EUROPEAN CENTRAL BANK

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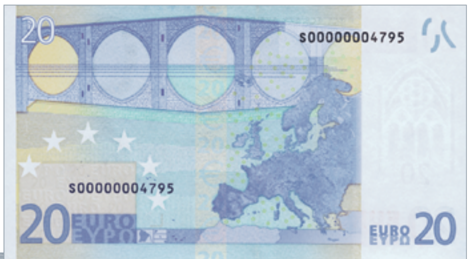
RETAIL PAYMENTS AT A CROSSROADS

ECONOMICS, STRATEGIES AND FUTURE POLICIES

A joint conference of the European Central Bank and the Banque de France
Paris, 21-22 October 2013



In 2014 all ECB publications feature a motif taken from the €20 banknote.

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I PREFACE
by Benoît Cœuré and Christian Noyer

Retail payments provide a very important yet not the most visible infrastructure for the operation of the real economy. The way economic actors pay is not only important from a theoretical point of view, but also from a policy perspective, as the costs for providing payment services are substantial in most countries. As we are witnessing a transformation in these markets from traditional paper-based payment instruments towards electronic means of payment, the interaction between market forces and regulatory initiatives continues to be a determining factor for the future. This interaction and the possible policy conclusions stemming from it were the main theme of the conference "Retail payments at a crossroads: economics, strategies and future policies" organised by the European Central Bank (ECB) and the Banque de France (BdF) on 21 and 22 October 2013 in Paris

There is an almost uniform trend towards a less-cash society in most countries of the world. Interchange fees are becoming subject to more and more intensive regulatory scrutiny which puts a stronger than ever emphasis on pricing models for retail payment instruments. The Single Euro Payments Area (SEPA) project is recognised as being on the right track, even though some further work needs to be done in the areas of standardisation of card payments and migration towards SEPA instruments. Moreover, innovations in retail payments are taking place more rapidly than ever, and payment service providers and regulators need to adapt quickly to this changing business environment. The aim of the conference was to bring together academics, regulators and market participants to discuss possible developments and dynamics that will shape the future retail payment landscape.

We would like to thank all participants in the conference. In particular, we would like to acknowledge the valuable contributions and insights provided by all speakers, discussants, session chairs and panellists, whose names can be found in the annexed conference programme. Their main statements are summarised in this document.

Behind the scenes, a number of colleagues from the ECB and the BdF contributed to both the organisation of the conference and the preparation of these conference proceedings. In alphabetical order, many thanks to Jean-Sébastien Cagnioncle, Paul Capocci, Emanuela Cerrato, Florian Dintilhac, Jérôme Fanouillère, Susan Germain de Urday, Philippe Girard, Geoffroy Goffinet, Monika Hempel, Iddo de Jong, Gergely Kóczán, Thomas Lammer, Antoine Lhuissier, Wiebe Ruttenberg, Chantal Sautreau, Heiko Schmiedel and Alexandre Stervinou.

Benoît Coeuré
Member of the Executive Board
European Central Bank

Christian Noyer
Governor
Banque de France

2 OPENING SPEECH
by Christian Noyer, Governor, Banque de France

Ladies and Gentlemen,

I am delighted to be here today to open this conference dedicated to "retail payments at a crossroads: economics, strategies and future policies". On behalf of the European Central Bank and of the Banque de France I would like to welcome you all to Paris, and thank you all for accepting our invitation to participate in this event. I would especially like to thank Michel Barnier, European Commissioner for Internal Market and Services, Benoit Cœuré, Member of the Executive Board of the European Central Bank, and Jean-Paul Gauzès, Member of the European Parliament, for their presence. I know the quality of all the persons gathered here, and I have no doubt that stimulating debates will take place during these two days, contributing to pushing our vision of retail payments further.

I am all the more delighted to welcome you to Paris since retail payments and retail payment security are core missions delegated to the Banque de France by the French legislator and the Treaty on the Functioning of the European Union. Thanks to its retail payment oversight mission, the Banque de France is particularly familiar with the different issues that will be addressed during the conference. Four of these issues seem especially important:

- the need to ensure users' trust in accessible means of payment, thus spurring economic development and financial inclusion;
- the need to rethink the conditions for the development of efficient and innovative means of payment;
- the importance of promoting the emergence of an integrated European-wide payments market, which will facilitate international trade;
- the necessity to cooperate at the international level to fight against fraud.

I would now like to share a few brief considerations taken from the Banque de France's experience.

In the retail payment market, dialogue between the different stakeholders is crucial. Since 2001 the Banque de France has been chairing the "Observatory for payment cards security", a forum which gathers together merchants, consumers, banking and payment market stakeholders, representatives from the French Parliament, law enforcement officers and other public authorities involved in payment card issues.

The Observatory, which recently published its tenth annual report, has greatly contributed, through its recommendations, to the wide diffusion in France of strong security requirements for payment cards, such as chip and PIN systems or reinforced authentication for internet payments.

Given the complexity of these issues and the number of stakeholders involved in the payment market, dialogue is the only efficient way to find common solutions accepted by the whole community. Authorities must act as catalysts in order to facilitate consensus between the players, to overcome technical issues and to adopt common standards which will ensure the universality and the efficiency of retail payments.

This spirit prevailed in the implementation of the SEPA project in France. In 2006, the Banque de France, in close coordination with the French Banking Federation, created the French national SEPA Committee, whose role is to organise French migration towards SEPA means of payment.

Nonetheless, regulatory decisions are still necessary in some situations to steer the payments market. The SEPA project exemplifies this situation as Regulation (EU) No 260/2012 was passed in order to establish a unique end date for the European migration. With fewer than 100 days to go before this end date, I would like to call upon all stakeholders, especially small and medium-sized enterprises (SMEs), to comply with the Regulation and ensure a smooth migration towards the SEPA means of payment.

Finally, the current increase in internet payments has led us to intensify the fight against cyberfraud, and has stressed the fact that retail payment security is now an international issue. As I already underlined, the reinforcement of retail payment security is the cornerstone of the Banque de France's missions. A means of payment might not be considered efficient unless it achieves the maximum security requirements, whether at the national or international level. For this reason, the Banque de France strongly supports the implementation of harmonised security measures for retail payments at the pan-European level, such as the EMV specifications for cards. It also contributes to the recommendations of the European Forum on the Security of Retail Payments (SecuRe Pay), which gathers together European central banks and prudential authorities.

This international conference, which combines academic and policy sessions, will help to confront views and thus to deepen the dialogue between market stakeholders and authorities. I am positive that through your contributions you will make this conference an important landmark for further work on retail payments.

Once again, thank you all for being here, and I wish you a very pleasant stay in Paris.

Thank you for your attention.

3 INTRODUCTORY SPEECH
by Benoît Cœuré, Member of the Executive Board of the ECB

Ladies and Gentlemen,

It is a great pleasure for me to make some introductory remarks at this conference on the different roads that may lie ahead for retail payments. But first of all, I would like to thank the Banque de France for organising this conference jointly with the ECB, and for hosting it. I am also grateful to Christian Noyer for opening this event. I am sure we will spend two fruitful days having some valuable discussions and exchanges on the economics, strategies and policies of retail payments.

Four years ago, in 2009, the ECB and De Nederlandsche Bank organised the first conference of this kind. The idea behind the conference was to foster the dialogue between academics and policy-makers in the field of retail payments. The second conference was organised with the Oesterreichische Nationalbank in 2011. And this is the third conference in the series. It shows that we are committed to building on the progress achieved and keeping the dialogue going.

Before the crisis, the retail payment business went largely unnoticed as a substantial source of revenue in banking. During the crisis, as was outlined in the 2009 conference, the retail payment business had been resilient, providing reliable and regular revenues. As a result, the subsequent realisation that banks with more stable funding models were better able to cope with the crisis has led in recent years to a greater recognition of the importance of retail banking and retail payments.

Indeed, one of the conclusions drawn at the 2011 conference was that retail payments have also become more socially relevant. Businesses and individuals must have cheap and easy access to basic retail payment services in order to pursue their economic activities. The further development of retail payments is a key factor in financial inclusion. I will come back to this issue later today in my panel discussion.

That said, the social costs of retail payment instruments, including cash and non-cash payments, remain substantial, as a recent ECB study has shown. Those costs amount to almost 1% of GDP in Europe, with considerable differences from country to country.

In the title of the conference we say that retail payments are at a crossroads. This means that the road we now follow will profoundly affect retail payment economics, strategies and policies. Different roads may appeal in different ways to the various economic actors. One possibility would be to preserve the status quo and to implement only the changes needed to comply with the existing regulatory framework. Alternatively, we could follow a road less travelled. Here, new economic actors may emerge and consumers may start to utilise more personalised, simple and secure payment services and applications offered by the information and consumption channels they increasingly (and in some cases even exclusively) use, i.e. smartphones and the internet. Also, payment service providers may push forward into the uncharted territories of further retail payment integration and innovation.

I would like to elaborate on the different roads ahead, considering integration first and then innovation.

Retail payment integration

Without wanting to pre-empt Michel Barnier's keynote speech on retail payments and their contribution to the Single Market, let me say that retail payment integration in the euro area – and in Europe – has made progress. Although there are still considerable efforts to be made, we are just a few weeks away from completing the migration to new European schemes that have been developed for credit transfers and direct debits. It is a big step forward.

But progress in the field of cards has been slower. We are still far from a situation where "any card can be used at any terminal". To ensure a level playing field, national borders for cards licensing, issuing and acquiring have to disappear, and the consistent implementation of the separation of scheme management and processing has to be ensured. Some movement in this area is expected to result from the revised Payment Services Directive and Regulation on interchange fees for cards. Regarding standardisation, despite some progress made during the last years, further work is required, as recommended by the Eurosystem.

The question remains whether in future retail payment integration will be mainly a compliance-driven process or whether it can be pushed further, making electronic payments more widely used. Currently, there is evidence of cross-country convergence in the euro area, especially for cards, direct debits and credit transfers, and the speed of convergence has clearly accelerated for most of the payment instruments studied since the introduction of the single currency.

Despite the convergence, however, there are still large differences in payment behaviour, starting with a choice between cash or cashless payments and then, say, selecting from a range of cashless payment instruments. For instance, the persistent use of cheques in some countries, even though it is steadily declining, shows that payment behaviour changes slowly. This also means that cash will remain an important means of payment in the foreseeable future. Therefore, the Eurosystem continues in its efforts to protect the integrity of the euro banknotes and stay ahead of counterfeiters, e.g. with the introduction of our new series of euro banknotes, called the Europa series.

Promoting further integration of retail payments in Europe is seen as economically and socially advantageous. There is empirical evidence that initiatives to integrate and harmonise retail payment markets boost trade and consumption and benefit the whole economy. Data from 27 markets in Europe between 1995 and 2009 confirms that the shift to efficient electronic retail payments stimulates overall economic growth, consumption and trade. This effect is most pronounced for card payments, followed by credit transfers.

Deeper integration of retail payments is expected to bring about more price convergence among cashless retail payment instruments in the euro area, making these instruments more affordable and thereby promoting financial inclusion.

The Single Euro Payments Area (SEPA) is instrumental in this respect. Later this week, the ECB will publish the second SEPA migration report, which will highlight the progress accomplished and the remaining challenges as we come closer to the SEPA end date of 1 February 2014 for migration to pan-European payment instruments. As recalled by the SEPA Council at its meeting on 23 September, the SEPA migration requirements set by law have to be fully respected without exception. Looking beyond the end date, the ECB will establish and chair the Euro Retail Payments Board (ERPB) as successor of the SEPA Council to contribute to and to facilitate the creation of an integrated, competitive and innovative market and level playing field for euro retail payments. The ambition is for the ERPB to achieve a wider membership, strengthened mandate and a more output-driven approach. I look forward to the active participation of the European Commission.

At present, financial inclusion is lower in those countries which make less use of cashless retail payment instruments. Giving more people, especially those on lower incomes, access to financial services not only adds to economic growth, but also plays a part in reducing income inequality and poverty. In this way, it can help to achieve higher social welfare. At the same time, it can integrate payment flows that currently exist outside the formal financial sector and strengthen the social role of banks. This matters enormously as Europe is emerging from a protracted crisis that has put its social model under strain and shattered public trust in the financial industry.

To sum up, I would say that there are strong economic, social and political reasons for retail payment service providers, users and regulators to aim for further retail payment integration. European regulation is essential in paving the way, but there are many other roads to follow for providers and users to reap the full benefits.

Retail payment innovation

As I said earlier, e-commerce and new communication and information media have set new challenges in terms of functionality and security for retail payments. They have also given providers of payment-related services new opportunities to compete. These chances are valuable because, as we know, competition is good for business, i.e. it should provide users with more choices and better services.

Unfortunately, these opportunities have not yet been fully exploited by the different market players. Innovative retail payment solutions in the euro area are still largely being provided by non-bank service providers, mainly for the payment initiation phase. Banks – the traditional payment service providers – are at a crossroads. They can either try to defend their existing products and leave this business segment to non-bank providers, or they can become more open and innovative. If they go down the first road, they risk ending up in the unpleasant situation of, say, bookshops confronted with the rise of online competitors. The ability to maintain a diversified business model, including through retail banking, will be key to the profitability and resilience of the European banking industry.

One reason for adopting a defensive posture may be that, until recently, most banks heavily relied on interchange fees for cards in their business model. But this business model is being increasingly challenged in a number of countries and jurisdictions. I mentioned earlier the proposal for a Regulation on interchange fees for cards. This has the potential to break the stalemate that has occurred not only in the cards dossier but also on the innovation front. Transparency and clarity with respect to the real costs and benefits of cards and other payment instruments are vital for a harmonised and innovative European retail payments market.

Another reason for a defensive posture may be that banks face a coordination issue within their own organisations. For one thing, retail payments are often perceived as a cost centre, not as a profit centre. Moreover, innovations in retail payments require investments in IT as well as the will to challenge well-established and profitable business models. Clearly, these are not easy things to do in times of financial distress.

