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E-INVOICING SOLUTIONS RELATED TO RETAIL PAYMENTS – THE WAY FORWARD IN SEPA

In June the members of the ERPB endorsed the general objective of considering a harmonised e-invoice/bill presentment & payment service with pan-European reach for all consumers and businesses in SEPA. The ERPB agreed to continue its work on this dossier with the aim to conclude on next steps in November 2015.¹ Taking into account the comments received during the June ERPB meeting and the 4-week written consultation period the ERPB Secretariat has adapted the initial note accordingly.

Executive summary and next steps

Digitalization of business processes in general and e-invoicing in particular is an opportunity to improve efficiency and cost savings of European enterprises. Since an e-invoice encompasses relevant data for payment processes, it offers the possibility for seamless straight through processes which also offer the potential for efficiency gains in the payments chain. E-invoicing will increase security by abolishing the need to manually type in or copy-paste any of the data required for completing a payment order when initiating a payment. This will enable enterprises to automate their processes when issuing, approving, paying and reconciling e-invoices; but it will also simplify the initiation of a payment for the consumers.

To date in the EU the take-up and development of e-invoicing and the payment-related solutions is at an early stage and mostly geared towards domestic usage. Nevertheless with the growing rate of digitalisation the adoption of e-invoicing will become of increased relevance for all stakeholders in the longer run. Business transactions and the following payment may be initiated based on an invoice or a request to pay, which could also be a source document in accounting. At present the general focus with regard to e-invoicing in Europe is mainly on governments and businesses². This is mainly due to the directive 2014/55/EU on electronic e-invoicing in public procurement, which aims at making e-invoicing in public procurement mandatory by 2016; furthermore it is also part of the Digital Single Market Strategy. However, for e-invoicing to become the predominant method of invoicing by 2020 in Europe³, it is necessary to focus on how the benefits of solutions integrating e-invoicing/billing and payments could be maximised for consumers, SMEs and micro enterprises (at domestic and cross-border level) in the Single Euro Payments Area – in line with the work already done by other European authorities and to avoid duplication.

For the ERPB the relevance of this dossier stems from the close links between invoicing and payment processes. E-invoicing not only enables end-to-end straight through processing (STP) in pre- and post-payment processes, it also influences how the payments are actually made. In the retail payments arena this has motivated market participants to leverage the benefits of digitalization and find new business opportunities. As a result new and efficient solutions for e-invoice/bill payments have been developed

¹ See the statement following the third meeting of the ERPB held on 29 June 2015 – click [here](#).

² See annex 1 for more information on the work on e-invoicing by European authorities, i.e. the work done by the European Multi-Stakeholder Forum on E-invoicing, chaired by the European Commission; and the European Committee for Standardisation, CEN.

³ A generic milestone set by the European Commission in the Single Market Act II (COM/2012/573) and in EC communication COM/2010/712.

especially for consumers, SMEs and micro enterprises – i.e. the integration of e-invoicing/billing and existing payment instruments has resulted in **electronic invoice/bill presentment & payment (EIPP/EBPP) solutions**. Such solutions do not only enable customers to comfortably receive and pay invoices, but also reconcile those invoices later in account statements and use the invoices as source documents in accounting. With EIPP/EBPP solutions it will be possible to associate the payment (no matter whether effected by a credit transfer, direct debit or card payment) to an e-invoice, enabling the payer to see the detailed information of the purchases made.

This note builds on the stance taken by the ERPB in June 2015 and the comments received from the ERPB members, complementing the stock taking and research which was done by the ERPB Secretariat in cooperation with the Eurosystem/ESCB. In view of the fact that i) resources of ERPB members are limited to tackle the potential workload of this dossier and ii) links to payment processes are less direct than in other ERPB dossier, it appears most conducive to take a step by step approach. Further action should only be taken if the ERPB determines that this is warranted based on the supporting analysis. As a first step, it is suggested to thoroughly analyse market practices and identify the issues that have occurred in the markets where e-invoicing and the related EIPP/EBPP solutions are more prevalent. Once this stock-taking has been conducted and respective analysis will have been provided, the ERPB should decide whether it is warranted to continue this work with a view to possibly giving guidance to market participants to avoid developing non-interoperable⁴ solutions and services for e-invoice/bill payments in SEPA.

Initial findings suggest that in the mid-term customers may want to receive notifications of invoices/bills or are directly e-invoiced/billed by the supplier via e-mail. However, invoice/bill presentment in the e-mail inbox usually doesn't provide an automatic link to the payment initiation phase, and therefore such solutions may not address respective needs. The scope of future work on this dossier may therefore be on EIPP/EBPP solutions that focus on services which are provided by PSPs and/or third party e-invoicing service providers and which enable consumers, SMEs and micro enterprises to consolidate the management and payment initiation of received e-invoices/bills in a seamless and fully digitalised way. Furthermore, for facilitating interoperability between service providers, the EIPP/EBPP solutions could be based on the deliverables of the European Committee of Standardisation (CEN), i.e. the European standard on e-invoicing (semantic content) and the list of technical message standards (syntaxes) compatible with the European standard.

Initial analysis suggests that several barriers may influence the implementation of electronic invoice/bill presentment & payment (EIPP/EBPP) solutions, and such analysis includes ERPB members' feedback. The following outlines **the most prominent barriers hindering:**

(A) the take-up of EIPP/EBPP solutions

1. Businesses and consumers have limited knowledge about the advantages and added value, thus not actively demanding change.
2. SMEs and micro enterprises perceive e-invoicing/billing and the integrated presentment & payment solutions as complex and expensive to implement.
3. Consumers as well as SMEs and micro enterprises may have reservations towards electronic services for receiving and paying e-invoices/bills, in particular accessibility, security and simplicity.
4. Where such solutions have been developed the payers (and the payees) might experience a lock-in effect because of diverging basic features/principles and therefore complexity in switching.

