

**BoF Online**

**2 • 2014**

**The Single Euro Payments Area:  
Characteristics, Realization and  
Future Prospect**

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*The opinions expressed in this paper are those of the authors and do not necessarily reflect the views of the Bank of Finland.*



Bank of Finland

Financial Stability and Statistics

19.2.2014

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BoF Online

Editor-in-Chief

Jenni Hellström

ISSN

1796-9123 (online)

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# 1 Introduction

After the formation of the single market and the introduction of the monetary union, the European Union (EU) is on the verge of entering a new phase of economic integration, the formation of a unified payments area. The complexity of this phase is comparable, or even more challenging, than the founding and adoption of the single currency euro within the Economic and Monetary Union (EMU). This initiative is known as the Single Euro Payments Area (SEPA) and it is designed with the intention of enabling the same conditions, rights and obligations to make and receive payments in euro by all consumers, enterprises and other economic agents involved regardless of national boundaries. The member states involved in the project include all the European Union countries as well as Iceland, Norway, Liechtenstein, Monaco and Switzerland.

The payments market is heavily dependent on strict communication standards between agents involved in the market. Therefore, SEPA can first and foremost be viewed as being a standardization initiative. SEPA is a market led development initiative propagated by the European Payments Council (EPC) as a result of regulation (EC) No 2560/2001<sup>1</sup> on equal charges for domestic and cross-border payments in euro. Nevertheless, it must be further emphasized that a unified payments area was originally a political undertaking to which SEPA can be viewed to be a response by the industry in order to meet the political aspirations behind the regulation. This study endeavours on providing an overall understanding of what SEPA actually is and the various effects of the adoption of SEPA to the European retail payments landscape as a whole.

Integration within the European retail payments market has been evident when looking at the past 10 years. While it can be questioned whether all this is due to SEPA, it is very likely that a significant portion of this change is attributable to the aims and ambitions behind the initiative. SEPA would appear to hold the potential for creating a harmonized competitive payments market with the possibility of becoming an innovative platform for future payments related development. Nevertheless, it is important to keep in mind that full migration to SEPA will most likely be achieved only sometime after 1 February 2014 in the euro area due to derogations, and hence, the market will at all likelihood continue evolving significantly also after this end-date.

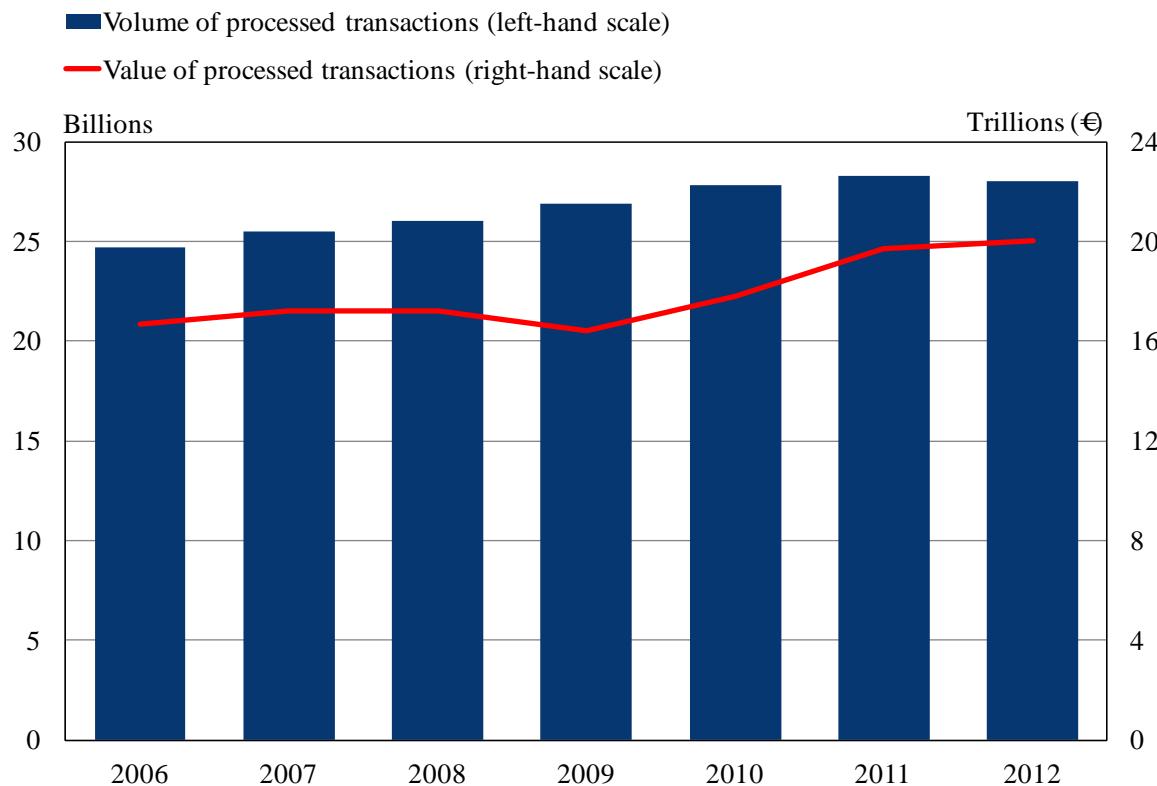
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<sup>1</sup> See <http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=CELEX:32001R2560:en:NOT>.

## 2 Significance of Retail Payments

The payment system infrastructure forms the backbone of the payments market which in turn serves the entire financial market through efficient, timely and secure ways of conducting payment transfers between any two parties involved. Kokkola (2010, 16) describes this to be of “*fundamental importance for economic and financial activities and [] essential for the conduct of monetary policy and the maintenance of financial stability*”. Moreover, Hasan & al. (2012, 21) even show empirically the existence of a positive correlation between migration to efficient electronic retail payments and economic growth in the EU-27 countries. Retail payment systems providing the infrastructure for the retail payment market in the EU are defined by the European Central Bank (ECB 2013b) as systems handling mainly payments made by the public with relatively low value and of no time-criticality. The importance of retail payment systems is further evoked by looking at the volume and value of transactions processed in the euro area as presented in figure 1 below.

**Chart 1. Volume and value of euro denominated retail payment transactions processed in the euro area 2006-2012**



Source: European Central Bank (2013b).

As can be observed from figure 1, the total value of euro denominated retail payment transactions was 20.0 trillion euro in 2012. This is over double the value of the euro area GDP in the same year, even without including cash payments. Both the volume and the value of processed payments grew by an annual average of 2.23% and 3.29%, respectively, between the years 2006 and 2012. Riksbank (2013, 55) highlights the size of the retail payments market as a fundamental driver for considerable revenue opportunities as well as the fact that the market is growing steadily unlike many other markets fluctuating in line with the economic cycle. This development is mainly due to people substituting cash payments with electronic ones. With the trend observed in figure 1, this statement would appear to hold true relatively well for the euro area as well.

Another important aspect conveying the significance of the payment services provided in general in a payments market is the price of offering any such services. In an early study, Humphrey et al., (1997, 32) found that the costs of providing payment services in a country may add up to about 3% of GDP. Capgemini and European Commission (2008, 8) estimated

that businesses, consumers and public entities in the EU-16 spent 1.3% of GDP as non-cash payments costs in 2006. This equals to about 158 billion euro while costs of cash handling were reported to be around 1% of GDP. Schmiedel et al. (2012, 43) further study the social costs of retail payment instruments and extrapolate it to be around 1% of GDP for the EU-27. However, it must be taken into account that there have generally been substantial deviations in the efficiency of national payment markets and the relative payment habits between the various countries in the EU and the euro area. The mostly used payment instruments tend to benefit from lower average costs irrespective of the instrument. Nevertheless, the provided estimates contribute in explaining the significance of the retail payment market for the economy as a whole.