In the end, whoever provides innovative payment services should be mindful of two key issues. First, these services should be safe and protected against misuse. For instance, it is necessary that clear conditions are established under which payment initiation services offered by third-party service providers can access existing online banking systems. Second, innovative services should have the potential to become pan-European solutions. If we do not think about the European dimension right from the start, in a few years' time we will face all the problems of having to merge multiple national solutions into a European framework.

I said earlier that retail payment integration brings benefits. The same thing applies to innovation. Fostering retail payment innovation is socially important as it should help to lower costs and reduce entry barriers, and promote financial inclusion among the underbanked and the unbanked.

Conclusion

I have only touched upon a number of very important issues. I am confident that today and tomorrow, these issues will be explored in greater depth. Taken together, the speakers, panellists, Chairs and discussants at this conference as well as you in the audience possess a vast body of knowledge and expertise. If all these assets are put to good use in choosing the future direction, I am confident that the right road will be found.

Retail payments have reached a turning point as regards integration and innovation. As in the famous poem by Robert Frost, the road that will be travelled by will make all the difference – economically and socially.

Thank you very much for your attention.

4 KEYNOTE SPEECH: RETAIL PAYMENTS – A TOOL FOR INCLUSIVE AND INNOVATIVE GROWTH IN EUROPE

by Michel Barnier, European Commissioner for Internal Market and Services

Ladies and Gentlemen,

First of all, I would like to thank the Bank of France and its Governor, Christian Noyer, and the ECB, represented here today by Benoît Cœuré, for inviting me.

The fact that this first panel includes representatives of the Dutch, Indian, Brazilian and Australian central banks is a testament to the importance given to retail payments around the world.

In Europe this issue has sometimes been put on the backburner over the last few years, eclipsed by the urgent problems arising from the financial, budgetary, economic and social crisis.

My thoughts on this are clear: it is a mistake!

Retail payments are not just a mundane management issue. On the contrary, they represent a key element of our response to the crisis.

Four examples:

- The financial crisis was aggravated by a crisis of confidence between banks and their clients. In order to rebuild this relationship we need greater transparency and security, including for bank payments, which must be reliable and whose charges must be reasonable and predictable.

- The crisis triggered protectionist tensions, which could jeopardise the integration of the single market. By modernising the European electronic payment market we would remove one of the main obstacles to the digital single market, which is an important source of growth and employment.

- For many Europeans, the crisis led to unemployment and exclusion, particularly of a financial nature. The aim of our initiative on access to a basic bank account is to ensure that no European is unable to open a bank account, something which has become an essential part of economic and social life.

- Moreover, the crisis highlighted a competitiveness divide between some European countries and the need to focus more than ever on innovation. These payments are a perfect example of a sector in which European companies offer innovative products and services, such as the new online payment facilities, based on electronic bank transfers.

Ladies and Gentlemen,

Retail payments have an extremely important contribution to make to society in general and to the single market in particular.

It is therefore essential that Europe has retail payment services that are accessible, secure and transparent, while also being competitive and innovative.

This is the objective of our legislative package of 24 July 2013 on modernising the electronic payments market.

The basis for this ambitious proposal is simple. In Europe more and more consumers every day shop online. Between 2011 and 2012, online sales in the EU increased by 19% and now have a turnover of EUR 312 billion, with France's turnover accounting for EUR 45 billion of this. Almost 60% of internet users in the EU now shop online.

In addition to online payments by bank card, new card-free payment services are now being offered, particularly payment via mobile phone.

But development of these new technical possibilities is all too often hindered by a lack of consumer confidence, due in particular to doubts as to the security of online payments.

Furthermore, the European payment market remains fragmented and its cost is estimated to be EUR 130 billion per year.

Our proposal aims to make online payments less expensive and more secure, for both traders and consumers.

- The security requirements for online payments will be stepped up for all payment institutions.

- Consumers will be better protected against fraud and payment incidents. For example, if a payment service provider does not use a strong client authentication method, clients cannot be held responsible for non-authorised payments on the card, unless they have acted in a fraudulent manner.

- Finally, the revised directive on payment services will extend its scope to providers of new online payment services, which will put them on an equal footing with payment institutions. I am thinking particularly of payment services by electronic bank transfer, which until now have not been regulated; this issue has raised questions about security, data protection and responsibility.

By taking these new players into account, it is also possible to promote innovation and competition among the different operators to the benefit of consumers, who will be able to choose from several methods of payment, and also among traders, who will be able to offer forms of payment that are better value than debit cards, and especially credit cards.

Our proposal to cap interchange fees at 0.2% for debit cards and 0.3% for credit cards is also designed to reduce the cost of payments and remove a significant barrier between national markets.

This reform should be highly positive for consumers, who will benefit from a wider acceptance of cards by traders and the end to over-invoicing in stores for all regulated cards. And indeed, our proposal has received the support of numerous consumer bodies, including the European Consumer Association, BEUC.

Moreover, ending restrictions on cross-border acquisition of cards would put strong competitive pressure on all card-related fees, which should lead to lower costs for traders.

Finally, while it is true that banks may see a fall in revenue from card transactions, this will be offset by a growing acceptance of cards by traders and thus a greater volume of transactions, particularly in countries where these fees are high.

I would like to point out that eight Member States already have rates of commission of below 0.2% for debit card transactions

Ladies and Gentlemen,

As you can see, by addressing payment security, the struggle against the fragmentation of the single market, lower costs and incentives for innovation, the legislative package of 24 July represents a step forward in a number of areas.

It is therefore essential that this package, like the other initiatives that we have taken regarding payments, enters into force quickly, which means that we have to make the most of the seven months left until the end of this parliamentary term.

For that reason I would now like to outline the three main priorities on payments that we hope to deal with between now and May.

1. First, we must ensure that our legislative proposals of 24 July enter into force quickly.

We can no longer afford to lose time, which is why the Commission has called for these texts to be adopted rapidly by the European Parliament and the Council.

2. Second, we must complete the migration to SEPA.

We cannot go on with a single currency and 18 different systems of electronic payment. Those citizens who travel, shop on foreign sites or send money to family members in other Member States do not understand why this should be the case. Nor do the companies that want to sell their products under the same conditions in their home country and in the rest of Europe.

In a truly single market for financial services, consumers should not only be able to make credit transfers easily and use their debit card wherever they are in the euro area, they should also be able to avoid having to open several accounts in several different countries in order to receive their salary or pay their bills.

Throughout the euro area, companies, and particularly SMEs, should also be able to make and receive payments using just one account.

Traders should be in a position to accept all cards from SEPA countries and, for internet transactions, propose that their clients pay via credit transfer or direct debit.

This vision should be a reality by 1 February 2014. That is, in any event, the deadline laid down in the SEPA Regulation for the migration of national systems to pan-European systems of credit transfers and direct debits in euro.

I believe that we need to take into account the size and technical nature of this migration, which concerns more than 35 billion credit transfers and direct debits per year.

This is why the migration is, for the time being, far from being complete. According to the ECB's SEPA indicator, the migration rate in the euro area in August was 52.8% for credit transfers and only 7.2% for direct debits.

It is therefore essential that we step up our efforts to ensure that SEPA is a success, particularly by improving the information available to SMEs and local administrations, which are still not sufficiently aware of the challenges, and whose involvement is essential if we want a smooth transition.

There is no plan B. The deadline has been clearly laid down in the Regulation and must be respected.

I welcome the way in which the Commission and the ECB are working together to achieve this objective. Our two institutions will soon present their reports on the migration. The Commission is also supporting the ECB's efforts to improve the governance of SEPA by ensuring that all stakeholders are represented.

3. The third priority that I would like to mention this morning concerns our proposal on access to a basic payment account.

Without a bank account it is often not possible to receive a salary, rent an apartment or take out a mobile phone subscription. And yet almost 58 million Europeans do not currently have a bank account, although 25 million would like one.

Some people are denied access to a bank account because of their limited resources. Others, as is the case with many Erasmus students, find it difficult to open a bank account in an EU country in which they are not resident.

These reasons will cease to be valid when the directive that we proposed on 8 May enters into force.

All consumers residing legally in the EU will be entitled to open a basic bank account in whichever Member State they wish, irrespective of their financial situation.

This account will make it possible for them to perform a number of essential day-to-day transactions, such as depositing and withdrawing money and making credit transfers and payments.

This service must be provided free of charge or at a very reasonable price and must be available in at least one bank per country, to be chosen by the Member State.

Our proposal also covers two other important aspects:

- the possibility to change bank account quickly and easily. Banks will have 15 days to finalise the change – 30 days if the new bank is located in a different Member State – and it must be performed free of charge or at a very limited cost;

- improved comparability of fees, made possible by standardised information on services and bank fees and by the putting into place of at least one accredited comparison website in each Member State.

These are tangible improvements for consumers, which explains why we are doing everything in our power to ensure that talks progress rapidly in the European Parliament and in the Council.

Ladies and Gentlemen,

This proposal on access to bank accounts, the migration to SEPA and the legislative package of 24 July show the importance that the Commission attaches to the issue of payments.

If we want to repair the bond of trust between Europeans and their banks, create a real digital single market, combat financial exclusion and bolster the innovation and competitiveness of our companies, it is imperative that all of these proposals enter into force as soon as possible.

I also believe that it is essential for all those involved in the European payments industry, of which you form a part, to continue to contribute actively to the reforms that we are carrying out, as you did when we presented the Green Paper on payments by card, internet and mobile phone. Only by working together will we find better solutions so that we can finally establish a genuine single payment market.

Thank you for your attention.

5 DINNER SPEECH
by Anne Le Lorier, First Deputy Governor, Banque de France

Ladies and Gentlemen,

It is a great pleasure for me to welcome you tonight to what I hope will prove to be a beautiful cruise on the Seine. I am particularly happy to welcome representatives from almost all continents. It is a privilege for the Banque de France, together with the European Central Bank, to host such an event at a time when retail payments are increasingly in the spotlight as a result of innovations in technology, security concerns and, in the particular case of Europe, decisive progress towards retail payment integration with the migration towards the Single Euro Payments Area (SEPA) by 1 February 2014.

Retail payments play a crucial role in our everyday life. They are essential for the proper functioning of a market economy and are at the heart of people's trust in the currency as a means of exchange. They also represent a promising vector for promoting economic development and the growth of international trade. Their role comes with a cost, however; the ECB published a study in 2012 providing a first estimate of the costs related to the use of retail payments for European countries, based on a sample of 13 EU Member States. It amounted to almost 1% of GDP (albeit with significant differences among the 13 countries surveyed).

In the light of the key role played by retail payments, it should come as no surprise that their proper functioning – considering their efficiency and the economic aspects of their standards, as well as the security they offer – is a crucial area of interest for public authorities. I thus welcome this opportunity to share my views on this important topic and my belief that there currently exists a need for greater cooperation at the international level to allow for harmonised and secure payment instruments.

It remains the case today that, for the vast majority of retail payments, a multiplicity of technical standards and operational rules continue to coexist, thus hampering the further development of international transactions. Addressing this shortcoming while still nurturing innovative approaches will prove to be the great challenge of the coming years. Moving forward on this issue will undoubtedly be difficult in view of the great heterogeneity in payment habits across countries. Heterogeneity still dominates in the euro area, where, to give you a simple example, cheques – although their use is declining – remain a popular payment instrument in France, representing 16% in volume and 6% in value of all cashless payments in 2012, while they are scarcely used in other euro area countries. Interestingly enough, the ability of a domestic retail payment market to evolve towards the use of new or more innovative payment instruments seems to be inversely proportional to its use of traditional cashless payment instruments. For instance, the Indian market has been experiencing a boom in mobile payments, with growth rates as high as 108% in volume and 229% in value terms over the past year. Similar trends have been observed in African regions. In comparison, mobile payments remain marginal in France, a so-called mature market, where users continue to predominantly use payment cards.

During the implementation of SEPA, the Banque de France had an opportunity to experience first hand how difficult it is to overcome the obstacles on the road to harmonisation, in a process which lasted several years. Under the auspices of the European Payments Council, the European banking community reached an agreement on the definition of the operational rules of the two new European payment instruments: the SEPA Credit Transfer and the SEPA Direct Debit. Nevertheless, last year the European legislator had to intervene to ensure a concerted and timely migration to these two payment instruments. Hence a legally binding end date for full migration to the SEPA Credit Transfer and the SEPA Direct Debit has been set for 1 February 2014. As this deadline draws ever nearer, and while migration to the SEPA tools is still far from being completed in the euro area, in particular among small and medium-sized enterprises, it is important that all stakeholders intensify their efforts towards this aim. There are short-term costs to be borne by banks and enterprises, but the long-term benefits that can be drawn from the adoption of the SEPA payment instruments should more than offset them. For SMEs in particular, this will translate into efficiency gains as they will be able to centralise their payments, which should be processed more quickly. They will also benefit from a decrease in the cost of payment services due to increased competition among service providers. Communication is key in raising the awareness of small and medium enterprises about these important issues and it is a task that rests with public authorities, but also payment service providers, which have a responsibility and a key role to play in assisting their customers in this migration.

From this SEPA migration experience, I would like to highlight the importance of finding the right balance between self-regulation on the part of market actors and the intervention of regulatory authorities that sometimes becomes necessary. The two approaches are and should be seen as complementary. The priority should be given to market-driven solutions, with the intervention of regulatory authorities coming as a last resort, for example in the case of market failure or in order to prevent market fragmentation.

International harmonisation initiatives must also strive to ensure the highest level of security for retail payments as this is one of the main ingredients for efficiency gains. As you all know, many central banks have been entrusted with the mission of ensuring the proper functioning of payments and infrastructures. In our case, the Banque de France's role as overseer was specified in 2001. The law specifically entrusted us with the task of ensuring the security of all non-cash payment means. Indeed, these means are defined as "any instrument that enables a person to transfer funds, irrespective of the medium or technique used".