⁴ Solutions operated by different service providers are not able to exchange "request to pay" messages, which for the payees and payers limit the reach of the service.

(B) integration of EIPP/EBPP solutions

5. No EU-wide interconnected network to reach all payers (for 4-corner e-invoicing models).
6. Diverging standards and non-interoperable technical formats for e-invoicing/billing.
7. Diverging business rules and practices on top of the standards.

In a context of limited resources and the need of the ERPB to also focus on other matters of priority, it is suggested that at this juncture, an ERPB Working Group is established only to review the landscape of EIPP/EBPP solutions and thoroughly analyse the identified barriers for the take-up and integration. Supported by this analysis, the ERPB could assess whether there is a need to continue work on concrete deliverables. The Working Group should prepare respective analysis by November 2016, upon which the ERPB could consider whether and if so how to proceed further on this dossier

The ERPB is invited to:

- ***Discuss the way forward with respect to e-invoicing and electronic invoice/bill presentment & payment:***
- ***agree to prepare by November 2016 a report analysing the barriers towards the take up and integration of e-invoice/bill presentment and payment solutions in Europe;***
- ***agree to assess the need for further ERPB work after the November 2016 report will have been delivered to the ERPB;***
- ***agree to set up an ERPB Working Group and approve the attached mandate; and***
- ***ask the ERPB Working Group to take into consideration the findings presented in the Secretariat note.***

1. Background

The migration to SEPA payment instruments harmonised the payment life cycle/payment chain of euro credit transfers and direct debits. This has enabled electronic straight-through-processing of payments in the Single Euro Payments Area. In many cases the initiation and reconciliation phase of the payment life cycle are not digitalised and for initiating a payment the payer has to provide a complete payment order and this is still being made manually, e.g. by typing in or copy pasting the payee's name, IBAN, amount of payment, remittance data necessary for reconciliation (from a paper or pdf invoice). Similarly, as the invoice is not in a digital and machine readable format, the payees cannot automate the reconciliation of outstanding invoices, resulting in manual processes, e.g. by an accountant. The adoption of electronic invoicing (e-invoicing) will address the above mentioned inefficiencies and facilitate full digitalization of the whole payment life cycle; furthermore it will create additional benefits in terms of efficiency, security and cost savings⁵.

E-invoices must be machine readable and enable fully digital/automatic processing. The EU legislators define an *“electronic invoice”* as an invoice that has been issued, transmitted and received in a structured electronic format which allows for its automatic and electronic processing (Directive 2014/55/EU on electronic invoicing in public procurement). Structured e-invoicing enables integration of processing in the Enterprise Resource Planning (ERP) and accounting software and will make it possible to fully automate buyer and seller business processes (i.e. starting from placing the order, to the actual payment and reconciliation of the invoice). This leads to fully digital straight-through-processing (STP) of information in the payment chain – i.e. starting from payment initiation and ending with reconciliation of received payments.

It is important to note that a scanned invoice (or a “pdf” invoice which does not contain data in a machine readable format) sent by email is not an e-invoice according to the above definition, furthermore it does not allow reaping the full benefits of digitalisation.

E-invoicing has the potential to bring benefits for the society as a whole – efficiency and productivity for businesses as well as for public administrations and increased convenience and security for consumers (see annex 2). The digitalization of business processes in general and e-invoicing in particular is a good opportunity to improve the competitiveness of European enterprises and raise productivity and customer satisfaction. E-invoicing enables faster invoice approval times, and if combined with faster payment solutions or improved supply chain finance opportunities, enables them to generate more value. In addition to the reduction of private costs⁶, the environmental benefits of e-invoicing should be considered. E-invoicing helps to reduce paper consumption and energy costs of transportation, generating significant carbon savings and reducing the ecological footprint of companies⁷.

From a retail payments perspective, different solutions and services are emerging which merge electronic invoicing and payments from the payment service users' (PSUs) perspective (see annex 3). This implies that basic e-invoicing (which is out of the scope of the ERPB) can be combined with payment instruments (based on the payment habits either with credit transfers, direct debits, or card payments) in a way which results in a new and efficient payment solution, enabling the payer to flexibly manage and pay invoices/bills – i.e. **Electronic Invoice/Bill Presentment & Payment (EIPP/EBPP)**⁸ solutions. EIPP/EBPP solutions are provided by payment service providers (PSPs) and/or e-invoice service

⁵ Reaping the benefits of e-invoicing in Europe, European Commission, 2010 ([link](#))

⁶ E.g. Based on some actual case studies, it is highlighted that e-invoicing enables businesses to reduce per invoice processing costs up to 59% for invoice issuers and 64% for invoice receivers, depending on the size of the company and the number of processed invoices (Billentis, 2014: 51–52).

⁷ Economically friendly electronic invoice, Federation of Finnish Financial Services, 2010

⁸ E-invoice (used in B2B/B2G) and e-bill (used in B2C) are synonyms, in this note the abbreviation – EIPP/EBPP – names both.

providers and in practice they can be used in the business/government-to-consumer and business-to-business domains. The business case for PSPs comes from the possibilities to enrich their offering with e-invoice viewing/presentation and payment services for payers as well as e-invoice sending and receiving services for payees as part of payment collection solutions, including also supply chain financing. E-invoice service providers will be in a position to make use of a new payment service introduced by PSD2 (i.e. payment initiation service) for the payment part; besides providing e-invoicing network services and acquiring payment services from PSPs.