On top of the indisputable importance of the retail payment market for an economy and its relative size in relation to the euro area GDP, SEPA has resulted in the retail payment market receiving wide spread attention by all stakeholders during the past odd ten years. SEPA continues to drive change and market reforms in the retail payment market in the EU and especially in the euro area, and will also potentially serve as the basis for future development even after the migration end date of 1 February 2014 for euro area countries and 1 January 2016 for the non-euro countries. As an outcome, the above mentioned reasons make SEPA an intriguing option for further studies in order to grasp the actual importance of this phenomena and its significance to the retail payment market.

### 3 Characteristics of the SEPA Project

#### 3.1 Vision behind and the stakeholders involved

The vision of SEPA perceived by the Commission and the ECB is “*an integrated market for payment services which is subject to effective competition and where there is no distinction between cross-border and national payments within the euro area*” thus calling “*for the removal of all technical, legal and commercial barriers between the current national payment markets*” (European Commission and European Central Bank 2006). The SEPA project was introduced in 2002 after the establishment of the European Payments Council (EPC) when 42 European banks, the three European Credit Sector Associations (ECSA's) and the Euro Banking Association (EBA) came together. This establishment was a result of Regulation

(EC) No 2560/2001<sup>2</sup> on 19 December 2001 pushing for equal charges for domestic and cross-border payments in euro on and eventually resulted in the publication of a White Paper the following year with a declaration (European Payments Council 2007, 7.):

*"We, the European banks and European Credit Sector Associations:*

- *share the common vision that Euroland payments are domestic payments,*
- *join forces to implement this vision for the benefit of European customers, industry and banks accordingly,*
- *launch our Single Payments Area."*

SEPA aims at eventually enabling all citizens, companies, banks and other participants to conduct payments denoted in euro within the SEPA region with the same rights, obligations and conditions despite their location in the region. Through the use of common technical standards and business models as well as a common legal basis and contractual frameworks, SEPA aims at creating a common set of payment instruments for all transactions concerning the single currency euro. This will also require efficient and competing clearing and settlement infrastructures satisfying user expectations that will be continuously amended and enhanced so as to ensure the further development of the system through market innovations. (European Central Bank 2013a.) The key stakeholders pushing and supporting the creation of SEPA are illustrated below in figure 2.

Chart 2. Main stakeholders in the creation of SEPA



Source: adopted from *Kokkola 2010*

The political driver of the SEPA project is the EC having a critical role when it comes to the founding of the entire project. The passage of the Payment Services Directive (PSD)<sup>3</sup> by

<sup>2</sup> See <http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=CELEX:32001R2560:en:NOT>.

the European Parliament and the EC is an essential step towards a consistent legal framework for payments hence introducing much improved certainty and clarity to the SEPA project. Under the coordination of the ECB, the Eurosystem has been responsible for setting up the objectives and the high level requirements for SEPA. The ECB is also monitoring EPC's progress with SEPA as well as coordinating the national implementation of the single payments area through national central banks. Consequently, national central banks are expected to draw together the banking industry, government and public authorities and users on a national level to safeguard the full implementation of SEPA. The EC, the ECB and the EPC are considered to be the co-owners of the SEPA project hence possessing the responsibility of the SEPA leadership. (European Payments Council 2007, 56–57.)

The main providers of the SEPA-project include the EPC formed by the European banking industry, the European Automated Clearing House Association (EACHA) and the Cards Stakeholders Group (CSG). Each one of the providers has their own unique responsibilities and duties in the creation of SEPA compatible requirements, payment schemes and infrastructure. (ECB 2013a.) The EPC also acts as the decision making and coordinating body of the European banking industry with issues related to payments. It has a declared purpose of promoting and supporting the creation and development of the SEPA project. The EACHA, meanwhile, provides the infrastructure needed for the payment transactions and makes sure that the infrastructure complies with the rules defined by the EPC. The purpose of the CSG is to aid in achieving a consensus between the relevant sectors involved in the project concerning the formation of new payment card standards. The users of SEPA, on the other hand, include all consumers, retailers, other small and medium-sized enterprises, large companies and public administrations. (ECB 2013a.)

### 3.2 Payment instruments and new payment schemes

The SEPA project is organized in three distinct layers. The first layer consists of the processing infrastructure providing operational services for which the EPC has established a framework clarifying the roles and procedures for the clearing and settlement services. The second layer consists of the common SEPA schemes. (Kokkola 2010, 189.) New payment schemes have been developed by the EPC for credit transfers and direct debits while a SEPA compliant framework has been established for card payments. (ECB2013a.) “*A set of interbank rules, standards, and practices for the execution of euro payment instruments*” is

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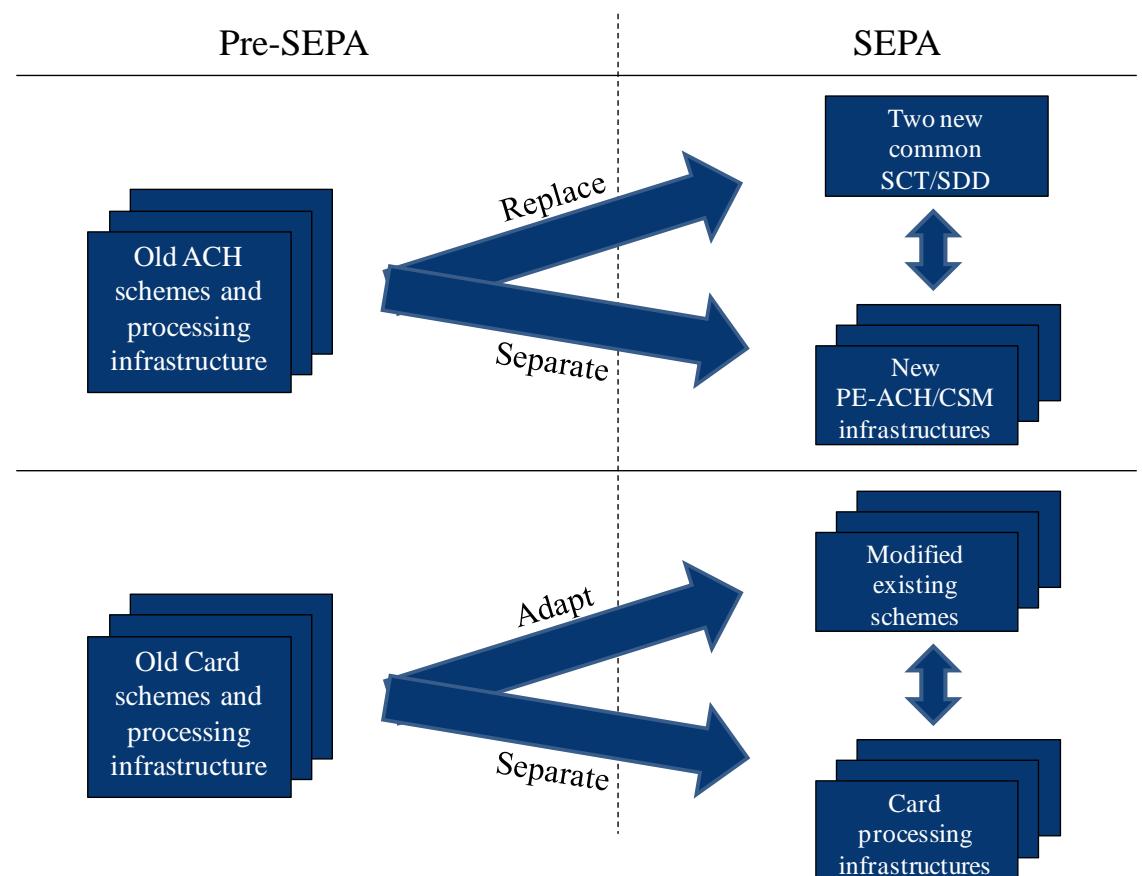
<sup>3</sup> See <http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=CELEX:32007L0064:EN:NOT>.

referred to as a SEPA scheme (European Payments Council 2007, 39). The third layer comprises of the new SEPA products and services offered on the basis of the core schemes to the end customers by the banks and service providers (Kokkola 2010, 190).

