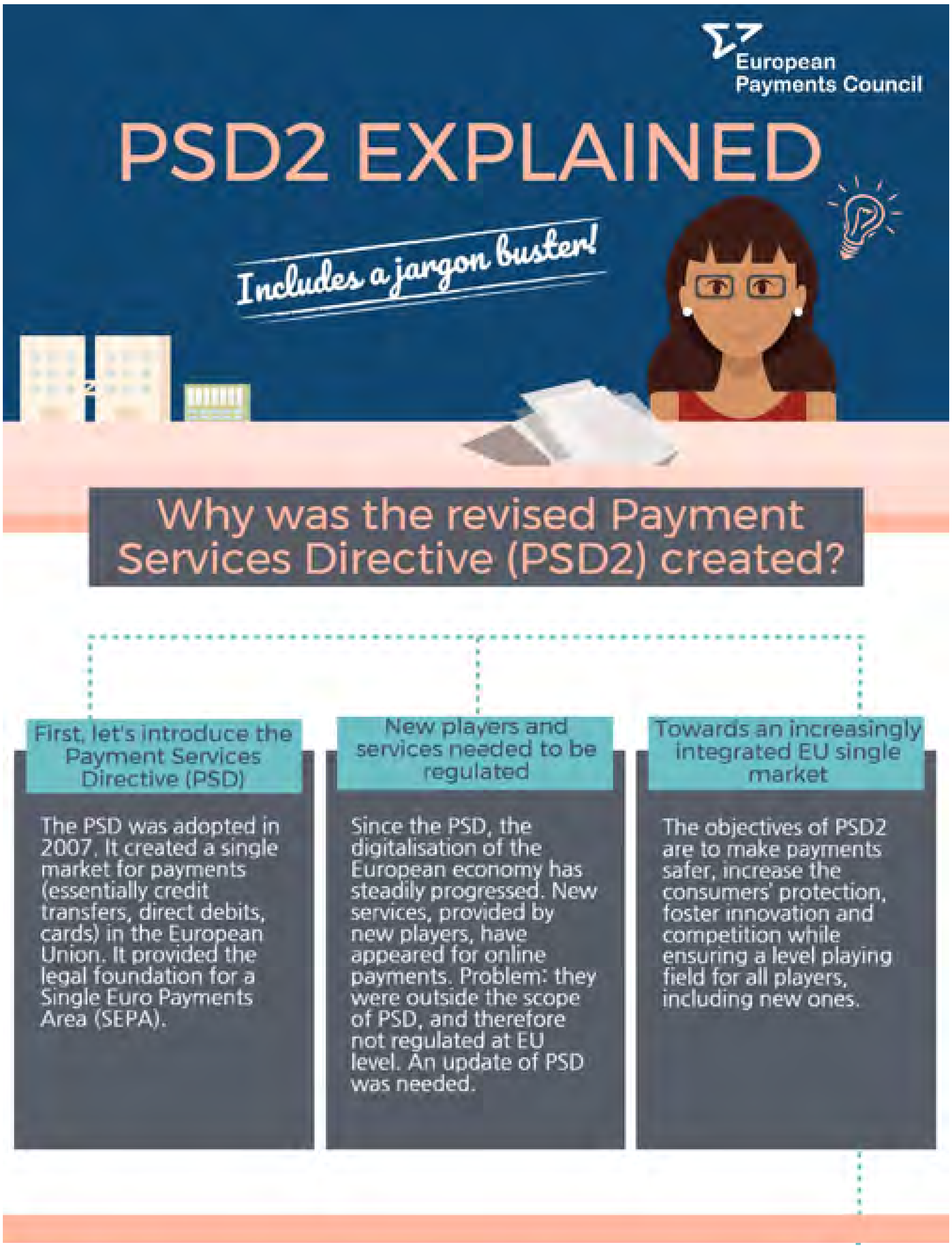
HISTORY OF PSD AND PSD2

The Payment Services Directive (PSD) of 2007 formed the legal basis for the creation of a pan-EU internal market in payment processing. The directive imposed a comprehensive set of regulations that were designed to apply to all payment services provided within the European Union. Its aim was to make cross-border payments as simple, efficient and secure as 'national' payments within a member state. At the same time, the directive created the necessary legal basis for the Single Euro Payments Area (SEPA).

PSD2 refers to the expanded Payment Services Directive (2015/2366) from the European Parliament and Council dated 25 November 2015, covering payment services in the internal market. PSD2, which will come into force on 13 January 2018, supersedes the original Payment Services Directive and specifies the opening up of the market in payment processing to third party providers (TPPs). PSD2 is designed to open up the market for payment services within the EU area to non-banks (i.e. third parties), in order to promote innovation and competition. At the same time, it seeks to increase consumer protection. Underlying the new directive is also the stated intention to reduce the costs of payment processing and improve security, through new providers, new solutions and stronger competition.