EIPP/EBPP services are based on traditional SEPA payment instruments, but the PSU's may perceive these services as new and alternative payment solutions on top of the traditional payment instruments. To date in the EU the take-up of e-invoicing and the payment-related solutions is still at an early stage. In order to foster harmonised payment solutions with pan-European reach, the ERPB could analyse relevant issues and consider whether to give guidance to market participants to avoid developing non-interoperable national EIPP/EBPP solutions and services, which would also affect the single euro retail payments market.

As a generic goal the European Commission considers e-invoicing becoming the predominant method of invoicing by 2020 in Europe (COM/2010/712). As a first step the Commission is focusing on electronic invoicing in public procurement. The Directive (2014/55/EU) on electronic invoicing in public procurement will however not only facilitate e-invoicing in the business-to-government domain, but by introducing an European standard for e-invoicing it might also prevent further fragmentation of the Internal Market and promote the general uptake of e-invoicing. The directive makes e-invoicing mandatory in public procurement by 2016 and calls for a European standard for the semantic data model of the core elements of an electronic invoice, which will be compulsory in the business-to-government domain. With the European standard the basic (core) elements of an e-invoice will be harmonised in all Member States. The harmonisation of the core section of the e-invoice will enable cross-border interoperability and also legal and fiscal compliance. This European e-invoicing standard can be used also for business-to-business and also business/government-to-consumer e-invoicing/billing.

The European standard on e-invoicing and the SEPA payment instruments are considered to be the basis for developing fully automatic e-invoicing/billing and payment solutions, which are interoperable at pan-European level. More specifically, the semantic data model of the core section of the European standard on e-invoicing specifies that invoices should provide necessary details to support bank transfers in accordance with the Single Euro Payment Area (SEPA) for payments in Euro and the relevant national payment practices for other currencies. Payments by means of Credit Transfer, Direct debit, and Payment Card are in scope for making payments of invoices compliant with the core invoice model. In that respect it is important to highlight that for efficiency and supporting straight-through-processing of data, the semantic data model has to contain the technical requirements specified in Regulation 260/2012 for initiating credit transfers and direct debits that are mandatory in the customer-to-PSP domain. If these elements are not included, the payer/payee is required to key-in or send additional data, interrupting the fully digital straight-through-processing of data.

The semantic model of the European standard on e-invoicing (EN 16931) has been sent to national standardisation organisations by the CEN and will be put on a 3-month public consultation in November 2015. The discussion on the final list of technical message formats/syntaxes (compulsory in public procurement) is still ongoing. It could be considered not to enforce implementation of a single syntax, but to make the most used syntaxes interoperable. Therefore, CEN is likely to do the mapping of the most used syntaxes (i.e. UN/CEFACT Cross Industry Invoice 2.0, 3.0; UBL 2.1.; EDIFACT and ISO 20022 Financial Invoice) and provide guidelines for interoperability. Based on the multitude of existing e-

invoicing syntaxes, there might be a business case for conversion services, e.g. for ERP/accounting software providers or e-invoice service providers.

At present the general focus in Europe with the call for a European standard on e-invoicing is on the domain between businesses and government (i.e. B2G). This is also confirmed in the European Commission's staff working document on a Digital Single Market Strategy for Europe⁹, referring only to the adoption of e-invoicing in public procurement. Nevertheless, it can be predicted that a greater uptake of e-invoicing solutions between businesses and government will take Europe closer to the above mentioned goal set for 2020 and increase also the usage of e-invoicing towards the consumers, SMEs and micro enterprises. Approximately 45–65% of all companies are suppliers for the public sector and all companies and households receive requests to pay (e.g. land tax, public service charges etc.) from the public sector (Billentis, 2014).

2. ERPB objectives with regard to EIPP/EBPP solutions and services

E-invoicing/billing generates benefits by fully digitalizing the payment initiation and reconciliation phases of the payment chain and thus offer potential for growth. In view of the adoption and deployment of solutions at national level the ERPB could consider facilitating the harmonisation of EIPP/EBPP solutions in the future in order to ensure pan-European reach and enable businesses, SMEs, micro enterprises as well as consumers to consolidate the management and payment initiation of received e-invoices/bills in a seamless and fully digitalised way throughout SEPA. The ERPB might focus in that respect on services which are provided by PSPs and/or third party e-invoicing service providers as well as the technical standards and business rules upon which the services are built on.

As the trend is towards electronic invoicing and consumers become more and more acquainted to e-finance there is a need for simple solutions to manage and pay e-bills in the entire Single Market. Furthermore, since IT skills and resources of SMEs and micro enterprises are frequently limited, there is an increasing demand for extremely easy-to-implement and -use e-invoicing/billing tools & services (provided e.g. by PSPs or third parties) which enable straight-through-processing (STP) of e-invoice/bill issuing, sending, receiving and payment processes. However in the context of this dossier in-house processing of invoices – i.e. e-invoices received, processed and sent for payment within the Enterprise Resource Planning (ERP) and/or accounting software of an individual business – is left out of scope.