In order to ensure an optimal balance between competition and co-operation amongst banks with the two new payment schemes, three key features were identified during the design process: (i) the creation of a competitive processing infrastructure, (ii) enabling the creation of common interbank schemes and (iii) facilitating banks in offering their own products and services on the basis of competition to end customers. By using the core functionalities of the schemes as a basis, banks will potentially be able to provide a wide variety of payment services as they are free to add advanced practices on top of their current payment services and products. In SEPA, banks are to be able to compete and develop their products and services for customers also outside their previous regional home markets thanks to the common business rules and standards adopted. The separation of processing infrastructures from the schemes, meanwhile, enables the conduction of non-cash payments through various optional Clearing and Settlement Mechanisms (CSM) hence breaking down national monopolies and allowing banks to choose their CSM based on the price and service levels. (European Payments Council 2007, 40–43.)

Focus in the SEPA project has been put on the three most used non-cash payment instruments: credit transfers, direct debits and card payments. This has resulted in the SEPA project coming along with two new payment schemes: SEPA Credit Transfer (SCT) and SEPA Direct Debit (SDD). The creation of both schemes by the EPC was based on knowledge and data gathered from banks' day to day contact with customers and they are designed to provide core features to customers, banks and infrastructure providers drawn from this information. An alternative approach was adopted in relation to card payments. The new payment schemes are to replace the old ones completely while the new card framework is a modification of the previous versions. (European Payments Council 2007, 39.) This is further illustrated in figure 3 below.

Chart 3. SEPA Schemes and Cards Framework Design Philosophy



Source: adopted from *European Payments Council 2007*.

Both, the SCT and the SDD, are referred to as interbank payment schemes since the schemes define the maximum processing time frame as well as the common service level that banks must adhere to. The SDD scheme actually consists of two new schemes: the core scheme and a business-to-business (B2B) direct debit scheme. The latter scheme is based on the former one. However, the B2B scheme includes certain specific features for payments between businesses and it is optional for banks to offer services related to it. (ECB 2013a.) The PSD improves the end users position by limiting the settlement time for euro denominated credit transfers to one business day within the entire EU starting 2012 onwards.

The differing approaches of national card schemes, the existence of the International Card Scheme (ICS) and the complexity of the card business itself resulted in the EPC issuing a SEPA Cards Framework (SCF) policy document instead of developing a completely new scheme as had been with credit transfers and direct debits. This SCF document states how card issuers and acquirers as well as card schemes and operators must adapt their current

operations in order to fully comply with the SEPA principles concerning card payments denoted in euro. (European Payments Council 2007, 47.)

### **3.3 Standardization and technical requirements**

The importance of the data format used to exchange information between banks in payments processing can be analogously compared to the importance of language in communication between people. SEPA sets out to replace the dozens of different data formats previously used in the EU and also inside the euro area through an agreement on a common set of data to be exchanged in a common syntax. The EPC has specified SEPA data formats for the exchange of SDDs and SCTs and they are detailed in the respective SEPA implementation guidelines. (European Payments Council 2013.) The regulation (EC) 260/2012<sup>4</sup> requires the use of ISO 20022 XML (eXtensible Markup Language) message standard as well as the use of the International Bank Account Number (IBAN) for all direct debits and credit transfers denominated in euro.

The ISO 20022 standards are based on the global ISO 20022 message standards developed by the International Organization for Standardization (ISO).<sup>5</sup> These standards aim at creating a level playing field between all stakeholders hence averting a situation in which several standards are simultaneously developed to address the same business needs materializing in different areas and domains internationally, potentially creating technology lock-ins and preventing competition. The global nature of the financial services industry is reflected in the standard by bringing together various financial and commercial needs. The ISO 20022 package are assumed to offer the fastest and the most efficient way of developing and implementing message standards serving as a basis for long-term financial service solutions. The ISO 20022 enables the development of message standards for all domains of the financial industry and can thus be considered to be “a standard to develop standards”. (European Payments Council 2013.)

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<sup>4</sup> See <http://eur-lex.europa.eu/Notice.do?checktexts=checkbox&val=672986%3Acs&pos=5&page=1&lang=en&pqs=10&nbl=7&list=673000%3Acs%2C672830%3Acs%2C673001%3Acs%2C672995%3Acs%2C672986%3Acs%2C673024%3Acs%2C672887%3Acs%2C&words=&action=GO&visu=%23texte>.

<sup>5</sup> ISO (Greek for isos, meaning equal) is a Swiss based organization founded in 1947. It is the “world’s largest developer of voluntary international standards” with “state of the art specifications for products, services and goods practice, helping to make industry more efficient and effective”. See <http://www.iso.org/iso/home/about.htm>.

The IBAN is technical standard developed by the ISO just like the ISO 20022 XML message format. Its purpose is to allow the identification of any account across SEPA in the 33 countries involved in the project and it will replace the former national bank account identifiers. This will enable any customer to be reached by a credit transfer as well as it will enable direct debits to be made in favour of any recipient within the SEPA region. (European Payments Council 2013.) The IBAN will replace the Basic Bank Account Number (BBAN) for all domestic national payments 1 February 2014. Likewise, the use of the BIC (Bank Identifier Code) will be phased out after the 2014 deadline for national and cross-border payments. However, EU member states may choose to defer this until the 2016 deadline. In any case, the IBAN will be the sole account identifier after the 1 February 2016 deadline. (European Payments Council 2013.)

In relation to the objectives of SEPA on cards, they will be achieved “*through the use of harmonized, interoperable and free standards openly available to all parties within the card payment value chain*”. A safer, secure, more cost-efficient and a functionally richer card services environment is the focus of the CSG especially aiming at technical obstacles currently preventing an extensive customer payment card experience across SEPA. The SEPA Cards Standardization Volume – Book of Requirements defines the standard set for requirements ensuring an interoperable card and terminal infrastructure formed on the basis of open and free standards. (European Payments Council 2013.)

### 3.4 Timeline and implementation

The creation of a common payment network for large value payments, the Trans- European Automated Real-time Gross settlement Express Transfer (TARGET) system, in 1999 enabled the uniform implementation of European monetary policy. The system was updated to TARGET2 starting November 2007 and currently acts as an “*essential building block for settlement of SEPA payments and other euro payments*” (European Payments Council 2007, 57). Despite these advances made concerning the payments network for large value payments denoted in euro, a unified retail payment network in Europe has not existed before the SEPA project.