PSD2 thus changes the rules of the game in payment processing and will affect all of those involved: the market, consumers and above all the banks. Financial institutions are obliged to provide Application Programming Interfaces (APIs) for third parties (TPPs) to allow them access to accounts (XS2A), so that they can engage in bank payment processing – at the request and with the agreement, of course, of the relevant account holder.

Specifically, third party providers are granted 'non-discriminatory access' to customer accounts (Access to Account/ XS2A) with respect to the basic functions, 'initiation of payments' and 'retrieval of account information'. Security, responsibilities and liability, therefore, are key topics in the discussion.


European Payments Council
PSD2 EXPLAINED
Includes a jargon buster!
Why was the revised Payment Services Directive (PSD2) created?
First, let's introduce the Payment Services Directive (PSD)
The PSD was adopted in 2007. It created a single market for payments (essentially credit transfers, direct debits, cards) in the European Union. It provided the legal foundation for a Single Euro Payments Area (SEPA).
New players and services needed to be regulated
Since the PSD, the digitalisation of the European economy has steadily progressed. New services, provided by new players, have appeared for online payments. Problem: they were outside the scope of PSD, and therefore not regulated at EU level. An update of PSD was needed.
Towards an increasingly integrated EU single market
The objectives of PSD2 are to make payments safer, increase the consumers' protection, foster innovation and competition while ensuring a level playing field for all players, including new ones.

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Main changes brought by PSD2

PSD2 contains 117 articles...
Only the most important changes are explained here!

1

Acknowledgement of new players accessing the consumers' payment accounts

New players will now be registered, licensed, and regulated at EU level. Barriers will be removed for these companies, therefore increasing competition, which should translate into lower costs for consumers. These new players will access the consumers' payment account (that's the **'XS2A'** - access to account) to make payments on their behalf (via credit transfers) and to provide them an overview of their various payment accounts. Obviously only with the prior consent of the consumers!

How would this technically work ?

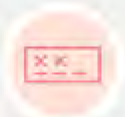
The institution holding the payment account of the consumer provides to these new players access to the account, for example via an Application Programming Interface **(API)**. It can be viewed as a messenger enabling information exchanges, taking a request from the new player, and returning an answer.

2

An increased security of Internet payments using Strong Customer Authentication **(SCA)**

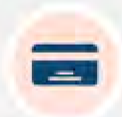
PSD2 aims at reducing the risk of fraud for electronic transactions, and enhancing the protection of the consumers' data. For all electronic transactions, the SCA will mean that two or more of the following independent elements will be used:

Knowledge



Something only the user knows (password, PIN...).

Possession



Something only the user possesses (key material...).

Inherence

Something the user is (fingerprint, voice recognition...).

+ extra element for remote transactions (Internet, mobile)

A unique authentication code which dynamically links the transaction to a specific amount and a specific payee.

When will SCA have to be applied?

- Each time the user makes a payment, except in certain situations (exemptions), such as:
  - Below a certain amount.
  - If the beneficiary is already identified.
- When users consult their payment account, or an aggregated view of their payment accounts, using an additional service.
  - The 1st time the account (or aggregated view) is consulted.
  - At least every 90 days.

3

A broader geographical reach

All transactions including those with 'one leg out' (at least one party is located within the EU, and no longer both) are in the scope of PSD2, and all official currencies (cryptocurrencies are excluded). It will offer a better information to consumers and a better protection of the European part of the transaction.

And also...

4

The EPC SDD Core scheme rule of the unconditional right of refund for direct debits becomes a formal legal requirement (until up to 8 weeks after the payment).

5

Ban of surcharging for most card payments (those subject to interchange fee caps under the Interchange Fee Regulation).

6

In case of unauthorised payments, the consumer will not pay more than €50 (vs €150 before), except in certain situations such as fraud or gross negligence.

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Who's who in the new PSD2 world?

1) DIFFERENT STATUTES

Credit Institutions

Defined in the Banking Directive (1977). Another term to say bank. Their activities are broader than payments (loans...).

Payment Institutions

Defined in PSD. They can propose several services, directly linked to payments.

Third Party Payment Service Providers
TPP

Introduced in PSD2. They are Payment Institutions which don't hold payment accounts for their customers, and have therefore a more limited scope of activities.

Payment Service Users
PSU

They make and/or receive payments. Can be either natural or legal persons. They interact as customers with all these organisations.