As the European payment market has become more integrated, carrying out this mission has meant adopting new approaches based on greater cooperation at the regional level. This necessity led to the publication in 2008 and 2010 of the Eurosystem's cooperative oversight arrangements for payment cards and for direct debits and credit transfers. It was also the driving force behind the creation in 2011 of the Forum on the Security of Retail Payments (SecuRe Pay). Comprising the central banks and prudential authorities of the European Union and the European Economic Area, this Forum has sought to facilitate common knowledge and understanding of issues related to the security of electronic retail payment services and instruments and, where necessary, has issued recommendations.

This joint effort among European overseers and supervisors led, in January 2013, to the publication of recommendations for the security of internet payments, and other recommendations are anticipated in the field of mobile payments. In this respect, I wholeheartedly welcome the fact that a number of the Forum's recommendations have been taken up by the European legislator in its proposed review of the Payment Services Directive.

Nevertheless, I fear that even this kind of regional cooperation will not suffice in the near future as a method of effectively fighting fraudulent behaviour. Fraudsters are no longer bound by national or even regional jurisdictions. The fraud figures compiled at the French national level show that the regions that have not adopted EMV (Europay Mastercard Visa) specifications for chip cards have, in recent years, suffered the consequences of a major shift in fraud patterns, as fraudsters have turned their attention to international transactions. To give you some figures, the fraud rate in 2012 for transactions outside SEPA (not using the Chip and PIN functionality) with cards issued in France was around two and a half times higher than the fraud rate for transactions conducted within SEPA with the same types of cards, which clearly shows the benefit of EMV Chip and PIN in terms of fraud prevention. Under the same rationale, we must also recognise the need to standardise strong authentication for internet payments and define this as a major objective at the international level. In the long run, spillover effects across regions should trigger the launch of international cooperative approaches to ensure the security of commonly used retail payments.

To sum up, there is no scarcity of issues to be addressed. Faced with such a rich subject matter, it is important that we take the time to share our analyses and learn from each other – from our successes but also from our failures. By bringing together people from many different backgrounds – central bankers, policy-makers and also representatives of the industry and academics – it is my sincere hope that this conference will have helped in achieving this goal.

As you have all worked very hard today, I would like to conclude my remarks by wishing you a pleasant evening on the Seine.

Thank you for your attention.

6 THE RELEVANCE OF RETAIL PAYMENTS FOR SOCIETY AND FOR THE FINANCIAL SERVICES INDUSTRY IN PARTICULAR

6.1 REDISCOVERING THE RELEVANCE OF RETAIL PAYMENTS FOR SOCIETY PANEL DISCUSSION

The panel session was chaired by **Benoît Cœuré** (Member of the Executive Board, European Central Bank) and brought together the visions and perspectives on the importance and relevance of retail banking and payments. The Chair invited the panel members to share their perspectives on the following building blocks of the panel:

1. Contribution to trust in a currency: importance of properly functioning payment systems for society.

2. Experiences and responsibilities to ensure effective and efficient payment systems: lessons learned from different regions.

3. Balancing public policy and industry needs in the field of payments: challenges posed to central banks and other relevant authorities.

4. The social relevance of retail payments (in terms of costs, economic factors and as precondition for social inclusion).

In his presentation **Frank Elderson** (Member of the Governing Board, De Nederlandsche Bank) emphasised that retail payments have been vital to society for quite some time. The business sector is dependent on them, and so are merchants and consumers. Society cannot do without a properly functioning retail payment system, but this may be even more important in times of financial and economic crisis. He also noted the importance of payment and settlement infrastructures in relation to resolution planning. He reminded us that the aim of resolution planning is to ensure that in the event of a failing systemic financial institution a) losses are borne first and foremost by shareholders and creditors instead of tax payers, and b) vital economic functions are protected, including payment and settlement infrastructures. He stressed that this shows how essential it is for consumers and businesses to trust that their money is safe and to know that they can access it whenever they want to, and how important it is for central banks to play their role in preserving this trust.

He went on to explain that the security of cash and non-cash payments is crucial for maintaining trust. Compared to cash, electronic payments face different threats, namely phishing or cyber attacks on financial institutions and infrastructures. He stressed that protecting the security of payments now also means combating cybercrime, an objective that should be high on the list of priorities of central banks around the world.

Equally important, however, is ensuring that the payment system is accessible to everyone, including elderly citizens and those without access to the internet. He argued that in Europe this is all the more relevant when moving towards SEPA. Meeting these challenges will require a properly functioning governance arrangement. The upcoming establishment of the Euro Retail Payments Board is a positive step towards this end. It is important that this board gets a strong mandate, that all stakeholders are represented on it and that they can really work on practical solutions to improve retail payments in Europe.

Being aware that 100% security and efficiency can never be reached, Mr Elderson concluded his talk by elaborating on the three areas that need further improvement. First, when moving towards an online society, there is the growing need for online payment solutions. Europe is now migrating to SEPA direct debits, but there is no European solution for electronic mandates yet. National solutions are being developed to fill this gap, which is welcome. When building a truly integrated payments market, however, this cannot be the long-term solution. Second, in this online society where people can shop around the clock, there should probably also be a 24/7 payment system. This is already being discussed in several countries, Australia being a good example. Some European countries have also taken initiatives. None of these are euro area countries, however, as the implementation of SEPA has been the top priority. It should be on the agenda in the euro area soon though. Third, there exists a need to address cybercrime, as providers and users of payment systems should be able to trust that these systems are safe – not only in their own country, but all over the world.

Malcolm Edey (Assistant Governor, Reserve Bank of Australia) focused in his presentation on the Reserve Bank of Australia's (RBA) involvement in an important innovation, namely the development of a real-time retail payment system for Australia. He explained that the RBA has a significant role in the Australian payment system in three ways:

- as banker/participant, providing payment services to the government;
- as infrastructure provider and operator for the real-time gross settlement system;
- as a regulator with significant powers.

Recognising the interdependency of these three roles, and also the potential for conflicts of interest among them, the government established a Payments System Board (PSB) in 1998 to determine the overall payment system policy of the RBA. The PSB is required to determine the RBA's payment system policies in the national interest, with the mandated objectives being:

- competition;
- efficiency;
- stability.

He explained that as regulator, the RBA has the power to “designate” a payment system and to set standards, for example with respect to pricing and access. The RBA has made significant use of these powers in relation to card payment networks in Australia. Nevertheless, the RBA cannot force the system to innovate or require a new system to come into being or a new capability to be developed. However, the RBA can use its broader influence to encourage innovation where there is a public-interest case for it.

In his view, two classes of innovation need to be distinguished:

- First, proprietary innovation, which can be driven by an individual service provider independently of the system. An example might be an improved customer interface.
- Second, systemic innovation which, because of network externalities, can only be delivered by coordinated action across the system as a whole. A historical example might be faster cheque clearing.

According to Mr Edey, the move to real-time payments falls into the second category because it requires collective action across the payment system to make it happen. He went on to explain how the project has developed in Australia over the past three years. With regard to the RBA’s role in the project, he stressed that this is a partnership, in that it is an industry-led project designed to meet public-interest objectives. The RBA has involvement and influence in several ways:

- The RBA is a party in the initial participation agreement, along with the major banks and a number of smaller banks.
- The RBA is also developing the settlement infrastructure that supports the payments hub.
- The RBA is represented on the project’s Steering Committee.
- There is a possibility of ex-post regulation if the PSB objectives are not met.

Mr Edey concluded that so far things are going well, but there is a long way to go. There is strong industry support and momentum. However, this is a challenging coordination exercise as it aims to generate collective industry innovation while also ensuring that it meets public-interest objectives. Hopefully, this will result in a best-practice fast retail payment service by the end of 2016.

Rogéro Lucca (Senior Adviser, Banco Central do Brasil) started his presentation by saying that central banks, as issuers of money, have always had a keen interest in the smooth functioning of the national payment system. Specifically, retail payment instruments, as substitutes of currency issued by central banks, have always been important in terms of maintaining trust in the currency – which constitutes a public good – and ensuring its smooth circulation. In that sense, it is normal that traditional payment instruments, such as cheques and interbank credit transfers, have been regulated by central banks, as is the case for the systems through which such instruments are settled.

According to Mr Lucca, with the growing evolution of financial systems, financial intermediation, capital markets and the complexity of financial instruments, including the growing participation of central banks in such markets in order to implement monetary policy, a new objective of guaranteeing financial stability has had increased significance for central banks in the area of payment systems. With this in mind, the focus has changed from the smooth circulation of currency to the appropriate management of risks to which payment systems are subject and, mainly, the possible impacts of these risks on the financial system and the maintenance of financial stability.

During the 1990s payment system regulators mainly devoted their attention to the safety of the systems, focusing on systemically important payment systems. By the middle of the last decade, as systemic risk seemed appropriately managed, there was once again scope to discuss retail payment systems. By this time, society had started to express dissatisfaction with private payment schemes, mainly payment cards. Even where central banks were not the legal authority responsible for schemes, society identified such matters as falling within the scope of their mandates. With the financial crisis later on in the decade and the need to revisit principles, recommendations and standards for payment systems to foster financial stability, retail payments returned to the top of central banks' agendas.

Mr Lucca explained that the modernisation of retail payments was facing many challenges such as governance problems, barriers to entry, anti-competitive behaviours and inefficiencies due to an inadequate balance between competition and cooperation. This modernisation initiative aimed to: (i) identify the structure and organisation of the payment schemes of the main players, including payment system owners, issuers, acquirers and processors, as well as the scheme rules, payment instruments, distribution channels and infrastructure for clearing and settlement; (ii) make a quantitative and qualitative analysis of the different developmental stages of retail payments, (iii) identify obstacles to modernisation and the adoption of electronic payments, and (iv) define the necessary actions for improvements in the sector. This exercise became the foundation for the development and implementation of policies to address the deficiencies effectively and in a systematic manner.

In 2006 Banco Central do Brasil publicly recommended that the payment card industry should share infrastructure, without prejudice to innovation, the development of new products and services and a competitive environment in the supply of products to end customers. It was highlighted that some payment services, based heavily on IT solutions, economies of scale and externalities, such as clearance, settlement and network service provision, should be provided in a consolidated, collaborative and interoperable manner. That would enable and facilitate competition, innovation and the efficiency of the provision of payment services to end users.

In 2010 alongside the competition authorities the Banco Central do Brasil published a Report on the Payment Card Industry, in which the main findings were (i) excessive vertical integration, the existence of exclusivity and lack of interoperability in the provision of acquiring services, (ii) the absence of a national debit card scheme, and (iii) the existence of rules limiting the ability of merchants to establish pricing differences by payment instrument.

In the light of these events and in response to moral suasion exercised by the Central Bank, some developments have been achieved. Specifically of note in the payment card industry are the end of exclusivity arrangements among acquirers and schemes, the partial interoperability arrangement, increased competition on the acquiring market, increasing transparency of prices and fees, and the emergence of a national arrangement debit cards scheme. Mr Lucca noted that the moral suasion approach had nevertheless reached its limits and that the adoption of regulatory measures was now necessary in order to move forward.

He concluded by pointing out that, currently, Banco Central do Brasil is regulating the law in order to organise the market and make clear requirements and oversight instruments. It is expected that a new environment will arise with greater interoperability, innovation, diversity of business models and soundness. These intermediate objectives will provide scope for the final social objectives of financial inclusion, the fulfilment of client needs and the smooth and secure circulation of currency to be achieved.

Gopalaraman Padmanabhan (Executive Director, Reserve Bank of India) addressed three main issues in his presentation:

- How can financial intermediaries and financial inclusion contribute to the economic growth of the country?
- The relevance of international standards and principles for stretching retail payment services beyond domestic boundaries.
- What are the key considerations to be followed while innovating in the field of retail payment systems?

Referring to Boston Consulting Group's Global Payments 2013 report, Mr Padmanabhan pointed out that we are facing a "two-speed world", as far as payment activities are concerned, owing to the important differences that exist between the needs of mature economies on the one hand and developing economies on the other. Such a dichotomy calls for the adoption of two different approaches. Developed economies have already reached a level of market maturity in terms of retail payments and are now looking for the next generation of efficiencies. In the case of emerging markets, such as India, further development of retail payments has long been considered necessary by policy-makers in order to move away from cash and paper-based payments. In these countries the objective is not to develop new payment methods, but to ensure the deployment and interoperability of already existing cashless payment instruments. The challenge in India has been to enable such systems to "develop", "consolidate" and "converge" with innovation at each stage.

Mr Padmanabhan stressed the well-accepted fact that a properly functioning payment system contributes to monetary and financial stability and ensures economic efficiency. With respect to the term "properly functioning", he pointed out that, in the emerging market context, such a system must ensure a level of trust among its users, similar to the confidence that these users have in cash transactions. Indeed, there is always the "fear of the unknown"; one bad experience early on can make users rush back to using cash. This is an even bigger challenge when trying to convince the financially excluded to adopt electronic payments.

On this note, it should be underlined that financial inclusion has recently been added to the G20 agenda because of the advent of technology, which enables the increased reach of financial products. Certain studies (Global Payments 2013 – Boston Consulting Group study; Gates Foundation studies) have shown that customers who use alternate non-cash payment methods tend to keep more funds in their accounts for larger periods of time. Therefore, the provision of safe, accessible and efficient alternative payment channels assumes critical importance. This is crucial for the banking systems in India, where the savings and loan spreads are high. In this respect, it is important to emphasise that financial inclusion makes huge commercial sense. In fact, the CGAP report (Financial Access 2012) also highlights the beneficial impact of financial inclusion through increased deposit and lending-to-GDP ratios on national income.

Business correspondents play an important role in promoting financial inclusion, since it is the lack of penetration of brick and mortar bank branches that has been the prime cause for financial exclusion. This key role can be seen in many different countries, even in the ones which have adopted models that differ from the Indian one.