National and cross-border low value payments have continued to be handled in various different manners depending on the local payment system. This has resulted in an observable difference between the fees charged by banks concerning different forms of transactions, cross-border transaction fees being relatively high throughout the entire EU.

The regulation (EC) No 2560/2001 banned the possibility of charging higher fees for cross-border than domestic euro payments with credit transfers and payment cards hence resulting in the creation of the EPC by the banking industry in 2002 to address the payments issue. This, in turn, eventually led to the launching of the SEPA project as has been discussed above. (European Central Bank 2013a.)

The timeline for the migration from the old national payment and settlement schemes to full compatibility of SEPA has been divided into three separate phases: design phase, implementation phase and migration phase (European Central Bank 2013a). Priority implementation focus has been put on the euro-area countries as SEPA has the potential to revolutionize their retail payment markets the most. EU countries joining the euro are expected to go through a similar process and all non euro area countries have to participate in SEPA for euro payments as well. They may also choose to adopt SEPA standards for payments in their national currencies. (European Payments Council 2007, 53.) The key dates related to the SEPA project are summarized in Table 1.

**Table 1. Historical milestones and next steps of SEPA**

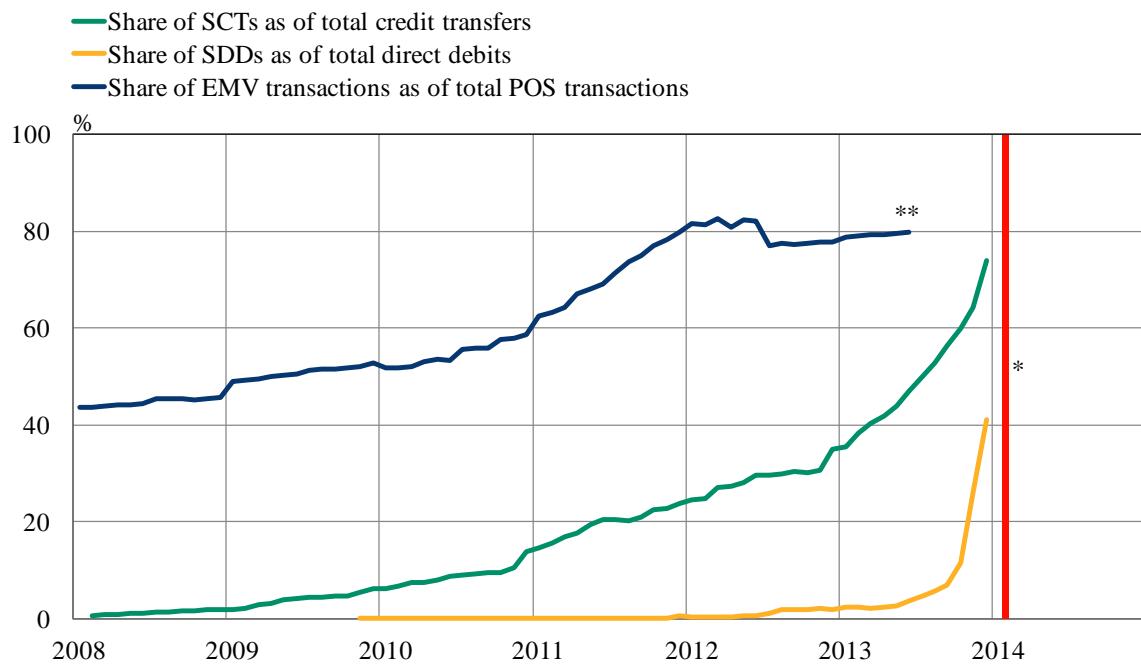
19 December 2001	Regulation (EC) No 2560/2001 entered into force.
June 2002	EPC is established.
13 November 2007	PSD is adopted as the legal basis for retail payments in Europe.
January 2008	SCT scheme is launched.
1 November 2009	Regulation (EC) No 924/2009 repeals regulation (EC) No 2560/2001.
November 2009	SDD scheme is launched (core scheme and B2B).
14 March 2012	Regulation (EU) No 260/2012 establishes technical and business requirements for credit transfers and direct debits in euro amending Regulation (EC) No 924/2009. SEPA end-date regulation.
1 February 2014	Deadline for migration to SCT and SDD within the euro area.
1 February 2016	Transitional arrangements end date (BIC requirements for cross-border payments and migration of national niche products).
31 October 2016	Deadline for non-euro area countries to migrate euro-denominated payments to SCT and SDD.

During the design phase between January 2004 and June 2006 the EPC designed the rules and practices for the new payment schemes and selected the standards that were to be applied. This meant the design of the cards framework and the new SCT and SDD payment instruments. The implementation phase began after the design phase and lasted until January 2008. During this phase the new SEPA products were created and tested by the banks and preparations for the new instruments were made on a national level. The set up of national implementation and migration bodies by each participating country occurred during this phase as well as the adoption of the PSD as the legal basis for SEPA. From January 2008 until today the participating countries of SEPA have been under the migration phase during which both the providers as well as the users of the new payment services are to gradually move to full SEPA compatibility. As a part of this phase, the SCT scheme was launched in January 2008 and both SDD schemes were launched in November 2009.

(European Central Bank 2013a.)

Despite, or maybe thereof, the magnitude of the SEPA project and the additional costs incurred especially by the banking sector for enabling a co-existence of several large scale payment systems simultaneously, no clear end-date was set for the SEPA project in the beginning. A clear end-date regulation was set only in March 2012, when Regulation (EU) No 260/2012 was published. According to this regulation, the end-date for replacing national credit transfers and direct debits for SCTs and SDDs will be 1 February 2014 for all euro-area countries. The final deadline for non euro-area countries to complete full migration into SCT and SDD for euro-denominated payments will be 31 October 2016. Figure 4 illustrates the progress of the migration process achieved by the euro area countries in relation to the 1 February 2014 end-date.

#### Chart 4. Indicators of the SEPA migration process as of December 2013



\* SEPA migration end date

\*\* Data available only until June 2013

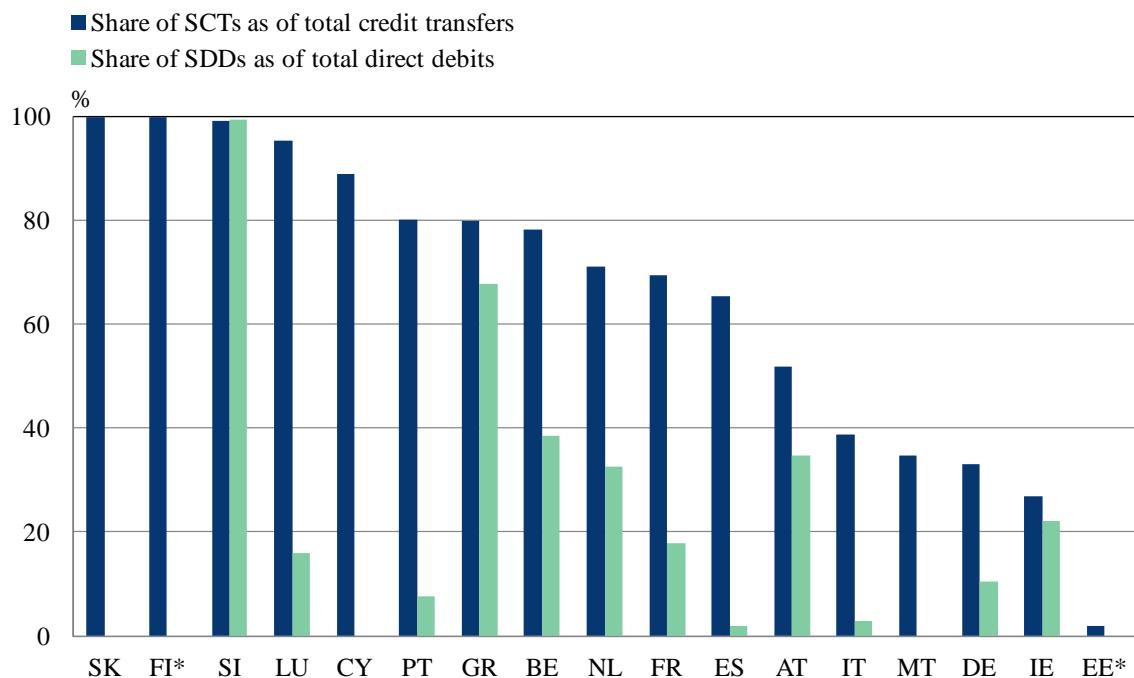
Source: European Central Bank.

