БАНКОВСКОЕ ДЕЛО

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FINANCIAL CONSEQUENCES AND ECONOMIC EFFECTS ON BANKS WITH THE IMPLEMENTATION OF SEPA-COMPLIANT PAYMENT SERVICES

Introduction

After the birth of Euro, to complete the European integrated market, the European Institutions have decided to realize the Single Euro Payments Area (SEPA). SEPA is an area where all the economic actors can order and receive payments at the same conditions of domestic payments. This area is constituted by all the countries of European Union. The implementation of SEPA started with the introduction of Directive 2007/64/EC on payment services in the international market (Payment Services Directive PSD).[3] This Directive has started a process of standardization of all payment instruments for all the countries of the Union. In fact the directive has introduced new categories of payment instruments: SEPA Credit Transfer (STC), SEPA Direct Debt (SDD) and SEPA Cards Framework (SCF). One of the principal aims of the SEPA is to reduce the use of paper means of payment towards electronic payment instruments for a reduction of the costs of payment services. Moreover it sustains a wider competition among payment services providers. It should bring benefits for banks' customers essentially due to lower costs and more efficiency of the payment process. But this is not the only economic effect in the payment market. In fact the implementation of the SEPA requires both severe investments by banks to adopt the new SEPA-compliant services and changes in operational cost for services supply side. In particular banks revenues and, of consequence, profit could be penalized by the changes due to the new payment market. An empirical evidence of the economic effect on profit due to application of the of SEPA schemes has been presented by recent research on Italian Credit Cooperative Banks in Campania.

In particular are estimated a less revenue due, for 80%, to the different application of the new schemes for the date of value in the SEPA payment instruments. The economic effect of the date of value on the income statement has been very important in particular for small-sized banks. The decrease of revenue due to the PSD effects on date of value should be rebalanced by an increase of costs of services. The small-sized banks in

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[3] In Italy, to implement SEPA, on February 2010 was adopted the PSD by decree-law determining important changes for banks and the other financial intermediaries.

Italy have an important role to help the development of Italian Small Business Enterprises, and to substain the growth of the economy of the country. However because of their economic structure, the most relevant effect of PSD will be really referred to an increase in the costs of the payment services themselves with reduced benefit for SBEs and their customers.

The New Payments Framework of SEPA

On 1[1] January 2002 euro cash replaced the national currencies, giving the possibility to European citizens to make cash payments with a single currency in 12 different countries[1].

The creation of SEPA represents the next step towards a closer European integration. The integration of the European financial markets represents one of the Eurosystem's basic policy goals and is a key factor to foster further development and modernization of financial system (ECB, 2007).

The functions of the market and payment system oversight aim to promote the efficiency and the reliability of the financial markets and the payments system in order to foster effective monetary policy, to contribute to the stability of the financial system, and to maintain the public's confidence in the currency and other payment instruments. However, a smooth and efficient operation of payment systems requires a mix of instruments with specific characteristics.[2] For this reason the Single Euro Payments Area project (SEPA) was designed to extend European integration to non-cash euro retail payments. SEPA is the economic area where all the economics actors as firms, citizens, governments can make and receive payments in euro at the same conditions regardless they were made within the same country or to different countries adopting the SEPA project.[3] In fact following the mentioned cash changeover to the single currency in 2002, SEPA is intended to enable European people to make payments to beneficiarie anywhere in the euro area using a single bank account and a set of harmonized payment instruments. SEPA should allow to an economic actor to make cross-border payments at the same conditions of domestic ones. In the SEPA framework all retail payments in euro are traded as "domestic" and the distinction between domestic and cross-border payments within the euro area is eliminated.

In particular SEPA consist of[4]: harmonized payment instruments (credit transfers, direct debit and payment cards), European infrastructures for handling Euro payments, common technical standards and operating practices, harmonized legal basis, and ongoing development of new customer-oriented services.

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[1] The euro was launched on 1 January 1999 but for the first three years it was only used for accounting purpose. Today 17 member States of the European Union use the euro as their currency (Austria, Belgium, Cyprus, Estonia — the newest — as on 1 January, the euro became legal tender in Estonia, Finland, France, Germany, Greece, Ireland, Italy, Luxembourg, Malta, Portugal, Slovenia, Slovakia, Spain, The Netherlands. Bulgaria, Czech republic, Denmark, Latvia, Lithuania, Hungary, Poland, Romania, Sweden, and the United Kingdom are EU member States but do not currently use the single European currency. The micro-sates of Monaco, San Marino and Vatican City also use the euro, on the basis of a formal arrangement with the European Community. Andorra, Montenegro and Kosovo likewise use the euro, but without the arrangement. For further information about the use of the euro and the euro area, see www.ecb.europa.eu

[2] The future evolution of payment system is directed towards a cashless society. Nevertheless cash is by far the most widely used retail payment instrument in the euro area, above all as it has some unique features such as of being the cheapest instrument for small retail payments; of ensuring people who have no bank accounts or limited access to them or who are unable to use electronic forms of payment to be able still to make their payments; of enabling customers to keep a closer check on their spending; and of being secure in term of fraud or counterfeiting resistance. Read more on www.ecb.europa.eu

[3] It is estimated that more than 300 million of citizens benefit of new instruments (Saccomanni, 2008).

[4] For further information, Bank of Italy-SEPA (www.bancaditalia.it).

Indeed the process of "harmonization" started before the introduction of euro. In fact a first definition of payment system was introduced with the directive 98/26/EC (Gimigliano, 2009), and in 1999 was introduced the Trans-European Automated Real-Time Gross Settlement Express Transfer System (TARGET) for large value payments.[1] Moreover the SEPA will bring substantial economic benefits and opportunities. With the SEPA, the competition among the payment services providers is promoted; in fact the payments market has been opened to new categories of payment services provider different from the usual financial intermediaries. The benefits for the consumers are due to the possibility to choose different payments services providers both the domestic and cross-border. They, in fact, can choose the best service for them thanks to a greater transparency. This should determine a decrease of services prices and a greater use of electronic instruments with respect to paper based ones. As concerns it banks should determine lower costs due the decrease of the use and elaboration of cash and check. The firms, instead, have the opportunity to choose the most adequate and efficient service for their own needs and for an extended offer of services, in particular concerning cross-border and technologic services. Moreover, the increase of competition has pushed banks and other competitors to develop new instruments for the firms (ECB, 2009).