In the speaker's view, for financial inclusion to succeed, it has to be driven from the top down. In India it is a part of the Financial Stability and Development Council agenda, which focuses on both the demand and supply-side constraints. The chosen model for financial inclusion is a bank-led model, but it allows non-bank entities to partner with banks in their financial inclusion initiatives.

That said, intermediaries have always played an important role in the technology-led financial sector in India, whether it is financial inclusion or as a payment system. While remaining technology-neutral, the Reserve Bank of India requires banks to seamlessly integrate whatever technology they choose within their core banking solution architecture. In India, mobile-based financial transactions are expected to bring about a huge change in the number of people having access to financial services, although there are still some teething problems.

With respect to the second issue of his presentation, Mr Padmanabhan made clear that for too long the international community has not accorded adequate importance to retail payment systems. He agreed that the reasons for such a development could be many and relevant. In a large country such as India where retail payment systems are quite significant, it would be legitimate to further develop principles and standards.

He argued that there are retail systems that have cross-jurisdictional presence: for instance, card payments, international remittances, PayPal, etc. In the case of card payments, it is generally the leading global card networks that are taking the lead in determining the industry standards as regards form factor as well as security standards (EMV chip; two-factor authentication), without active regulatory intervention. However, as such standards have implications for countries – in terms of the cost of migration to newer standards and the impact on domestic card networks (cost of certification, access to new standards/technology, etc.) – the case could be made that regulators need to be more involved in setting standards in order to safeguard the interests of domestic players.

For large-value payment systems, there are attempts to address regulatory arbitrage through common international standards and principles. The difficulty here is how to address the needs of retail systems with system-wide importance when the defined standards are either region-specific or country-specific. One area where there is ample scope for common standards is security in electronic payments. For instance, in the field of card payments, while Europe has already implemented the EMV standard, the United States is still continuing with the magnetic stripe. Minimum common security standards need to be implemented in order to avoid regulatory arbitrage between these two regions.

Mr Padmanabhan emphasised that the lack of international standards in retail payments could also affect the interoperability between these systems – both at a domestic level and at international level. At a domestic level, India is currently facing the challenge of promoting interoperability among the non-bank and bank-operated payment systems. While considering the access of non-banks to the inter-bank payment network, the challenges that need to be addressed are the lack of standardisation of form factors, message formats and the non-adoption of international standards for card security.

So there is clearly a case for developing international standards and principles for cross-border payment systems at the minimum, but the issue would then be how to enforce such standards, most notably with regard to issues relating to home country and host country regulatory prescriptions. For the speaker, these difficulties raise the question of whether the time has come for "cooperative oversight" when it comes to internationally pervasive retail payment infrastructures.

In the third part of Mr Padmanabhan's talk, he praised the ECB for its remarkable foresight in producing the document that contained minimum safety recommendations to be implemented by 2015 to improve online payment security. He also acknowledged the seminal guidelines issued by the ECB on data quality. Both, he argued, are outstanding documents.

For Mr Padmanabhan, the rule of thumb for any central bank has to be the encouragement of innovations. However, before innovations can become a "product" of system-wide importance, standards need to be put in place; otherwise there would be bigger issues to deal with (i.e. cloud computing in the financial sector, rules for payment gateways, security standards for mobile banking and enabling NFC-based payment instruments). He underlined that the need for and focus of innovations may vary significantly between countries, with some having developed/mature payment systems and others in which payment systems are still evolving. While safety and security underpin any innovation, in emerging payment system jurisdictions, the key considerations for innovations may revolve around accessibility, availability and affordability, etc., whereas in mature/developed payment markets, the focus may have shifted towards the convergence of payment channels and real-time payments.

Another important issue that is emerging in the innovations context relates to the legal and oversight issues for innovative payment services, for example virtual currencies and access to customer accounts by third-party service providers. Mr Padmanabhan concluded that when innovations take place outside the banking domain, i.e. when non-banks start offering these services, certain issues are raised: access to the national payment system by non-banks, the extent of regulation, customer ownership and protection issues, as well as data privacy and security.

6.2 THE RELEVANCE OF RETAIL PAYMENTS FOR SOCIETY AND FOR THE FINANCIAL SERVICES INDUSTRY IN PARTICULAR[1] POLICY SESSION

Chaired by **Thomas Gehrig** (Professor, Faculty of Business, Economics and Statistics at the University of Vienna)

1 Owing to illness the keynote policy speech by Jean Paul Gauzès planned for this session in the original programme was not given at the conference.

Keynote academic speech: Banking, payments and the growth nexus

Iftekhar Hasan (Fordham University, New York and Bank of Finland)

In his keynote speech, **Iftekhar Hasan** presented an overview of recent academic approaches to understanding retail payments. It is widely recognised that a properly functioning market infrastructure, which includes retail payments, is one of the crucial elements in the promotion of financial stability and the efficiency of the financial system as a whole. Financial integration, financial development and modernisation affect the relationship between the foundations and the performance of the financial system. The financial system is a key tool for boosting consumer confidence and facilitating economic interaction and the trade of goods and services. However, unsafe and inefficient payment systems may hamper the transfers of funds among individuals and economic actors.

Over the past few decades, payment markets have witnessed important ongoing challenges and opportunities, comprising regulatory and market initiatives, increased consolidation and competition. In addition, technological advances have aided the migration from paper to electronic payments. In the European context, these developments have been complemented by the establishment of SEPA, which aims at creating an integrated and harmonised pan-European payment market, thereby fostering competition and driving innovation.

One of the most important academic questions related to payments is whether global economic growth is significantly affected by developments in retail payments. Several studies have looked at different angles of this question.

The ECB has carried out a study that analyses the link between the infrastructure of retail payment markets at the country level and its effects on real economic indicators, specifically, GDP, trade and household consumption. This study was conducted by 13 national central banks in the EU27, relative to the year 2009. As stated in the occasional paper on this study edited by the ECB in September 2012, the social costs of retail payments are substantial, at 0.96% of GDP or EUR 45 billion for the 13 countries, and at 1% of GDP when extrapolated to the EU27.

In a study by Hasan, Schmiedel and Song (2012), it was found that a bank's financial performance, e.g. return on assets and equity, is better in countries with a high volume of retail payment transactions (EU27, 2000-2007). This relationship is stronger in countries with a relatively high adoption of retail payment transaction technologies. In other words, higher usage of electronic retail payment instruments seems to stimulate banking business.

In a study by De Renzis, Hasan and Schmiedel (2013), it is confirmed that migration to efficient electronic retail payments stimulates overall economic growth, consumption and trade. Among the different payment instruments, this relationship is strongest for card payments, followed by credit transfers. Cheque payments are found to have a relatively low macroeconomic impact.

The diffusion of new retail payment technology also has a positive correlation with real economic aggregates. Additionally, the findings reveal that the impact of retail payments on economic growth is more pronounced in euro area countries.

Based on the findings of the academic literature it can be concluded that central banks, regulators, supervisors and the payment industry itself should not only endeavour to enlarge the scale of payment systems, but also to develop various retail payment instruments simultaneously, especially innovative electronic payment instruments. Moreover, the results can be regarded as providing strong support for the objectives of financial integration and financial modernisation that SEPA) is expected to fulfil.

In his remarks **Thomas Gehrig** identified the following issues that would be of particular interest for future research on payments:

The causality link between the level of adoption of cashless payment instruments and economic growth could be studied more precisely. Obviously, they are clearly connected and it can be assumed that wider adoption of cashless payment instruments increases economic growth, but we still need to find academic proof of this assumption. For example, it cannot be proven that the development of international trade is actually driven by the wider adoption of cashless payment instruments, since international payments are no longer based on cash.

In Europe, it was estimated in the early stages of the SEPA project that migration to SEPA instruments (SEPA Credit Transfer and SEPA Direct Debit) would generate a 0.02% benefit in economic growth. The global crisis actually changed the situation, but migration to SEPA instruments is still considered to be profitable. Further updates of the academic study, including post-SEPA migration data, would help to confirm this assumption. The impact of the cost of cashless payment instruments on economic growth could also be studied in more depth.

7 PAYMENT BEHAVIOUR AND THE CHOICE OF PAYMENT INSTRUMENTS

7.1 HOW DO RETAIL PAYMENT INNOVATIONS INFLUENCE PAYMENT BEHAVIOUR? POLICY PANEL

Chaired by **Wiebe Ruttenberg** (Head of Division, Market Integration, ECB)

The chair introduced the panellists, and then invited everyone to present a short response to the following question: "What is the most important retail payment innovation that you and/or your company have introduced in the last five to ten years, or which innovations should you and/or your company have introduced?".

Jean Clamon (BNP Paribas) saw the innovations relating to the "digitalisation" of retail payments as his bank's most important. It already introduced mobile payments in 2010, is working on mobile acquiring and has recently started offering, with two other banks, a wallet solution for e-commerce and m-commerce payments ("PayLib"). However, he emphasised that it was not easy to innovate, given the diverse customer demands, including their expectations regarding the security of payments and the niche versus mass solutions.

Jarl Dahlfors (Loomis AB) stated that for his company, which offers banks and retailers comprehensive solutions for cash handling, the most important innovations involve adapting to new challenges and making an intrinsically costly process more efficient. It has offered merchants a sort of ATM that also functions as a safe deposit box, as well as enables their payment account to be credited immediately ("SafePoint"). However, both consumers' payment behaviour and banks' behaviour have changed very slowly.

Nicolas Dreyfus (Banque Accord) mentioned that his bank was the first in France to issue a co-branded credit card, it introduced contactless cards in 2007, has been working with biometrics for some years now, and this year has launched an m-payments solution ("Flash 'N Pay"). An important lesson learnt through the introduction of contactless cards, which were not accepted as well as expected, was the need to involve the full "ecosystem", i.e. all stakeholders in the retail payment process.

Hannah Meiton (iZettle) argued that by introducing a simple way for the 20 million businesses in Europe that do not accept card payments to do so, iZettle had therefore opened a new market segment. The solution lies not only in the easy-to-use and inexpensive card reader that is attached to a mobile device, but the online onboarding process, i.e. signing up merchants as new customers, together with the use of cloud computing to deliver relevant business insights and information to the merchants.

Dirk Schrade (Deutsche Bundesbank) stated that, on the whole, innovative payment schemes and products have been less successful in the last ten years, and pointed to a high rate of failure of new innovations, as well as fragmented approaches with a purely domestic focus. In his view, examples of successful innovations are the migration to EMV, the introduction of "iDeal" in the Netherlands as a cooperative effort on the part of banks, and the introduction of m-payments in Japan as a cooperative effort on the part of telecommunications providers and the public transport sector.

Mr Ruttenberg noted that many panellists described innovation in the field of retail payments as a gradual process, rather than "disruptive". He then asked the panellists why one should innovate and what the driving forces were. Mr Dahlfors argued that in some cases, innovation was needed to survive as a company, for instance, a company active in the cash cycle, given that the use of cash for payments is declining in relative terms, even though the absolute volume is stable. Mr Clamon suggested that innovations needed to match customer demands, both for the payer and payee. Mr Dreyfus stated that innovations were needed to supply the payment solutions that meet the changing needs of customers as they change their payment behaviour, i.e. e-commerce. As his bank is specifically aimed at the needs of retailers, the emphasis is on safe, easy and cheap payment solutions. Ms Meiton from iZettle felt the need to innovate stemmed from wanting to deliver a profitable service to the forgotten and highly fragmented segment of SMEs that currently do not accept card payments, when 70% of the UK market prefers to pay by card. Mr Schrade explained that while the provision of retail payments was a for-profit activity for banks, the pricing level in some countries, owing to heavy competition, was quite low and had even had made payments appear “free”. This might have been a barrier to introducing new services. From the customer’s point of view, besides costs, convenience and security are key. In his view, banks were at a crossroads, facing the decision of whether to continue as usual or to innovate in the face of disruption from the internet environment.

In a follow-up question, Mr Ruttenberg asked what the focus of retail payment innovations should be, i.e. should it make existing products better, specifically changing the initiation phase of existing products, or should it introduce completely new technologies? Mr Dreyfus responded by saying that innovation should aim at providing the right solution at the right moment – you cannot be too early or too late. Ms Meiton explained that the challenge with introducing new technology that demands new behaviour, such as NFC or virtual currencies, is that you need to establish a critical mass among payers and payees. Moreover, if it requires a change in behaviour, as in the case of NFC, it will be a very risk-prone innovation strategy. Instead the focus should be on improving existing solutions and making them more available, e.g. introducing customer insights and data that is already readily available for e-commerce providers and offering them to brick and mortar merchants. Mr Schrade put forward the idea that there are customer demands in the areas of point-of-sale payments, e-commerce payments and person-to-person payments. If a solution could cover all these demands, it would have high chances of becoming successful. However, innovation needs to be combined with cooperative efforts in order to standardise, to achieve the necessary critical mass and to avoid monopolistic solutions. Mr Clamon felt that regulators have put too much emphasis on the negative sides of cooperation and have listened too much to retailers, pointing out that Monnet was not supported by the political level.

The first question from the audience related to the role of banks and the roles of other players when it comes to innovation. Panellists noted that banks have not delivered very much, and could perhaps cooperate more with new types of providers. However, new types of providers should be on a level playing field when it comes to AML/CTF provisions. Cooperation efforts between banks remain possible when these involve other stakeholders and are aimed at developing the basic standards upon which all types of providers can offer competitive services.

The second question posed was how mobile devices as acceptance points could change payment behaviour. Panellists pointed to Africa where mobile telephone accounts outnumbered bank accounts by far. The mobile device could perhaps be compared to the fridge, which was an innovation in itself, but more significantly inspired many other innovations and led to significant changes in people's behaviour.