The ECB (2013a) uses the share of EMV transactions<sup>6</sup> of total POS transactions as an indicator<sup>7</sup> to follow the SEPA compliance for cards. The share of EMV transactions is used as, by definition, non-EMV transactions are not SEPA-compliant. However, it must be reminded that the EMV standard itself is not a SEPA standard but instead a global standard ensuring the security and global interoperability of chip-based payment cards (the abbreviation stands for Europay, MasterCard and Visa). Despite the approaching migration end-date covering SCTs and SDDs, SEPA compatibility is still far from complete. Significant improvements had been made by December 2013 but as can be observed from figure 4, migration is still very much on its way when considering SDDs while about 70 percent of credit transfers are currently executed as SCTs. The state of migration between different countries is further illustrated in figure 5.

<sup>6</sup> EMV-compliant card used at an EMV-compliant terminal with EMV technology used in processing the transaction.

<sup>7</sup> Other indicators include EMV-compliant ATMs and POS terminals. However, as an indicator they include the same caveats as with the indicator of the share of EMV transactions of total POS transactions.

Chart 5. Migration to SCT and SDD per country at the end of Q3 2013



\* Legacy direct debit will mainly be replaced by e-ivoicing in Finland and Estonia.

Source: European Central Bank.

As can be observed, actual migration is not taking place in a uniform manner across countries. Vast differences exist between the participating nations. The ECB (2013d, 91) is paying close attention to the migration process and is urging for additional actions to be taken despite "*all the efforts made so far by public authorities, the financial industry, individual end-users and end-user groups*". According to the ECB (2013d, 91) a key role will be played by communication in order to ensure a successful migration.

## 4 Realization of the SEPA Project

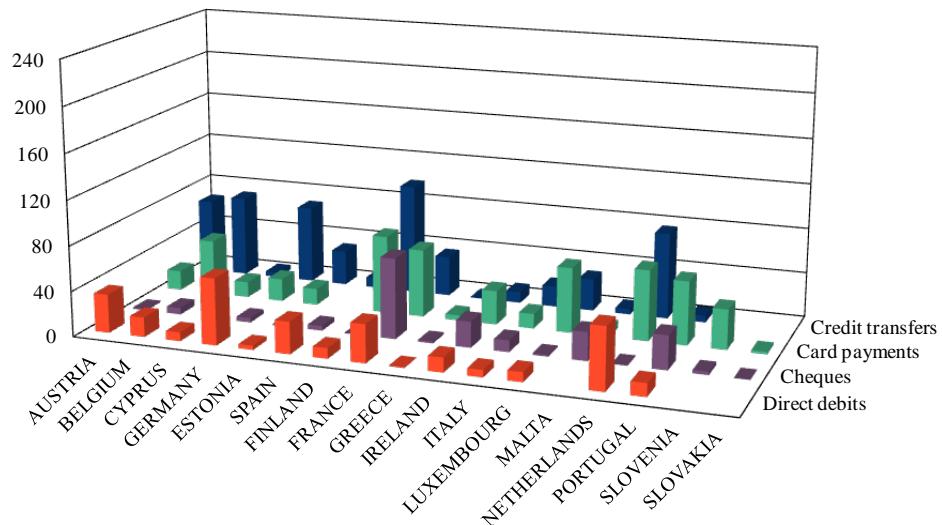
### 4.1 Payments market integration

The ECB (2013d, 86) states that "*[f]rom a macroeconomic perspective, the realization of a more efficient retail payments market through SEPA can facilitate trade, increase competition and innovation, foster financial integration, and add to the completion of the single currency (and monetary union). Thus it is an important tool for strengthening EU competitiveness and growth.*" In order to better understand the potential retail payments market evolution brought about by SEPA, it is essential to compare current market situation to the "starting point". It was in 2001 when the political decision was made to address the fragmented payments landscape in the euro area by passing Regulation (EC) No 2560/2001 thus providing a logical reference point for analyzing market evolution until 2012 for which the latest payments data is available. The heterogeneity and evolution in the euro payments market since the beginning of the single currency is illustrated in this study through the following indicators: (i) fragmented payment habits across the different countries and through (ii) the development of cross-border retail payments. The overall effect of SEPA will be monitored against these indicators.

#### 4.1.1 Fragmented payment habits

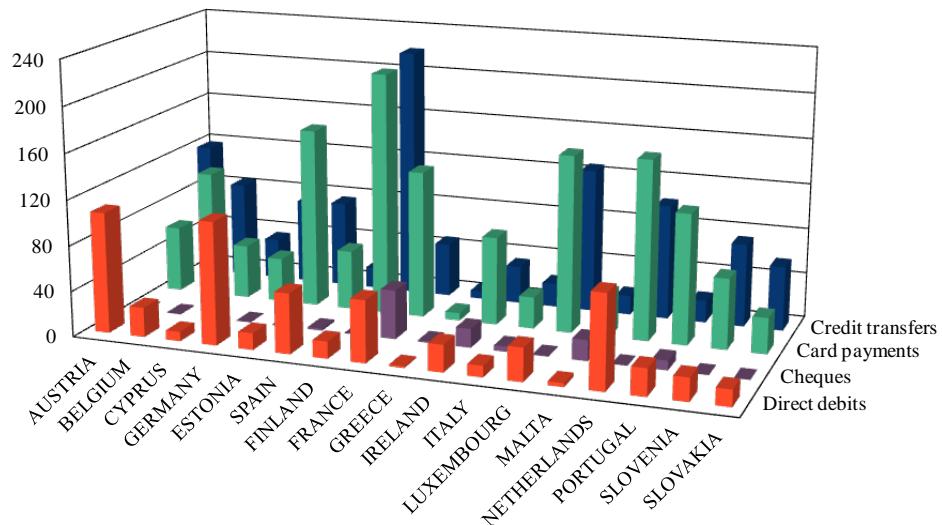
Figures 6 and 7 below illustrate the volume of cashless payments per inhabitant within the current 17 euro area member states from the years 2001 and 2012, respectively, and portray the heterogeneity of the use of the main non-cash payment instruments: credit transfers, direct debits, card payments and cheques. It is somewhat evident that during the course of the past 11 years payment habits have changed in the euro area countries. One significant change instantly observable is that the amount of cashless payments per inhabitant have increased substantially hence also giving rise to stronger economies of scale and scope in the payments processing industry. Convergence between payment habits of the euro area countries, on the other hand, is not as evident but can be said to have occurred to some extent. Despite the gradual progress observed it is necessary to point out that heterogeneity in payment habits across the euro area countries does seem to remain significant also today and can most likely be attributed not only to path dependence, but also to underinvestment in network economies.