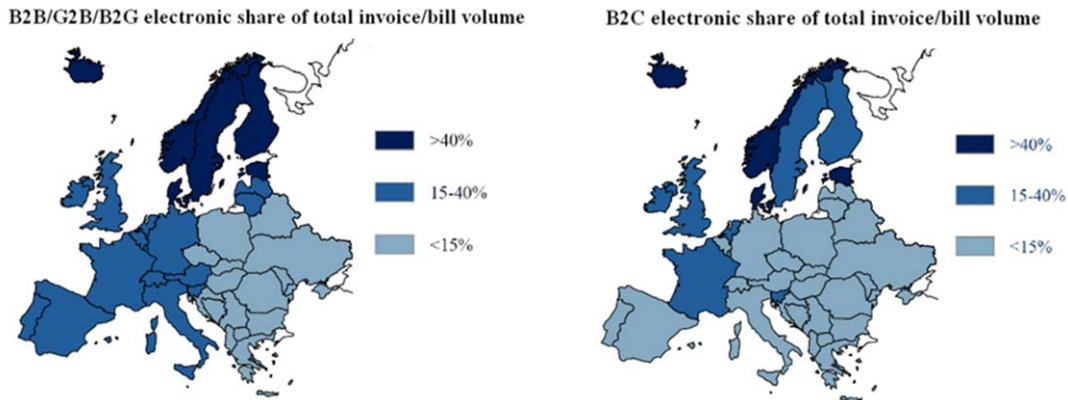
3. General state of play in Europe

The e-invoicing market is growing, but the use of e-invoicing, especially in the business-to-consumer domain (B2C), is not yet widespread throughout the European Union and the use of EIPP/EBPP solutions is even less. In Europe according to a research conducted by Billentis (2015: 12) the annual invoice volume is estimated to reach 36 billion invoices in 2016. More precisely, approximately half of the volume is sent to consumers (B2C); the other half to businesses and the public sector (B2B/B2G/G2B). A survey among the members of the European E-invoicing Service Providers Association (EESPA) shows a 17.3% increase in the e-invoicing volumes in 2014, which is substantially based on B2C e-invoicing (growing over 50%).¹⁰ However, the predicted electronic share of the total invoice/bill volume in the B2C domain exceeds 40% in Denmark, Norway and Estonia and is above 15% only in Finland, Sweden, France, Ireland, the Netherlands and the United Kingdom. In general electronic invoicing/billing is stronger used in

⁹ A Digital Single Market Strategy – analysis and evidence, European Commission, 2015 ([link](#))

¹⁰ Press release – European e-invoicing service providers processed nearly 1 billion e-invoices, according to EESPA survey. 30.06.2015 ([link](#))

B2B/G2B/B2G, the respective share in the majority of Europe is between 15-40%, and sometimes even above.



In Europe there are over 620 e-invoicing service providers (operators), which are based either on three- or four-corner e-invoicing models. They offer different web-based, Software as a Service (SaaS, e.g. a piece of software which connects to the ERP/accounting systems) and other solutions, which enable payees to issue e-invoices and send/receive them directly or via a consolidator/aggregator (see annex 3). As regards distribution channels in B2B/B2G/G2B invoicing the 'buyer/supplier direct' and 'consolidator models'¹¹ are used more or less equally, if one considers only the presentment of the invoice. In the B2C invoicing the supplier direct model is used the most. This is because most consumers prefer to receive electronic invoice notifications via e-mail; for presentment and payment the consumer may be routed e.g. to the billers' (but also consolidators') website or the invoice may be contained in the e-mail. Therefore it is estimated that e-mailing could be the preferred delivery channel for 2/3 of European consumers in the mid-term. However, for consumers invoice presentment on the supplier portals and via internet banking (i.e. as EIPP/EBPP services offered by PSPs) does not yet play a major role in most European countries. An exception are the Nordic countries, where the exchanged e-invoice volume via online banking portals is almost as high as the one distributed by other channels. (Billentis 2014 and 2015)

In 2014 the migration to SEPA credit transfers and direct debits reduced the complexity of implementing e-invoicing solutions and enhanced the benefits of automated reconciliation in the euro area – by October 2016 all stakeholders in EU will use ISO 20022 XML standards for initiating payments in euro and receiving reconciliation messages. Therefore the harmonisation of the "payment leg" and the messaging channels between the PSPs and PSUs have made it easier for the sellers and buyers to integrate e-invoicing into their ERP/accounting systems. As specified before, e-invoicing can be combined with all payment instruments. However, SEPA migration even motivated PSPs in some Nordic-Baltic Member States¹² to move more towards B2C/B2B e-invoicing/billing – i.e. by replacing legacy direct debits with EIPP/EBPP solutions, which combine e-invoicing and SEPA credit transfers to facilitate comfortable payment of one time and regular invoices.

In the Nordic-Baltic countries (i.e. Finland and Estonia) the impact on the uptake of B2C invoicing has been remarkable. SEPA migration provided an incentive to make invoicing and payment procedures more efficient, resulting in the switch of legacy direct debits to e-invoices/bills which are being comfortably paid with SCTs. As both countries use a national four-corner e-invoicing model, the payees can make use of

¹¹ In the **supplier direct model** - the vendor possesses the EIPP/EBPP system on which invoices are presented to customers; in the **buyer direct model** – the customer controls the EIPP/EBPP application and the vendor either posts his invoices into the customer's application or the customer creates the invoice himself from his own order; in the **consolidator model** – a consolidator (e.g. a third party or a PSP) acts as an intermediary, collecting or aggregating invoices from multiple payees for multiple payers, eliminating the need for point-to-point connections.