Table 1

1: SEPA Milestones

Major milestones since 2002	Future Milestone
2002 — Set-up of the EPC. **2007** — Adoption of the Payment Services Directive (PSD) as the legal basis for SEPA. **2008** — Start of SEPA credit transfers. **2009** — Start of SEPA direct debits; deadline for national PSD implementation. **2010** — All bank accounts reachable for national direct debits must be "reachable" for SEPA direct debits. — Full EMV migration. — Certification framework for terminals	**2011** — Framework for card transaction processing. Charging principles for cards by the European Commission. Adoption by the EU Council and Parliament of the European Commission's proposal on an end-date for migration to SEPA by means of an EU Regulation. **2012** — Regulation establishing technical requirements for credit transfers and direct debits enters into force, setting end-dates for migration to SEPA credit transfers and direct debits

Source: ECB, about the project, www.ecb.europa.eu

The realization of SEPA have to pass important regulatory changes.[2] In fact after the introduction of euro, during the last years the European Parliament and the Council have issued an important directive finalized to the implementation of the SEPA: Directive 2007/64/EC on payment services in the international market, Payment Services Directive (PSD).[3] The PSD is the legislative initiative by European Institutions

[1] Actually it is running the system Target 2.TARGET was composed of the gross settlement systems of the 17 EU member countries and the European Central Bank. The system made possible an efficient execution of interbank payments in the euro area and at the same time spurred process of financial and commercial integration among participating countries. TARGET 2, replacing the original TARGET system, began to be phased on 19 November 2007. The transfer to TARGET 2 was completed on 19 May 2008 with the migration of the Italian financial marketplace. The new system responds to banks' demand for harmonized, advanced services, particularly for liquidity management, to the needs arising from enlargement of the European Union and the Euro-system.

[2] The European Central Bank and the Commission have the role of SEPA project promotion, while the European Payments Council (EPC) is responsible for design and implementation. In Italy, as part of the shared oversight tasks within the Euro-system, the Bank of Italy contributes to the project, participating in and supporting for the creation of SEPA by 2010. For further information, see www.bancaditalia.it

[3] The PSD is divided in the following six Titles covering the contents of the new operating area: Title I: Subject Matter, Scope and Definitions (art. 1—4); Title II: Payment Service Providers (art. 5—29); Title III: Transparency of Conditions and Information Requirements for Payment Services (art. 30—50); Title IV: Rights and Obligations in relation to the Provision and Use of Payment Services (art. 51—83); Title V: Implementing measures and Payments Committee (art. 84—85); Title VI: Financial provisions (art. 86—96).

to organize in a single framework the whole matter of payments in SEPA. The PSD should allow the integration of payment services market through the breaking down of legal barriers between the States of European Union improving their competition. Moreover the PSD has introduced new payments instruments schemes that defines important changes in terms of economic conditions and transparency payment services.

SEPA'S Implementation and the new SEPA Payment Instruments

With SEPA there will be no difference in the euro area between national and cross-border and retail payments (ECB, 2007).

The introduction of the Directives PSD and EMD and the existence of a SEPA area enable customers to make cashless euro payments to anyone located anywhere in Europe, using single payment account and single set of payment instruments. Together with this principle there is the enlargement of the category of payment service providers, including payment institutions, constituted not only by credit institutions and e-money institutions but also by other operators, with the consequence of the creation of a real new payment market. According to this framework, commercial entities, like communications companies or large-scale distribution operators, can provide payment services (Passacantando, 2011). Moreover the elimination of the legal barriers and the creation of a single market have simplified the entrance of new players. In fact a number of banks outside Europe, including Asian Banks, also encouraged by the opportunities created by the financial crisis, have decided to enter the European market. As expected all these changes have determined an increase in competition on the payment market, even creating important partnerships, above all for small sized enterprises of this sector. An example is the partnership created between SMA Financial[1] and VocaLink[2] to deliver smart, comprehensive connectivity solutions to banks and their corporate customers in the UK (Bannister, 2010). The partnership will enable VocaLink to offer greater flexibility for designing efficient migration and payments consolidation strategies for UK Banks, allowing them to reap the benefits of cost reduction and improved control. The outsourcing is often used by small sized companies in case of impossibility of producing by themselves, giving in outsourcing the international payment service to no bank providers. An example is the case of the Travelex Global[3] who takes care about international payments for smaller banks helping them to compete with the big banks in the services market (Bannister, 2010).

It is evident that the European payments business is in turbulence. The creation of SEPA is determining changes on demand side (payment users) and suppliers (mainly bank). In fact payments services are an integral part of a bank's direct and indirect profits, and they are an essential element in keeping a bank's client relationship intact. Over the years payments have evolved from a basic service into a full blown industry holding strategic value for suppliers and users of payment services (Capgemini Consulting, 2007). In fact in 2006, before the entrance of SEPA, in the euro countries, the United Kingdom, Sweden and Poland, consumers, public entities and firms spent 158 billion on payments representing 1,3% of GDP with a volume annually growth of 9,5%. But the entrance of the SEPA and its implementation through the PSD is changing the payment market. To quantify possible economic consequences of SEPA, European Institutions and principal consulting groups have made, in the last years, relevant studi-

[1] SMA Financial provides a complete range of business consulting, technical services and solutions to complement the SWIFT network throughout Europe.

[2] VocaLink is a specialist payments partner to banks, their corporate customers and government departments.

[3] It is the largest non-bank provider of international payments, with 35,000 corporate customers in 13 countries.

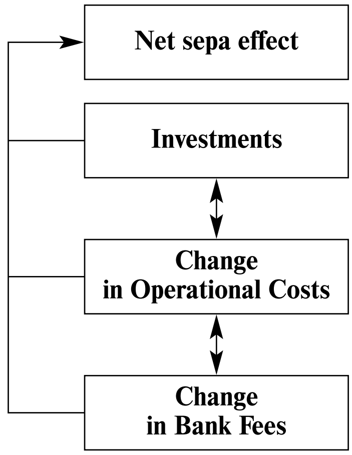

Fig. 1. Main Factors of SEPA Economic Effect

Source: elaboration from "SEPA: potential benefits at stake" (Capgemini 2007).

es with simulation models to predict the effects on the payment market. The principal effects are related to three main factors: new investments, changes in operational costs and banking fees.

As concerns investments the studies have estimated that the European aggregate level of expenditure for banking industry seemed to a range between €5,2 billion and € 7,7 billion (ECB, 2007).

Table 2

Estimated SEPA Investments in EUR billion

	Low	High
Accenture/PSE Consulting (2006)	3	>8
Boston Consulting Group (2006)	0,5	5
Eurogroup/FBF (2007)	9,1	12
Iflex-solutions/Financial Insight (2006)	5,4	5,4
Tower Group (2005)	8	8
Average	5,2	>7,7

Source: ECB, 2007

About the determination of changes in terms of operational costs due to the SEPA, some studies published by ECB have shown that this kind of cost is tied to the degree of implementation of the SEPA. In fact at the beginning of SEPA, banks have to offered the "old" payment instruments, as well as the "new" SEPA payment instruments. In the short run, this has led to higher costs mainly due to the setting-up of the new schemes and their coexistence with the old ones. In the longer term there will be a substantial potential cost savings due to economies of scope and scale and a possible reduction of manual process (ECB, 2007).