The final question asked was what the panellists would want as an innovation? The Chair added the perspective of looking ten years ahead. The panellists predicted that plastic cards would be fully overtaken by mobile devices, but that the organisational concepts behind card payments, such as broad acceptance and security for its users, would remain. Security of payments and modern solutions need to go hand-in-hand. The mobile device enables higher mobility for payments. It also enables a much more personalised experience. New solutions should fit the new payment situations. Such changes are likely to take place gradually. And cash is expected to still be around in ten years.

7.2 PAYMENT BEHAVIOUR AND THE CHOICE OF PAYMENT INSTRUMENTS ACADEMIC SESSION

The academic session was chaired by **David Bounie** (Professor, Department of Economics and Social Science at Telecom ParisTech) who introduced the participants.

Tuomas Takalo (Bank of Finland) presented the first paper entitled "Convergence in European retail Payments".

The paper is the result of a collective study conducted by Tuomas Takalo, Emmi Martikainen and Heiko Schmiedel. Their aim was to determine if there is a correlation between retail payment integration on one hand, and competition, efficiency and growth on the other hand. Mr Takalo considers that deeper integration of retail payments should be beneficial as a result of network externalities, should facilitate cross-border transactions and should foster convergence towards more efficient payment methods.

The most common retail payment instruments (cash, debit card, credit card, direct debit, credit transfer, cheques and e-money) for over 27 countries were analysed over the 1995-2011 period. Two methods were used to test potential convergence. The results confirmed convergence for all payment instruments with the exceptions of cheques and e-money. The pace of this convergence appeared to be slow, as payment habits continued to be quite heterogeneous across countries. The study nevertheless found a decrease in cross-country dispersion over time for most of the payment instruments in Europe. The SEPA effect seems to be at play, as the pace of convergence has picked up for retail payment instruments. Contrary to other segments of the financial market, integration in the retail payment market did not deteriorate during the financial crisis.

Scott Schuh (Federal Reserve of Boston) presented the second paper entitled "This is what's in your wallet and how to use it".

The author compared the adoption and carrying of different payment instruments, such as cash, debit and credit cards. A strong adoption of cash was naturally observed, but consumers were also found to use a dozen other methods of payment. In his study, the research was aimed at better understanding the reasons behind payment users choosing one payment instrument over another. To do this, the transactions of a sample group of 2,500 consumers were recorded over three days (2012 Diary of US Consumer Payment Choice).

Mr Schuh found that most consumers hold between four and seven different payment instruments. Cash was the preferred payment instrument of consumers; while cheques were essentially used to make big purchases. By analysing the fact that different payment instruments were selected for different transaction values, it is possible to confirm that the use of cash decreased when the transaction amount went up, while cheques followed the opposite trend.

Next, the author analysed the links between the choice of payment instrument and money demand, in order to see how the benefits associated with the use of new payment technologies changes the demand for transaction balances. The model was then extended to allow consumers to look forward to future transactions, as in the Klee (2008) or Michael and Rysman (2012) models: customers have to choose between the use of cash immediately and the benefits given by an alternative means of payment, knowing that by choosing cash they might limit their opportunities in the future. According to this hypothesis, cheques are no longer used for purchase transactions, except for bill payments.

Mr Schuh concluded that the utility of a transaction depends on the available payment instruments and on the cash holdings. Moreover, the customer appears to consider upcoming transactions when deciding which payment instrument to use, creating a link between current and future transactions and the demand for cash balances. The researcher also confirmed that cash withdrawals appeared to be rather costly.

Santiago Carbo-Valverde (Bangor Business School) summarised the two main findings:

- purchase transactions are no longer settled using cheques, which continue to play a significant role in bill payments;
- the cross-country dispersion in payment habits has declined.

In addition, Mr Carbo-Valverde outlined some theoretical background on customer choices to explain the changing trends observed both in the United States and in Europe. He showed that the explicit cost of every means of payment at the time of the payment has a strong influence on the way they are used. While cash and cheques typically bear no explicit cost, withdrawal and credit card programmes involve transactional or monthly fees. However, he conceded that some credit or debit card reward programmes are likely to be changing the perception of the explicit cost.

Others factors, such as convenience and speed, influence consumers' perceptions. For example, cash is considered to be quick for some transactions involving small amounts, whereas a card is preferred for larger amounts, or cheques in the case of bill payments, even if it requires an additional step, such as the use of a pen.

8 CREATING A COMPETITIVE RETAIL PAYMENT MARKET

8.1 HOW BEST TO RECONCILE SECURITY AND INNOVATION? POLICY PANEL

In the policy stream of the conference, the panel, chaired by **Pierre Petit** (Deputy Director General, European Central Bank) addressed the issue of how best to reconcile security and innovation; it featured representatives from authorities and the market at global level.

The Chair opened the discussion with a few words on each element of the dilemma. Innovation is not about new payment instruments, but about new channels for payment initiation. Consumers do not face a lack of payment instruments, but a lack of secure ways to make use of them. What we need are solutions that link together consumers, merchants and their payment service providers in a way that is safe and efficient. Security is a core part of the mandate of central banks. All the key tasks of the central bank – namely ensuring the smooth functioning of the payment system, banking supervision and monetary policy, which Tommaso Padoa Schioppa has referred to as the "triadic function" of central banks – have the same ultimate objective: maintaining people's trust and confidence in the currency. For the payment system function, this means ensuring that the payment system is safe and efficient.

The Chair then opened the floor to the panellists, asking them to address three main points: first, the relationship between innovation and security, in terms of compatibility, trade-off or synergy; second, the role of non-banks, their riskiness and their potential for innovation; third, the role of authorities in connection with the two issues at stake, with a special focus on whether and how they should intervene.

Pierre Chassigneux (Chief Risk and Audit Officer, Groupement des Cartes Bancaires) illustrated how innovation can offer an opportunity to increase security. Today the fraud rate in card-not-present (CNP) transactions is significant compared to point-of-sale (POS) and ATM transactions, given the advances in security brought about by EMV technology in Europe. As the example of chip and PIN cards shows, innovation and security can be mutually reinforcing. At the same time, innovation means new risks, as illustrated by the low security of smartphones which are prone to malware; although it often goes unnoticed by users, mobile phones are as yet only secure as a communication environment. With regard to non-banks, two main types of new entrants are entering the retail payment market: innovative start-ups and incumbents from other markets, including telecommunications providers. As non-banks are a source of innovation, competition between them and traditional banks should be preserved. Compared to banks, they indeed have the competitive advantage of speed, but their entry on the market might also lower the security levels compared to the levels attained by banks, whose approach is based on self-regulation and regulation. While competition between banks and non-banks should be preserved, this should not drive down security; therefore, banks and regulators should become more time-to-market, so as to move at the same pace as innovative non-banks. Both self-regulatory and regulatory efforts should be made to maintain users' trust in money, also when it comes to innovative methods of payment. Moreover, efforts should be global, since cybercrime does not recognise geographical boundaries.

Tony Chew (Director – Specialist Advisor, Monetary Authority of Singapore) focused on payment card security. Given the diverse, open and interoperable landscape of POS and CNP payment transactions, the security vulnerabilities of payment cards are growing and spreading. Payment card fraud continues to escalate and accelerate in many parts of the world where conversion to chip cards has been fragmentary or delayed, and also where 3D Secure processing has not been adopted. Mr Chew provided fraud statistics and compiled evidence of what has been happening globally in this field. Singapore has succeeded in reducing card fraud significantly by adopting a mandatory roadmap and a set of requirements for payment card security enhancements. These security measures have enabled Singapore to achieve POS and CNP payment card fraud rates of 1.2 basis points in both instances in 2012. To combat the growing virulence of payment card fraud, including skimming attacks on ATMs, most of the advanced countries around the world have been migrating to chip card technology. Those that have already converted from magnetic stripe cards to chip technology are already experiencing huge reductions in fraud incidence and exposure. However, the continuing acceptance of the magnetic stripe on chip cards has blunted the effectiveness of migrating to chip technology. Partial migration produces only narrow benefits. Singapore moved to chip technology in 2010 concurrently with the adoption of two-factor authentication based on one-time passwords for online transactions throughout the industry. The cumulative effects of deploying dynamic authentication with chip technology for customers, issuers, acquirers and merchants have proved to be an effective method of card fraud prevention, detection and reduction. While payment card cloning, online attacks and ATM/POS skimming continue to climb and spread in many parts of the world, the payment card landscape is steeped in obscurity, conjecture and ignorance about the magnitude and malignancy of payment card fraud which has been estimated to exceed USD 12 billion annually. Payment card fraud will pursue the path of least resistance and exploit the weakest links in the global payment networks. Cross-border payment card transactions continue to be highly susceptible to counterfeit card fraud which exploits the global interoperability model and the patchwork migration to chip platforms.

Jeremy King (Director for Europe, PCI Security Standards Council – PCI SSC) also focused mainly on security. Securing payment transactions entails widening the scope from the actual transaction to the environment in which it takes place, especially when card data are used in the cloud. Such challenges are not limited to e-commerce, as small retailers at physical points of sale may also insert data in a complex electronic environment. Of course, risk levels differ widely between small local corner shops and big multi-country retailers. But the fact is that shopping has become an experience that crosses the boundaries between the physical and virtual world. Payment is just one element of this experience and cannot help but be affected by new habits, such as the use of smartphones. In this respect, Mr King shared Mr Chassigneux's view that communication devices are not yet secure payment devices. One of the reasons for this situation is paradoxically the high level of security attained in ATM and physical POS transactions thanks to EMV card standards: the difficulty in breaching those security standards has pushed fraudsters towards "more affordable" attacks on CNP payments. Countermeasures to such frauds are being investigated: Mr Petit mentioned the work going on in the SecuRe Pay Forum on the security of mobile payments. In any case, technology is only one aspect of security, with users' education being equally important.

Sophie Nerbonne (Deputy Head of Legal and International Affairs and Assessments, Commission Nationale de l'Informatique et des Libertés) presented the perspective of a data protection authority, which aims to increase the protection of fundamental rights. In the specific field of payments, Ms Nerbonne did not find a contradiction between innovation and data protection, but rather a synergy: bearing in mind that the distinction between banks and non-banks is irrelevant for a data protection authority, all providers of payment services should be adopting technical and organisational measures aimed at protecting data, with the approach labelled as "privacy by design". In such a context, security should not be seen as a cost but as a differentiation factor for providers, which they should be exploiting to build trust among old and prospective users. To that end, the data protection authority has been cooperating with the market, for instance in pilot projects to test biometric solutions. Far from discouraging innovation, regulation can support it. Regulators can contribute to combining innovation and security by proactively experimenting with new forms of co-regulation, while remaining neutral as to the technological choices of the market.

Marcin Skowronek (Head of Payment Fraud Team, Europol) addressed the issue of criminal innovation. Cybercrime is actually high on the agenda of criminals, not only of banks and regulators. Criminals have developed their own new business model in the field, leveraging real "criminal services" available for purchase on the internet. To combat this, regulators need to adapt to the new landscape and anticipate the actions of criminals. To that end, Europol has been working, on the one hand, with the ECB on EMV and the security of online and mobile payments, and on the other hand, with telecommunications providers and the industry – just as data protection authorities have done, as explained by Ms Nerbonne. Also, among market participants, while innovation is an area in which actors may compete, security should be where actors choose to cooperate. However, as intimated by Mr King, irrespective of how hard the actors involved may try to minimise the risks, security is often breached due to human error. Therefore, besides the technical aspects, the social factors should be taken into account when thinking about security.

In his concluding remarks, the Chair suggested that the different perspectives seemed to converge towards shared conclusions. Innovation is blurring the boundaries between the online, offline and mobile environments, as purchases are often the result of an experience that crosses them all. Security is therefore not so much a question of what means of payment are used, but how the transactions are authenticated, verified and authorised. What is more, proportionality should be a guide: in a complex environment, payments of different kinds and values are processed, which deserve proportional safeguards, also taking into account that security entails costs. That said, much lies ahead for all actors, be they banks, non-banks or authorities, in the near future. Market players expect the authorities to ensure a trustworthy and competitive payment landscape. The authorities expect the market to ensure the further development of innovative and safe payment solutions.

8.2 CREATING A COMPETITIVE RETAIL PAYMENT MARKET ACADEMIC SESSION

The academic session was chaired by **Geoffroy Goffinet** (Banque de France) who opened the discussion by underlining the relationship that exists between the public's level of trust in a means of payment and its perceived level of security. The difficulty lies in finding the right balance between the imperative of maintaining a high level of security in the field of payments and the need to ensure the ease of use of the different payment instruments.

Guerino Ardizzi (Banca d'Italia) presented the first paper entitled "The impact of microchips on payment card fraud". Considering that confidence in methods of payment is a public good, Mr Ardizzi explained that his intention was to contribute to the scarce empirical literature analysing the impact of fraud prevention standards on the safety of payments. In the process, he used empirical analysis to verify the impact of the implementation of one fraud prevention standard on the observed level of fraud. More specifically, he estimated the impact of the implementation of the microchip in Italy on the level of counterfeiting affecting debit cards over the course of a period spanning 2009 and 2010.

A single equation model was used to measure the effect of EMV adoption as a determinant of the fraud rate, while controlling for dimension, network diffusion and individual or group heterogeneity. The dataset used was drawn from the reports of payment services' intermediaries collected by Banca d'Italia and included 108 intermediaries, representing over 60% of the Italian debit card market.

The results confirmed the positive effects of EMV implementation: faced with an increase of 10 percentage points (in absolute terms) in cards that have migrated to the chip, the ratio of fraud to transactions was reduced by 6-7% on average. This implies that in Italy since 2006 (the year in which fraud reached its peak) the adoption of chip technology has resulted in a EUR 46 million reduction in losses from fraud on ATM and POS payment card transactions, freeing up resources that could be devoted to preventive innovations.

While Mr Ardizzi admitted that the migration to microchips is an expensive process – which may be one of the reasons for the strong resistance from banking communities, especially in the United States – he concluded by underlining that enhanced safety in the payment network, following a global reduction in fraud, is an important benefit from a social planner's perspective, even if such a benefit is underestimated by a private short-term profit function.