¹² Finland, Estonia and Latvia

e-invoice sending and receiving possibilities offered directly by their PSPs or third party e-invoicing service providers (SaaS or web-based), unfortunately interoperability is possible only at national level. Based on the practice of Finnish and Estonian PSPs the payers (consumers and businesses) are comfortable with the EIPP/EBPP solution and according to the competent authorities and consumer protection bodies there have been no complaints, e.g. with regard to the need for refunds.

The decision how the payers want to pay incoming e-invoices/bills always depends on different factors, e.g. the nature of the conducted “business” transactions and also the financial situation of the payer, which will also influence the payment decisions through the level of the payer’s financial literacy. Based on these factors the payers are free at any time to choose whether they want to pay their e-invoices using one-off or automatic (re-current) payment options, and change their decision at will. But it can be said that the payers (especially consumers) tend to use the EIPP/EBPP service more for automatically paying regular e-invoices/bills, at least in the on-boarding phase; as it provides a good and electronically available overview of the status of all regular liabilities.

4. Barriers to take-up and integration

E-invoicing is a network business and it is imperative to avoid fragmentation and to rather interconnect service providers in order to achieve maximum reach to all businesses and consumers. With regard to take-up, it is quite common that the migration to e-invoicing faces the well-known chicken-and-egg dilemma. Some vendors and service providers might argue that they don’t need to start using e-invoicing, because their customers (business/private) don’t demand it. Vice versa business and private customers cannot demand services related to e-invoicing if the related companies do not offer them.

With regard to EU integration, the work that is going to be done under the aegis of Directive 2014/55/EU is addressing the general standardisation and interoperability issues of e-invoicing – i.e. the European standard on e-invoicing; the limited list of syntaxes; and the relevant guidelines on interoperability at the transmission level. But as the focus will be on public procurement specificities, the content of the standard and the syntaxes will be much richer compared to what is needed for B2C e-invoice/bill presentment and payment services. By law e-invoicing will be compulsory only in the procurement process, between businesses and public authorities. However, as the migration to the European e-invoicing standard is voluntary for private businesses (B2B and B2C invoicing) it affects also the EIPP/EBPP services offered to SMEs, micro enterprises and consumers. The most important remaining barriers are listed in the following table.

The following list of barriers takes into account the ERPB members’ feedback, complementing the research and stock taking done by the ERPB Secretariat in cooperation with the Eurosystem/ESCB.

The 7 key barriers to be addressed

Influencing the general take-up and implementation of EIPP/EBPP solutions

1. Businesses and consumers have limited knowledge about the advantages and added value, thus not actively demanding change.
2. SMEs and micro enterprises perceive e-invoicing/billing and the integrated presentment & payment solutions as complex and expensive to implement.
3. Consumers as well as SMEs and micro enterprises may have reservations towards electronic services for receiving and paying e-invoices/bills, in particular accessibility, security and simplicity.
4. Where such solutions have been developed, the payers (and the payees) might experience a lock-in effect because of diverging basic features/principles and therefore complexity in switching.

Influencing EU integration of EIPP/EBPP solutions

5. No EU-wide interconnected network to reach all payers (especially for 4-corner e-invoicing models)¹³.
6. Diverging standards and non-interoperable technical formats for e-invoicing/billing.
7. Diverging business rules and practices on top of the standards.

5. Considerations towards addressing the identified barriers

As described before, the potential benefits of the adoption of e-invoicing in general and EIPP/EBPP solutions more specifically are important not only for the stakeholders but also for the whole economy. A central point for achieving migration to e-invoicing is that payees are convinced of the added value (i.e. cost savings, speed, security and simplicity) of e-invoicing/billing and efficient EIPP/EBPP solutions which clearly involve also payees/payers with limited technical capability of automating its own payment processes.

For e-invoicing/billing to become predominant in Europe, the vast majority of SMEs and micro enterprises must also be enabled to issue, receive and pay e-invoices/bills in a simple and cheap manner. According to Eurostat, 7.3% of all enterprises in EU28 are SMEs and 92.5% are micro enterprises. They could benefit not only from the electronic transmission of the invoice and electronic execution of the payment through PSPs, but also from the possibility to use the data set contained in an electronic invoice (a digital document) for financial accounting purposes, since they are subject to a relevant tax compliance (e.g. VAT and Income Tax). Furthermore, in a two-sided market this would also ensure that consumers can fully benefit from e-invoicing/billing, because it would give a greater incentive to PSPs, e-invoicing service providers and larger payees for developing EIPP/EBPP services targeting directly at consumers (incl. SMEs and micro enterprises).

By addressing the “seven key barriers” identified in the previous chapter the following possibilities for supporting the take-up and EU integration of EIPP/EBPP solutions are identified. The considerations are based on the analysis of the ERPB Secretariat complemented by comments of ERPB members and could serve as generic suggestions for the ERPB working group in analysing the market situation with regard to EIPP/EBPP solutions.

5.1. Supporting the take-up of EIPP/EBPP solutions

For supporting the wide dispersion of the electronic invoice/bill presentment & payment solutions the following conclusions could be considered by the ERPB.

1. Better communication of the potential benefits to the supply and demand side of the market is needed already at country level.

- a. A supporting role could be played by the relevant national fora and initiatives.

For supporting this consideration, key considerations in explaining the benefits of EIPP/EBPP solutions (for supply side) and services (for consumers, SMEs and micro enterprises) could be highlighted and elaborated. The results could be used as input for the national fora and initiatives focusing on retail payments and/or e-invoicing.

2. Cheap-to-implement EIPP/EBPP solutions and easy-to-use EIPP/EBPP services are needed to increase take-up.

¹³ In 2-, and 3-corner models the payee or the third party service provider can reach all payers e.g. via e-mail.