Chart 6. Volume of cashless payments per inhabitant in 2001 in the euro area 17 countries



Source: Statistical Data Warehouse of European Central Bank.

Chart 7. Volume of cashless payments per inhabitant in 2012 in the euro area 17 countries



Source: Statistical Data Warehouse of European Central Bank.

Kemppainen & Salo (2006, 73) point out that path dependence is most likely influenced through the structure of the service providing sector, national payment traditions and the

legislative environment. They also point out that path dependence would appear to be stronger in the EU-15 countries while being weaker in the newer member states. This is most likely due to a “*lighter burden from the historical systems*” hence enabling a rapid adoption of the most efficient payment methods. Riksbank (2013, 41) adds to this by underlining retail payment markets in other countries to be dependent on the current payment service demand, which in turn is dependent on consumption patterns, the structure of the industry and commerce as well as in part also on the current appearance of the financial infrastructure. Since it is less expensive to hold on to the current infrastructure by making minor improvements to it rather than building a new one from scratch, inertia in the structure has resulted in the situation staying partly the same over a longer period of time in several countries. The Federation of Finnish Financial Services (Finanssialan keskusliitto 2008, 4) also points out the differing billing spans between countries to be an example of a partial reason behind the disparity between the numbers of conducted transactions on top of the varying methods of payment: rent, utilities, phone and internet expenses are paid in other countries on a monthly basis while in others it could be done on an annual basis.

Despite some common features in the increasing numbers of card payments and credit transfers in general, fragmentation between countries stays relevant. The use of cheques would appear to be one of the most evident examples: their volume is still rather significant in countries like France, Cyprus and Malta while this form of a payment method is practically non-existent in countries such as Finland, Estonia and Luxembourg. The seemingly slow convergence of payment habits of the first 12 countries to take euro banknotes and coins into use in 2002 gives further evidence of the lack of a true domestic and an internal market for a non-cash retail payment market within the euro area. This would indicate underinvestment by PSPs as the lack of cooperation between them is evident in 2001 when compared to 2012 by which time the industry had formed the EPC and is fast approaching a pan-European deadline for SEPA migration. Nevertheless, it must also be noted that it was only until the passing of the PSD that a common legislative framework was created to enable such a project as SEPA to be ultimately achieved thus also portraying the significance of regulatory reform in enabling further payments market integration.

According to Kemppainen (2003, 13) the “*slow and imperfect integration of the international financial markets*” is most likely also a relevant factor behind national development paths in payment systems in the past. He continues by saying that this has recently been under pressure for compatible systems especially because of the EMU. Even so, it must be understood that the idea behind the comparison does not necessarily indicate

that payment habits over the euro area member states should become completely homogenous and a goal by itself. This is because it is probable that the reasons behind are various and heavily rooted to the respective cultures and ways of conduct as implied also before.

#### 4.1.2 Development of cross-border retail payments

The European Central Bank (ECB 1999, 5) has stated even before the actual cash changeover of the single currency euro, that the principles of the free movement of goods, services, capital and people are fully achieved only, if citizens and business alike are able to transfer money as rapidly, reliably and cheaply from one country in the EU to another as within a member state itself. Therefore, efficient and reliable cross-border payment services are essential for the smooth functioning of the Single Market. In relation to this issue, the ECB (1999, 7) paid special focus in regard to cross-border credit transfers having substantially higher prices and execution times in comparison to domestic equivalents<sup>8</sup>.

The retail payment markets within the euro area tend to differ from each other due to the fact that they were originally based on national requirements or customs. There have been considerable differences in the efficiency as well as in the use of various standards. The vast majority of retail payments were national with only 2–3% being cross-border payments. Kemppainen & Salo (2006, 70) point out that this may very well be a result of the inconvenience of cross-border payments rather than their potential demand. There is at least anecdotal evidence of firms internalizing the inconvenience of cross-border payments by establishing local accounts and minimizing the cross-border transactions. This claim is to some extent supported by the early European Commission's report (EC 2000, 11) on banking charges in the then 11 euro area countries. The report points out that the average charge for a credit transfer of an amount of 100 euro was 15.51 euro with significant variations between the countries: lowest in Luxembourg with 8.15 euro and highest in Ireland with 25.61 euro.

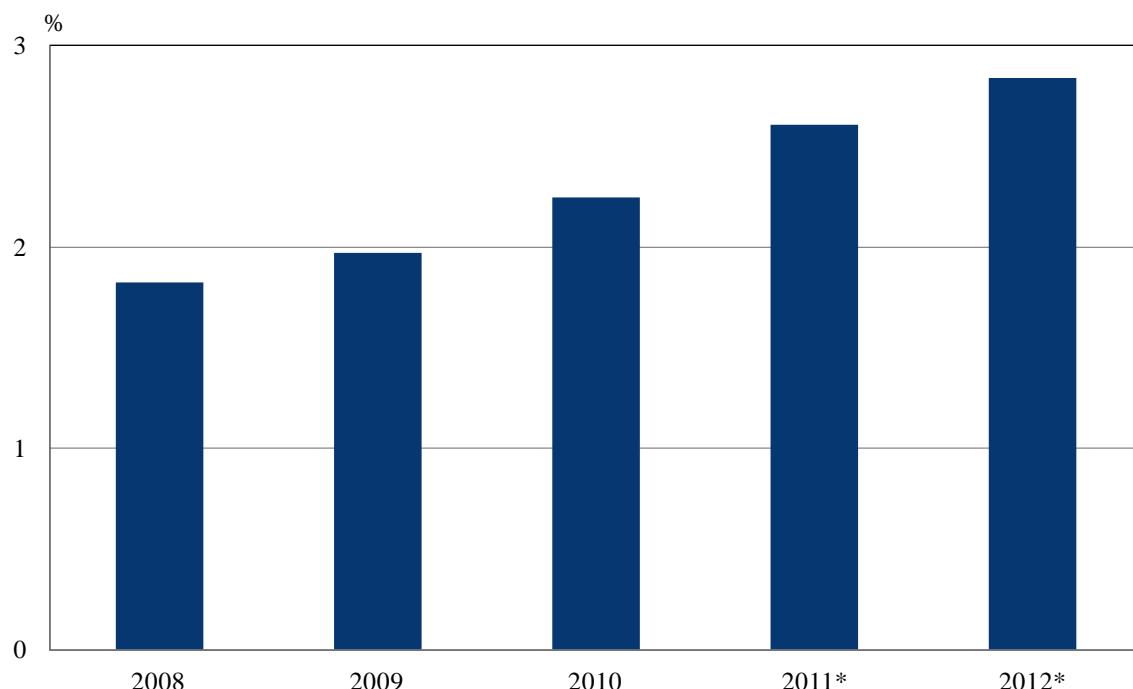
A reason behind long execution times for cross-border payments was the predominant recourse to correspondent banking in relation to international transfers as well as the lack of an adequate interbank infrastructure. Generally, this meant that a part of the processes had to be carried out manually thus having a direct impact not only on the processing costs but

<sup>8</sup> See also European Central Bank (2001). Towards an Integrated Infrastructure for Credit Transfers in Euro, November 2001.

also on the execution times required. Since, correspondent banking is also based on bilateral arrangements between banks, this resulted in the need of a large number of arrangements required in order to achieve an adequate geographical coverage. Even if a customer provided the order electronically, it was uncommon for the formats between banks in different countries to be compatible. Hence, it was also costly for the banks to rectify any such orders. (European Central Bank 1999, 9–10.)