To confirm this a study by Capgemini of 2007 has shown that the maximum savings in operating costs are realized in total implementation of the SEPA instruments (SEPA Big Time scenario).[1]

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[1] In 2007 Capgemini published an analysis paper on the SEPA effects on the European Payment Market. The paper analyses four possible scenarios in a period of six years (2006—2012). The scenarios are built by the combination of two main critical drivers: strategies of supplies side (Banks) and the strategy of the demand side (customer, corporate and public entities). For more information see www.ecb.int

The effect of growing cross border competition is expected that banking fees will be lower than the ones applied in the "previous market". In fact SEPA will entail and stimulate harmonization and convergence of prices for payment services. But in reality it is not sure that banks are able and willing to accept overall price levels that prevent them from recuperating their costs in the long term (EFMA, 2006).

In fact a real decrease of banking fees is possible only in consequence of a decrease on the cost side which should not have bad effects on bank's revenue, so a decrease of payment services does not seem to be a sustainable outcome in the long run.

Moreover it's expected that the convergence of fees level to the European average may lead to local distortions. For instance, in France and the Netherlands bank payments revenues could benefit from a convergence to an average EU-wide transaction fee, while Italian and Spanish banks would lose a share of their revenues (McKinsey, 2005).

So if SEPA could create new opportunities for banks to reap additional revenues due to the absence of legal barriers and the replacing of cash with no cash transactions at the same time, in the long term, revenues might decrease because of competition which would squeeze margins.

The Migration to SEPA Payment Instruments: a Valuation through SEPA Indicators

The PSD directive is limited to electronic payment services. In fact it introduces changes in terms of contract, fees, refunds and responsibility on Credit Transfer, Direct Debit and Cards Framework.[1]

SEPA Credit Transfer (SCT) and SEPA Direct Debit (SDD) schemes represent the integration at a European level of the multiple sets of single national payment system existing today. Migration to a single set of SEPA payment schemes allows payment service providers to offer a broad range of diversified payment services and products. As a result, customers benefit from competition and more choices in the payment market.[2]

Periodically the EPC releases updated and enhanced version of the SCT and SDD[3] and on 1 November 2010 the new rulebook versions have been published even if payment service providers have sufficient time to address the rulebook updates ahead of 19 November 2011 when these revised rulebooks will come into effect (Santamaria, 2010).

SCT is fast and timing predetermined, in fact transfers ordered by the customer without currency conversion (i.e. payments in euro within 32 SEPA contries) shall be made within one business day following receipt of the order; while transfers received are made available on the same day of receipt by the bank (run in D + 0) or at most the next day (D + 1). Credit transfers are executed on the basis of IBAN code: IBAN code which is totally necessary to order a bank transfer and is the unique identification of the beneficiary. Moreover for the client paying the debit, value date is not earlier than the date of complaint, while for the beneficiary, settlement date is the date and the date of credit availability. The SCT scheme enables payment service providers to offer a core and basic credit transfer service throughout SEPA whether for single or bulk payments. The payment service providers executing the credit transfer must formally participate in the SCT Scheme. No cap on the amount of funds that can be transferred under the scheme is provisioned.[4]

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[1] SEPA is the standardization of payment instruments. New sets of rules and standards for the execution of SEPA payment transactions are defined and have to be observed by payment service providers. See, www.europeanpaymentscouncil.eu

[2] Given that there are 33,4 billion euro credit transfer and direct debit processed annually by thousand of banks in the EU, an optimally efficient and integrated euro payments market will rely on payment scheme rules and standards that have been agreed. For further information, www.europeanpaymentscouncil.eu

[3] The EPC launched the SCT scheme in January 2008 and the SDD Scheme in November 2009. For further information about the two schemes and the contents of the specific rulebooks, from the original versions to the updated ones, see www.europeanpaymentscouncil.eu

[4] See www.europeanpaymentscouncil.eu

The SEPA Direct Debit (SDD) enables a consumer to make domestic and cross-border payments throughout the 32 SEPA countries. We can distinguish SEPA Core Direct Debit scheme and the SEPA Business To Business Direct Debt scheme.[1] The SDD Core Scheme is based on the concept that the payer (debtor) and the biller (creditor) hold on an account with a payment service provider in SEPA.[2] The accounts may be in euro or in any other SEPA currency but the transfer of funds between banks will take place in euro. The SDD B2B scheme enables business customers in the role of payers to make payments by direct debit. The SDD scheme offers businesses significant efficiency gains through the automation of payment processing and the ability of optimizing the cash management process. Moreover, the SDD B2B facilitates the expansion of businesses across national borders and across the EU internal market. It enables the biller to collect payments on the exact day when a payment is due. As concerns the functioning of the SDD core scheme, it allows a biller to collect funds from a payer's account provided that a signed mandate has been granted by the payer to the biller. The mandate expires 36 month after the last initiated collection. The mandate can be issued in paper form or electronically.[3] The SEPA Direct Debit grants payers a "no-question-asked" refund right during eight weeks following the debiting of a payer's account.[4] In the case of unauthorized direct debt the refund right lasts a period of thirteen months. As for credit transfer, the date of value effect is limited. In fact one of the principal changes made by SEPA payment services is the elimination of value date. This is a sure benefit for consumer and at the same time it has important effects on financial statement of the banks.[5]

Table 3

Main Aspects of SDD B2B Scheme

• **Services and products based on SDD B2B Scheme are only available to business; the payer must not be a private individual (consumer)**
• **In the SDD B2B scheme the payer (a business) is not entitled to obtain a refund of an authorized transaction**
• **The SDD B2B Scheme the payer's bank to ensure that the collection is authorised by checking the collection against mandate information; the payer's bank and the payer are required to agree on the verification to be performed for each SEPA B2B direct debit**
• **Responding to the specific needs of the business community the SDD B2B Scheme offers a significantly shorter timeline for presenting direct debits and reduced return period**

Source: Elaboration on information published in www.europeanpaymentcouncil.eu

As stated SEPA migration process implies the usage of "old" and "new" schemes. To monitor the usage of the new SEPA payment instruments the Eurosystem compiles SEPA indicators. They are compiled during the period of SEPA migration when both national legacy non-SEPA instruments as well as the new SEPA instruments are used and offered in parallel. By this way, it is closely monitored the implementation including the migration towards the new SEPA payment instruments.

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[1] A third SDD scheme, the SEPA fixed-amount direct debit scheme, is currently discussed at the EPC level. See (ECB, 2010).

[2] SDD core on www.europeanpaymentscouncil.eu

[3] The E-Mandate option is the possibility to create mandate through the use of electronic channels. It is based on online banking services offered by debtor banks.

[4] During this time any funds collected by SDD Core will be credited back to the payer's account upon request.

[5] Currently, 32 European countries are participating in SEPA, more than 4.400 banks have joined the SEPA credit transfer scheme, and more than 3000 banks have signed up for the SEPA direct debit scheme. Further action by European legislators is needed for SEPA to be completed, preferably, by the end of 2012 for credit transfers and by the end of 2013 for direct debits.