- a. For payees – the ERP/accounting software providers have a key role to play (many of the solutions already enable e-invoicing, the question is how to send the invoice via a PSP or e-invoicing service provider's network to any payer in the EU).
- b. For payers – the PSPs and e-invoice service providers have a key role in deciding whether and how to offer simple invoice/bill presentment and payment services.

EIPP/EBPP solutions and services provided by e-invoicing service providers and PSPs could be thoroughly assessed to identify how the needs of payees/payers have been addressed. Furthermore it could be highlighted how the service providers have addressed customers' reservations in using electronic services for sending, receiving and paying invoices/bills. The outcome could facilitate general awareness of payees/payers (the demand side) and thus might catalyse developments from the supply side in making sending, viewing and paying of invoices/bills more integrated and fully digital throughout SEPA.

5.2. Fostering the emergence of EU integration of EIPP/EBPP solutions

3. Harmonised basic features and business rules for interoperability between different EIPP/EBPP services domestically and on the cross-border level are needed.

Based on identified features and user needs (see above consideration 2), it could be assessed which are the basic features/principles of an EIPP/EBPP service and a harmonised description could be proposed. This could serve as the basis for switching service providers. Furthermore, a set of "minimum criteria" for business interoperability that all EIPP/EBPP service providers could voluntarily accept in SEPA could be described.

In principle such a harmonisation of rules and practices could lead to the development of a European scheme¹⁴ for EIPP/EBPP solutions and services. A uniform scheme would facilitate the elimination of borders and make it possible for consumers, SMEs and micro enterprises to use EIPP/EBPP solutions and services in SEPA with the same level of simplicity and adequate security as within the national environment. Ultimately a European scheme could also benefit the development of a competitive market where the EIPP/EBPP solution and service providers can enjoy a level playing field. Therefore, the possibilities of creating a European scheme, which uses the existing SEPA payment schemes (credit transfer and direct debit) for payment initiation in combination with the European e-invoicing standard, could be explored.

4. In SEPA the e-invoicing leg of EIPP/EBPP solutions should support full straight-through-processing of an e-invoice/bill and also the subsequent ISO 20022 XML payment / reconciliation messages.

It could be elaborated, which semantic data is needed for providing EIPP/EBPP services – i.e. what is needed for the invoicing/billing part and what is needed for initiating a payment. Furthermore, based on a stable/finalised European e-invoicing standard and CEN's guidelines on technical interoperability of e-invoicing syntaxes, it could be assessed, which e-invoicing syntaxes are best suited for providing EIPP/EBPP services. As the payment initiation messages are contained inside the e-invoicing envelopes, it could be assessed, which implications (if any) the European e-invoicing standard may have on the ISO 20022 XML payment message standards (e.g. will it be possible to initiate a SEPA direct debit collection based only on the e-invoicing envelope, or is there a need for a separate direct debit collection order?).

¹⁴ In a simplistic approach, a scheme consists of a single set of rules, practices, standards and/or implementation guidelines for providing a service.

5. Pan-European reach of EIPP/EBPP solutions require an interoperable e-invoicing/billing network which connects payers and payees in SEPA.

In SEPA the payment service users should have the possibility to use EIPP/EBPP services irrespective of the Member State where they reside, for sending, receiving, paying and reconciling their e-invoices/bills. To achieve this, there is a need for an e-invoicing/billing network with pan-European reach, which enables the payees to send all e-invoices/bills (e.g. based on IBANs and/or payment card details) to any payer in the European Union. This could be done in combining the following:

- a. Conversion services suitable for EIPP/EBPP solutions, which enable interoperability between e-invoicing syntaxes (*like UN/CEFACT Cross Industry Invoice; Universal Business Language 2.1.; EDIFACT and ISO 20022 Financial Invoice*); and
- b. Trying to leverage the potential of the SEPA infrastructure – the PSPs have a key role, because their network interconnects all payees and payers in the European Economic Area (EEA).

Based on the outcome of the previous consideration, different options how to achieve pan-European reach in sending and receiving e-invoices/bills could be assessed. It could also be assessed what would be the most suitable options for using conversion services and how would it be possible to leverage the SEPA infrastructure and future real-time payments. This could be elaborated from the payee's perspective (i.e. for sending invoices/bills to any payer in the EEA) and from the payer's perspective (i.e. for routing e-invoices/bills from any payee to a central collection point in the PSPs' or e-invoicing service provider's electronic environment).

6. Way forward

Given the complexity of the matter and given existing resource constraints, it is suggested to conduct analysis and work in a step-by-step approach where further action should only be taken if the ERPB determines that this is warranted based on the supporting analysis. As a first step, an ERPB working group could be established to initiate a stock taking exercise to thoroughly assess the market situation of EIPP/EBPP solutions and analyse in detail the identified barriers. Such working group could be composed of the demand and supply side of the ERPB. The ERPB working group should deliver such analysis by November 2016. At that stage, the ERPB should discuss and determine further steps, if any.

Annexes

Annex 1. Work on e-invoicing by European authorities

The European Multi-Stakeholder Forum on E-invoicing (EMSFEI)

The forum was established in 2010 ([link](#)). The mandate of the EMSFEI covers business-to-government and business-to-business aspects of e-invoicing and the e-invoicing aspects of e-procurement in public procurement. The forum is not focusing on business-to-consumer e-invoicing and therefore doesn't deal with harmonisation of different e-invoice/bill presentment and payment (EIPP/EBPP) solutions. However the generic deliverables on e-invoicing are re-usable in the context of consumer oriented EIPP/EBPP solutions.