Leo Van Hove (Vrije Universiteit Brussel) presented the second paper, entitled "The role of risk in e-retailers' adoption of payment methods: Evidence from transition economies", which was co-authored by Farhod P. Karimov.

Mr Hove explained how he and his co-author used a logit analysis to exploit a self-collected dataset on the payment and delivery options offered by 194 business-to-consumer websites in five Central Asian transition economies (Kazakhstan, Kyrgyzstan, Tajikistan, Turkmenistan and Uzbekistan). Specifically, they conducted a supply-side test of the Transaction Context Model developed by Liezenberg et al. (2007), which highlights the role of perceived risk for the payment behaviour of both buyers and sellers. They used this model to test two hypotheses:

H1: the higher the product risk, the higher the probability that e-retailers will opt for payment methods with a low timing risk for the seller.

H2: e-retailers that opt for low-risk delivery methods are more likely to adopt low-risk payment methods.

The paper's results broadly confirmed these two hypotheses, although evidence for the first was less strong than for the second. With regard to the first hypothesis, the authors found a negative effect of the transaction value, and hence the product risk, on the acceptance of credit cards – which are considered, within the scope of the study, as a more risky payment method than debit cards or cash on delivery. Unfortunately, the authors found that this result could also be due to the fee structure for credit cards, as merchant fees for such cards are typically ad valorem. As such, higher transaction amounts not only increase the product and payment risk involved, but also raise credit card fees. In practice, for the complete dataset these two explanations were impossible to disentangle given that credit card fees are ad valorem precisely because the risk for the issuer is proportional to the amount of the payment.

However, the specific case of Uzbekistan provided the authors with a natural experiment of sorts: local businesses are not allowed to accept credit card payments and, moreover, face no fees for accepting payroll cards. Hence, at least in the case of Uzbekistan, the positive impact of product risk on the acceptance of debit cards would effectively seem to be due to risk. By extension, the negative impact of the same variable on the acceptance of credit cards is probably at least partly due to risk.

With respect to the second hypothesis, the authors found a positive and highly significant impact of delivery risk on the acceptance of credit cards: merchants who offer higher-risk delivery options were also more prone to adopt higher-risk payment instruments.

The analysis of the control variables also yielded interesting results. It revealed that pure players were more likely to adopt online payment methods and less likely to adopt offline alternatives. Sites that target international markets were also more likely to adopt online payment methods but did not shun local offline substitutes. Finally, the authors found that the offline penetration of a payment instrument positively affected its adoption by online merchants.

In her introductory remarks, the discussant **Nicole Jonker** (De Nederlandsche Bank) underlined the relevance of both works by noting that the introduction of electronic payments was followed by an increase in cybercrime. In the short term, this development could lead to shifts towards less efficient modes of payment. If unchecked in the long run, it could present the risk of eroding the public's confidence in the retail payment system.

In her comments on the first paper, Ms Jonker insisted on the need to evaluate the cost of fraud more broadly, most notably by taking into account the cost of replacing counterfeited cards and damaged ATM and POS terminals, and by factoring in the social impact of high fraud rates. According to her calculations, adopting this approach leads to a much higher observed benefit of EMV migration than when only considering the reduction of financial losses resulting from fraudulent transactions. Ms Jonker concluded her comments on the first paper by noting the time lag between international standard setting and the changing nature of fraudulent activities. She seized the opportunity presented by the conference to encourage policy-makers to better coordinate their actions at the international level to prevent a shift in fraudulent activity towards less protected national markets.

In her comments on the second paper, Ms Jonker presented the possibility that the presence of network externalities may have blurred the observed results on merchants' propensity to adopt low-risk methods of payment. Indeed, the latter group may have incorporated consumers' preference for cash payments over e-money. To address this shortcoming, she suggested that the authors enrich their model with explanatory variables that reflect costs and/or usability. She also encouraged them to regroup payment methods in risk categories rather than analysing each one separately.

9 COMPETITION AND CHARGING MODELS IN RETAIL PAYMENTS

9.1 THE EFFECT OF COMPETITIVE FORCES AND MARKET DYNAMICS ON RETAIL PAYMENTS PRICING POLICY PANEL

The panel discussion was chaired by **Louise Roseman** (Federal Reserve Board). In her introductory remarks, Ms Roseman noted that payment systems exhibit both great economies of scale (on the supply side) and network effects (on the demand side), suggesting that efficiencies may arise from concentrations in the provision of payment services, but that such concentrations may raise concerns regarding market power and the potential abuse of dominant positions by leading market actors. Pricing needs to provide incentives for sufficient participation by service providers and end users for a system to succeed. Evaluating the optimal pricing of retail payment services to issuers and merchants is difficult. As a general rule, the pricing scheme should be considered by both sides of the market as being fair. This has not been the case for card schemes, thus prompting the adoption of corrective measures by public authorities in many jurisdictions. In recent years, the debate on these matters has come to focus on the level of interchange fees, as onlookers have struggled to explain why the level of interchange fees has not gone down as payment networks have grown significantly and the expected economies of scale have been achieved.

Frédéric Mazurier (Carrefour) emphasised the moving environment of retail payments that is characterised by the appearance of both new payment instruments and security requirements, and the continuous optimisation of the acquiring process. For acquirers, these constant changes translate into high operational costs.

From a retailer's perspective, it is not possible to accept all modes of payment as there are set-up costs involved and a limit to the level of complexity that can be passed on to cashiers. As a result, retailers need to be selective and hence make a choice regarding which payment means they will accept. Such a choice will be based on different criteria: customer experience, cost per transaction, security, potential diffusion in different markets, level of dependency with other actors.

Looking forward, Mr Mazurier identified the ability to centralise the flows for card transactions at a pan-European level as the key issue for Carrefour in particular and retailers in general. Success in establishing such a set-up would indeed represent a great opportunity to reduce costs.

Mr Mazurier concluded his presentation by insisting that it is almost impossible for retailers to achieve economies of scale on interchange fees when the latter represent more than 80% of card payment costs.

Philippe Menier (Visa Europe) started his talk by touching upon the differences between the treatment of cash, considered to be a free service by society, and other payment instruments. He insisted on the need for all payment instruments to be treated equally in order to ensure a true level playing field.

Whereas four-party systems have clearly been under scrutiny in recent years, they continue to be the most widespread system around the world. For Mr Menier, this success is due to their ability to both provide security guaranties to cardholders and acquirers, and allow small payment service providers to offer their clients a universal payment instrument. Moreover, four-party systems have proven to be important drivers of innovation, as illustrated in recent times by the launch of 3D Secure and contactless payments.

On the more specific issue of interchange fees, Mr Menier noted that, despite popular belief, interchange fees have continuously gone down, albeit sometimes under pressure from regulators. Furthermore, he argued that high prices for retail payments are not always linked to the existence of interchange fees, citing the example of Sweden where retailers are faced with high costs despite the absence of interchange fees.

Mr Menier concluded his address by asking regulators to recognise the benefits that four-party systems represent in terms of innovation and reactivity. He underlined that Visa Europe has in the past proven its willingness to work with regulators and reach satisfactory agreements. In return, it expects certainty and consistency in the treatment of domestic and cross-border payments.

Javier Perez (MasterCard Europe) touched upon the existing consensus regarding the need to increase the incidence of electronic payments, while also promoting innovation and transparency. In doing so, the costs of providing such payment instruments must be shared in a manner that is considered fair by all stakeholders.

In his eyes, interchange fees are the most transparent way to achieve such redistribution of costs as they are publicly available, along with the breakdown of the costs incurred. Given this view, he was critical of the Commission's proposal for a Regulation on multilateral interchange fees. He notably argued that a decrease in interchange fees will only benefit big retailers while hurting both small retailers and cardholders, who will have to pay more for the same level of service. He also emphasised the absence of an evidence-based justification for the proposed one-size-fits-all levels (20 and 30 basis points), as market realities look very different across Member States on this matter.

Mr Perez ended his talk by stating that MasterCard shares all the Commission's objectives outlined in its proposals but fears that these proposals will, in their current drafting, have unintended negative consequences on end users. As such, MasterCard stands ready to work constructively with the European institutions to promote safe and efficient payments in Europe.

Irmfried Schwimann (DG Competition) presented the European competition authorities' analysis of the current situation. In her eyes, the achievement of scale effects over the course of the last decade in the field of retail payments has not led to a decrease in the costs borne by consumers and merchants. Much to the contrary, interchange fees have increased across the board, except in the markets where regulators have intervened to control their level.

Ms Schwimann explained this situation by suggesting that interchange fees are subject to reverse competition: competition among the different scheme owners exerts an upward pressure on interchange fees as schemes compete to attract new issuing banks. Past developments in the British and Hungarian markets provide clear examples of this process. Moreover, high interchange fees have the added disadvantage of leading to low acceptance rates.

As regards the frequently made link between innovation and interchange fees, Ms Schwimann remarked that high interchange fees do not result in innovation per se. On the contrary, the existing arrangements on fees discourage innovation by preventing new players and business models from entering the market. As such, the overall effect of interchange fees on innovation is at best mixed. To definitively answer these shortcomings and bring an end to the current fragmentation of the European retail payment market, she considers the adoption of a European regulation as a necessary step in order to create a level playing field among all market actors and increase transparency.

Christian Westerhaus (Deutsche Bank) outlined the different ways in which the activity of providing payment services has been affected by the recent economic environment, characterised by very low interest rates, and the implementation of new regulatory frameworks, most notably the Regulation on the SEPA end date and the Basel III requirements. In doing so, he insisted that transaction banking needs to remain profitable for banks. Mr Westerhaus also warned participants against comparing the fee arrangements in the fields of card payments and direct debits, underlining that the guarantee of payment for acquirers provided by card schemes does not exist in the case of direct debit schemes.

The ensuing discussion revealed a number of disagreements among participants, most notably on whether European interchange fees had increased over the course of the last decade, the best way to regulate the level of these interchange fees and the potential effects of a regulatory cap. In response to a question from the audience, the soundness of using the merchant indifference test as a benchmark to determine the acceptable level of interchange fees was also discussed.

9.2 COMPETITION AND CHARGING MODELS IN RETAIL PAYMENTS ACADEMIC SESSION

Sujit "Bob" Chakravorti (The Clearing House) chaired the academic session on competition and charging models in retail payments

The first paper "Competition in bank-provided payment services" was presented by **David Humphrey** (Florida State University) and was co-authored by Wilko Bolt (De Nederlandsche Bank). The paper proposes a new method to analyse relative competition in bank-provided payment services in addition to the traditional methods of the HHI of deposit market shares, the Lerner index (the relative difference of price from marginal cost) or the H-statistic (a measure of the change in price in response to a change in production cost). The new method is a frontier-based approach which attempts to separate the pure competitive behaviour of a bank from its productivity (or cost efficiency) and measure the former. Estimation is based on the idea that once all traditional factors not related directly to competition (such as costs, productivity and other non-competition influences) that explain profits or revenues are controlled for, the unexplained portion reflects the influence of competition and can be used as a measure for competitive behaviour. This is a new approach in the sense that traditional methods usually rely on some direct measure of competition and use this measure as an explanatory variable in the regression to explain prices, profits or revenues of industrial organisations. Most often these direct measures of competition are the HHI, the Lerner index and the H-statistic, which do not seem to correlate with each other, as also suggested by the authors in a previous paper, as well as in other papers. In fact these measures are not strongly correlated because each of them measures different aspects of competition or competitive behaviour. The HHI index only measures the potential for price collusion, not the actual efforts to collude over prices. The Lerner Index reflects the (average) level of the spread between prices and costs, whereas the H-statistic reflects the average change in the same spread. There can be a situation where relatively strong responsiveness of prices to cost coexist with a large spread between the levels of price and cost and vice versa. Payment service data are limited and only the HHI was contrasted with the authors' frontier competition measure.

There is no real agreement among academics or policy-makers on the best competition measure. Regulators seem to prefer the HHI because of its predictive feature in the past for oligopolistic industries. Academics prefer the Lerner Index and the H-statistic for their stronger theoretical underpinnings. The clear advantages of the frontier method is that 1) it is able to separate productivity from competitive behaviour and 2) that it uses revenue and operating cost data by service line at banks, since prices are not available. It has to be noted, though, that the competition frontier estimated using this method determines relative competition among banks and not, in contrast with the other three competition measures, the absolute level of competition.

In their model the authors use the sum of all deposits, payment-related costs, the labour/branch ratio, the deposit/branch ratio and the quarterly number of all non-cash transactions in the United States as variables to explain the revenue-to-operating-cost ratios of banks in the sample. The unexplained portion in this composed error model averaged over six separate two-quarter cross-section (panel) regressions is assumed to reflect the average influence of competition. The averages of the R squares of the estimated model suggest 68% of the variation in the revenue-to-cost ratio is explained by cost and other non-competitive factors, while 32% is due to competition.

Looking at the sample, the authors used balanced panels of 382 US commercial banks with assets of more than USD 1 billion and 2,273 commercial banks with assets of between USD 100 million and 1 billion. Estimates for competitiveness (as suggested by the unexplained portion of the model) show that there are few differences in the resulting competition efficiencies (CEs) by class size among banks that have more than USD 1 billion in assets. Competitiveness falls (the CE value rises) as payment revenues rise up to USD 8 million but levels off and falls slightly above USD 8 million in payment revenue and USD 3.3 billion in assets.

According the authors' estimates the least competitive banks in the United States are three times more profitable than the most competitive ones. There is no significant difference in the sizes (in terms of total assets) between these two sets of banks. The authors did not find any material sign of cross-subsidisation in their sample for payment services, as the correlation between deposit or loan rates and payment fees turned out to be low in their opinion. However, they found signs of market segmentation as one bank's CE did not seem to influence another's in one single metropolitan area in the United States.