Table 4

Transactions processed in the SEPA format (SEPA credit transfer)
Unit: %; Reference area: euro area

Year/Month	Volumes of SCT Transactions (Millions)	% share of SCTs in number of total transactions processed
2008-05	4,52	**1,02**
2008-12	9,62	**1,83**
2009-05	17,54	**3,87**
2009-12	33,36	**6,19**
2010-05	37,85	**8,07**
2010-12	82,01	**13,85**
2011-05	**109,32**	**19,37**

Source: Elaboration on data published in www.europeanpaymentcouncil.eu

The higher the value of the indicator, the higher the usage of the newly introduced SEPA product. A figure of 100% would indicate that only SEPA products are used and have fully replaced the non-SEPA instruments.[1] From 2008 to 2011 a very significant increase has been registered in the percentage share of SCTs in number of total transactions, reaching almost 20% confirming the migration to SEPA instruments.

In table 5 the indicators present the share of SEPA Credit Transfer transactions as a percentage of the total volume of all credit transfer transactions initiated in a country considering euro and non euro countries. The indicators cover around 80% of credit transfer transactions initiated in a country. At the end of 2010 a number of countries seemed to have migrated their transactions to SCT.

As concerns the migration of direct debits table 6 shows the share of SEPA direct debits (SDD) in the interbank domain as a percentage of the total volume of direct debits (DD). The Regulation 924/2009 on cross-border payments in the Community have established, that since November 2010, euro area banks have to ensure reachability of their customers' accounts for SDD transactions, if they are reachable from a national direct debit transaction denominated in euro. The higher the value of the indicator, the higher the usage of the newly introduced SEPA product.

It is evident that SDDs cover still a low percentage share of the total transaction processed.

As concerns cards, the EPC has developed the SEPA cards Framework to enable a consistent customer experience when making or accepting payments and cash withdrawals in euros with cards. The EPC is carrying out a cards standardization program designed to remove technical obstacles preventing a consistent customer experience throughout the SEPA cards market and allow a higher process efficiency along the overall card chain. SEPA cards (prepaid, debt and credit) are the principal object of changes in terms of technology and rules. In the last years the use of cards, debit and credit, has grown in terms of transaction and number. In particular debit cards are often used for micro payments and they have became workhorses (Bannister, 2010). This increase of usage is also the start point of a contactless evolution for cards; in particular in the case of small payment.[2] As concerns the migration of card payments several initiatives are under way with a view to create an additional European card scheme within SEPA.[3] However,

[1] The total number of SCT transactions indicate the transactions processed by the infrastructures located in the euro area. The figures are based on aggregated data from the following clearing and settlement infrastructures/systems located in the euro area: ACH Finland, CEC, RPS, Dias, Iberpay, SIT/CORE, BI-COMP, JCCTransfer, Equens, Step.at, SIBS, Bankart, Euro SIPS, ESTA and STEP2.

[2] In fact the principal companies of the sector, Visa and Mastercard, have developed new important product of debit card based on contactless technology.

[3] Further information and data about SEPA migration are on www.ecb.europa.eu

Table 5

Indicators of the usage of SCT as a percentage of all CT transactions per country (SEPA credit transfers — transaction shares per country)
Frequency: Semiannual; Unit: %

Country	Year					
	2008-H1	2008-H2	2009-H1	2009-H2	2010-H1	2010-H2
Euro Area						
Austria	0,93	1,44	2,19	3,41	5,54	**7,17**
Belgium	1,24	2,76	6,5	13,78	23,4	**30,17**
Cyprus	1,69	29,85	60	56,62	59,25	**56,27**
Finland	0,76	1,35	1,57	2,03	3,31	**13,46**
France	0,11	0,58	0,76	1,03	1,59	**5,7**
Germany	0,14	0,29	0,3	0,44	0,76	**1,04**
Greece	0,43	0,54	0,59	0,77	0,91	**0,98**
Ireland	0,09	0,19	0,31	0,5	0,47	**0,92**
Italy	0,31	0,73	1,39	1,52	1,99	**5,61**
Luxembourg	84,79	85,76	85,76	89,89	89,9	**89,92**
Malta	2,69	3,28	4,73	5,34	2,76	**3,2**
Portugal	0,42	0,68	0,73	0,85	1,13	**1,2**
Slovakia	0	0	0,4	0,48	0,62	**0,8**
Slovenia	0,04	0,1	24,57	39,96	40,09	**42,39**
Spain	0,64	1,51	2,67	7,69	17	**19,98**
The Netherlands	0,05	0,15	0,38	0,5	0,64	**0,77**
Non Euro Area						
Denmark	27,68	56,26	65,55	71,89	74,51	**77,18**
Estonia	14,81	19,58	19,08	20,82	22,78	**27,79**
Great Britain	0	0	77,12	78,38	81,88	**84,68**
Latvia	2,92	41,92	51,21	55,06	55,13	**60,62**
Lithuania	—	—	—	—	—	**59,71**
Sweden	0	0	48,22	61,29	62,04	**59,44**

Source: Elaboration on data published in www.europeanpaymentcouncil.eu

Table 6

Transactions processed in the SEPA format (SEPA direct debits)
Unit: %; Reference area: euro area

Year/Month	Volumes of SDD Transactions (Millions)	% share of SDDs in number of total transactions processed
2009-12	0,25	**0,04**
2010-05	0,25	**0,05**
2010-12	0,47	**0,08**
2011-05	**0,69**	**0,11**

Source: Elaboration on data published in www.europeanpaymentcouncil.eu existing card schemes can also become SEPA compliant. Cards are different from credit transfer and direct debits and it is not easy to monitor migration to the new SEPA payment instruments; it is instead under monitoring the migration to the EMV specifications.[1] In order to be SEPA-compliant, card schemes must apply the EMV specifications and require the use of PIN codes. Although it began prior to SEPA migration to EMV can still be seen as an important indicator in the sense that non-EMV cards, POS terminals, ATMs are not SEPA compliant. The Eurosystem has developed a SEPA card indicator for migration to EMV at transaction level, and Tables 7 and 8 show the result of the migration.