According to Kemppainen (2003, 14), the heterogeneous situation in retail payments in the beginning of the single currency euro has been argued to hinder development of efficient cross-border retail payment systems. He continues that this is due to the complexity of developing truly compatible systems with such a high heterogeneity in payment media demand. Furthermore, the banking sector has argued for the lack of a real business case in the context of cross-border retail payments hence also limiting the incentives for the development of efficient infrastructures (Kemppainen 2003, 16). Some evidence behind this claim can potentially be found when looking at the share of cross-border transfers from the total amount of transactions after the introduction of SEPA as illustrated in figure 8 below.

**Chart 8. Share of cross-border transactions from euro denominated transactions 2007–2012**



\* Data on cross-border transactions in Italy are not available and have been omitted here.  
Source: Statistical Data Warehouse of European Central Bank.

Figure 8 above indicates that the level of cross-border transactions sent from the total amount of transactions has indeed visibly increased. However, the share is barely 3% still in

2012. Through SEPA, firms will be able to achieve a higher level of efficiency by centralizing their payments processing into a single location within the euro zone, i.e. by establishing “*payment factories*”. This will result in an increased amount of cross-border transactions thus also promoting efficiency gains most evident with multinational enterprises. Likewise, consumers will find it easier to conduct cross-border payments. The growth of e-commerce greatly contributes in the growth of cross-border payments and while today the majority of e-commerce payments are conducted by the use of a payment cards, other innovative ways of paying will most likely further increase their share of total payments in the world of tomorrow.<sup>9</sup> However, a natural limit above which the amount of cross-border payments will not grow most probably exists. This limit is, nevertheless, is presumably higher for firms when compared to consumers due to the inherent nature of consuming and investment patterns of these two groups.

## 4.2 Increased overall efficiency

Not only do we see that some convergence has taken place in relation to the use of cashless payment instruments and the average fee structure of cross-border payments, but convergence has also taken place in relation to execution times for retail payments.<sup>10</sup> The ECB (2013d, 90) points out that the average execution time for retail payments in the EU has decreased down to no more than one business day while it was about five days in the early 1990s. This development, of course, cannot be fully attributed to the SEPA project. However, the ECB (2013d, 90) does point out that since 1 January 2012 the PSD has “*obliged payment service providers to make funds accessible to the recipient by the end of the next business day after a payment order is received*”. In addition, an ECB (2013c, 4) report would indicate that especially the level of card fraud has decreased in SEPA by hitting its lowest level in 2011 (0,036%) since 2007. The report summarizes the development in card fraud to be the result of EMV-technology by which counterfeit fraud has shifted “*towards non-SEPA countries where EMV is less prevalent*” (ECB 2013c, 5).

Beijnen & Bolt (2007, 2) state that for SEPA to be a success, separate domestic national payment infrastructures must be replaced by a pan-European structure through which a

<sup>9</sup> See also Ecommerce Europe and Innopay (2012). *Online payments 2012, Moving beyond the web*. Version 1.2 – Ecommerce Europe edition. May 2012.

<sup>10</sup> See Khiaonarong, T. (2003). Payment systems efficiency, policy approach, and the role of the central bank. *Bank of Finland Research Discussion Papers*, No 1, 2003 for a more theoretical analysis of payment system efficiency.

higher level of economic efficiency can be obtained especially through the realization of higher economies of scale. The SEPA project is to create more competition between the clearing houses as they are all bound to be faced by the same and therefore compatible standards thus disabling former national and local monopolies. STEP2 is the first example of such a pan-European Automated Clearing House (PEACH) and other similar infrastructures are emerging.

Despite Berger et al. (1996, 720) stating that “*there are typically extraordinarily long lags between the introduction of new payment methods to their widespread use*” the end-date regulation is pushing for a relatively fast development within EU and is hence already now illustrating some evidence of increased social utility through more efficient processing and settlement of retail payments. Nevertheless, based on what has been observed in figure 4 in section 3.4 concerning the migration status, it must be kept in mind that the argument for attaining a critical mass could potentially have a wide influence on the effects of SEPA observed thus far. As Guibourg (1998, 10) emphasizes, the demand for products with network externalities grows slowly at first until a critical mass is reached after which “*demand grows at a substantially faster pace*”. It could be argued that no such effect or a major change in the demand for SEPA payment instruments has taken place on a truly pan-European scale so far.

Palva & Penttinen (2012, 101) have identified several factors of slow migration especially in relation to the migration to SCT in Finland, but it is very likely that these can also be extended to be major factors in other countries likewise. Such factors include the time consuming process of companies conducting internal system changes with the support of banking software, integrator service and enterprise resource planning providers. Also, the banks’ implementation timelines for SEPA are not completely unified due to which many companies will most likely fully migrate only after each individual bank they use is ready for SEPA. Due to these factors, migration will most likely increase significantly towards the actual end-date of 1 February 2014 in the 17 euro countries only after which a more profound analysis of the final effects of SEPA and the potential efficiency gains can be performed.

Martikainen et. al (2013, 23) find in their empirical work through the use of sigma and beta convergence for the years 1995–2011 that payment behaviour in the EU-27 have become more similar since the introduction of the euro. They also find that convergence in retail payment behaviour has continued regardless of the current financial crisis but state that “*it is hard to disentangle the effects of SEPA and those of the economic crisis on the convergence process*”. Further on, Martikainen et al. (2013, 23) conclude that since “*economic theory and*

*empirical findings support the fact that integration promotes competitiveness, efficiency and growth, the process of integration should be considered beneficial, even at times of extreme economic uncertainty".*

## 5 Conclusion and Implications for Finland

The creation of a truly single market requires an integrated payment system thus also further contributing to the goal of financial integration as set out already in the Lisbon agenda.

Standardization promotes compatibility and interoperability and hence lowers costs and opens previous national and local monopolies for competition within SEPA. The emergence of pan-European clearing infrastructures is a clear indication of the existence of economies of scale and scope in the payments industry. It should be noted that in SEPA a potential user network of potentially over 500 million users within Europe is by itself clearly a positive reinforcement for extending former domestic retail payment markets into a single market. The benefits of deeper integration are further elaborated especially in the case that these users, as presumed in the SEPA project, will be linked together with new innovative, more secure and competition enhancing payment service solutions.

The pre-SEPA obstacles for cross-border transactions limiting trade and acting as a barrier for a true domestic products and services market within the Union have not evaporated completely as of yet. The convergence of payment habits between countries seems limited notwithstanding a moderately general trend towards a more widespread use of electronic payment instruments over paper-based ones hence promoting a higher level of overall efficiency. The average fee structure for payments in the euro area also still persists to exist as relatively heterogeneous. In addition, ambiguity with the implementation of ISO standards, the drawbacks in relation to eSEPA innovations so far and the SEPA Cards Framework (SCF) lacking behind in progress further illustrate the challenges and the magnitude of the project. The SEPA rulebooks leaving room for different interpretations when implementing standards and the equivocalness of the SCF act as barriers for future development and integration.