As such, the forum advises the EU Commission and the European Forum on E-Procurement (EFEP) whenever e-invoicing is discussed within the broader e-procurement framework. The forum also provides advice to the EU Commission on the Connecting Europe Facility (CEF) initiative and related digital service infrastructure (DSI) for e-invoicing ([link](#)).

The European Committee for Standardisation (CEN)

CEN launched on 9 September 2014 a Project Committee ([CEN/PC 434](#)) to develop standards in support of European Electronic Invoicing. CEN/PC 434 is responsible for delivering the European standard on e-invoicing as per the Commission's standardisation request ([link](#)). The scope of their work has been set as follows (extract).

"This European Standard establishes a semantic data model of the core elements of an electronic invoice. The semantic model includes only the essential information elements that an electronic invoice needs to ensure legal (including fiscal) compliance and to enable interoperability for cross-border, cross sector and for domestic trade. The semantic model may be used by public and private sector organizations for public procurement invoicing. It may also be used for invoicing between private sector enterprises. This European Standard complies at least with the following criteria:- it is technologically neutral;- it is compatible with relevant international standards on electronic invoicing;- it has regard to the need for personal data protection in accordance with Directive 95/46/EC, to a 'data protection by design' approach and to the principles of proportionality, data minimization and purpose limitation;- it is consistent with the relevant provisions of Directive 2006/112/EC;- it allows for the establishment of practical, user-friendly, flexible and cost-efficient electronic invoicing systems;- it takes into account the special needs of small and medium-sized enterprises as well as of sub-central contracting authorities and contracting entities;- it is suitable for use in commercial transactions between enterprises".

Annex 2. Benefits of using electronic invoicing/billing for businesses and consumers¹⁵

For businesses as sellers/payees and buyers/payers

Cost reduction – e-invoicing creates substantial cost savings through a reduction in manual administrative work, material and transport/postal costs. In particular a full integration of procurement/purchase processes, invoicing and payments along the physical and financial supply chain is an essential driver for enterprise cost savings. Straight-through-processing (STP) and semi/full automation of the invoice presentment and payment makes the whole process more efficient (e.g. no mistakes in the payment orders and less problems in reconciliation). Additional cost savings arise in fraud and loss prevention and auditing costs for trading parties and tax authorities.

Faster processing and payment cycles – e-invoicing enables instant and secure delivery of multiple invoices to the payers, i.e. ensuring also faster invoice routing and approval times. It also enables faster payments, either initiated through the payer's own automated ERP and accounting software (exporting payment data to PSPs) or via EIPP/EBPP solutions enabling easier and more efficient payment opportunities for SMEs, micro enterprises and consumers. By using the automated ISO 20022 XML account reports messages in the ERP and accounting software, the businesses can make use of enhanced account reconciliation. This enables also better monitoring of the days sales outstanding, i.e. acknowledgement of invoice receipt and transparency of the payment status.

Faster business cycle – due to the faster approval and processing of e-invoices, businesses can increase their working capital by making use of flexible supply chain financing, i.e. they have the opportunity to borrow against approved receivables, thus increase the speed and productivity of their business cycle.

Improved cash management – for businesses the ability to optimise their working capital is essential. It improves business agility and can minimise the need for external financing. By shrinking the order-to-pay and order-to-cash cycles, e-invoicing allows businesses to receive payments in a timely manner and take advantage of any trade discount schemes that may be available.

Improved compliance and security – businesses can take advantage of e-invoicing service providers (PSPs or e-invoicing operators) whose solutions ensure security and regulatory compliance, i.e. VAT compliance of invoices. For example: enabling e-invoices to be signed by a qualified electronic signature and used/accepted as source documents in accounting, i.e. making the whole accounting process more efficient.

For consumers as buyers/payers

Convenience and control of finances – all purchases end with a paper or electronic invoice/receipt. With EIPP/EBPP services consumers have simple and easy access to their invoices at the payees' digital environment, at the PSPs' internet banking environment or 3rd party service providers' digital environment (including notifications/monitoring via e-mail or SMS). With the latter two it is possible also to collect all invoices into one place, which gives the consumer a good overview of expenditures, enabling to better plan one's finances and decide when, where and how to pay. Furthermore, EIPP/EBPP also allows access to archived invoices for warranty purposes.

Better payment choices – with EIPP/EBPP services the consumers are always in charge, i.e. having an overview of outstanding invoices and choosing payment options that best fit their financial needs (e.g. using one-off or re-current payments). As invoices are presented to the payer well before the due date,

¹⁵ This part has benefited from different sources released by commercial and public sector entities; and the "Final report of the expert group on e-invoicing", published by the European Commission in November 2009. The benefits for the Public Administrations are not described as they are out of the scope of this report.

the payer can check the details and rightfully change also pre-authorized re-current payments. The payers will enjoy all benefits of the SEPA payment instruments.

Increased security – with e-invoicing the payer cannot make mistakes in the payment order, because the latter is generated automatically from the e-invoicing envelope sent by the payee. This means that the invoice is always paid correctly, i.e. with the right payer and recipient name, account and reference number and other relevant remittance data. In addition with using EIPP/EBPP services the payer will always receive the invoice, it won't get lost in post.