Table 7

Cards — EMV migration per country — EMV-compliant cards per country (as a percentage of total cards in circulation)

Frequency: Quarterly; Unit: %

Country	Year				
	2006-Q4	2007-Q4	2008-Q4	2009-Q4	2010-Q4
AT	97,47	100	100	100	**100**
BE	71,97	100	100,03	100	**100**
CY	0	75,50	58,75	85	**90,74**
DE	51,75	68,21	78,42	77,59	**93,29**
EE	77,17	82,89	89,76	89,76	**89,76**
ES	0,95	2,45	7,32	17,89	**48,70**
FI	72,48	82,60	85,49	96,74	**93,06**
FR	100	100	100	100	**100**
GR	10	21,07	22,32	30,94	**58,23**
IE	95,13	96,75	99,49	99,99	**99,99**
IT	9,75	35,16	61,33	65,09	**69,78**
LU	100	100	100	100	**100**
MT	0	0	0	30,90	**93,68**
NL	8,46	29,23	46,85	82,91	**94,37**
PT	4,59	23,78	44,21	66,11	**83,79**
SI	12,09	24,23	83,94	90,21	**97,92**
SK	—	19,72	24,92	24,92	**86,93**
BG	2,26	2,26	2,26	2,26	**2,26**
CZ	42,84	69,75	76,47	86,66	**94,05**
DK	94,61	91,13	92,16	92,11	**92,11**
HU	22,98	28,54	30,38	30,40	**38,26**
LT	—	78,09	82,18	82,09	**82,09**
LV	37,83	86,19	91,55	91,45	**91,45**
PL	2,87	6,27	6,68	0,05	**0,05**
RO	—	2,34	9,57	25,78	**57,96**
SE	57,68	65,99	80,90	83,45	**93,91**
UK	98,71	100	100	100	**100**
Euro Area	38,84	51,10	61,31	67,97	**82,23**
EU-27	**51,52**	**57,99**	**63,70**	**69,10**	**80,96**

Source: Elaboration on data published in www.europeanpaymentcouncil.eu

[1] EMV which stands for Europay, MasterCard and Visa, is a global standard for credit and debit payment cards based on chip card technology. EMV chip-based payment cards, also known as smart cards, contain an embedded microprocessor. The microprocessor chip contains the information needed to use the card for payment and is protected by various security features. Chip cards should be a more secure alternative to traditional magnetic stripe payment cards and as end of 2010, there were more than 1 billion EMV compliant chip-based payment cards in use worldwide. See, www.emvco.com

Table 8

POS — EMV migration per country — EMV-compliant POS per country (as a percentage of total POS terminals)

Frequency: Quarterly; Unit: %

Country	Year				
	2006-Q4	2007-Q4	2008-Q4	2009-Q4	2010-Q4
AT	1,50	42	50	59	**85,10**
BE	89	82	95,80	96	**96**
CY	5	41	51	80	**82**
DE	2	4	5	10	**85**
EE	61	69	69	92,54	**92,54**
ES	47,77	69,92	79,50	85,53	**91,40**
FI	19,40	33,47	29,63	56	**70**
FR	94	97	99	99,70	**99,50**
GR	31	50,50	59	60,50	**70,59**
IE	100	99	98	99	**99,99**
IT	32,20	64	82	85	**81**
LU	100	100	100	100	**100**
MT	40	50	50	98,70	**100**
NL	0,10	11	28,60	52,33	**79,62**
PT	44	68,50	83,01	90,33	**94,17**
SI	20,40	26	68,70	79,60	**95,75**
SK	42	87,14	91,21	91,00	**98,55**
BG	—	43	42,68	42,68	**42,68**
CZ	84,30	89,40	93,44	99,30	**99,93**
DK	14,25	39	100	100	**100**
HU	25,70	50,31	82	85	**91**
LT	—	58	45	45	**45**
LV	54	87,20	88,55	88,55	**88,55**
PL	—	32	—	80	**80**
RO	—	34,10	49,87	80,82	**88,77**
SE	6,40	13,50	33	55	**71,40**
UK	94	98	100	100	**100**
Euro Area	44,46	61,84	70,42	76,34	**88,29**
EU-27	**48,34**	**59,58**	**70,60**	**77,96**	**89,35**

As concerns the percentage of EMV transactions at POS terminals, the Eurosystem has also developed a SEPA card indicator for migration to EMV at transaction level. An “EMV transaction” means a card payment transaction in which the following criteria are satisfied: an EMV-compliant card is used in EMV-compliant terminal and EMV technology is used in the processing of the transaction. For this indicator the Eurosystem cooperates with card acquiring processor, i.e. entities that, acting on behalf of the acquirer, are responsible for the processing of card payment transaction from their acceptance at POS to their delivery at the routing centre (switch).[1]

[1] Atos, Worldline, Bankart, CECA, CETREL, Deutsche BP, Deutsche Postbank, Equens, First Data, Intercard, Intesa Sanpaolo Card, JCC Payment Systems, Montrada, RBS WorldPay, Reders y Procesos, SERMEPA, SIBIS, UNICRE, CGD and BCP are the processor that are participating in the data collection. The data provided by these processors, together with the figures from Banque de France, cover around 70% of POS transaction in the euro area. For further information and figures, see www.ecb.europe.eu

Another SEPA card indicator is the cardholders actual use of their cards abroad. The cross-border use of cards depends on the technical capabilities of the card and the terminal, on the merchant's acceptance of the card in question and on the extent to which people have a uniform "customer experience" across the SEPA Area. Data are collected from the same card acquiring processors that report on EMV transactions as a percentage of transactions at POS terminals.[1]

Table 9

EMV and cross-border transaction shares — Cross-border transactions in the euro area (as a percentage of total transactions at POS terminals)

Reference area: euro area

Year/Month	%
2008-12	3,36
2009-12	4,31
2010-12	6,49

They report biannually but the results take the form of monthly figures. Low levels (1—2%) must be seen at the outset in January 2008. A move to higher level is the consequence of SEPA migration in card industry both concerning card acceptance and the payment behavior of cardholders.

Table 10

SEPA indicators at a glance (euro area)

	February 2011	**May 2011**
SEPA credit transfer as % of total transactions	15,57% (*)	19,4%
SEPA direct debit as % of total transactions	0,09% (*)	0,1%
	June 2010	**December 2010**
EMV transactions as % of total transactions at POS terminals	56,7% (**)	58,5%

Source: www.ecb.europa.eu

A statement was adopted by the members of the SEPA Council present at the meeting on 11 may 2011. The statement addresses the adoption of a Regulation setting migration end-dates for SEPA credit transfers and SEPA direct debits. It recognises the importance of innovative payment solutions and of measures to improve the security of retail payments. The SEPA Council exchanged views on the current SEPA governance arrangements and discussed possible future improvements.

At least to increase the use of e-money in substitution of paper money, directives have considered the use of another channel for payment: i.e. Mobile phone. Mobile phone has achieved full market penetration and reached high service levels in most Member States making the mobile channel ideal for leveraging and promoting the use of SEPA instruments (EPC, 2010).