2) SEVERAL POSSIBLE ROLES

Account Servicing Payment Service Providers
ASPSP

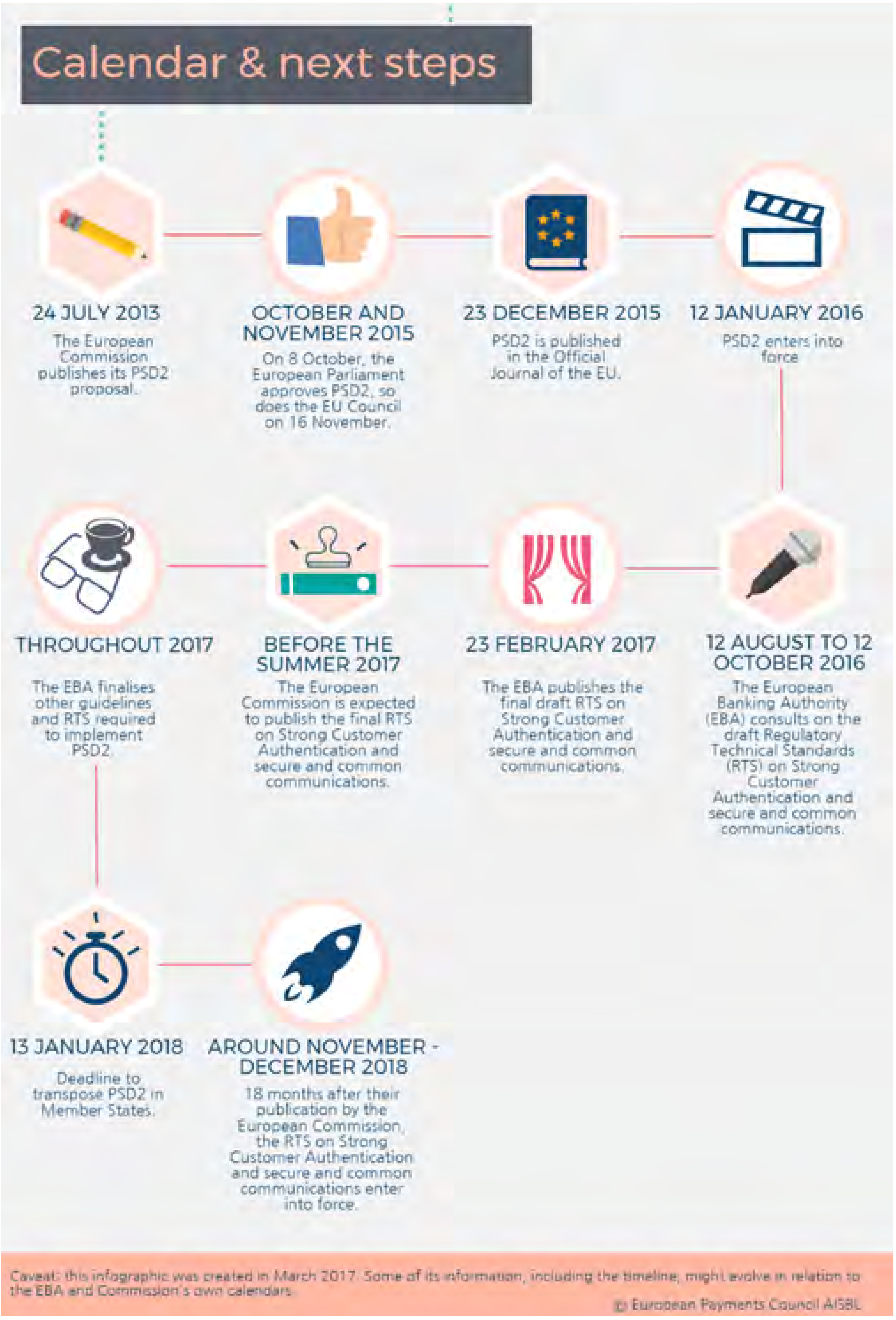
They provide and maintain payment accounts for consumers.

Account Information Service Providers
AISP

They aggregate online information for multiple payment accounts and offer consumers a global view of their daily finances, in a single place, in order to help them better manage them.

Payment Initiation Service Providers
PISP

They facilitate the use of online banking to make a payment (which offers an alternative to the use of cards).



European Payments Council AISBL: Infografik "PSD2 explained" http://www.europeanpaymentscouncil.eu/index.cfm/newsletter/article/?articles_uuid=9C9F71A1-DEBF-ED03-7D900EAD659DF1FA

For questions and inquiries about Computop's solutions, contact a payment specialist in your area or visit **computop.com.**

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