Slow migration to SEPA Credit Transfers (SCT) and SEPA Direct Debits (SDD) limits the extent to which developments in the retail payment market can be directly attributed to SEPA. Despite this, it is evident that the European retail payment market is evolving and appears to be doing so at a more rapid pace than ever before. Nevertheless, the project is still far from over and not only is full scale migration still on its way to SCTs and SDDs from legacy payment instruments, no end-date has been established for the SCF. Also, new innovations based on the SEPA standards and current frameworks appear currently more as a vision of tomorrow rather than the reality of today. There is also the danger of SEPA standards being interpreted in a too strict manner thus potentially inhibiting the development of payment innovations.

Finland has been one of the forefront countries in replacing legacy payment instruments as the SEPA end-date approaches.<sup>11</sup> Full migration to SCT was attained already by November 2011 and no major problems are foreseen in regards the discontinuation of legacy direct debits after 1 February 2014. As a whole, legacy direct debits have constituted only around five percent of all transactions in Finland. While SDDs have only been offered to customers in a limited manner, most of the legacy direct debits are being converted into e-invoicing and direct payments.<sup>12</sup> The vast majority of billers, of which especially the big billers, have moved to e-invoicing while some of the smaller billers have moved back to traditional paper invoicing. As with other countries, the conversion of legacy direct debits has concentrated around the final months before the SEPA end-date. Even so, the transition is well on its way and no major obstacles are anticipated by the banking sector or by the relevant regulatory or oversight authorities.<sup>13</sup>

SEPA is first and foremost a standardization initiative driving further economic and technological efficiency especially through regulatory and technological innovations. While the future possibilities of reaping benefits from economies of scale appear extensive, a trade-off can also be seen in letting go off flexible and easily approachable domestic markets for a more rigid pan-European market structure. A successful rolling out of market wide innovations will become more demanding and will require further development in the

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<sup>11</sup> See annex for developments that have taken place in January 2014 in regard the end-date regulation.

<sup>12</sup> Direct payment is an e-invoicing service without the customer having an online banking service in use.

<sup>13</sup> See also the following publications for further information about the introduction and effects of SEPA in Finland: Finanssialan keskusliitto (2012), Yhtenäisen Euromaksualueen toteutuminen Suomessa. Suomen kansallinen SEPA -siirtymäsuunnitelma; Iivarinen, T. & Ripatti, K. (2010), SEPA-infrastruktuurin syntyminen Suomessa. *BoF Online*, No. 6, 2010; and Väistänen, L. (2008). Yhtenäinen euromaksualue: vaikutukset Suomessa toimiviin pankkeihin. Bank of Finland Research Discussion Papers, No. 15, 2008.

currently still fragmented regulatory structure calling for deeper cross-border cooperation among competition policy authorities as well as banking, internet and telecommunications regulators.<sup>14</sup> Opportunities through scale will be met by challenges in promoting new innovations not only due to market size but also through the development of truly open and competition enhancing standards.<sup>15</sup> These effects will ultimately be determining the success of the entire SEPA project.

A future study about the effects of SEPA would be in place within the next 3–5 years whereby the analysis could be complemented by examining the emergence of value added services, CSM development as well as evolution of merchant services based on the new SEPA platform. This would allow for a more in depth analysis of the actual final effects of the changeover from legacy payments instruments and systems.

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<sup>14</sup> See <http://www.voxeu.org/article/efficient-retail-payments-and-growth-europe>.

<sup>15</sup> See Hunt, R.M., Simojoki, S. & Takalo, T. (2007). Intellectual property rights and standard setting in financial services: The case of the single European payments area. *Federal Reserve Bank of Philadelphia, Research Department, Working Paper*, No 07-20 for a deeper analysis of SEPA standardization keeping in mind the lessons learned from the GSM standard.

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## List of abbreviations

BBAN	Basic Bank Account Number
BIC	Bank Identifier Code (SWIFT)
CSG	Cards Stakeholders Group
CSM	Clearing and Settlement Mechanism
EACHA	European Automated Clearing House Association
EBA	Euro Banking Association
EC	European Commission
ECB	European Central Bank
ECSA	European Credit Sector Association
EMU	Economic and Monetary Union
EMV	Europay MasterCard Visa program
EPC	European Payments Council
EU	European Union
IBAN	International Bank Account Number
ICS	International Card Scheme
ISO	International Organization for Standardization
PSD	Payment Services Directive
SCF	SEPA Cards Framework
SCT	SEPA Credit Transfer
SDD	SEPA Direct Debit
SEPA	Singe Euro Payments Area
TARGET	Trans-European Automated Real-time Gross settlement Express Transfer system
XML	eXtensible Markup Language

## Annex

On 9 January 2014 the European Commission gave out a proposal to amend the EU Regulation No. 260/2012 as regards an additional transition period of six months related to the Single Euro Payments Area (SEPA).<sup>16</sup> This additional grandfathering period is considered appropriate in order to avoid payment incidents leading to delays in payments or market disruptions after the 1 February 2014 end-date.

Transition from legacy payments to SCTs and SDDs has suffered from delays in some Member States and hence it seems unlikely that a fully completed migration would be attained by the 1 February 2014 end-date. The Commission holds a view by which banks and other payment service providers will cease from processing legacy payments after the end-date despite having all payments migrated to the new SEPA schemes. This would potentially affect all payment service users most specifically SMEs and consumers. Several larger utility providers have foreseen their migration close to the 1 February end-date thus potentially resulting in bottlenecks especially for payment service providers and software vendors facing capacity constraints. A grandfathering period of 6 months will allow for gradual migration as well as the possibility of reverting to legacy payments if and when full migration is not reached by the original end-date.

From the perspective of the Finnish market, it will be difficult for banks, payment service providers and billers to benefit from the Commission's proposal this close in time with the original end-date. Required changes to payments processing systems have already been conducted or are well on their way and all customers have been informed by now of the upcoming changes. Henceforth, an extension of the end-date deadline until August would do more harm than good. The Commission's proposal does not oblige individual countries to adjust their deadlines and therefore banks in Finland have decided to keep the original deadline of 1 February 2014.<sup>17</sup>

The European Central Bank has communicated their stance on the Commission's proposal through a press release stating that "*the SEPA migration end date of 1 February 2014 remains and urges all market participants to complete the transition of all credit transfer and direct debit transactions to the SEPA standards by this date*".<sup>18</sup> The Commission's

<sup>16</sup> See [http://ec.europa.eu/internal\\_market/payments/docs/sepa/1401069\\_proposal\\_en.pdf](http://ec.europa.eu/internal_market/payments/docs/sepa/1401069_proposal_en.pdf).

<sup>17</sup> See [http://www.fkl.fi/en/news/bulletins/Pages/No\\_change\\_to\\_the\\_SEPA\\_end\\_date.aspx](http://www.fkl.fi/en/news/bulletins/Pages/No_change_to_the_SEPA_end_date.aspx).

<sup>18</sup> See [http://www.ecb.europa.eu/press/pr/date/2014/html/pr140109\\_1.en.html](http://www.ecb.europa.eu/press/pr/date/2014/html/pr140109_1.en.html).

proposal was adopted by the European parliament on 4 February 2014 and will be followed by the formal adoption in the Council within the coming days.<sup>19</sup>

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<sup>19</sup> See [http://europa.eu/rapid/press-release\\_MEMO-14-81\\_en.htm?locale=en](http://europa.eu/rapid/press-release_MEMO-14-81_en.htm?locale=en).