But merchants and customers are very sensitive to security, and the relationship between a payment service provider and its customers can be severely damaged, and there is much to do about security in payment transactions (EPC, 2010). So Mobile payment service

[1] Cross-border transactions accounted for around 3.5% of Pos transactions in the euro area at the beginning and the end of 2008. However, the indicator shows higher values during the period from July to September 2008, according to greater travelling during the summer months. In 2009 the indicator was around 1% higher compared to 2008; at the end of 2010, there were around 6.5% cross-border Pos transactions. For further information, see www.ecb.europe.eu

providers have to establish an overall security architecture that covers all the three security levels: Process level, application level and implementation level. Moreover the European Payment Council is establishing high level principles and a framework for mobile payments in order to create the necessary standards and rules for payments services providers (EPC, 2010). Mobile payments are classified as contactless or remote payments. For contactless payments the payer and the payee are in the same location and communicate directly with each other using contactless radio technologies, such as NFC (RFID)[1], Bluetooth, and infrared for data transfer. To leverage as much as possible the shared infrastructure for contactless SEPA card payments, mobile contactless payments are based only on the usage of near field communications (NFC) technology in card-emulation mode (EPC, 2010).

The expectation is that the mobile payments will become available in the next two years, but it is better to remember also today mobile phones are often used from banks to communicate information and operation to own costumer, and it is necessary to underline that the presence of mobile phone in banking operation is completely new. The new way of usage is only an evolution of the actual systems already present in the market (EPC-GSMA, 2010). The cross-border dimension of services and value technology, however, represent not only an opportunity, but also a potential risk (McKenzie, 2009c). The legal Framework of the directives is constructed to promote technical and organizational arrangements that offer satisfactory safeguard against operational risks to payment circuits and instruments. A major objective, regarding payment instruments, is to strengthen users' confidence in non-cash instruments by upgrading their efficiency and reliability, which are assessed from the originator of the payment to the beneficiary and keeping with sector standards (McKenzie, 2009a).

The adoption of PSD and the Economic Effects on Italian Credit Cooperative Banks

The PSD is the legislative initiative by European Institutions to organize in a single framework the whole matter of payments in SEPA. As SEPA covers not only the euro area, but the whole of the European Union as well as Iceland, Liechtenstein, Monaco, Norway and Switzerland, the PSD is applied in large number of states. This means that communities outside the euro area can adopt SEPA standards for their euro payment.[2] It has been vital, therefore, to establish at Community level a modern and coherent legal framework to ensure a single euro payment area with a level playing field for all payment systems, in order to maintain consumer choice in terms of cost, safety and efficiency. According to this scope, the directive has also implied a specification of the categories of payment service providers throughout the Community. Moreover, in order to remove legal barriers to market entry, it has been necessary to establish a single license for all providers of payment services, different from credit institutions and electronic money institutions. In particular a new category of payment service providers has been introduced by the directive, the "payment institutions" defining a set of strict and comprehensive conditions for their authorization.[3]

Another relevant aspect of PSD is the set of rules established in order to ensure transparency of conditions and information requirements for payment services. As con-

[1] Near field communication, or NFC, is a set of short-range wireless technologies, typically requiring a distance of 4 cm or less.

[2] Hereafter some relevant numbers regarding SEPA project: 32 countries in Europe participate in SEPA; more than 458 millions of citizens can make SEPA payments; more than 4000 banks have signed up for SEPA credit transfers; more than 2600 banks have signed for the SEPA core Direct Debit scheme and more than 2,400 banks have signed up for The SEPA business to business Direct Debt scheme. See, www.ecb.europa.eu

[3] The conditions for granting and maintaining authorization as payment institutions include prudential requirements to face operational and financial risks incurred in their activity.

sumer and enterprises are not in the same position, they do not need the same level of protection. In particular the Directive guarantees consumers' rights by provisions which cannot be derogated from by contract and lets enterprises and economic organization free to agree otherwise. Consumers should be protected against unfair and misleading business-to-consumer commercial practices. This Directive should lay down rules for a refund to protect the consumer when the executed payment transaction exceeds the amount which could reasonably have been expected. Moreover, for financial planning and the fulfillment of payment obligation in due time, consumers and enterprises need to have certainty on the length of time that the execution of a payment order takes.[1] With regard to charges, their sharing between a payer and a payee is the most efficient system. Charges must be levied directly on the payer and the payee by their respective payment service providers.

It is important to underline that the Directive is applied to the payment instruments as credit transfer, direct debit and so on, but to none of payment transactions made in cash directly from the payer to the payee without any intermediary intervention or from the payer to the payee through a commercial agent, or payment transaction based on documents drawn on the payment service provider with a view to placing funds at the disposal of the payee, such as paper cheques, paper-based draft, paper based vouchers, traveller's cheque or paper based postal money orders, and payment transactions related to securities or assets servicing or carried or between payment service providers.[2] The payments under this Directive are made through a payment provider and this relationship is regulated by a framework contract. This contract regulates payment transactions, and may require the opening of a payment account.

Transparency of conditions and information requirements for payment services apply to single payment transactions, framework contracts and payment transactions covered by them. One of the most relevant provisions implies that the payment service provider shall not charge the payment service user for providing information.

As concerns the rights and obligations in relation to the provision and use of payment services, clarity and certainty of rights and obligations of users and payment service providers are necessary and functional to the development of modern electronic payment systems. It is essential for payment service users to know the real costs and charges of payment services in order to make their choice.[3] Particularly relevant are the rules referred to the authorization and execution of payment transactions, as well as execution time and value date and liabilities. The smooth and efficient functioning of the payment system depends on the user being able to rely on the payment service provider executing the payment transaction correctly and within the agreed time. As concerns value date and availability of funds, the Directive establishes that the credit value date for the payee's payment account is no later than the business day on which the amount of the payment transaction is credited to the payee's payment service provider's account. The amount of payment transaction must be at the payee's disposal immediately after that amount is credited to the payee's payment service provider's account.[4] These rules have relevant economic effects both for payment service providers constituted by credit institutions and for payment service users.

In Italy the implementation of PSD has been due to the entry into force of Legislative Decree 11/2010 on 1 March 2010. (The Decree has been published in Supplemento

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[1] The Directive introduces a point in time at which rights and obligations take effects, namely, when the payment service provider receives the payment order.

[2] Article 3, Directive 2007/64/EC.

[3] The Directive does not allow the use of non-transparent, pricing methods, which make difficult for user to establish the real price of the payment service. For this reason the use of value dating to the disadvantage of the user is not permitted anymore.

[4] Article 73, Directive 2007/64/EC.

Ordinario alla *G.U.* N 36, 13 February 2010.) The SEPA migration in Italy, as in all countries adopting the PSD, has had relevant consequences on banking revenues. The SEPA implementation implies also consideration both of supply of SEPA instruments by payment service providers and their use by central and local government, firms and consumers.[1] The following content aims at giving a description of a series of development and stakeholders decision, according to the national SEPA Migration Plan, and at showing the economic results obtained by a banking simulation on Italian Small banks (cooperative credit). As concerns the first aspect, since the launch of the SEPA Credit Transfer in January 2008, virtually the entire Italian banking system (688 banks plus Poste Italiane) have joined in the SEPA scheme. In November 2009 new pan-European Schemes began the operation. By October 2010, 646 banks belonged to the SEPA Core Direct Debit Scheme and 620 to the B2B Scheme.