The second paper, "Paying for payments" was presented by **Soren Korsgaard** (Danmarks Nationalbank). In this paper the author describes a theoretical model to analyse the effects and the optimal level of interchange fees. The topic is highly relevant as interchange fees are currently subject to very intense scrutiny from regulators all around the world. Different card usage patterns in the EU show that the existence of interchange fees is not a precondition for high levels of card usage. In fact in four national card schemes in Europe there is no interchange fee and these countries show a relatively high level of card usage compared to other nations.

The model developed by the author is based on the classic Rochet and Tirole model for optimal interchange fees (which is the one that has most commonly been used in the previous literature), but represents a deviation from it with regard to the set-up of the fees the customer pays for its banking services. While the original Rochet and Tirole model assumes that all payment services are priced to the customer at marginal cost plus a markup, the author's model incorporates the more common practical example of flat fee payment services. The customer in this model pays a fixed fee for a package of payment services (including a payment card) and thus has zero marginal cost with regard to payment transactions. This feature has remarkable implications as compared with previous models in the literature: the optimal interchange fee depends solely on the relative costs of producing cash and card payments, but not on the distribution of benefits between consumers and merchants. This feature makes it much easier to assess the social impact for regulators as there is no need to estimate the benefits for the customer.

Solving the model using the data from the study prepared by Danmarks Nationalbank on the social cost of payment instruments in Denmark, the author found that the optimal interchange fee (from a social welfare point of view) was negative but close to zero. The result of a negative interchange fee can be explained by banks' underpricing of cash services thereby subsidising cash usage. When using the assumptions of the merchant indifference test and not optimising for social welfare, but equalising merchants' costs and benefits, the author found that the model yields a higher implied interchange fee, but one which is remarkably close to that determined by the EU Commission in its cases against VISA and MasterCard and which forms the basis of its recent proposal to put a regulatory cap on interchange fees for debit cards.

When considering the possibility of surcharging, the model becomes more complicated to solve and in fact several equilibriums exist. It is no longer possible to derive the optimal interchange fee on a purely cost basis. At low but but positive merchant fees, welfare is at its maximum when merchants do not surcharge, although merchants will choose to surcharge in this case. Surcharging may improve social welfare if interchange fees are unregulated. This latter finding of the model is due to the effect of surcharging on the behaviour of banks in particular to keep merchant fees lower.

To summarise, the author concluded that the model may give an explanation as to why interchange fees do not work in practice in the way the Rochet and Tirole model suggests. According to the adapted model, higher interchange fees lead to lower usage of card payments and banks set overly high fees from a social welfare point of view. In addition, according to the model surcharging is unlikely to improve social welfare if there is a cap on the level of interchange fees set by the regulators based on the social optimum for card usage.

The discussant for both papers was **Thomas Gehrig** (University of Vienna/CEPR London). He underlined the importance of the topics covered by the papers and felt their findings were interesting and provided good ideas for future research.

In his general comments he stressed the need to also take into account the benefits of alternative payment products or services, alongside their costs. This is relevant for both theoretical works and empirical studies. He noted that neither of the papers took this factor into account. If incorporated this might change the conclusions both on welfare and on the level of competition. He quoted the famous but recently less used Baumol-Tobin model on transaction demand for cash as an example for modelling consumer benefits in the payments field.

More specifically he noted with regard to the second paper that the relative consumer benefit of cards is complicated by various market practices, such as bundling, which makes it important to distinguish debit cards from credit cards. In the case of debit cards the interest paid on deposits may lower the optimal level of interchange fee, but an overdraft facility provided or an insurance product attached can increase it. In the case of credit cards, alongside the deferred payment option, reward systems and additional attached services can all increase the optimal level of interchange fees. As a result of the different characteristics, the optimal interchange fee may differ to a great extent for the two products. He pointed out that strategic bundling can render benefits endogenous and they can no longer be treated as exogenous. He also noted that calibrations of a model with Danish cost data is specifically relevant for Denmark, rather than for other countries.

As for the first paper he underlined that the interchange fee regime is an instrument that affects competition in payments, as well as bundled services. More specifically these arrangements can support cartel-like behaviour when demand and supply elasticities permit. He noted in this regard that there are data limitations on the actual mix of payment services provided by banks and also that there are additional effects, for example the network effect, at large banks, which render their services more attractive to customers at a given price.

He concluded that the microstructure of payment markets matters when deriving policy-relevant conclusions and that models need to take into account not only the costs but also the benefits of alternative payment services. He stressed that better data is needed to inform the policy debates on these issues.

10 THE FUTURE OF CASH PAYMENTS AND THE AIM OF FINANCIAL INCLUSION

10.1 FINANCIAL INCLUSION – CHALLENGES IN DEVELOPING AND INDUSTRIALISED COUNTRIES POLICY PANEL

The session was chaired by **Gertrude Tumpel-Gugerell** (Consultant at WIFO, the Austrian Institute of Economic Research, and Former member of the ECB's Executive Board).

In her introductory remarks, Ms Tumpel-Gugerell underlined the fact that retail payment markets have been developing rapidly throughout the last decade. In Europe a number of legal and regulatory measures have been adopted with the aim of achieving a more integrated single market for payments. The market-initiated SEPA project has accelerated the development of the European retail payment market into one that is based on increasingly integrated and more competitive market structures.

It is generally accepted that innovations in retail payments should make everyday life more convenient by offering easier access to payment instruments. It might also be a chance to decrease the unbanked and under-banked populations, i.e. it could be a powerful tool to increase financial inclusion. But, in this context where speed of operations, modernity and efficiency are key factors, access to these services is still an issue for millions of people that do not have a bank account and is one cause of exclusion.

In the first presentation, **Massimo Cirasino** (Manager, World Bank) underlined that while poverty remains a major concern, the lack of access to a basic system that enables people to pay vital expenses is identified as a major obstacle to growth and raises the importance of offering an equal right of access to affordable banking services and methods of payment.

The observation is that, currently, excluded people are mainly using cash, which is easier and cheaper for them than any other means of payment. Most payment innovations are currently not relevant or adapted to financially-excluded consumers. However, universal access to financial services is within reach – thanks to new technologies and transformative business.

Overall, innovations in retail payments should aim to be useful, practical, safe and efficient. In addition, these innovations must be offered according to the right level of fees in order to eventually be a solution that will give excluded people access to financial services.

In this context, the World Bank works on projects to promote ambitious reforms that offer universal access to financial services. In as early as 2020 certain instruments, such as e-money accounts that have debit cards and low-cost standard bank accounts, could significantly increase financial access for those who are excluded.

Jan Hillered (Senior Vice President, Europe & CIS Western Union) started his talk by presenting Western Union, which is a financial services company based in the United States, but with regulatory authorisations in several EU Member States. Considered a non-bank, it has several divisions, with products such as person-to-person money transfer, money orders, business payments and commercial services.

He views the role of non-banks in retail payments as a complement to traditional banking services, offering tailor-made services to categories of people that have special needs not fulfilled by traditional banking infrastructures. Thus, thanks to a large network of more than 500,000 agent locations, and with longer opening hours around the world, Western Union has become a major provider of efficient cross-border fund transfers for migrants and other consumers.

Against this background, Mr Hillered highlighted the need for clear and proportionate regulation for payment services, insisting on the need for coordination at the international level in order to avoid conflicting regulations that can impede the further development of cross-border payment transfers.

Kristo Käärmann (Founder & CEO, TransferWise) touched upon the necessity of financially facilitating cross-border payments, a difficulty he personally met when he arrived in the UK and had to pay a 5% fee each time he wanted to send money to his native country, Estonia.

He then decided to circumvent the banks and teamed up with a friend to exchange currencies using official exchange rates but saving the bank fees. As a result of that experience he decided to develop a peer-to-peer cross-border money transfer service which is now regulated by the FSA.

While he recognises the need for regulation to ensure the security of payments, he also believes the need to reach harmonisation at the international level, especially on anti-money laundering, is important for increasing the efficiency of cross-border payments.

Jim Murray (President of the European Foundation for Financial Inclusion) presented the European Foundation for Financial Inclusion, which was founded in 2010 and whose aim is to promote financial inclusion, i.e. access for all to a choice of basic and affordable banking, payment and financial services that are essential for integration into modern society.

He explained that there are certain factors that tend to support financial exclusion, which include low income, migration, homelessness, lack of mobility, age, disability, bad credit history and physical or social isolation.

He has carried out an analysis on five countries to assess the impact of new methods of payment (cards, mobile phones and the internet) on financial inclusion. The findings are that new payment methods are not very relevant or well-adapted to financially excluded people because they are not very user friendly, require technical skills or expensive equipment and are not suited to tight budget management.

He explained that when a service becomes essential, universal access to the service becomes an imperative. In these conditions, one essential measure could partially solve the problem: each country should recognise the right to access a basic account service, with obligations in respect of providing a service, with limited exceptions.

Erik Nooteboom (Head of Unit, DG Internal Market, European Commission) started his talk by presenting the European Commission initiative on access to basic bank accounts, whose aim is to ensure that no European is denied access to a bank account – a service that has become a prerequisite for economic and social life – and by underlining the need to fight exclusion.

He explained that 14% of Europeans do not have access to financial services because of their cost or complexity. The European Commission considers it essential that everybody who wants a bank account has the opportunity of getting one.

In this context, the Commission proposals cover the following areas: comparability of payment account fees, by making it easier for consumers to compare the fees charged for payment accounts by banks and other payment service providers in the EU; payment account switching, by establishing a simple and quick procedure for consumers who wish to switch their payment account to one with another bank or payment service provider; access to payment accounts, by allowing EU consumers to open a payment account without needing to be a resident of the country where the payment service provider is located. Moreover, these provisions will allow all EU consumers, irrespective of their financial situation, to open a payment account that allows them to perform essential operations, such as receiving their salary, pensions and allowances or paying utility bills, etc.

Improving the transparency and comparability of fees while also ensuring a smoother switching process should enable consumers to benefit from better offers and lower costs for their bank accounts. At the same time, the financial services industry will benefit from increased mobility of their clients, with reduced barriers to entry, making cross-border applications possible. In addition, EU countries would be able to set national rules, for instance requiring payment accounts with basic features to be offered to consumers for free or for a reasonable fee. Not all banks would have to provide basic payment accounts for everyone – governments may ask just one bank to offer such accounts. All these measures promote social inclusion and it will be necessary to monitor the implementation of and compliance with these measures.

10.2 THE FUTURE OF CASH PAYMENTS AND THE AIM OF FINANCIAL INCLUSION ACADEMIC SESSION

Thomas Lammer (The World Bank) chaired the academic session on the future of cash payments and the aim of financial inclusion.

The first paper, "Consumer cash usage and management: a cross-country comparison with diary survey data" was presented by **Kim P. Huynh** (Bank of Canada) and was co-authored by John Bagnall (Reserve Bank of Australia), David Bounie (Telecom ParisTech), Anneke Kosse (De Nederlandsche Bank), Tobias Schmidt (Deutsche Bundesbank) and Helmut Stix (Oesterreichische Nationalbank). The paper analyses consumers' use of cash for payments by employing microeconomic evidence from large-scale payment diary surveys that were conducted in Australia, Austria, Canada, France, Germany, the Netherlands and the United States. The payment diaries were conducted idiosyncratically and hence are not harmonised. Differences pertain to the number of recorded days, the mode of data collection, the scope of transactions covered and the level of detail regarding transaction characteristics. The authors tried to harmonise the variables and concepts before conducting their cross-country analysis.

The authors address the following main questions within their paper: (i) To what extent is cash used in the seven economies? (ii) Does the consumption structure differ across countries? (iii) Does cash usage differ across transaction types, point-of-sale characteristics or socio-demographic factors? The paper starts with a descriptive analysis and documents that cash is still used extensively. When including all personal payments made by respondents, between 46 to 82% of all payment transactions (in terms of volume) were conducted in cash across the seven countries. In value terms differences across countries are accentuated. In Austria and Germany cash dominates (over 50%), while in Canada, France and the United States cash payments account for only about one quarter of the value of transactions. The composition of non-cash payments varies substantially across countries, but the overwhelming majority of payments were conducted with only a few payment instruments.

The use of cash is nearly universal for low-value transactions. In all seven economies the average value of cash transactions is lower than the average value of card transactions. The dissemination of payment cards – in particular, debit cards – was high in all countries. This suggests that differences with respect to the use of cash versus cards cannot simply be explained by differences in card ownership. Notably, in card-intensive countries, the average card transaction value is lower than it is in cash-intensive economies.

When looking at the consumption patterns in all countries the authors found that consumer payments were similar across countries, which they explained by noting the fact that all countries are relatively comparable in terms of economic development.

The authors concluded that even when controlling for POS transaction characteristics, and hence, for the consumption patterns, that higher income and/or higher education is associated with lower cash use. These findings highlight that demographics play a major and almost universal role across countries. The consumers that rate cash high with regard to ease of use conduct more cash transactions. The strongest effect on consumers' choice between cash and non-cash was obtained for transaction values, where the estimate results confirmed that the probability of using cash decreases homogeneously with the transaction value quartile. One other interesting finding was that people who hold higher cash balances on average use cash more often than people with lower cash balances, but the causality of this relationship could not be fully determined. Finally, the results showed that card acceptance is important in consumers' payment choice; the higher the rate of acceptance of cards at the POS, the lower the probability of using cash.

The second paper, "Migrants' choice of remittance channel – Do general payment habits play a role?" was presented by **Anneke Kosse** (De Nederlandsche Bank) and co-authored by Robert Vermeulen (De Nederlandsche Bank). The focus of this paper is on the determinants in migrants' choice of payment channel when transferring money to relatives abroad. To this end 1,680 migrants in the Netherlands were surveyed.