Annex 3. Combining e-invoicing and retail payments

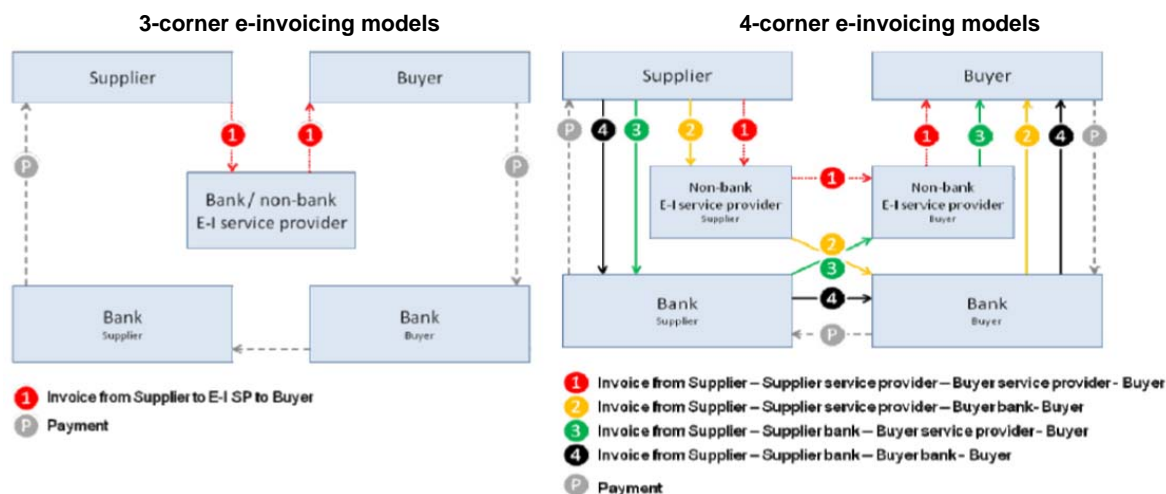
E-invoicing is an essential part of an efficient financial supply chain and it links the internal processes of enterprises to their payment systems. Benefits of electronic invoicing are maximised when the generation, sending, transmission, reception and processing of an invoice can be fully automated.

In general e-invoices can be routed and displayed to the payers (consumer, SME & micro enterprise) via different channels. The payee has the possibility to:

- issue e-invoices directly to the payers, if it has enough resources to integrate e-invoicing into the ERP/accounting system; or
- use a service provider (a PSP or a 3rd party), which can provide an easy-to-use solution for compiling e-invoice envelopes, also enabling aggregation possibilities.

This enables to make the connection between the general e-invoicing and the automation of the presentment and payment of the invoice (i.e. EIPP/EBPP) towards the payers. It also includes the after-payment processes, enabling automated reconciliation¹⁶ of outstanding e-invoices and payments made/received.

The following figures show the involved parties and illustrate the possible e-invoice flows in case of 3-corner and 4-corner models (non-exhaustive)¹⁷. It has to be noted that more and more e-invoicing networks are processing information flows in real-time.



¹⁶ Within SEPA the automation of reconciliation can be achieved by using the ISO 20022 XML messages for Account Reports in the payment service provider (PSP) to customer domain.

¹⁷ EBA e-invoicing initiative – Service Description & Rulebook – Version 2.0, published 2011 (see pages 85–86)

It is important to stress that all EIPP/EBPP solutions enable *via* the PSPs the buyer-side (payer) to initiate an electronic payment either using a credit transfer, a direct debit, or a card payment (as described in the following table). In addition the seller-side (payee) can enjoy automated reconciliation in its ERP/accounting systems (or via an accounting service provider).

Electronic Invoice or Electronic Bill Presentment & Payment (EIPP/EBPP) solutions		
1. PRESENTMENT	PSPs' Internet Banking websites;	
	3rd Party Service Providers' websites/secure e-mails (non-PSPs); Payees' websites.	acquiring the payment option via PSPs
2. PAYMENT	Credit Transfers, Direct Debits, or Card Payments	

Recognizing that for EIPP/EBPP solutions the payees can use their own websites, it has to be stressed that PSPs and non-PSP third party service providers (e.g. e-invoicing operators/service providers) are better placed for spreading of e-invoicing in Europe. The e-invoicing operators can provide easy-to-use and simple-to-implement e-invoicing solutions for issuing invoices (which is their primary business), but also address the payers' needs by offering EIPP/EBPP services to consumers, SMEs and micro enterprises.

The PSPs network provides strong authentication of the payees/payers as well as strong authorisation of payments. The PSPs are also inter-connected via the SCT and SDD infrastructures into a pan-European network, which reaches all stakeholders. Currently in the Single Euro Payments Area (SEPA) there are three EU-wide payment schemes developed by the European Payment Council: one for credit transfers (SEPA Credit Transfer Scheme) and two for direct debits (SEPA Direct Debit Core and B2B Scheme). For making inter-bank payments the PSPs make use of relevant infrastructures and the corresponding services for clearing and settlement of credit transfers and direct debits

The following table shows how it is possible to combine e-invoicing, different payment instruments and related infrastructures to enable comfortable payment of an invoice.

EIPP/EBPP solutions			
e-invoicing standard/format	e-invoicing file/envelope		
payment instrument	credit transfers	direct debits	card payments
and infrastructure	SCT infrastructure	SDD infrastructure	processing infrastructure
At the service level the payers are enabled to make	<ul style="list-style-type: none"> - one-off payments (<i>for one time or regular e-invoices</i>); and/or - re-current payments (<i>for regular e-invoices</i>) 		

The table is generic and the EIPP/EBPP solutions are flexible towards the different needs and payment habits of the payment service users in Europe. From the security perspective the EBA guidelines on the security of internet payments are applicable to all combinations.