As regards infrastructure, since 2008 SIA-SSB and ICBPI/ICCREA systems (for bilateral netting) and the Bi-6MP system (for multilateral clearing and settlement in central bank money) have been compliant with the EPC's requirements for clearing and settlements mechanisms. The public administration takes on the role as driving force for the migration to the SEPA instruments. The adoption of SEPA schemes is maintained by the bank of Italy as it is handling two sets of payments paid by the Treasury and INPDAP[2] (the public employee pension fund). For the Treasury payments, the Bank of Italy plans to make the changes necessary to issue credit transfer compliant with SEPA during 2011. For public employee pensions, the Bank will work together with INPDAP to make a new procedure for SEPA compliant credit transfers operational in the second half of 2011. As regards Additional Optional Services (AOS), the Italian banking system, in 2009 extended the scheme for transferability of domestic credit transfers to SEPA credit transfers in the event that the beneficiary changes his bank account. In 2009 and 2010 it defined the technical and functional specification of AOS for SEPA Direct Debit named SEPA-compliant electronic database alignment. These AOS permit exchange of data on the debit mandate issued by the debtor even prior the first debit transaction, as well as the updating of information on the mandate in the course of relationship. Italy also takes part in the Euro Alliance of Payment Schemes work for card payment within the SEPA area. As regards the cash payments, Italian activity is proceeding in line with the advancement work within EPC consistent with the institution of the SECA Framework for a Single Euro Cash Area within SEPA. Another relevant aspect of a full migration to SEPA is communication which is really essential, so that the Italian banking system and the National Migration Committee are still conducting specific informational activities. In 2010 a working group was formed to develop messages to various stakeholders on the new SEPA instruments and on the main changes connected with the entry into force of PSD in Italy. The group is composed by Italian Bankers' Association (ABI), the Bank of Italy and the representatives of trades association and consumer organizations. As concerns the economic effects deriving from the adoption of SEPA-compliant instruments and schemes we have considered impact studies produced in October 2009 by local federation of cooperative small banks (*Federazione Campana delle Banche di Credito Cooperativo*)takes.[3] Italian Cooperative Credit banks (*Casse Rurali e Artigiane* and from 1993 *Banche di Credito*

[1] For detailed information see section 3 of National SEPA Migration Plan Update by National Migration Committee, October 2010.

[2] The Treasury pays salaries and pensions (21million mandates a years) and INPDAP pays pensions (23 million mandates). See section 3 of National SEPA Migration Plan Update by National Migration Committee, October 2010.

[3] The data set and the model have been provided for by *Dr Alessandro Fienga* of *Federazione Campana BCC* and the reference to a local experience is referred to *Banca di Credito Cooperativo di Fisciano*, *Salerno under the authorization of Dr Domenico Prezioso*.

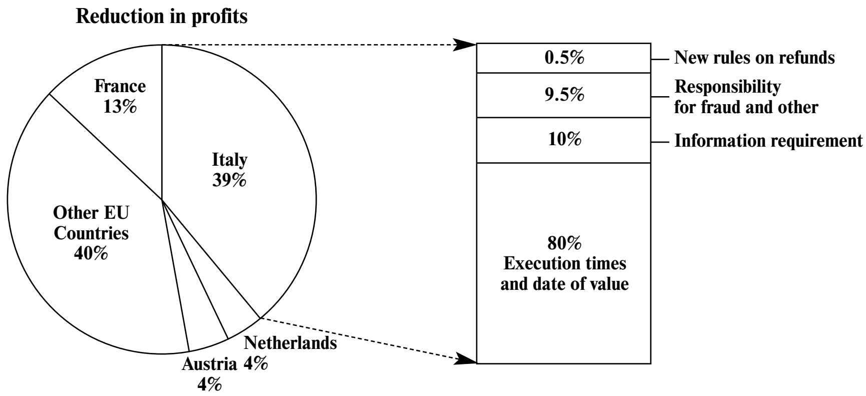

Fig. 2. The PSD: the Effects on Italian Banking System

Source: Dr Alessandro Fienga of Federazione Campana BCC

Cooperativo, BCC) were created among rural communities and have always kept strong and deep ties with their territory, interweaving their history to that of the local community. In order to retain the advantages linked to their small size, widespread action and roots in the territory, Italian Cooperative Credit Banks (*Credito Cooperativo BCC-CR*) are structured in a system focused on association, divided in local, regional and national. These banks after their creation, are members of local federation (that represents one or more regions) that are associated to *Federcasse*, the national federation that promotes, coordinates and provides technical and auditing assistance to the entire cooperative credit system.[1]

To evaluate the economic impact of the entry into force of Legislative Decree 11/2010 implementing PSD in Italy, we have considered the simulation of the effects on Credit Banks located in Campania, as shown by quantitative simulation proposed by the local Federation (*Federazione Campana delle BCC*). The simulation has considered as particularly relevant the consequences deriving from the execution time and the value date, according to the content of PSD. In absence of PSD these two elements became source of revenues for Banks as they could reduce the interest paid on customers account, as sums were not considered at the disposal of the payer or of the payee on the basis of the realization of the payment order. As regards the execution time the beneficiary must have at his own disposal the sums after D + 1 WD or D + 2 WDs (if it is not an electronic order).[2] The simulation was made in 2009 when the PSD was not yet implemented in Italy; the impact study considers a sample of 12 cooperative banks located in Campania. For each bank it was asked execution time and value date referred to their operations realized in 2008 and then the constraints imposed by PSD have been applied to simulate the changes occurring with the implementation of PSD.

The changes in this two factors have impact on the cash-flows of the bank (management of outflows and interest costs; management of inflows at immediate availability of customers) and its net interest income. In fact reduction of execution time and the value date which can not be used as a way not to pay interest by the Bank, require the search for new use of sums entering in banks but also the necessity of covering the higher costs due the payment interest. At the same time it should be necessary to acquire cash-flows to face the outflows caused by the application of PSD.

The simulation has put in evidence that the payment instruments which cause the most significant reduction of revenues are banking orders and other direct debit instruments.

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[1] Italian Cooperative Credit system is constituted by more than 400 Banks, more than 40000 branches, one million members, 31000 co-workers and more than 5 million customers. See, www.creditocooperativo.it

[2] The maximum working days might be 3 or 4 (if it is not an electronic order) up to 1 January 2012 according to legislative Decree).