After a general introduction into the global remittance market, the paper focuses on remittance corridors originating in the Netherlands. The Netherlands hosts around 2.8 million immigrants (20% of its total population) and is one of the world's largest remittance-sending countries. The majority of immigrants originate from Turkey, Suriname, Morocco, the Netherlands Antilles, Indonesia and Germany.

Legal migrants in the Netherlands have full access to the financial system and have various options for sending money to their home countries. First, they can send remittances using standard international money transfers offered by the Dutch banks. Also, there are various foreign banks active in the Netherlands that provide a wide range of dedicated remittance services. Second, remittances may be sent through money transfer operators (MTOs) that are officially registered under the Dutch Financial Supervision Act and subject to supervision by DNB. Third, there are several informal organisations offering remittance services. Similar to formal MTOs, these do not require the migrant or the recipient to have a bank account and they can transfer money within a day. Finally, remittances find their way abroad through regular mail, through ATM withdrawals abroad and through personal conveyance on visits and returns by either the migrants themselves or their family and friends.

To thoroughly examine the determinants of migrants' choice of remittance channel, the authors used a dataset which was collected between March and July 2009. The survey was commissioned by DNB to discover their overall payment behaviour and perceptions. Although the survey focused on people of Turkish, Moroccan, Surinam and Antillean origin, the sample also included migrants from other regions. In part one of the survey, respondents documented all their POS expenses during one day in a transaction diary. For each transaction, they were asked to register the location, the method of payment used and its transaction amount. In part two, respondents answered detailed questions on socio-demographics, ethnic background, perceptions and attitudes regarding different modes of payment and remittances.

For the purpose of this study, remittances were defined as money sent and/or given to family or friends abroad. The authors made a distinction between two different types of channels: i) channels that allow the payer to transfer money from the Netherlands while physically staying in the Netherlands, and ii) channels where the payer hands over money to the beneficiary at the beneficiary's destination.

Overall, 35% of the sample had remitted money back home during the 12 months prior to the survey – from 14% for Indonesian respondents to 46% for Moroccan respondents. There was also considerable variation between the subsamples in terms of generation, age, education, strength of ties and frequency of visits to the home country. The descriptive statistics hinted at some parallels between remittance behaviour and general payment patterns: migrants that prefer cash and other paper-based instruments seem to prefer handing over cash instead of using a bank or an MTO for their remittance transfers.

The authors developed an empirical model by defining the chosen remittance channel as the dependent variable and conducted a multinomial logit analysis; the results were reported as odds ratios. In general, after correcting for remittance amounts, personal characteristics and country heterogeneity, the paper found a few indications that suggest the choice of remittance channel is somehow related to a person's general payment behaviour. People who frequently use internet banking for other purposes seem more likely to use bank services for remittances and heavy internet-banking users are significantly less likely to remit through informal channels. The effects of general payment habits, however, are relatively weak and economically small. Instead, the authors found the role of the remittance amount, personal characteristics and (perceived) costs, convenience and availability of remittance options to be stronger and more significant.

First, the authors showed that more educated migrants are less likely to use informal transfers or to bring cash themselves to the recipient. Second, they found that bank transfers are generally preferred for larger amounts, whereas other channels are preferred for small remittances, which is most probably to be explained by differences in fees and fee structures. In fact, the paper demonstrates that the use of informal channels is strongly driven by cost considerations. Finally, the results suggest that the availability of appropriate remittance options is important. People living in urbanised areas are more likely to go to an MTO or use informal channels than people living in rural environments, where bank services are often used simply because no other options are available. Additionally, informal channels are often used because the recipient does not have a bank account. Based on their findings, the authors suggest that financial education, cost reduction and new (mobile) remittance solutions may serve a valuable role in stimulating the use of formal remittance channels.

The discussant for both papers was **Franz Seitz** (Weiden Technical University, WSB Poznan). He praised the two papers for their attempts to contribute to the literature on payment behaviour and briefly summarised the key characteristics of both studies.

Since both papers rely on surveys, the first observation of the discussant was directed to both presenting authors. Mr Seitz criticised the trend for investigating payment behaviour and cash usage by means of empirical analyses. While surveys might provide good results for non-cash payments, they have drawbacks when it comes to cash payments. He warned about the risk of sample selection bias and raised the question of whether consumers are really honest and open about their true behaviour when being surveyed, in particular with respect to their use of cash given the desire for anonymity. Another general comment referred to the role of the financial and economic crisis and the potential risk that the reference periods used in both papers may not be representative and free from distortions. As regards cash, he emphasised that only the issued amounts are known for sure, whereas its holding and/or circulation is not known, nor is the purpose of this cash usage behaviour. Also, the discussant made some general recommendations with respect to the explanatory variables and estimation methods used.

As regards the first paper the discussant questioned whether an international comparison of a number of very diverse countries really adds value and whether focusing on countries which are more closely related would not provide more insights. Also, the discussant recommended reflecting on the causality between cash balances and cash usage and on the role of determinants and elasticities when comparing consumption patterns.

As regards the second paper the discussant questioned whether remittance ratios of approximately one third of the surveyed migrants might not be an indicator for underreporting. Moreover he pointed to the special role of Germany when it comes to formal remittance channels. He recommended taking advantage of official data on the net shipment of banknotes for the sale and/or purchase of euro banknotes by euro area central banks to/from wholesale banks in international foreign currency. However, he also emphasised that migrants might not necessarily send euro banknotes back home but also US dollars. The role of the Netherlands as a net issuer of 50 and 500 banknotes might be an indication that these denominations are preferred for cash remittances within the euro area. In the ensuing discussion, a number of comments and questions were raised in relation to the difference between legal and illegal remittance channels and the potential effect of the introduction of the Payment Services Directive in 2009 on the remittances market and whether language or distance to the home country could play a role when choosing the remittance channels.

11 A BORDERLESS WORLD FOR RETAIL PAYMENTS: MERELY FICTION OR SOON TO BE A REALITY? CONCLUDING PANEL

The policy session was chaired by **Denis Beau** (Director General, Banque de France) who opened the discussion by observing that currently, with the possible exception of card payments when viewed from the perspective of cardholders, a borderless world for retail payments does not exist. In this context, two sets of issues may be underlined:

- how do we achieve coordination at the international level and on which retail payments should harmonisation efforts focus as a matter of priority?
- how can we coordinate efforts made to ensure the security of payment instruments?

Javier Santamaria (Chair, European Payments Council) suggested that we could consider the world as a set of vectors producing equilibriums and tried to identify the forces in play, which he argued could be economic, social or political forces. These forces may have either a positive effect (e.g. economies of scale, political integration and free trade) or an adverse effect (e.g. national sovereignty and security, language barriers).

Against this background, the tale of SEPA is an interesting experience from the EPC's perspective. In 1999, together with the introduction of the euro currency, the European institutions expressed a will to further integrate the internal market by developing a common set of payment schemes for cashless payments. SEPA was consequently introduced in March 2000 as a part of the Lisbon agenda. Created in 2002 in response to this call from European institutions, the EPC notably defined the SEPA Credit Transfer (SCT) and the SEPA Direct Debit (SDD) schemes which went live respectively in 2008 and 2009. Since then, billions of SEPA transactions have been exchanged and migration to the SEPA schemes has proven to be manageable and beneficial.

Considering the magnitude of the SEPA project, the EPC emphasised from the very beginning that the SEPA vision would not develop solely by voluntary migration, hence underlining the need for regulatory intervention. In contrast to the euro cash changeover, however, such an action was not undertaken at the beginning, when the European authorities' action was limited to a mandate given to all actors to do their part. Eventually the "SEPA changeover" proved to be very slow and this led the European legislator to decide to fix a migration end date. According to the latest data from the ECB, all stakeholders should be ready for the end date.

The lessons learned from the SEPA project are, first, a need for clear goals from the start, with the support of political drivers. The SEPA project has also demonstrated that clear political communication is necessary. Second, as standards need to change over time, it is important to clearly define a process to both implement these changes and explain their motivation. Third, governance issues should not be neglected, and clear ownership is necessary.

Joaquim Kiyoshi Kavakama (CEO, Câmara Interbancária de Pagamentos) argued that it was difficult to tell when the vision of a borderless world of retail payments would be achieved. To a certain extent, it is already the case for cardholders and even for PayPal users, albeit there are certain security aspects which still need to be addressed. A parallel can also be drawn with the experience of users of virtual currencies such as Bitcoin. These innovations raise the question of when the network effects will be achieved and how to best regulate them.

The main question should be how bankers can provide users with incentives to use traditional retail payments (such as credit transfers/direct debits) in a borderless way. According to the speaker's own personal experience of trying to send a wire transfer in one day to the UK, and not succeeding, it is difficult to understand why banks cannot provide such a simple service. This issue could be addressed at the international level with, for instance, the definition of a rulebook for such transactions on the basis of the ISO 20022 XML standard. The IPFA (International Payments Framework Association) was also created to promote development and wider adoption of the ISO 20022 standard, in order to facilitate interoperability between payment systems. Maybe the focus should initially be on credit transfers, with a view to agreeing on a single rulebook that would be adopted worldwide.

Wim Raymaekers (Head of Banking and Treasury Markets, SWIFT) explained that SWIFT was founded in 1973 to establish common standards for financial transactions, including payment transactions, and the first SWIFT message was sent in 1977. It is now considered that SWIFT has achieved automation for correspondent banking globally.

Since the mid-1990s, a shift in the thinking has been observed; the focus is now on efficiency with the centralisation of operations. SWIFT contributed to this objective by establishing common market practices and business intelligence between members. In the last eight years, banks have greatly rationalised their networks. The largest 80 banks in the world have reduced their network by approximately 15%. The only region where banks have increased their networks is Asia. However the process of rationalisation of bank networks is not yet over. This should lead to a concentration of intermediate service providers.

Another shift in banking deals with "experience banking", which focuses on making banking for customers and also banking between banks more simple: this leads to increased integration among banks.

It is considered that SWIFT can facilitate a considerable number of cross-border payments, even those under 500 euro, mainly via correspondent banking. But is this reality or fiction? Obviously bank products based on this correspondent banking model are not clear and transparent, as banks have to gather all their contractual conditions with correspondent banks in their terms of service.

However, for bankers, is there any need to improve this service? Figures show that international payments only represent a small portion of overall payments (less than 10%). A new market is developing but individual banks tend to stay focused on their domestic markets. Moreover, as of today, there is no real threat from non-banks in this field as an underlying payment account is still needed.

The last question was about the economic benefits of borderless payments. Gates Foundation research on financial inclusion, relating to the question of how to motivate providers of payment services to develop new services for this purpose, showed that of the four areas of revenue for providers of payment services, account maintenance and "cash in/cash out" operations were unprofitable, transactions were only slightly profitable, and that adjacent services, such as interest, were the main source of revenue.

In conclusion, it can be argued that technology is no longer an issue, nor is global connectivity or standards. The key issue is engagement and the incentive model.

Michael Montoya (Head of Cash and Trade Finance, UBS) took as an example the case of Switzerland, where 23% of residents are foreigners and there are four official languages, leading to strong links with neighbouring countries. In the border regions, up to 20% of business is done across the border. 70% of cross-border flows are outbound and 75% of these are in euro. The Swiss payment market is marked by high usage of credit transfers (52%) and card payments (45%). It is quite normal for users to have both Swiss franc accounts and international currency accounts with no major differentiation between operational processes.

This explains Swiss banks' interest in the field of borderless payments. The internet brought a change in perception for clients because users could interact with their bank from anywhere in the world and at any time. It has become very easy for users to make any transaction in any currency, due to deregulation over recent decades in the fields of movement of capital and payments (e.g. reporting and administrative requirements).

New technology has fostered the development of new instruments but not the disappearance of legacy solutions. The challenges that we face now are funding for innovation and fighting against the rise of cybercrime. In this respect, banks must also tackle a low level of awareness among their customers.

Marie Gooding (First Vice President and COO, Federal Reserve Bank of Atlanta) explained that, among the 12 US Federal Reserve banks, Atlanta is in charge of operating retail payment services (ACH and cheque networks). While cross-border payments actually make up a small portion of overall payments, their share is likely to grow. International payments represent only a small part of innovation, and banks tend to be focused on the domestic market.

She considered that the main role of the central bank is the promotion of international standards and interoperability as this relates to system rules and operation, and reducing friction in the form of fees. SEPA is a good example but it remains regional. Globally, numerous issues have to be tackled such as languages and character sets, rules and regulations which may lead to inconsistencies concerning, for instance, anti-money laundering rules, consumer protection and cut-off times.

The US Federal Reserve System is currently focusing on trying to connect domestic organisations on the basis of ISO 20022 message standards developed by the IPFA and developing a business case for conversion to ISO 20022 in the United States. In the regulatory field, the simple fact of bringing together regulators in the retail space is seen as a step forward. Last, in the light of the rise of real-time payment systems around the world, there is a high probability that, in the next ten years, demand will increase leading such systems to be operated at the international level.

The Federal Reserve Banks have issued a consultation paper on payment solutions in the United States. The Federal Reserve has identified gaps and desired outcomes for a ten-year time frame. One of the key points is cross-border payments, since it has been observed that they are currently slow and costly.

During the panel discussion, the question of whether the Committee on Payment and Settlement Systems (CPSS) could act as a forum between authorities at the international level arose. The payment market user group within SWIFT was also identified as a candidate, although it was noted that it lacked enforcement power. The need for a dispute resolution authority in this space, such as the International Chamber of Commerce, was also raised.

Security was also identified as an issue that should be put high on the international agenda.

Views differed on the need for global legal harmonisation in the field of retail payments since some considered there is no market demand for such solutions, which would require a legal mandate and hence a proxy of global regulator. Within the IPFA, this was dealt with by ensuring each participant transposed the common international standards in domestic regulations.

In conclusion, it was pointed out that major efforts still need to be made before global integration for retail payments can be achieved. The importance of cooperation between stakeholders across regions was emphasised, as well as the need for a closer dialogue between policy-makers and academics.