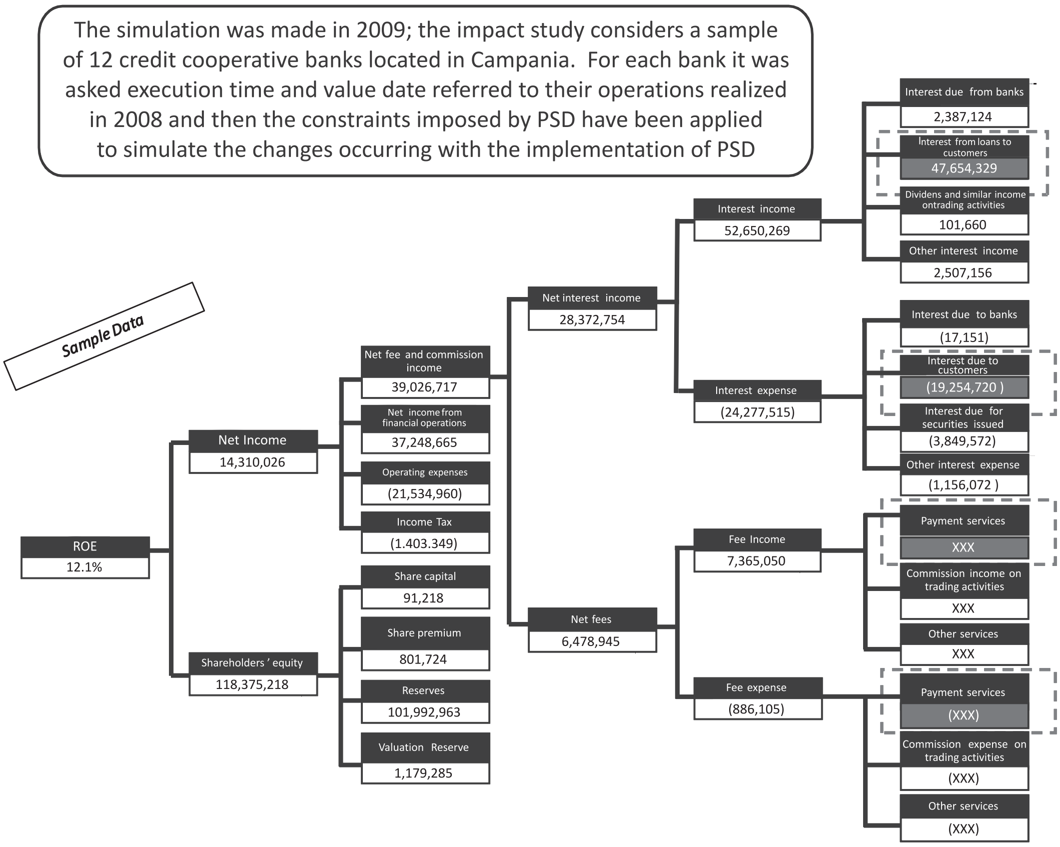

Fig. 3. Evidence of PSD Simulation on Italian Credit Cooperative Banks located in Campania. Financial Statement

Source: Dr Alessandro Fienga of Federazione Campana BCC.

As concerns the results of 2009 simulated income statement, the net interest income becomes negative as a consequence of the elimination of value date effect; the margin deriving from the difference between net interest income and net fee and commission income reduces of 2,9089%; the gross income registers a –7,2246% and the net profit (loss) of the period shows a –7,9331%. Considering these data it seems that the PSD Directive determines economic effect on banking income.

Table 11

Percentage of reduction of revenues due to SEPA instrument

Indicator	Decrease of net interest Income due to value dating	
	EUR/100	% su Tot
Active RiBa	481	42,35%
Domestic Incoming Credit Transfer	377	33,19%
Domestic Outgoing Credit Transfer	189	16,67%
Internal Credit Transfer	28	2,48%
Active RID	28	2,46%
Passive RiBa	24	2,10%
Other	8	0,75%
TOTAL	**1,135**	**100%**

Source: Dr Alessandro Fienga of Federazione Campana BCC

Table 12

Income statement — Decrease due to value dating

Indicator	EUR/100	% decrease of net interest income due to value dating
Decrease in net interest income due to value dating	−1,135	—
Net fee and commission income 2009	39,027	−2,9089%
Gross Income 2009	15,713	−7,2246%
Net Income 2009	14,310	−7,9931%

Source: Dr Alessandro Fienga of Federazione Campana BCC

This might imply the possibility of charging customers with other costs or fee for the use of payment instruments, but PSD does not safeguard customers from this risk.

Conclusion

The SEPA vision was set out by EU governments in the Lisbon Agenda in 2000, and the introduction of euro in 2002 was the driver towards the necessity of an integration in the euro payments market. Thanks to the creation of the Single Euro Payments Area (SEPA) customers are able to make cashless euro payments to anyone located anywhere in Europe, using a single payments account and a single set of payment instruments. EU governments, the EU Commission and ECB focused to develop a set of harmonised payment schemes and frameworks for electronic euro payments.

To create this single area it has been necessary to define an integration of the existing national euro credit transfer and euro direct debit schemes into a single set of European payment schemes, as this was considered as a natural step towards the reduction of operational differences among EU Member States (these differences are essentially referred to the meaning of payment service, payment institution, payment service, payment instrument, payment service user, payment service provider, execution time, application of value date, charges applicable, receipt, refusal and irrevocability of a payment order). Moreover it has been created a SEPA for cards to ensure a consistent customer experience when making or accepting payments with cards throughout the euro area and it incentivised an increased use of electronic payment instruments and reduced the costs of the wholesale cash distribution (this is the scope of a new discipline of electronic money institutions).

The above mentioned objectives have led to the SEPA Credit Transfer Scheme (SCT) and to SEPA Direct Debit Scheme (SDD) and to the contents of Directive 2007/64/EC (PSD) and Directive 2009/110/EC on e-money institutions (EMD), which have been the legal drivers towards a real implementation of SEPA. To grant a complete migration to SEPA some particular steps have been required; in particular the orientation of European Payments Council for the constitution all over SEPA, of bodies able to put in force the Directives' requirements and the use of communication ways able to widespread the news and the benefits of the implementation of SEPA.

The countries of the euro and non euro area are implementing SEPA compliant instruments in different ways. As concerns the Italian situation the National Migration Committee was constituted and together with the Bank of Italy and the Italian Bankers' Association is working for the realization of the National Migration Plan. To do this Italian banks have adopted SCT and SSD and above all, must now respect the content of Directive 2007/64/EC as it was implemented in the Italian law after the entry in force on 1 March 2010 of the legislative Decree 11/2010.

The impact of this decree has had operational consequences on Italian banks and on their customers. As concerns the former, we have considered the case of Italian

Cooperative Banks located in Campania Region (as these results have been registered also by the global system of Cooperative Banks), and our data have shown that the constraints in terms of execution time and the elimination of value date effect, have relevant economic consequences on income, both as increase of interest costs due to a particular management of the out/inflows deriving from credit transfer and direct debit operations and as decrease of charges for these payment services. As concerns the latter, a major clarity characterizes the relationship with the bank due to the respect of specific rules.

Even if there is consequence, we must reflect on the considerations contained in the studies which have put in evidence that SEPA implementation requires also investment and cost in services supply. It is still to be investigated the real impact on the other costs and fees which can be charged by banks only for giving their support in payment transfers, avoiding, by this way the content of PSD or the aims of SEPA.

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